

# **MINISTRY OF ENERGY AND MINES**

**Information Binder  
June 2013**

Ministry of Energy and Mines

**INFORMATION BINDER**  
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# Corporate Initiatives Branch

## 1. Purpose

The Corporate Initiatives Branch (CIB) is responsible for delivering on behalf of the Ministry a unified, corporate approach on policies, processes and services for those issues and needs that transect the Ministry's core businesses. CIB is responsible for managing policy issues that are cross-Ministry, cross-government and intergovernmental; ministry planning and reporting including the annual service plans and reports for the Ministry and its Crown corporations; coordination of Ministry responses to proposed treaty settlements; advice to the Minister on intergovernmental relations; as well as working with the Ministry's Divisions to develop the Ministry's legislative program and leading specific legislative projects. On behalf of the Ministry, CIB manages corporate services which include internal communications, correspondence, public service events, and records management, including FOI requests.

**Related Legislation:** None.

## 2. Context

There is a continuing legal and policy requirement for the Ministry to deliver corporate products and services, as well as an increasing emphasis on cross-ministry integration and coordination to better and more efficiently provide public services. In particular, the Natural Resource Sector (NRS), of which the Ministry is a part, is transforming its processes, technology and human resources with the vision of "one land manager". CIB staff has expertise in leading and coordinating across the Ministry's divisions and within government to advance government's objectives for its intra/inter-Ministry and inter-governmental strategies.

## 3. Key Functions

- Communications: internet and intranet updating and graphic design;
- Correspondence: responses to Minister and Deputy Minister correspondence;
- Corporate services: assignments, reporting, corporate statistics,
- Public service events: Premier's Awards, Public Service Week, Long Service Awards, Provincial Employees Community Services Fund, etc.

- Records management and FOIPPA requests;
- Coordination and production of corporate briefing products such as the briefing binders for government transition and the annual budget estimates;
- Specific Ministry and cross-ministry legislative and regulatory development/amendments, such as the *Oil and Gas Activities Act* and the *Natural Resource Roads Act*;
- Working with the Ministry's Divisions to develop the Ministry's three-year legislative program;
- Leading policy development that transects multiple lines of Ministry business, such as the Dominion Coal Blocks issue, which is an intergovernmental issue related to both oil and gas and coal, and the NRS Integrated Decision Making Project;
- Strategic planning and reporting, including the management of the service planning and annual reporting requirements of the Ministry and its Crown Corporations;
- Advocating for the Ministry's position in various trade agreements such as Trade, Investment and Labour Mobility Agreement with Alberta and the New West Partnership;
- Leading cross ministry work on specific intergovernmental files or events such as the Energy and Mines Ministers' Conference and the annual Union of BC Municipalities Convention.
- Coordinating the Ministry's interests with respect to offers of treaty settlement lands to First Nations.

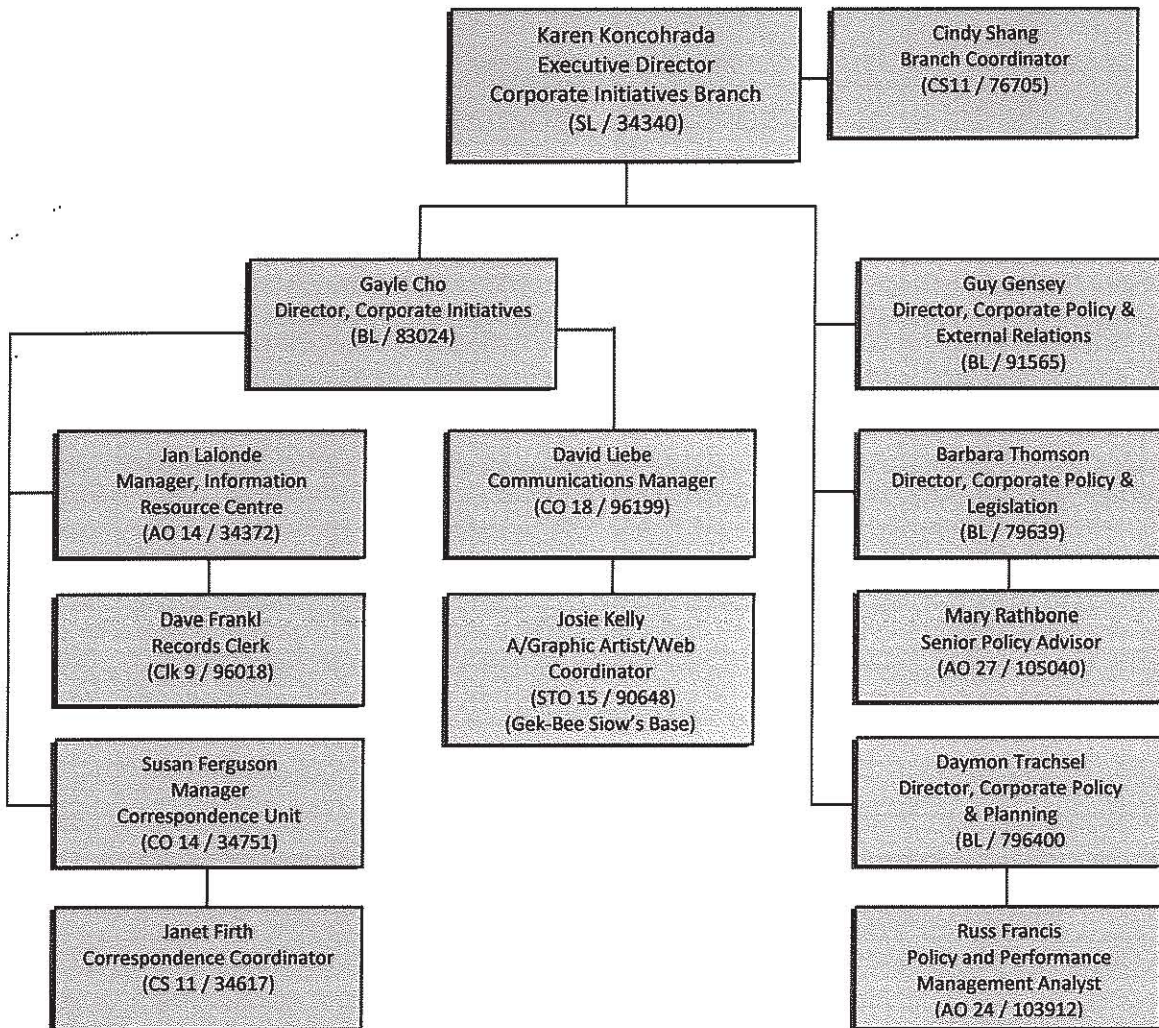
#### **4. Division Organization Chart, Budget and FTE's**

**Budget:** S17

**Full Time Equivalents (FTEs):** 14



## Corporate Initiatives Branch Org Chart



## **Corporate Initiatives Branch**

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## BRIEFING NOTE

### 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.

#### ATTACHMENT:

Canadian Energy Strategy Action Areas

**CONTACT:** Karen Koncohrada, ED

## 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 21<sup>st</sup> 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.



## BRIEFING NOTE

### ISSUE: Cumulative Effects Assessment Framework (CEAF)

#### KEY MESSAGES:

- The Ministry of Environment (MOE) and the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) are jointly managing an interagency initiative develop a Cumulative Effects Assessment Framework (CEAF).
- The CEAF will provide a consistent, comprehensive approach to assessing economic, social and environmental values in natural resource decision-making.

#### BACKGROUND:

- British Columbia continues to experience natural resource sector growth, with overlapping and competing interests on the land-base. First Nations, communities and industry have identified an increasing need to address cumulative effects.
- The Ministry of Environment (MOE) and the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) are jointly managing an interagency initiative develop a Cumulative Effects Framework (CEAF) to guide decision making.
- For the purpose of this project, cumulative effects have been defined to be the combined effect of past, present and reasonably foreseeable actions or events on social, economic and environmental values which are of primary importance to British Columbians.
- The Ministry of Energy, Mines and Natural Gas is represented by Electricity and Alternative Energy (EAED) staff in this initiative.
- The project aims to develop greater capacity in the natural resource sector to assess and consider cumulative effects when making decisions by:
  - 1) developing consistent approaches to assessing cumulative effects; and,
  - 2) determining what information is needed for regional decision makers to make informed and transparent decisions around cumulative effects.
- The CEAF is also expected to help streamline decision-making, reduce demands on government staff and support a shift to a results-based land management.
- The initiative has just completed the application of the CEAF in a number of demonstration projects.
- The projects's next step will be to develop an action plan outlining the steps and resources necessary to implement the CEAF in natural resource decision processes.

**CONTACT:** Karen Koncohrada, ED



## BRIEFING NOTE

### 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, in the Dominion Coal Blocks.
- The Dominion Coal Blocks lie within the traditional territory of the Ktunaxa Nation (Ktunaxa).
- The Ministry of Energy, Mines and Natural Gas (Ministry) has been in discussions with Natural Resources Canada (NRCan) to resolve issues related to the ownership and management of the Dominion Coal Blocks and their resources.

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#### BACKGROUND:

- The Dominion Coal Blocks (DCB) are two parcels of land located in the East Kootenay in which the land surface and coal are owned by the Federal Government. In 1899, the DCB were carved out of two extensive land parcels 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 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.
- No development of the DCB coal resources has ever taken place because the Federal Government has no mechanism to permit or regulate coal mining in 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.
- On January 29, 2013, the Province and the Ktunaxa entered into an Economic and Community Development Agreement (2013 ECDA) which provides the Ktunaxa with a share in provincial revenues from any new coal mine projects in the Elk Valley. In 2010, the parties also concluded a Strategic Engagement Agreement (2010 SEA) to guide government to government discussions on natural resource decisions.

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- Coal companies, S21 may also be interested in the development opportunities of those portions of the DCB in the Elk Valley. Enquiries about the availability of the DCB have been fielded by both levels of government over the years.

- Being large areas of relatively undeveloped federal Crown land, both DCB have been of interest to the environmental community for protection or management as wildlife corridors.

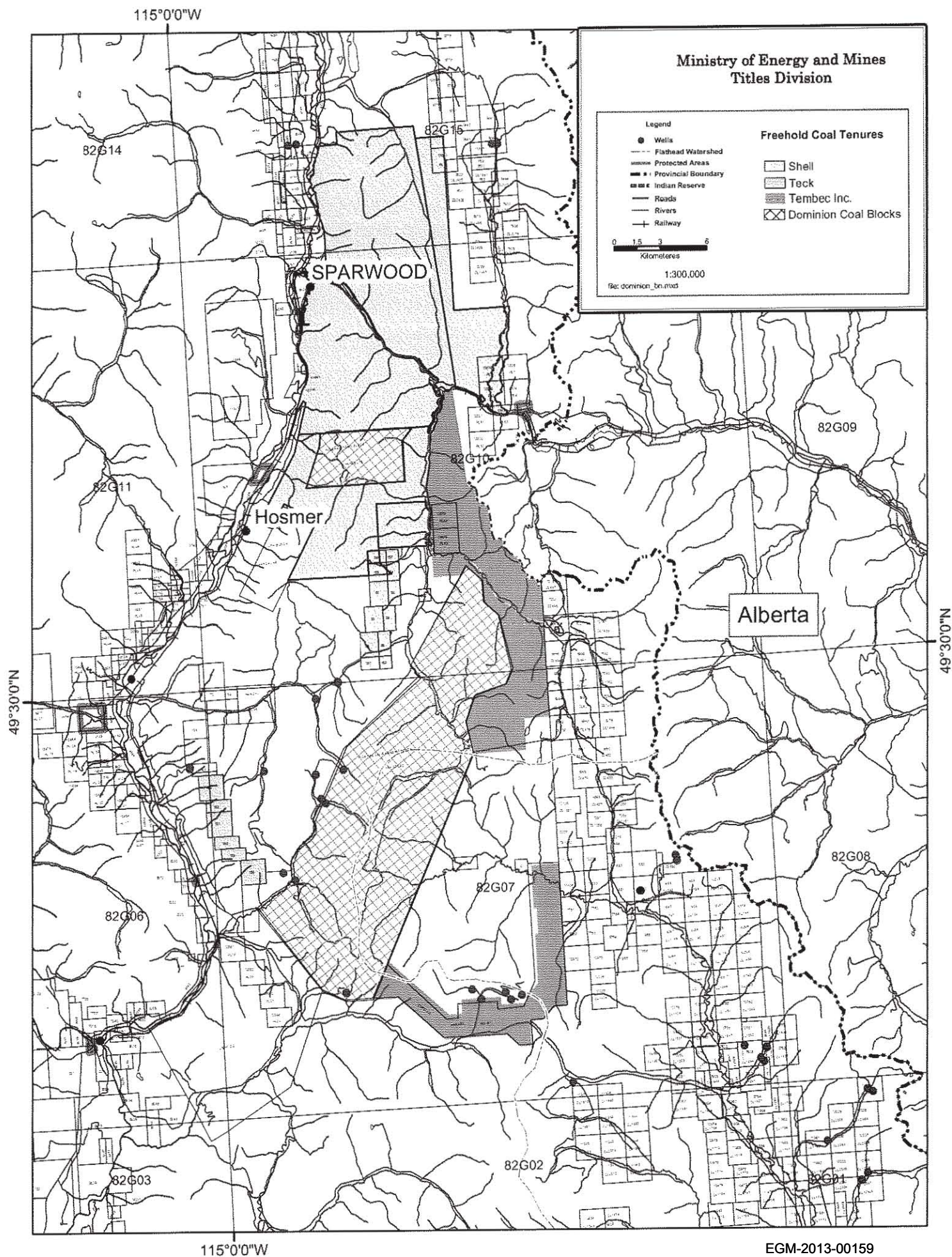
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**ATTACHMENT:**

Dominion Coal Blocks Map

**CONTACT:** Karen Koncohrada, ED







**BRIEFING NOTE****ISSUE: Energy and Mines Ministers' Conference 2013****KEY MESSAGES:**

- Each year federal, provincial and territorial (F/P/T) Ministers of energy and mines meet to discuss the challenges and opportunities of the sectors, and meet with invited industry stakeholders.
- This year's Energy and Mines Ministers' Conference (EMMC) is scheduled for August 24 – 27, 2013 in Yellowknife, Northwest Territories. Typically the Minister and Deputy Minister attend for each jurisdiction with support from staff as required.
- EMMC is co-chaired by the federal Minister of Natural Resources Canada and the Minister of the host province or territory for that year.
- Media is present at the end of the conference to interview the co-chairs.
- The agenda includes both open sessions with stakeholders and confidential government-only meetings.

**BACKGROUND:**

- The priority work areas for EMMC 2013 include:
  - **Labour Markets:** Assessing future workforce needs of the energy and mining sectors and compiling best practices by government, industry and other organizations to improve labour mobility, attract and retain skilled labour, and increase participation by Aboriginal peoples.
  - **Unconventional Energy Technologies:** Reviewing Canadian shale oil and gas resource potential, knowledge gaps, best practices and innovative solutions currently being pursued, including public engagement.
  - **Regulatory Reform:** Developing early warning systems for challenges in the environmental review process, ways to improve federal-provincial coordination of Aboriginal consultation, mapping of environmental review processes and strengthening environmental project reviews.
  - **Mining:** Examining regulatory barriers to the adoption of green mining technologies, producing a 2013 Mining Sector Performance Report and developing communications and stakeholder engagement strategies.
- Ministerial discussions at EMMC are supported by a Deputy Ministers' Committee that tasks working groups comprised of F/P/T energy officials to provide advice on priority and emerging issues such as: energy efficiency; electricity reliability; new markets and international trade; mining; unconventional oil and gas technologies; regulatory reform; and labour market challenges.

**ATTACHMENTS:**

1. 2013 EMMC Agenda
2. 2013 EMMC Committee Structure

**CONTACT:** Karen Koncohrada, ED



## Attachment 1

## 2013 EMMC Agenda

| SATURDAY, AUGUST 24, 2013 |  |                  |  |
|---------------------------|--|------------------|--|
| Time                      | Ministers  | Deputy Ministers | Delegates  |
| 1:00-6:00                 | <b>Avalon's Nechalacho Rare Earth Element Project Tour</b><br><br><b>&amp;</b><br><b>Fishing trip and Aboriginal Awareness Seminar at Blachford Lake Lodge</b> |                  | <b>9-hole golf tournament</b><br>(subject to cancellation – dependent on registration) |
| 7:00-10:00                |  |                  | <b>Meet-and-Greet</b><br>(Black Knight)  |

| SUNDAY, AUGUST 25, 2013 |                                      |                  |  |
|-------------------------|--------------------------------------|------------------|--|
| Time                    | Ministers                            | Deputy Ministers | Delegates                              |
| 9:00-10:00              | Return from Blachford Lodge          |                  |  |
| 10:00-11:00             |                                      |                  |  |
| 11:00-12:00             |                                      |                  | Great Slave Lake Tour<br>& Shore Lunch |
| 12:00 -1:00             | Diavik Diamond Mine & Wind Farm Tour |                  |  |
| 1:00-2:00               |                                      |                  |  |
| 2:00-3:00               |                                      |                  |  |
| 3:00-4:00               |                                      |                  |  |
| 4:00-5:00               |                                      |                  |  |
| 5:00-6:00               |                                      |                  |  |
| 6:00-7:30               | Private Dinner                       |                  |  |
| 7:00-10:00              | Opening Reception<br>Tent (Explorer) |                  |  |



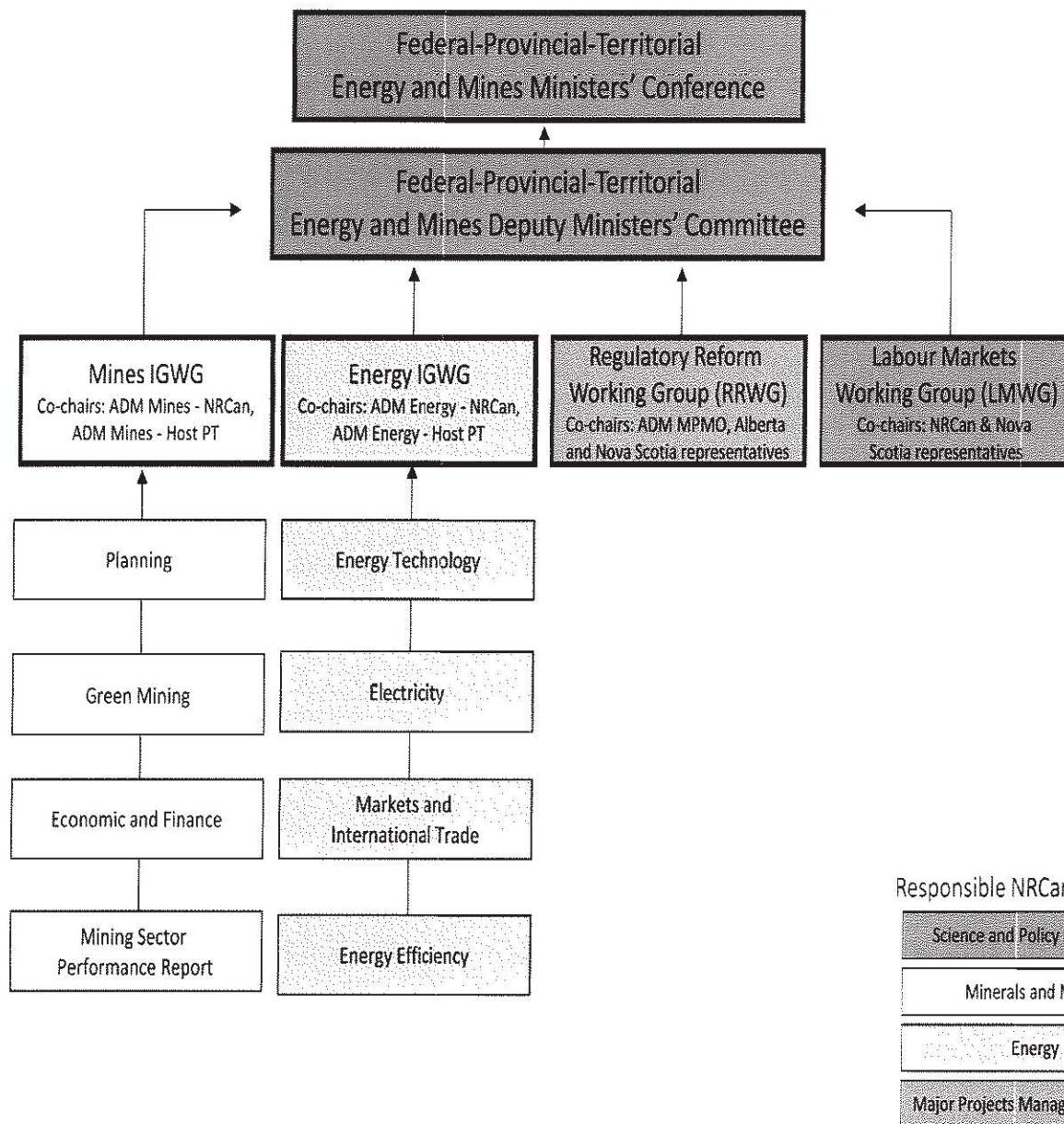
| <b>MONDAY, AUGUST 26, 2013</b> |  |                         |                                  |
|--------------------------------|--|-------------------------|----------------------------------|
| <b>Time</b>                    | <b>Ministers</b>   | <b>Deputy Ministers</b> | <b>Delegates</b>                 |
| 7:30-9:00                      | <b>Keynote Speaker/Breakfast</b><br>Tent (Explorer)  |                         |                                  |
| 9:00-9:30                      | Travel to Panel Discussions (5 minute walk)  |                         |                                  |
| 9:30-11:30                     | <b>CONFERENCE PANEL DISCUSSIONS</b><br>Museum and Legislative Assembly   |                         | <b>Yellowknife<br/>City Tour</b> |
| 11:30-12:00                    | Walk back for Lunch  |                         |                                  |
| 12:00-1:30                     | <b>Keynote Speaker &amp; Lunch</b><br>The Honourable Joe Oliver, Minister of Natural Resources<br>Tent (Explorer)    |                         |                                  |
| 1:45-3:30                      | <b>EMMC OPEN SESSION</b><br><b>Joint Energy and Mines Ministers' Meeting</b><br>Katimavik B-C (Explorer)             |                         |                                  |
| 3:30-3:40                      | Health Break   |                         |                                  |
| 3:40-4:50                      | <b>EMMC OPEN SESSION (continued)</b><br><b>Joint Energy and Mines Ministers' Meeting</b><br>Katimavik B-C (Explorer) |                         |                                  |
| 5:00-5:30                      | <b>Media Availability</b><br>Janvier Room  |                         |                                  |
|                                |  |                         |                                  |
| 6:00-11:00                     | <b>Traditional Northern Dinner/Entertainment</b><br><b>(Buffalo Air Hangar)</b>                                      |                         |                                  |



| TUESDAY, AUGUST 27, 2013 |   |                                     |  |
|--------------------------|---|-------------------------------------|--|
| Time                     | Ministers   | Deputy Ministers                    | Delegates  |
| 7:30-9:00                | <b>Breakfast/<br/>Photo Session</b><br>Legislative Assembly | <b>Breakfast</b><br>Tent (Explorer) |  |
| 9:00-10:30               | <b>Mines Ministers' Meeting (Closed)</b><br>Katimavik B-C   |                                     | <b>Mine Heritage<br/>&amp; Giant Mine<br/>Tour</b> |
| 10:30-11:00              | Health Break<br>Explorer                                    |                                     |  |
| 11:00-12:30              | <b>Energy Ministers' Meeting (Closed)</b><br>Katimavik B-C  |                                     |  |
| 12:00-1:30               | <b>Lunch</b><br>Tent (Explorer)                             |                                     |  |
| 1:30-2:00                | <b>Press Conference</b><br>Janvier Room                     |                                     |  |
| 2:00-4:00                | <b>Giant Mine Remediation Tour (AANDC)</b>                  |                                     |  |
| 7:00 - 10:00             | <b>Closing Event</b><br>Northern Show<br>Black Knight       |                                     |  |

## Attachment 2

## EMMC 2013 Committee Structure





**BRIEFING NOTE****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 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 April 23, 2013, the federal Minister of the Environment has approved EAO's substitution requests for the environmental assessments of the proposed Carbon Creek Coal Mine near Hudson's Hope, BC, and the proposed Sukunka Coal Project near Chetwynd, BC.
- Substitution means that where both federal and provincial environmental assessments are triggered, there would be one assessment process (the provincial one) and two decisions (federal and provincial Ministers).

**BACKGROUND:*****Additional Substitution Requests:***

- In addition to the approved substitution requests for the proposed Carbon Creek and Sukunka projects, EAO has requested substitution for the:
  - Echo Hill Coal Project, located 44 km north of Tumbler Ridge;
  - LNG Canada Export Terminal, located in Kitimat; and
  - Arctos Anthracite Coal Mine, located 160 km NE of Stewart
- The decisions on these requests are anticipated in late May 2013. 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.
- EAO is conducting ongoing analysis to identify future substitution requests, and anticipates requesting substitution regularly.

***Responses to Substitution and EAO Outreach:***

- Various environmental non-governmental organizations and First Nations are opposed to the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) in general, and 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 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, West Coast Environmental Law, and the Canadian Association of Petroleum Producers.
- EAO is meeting with a number of First Nations with an interest in substitution, including those who live near the proposed Carbon Creek and Sukunka projects.

#### ***Meeting the Conditions for Substitution:***

- A key principle behind substitution is that it must support and encourage the rigour of federal and provincial environmental assessments.
- Substitution does not change the purpose of environmental assessment, which is to examine proposed major projects for potentially adverse effects that may occur during the project's life cycle and develop strategies to avoid or minimize those impacts.
- 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) and an opportunity for public participation.
- 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 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 environmental assessment and Aboriginal consultation.
- The Agency commits to timelines in considering substitution requests from BC.
- A joint implementation steering committee will develop operational procedures, monitor implementation and address key issues.

**CONTACT:** Karen Koncohrada, ED

## BRIEFING NOTE

### ISSUE: Environmental Mitigation Policy (EMP)

#### KEY MESSAGES:

- The BC Ministry of Environment (MOE), with support from the Environmental Assessment Office (EAO) and other natural resource ministries, is developing a policy to establish a consistent approach to mitigating adverse environmental impacts caused by development.
- The goal is to establish policy direction for avoiding, minimizing, restoring and offsetting environmental impacts across the province, and to provide guidance on financial offsetting. The proposed policy will clarify requirements, decision making roles and responsibilities for environmental mitigation. It will also improve efficiency in identifying appropriate environmental mitigation measures, and negotiating environmental mitigation plans and environmental offsetting agreements.

#### BACKGROUND:

- The goal of the proposed EMP is to help government staff provide consistent, efficient and relevant advice to statutory decision makers when authorizing development projects and activities, by providing a province wide approach to identifying and addressing potential environmental impacts.
- The EMP will standardize environmental assessment processes, negotiations of environmental mitigation agreements, and expectations for environmental offsetting.
- The policy will provide internal policy guidance that supports existing provincial and federal legislation.
- The EMP Interagency Policy Advisory Committee includes representatives from two divisions (Electricity and Alternative Energy Division and the Mines and Mineral Resources Division) of the Ministry of Energy, Mines and Natural Gas.

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- The trial application phase of the project is expected to conclude in Spring 2013, and the project will then move into the implementation phase.
- The goal of the implementation phase is to have the EMP used as a targeted tool right across the natural resource sector. To achieve this, an implementation plan will be developed, including training for government staff and proponents.



- Stakeholder and First Nation engagement in February 2012 highlighted specific concerns:
  - 1) there may be an absence of clear guidance on where and when the EMP should be used; and,
  - 2) having the EMP as a voluntary tool may lead to inconsistent uptake and application by natural resource sector staff and decision makers.
- The implementation plan will address these concerns and include guiding principles for where and when the EMP should be used.

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**CONTACT:** Karen Koncohrada, ED

## BRIEFING NOTE

### ISSUE: Integrated Decision Making Regulatory Initiative

#### KEY MESSAGES:

- As stated in the Natural Resource Sector (NRS) Transformation Plan, a key goal of the sector is to achieve the vision of "one land manager". One of the major ways to do this is through integrated decision making.
- The Integrated Decision Making (IDM) regulatory initiative, led by Ministry of Forests, Lands and Natural Resource Operations (FLNRO), will coordinate decision making processes for projects that require decisions under multiple statutes.
- The IDM regulatory initiative is to be implemented through phased legislative changes.

#### BACKGROUND:

- FLNRO is leading NRS ministries in a number of initiatives to improve efficiencies and decisions for government, proponents and the public, which collectively aim to achieve the goal of one land manager. The major initiative of these is IDM. The Ministry of Energy, Mines and Natural Gas is involved in this initiative through the Corporate Initiatives Branch and the Mines and Mineral Resources Division.
- The IDM Regulatory Initiative will initially develop consistent application processes and requirements for the multiple approvals required for a single project.
- The intent is to develop an 'umbrella' statute in phases.
- For a project that requires approvals across multiple statutes, phase 1 will establish a single standard for public review and coordinate the terms of approvals/tenures, renewals, processes, payments (e.g. royalties, fees and rents) and securities.
- Subsequent phases will establish environmental resource management objectives, standards and practices applicable to all sectors, rather than the current ones that are applied on a sector specific basis and only to certain sectors.

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#### ATTACHMENTS:

1. IDM Initiatives Overview
2. IDM Potential Model for Regulatory Harmonization

**CONTACT:** Karen Koncohrada, ED



## Integrated Decision Making – Change Drivers

*Client dependence on government for information*

*Multiple entry points*

*Regulatory framework separates decisions*

*Prescriptive regulation regardless of risk*

*Fragmented data, with limited reusability*

## Strategic Shifts

*From*

Limited data available to clients

### The Way Clients Interact with the NRS

- Open Government
- Self evaluation of application
- One window, electronic intake
- Application status tracking

*To*

Open data, client self evaluation

Focus on individual authorizations

### The Way the Land Base is Managed

- Assessment of Cumulative Effects
- Results and Risk Based Regulatory Framework
- Qualified Persons/Professional Reliance
- Spatially driven integrated information

Integrated management of resources

Regulations, processes and systems segregate decisions

### The Way NRS makes timely and durable decisions

- Harmonized regulatory framework
- Provincially consistent and predictable processes
- Integrated and automated workflows
- Project-based consultations and authorizations

Regulations, processes and systems that integrate decisions

## Outcomes

Increased client satisfaction

Lower service delivery costs

Improved utilization of resources

Lower risks to government

More timely, efficient and durable decisions

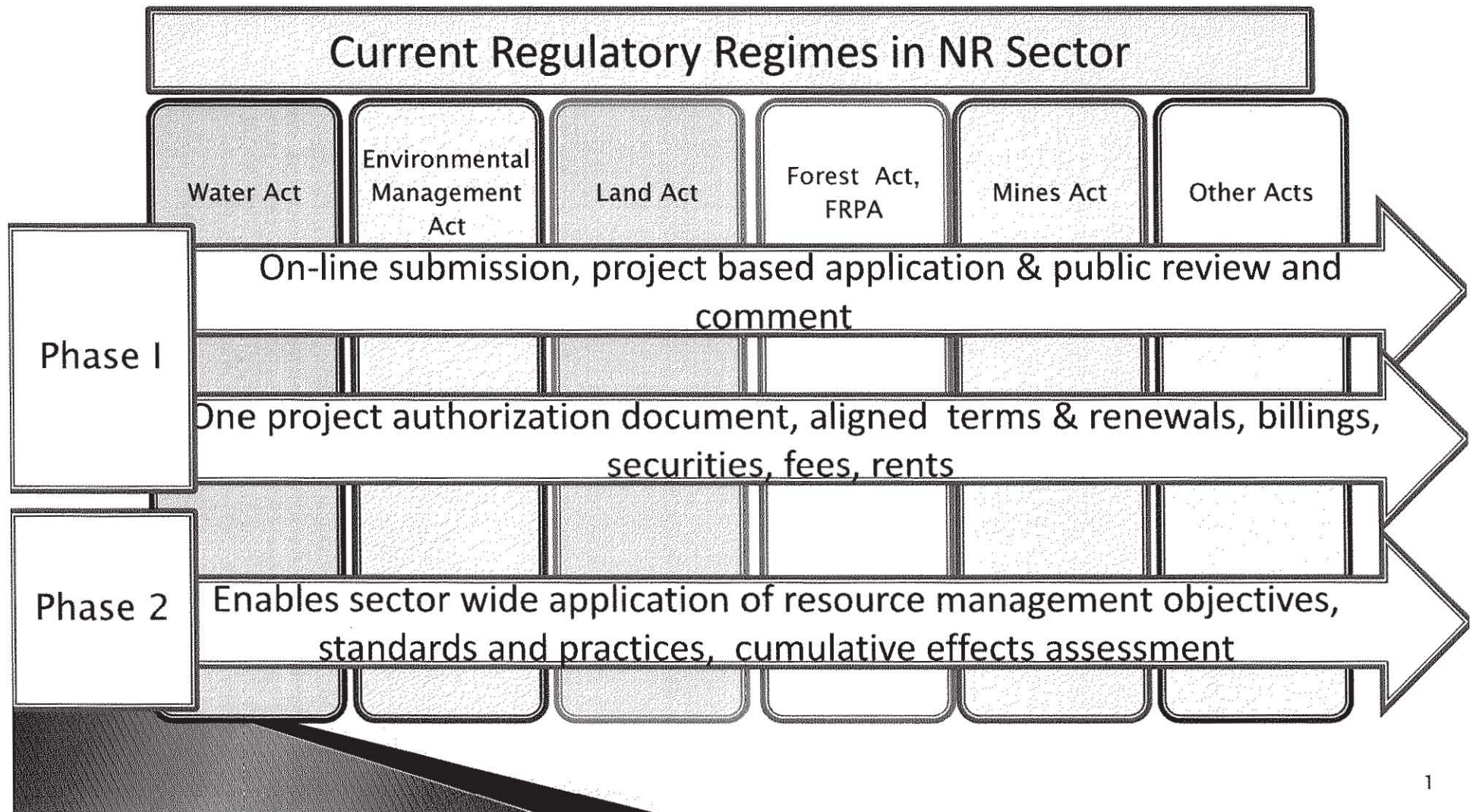




BRITISH  
COLUMBIA

# MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS

## Potential Model for Regulatory Harmonization





## BRIEFING NOTE

**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 over which British Columbia has constitutional jurisdiction 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

**CONTACT:** Karen Koncohrada, ED



## **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**

**BRIEFING NOTE****ISSUE: The Natural Resource Road Act (NRRRA) Project****KEY MESSAGES:**

- The current legislative framework for regulating resource roads in British Columbia includes thirteen separate acts, many providing a unique suite of rights, obligations, standards, fees and terms.
- For road users and government administrators, understanding which rules apply to which roads and who holds accountability for what obligations, is challenging and conducting business under such a regime is inefficient and ineffective.
- The proposed NRRRA will establish a consistent suite of rights, obligations and enforcement practices across all resource roads in the Province, thereby supporting business and government efficiency, as well as safer and more environmentally sound use of resource roads.

**BACKGROUND:**

- The resource road infrastructure is critical in supporting economic activity and the social well being of British Columbians.
- The vast majority of resource roads in the Province are built and maintained by the forest, oil and gas and mining sectors, but are widely used by commercial enterprises and the public.
- There are an estimated 205,000 kilometres of permitted resource roads, and 250,000 km of non-permitted roads, of unknown condition and use in BC.
- The current legislative framework for regulating resource roads in British Columbia includes thirteen separate acts, many providing a unique suite of rights, obligations, standards, fees and terms, and administered by a variety of government entities.
- For both road users and government administrators, understanding which rules apply to which roads, and who holds accountability for what obligations, is challenging. Conducting business under such a regime is inefficient and ineffective.
- The Ministry of Forests, Lands and Natural Resource Operations and Ministry of Energy, Mines and Natural Gas are leading a team in developing a new *Natural Resource Road Act* to establish a consistent suite of rights, obligations and enforcement practices across all resource roads in the Province. The intent is to support business and government efficiency, as well as the safer and more environmentally sound use of resource roads.
- EMNG is being represented in the NRRRA project by members of the Corporate Initiatives Branch, the Oil and Gas Division, and the Mines and Mineral Resources Division. Representatives of the Oil and Gas Commission are also participating.



- There has been broad engagement of stakeholders and First Nations. Policy development is being informed by an advisory team consisting of representatives from all major stakeholder groups, including mining, oil and gas, forestry, utilities, tourism, outdoor recreation and local government.
- While there is broad support for the NRRA, there has been also some stakeholder and First Nation resistance. This is based primarily on misunderstandings of what the legislation may contain. Steps continue to be taken to manage these concerns.

**CONTACT:** Karen Koncohrada, ED



**BRIEFING NOTE****ISSUE: Natural Resource Sector Appeal Tribunals****KEY MESSAGES:**

- There are three distinct administrative tribunals which hear appeals to various decisions made by government under the statutes that govern the natural resource sector: the Environmental Appeal Board, the Forest Appeals Commission and the Oil and Gas Appeal Tribunal.
- The three tribunals currently share a common chair, members and administrative support. The tribunal authorities, powers and rights of appeal however differ between the tribunals and across the statutes.

S13, S14

**BACKGROUND:**

- The Environmental Appeal Board (EAB), Forest Appeals Commission (FAC), and Oil and Gas Appeal Tribunal (OGAT) are independent, quasi-judicial administrative tribunals that hear appeals to decisions in the natural resource sector. Although being separate boards with different authorities, the Chair and members are cross-appointed to each of the three boards. The three boards also share administrative resources and an office in Victoria.
- The EAB, established in 1981 under the *Environment Management Act* and continued under the 2003 *Environmental Management Act*, hears appeals of specific decisions under the *Drinking Water Protection Act*, *Environmental Management Act*, *Integrated Pest Management Act*, *Greenhouse Gas Reduction (Cap and Trade) Act*, *Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act*, *Greenhouse Gas Reduction (Vehicle Emission Standards) Act* [not in force], *Water Act*, and *Wildlife Act*.
- The FAC, established in 1995 under the *Forest Practices Code of British Columbia Act*, hears appeals of decisions under the *Forest Act*, *Forest Practices Code of British Columbia Act*, the *Forest and Range Practices Act*, the *Private Managed Forest Land Act*, the *Range Act*, and the *Wildfire Act*.
- The OGAT, established in 2010 under the *Oil and Gas Activities Act*, hears appeals of decisions under the *Oil and Gas Activities Act*.
- The staggered development of appeal rights in the natural resource management sector has resulted in the establishment of three tribunals with jurisdiction under 14 statutes, different authorities and powers, inconsistent procedures and application of the *Administrative Tribunals Act*, lack of clarity for the users, and some duplication of the administration and infrastructure necessary to support the tribunals.

S13, S14

- The Ministry of Energy, Mines and Natural Gas is involved in this project through the Corporate Initiatives Branch.

**CONTACT:** Karen Koncohrada, ED



**BRIEFING NOTE****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 in 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.
- 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.

S13, S16

- 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, ED



## BRIEFING NOTE

**ISSUE:**        **Qualified Persons (QPs) in the Natural Resource Sector**

### KEY MESSAGES:

- The Qualified Persons (QP) project is a government Natural Resource Sector (NRS) initiative led by the Ministry of Forests, Lands and Natural Resource Operation (FLNRO) to improve the understanding of how QPs can add value to the resource administration process, and when it is appropriate to rely on the work of QPs to inform or support administrative and technical functions.

S13

### BACKGROUND:

- A wide variety of QPs work in the NRS in a wide range of capacities. They provide information and expertise to support both decision-making and operational activities.

S13

**CONTACT:** Karen Koncohrada, ED

## **BRIEFING NOTE**

**ISSUE:**            **Service Plan 2013/14-2015/16 for the Ministry of Energy, Mines and Natural Gas (EMNG) and Minister Responsible for Housing**

### **KEY MESSAGES:**

- The Service Plan for the Ministry of Energy, Mines and Natural Gas (EMNG) and Minister Responsible for Housing, and Liquor and Gaming, was prepared in accordance with government-wide guidelines and presented as part of the February 19, 2013 provincial budget.
- Under the direction of the Natural Resources Board, resource management ministries continue to implement a sectoral approach that promotes streamlined authorization processes and enhanced access to public services across the Province. The Ministry's 2013/2014 Service Plan contains strategies that support this approach.
- At the time of writing, the Minister of Energy, Mines and Natural Gas has responsibility for housing, and liquor distribution and gaming. Accordingly, the Ministry's 2013/2014 Service Plan incorporates goals, strategies and performance measures for each of these program areas.

### **BACKGROUND:**

- The Service Plan includes revised strategies and performance measures that support Ministry's 2012 Mineral Exploration and Mining Strategy, Natural Gas Strategy and Liquefied Natural Gas Strategy.
- The Ministry regularly assesses resources against business objectives, and undertakes a comprehensive review of current resources in conjunction with the development of its Service Plan. This allows the Ministry to direct resources towards programs designed to achieve the Service Plan objectives.
- For this fiscal year, EMNG staff factored in ongoing developments in the world economy, particularly slower growth in Asia and the impact this will have on demand for provincial exports; improvements in the markets for some resource commodities produced in British Columbia; continuing low interest rates; and greater demand for housing assistance during times of fiscal restraint. EMNG considered the impact these will have on its Service Plan targets and the nature of the services to be delivered by the Ministry.
- The complete 2013/14 Service Plan is attached, together with a logic model showing the Service Plan goals and objectives.

### **ATTACHMENT:**

Service Plan Logic Model

**CONTACT:** Karen Koncohrada, ED



## Service Plan Logic Model

| <div style="text-align: center;"> <b>Ministry Goal 1</b><br/> <b>Internationally competitive energy, mining and natural gas sectors that contribute to jobs and the economy</b> </div> |   |   |  |
|--|---|---|--|
| Objectives   |   | 2013/14 Strategies  | 2012/13 Performance Measures   |
| 1.1 New energy and mineral resource projects that support the creation of family-supporting jobs in B.C.   | → | <ul style="list-style-type: none"> <li>• Work with proponents of liquefied natural gas projects and other ministries to have at least three terminals and associated pipelines in operation by 2020.</li> <li>• Work with First Nations, communities and Canada to ensure best practices are in place to guide marine traffic and the safe shipment of liquefied natural gas to export markets.</li> <li>• Support the development of pipelines, roads and electricity infrastructure required for new mines, mine expansions and liquefied natural gas facilities including the development of industrial land use plans for the Douglas Channel, Kitimat and Prince Rupert areas.</li> <li>• Work with BC Hydro to ensure an adequate supply of clean electricity is available to support new investments in liquefied natural gas, upstream oil and gas, and mines.</li> <li>• Continue to develop a coordinated, transparent permitting and approval process with clear timelines for all industrial projects, including natural resource development projects.</li> <li>• Continuously improve geological and resource assessments for natural gas, geothermal, storage reservoirs, coal, minerals and aggregate through collaboration with industry, industry associations, and academic and research institutes.</li> <li>• Work closely with the Ministry of Jobs, Tourism and Skills Training to ensure that skills gaps in the workforces of the oil and gas, and mineral exploration and mining sectors are identified and filled.</li> </ul>  | → 1. Number of new mines in operation<br><br>→ 2. Number of expansions to existing mines   |
| 1.2 B.C. is positioned as an attractive jurisdiction for investment in the energy and mining sectors and related businesses  | → | <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• Maintain B.C.'s competitiveness for investment in upstream natural gas development, and related liquefied natural gas export opportunities, by modernizing petroleum and natural gas tenure legislation, ensuring royalty programs remain highly competitive, supporting infrastructure development and facilitating efficient and timely regulatory review of proposed developments.</li> <li>• Conduct energy and mining related geoscience research and technical assessments to promote industry investment.</li> <li>• 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.</li> <li>• 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.</li> </ul> | → 3. Annual Investment in Oil and Gas Exploration and Development<br><br>→ 4. Annual Investment in Mineral Exploration and Mines |

## Ministry Goal 1

### Internationally competitive energy, mining and natural gas sectors that contribute to jobs and the economy

| Ministry Objectives  |   | 2013/14 Strategies   |   | 2012/13 Performance Measures                              |
|--|---|--|---|---|
| 1.3. Optimal revenue from the development of B.C.'s energy and mineral resources   | → | <ul style="list-style-type: none"> <li>• Provide the government services needed to respond to increasing economic activity, in particular delivering sound, timely decisions on mining, oil and gas, liquefied natural gas, and related water, Crown land and other permits, authorizations and tenures.</li> <li>• Monitor and evaluate the performance of B.C.'s energy and mining policies and programs to fully maximize the financial benefit of resource development and use for British Columbians.</li> <li>• Implement revenue collection mechanisms to address B.C.'s specific challenges that might otherwise slow or hinder the development of oil, gas, coal and mineral resources.</li> <li>• Continue to hold 12 monthly Crown oil and gas rights sales per year.</li> </ul>                    | → | 5. Direct government revenue from mining, and oil and gas |
| 1.4. A secure, reliable supply of energy for the long-term benefit of all British Columbians                                   | → | <ul style="list-style-type: none"> <li>• Work with BC Hydro to upgrade the Province's heritage generation, transmission and distribution assets to meet future demand.</li> <li>• Develop and implement policies to keep electricity rates affordable for B.C. families and respond to B.C.'s other energy objectives.</li> <li>• Ensure reliable electricity supply through innovative, aggressive conservation, ongoing competitive power procurement programs, and BC Hydro funded projects.</li> <li>• Expand the use of natural gas as a transportation fuel.</li> <li>• Conduct regional studies and resource assessments to enhance understanding of the geological framework that hosts B.C.'s oil and gas resources, improve the province's resource estimates, and encourage exploration.</li> </ul> |   |   |
| 1.5. Efficient and effective energy and mining policy, legislation and regulation in the public interest of British Columbians | → | <ul style="list-style-type: none"> <li>• 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.</li> <li>• Modernize the Ministry's oil and gas tenure administration processes.</li> <li>• Complete the development of a Carbon Capture and Storage Regulatory Framework.</li> <li>• Manage the review of the Columbia River Treaty to ensure benefits for British Columbia continue to be realized.</li> <li>• 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.</li> </ul>                                  |   |   |



| Ministry Goal 2<br>Safe and environmentally responsible energy and mineral resource development and use   |   |   |   |
|---|---|---|---|
| Ministry Objectives   |   | 2013/14 Strategies  | 2012/13 Performance Measures  |
| 2.1. Standards that protect the public and the environment  | → | <ul style="list-style-type: none"> <li>• Work with industry and other natural resource sector agencies to improve environmental and safety regulation compliance at mine sites through inspections and audits.</li> <li>• Collaborate with other government ministries on the Ministry of Health's study into the potential human health effects of the oil and gas industry.</li> <li>• Work with industry to identify disposal zones for carbon dioxide sequestration projects and opportunities for carbon dioxide use in enhanced oil recovery.</li> <li>• Continue to support the annual British Columbia Mine Reclamation Awards to recognize outstanding achievements in mine reclamation in this province.</li> <li>• Support mine rescue competitions and the annual Mines Safety Awards.</li> </ul>   | → 6. WorkSafeBC injury rate at B.C. mines   |
| 2.2. Clean energy resources, fuels and related technologies complemented by energy efficiency and conservation efforts across all sectors of the economy. | → | <ul style="list-style-type: none"> <li>• Support energy utilities with the implementation of cost effective demand side management measures.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• Through the Innovative Clean Energy Fund, support projects that solve real, everyday energy and environmental issues and create economic benefits for all British Columbians.</li> <li>• 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.</li> </ul> | → 7. Total energy savings achieved each year through utility and provincial conservation policies, programs, and regulations. |

## Ministry Goal 2

### Safe and environmentally responsible energy and mineral

| Ministry Objectives   | 2013/14 Strategies  | 2012/13 Performance Measures |
|---|---|------------------------------|
| <p>2.3. The Ministry, stakeholders, First Nations and industry are engaged and working cooperatively for the responsible development and use of British Columbia's energy and mineral resources</p> | <p>→</p> <ul style="list-style-type: none"> <li>• Develop and implement an effective community and stakeholder engagement model to respond to increased unconventional gas exploration and development in Northeast B.C.</li> <li>• Seek support for the Farmers Advocacy Office in Dawson Creek to assist land owners in engaging the oil and gas sector.</li> <li>• 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.</li> <li>• 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.</li> <li>• Support the development and continuous improvement of Strategic Engagement Agreements with First Nations to make consultation processes more predictable.</li> <li>• 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.</li> <li>• Continue to work with the Ministry of Aboriginal Relations and Reconciliation to build effective business development relationships with First Nations.</li> <li>• 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.</li> <li>• 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.</li> </ul> |                              |



Pages 41 through 42 redacted for the following reasons:

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Not Responsive

**BRIEFING NOTE****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 Energy, Mines and Natural Gas (EMNG).
- A Memorandum of Understanding exists between the Chair and the Minister of EMNG to clarify the respective roles of the Minister and Chair, and the administrative and communication processes.
- 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 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 quarterly on the number of applications filed, hearings held and decisions made by the Board.

| <b>Name</b>                                       | <b>Location</b> | <b>Background</b>           | <b>Date of First Appointment</b> | <b>Expiry date of Appointment</b> |
|---|-----------------|-----------------------------|----------------------------------|-----------------------------------|
| Cheryl Vickers<br>(Chair)<br>[PAAB Chair]         | Vancouver       | Lawyer                      | July 22, 2007                    | December 31, 2013                 |
| Simmi Sandhu<br>(Vice chair)<br>[PAAB Vice-chair] | Vancouver       | Lawyer                      | July 22, 2007                    | July 31, 2014                     |
| Valli Chettiar<br>[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<br>(temporary extension)               | Victoria        | Real estate professional    | July 22, 2007                    | July 31, 2013                     |

**CONTACT:** Karen Koncohrada, ED

## BRIEFING NOTE

### **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.

s.16

- The practical effect of Alberta's measures is that companies in the oil, gas and coal sectors that operate inter-provincially establish their head office in Alberta rather than in British Columbia.

s.17

#### **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.

**CONTACT:** Karen Koncohrada, ED

Corporate Initiatives Branch

BN: 15

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**BRIEFING NOTE****ISSUE: Water Sustainability Act Initiative****KEY MESSAGES:**

- The Ministry of Environment (MOE) is leading the development of the *Water Sustainability Act (WSA)* to replace the current *Water Act* with a modernized regulatory scheme that will be applicable to all water use in the Province.
- Key elements that will be new to water regulation in the Province include the regulation of groundwater, authorities to restrict and re-prioritize water usage during drought and the introduction of stream flow requirements into water use decisions.

**BACKGROUND:**

- MOE is leading the development of a new *WSA* to replace the *Water Act* in the management of BC's water resources. Ministry of Energy, Mines and Natural Gas staff from the Corporate Initiatives Branch, Electricity and Alternative Energy Division, Mines and Minerals Resources Division and Oil and Gas Division participated in a Directors Committee set up for interagency consultations about the *WSA* project.
- The key goals of the proposed *WSA* are to ensure:
  - Watersheds are healthy and protected
  - Users, communities and industries have secure and equitable access to water; and
  - Water management is sustainable, efficient and adaptive.
- Under the *WSA*, many of the existing provisions of the *Water Act* will be retained. Changed or new policies will include measures to:
  - Protect stream health;
  - Regulate groundwater;
  - Address water use during times of scarcity;
  - Create Provincial Water Objectives for water quality, water quantity and aquatic ecosystem health;
  - Introduce requirements for decision makers to consider the quantity and timing of stream flow required to sustain freshwater ecosystems (environmental flow needs) when considering applications for surface or groundwater use; and
  - Create authority for the Water Comptroller to regulate existing water use when stream flow falls below a threshold at which significant or irreversible harm to the ecosystem may occur (critical environmental flow).
- The proposed *WSA* will maintain the existing priority date system for surface water licences (i.e., FITFIR) and introduce a priority date system for groundwater use. Existing groundwater uses will be assigned priority dates based upon well drilling records or other evidence of historic use and will be integrated into the existing priority date system.

- The proposed WSA will require large users (e.g., those using 250m<sup>3</sup>/day of water or more) to measure, record and report actual water use and related information on a more comprehensive and consistent basis than currently required under the *Water Act*. This will capture use by the oil and gas sector but is not expected to create new requirements as oil and gas operators already have to meet reporting requirements for water use under the *Oil and Gas Activities Act*.
- The proposed WSA will include requirements to conserve and use water efficiently (i.e. no wasteful use). Authority will be created to require water licensees to undertake water conservation audits; and establish levels of efficiency and conservation targets.
- Important elements of the WSA for the energy and mining sectors include:
  - Authority to exempt the use of deep, saline groundwater from regulation. The depth and saline thresholds are to be set through regulation. Deep, saline aquifers, which are believed to have minimal hydraulic connection with shallower groundwater, are of interest for use by the oil and gas industry.
  - Authority to exempt groundwater extracted from geothermal wells otherwise regulated under the *Geothermal Resources Act* from licensing under the WSA. At this time, geothermal wells are rare and the extraction is non-consumptive.
  - Continuation of the 40-year term as the maximum term for operations under a power purpose licence. However, the WSA will enable the creation of an additional term to be added to a licence to allow for the period of project development prior to the commencement of the operation. This should provide consistency and harmonization with other tenures held (e.g., *Land Act* tenures) as part of the power project.

**CONTACT:** Karen Koncohrada, ED



# Electricity and Alternative Energy Division

## 1. Purpose of the Division

The Division facilitates thriving, competitive, reliable, efficient and environmentally responsible electricity, alternative energy and energy efficiency sectors for the benefit of British Columbians.

The Division is responsible for:

- Legislation, policies and programs to support all forms of electrical power generation and transmission;
- Energy conservation and efficiency policies, programs, market transformation measures and regulations;
- Zero carbon fuel switching policies;
- Alternative energy development;
- Renewable and Low Carbon Fuels;
- Policy advice and direction to electrical utilities, including implementation of the BC Hydro Review;
- Policy advice and direction to the electricity and natural gas utility regulator, the British Columbia Utilities Commission;
- Fostering private sector investment in new electricity resources and energy efficiency technologies;
- Community Energy Solutions including remote community regulation and projects;
- Operational policy support for clean and renewable power producers;
- The LiveSmart BC: Efficiency Incentive Program;
- The LiveSmart BC: Small Business Program;
- The Innovative Clean Energy(ICE) Fund;
- The Columbia River Treaty Review; and
- Support the Minister in implementing the governance relationship with power-related Crown Corporations, BC Hydro and Columbia Power Corporation, on the Government's letter of expectations, service plan, annual report, budget and related mining, natural gas and liquefied natural gas (LNG) strategies.

The Division supports electricity and alternative energy aspects of the BC Jobs Plan, including maintaining competitively priced clean power, facilitating clean electricity supply and

transmission expansion to support LNG and new mines, and helping to advance the clean tech sector. The Division leads the implementation of electricity, energy efficiency and alternative energy components of the BC Energy Plan and *Clean Energy Act*, along with the Energy Efficient Building Strategy and the BC Bioenergy Strategy. The Division supports the achievement of the Government Strategic Plan and the Ministry Service Plan.

**Related Legislation:** *BC Hydro Public Power Legacy and Heritage Contract Act, Clean Energy Act, Energy Efficiency Act, Geothermal Resources Act, Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act, Hydro and Power Authority Act, Hydro Power Measures Act, Power for Jobs Development Act, Special Accounts Appropriation and Control Act (Sections 9.5[ICE Fund]), West Kootenay Power and Light Company Act.*

## 2. Context

### External Factors

- The Ministry of Finance forecasts British Columbia's real GDP to grow by 2.0 percent in 2012, 1.8 percent in 2013 and about 2.4 percent per year in the medium-term.
- The forecast for relatively slow near-term growth in the British Columbia economy is mainly due to continued weakness in Europe, the sluggish US recovery and the potential for further slowing of global economic activity.
- Despite the sluggish near-term forecast, LNG development in the province continues to gain momentum. Five LNG export facilities and three pipelines have been proposed for Northwest British Columbia representing a potential capital investment (including upstream development) of \$278 billion by 2020. As part of the BC Jobs Plan, British Columbia has a goal of three LNG facilities in operation by 2020.
- The British Columbia government amended the *Clean Energy Act* in the summer of 2012 to exclude LNG export facilities, and the electricity generation used to power them, from the Act's 93 percent clean and renewable energy requirement. Government remains committed to supplying a portion of the potential LNG load with BC Hydro clean and renewable electricity.
- BC Hydro is grappling with considerable uncertainty regarding future electricity needs. This uncertainty is driven primarily by potential LNG loads. If BC Hydro serves a significant portion of the new LNG load then BC Hydro could require significant new supply. However to the extent BC Hydro has a minor role in serving new LNG then BC Hydro will likely not need significant new supply and could be in surplus into the mid-term.



- In the spring of 2012, the BC Legislature amended the *Clean Energy Act* definition of self-sufficiency such that BC Hydro is required to meet customer demand on an average water year. The amendment eliminates the requirement for BC Hydro to acquire an extra 3,000 GWh hours per year of insurance energy by 2020.
- Electricity rates in BC rose by 7.1 percent on April 1, 2012 and will increase marginally by 1.44 percent next April 2013. Depending on a number of factors, including government policy, rates are expected to increase on average between 5 percent and 9 percent over the following three years.
- Energy efficiency is a leading market response to increasing energy costs for businesses and families, with economic stimulus, job creation and emissions reduction co-benefits.
- In 2011/2012, BC utilities invested \$211 million in demand-side management and are expected to maintain that level of spending in 2012/2013.
- Natural Resources Canada eliminated the ecoENERGY – Retrofit Homes incentives in March 2012. Reduced federal incentives are expected to significantly impact program uptake for LiveSmart BC in 2012/2013.
- The price of natural gas in the Province and the North American market is expected to remain low for an extended time period.
- Fortis BC predicts that the demand for natural gas in BC is expected to increase between 25 and 45 percent in the next 20 years.
- In 2012, the National Energy Board stated that transportation energy use is projected to grow at an average annual rate of 1.4 percent.

**Internal Factors:**

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- The Division currently has 40 FTE's for 2012/2013. There are 45 people working in the Division as several positions are funded from external agencies. A new Branch was formed in 2011/12 to undertake a review of the Columbia River Treaty.
- Some positions in the Division remain vacant due to the need to hold back 1.5 percent of salary dollars to address cooperative gains and fiscal constraints.
- Government instituted spending reductions and a hiring freeze across the public service in September 2012 in part to counterbalance the effect of reduced natural gas resource revenues. Accordingly, the Division will continue its efforts to streamline its operations and leverage cross-Branch resources to meet its policy, program and process priorities.

For example, cross-Branch teams have been formed to develop proposals for new standards under the *Energy Efficiency Act* and administer the Renewable and Low Carbon Fuel Requirements Regulation.

### **3 Division Priorities**

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**Programs:**

- LiveSmart Residential Program
- LiveSmart Small Business Program
- ICE Fund
- Clean Energy Vehicle Program
- Community Energy Programs (Remote Community Implementation Program, Community Energy Mentorship Program)

**Processes:**

- Ministerial servicing (referrals, briefing notes, media requests, new issues, etc.)
- Drafting and implementation of regulations as directed by Cabinet and/or Minister
- Financial forecasting/reporting
- Crown oversight and issues management of BC Hydro and Columbia Power Corp
- Oversight of utility regulatory framework (*Clean Energy Act* and *Utilities Commission Act*)
- Cross-government policy development (land use, *Water Act*, building code, *Environmental Assessment Act*, BC/AB Water Management Bilateral Negotiations, Mitigation Policy Cross Ministry Working Group; Cumulative Effects)
- Participating in environmental assessment of energy projects
- Supporting the Minister in his role as the strategic lead for clean and renewable policy development
- Participation in the Clean Energy Association of British Columbia strategic policy forum
- Tracking relevant BCUC proceedings
- Stakeholder engagement
- First Nations energy development issues management
- Remote Community Regulation & RCE MOU
- Fortis Natural Gas Vehicle program oversight (section 18 –prescribed undertaking)
- Stakeholder Working Groups (ICES, Off-grid, QUEST, Plug-In BC)
- RLCFRR Administration (annual fuel supplier audits under RLCFRR, validation of carbon intensities, carbon intensity audits, negotiation and approval of Part 3 agreements under the RLCFRR, annual report acceptance)
- Utility DSM support
- Energy Efficiency Act and EESR implementation and enforcement
- Pacific Coast Collaborative

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**Programs:**

- MARR First Nations Clean Energy Business Fund – advisory services

**Processes:**

- Intergovernmental processes (WGA, WIEB, WECC, WIRAB, WREZ, Alberta Bilaterals, Pacific Coast Collaborative, NRCan Steering Committee on Energy Efficiency, EMMC, COF, FPT Working Group, ASCEE, etc.)
- Crown corporation business cycle oversight (SLE, Service Plans, Quarterly and Annual Reports)
- Community Energy Funding Guide
- First Nation energy efficient housing
- Support BC Building Code updates
- Government point of contact for FortisBC Electric
- Government point of contact for non-utility generators
- Professional development (conferences, training, journal articles)

**Bike Rack (Parking lot):**

- Energy Efficient Buildings Strategy 3.0
- Clean Energy Act, Section 18 – Electric Transportation Prescribed Undertaking
- Heat pump water heater R&D project
- Energy Efficiency Financing with First Nations
- Natural gas energy efficiency in First Nations communities
- Coastal First Nations Clean Energy Action Plan
- Golden Carrot program for smart charging
- Energy performance disclosure for houses (including time of sale)



- BOMA energy performance benchmarking
- On-bill financing for MURBs and institutional buildings
- Energy efficiency curriculum development for schools
- Renewable energy and clean technology policy (thermal)
- 100,000 solar roofs
- Water and Land Act pricing policy review for IPPs
- Wind turbine acoustic policy

## 4. Branch/Work Unit Descriptions

### 4.1 Electricity Policy Branch (EPB)

#### Key Functions:

- The Electricity Group provides advice to the Minister and Cabinet on current and emerging electricity policy issues. The EPG is divided into the Generation and Regulation Branch (GRB) and the Transmission and Industrial Electricity Branch (TIEB).
- The GRB addresses policy issues related to electricity generation, legislation and regulation governing British Columbia's electricity sector as well as policy for Clean and Renewable Producers and building relationships with related stakeholders. GRB is responsible for oversight of the electricity Crown corporations (Columbia Power Corporation and BC Hydro). The Branch contributes to BC Hydro Site C Development, provides guidance to BC Hydro on Integrated Resource Plan Development and is implementing the BC Hydro Review (water rentals and storage fees, definition of Net Income/Dividend Policy, and PowerTech Industries Sale). The Branch works on cross-government initiatives led by other ministries or agencies such as the *Water Act* Modernization Cross Ministry Working Group, BC/AB Water Management Bilateral Negotiations, Mitigation Policy Cross Ministry Working Group, Mountain Caribou Recovery Strategy Cross-Ministry Working Group, Williston Water Withdrawal for Fracking Policy, Cumulative Effects, Run of river compliance, and projects in the Environmental Assessment process.
- The TIEB is responsible for transmission policy and legislative analysis/development including representing provincial interests in inter-jurisdictional settings. It also is responsible for working with BC Hydro on industrial electricity initiatives that support provincial economic development objectives, such as the industrial electricity rates review. TIEB manages issues related to the Northwest Transmission Line (NTL) Project, the Iskut Extension, the Yellowhead Mine Interconnection, Robson Valley and rural and

First Nations transmission expansion in support of economic development. The Branch is responsible for the BCUC Mandatory Reliability Standards Review, providing advice to natural resource agencies on operational clean and renewable power production policies, and to non-utility generators (i.e. Rio Tinto Alcan, Teck Resources and Plutonic Power) and FortisBC Electric with respect to regulatory and policy issues.

## 4.2 Efficiency and Clean Energy Policy

### Key Functions:

- Strategic planning to support broad market transformation to energy efficiency and clean energy supplies.
- Public and industry outreach and on energy efficiency and clean energy measures.
- Energy performance regulations for manufactured building components and equipment (*Energy Efficiency Act*).
- Oversight of the government regulatory framework for demand-side management, on-bill efficiency financing and clean energy programs of energy utilities (DSM regulation under the *Utilities Commission Act* and Improvement Financing and Greenhouse Gas Reduction measures under the *Clean Energy Act*).
- Development of a BC Energy Efficiency Network to promote improved productivity of British Columbia's industrial sector through the efficiency use of natural gas (Natural Gas Strategy) and other fuels and to implement the ISO50001 energy management systems standard.
- Energy efficiency policy initiatives (e.g., promotion of clothes lines for energy conservation, support for the BC Building Code).
- Ministry leadership measures on energy efficiency and carbon neutral government.



### 4.3 Energy Efficiency Programs (LiveSmart BC)

**Key Functions:**

- Distribute incentives funds through the LiveSmart Small Business and Residential incentive programs.
- Maintain and develop partnerships with Utility Partners.
- Coordinate with Energy Efficiency programs with Policies to further the impact of both.
- Adapt and expand existing Energy Efficiency programs.

### 4.4 Innovative Clean Energy (ICE) Fund

**Key Functions:**

- Provide project oversight and manage funding commitments for approved projects.
- Administer project Contribution Agreements to ensure alignment with ICE Fund objectives, government financial policy and risk management policy.
- Provide ongoing program analysis to advise Government regarding recommended changes to ICE Fund priorities, program amendments or financial management.
- Liaise with stakeholders, current project proponents and potential applicants to address program enquiries and/or administrative issues.
- Develop proposals for new Calls for Applications or use of ICE Funding for consideration by the Minister/Cabinet.

### 4.5 Communities and Transportation

**Key Functions:**

The Communities and Transportation team is responsible for policy and programs related to community energy solutions and transportation energy.

In the area of transportation energy specifically, the team is responsible for:

- The development and implementation of the Greenhouse Gas Reduction (Clean Energy) Regulation, including developing and defining prescribed undertakings for utilities to reduce emissions in the transportation sector, and managing ongoing reporting and performance,
- The delivery of the infrastructure components of the Clean Energy Vehicle Program, including project design and management for the 1000-Charging Point Project, hydrogen fuelling infrastructure and natural gas fuelling infrastructure, and
- Ongoing policy and program development to promote and manage the use of clean energy in the transportation sector.

In the area of community energy, the team is responsible for:

- Amendments to the Remote Communities Regulation, including policy oversight for BC Hydro's Remote Community Electrification Program,
- Program development and implementation supporting community leadership in energy planning, energy efficiency and clean energy, including, the following projects or programs:
  - First Nations Energy Efficient Buildings Project
  - Remote Community Implementation Program
  - Mentorship Program
- Providing technical, project management, and policy expertise and advice to community energy initiatives, including the Coastal First Nations Clean Energy Action Plan and other similar initiatives, and
- Ongoing policy and program development and R&D activities (in partnership with the federal government) to support community energy solutions.

## 4.6 Renewable and Low Carbon Fuels

### Key Functions:

- Implementation and ongoing administration of the Renewable and Low Carbon Fuel Requirements Regulation (RLCFRR).
- Process fuel supplier annual reports and compile reports.
- Monitor compliance and work with fuel suppliers to ensure that they understand the requirements of the RLCFRR.
- Review applications for carbon intensity approvals under the RLCFRR. Analyze fuel lifecycle reports to ensure that accurate carbon intensity values are approved.
- Implement an ongoing inspection regime to ensure compliance with the Act, including the development of an inspection program and training of auditors.
- Develop an electronic reporting system to ensure timely and accurate reporting and to enable the banking and exchange of credits.
- Work with stakeholders to understand industry concerns regarding compliance opportunities.
- Develop a program for entering into agreements with suppliers to issue compliance credits for actions which accelerate the transition to low carbon transportation fuels.
- Monitor developments in the understanding of emerging issues regarding new fuels, such as sustainability, food for fuel, and indirect land use change. Advise Government as necessary regarding appropriate responses to these complex issues.



## 4.7 Columbia River Treaty Review Team

### Key Functions:

The purpose of the Columbia River Treaty (CRT) Review is to recommend to Cabinet by September 2013 whether to terminate the Columbia River Treaty, as well as what the Province's position should be in discussions with the United States on any new arrangements within the CRT, amendments to the CRT, or negotiation of new commercial flood control and/or power generation arrangements outside of the CRT. The work of the CRT team includes:

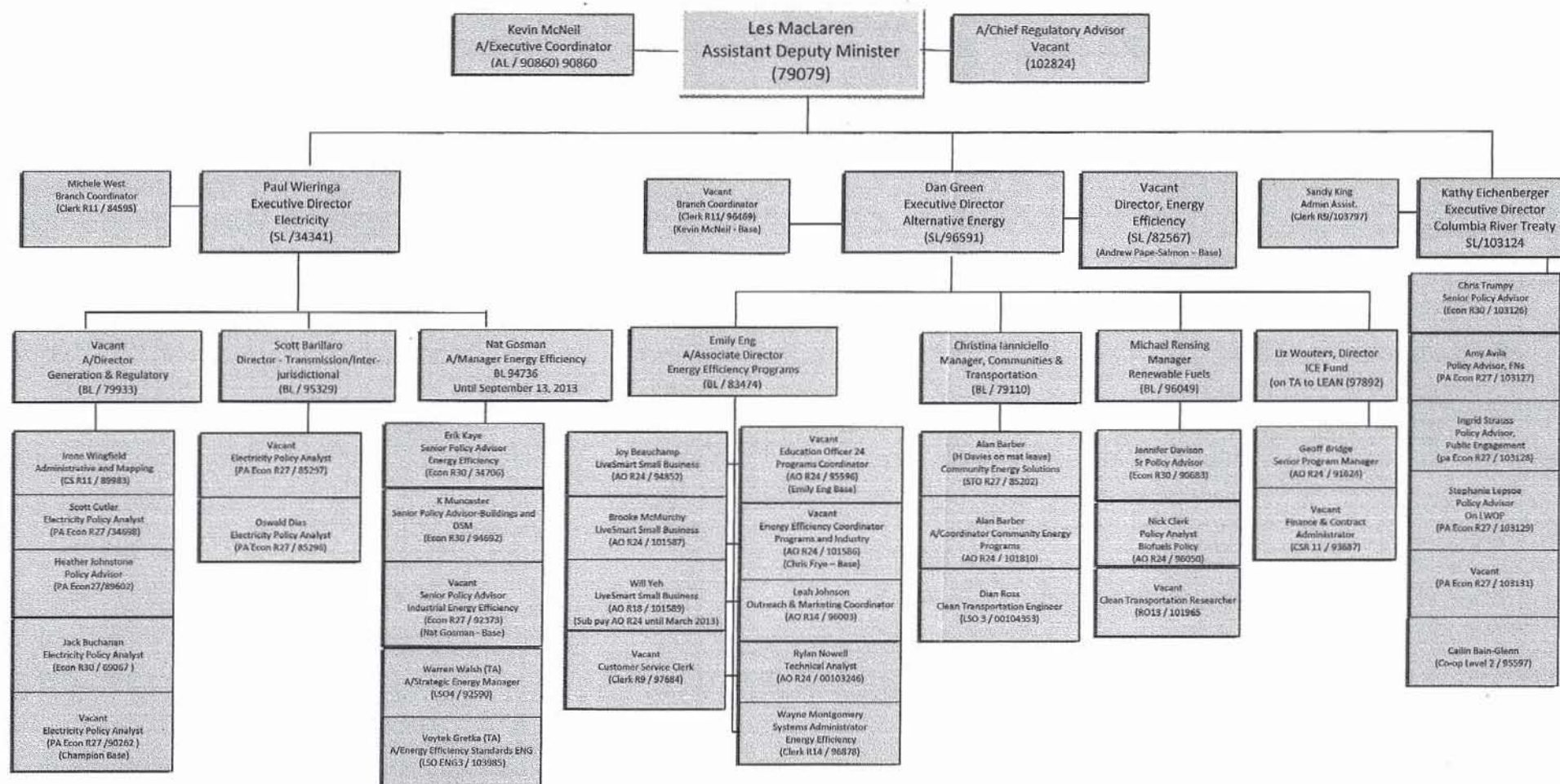
- Undertaking Economic, environmental, social, financial, legal and hydrological analyses.
- Identifying federal and provincial interests related to the CRT and developing a collaborative approach to address them.
- Analyzing US economic, environmental, financial, legal and technical interests to understand the US position on termination or revision of the CRT post-2024 and developing provincial positions on discussions with US parties.
- Meeting the Province's legal obligations to consult, and if necessary accommodate, First Nations potentially impacted by any decision on the CRT.
- Consulting Columbia Basin residents on decision options and identifying regional concerns, interests, and expectations.
- Providing a recommendation to Cabinet as to what the Province's position should be in regard to future negotiations with the United States.

## 5. Division Organization Chart, Budget and FTE's

### Budget

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Full Time Equivalents (FTEs): 37





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**BRIEFING NOTE****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 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, sets 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.
- 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 km 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. Geothermal energy prospects from sedimentary basin aquifers are considered lower risk due to the existing oil and gas exploration data sets, however, 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, length of exploration and development timelines, and the lack of a geothermal call for power.
- 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, ADM

**BRIEFING NOTE****ISSUE: Clean Energy Vehicle (CEV) Program****KEY MESSAGES:**

- British Columbia is a leading jurisdiction in adopting clean transportation technology.
- The 201 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 (extended from March 31, 2013) 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); and
  - rebates for residential electric vehicle charging stations.
- CEV Program partners include the New Car Dealers Association of BC, the Canadian Hydrogen and Fuel Cells Association, BC Hydro, major automakers (Nissan, Mitsubishi, General Motors, and Toyota), other industry, Green Fleets BC, 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 March 2013, 431 incentives have been issued.
- 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 March 2013, 111 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 spring 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 clean energy vehicles.
- 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 approximately 500 publicly available charging points throughout the Province by summer 2013. Successful applicants received funding for 75 percent of eligible costs of a station, to a maximum of \$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 also has strong research, testing and development expertise in the clean transportation sector. Under the CEV Program, \$600,000 was provided to 10 different academic and trade school projects across the Province.
- 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, Mines and Natural Gas, will reduce overall carbon intensity of transportation fuels by 10 percent by 2020. Compliance obligations with intensity reductions have been revised to begin in mid-year 2013.

**CROSS-REFERENCE:**

Information Note: 4 Green Highway

**CONTACT:** Les MacLaren, ADM



## BRIEFING NOTE

### 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 combined provincial, federal and BC Transit funding of \$89 million, 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.
- 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 July 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.

**CONTACT:** Les MacLaren, ADM

## BRIEFING NOTE

**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.
- 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 approximately 500 public Level 2 (240 volt) charging stations in communities and at businesses throughout the Province.
- 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 2013, with funding under the Clean Energy Vehicle Program. The remaining 17 stations will be located throughout the Province

S17, S16

S16, S17

- 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.

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- 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:**

Information Note: 2 Clean Energy Vehicle Program

**CONTACT:** Les MacLaren, ADM

**BRIEFING NOTE****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 per cent renewable content in diesel sold in British Columbia; and
  - a 10 percent reduction in the carbon intensity of transportation fuels by 2020.
- Amendments to the Act and Regulation will come into force on July 1, 2013 to address many of industry's concerns while maintaining British Columbia's leadership in reducing greenhouse gas emissions.

**BACKGROUND:**

- The *Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act (Act)* received Royal Assent on May 1, 2008. The Regulation came into force on January 1, 2010.
- The Regulation defines market-based performance standards that allow trading of credits between fuel suppliers, and fuel suppliers are complying by securing renewable fuel supplies and investing in the necessary infrastructure.
- All fuel suppliers have complied with the renewable requirements. The compliance periods up to June 30, 2013 have been, effectively, reporting-only years for the low carbon requirements.
- The Ministry of Energy, Mines and Natural Gas (Ministry) is adapting California's reporting and credit banking tool for use in British Columbia. It is anticipated that fuel suppliers will be able to use the reporting tool starting in the fall of 2013.
- Procedures are being developed to allow the Director appointed under the *Act* to enter into agreements with suppliers to issue credits for actions that the Director believes will accelerate the adoption of low carbon fuels.
- Ministry staff have outlined an Inspection Program that describes audit objectives, audit risk areas and detailed audit procedures for inspections under the Regulation. Options being investigated for implementing regular inspections include utilizing existing audit capabilities within Government and contracting with external qualified service providers for inspection services.
- Ministry staff are creating a small technical working group to explore technical details and provide advice regarding issues that could impact the successful implementation of the Regulation. The initial task for this group will be to identify issues of concern to industry in achieving the ten per cent reductions and making recommendations for better understanding and for addressing these issues.



- California also has a Low Carbon Fuel Standard requiring a ten per cent reduction in the carbon intensity of transportation fuels by 2020.
- Oregon has set requirements for reporting the carbon intensity of transportation fuels, and is currently deciding whether to proceed with requirements to reduce the carbon intensity.
- The Government of Canada has implemented a renewable fuel standard requiring a national average of five per cent renewable content in Canada's gasoline supply, and a national average of two per cent renewable content in all diesel and home heating oil supplies.
- Alberta, Saskatchewan, Manitoba and Ontario have renewable fuel requirements.
- The European Union has set targets for renewable energy and requires national action plans that establish pathways for the development of renewable energy sources.

**CONTACT:** Les MacLaren, ADM

**BRIEFING NOTE****ISSUE: Waste to Energy Under Clean or Renewable Electricity Guidelines****KEY MESSAGES:**

- Electricity generated from municipal organic waste used to fuel a waste-to-energy (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.
- Local governments in the province are considering WTE facilities as a more sustainable alternative to landfills.

**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).

S13

- 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.

S13, S21

S13, S21 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 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 19 proposals from firms interested in building and/or owning operating the WTE facility. Metro Vancouver continues to assess the submissions and

S13, S16

S13, S16

S13, S16 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 price of power sales.

S13, S17, S16

S13, S16, S17

**CONTACT:** Les MacLaren, ADM

**BRIEFING NOTE****ISSUE: British Columbia Electricity Market Structure****KEY MESSAGES:**

- Electricity rates in British Columbia are set by the British Columbia Utilities Commission (BCUC).
- While BC Hydro is the largest utility and generator in British Columbia, other utilities, industrial generators, and Independent Power Producers also operate in the market.

**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 (plus a return to utility shareholders) rather than the price set in a competitive market.
- The 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 more than 17,000 megawatts (MW) of installed generation capacity:
  - BC Hydro (69 percent) ~12,040 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) ~2,294 MW, 75 facilities
  - Columbia Power Corporation/Columbia Basin Trust (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 or renewable sources. Reliable data for subsequent years is not available, but it is likely that current figures are higher, as only clean or renewable generation has come online since 2008.



**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. BC Hydro reported \$975 million in trade revenues in fiscal 2012.
- 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.
- In recent years, low market prices have become a challenge.
- BC Hydro has been a net purchaser of electricity in three of the last five years, but has shifted to a significant surplus position. From fiscal 2008-2012, BC Hydro had an average of 1,482 GWh per year in net purchases. In fiscal 2012, a high water year, BC Hydro's net sales to market were 3,888 GWh.

**CONTACT:** Les MacLaren, ADM

## BRIEFING NOTE

### 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.
- While the report shows BC Hydro's rates increasing, they remain within the lowest quartile of utilities surveyed.

#### BACKGROUND:

- One of the energy objectives in section 2 of the *Clean Energy Act (CEA)* 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 *CEA*, BC Hydro is required to produce a rate comparison report which:
  - includes the rates of at least one public utility from each of more than 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.
- BC Hydro currently uses a Quebec Hydro report, "Comparison of Electricity Prices in Major North American Cities", which compares 22 North American utilities' rates, to compile its rate comparison report findings.
- BC Hydro completed its fifth annual rate comparison report in December 2012.
- The previous rate comparison report showed that BC Hydro residential ratepayers pay the third to sixth lowest rates among utilities surveyed, commercial ratepayers pay the third to seventh lowest rates, and large industrial customers pay the third to fifth lowest rates.
- The relative competitiveness of BC Hydro rates depends on a number of factors, including rate design and the level of consumption.
- The new rate comparison report showed that BC Hydro residential and commercial ratepayers pay the fourth to seventh lowest rates among utilities surveyed, while large industrial customers pay the third to sixth lowest rates.

#### ATTACHMENT:

8A - BC Hydro Rate Comparison Report

**CONTACT:** Les MacLaren, ADM





FOR GENERATIONS

**Janet Fraser**  
Chief Regulatory Officer  
Phone: 604-623-4046  
Fax: 604-623-4407  
[bchydroregulatorygroup@bchydro.com](mailto:bchydroregulatorygroup@bchydro.com)

December 17, 2012

Hon. Rich Coleman  
Minister of Energy, Mines and Natural Gas  
PO Box 9060 Stn Prov Govt  
Victoria BC V8W 9E3

Via email: [EMH.minister@gov.bc.ca](mailto:EMH.minister@gov.bc.ca)

Dear Minister Coleman:

**RE: Electricity Rate Comparison Report - Fifth Annual Report**

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BC Hydro writes to the Minister to file its Electricity Rate Comparison Annual Report (the **Report**) which provides a comparison of BC Hydro's monthly bills and average prices for residential, commercial and industrial customers with other North American utilities as of April 1, 2012 (**Attachment A**). The report is prepared in response to *Clean Energy Act* section 8 (4), which states that:

*"The authority must provide to the minister, in accordance with the regulations, an annual report comparing the electricity rates charged by the authority with electricity rates charged by public utilities in other jurisdictions in North America, including an assessment of the extent to which the authority's electricity rates continue to be competitive with those other rates."*

BC Hydro has adhered to the Province of British Columbia's Rate Comparison Regulation (Ministerial Order No. M167) (**Attachment B**). The Rate Comparison Regulation requires that the Report provide a comparison of BC Hydro's monthly electricity bills with at least one public utility in each of at least 15 other North American jurisdictions, including all of the following: the provinces of Alberta, Quebec, Ontario and Manitoba; and the states of Washington, Oregon and California. The comparison concerns the previous year's applicable rates for residential, commercial and industrial customers in Canadian funds. Additionally, BC Hydro is to provide its previous five years of applicable rates.

For efficiency and consistency in reported data, the Report consists of information taken from a Hydro-Quebec rate survey report titled "Comparison of Electricity Prices in Major North American Cities" in which BC Hydro participates. The Hydro-Quebec report is prepared each year. Monthly bills and average prices are calculated and submitted to Hydro-Quebec by the participating utilities using the rates that are in place as of April 1 of that current year. As such, some of the rates used may be interim rates that are

approved and in effect at that time. The Hydro-Quebec report is typically available in the fall of the same year.

The Report indicates that BC Hydro's monthly bills and average prices remain generally within the first (i.e., lowest rate) quartile of the public utilities surveyed.

For further information, please contact the undersigned.

Yours sincerely,



Janet Fraser  
Chief Regulatory Officer

dr/rh

Enclosure

Copy to: **British Columbia Utilities Commission**  
Attention: Ms. Erica Hamilton  
Commission Secretary  
[Commission.secretary@bcuc.com](mailto:Commission.secretary@bcuc.com)

**Ministry of Energy**  
Deputy Minister's Office  
Electricity & Alternative Energy Division  
Attention: Steve Carr  
Deputy Minister  
[Steve.Carr@gov.bc.ca](mailto:Steve.Carr@gov.bc.ca)

**Ministry of Energy**  
Electricity & Alternative Energy Division  
Attention: Les MacLaren  
Assistant Deputy Minister  
[Les.MacLaren@gov.bc.ca](mailto:Les.MacLaren@gov.bc.ca)





**Attachment A**

**Electricity Rate Comparison Annual Report**

  
**April 1, 2012 Rates**

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**List of Tables**

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## 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.<sup>1</sup>

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.<sup>2</sup>

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.

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<sup>1</sup> 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.

<sup>2</sup> [http://www.hydroquebec.com/publications/en/comparison\\_prices/index.html](http://www.hydroquebec.com/publications/en/comparison_prices/index.html).

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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:



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

**Table 1 Residential Monthly Bills**

| Hydro-Quebec Electricity Prices Comparison Report – Residential<br>Monthly Bills as of April 1, 2012<br>CDN \$/Month |                   |         |        |         |        |           |        |           |        |
|--|-------------------|---------|--------|---------|--------|-----------|--------|-----------|--------|
| Utility  | City              | 625 kWh |        | 750 kWh |        | 1,000 kWh |        | 2,000 kWh |        |
| Hydro-Quebec   | Montreal, QC      | (2nd)   | 45.44  | (1st)   | 52.09  | (1st)     | 67.58  | (2nd)     | 142.68 |
| Manitoba Hydro   | Winnipeg, MB      | (3rd)   | 49.16  | (3rd)   | 57.63  | (2nd)     | 74.55  | (1st)     | 142.25 |
| Seattle City Light   | Seattle, WA       | (1st)   | 45.00  | (2nd)   | 57.24  | (3rd)     | 81.72  | (5th)     | 179.60 |
| CenterPoint Energy <sup>2</sup>  | Houston, TX       |         | 71.42  |         | 81.84  |           | 92.81  | (4th)     | 176.15 |
| BC Hydro   | Vancouver, BC     | (4th)   | 49.43  | (4th)   | 61.03  | (4th)     | 87.77  | (7th)     | 194.77 |
| Commonwealth Edison <sup>2</sup>   | Chicago, IL       |         | 82.16  |         | 95.20  |           | 121.27 | (3rd)     | 168.68 |
| Florida Power and Light <sup>2</sup>   | Miami, FL         | (5th)   | 59.37  | (5th)   | 70.08  | (5th)     | 91.48  |           | 196.95 |
| Nashville Electric Service   | Nashville, TN     |         | 68.70  |         | 80.09  |           | 102.88 |           | 194.02 |
| Pacific Power and Light  | Portland, OR      |         | 67.99  |         | 79.58  |           | 102.76 |           | 220.63 |
| NB Power   | Moncton, NB       |         | 81.29  |         | 93.61  |           | 118.23 |           | 216.73 |
| Newfoundland Power <sup>1</sup>  | St. John's, NL    |         | 79.54  |         | 92.35  |           | 117.98 |           | 220.49 |
| SaskPower  | Regina, SK        |         | 85.59  |         | 98.86  |           | 125.38 |           | 231.48 |
| EPCOR Energy   | Edmonton, AB      |         | 88.80  |         | 102.21 |           | 129.04 |           | 236.36 |
| Hydro Ottawa   | Ottawa, ON        |         | 83.78  |         | 98.72  |           | 131.43 |           | 263.38 |
| Enmax  | Calgary, AB       |         | 93.80  |         | 108.82 |           | 138.85 |           | 258.99 |
| Toronto Hydro  | Toronto, ON       |         | 90.68  |         | 105.62 |           | 135.72 |           | 261.46 |
| Maritime Electric  | Charlottetown, PE |         | 99.88  |         | 114.95 |           | 145.07 |           | 265.57 |
| Nova Scotia Power  | Halifax, NS       |         | 97.85  |         | 115.25 |           | 150.06 |           | 289.29 |
| Detroit Edison <sup>2</sup>  | Detroit, MI       |         | 94.71  |         | 113.23 |           | 150.26 |           | 298.40 |
| Boston Edison  | Boston, MA        |         | 105.20 |         | 124.97 |           | 164.48 |           | 322.59 |
| Consolidated Edison <sup>2</sup>   | New York, NY      |         | 146.87 |         | 173.13 |           | 225.65 |           | 435.74 |
| Pacific Gas and Electric <sup>2</sup>  | San Francisco, CA |         | 137.09 |         | 179.17 |           | 222.61 |           | 559.03 |

1) Newfoundland Power rates.

2) These bills have been estimated by Hydro-Québec and may differ from actual bills.

Note: Bill calculations exclude taxes and levies. BC Hydro's bill calculation includes the rate rider. The top five participating utilities with the lowest monthly bills are ranked in the table above, from lowest to highest. The sort order indicates the utility's overall ranking in the category.



**Table 2 Small Power Monthly Bills**

| Hydro-Quebec Electricity Prices Comparison Report – Small Power<br>Monthly Bills as of April 1, 2012<br>CDN \$/Month |                   |                                    |                                      |  |   |   |
|--|-------------------|------------------------------------|--------------------------------------|--|---|---|
| Utility  | City              | 6 kW<br>750 kWh<br>17% load factor | 14 kW<br>2000 kWh<br>20% load factor | 40 kW<br>10,000 kWh<br>35% load factor | 100 kW<br>14,000 kWh<br>19% load factor | 100 kW<br>25,000 kWh<br>35% load factor |
| Seattle City Light   | Seattle, WA       | (1st) 51.32                        | (1st) 136.85                         | (1st) 684.27                           | (1st) 941.12                            | (1st) 1,582.75                          |
| Manitoba Hydro   | Winnipeg, MB      | (3rd) 71.80                        | (2nd) 160.55                         | (2nd) 728.55                           | (3rd) 1,456.49                          | (2nd) 1,907.49                          |
| CenterPoint Energy <sup>2</sup>  | Houston, TX       | (2nd) 63.88                        | 230.08                               | (3rd) 793.14                           | (2nd) 1,405.26                          | (3rd) 1,927.64                          |
| Pacific Power and Light  | Portland, OR      | 92.76                              | 215.52                               | 946.66                                 | (4th) 1,552.04                          | 2,328.39                                |
| BC Hydro   | Vancouver, BC     | (6th) 78.20                        | (5th) 198.30                         | (7th) 972.62                           | (5th) 1,644.83                          | (4th) 2,244.97                          |
| Hydro-Quebec   | Montreal, QC      | (5th) 77.81                        | (3rd) 186.93                         | (4th) 885.33                           | 1,667.40                                | 2,446.50                                |
| Florida Power and Light <sup>2</sup>   | Miami, FL         | (4th) 77.10                        | (4th) 194.20                         | (5th) 940.77                           | 1,748.64                                | (5th) 2,327.46                          |
| Commonwealth Edison <sup>2</sup>   | Chicago, IL       | 96.70                              | 230.96                               | 1,076.16                               | 1,721.59                                | 2,653.63                                |
| Enmax  | Calgary, AB       | 119.54                             | 262.59                               | 1,124.23                               | 1,758.53                                | 2,584.99                                |
| SaskPower  | Regina, SK        | 99.84                              | 225.70                               | 1,031.22                               | 1,986.75                                | 2,724.60                                |
| Nashville Electric Service   | Nashville, TN     | 102.31                             | 230.88                               | 1,053.73                               | 2,188.09                                | 2,897.87                                |
| Detroit Edison <sup>2</sup>  | Detroit, MI       | 109.75                             | 274.42                               | 1,267.19                               | 1,763.58                                | 3,128.64                                |
| EPCOR Energy   | Edmonton, AB      | 106.43                             | 259.78                               | 1,241.22                               | 2,012.07                                | 3,029.02                                |
| Newfoundland Power <sup>1</sup>  | St. John's, NL    | 107.76                             | 317.17                               | 1,183.18                               | 2,133.47                                | 2,979.55                                |
| NB Power   | Moncton, NB       | 111.46                             | 262.33                               | 1,245.63                               | 2,167.63                                | 3,109.23                                |
| Toronto Hydro  | Toronto, ON       | 116.41                             | 281.95                               | 1,341.18                               | 2,228.84                                | 3,249.75                                |
| Hydro Ottawa   | Ottawa, ON        | 110.40                             | 270.39                               | 1,294.32                               | 2,311.00                                | 3,377.46                                |
| Nova Scotia Power  | Halifax, NS       | 117.95                             | 288.09                               | 1,424.76                               | 2,483.82                                | 3,561.90                                |
| Maritime Electric  | Charlottetown, PE | 138.42                             | 328.17                               | 1,517.67                               | 2,695.87                                | 3,719.97                                |
| Pacific Gas and Electric <sup>2</sup>  | San Francisco, CA | 140.18                             | 357.51                               | 1,690.20                               | 2,700.63                                | 4,020.24                                |
| Boston Edison  | Boston, MA        | 132.43                             | 340.02                               | 1,760.22                               | 3,410.25                                | 4,641.36                                |
| Consolidated Edison <sup>2</sup>   | New York, NY      | 185.01                             | 583.33                               | 2,129.18                               | 3,979.72                                | 5,285.58                                |

1) Newfoundland Power rates.

2) These bills have been estimated by Hydro-Québec and may differ from actual bills.

Note: Bill calculations exclude taxes and levies. BC Hydro's bill calculation includes the rate rider. The top five participating utilities with the lowest monthly bills are ranked in the table above, from lowest to highest. The sort order indicates the utility's overall ranking in the category.

**Table 3 Medium Power Monthly Bills**

| Hydro-Quebec Electricity Prices Comparison Report – Medium Power<br>Monthly Bills as of April 1, 2012<br>CDN \$/Month |                   |  |  |   |   |  |
|---|-------------------|--|--|---|---|--|
| Utility   | City              | 500 kW<br>100,000 kWh<br>28% load factor | 500 kW<br>200,000 kWh<br>56% load factor | 1000 kW<br>200,000 kWh<br>28% load factor | 1000 kW<br>400,000 kWh<br>56% load factor | 2500 kW <sup>1</sup><br>1,170,000 kWh<br>65% load factor |
| Manitoba Hydro  | Winnipeg, MB      | (2nd) 8,073                              | (1st) 11,333                             | (2nd) 15,962                              | (1st) 22,482                              | (1st) 55,587   |
| Seattle City Light  | Seattle, WA       | (1st) 6,456                              | (2nd) 12,287                             | (1st) 12,567                              | (2nd) 24,172                              | (2nd) 70,294   |
| CenterPoint Energy <sup>4</sup>   | Houston, TX       | (3rd) 9,122                              | (4th) 13,871                             | 19,257                                    | (5th) 28,755                              | (4th) 72,827   |
| Commonwealth Edison <sup>4</sup>  | Chicago, IL       | (4th) 9,159                              | (3rd) 13,759                             | (4th) 18,779                              | (3rd) 28,010                              | 77,123   |
| BC Hydro  | Vancouver, BC     | (5th) 9,371                              | (5th) 14,106                             | (5th) 18,831                              | (4th) 28,302                              | (5th) 77,100   |
| Hydro-Quebec  | Montreal, QC      | 11,055                                   | 15,540                                   | 22,110                                    | 28,762                                    | (3rd) 70,795   |
| Pacific Power and Light   | Portland, OR      | 9,737                                    | 15,662                                   | (3rd) 18,000                              | 29,207                                    | 78,384   |
| Florida Power and Light <sup>4</sup>  | Miami, FL         | 10,627                                   | 15,408                                   | 21,205                                    | 30,767                                    | 82,723   |
| SaskPower   | Regina, SK        | 12,213                                   | 18,160                                   | 24,432                                    | 36,326                                    | 87,066   |
| Newfoundland Power <sup>3</sup>   | St. John's, NL    | 11,490                                   | 18,608                                   | 22,057                                    | 36,217                                    | 100,405  |
| Enmax   | Calgary, AB       | 11,916                                   | 19,290                                   | 23,373                                    | 38,122                                    | 101,249  |
| Nashville Electric Service  | Nashville, TN     | 12,190                                   | 18,259                                   | 24,185                                    | 36,323                                    | 103,988  |
| Detroit Edison <sup>4</sup>   | Detroit, MI       | 12,436                                   | 19,727                                   | 24,846                                    | 38,956                                    | 100,988  |
| NB Power  | Moncton, NB       | 13,393                                   | 21,953                                   | 26,783                                    | 43,903                                    | 124,305  |
| EPCOR Energy <sup>2</sup>   | Edmonton, AB      | 14,189                                   | 23,062                                   | 26,552                                    | 44,299                                    | 123,093  |
| Toronto Hydro   | Toronto, ON       | 13,792                                   | 23,111                                   | 27,273                                    | 45,712                                    | 128,800  |
| Nova Scotia Power   | Halifax, NS       | 15,755                                   | 23,975                                   | 31,509                                    | 47,949                                    | 119,849  |
| Hydro Ottawa  | Ottawa, ON        | 13,293                                   | 22,988                                   | 26,293                                    | 45,683                                    | 133,867  |
| Pacific Gas and Electric <sup>4</sup>   | San Francisco, CA | 19,008                                   | 27,342                                   | 37,417                                    | 53,739                                    | 112,134  |
| Boston Edison   | Boston, MA        | 18,060                                   | 25,142                                   | 35,954                                    | 50,118                                    | 135,601  |
| Maritime Electric   | Charlottetown, PE | 16,074                                   | 25,384                                   | 32,099                                    | 50,719                                    | 142,551  |
| Consolidated Edison <sup>4</sup>  | New York, NY      | 23,174                                   | 35,045                                   | 46,276                                    | 70,019                                    | 147,492  |

1) Supply voltage of 25 kV.

2) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

3) Newfoundland Power rates.

4) These bills have been estimated by Hydro-Québec and may differ from actual bills.

Note: Bill calculations exclude taxes and levies. BC Hydro's bill calculation includes the rate rider. The top five participating utilities with the lowest monthly bills are ranked in the table above, from lowest to highest. The sort order indicates the utility's overall ranking in the category.



**Table 4 Large Power Monthly Bills**

| Hydro-Quebec Electricity Prices Comparison Report – Large Power |                   |   |   |   |                                       |                                       |                                       |  |
|---|-------------------|---|---|---|---------------------------------------|---------------------------------------|---------------------------------------|--|
| Monthly Bills as of April 1, 2012                               |                   |   |   |   |                                       |                                       |                                       |  |
| CDN \$000/Month   |                   |   |   |   |                                       |                                       |                                       |  |
| Utility   | City              | 5,000 kW<br>2,340,000 kWh<br>25 kV<br>65% load factor | 5,000 kW<br>3,060,000 kWh<br>25 kV<br>85% load factor | 10,000 kW<br>5,760,000 kWh<br>120 kV<br>80% load factor | 30,000 kW<br>17,520,000 kWh<br>120 kV | 50,000 kW<br>23,400,000 kWh<br>120 kV | 50,000 kW<br>30,600,000 kWh<br>120 kV |  |
| Manitoba Hydro  | Winnipeg, MB      | (1st) 109.1   | (1st) 131.2   | (1st) 215.8   | (1st) 654.1                           | (1st) 930.1                           | (1st) 1,128.8                         |  |
| Newfoundland Power <sup>2</sup>                                 | St. John's, NL    | 198.3   | 249.9   | 468.0   | (2nd) 706.9                           | (2nd) 1,010.5                         | (2nd) 1,218.6                         |  |
| Hydro-Quebec  | Montreal, QC      | (2nd) 124.5   | (2nd) 145.8   | (2nd) 265.1   | (3rd) 802.4                           | (3rd) 1,166.3                         | (3rd) 1,378.7                         |  |
| BC Hydro  | Vancouver, BC     | (6th) 154.3   | (6th) 187.9   | (3rd) 291.2   | (4th) 883.0                           | (4th) 1,248.1                         | (4th) 1,525.6                         |  |
| Commonwealth Edison <sup>3</sup>                                | Chicago, IL       | (5th) 153.7   | (5th) 187.0   | 327.7   | (5th) 939.9                           | (5th) 1,298.3                         | (5th) 1,630.6                         |  |
| Seattle City Light  | Seattle, WA       | (3rd) 140.6   | (4th) 182.4   | (4th) 323.1   | 982.2                                 | 1,321.5                               | 1,713.2                               |  |
| CenterPoint Energy <sup>3</sup>                                 | Houston, TX       | (4th) 144.2   | (3rd) 178.3   | (5th) 323.8   | 979.8                                 | 1,356.7                               | 1,698.5                               |  |
| SaskPower   | Regina, SK        | 166.7   | 204.4   | 335.6   | 1,005.1                               | 1,401.1                               | 1,736.0                               |  |
| Pacific Power and Light   | Portland, OR      | 155.9   | 194.1   | 355.8   | 1,049.8                               | 1,465.3                               | 1,817.0                               |  |
| Florida Power and Light <sup>3</sup>                            | Miami, FL         | 165.3   | 198.6   | 358.4   | 1,082.7                               | 1,556.4                               | 1,863.2                               |  |
| NB Power  | Moncton, NB       | 185.4   | 220.2   | 402.8   | 1,219.8                               | 1,757.5                               | 2,099.5                               |  |
| EPCOR Energy <sup>1</sup>                                       | Edmonton, AB      | 237.7   | 299.3   | 412.2   | 1,233.8                               | 1,687.3                               | 2,133.1                               |  |
| Nashville Electric Service                                      | Nashville, TN     | 209.1   | 252.6   | 416.2   | 1,246.2                               | 1,856.4                               | 2,128.6                               |  |
| Detroit Edison <sup>3</sup>                                     | Detroit, MI       | 201.5   | 241.8   | 451.0   | 1,365.4                               | 1,953.1                               | 2,353.0                               |  |
| Enmax   | Calgary, AB       | 200.5   | 253.8   | 480.4   | 1,457.9                               | 1,999.9                               | 2,533.1                               |  |
| Maritime Electric   | Charlottetown, PE | 212.7   | 255.8   | 490.0   | 1,484.4                               | 2,126.7                               | 2,557.9                               |  |
| Pacific Gas and Electric <sup>3</sup>                           | San Francisco, CA | 221.7   | 272.1   | 517.1   | 1,564.2                               | 2,199.7                               | 2,703.7                               |  |
| Nova Scotia Power   | Halifax, NS       | 223.6   | 275.4   | 524.9   | 1,592.0                               | 2,235.8                               | 2,754.2                               |  |
| Boston Edison   | Boston, MA        | 260.3   | 310.2   | 595.3   | 1,802.0                               | 2,601.1                               | 3,100.2                               |  |
| Toronto Hydro   | Toronto, ON       | 255.9   | 324.3   | 613.1   | 1,845.4                               | 2,544.2                               | 3,201.1                               |  |
| Hydro Ottawa  | Ottawa, ON        | 268.9   | 336.9   | 625.1   | 1,868.5                               | 2,556.6                               | 3,236.6                               |  |
| Consolidated Edison <sup>3</sup>                                | New York, NY      | 294.9   | 353.4   | 677.4   | 2,051.6                               | 2,948.4                               | 3,532.9                               |  |

1) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

2) Newfoundland Power and Labrador Hydro rates for customers with a power demand of 30,000 kW or more; Newfoundland Power rates for all other customer categories.

3) These bills have been estimated by Hydro-Québec and may differ from actual bills.

Note: Bill calculations exclude taxes and levies. BC Hydro's bill calculation includes the rate rider. The top five participating utilities with the lowest monthly bills are ranked in the table above, from lowest to highest. The sort order indicates the utility's overall ranking in the category.

**Table 5 Residential Average Prices**

| Hydro-Quebec Electricity Prices Comparison Report – Residential<br>Average Prices as of April 1, 2012<br>CDN ¢/kWh |                   |            |            |            |            |             |
|--|-------------------|------------|------------|------------|------------|-------------|
| Utility  | City              | 625 kWh    | 750 kWh    | 1,000 kWh  | 2,000 kWh  | 3,000 kWh   |
| Hydro-Quebec   | Montreal, QC      | (2nd) 7.27 | (1st) 6.95 | (1st) 6.76 | (2nd) 7.13 | (2nd) 7.26  |
| Manitoba Hydro   | Winnipeg, MB      | (3rd) 7.87 | (3rd) 7.68 | (2nd) 7.46 | (1st) 7.11 | (1st) 7.00  |
| Seattle City Light   | Seattle, WA       | (1st) 7.20 | (2nd) 7.63 | (3rd) 8.17 | (5th) 8.98 | (5th) 9.25  |
| BC Hydro   | Vancouver, BC     | (4th) 7.91 | (4th) 8.14 | (4th) 8.78 | (7th) 9.74 | (7th) 10.06 |
| Florida Power and Light <sup>2</sup>   | Miami, FL         | (5th) 9.50 | (5th) 9.34 | (5th) 9.15 | 9.85       | 10.08       |
| CenterPoint Energy <sup>2</sup>  | Houston, TX       | 11.43      | 10.91      | 9.28       | (4th) 8.81 | (4th) 8.65  |
| Nashville Electric Service   | Nashville, TN     | 10.99      | 10.68      | 10.29      | 9.70       | 9.51        |
| Pacific Power and Light  | Portland, OR      | 10.88      | 10.61      | 10.28      | 11.03      | 11.28       |
| Commonwealth Edison <sup>2</sup>   | Chicago, IL       | 13.15      | 12.69      | 12.13      | (3rd) 8.43 | (3rd) 8.05  |
| Newfoundland Power <sup>1</sup>  | St. John's, NL    | 12.73      | 12.31      | 11.80      | 11.02      | 10.77       |
| NB Power   | Moncton, NB       | 13.01      | 12.48      | 11.82      | 10.84      | 10.51       |
| SaskPower  | Regina, SK        | 13.69      | 13.18      | 12.54      | 11.57      | 11.25       |
| EPCOR Energy   | Edmonton, AB      | 14.21      | 13.63      | 12.90      | 11.82      | 11.46       |
| Hydro Ottawa   | Ottawa, ON        | 13.40      | 13.16      | 13.14      | 13.17      | 13.18       |
| Toronto Hydro  | Toronto, ON       | 14.51      | 14.08      | 13.57      | 13.07      | 12.91       |
| Enmax  | Calgary, AB       | 15.01      | 14.51      | 13.89      | 12.95      | 12.64       |
| Maritime Electric  | Charlottetown, PE | 15.98      | 15.33      | 14.51      | 13.28      | 11.92       |
| Nova Scotia Power  | Halifax, NS       | 15.66      | 15.37      | 15.01      | 14.46      | 14.28       |
| Detroit Edison <sup>2</sup>  | Detroit, MI       | 15.15      | 15.10      | 15.03      | 14.92      | 14.88       |
| Boston Edison  | Boston, MA        | 16.83      | 16.66      | 16.45      | 16.13      | 16.02       |
| Consolidated Edison <sup>2</sup>   | New York, NY      | 23.50      | 23.08      | 22.57      | 21.79      | 21.53       |
| Pacific Gas and Electric <sup>2</sup>  | San Francisco, CA | 21.93      | 23.89      | 22.26      | 27.95      | 29.85       |

1) Newfoundland Power rates.

2) These bills have been estimated by Hydro-Québec and may differ from actual bills.

Note: The top five participating utilities with the lowest average prices are ranked in the table above, from lowest to highest. The sort order indicates the utility's overall ranking in the category.



**Table 6 Small Power Average Prices**

| Hydro-Quebec Electricity Prices Comparison Report – Small Power |                   |                                    |                                      |  |   |   |
|---|-------------------|------------------------------------|--------------------------------------|--|---|---|
| Average Prices as of April 1, 2012                              |                   |                                    |                                      |  |   |   |
| CDN ¢/kWh   |                   |                                    |                                      |  |   |   |
| Utility   | City              | 6 kW<br>750 kWh<br>17% load factor | 14 kW<br>2000 kWh<br>20% load factor | 40 kW<br>10,000 kWh<br>35% load factor | 100 kW<br>14,000 kWh<br>19% load factor | 100 kW<br>25,000 kWh<br>35% load factor |
| Seattle City Light  | Seattle, WA       | (1st) 6.84                         | (1st) 6.84                           | (1st) 6.84                             | (1st) 6.72                              | (1st) 6.33                              |
| Manitoba Hydro  | Winnipeg, MB      | (3rd) 9.57                         | (2nd) 8.03                           | (2nd) 7.29                             | (3rd) 10.40                             | (2nd) 7.63                              |
| CenterPoint Energy <sup>2</sup>                                 | Houston, TX       | (2nd) 8.52                         | 11.50                                | (3rd) 7.93                             | (2nd) 10.04                             | (3rd) 7.71                              |
| Hydro-Quebec  | Montreal, QC      | (5th) 10.37                        | (3rd) 9.35                           | (4th) 8.85                             | 11.91                                   | 9.79                                    |
| BC Hydro  | Vancouver, BC     | (6th) 10.43                        | (5th) 9.92                           | (7th) 9.73                             | (5th) 11.75                             | (4th) 8.98                              |
| Florida Power and Light <sup>2</sup>                            | Miami, FL         | (4th) 10.28                        | (4th) 9.71                           | (5th) 9.41                             | 12.49                                   | (5th) 9.31                              |
| Pacific Power and Light   | Portland, OR      | 12.37                              | 10.78                                | 9.47                                   | (4th) 11.09                             | 9.31                                    |
| Commonwealth Edison <sup>2</sup>                                | Chicago, IL       | 12.89                              | 11.55                                | 10.76                                  | 12.30                                   | 10.61                                   |
| SaskPower   | Regina, SK        | 13.31                              | 11.29                                | 10.31                                  | 14.19                                   | 10.90                                   |
| Nashville Electric Service                                      | Nashville, TN     | 13.64                              | 11.54                                | 10.54                                  | 15.63                                   | 11.59                                   |
| Enmax   | Calgary, AB       | 15.94                              | 13.13                                | 11.24                                  | 12.56                                   | 10.34                                   |
| EPCOR Energy  | Edmonton, AB      | 14.19                              | 12.99                                | 12.41                                  | 14.37                                   | 12.12                                   |
| Detroit Edison <sup>2</sup>                                     | Detroit, MI       | 14.63                              | 13.72                                | 12.67                                  | 12.60                                   | 12.51                                   |
| NB Power  | Moncton, NB       | 14.86                              | 13.12                                | 12.46                                  | 15.48                                   | 12.44                                   |
| Newfoundland Power <sup>1</sup>                                 | St. John's, NL    | 14.37                              | 15.86                                | 11.83                                  | 15.24                                   | 11.92                                   |
| Hydro Ottawa  | Ottawa, ON        | 14.72                              | 13.52                                | 12.94                                  | 16.51                                   | 13.51                                   |
| Toronto Hydro   | Toronto, ON       | 15.52                              | 14.10                                | 13.41                                  | 15.92                                   | 13.00                                   |
| Nova Scotia Power   | Halifax, NS       | 15.73                              | 14.40                                | 14.25                                  | 17.74                                   | 14.25                                   |
| Maritime Electric   | Charlottetown, PE | 18.46                              | 16.41                                | 15.18                                  | 19.26                                   | 14.88                                   |
| Pacific Gas and Electric <sup>2</sup>                           | San Francisco, CA | 18.69                              | 17.88                                | 16.90                                  | 19.29                                   | 16.08                                   |
| Boston Edison   | Boston, MA        | 17.66                              | 17.00                                | 17.60                                  | 24.36                                   | 18.57                                   |
| Consolidated Edison <sup>2</sup>                                | New York, NY      | 24.67                              | 29.17                                | 21.29                                  | 28.43                                   | 21.14                                   |

1) Newfoundland Power rates.

2) These bills have been estimated by Hydro-Québec and may differ from actual bills.

Note: The top five participating utilities with the lowest average prices are ranked in the table above, from lowest to highest. The sort order indicates the utility's overall ranking in the category.

**Table 7 Medium Power Average Prices**

| Hydro-Quebec Electricity Prices Comparison Report – Medium Power |                   |  |  |   |   |  |
|--|-------------------|--|--|---|---|--|
| Average Prices as of April 1, 2012                               |                   |  |  |   |   |  |
| CDN ¢/kWh  |                   |  |  |   |   |  |
| Utility  | City              | 500 kW<br>100,000 kWh<br>28% load factor | 500 kW<br>200,000 kWh<br>56% load factor | 1000 kW<br>200,000 kWh<br>28% load factor | 1000 kW<br>400,000 kWh<br>56% load factor | 2500 kW <sup>1</sup><br>1,170,000 kWh<br>65% load factor |
| Seattle City Light   | Seattle, WA       | (1st) 6.46                               | (2nd) 6.14                               | (1st) 6.28                                | (2nd) 6.04                                | (2nd) 6.01   |
| Manitoba Hydro   | Winnipeg, MB      | (2nd) 8.07                               | (1st) 5.67                               | (2nd) 7.98                                | (1st) 5.62                                | (1st) 4.75   |
| Commonwealth Edison <sup>4</sup>                                 | Chicago, IL       | (4th) 9.16                               | (3rd) 6.88                               | (4th) 9.39                                | (3rd) 7.00                                | 6.59   |
| CenterPoint Energy <sup>4</sup>                                  | Houston, TX       | (3rd) 9.12                               | (4th) 6.94                               | 9.63                                      | (5th) 7.19                                | (4th) 6.22   |
| BC Hydro   | Vancouver, BC     | (5th) 9.37                               | (5th) 7.05                               | (5th) 9.42                                | (4th) 7.08                                | (5th) 6.59   |
| Pacific Power and Light  | Portland, OR      | 9.74                                     | 7.83                                     | (3rd) 9.00                                | 7.30                                      | 6.70   |
| Hydro-Quebec   | Montreal, QC      | 11.06                                    | 7.77                                     | 11.06                                     | 7.19                                      | (3rd) 6.05   |
| Florida Power and Light <sup>4</sup>                             | Miami, FL         | 10.63                                    | 7.70                                     | 10.60                                     | 7.69                                      | 7.07   |
| Newfoundland Power <sup>3</sup>                                  | St. John's, NL    | 11.49                                    | 9.30                                     | 11.03                                     | 9.05                                      | 8.58   |
| SaskPower  | Regina, SK        | 12.21                                    | 9.08                                     | 12.22                                     | 9.08                                      | 7.44   |
| Nashville Electric Service                                       | Nashville, TN     | 12.19                                    | 9.13                                     | 12.09                                     | 9.08                                      | 8.89   |
| Enmax  | Calgary, AB       | 11.92                                    | 9.65                                     | 11.69                                     | 9.53                                      | 8.65   |
| Detroit Edison <sup>4</sup>                                      | Detroit, MI       | 12.44                                    | 9.86                                     | 12.42                                     | 9.74                                      | 8.63   |
| NB Power   | Moncton, NB       | 13.39                                    | 10.98                                    | 13.39                                     | 10.98                                     | 10.62  |
| EPCOR Energy <sup>2</sup>  | Edmonton, AB      | 14.19                                    | 11.53                                    | 13.28                                     | 11.07                                     | 10.52  |
| Hydro Ottawa   | Ottawa, ON        | 13.29                                    | 11.49                                    | 13.15                                     | 11.42                                     | 11.44  |
| Toronto Hydro  | Toronto, ON       | 13.79                                    | 11.56                                    | 13.64                                     | 11.43                                     | 11.01  |
| Nova Scotia Power  | Halifax, NS       | 15.75                                    | 11.99                                    | 15.75                                     | 11.99                                     | 10.24  |
| Maritime Electric  | Charlottetown, PE | 16.07                                    | 12.69                                    | 16.05                                     | 12.68                                     | 12.18  |
| Boston Edison  | Boston, MA        | 18.06                                    | 12.57                                    | 17.98                                     | 12.53                                     | 11.59  |
| Pacific Gas and Electric <sup>4</sup>                            | San Francisco, CA | 19.01                                    | 13.67                                    | 18.71                                     | 13.43                                     | 9.58   |
| Consolidated Edison <sup>4</sup>                                 | New York, NY      | 23.17                                    | 17.52                                    | 23.14                                     | 17.50                                     | 12.61  |

1) Supply voltage of 25 kV.

2) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

3) Newfoundland Power rates.

4) These bills have been estimated by Hydro-Québec and may differ from actual bills.

Note: The top five participating utilities with the lowest average prices are ranked in the table above, from lowest to highest. The sort order indicates the utility's overall ranking in the category.



**Table 8 Large Power Average Prices**

| Hydro-Quebec Electricity Prices Comparison Report – Large Power |                   |   |   |   |                                       |                                       |                                       |
|---|-------------------|---|---|---|---------------------------------------|---------------------------------------|---------------------------------------|
| Average Prices as of April 1, 2012                              |                   |   |   |   |                                       |                                       |                                       |
| CDN ¢/kWh   |                   |   |   |   |                                       |                                       |                                       |
| Utility   | City              | 5,000 kW<br>2,340,000 kWh<br>25 kV<br>65% load factor | 5,000 kW<br>3,060,000 kWh<br>25 kV<br>85% load factor | 10,000 kW<br>5,760,000 kWh<br>120 kV<br>80% load factor | 30,000 kW<br>17,520,000 kWh<br>120 kV | 50,000 kW<br>23,400,000 kWh<br>120 kV | 50,000 kW<br>30,600,000 kWh<br>120 kV |
| Manitoba Hydro  | Winnipeg, MB      | (1st) 4.66  | (1st) 4.29  | (1st) 3.75  | (1st) 3.73                            | (1st) 3.97                            | (1st) 3.69                            |
| Hydro-Quebec  | Montreal, QC      | (2nd) 5.32  | (2nd) 4.76  | (2nd) 4.60  | (3rd) 4.58                            | (3rd) 4.98                            | (3rd) 4.51                            |
| BC Hydro  | Vancouver, BC     | (6th) 6.59  | (6th) 6.14  | (3rd) 5.06  | (4th) 5.04                            | (4th) 5.33                            | (4th) 4.99                            |
| Seattle City Light  | Seattle, WA       | (3rd) 6.01  | (4th) 5.96  | (4th) 5.61  | 5.61                                  | 5.65                                  | 5.60                                  |
| CenterPoint Energy <sup>3</sup>                                 | Houston, TX       | (4th) 6.16  | (3rd) 5.83  | (5th) 5.62  | 5.59                                  | 5.80                                  | 5.55                                  |
| Commonwealth Edison <sup>3</sup>                                | Chicago, IL       | (5th) 6.57  | (5th) 6.11  | 5.69  | (5th) 5.36                            | (5th) 5.55                            | (5th) 5.33                            |
| SaskPower   | Regina, SK        | 7.12  | 6.68  | 5.83  | 5.74                                  | 5.99                                  | 5.67                                  |
| Newfoundland Power <sup>2</sup>                                 | St. John's, NL    | 8.48  | 8.17  | 8.12  | (2nd) 4.03                            | (2nd) 4.32                            | (2nd) 3.98                            |
| Pacific Power and Light   | Portland, OR      | 6.66  | 6.34  | 6.18  | 5.99                                  | 6.26                                  | 5.94                                  |
| Florida Power and Light <sup>3</sup>                            | Miami, FL         | 7.06  | 6.49  | 6.22  | 6.18                                  | 6.65                                  | 6.09                                  |
| NB Power  | Moncton, NB       | 7.92  | 7.19  | 6.99  | 6.96                                  | 7.51                                  | 6.86                                  |
| Nashville Electric Service                                      | Nashville, TN     | 8.94  | 8.26  | 7.23  | 7.11                                  | 7.93                                  | 6.96                                  |
| Detroit Edison <sup>3</sup>                                     | Detroit, MI       | 8.61  | 7.90  | 7.83  | 7.79                                  | 8.35                                  | 7.69                                  |
| EPCOR Energy <sup>1</sup>                                       | Edmonton, AB      | 10.16   | 9.78  | 7.16  | 7.04                                  | 7.21                                  | 6.97                                  |
| Enmax   | Calgary, AB       | 8.57  | 8.29  | 8.34  | 8.32                                  | 8.55                                  | 8.28                                  |
| Maritime Electric   | Charlottetown, PE | 9.09  | 8.36  | 8.51  | 8.47                                  | 9.09                                  | 8.36                                  |
| Pacific Gas and Electric <sup>3</sup>                           | San Francisco, CA | 9.48  | 8.89  | 8.98  | 8.93                                  | 9.40                                  | 8.84                                  |
| Nova Scotia Power   | Halifax, NS       | 9.55  | 9.00  | 9.11  | 9.09                                  | 9.55                                  | 9.00                                  |
| Boston Edison   | Boston, MA        | 11.12   | 10.14   | 10.33   | 10.29                                 | 11.12                                 | 10.13                                 |
| Toronto Hydro   | Toronto, ON       | 10.94   | 10.60   | 10.64   | 10.53                                 | 10.87                                 | 10.46                                 |
| Hydro Ottawa  | Ottawa, ON        | 11.49   | 11.01   | 10.85   | 10.67                                 | 10.93                                 | 10.58                                 |
| Consolidated Edison <sup>3</sup>                                | New York, NY      | 12.60   | 11.55   | 11.76   | 11.71                                 | 12.60                                 | 11.55                                 |

1) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

2) Newfoundland Power and Labrador Hydro rates for customers with a power demand of 30,000 kW or more; Newfoundland Power rates for all other customer categories.

3) These bills have been estimated by Hydro-Québec and may differ from actual bills.

Note: The top five participating utilities with the lowest average prices are ranked in the table above, from lowest to highest. The sort order indicates the utility's overall ranking in the category.

**Table 9 BC Hydro Monthly Bills Summary**

| BC Hydro Monthly Bills Summary for the Previous Five Years<br>CDN\$/Month |                            |                            |                            |                          |                            |
|---|----------------------------|----------------------------|----------------------------|--------------------------|----------------------------|
| Vancouver, BC   | April 1, 2008 <sup>1</sup> | April 1, 2009 <sup>2</sup> | April 1, 2010 <sup>3</sup> | May 1, 2011 <sup>4</sup> | April 1, 2012 <sup>5</sup> |
| <b>Residential</b>  |                            |                            |                            |                          |                            |
| 625 kWh   | 45.09                      | 41.19                      | 45.00                      | 47.24                    | 49.43                      |
| 750 kWh   | 53.32                      | 50.44                      | 55.11                      | 58.06                    | 61.03                      |
| 1,000 kWh   | 69.78                      | 71.32                      | 77.93                      | 82.71                    | 87.77                      |
| 2,000 kWh   | 136                        | 155                        | 169                        | 181                      | 195                        |
| 3,000 kWh   | 201                        | 238                        | 261                        | 280                      | 302                        |
| <b>Small Power</b>  |                            |                            |                            |                          |                            |
| 750 kWh/6 kW  | 60.21                      | 63.22                      | 69.08                      | 73.50                    | 78.20                      |
| 2,000 kWh/14 kW   | 153                        | 160                        | 175                        | 186                      | 198                        |
| 10,000 kWh/40 kW  | 763                        | 802                        | 876                        | 923                      | 973                        |
| 14,000 kWh/100 kW   | 1,287                      | 1,351                      | 1,476                      | 1,558                    | 1,645                      |
| 25,000 kWh/100 kW   | 1,709                      | 1,794                      | 1,961                      | 2,093                    | 2,245                      |
| <b>Medium Power</b>   |                            |                            |                            |                          |                            |
| 100,000 kWh/500 kW  | 7,109                      | 7,468                      | 8,163                      | 8,707                    | 9,371                      |
| 200,000 kWh/500 kW  | 10,667                     | 11,205                     | 12,250                     | 13,073                   | 14,106                     |
| 200,000 kWh/1,000 kW  | 14,300                     | 15,023                     | 16,421                     | 17,512                   | 18,831                     |
| 400,000 kWh/1,000 kW  | 21,416                     | 22,497                     | 24,595                     | 26,245                   | 28,302                     |
| 1,170,000 kWh/2,500 kW  | 58,185                     | 61,153                     | 66,899                     | 71,443                   | 77,100                     |
| <b>Large Power</b>  |                            |                            |                            |                          |                            |
| 2,340 MWh/5,000 kW/25 kV  | 116,451                    | 122,392                    | 133,891                    | 142,983                  | 154,289                    |
| 3,060 MWh/5,000 kW/25 kV  | 141,682                    | 148,895                    | 162,877                    | 173,950                  | 187,873                    |
| 5,760 MWh/10,000 kW/120 kV  | 224,148                    | 235,277                    | 257,041                    | 273,626                  | 291,237                    |
| 17,520 MWh/30,000 kW/120 kV   | 679,568                    | 713,310                    | 779,294                    | 829,577                  | 882,967                    |
| 23,400 MWh/50,000 kW/120 kV   | 960,555                    | 1,008,249                  | 1,101,519                  | 1,172,581                | 1,248,056                  |
| 30,600 MWh/50,000 kW /120 kV  | 1,174,147                  | 1,232,445                  | 1,346,452                  | 1,433,332                | 1,525,576                  |

1) Rates used reflect a 6.56 per cent approved interim increase effective April 1, 2008.

2) Rates used reflect an 8.74 per cent approved increase effective April 1, 2009.

3) Rates used reflect a 6.11 per cent approved increase effective April 1, 2010.

4) Rates used reflect an 8.00 per cent approved increase effective May 1, 2011.

5) Rates used reflect a 3.91 per cent approved increase effective April 1, 2012.

Note: Bill calculations exclude taxes and levies and include the rate rider.



**Table 10 BC Hydro Average Prices Summary**

| BC Hydro Average Prices Summary for the Previous Five Years<br>CDN¢/kWh |                            |                            |                            |                          |                            |
|---|----------------------------|----------------------------|----------------------------|--------------------------|----------------------------|
| Vancouver, BC   | April 1, 2008 <sup>1</sup> | April 1, 2009 <sup>2</sup> | April 1, 2010 <sup>3</sup> | May 1, 2011 <sup>4</sup> | April 1, 2012 <sup>5</sup> |
| <b>Residential</b>  |                            |                            |                            |                          |                            |
| 625 kWh   | 7.21                       | 6.59                       | 7.20                       | 7.56                     | 7.91                       |
| 750 kWh   | 7.11                       | 6.73                       | 7.35                       | 7.74                     | 8.14                       |
| 1,000 kWh   | 6.98                       | 7.13                       | 7.79                       | 8.27                     | 8.78                       |
| 2,000 kWh   | 6.78                       | 7.74                       | 8.46                       | 9.07                     | 9.74                       |
| 3,000 kWh   | 6.71                       | 7.95                       | 8.69                       | 9.33                     | 10.06                      |
| <b>Small Power</b>  |                            |                            |                            |                          |                            |
| 750 kWh/6 kW  | 8.04                       | 8.43                       | 9.21                       | 9.80                     | 10.43                      |
| 2,000 kWh/14 kW   | 7.64                       | 8.02                       | 8.76                       | 9.32                     | 9.92                       |
| 10,000 kWh/40 kW  | 7.63                       | 8.02                       | 8.76                       | 9.23                     | 9.73                       |
| 14,000 kWh/100 kW   | 9.19                       | 9.65                       | 10.54                      | 11.13                    | 11.75                      |
| 25,000 kWh/100 kW   | 6.83                       | 7.18                       | 7.84                       | 8.37                     | 8.98                       |
| <b>Medium Power</b>   |                            |                            |                            |                          |                            |
| 100,000 kWh/500 kW  | 7.11                       | 7.47                       | 8.16                       | 8.71                     | 9.37                       |
| 200,000 kWh/500 kW  | 5.33                       | 5.60                       | 6.13                       | 6.54                     | 7.05                       |
| 200,000 kWh/1,000 kW  | 7.15                       | 7.51                       | 8.21                       | 8.76                     | 9.42                       |
| 400,000 kWh/1,000 kW  | 5.35                       | 5.62                       | 6.15                       | 6.56                     | 7.08                       |
| 1,170,000 kWh/2,500 kW  | 4.97                       | 5.23                       | 5.72                       | 6.11                     | 6.59                       |
| <b>Large Power</b>  |                            |                            |                            |                          |                            |
| 2,340 MWh/5,000 kW/25 kV  | 4.98                       | 5.23                       | 5.72                       | 6.11                     | 6.59                       |
| 3,060 MWh/5,000 kW/25 kV  | 4.63                       | 4.87                       | 5.32                       | 5.68                     | 6.14                       |
| 5,760 MWh/10,000 kW/120 kV  | 3.89                       | 4.08                       | 4.46                       | 4.75                     | 5.06                       |
| 17,520 MWh/30,000 kW/120 kV   | 3.88                       | 4.07                       | 4.45                       | 4.74                     | 5.04                       |
| 23,400 MWh/50,000 kW/120 kV   | 4.10                       | 4.31                       | 4.71                       | 5.01                     | 5.33                       |
| 30,600 MWh/50,000 kW /120 kV  | 3.84                       | 4.03                       | 4.40                       | 4.68                     | 4.99                       |

1) Rates used reflect a 6.56 per cent approved interim increase effective April 1, 2008.

2) Rates used reflect an 8.74 per cent approved increase effective April 1, 2009.

3) Rates used reflect a 6.11 per cent approved increase effective April 1, 2010.

4) Rates used reflect an 8.00 per cent interim approved increase effective May 1, 2011.

5) Rates used reflect a 3.91 per cent approved increase effective April 1, 2012.

**Table 11** Corresponding BC Hydro Rate Schedules  
included in each Segment of the Hydro  
Quebec Rate Survey

| Hydro Quebec Segment            | Corresponding<br>BC Hydro Rate<br>Schedule |
|---------------------------------|--|
| Residential                     |  |
| 625 kWh                         | RS 1101                                    |
| 750 kWh                         | RS 1101                                    |
| 1,000 kWh                       | RS 1101                                    |
| 2,000 kWh                       | RS 1101                                    |
| 3,000 kWh                       | RS 1101                                    |
| Small Power                     |  |
| 750 kWh/6 kW                    | RS 1300                                    |
| 2,000 kWh/14 kW                 | RS 1300                                    |
| 10,000 kWh/40 kW                | RS 1500                                    |
| 14,000 kWh/100 kW               | RS 1500                                    |
| 25,000 kWh/100 kW               | RS 1500                                    |
| Medium Power                    |  |
| 100,000 kWh/500 kW              | RS 1600                                    |
| 200,000 kWh/500 kW              | RS 1600                                    |
| 200,000 kWh/1,000 kW            | RS 1600                                    |
| 400,000 kWh/1,000 kW            | RS 1600                                    |
| 1,170,000 kWh/2,500 kW          | RS 1611                                    |
| Large Power                     |  |
| 2,340,000 kWh/5,000 kW/25 kV    | RS 1611                                    |
| 3,060,000 kWh/5,000 kW/25 kV    | RS 1611                                    |
| 5,760,000 kWh/10,000 kW/120 kV  | RS 1823                                    |
| 17,520,000 kWh/30,000 kW/120 kV | RS 1823                                    |
| 23,400,000 kWh/50,000 kW/120 kV | RS 1823                                    |
| 30,600,000 kWh/50,000 kW/120 kV | RS 1823                                    |



**Table 12 BC Hydro Rankings Summary in Hydro Quebec Rate Surveys, Out of 22 Utilities Surveyed**

| Vancouver, BC                | April 1, 2008 | April 1, 2009 | April 1, 2010 | May 1, 2011 | April 1, 2012 |
|------------------------------|---------------|---------------|---------------|-------------|---------------|
| <b>Residential</b>           |               |               |               |             |               |
| 625 kWh                      | 3             | 1             | 2             | 3           | 4             |
| 750 kWh                      | 4             | 1             | 4             | 4           | 4             |
| 1,000 kWh                    | 4             | 3             | 4             | 4           | 4             |
| 2,000 kWh                    | 2             | 3             | 5             | 5           | 7             |
| 3,000 kWh                    | 2             | 3             | 4             | 6           | 7             |
| <b>Small Power</b>           |               |               |               |             |               |
| 750 kWh/6 kW                 | 2             | 3             | 4             | 4           | 6             |
| 2,000 kWh/14 kW              | 3             | 3             | 3             | 3           | 5             |
| 10,000 kWh/40 kW             | 4             | 4             | 7             | 7           | 7             |
| 14,000 kWh/100 kW            | 3             | 3             | 7             | 7           | 5             |
| 25,000 kWh/100 kW            | 3             | 3             | 5             | 4           | 4             |
| <b>Medium Power</b>          |               |               |               |             |               |
| 100,000 kWh/500 kW           | 2             | 2             | 5             | 3           | 5             |
| 200,000 kWh/500 kW           | 3             | 2             | 4             | 3           | 5             |
| 200,000 kWh/1,000 kW         | 3             | 2             | 6             | 4           | 5             |
| 400,000 kWh/1,000 kW         | 3             | 2             | 5             | 3           | 4             |
| 1,170,000 kWh/2,500 kW       | 4             | 2             | 6             | 5           | 5             |
| <b>Large Power</b>           |               |               |               |             |               |
| 2,340 MWh/5,000 kW/25 kV     | 4             | 2             | 7             | 5           | 6             |
| 3,060 MWh/5,000 kW/25 kV     | 3             | 3             | 6             | 4           | 6             |
| 5,760 MWh/10,000 kW/120 kV   | 2             | 2             | 3             | 3           | 3             |
| 17,520 MWh//30,000 kW/120 kV | 2             | 3             | 4             | 4           | 4             |
| 23,400 MWh/50,000 kW/120 kV  | 2             | 2             | 4             | 4           | 4             |
| 30,600 MWh/50,000 kW /120 kV | 2             | 3             | 4             | 4           | 4             |

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# **Electricity Rate Comparison Annual Report**

**April 1, 2012 Rates**



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**Attachment B**

**Ministerial Order No. M167**

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PROVINCE OF BRITISH COLUMBIA  
REGULATION OF THE MINISTER OF ENERGY AND MINES  
AND MINISTER RESPONSIBLE FOR HOUSING

*Clean Energy Act*

Ministerial Order No. **M 167**

I, Rich Coleman, Minister of Energy and Mines and Minister Responsible for Housing, order that the Rate Comparison Regulation, B.C. Reg. 140/2009, is repealed, and the following Rate Comparison Regulation is made.

**RATE COMPARISON REGULATION**

**Definition**

1 In this regulation:

"Act" means the *Clean Energy Act*;

"applicable rates" means, with respect to a public utility's electricity rates, the average monthly bill for electricity, but not any other terms and conditions of those rates.

**Report requirements**

2 In a report to be provided to the minister under section 8 (4) of the Act, the authority must do all of the following:

- (a) include a comparison with at least one public utility in each of at least fifteen other jurisdictions in North America, including all of the following:
  - (i) the provinces of Alberta, Quebec, Ontario and Manitoba;
  - (ii) the states of Washington, Oregon and California;
- (b) compare the previous year's applicable rates for residential, commercial and industrial customers with similar rates of the public utilities referred to in paragraph (a);
- (c) express the monetary comparisons in Canadian currency;
- (d) provide the authority's previous 5 years of applicable rates.


**DEPOSITED**

JUN 28 2011

B.C. REG. 119/2011

JUN 28 2011

Date

  
Minister of Energy and Mines and Minister  
Responsible for Housing

(This part is for administrative purposes only and is not part of the Order.)

Authority under which Order is made:

Act and section: *Clean Energy Act*, S.B.C. 2010, c. 22, s. 37 (f)

Other: *Utilities Commission Act*, R.S.B.C. 1996, c. 473, s. 125.1 (4) (c); M114/2009

June 9, 2011

Resub R/77/2011/27

## BRIEFING NOTE

### ISSUE: BC Hydro Revenue Requirements Application

#### KEY MESSAGES:

- BC Hydro submitted a Revenue Requirements Application to the British Columbia Utilities Commission (BCUC) in March 2011 for the 2012-2014 fiscal years.
- The 2011 Deputy Ministers' Review of BC Hydro identified substantial cost reductions and led to BC Hydro filing a revised BCUC application in November 2011, reducing the rate increase it had previously applied for by about one-half.
- The Government expressed concerns about power rates, and in May 2012 directed rate levels over the three years to be consistent with the Deputy Ministers' Review and BC Hydro's revised application.
- The total rate increase over the three years covered by BC Hydro's application is approximately 17 percent with rate increases of 8 percent in 2011/12, 7.1 percent in 2012/13 and 1.44 percent in 2013/14.
- The Direction also allows for rate changes that may result from BC Hydro's Demand-Side Management Revenue Expenditures Application expected in September/October this year.
- BC Hydro is required to bring forward a new Revenue Requirements Application for the period starting April 1, 2014. It is expected that BC Hydro will request approval for an interim rate for fiscal 2014/15 with a BCUC hearing on BC Hydro's application likely to commence spring/summer 2014.

#### BACKGROUND/STATUS:

- On March 1, 2011, BC Hydro filed a three-year rate application with the BCUC seeking increases of 9.73 percent effective April 1 in each of fiscal 2012, 2013 and 2014.
- The cumulative impact of this increase was 32 percent over three years. Combined with a 7.29 percent approved increase in 2010/11 and an anticipated seven percent in 2014/15, the impact was projected to be 50 percent over five years.
- Government announced a review of BC Hydro on April 7, 2011 to find ways of minimizing rate increases while maximizing benefits to the Province, taxpayers and ratepayers. The Deputy Ministers' Review of BC Hydro identified substantial cost savings.
- BC Hydro amended its Revenue Requirements Application to the BCUC seeking a rate increase of eight per cent in 2011, 3.91 percent on April 1, 2012 and 1.44 percent on April 1, 2013.



- On February 15, 2012, the BCUC issued a decision confirming an interim 3.91 percent rate increase for the next fiscal year as applied for by BC Hydro. The decision also ordered an interim increase to BC Hydro's current rate rider of 2.5 percent to 5 percent. With compounding, the net annual bill impact for customers was a 7.07 percent increase. These changes have been reflected on bills since April 1, 2012.
- On March 30, 2012, the BCUC denied BC Hydro's request to resolve the revenue requirements application through a negotiated settlement process and ordered an oral hearing to begin in June.
- Proceeding by way of oral hearing would have very likely resulted in higher rate increases than what BC Hydro applied for and would have continued rate uncertainty until the end of 2012.
- Accordingly, the Government decided to direct the BCUC to set rates so that the total 3 year effect on customer bills is the same as what BC Hydro applied for. The Direction was released on May 22, 2012.
- The rates set by the Direction are subject to BC Hydro filing an application for fiscal 2013/14 demand-side management expenditures to the BCUC. BC Hydro intends to file an application following the submission and approval by government of the Integrated Resource Plan (IRP) due August 3, 2013. Assuming that the government accepts the IRP, it is anticipated that BC Hydro will be ready to file the application in September or October 2013. It is not anticipated that BC Hydro will apply for a rate increase.
- BC Hydro is required to submit a new Revenue Requirements Application that will set rates for 2014/15.

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**CONTACT:** Les MacLaren, ADM

**BRIEFING NOTE****ISSUE: BC Hydro Regulatory and Deferral Accounts****KEY MESSAGES:**

- BC Hydro's deferral accounts have a current balance of approximately \$4.3 billion.
- This is forecasted 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 & Infrastructure.
- The two largest other accounts are for the transition to International Financial Reporting Standards.

**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) 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 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.
- After fiscal 2013, the rate of increase in deferral 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 deferral accounts.

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**CONTACT:** Les MacLaren, ADM

**BRIEFING NOTE****ISSUE: BC Hydro Review and Implementation****KEY MESSAGES:**

- In spring 2011, the Province appointed a panel 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.

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**BACKGROUND:**

- On March 1, 2011, BC Hydro applied to the BCUC for a 9.73 percent rate increase in each of the next 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.
- The Government review does not replace the more detailed examination of BC Hydro's Revenue Requirements Application 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 with specific timelines and continues to report quarterly to Government on its progress.

**CROSS-REFERENCE:**

9 - BC Hydro Revenue Requirements Application

10 - BC Hydro Deferral Accounts

**CONTACT:** Les MacLaren, ADM

## BRIEFING NOTE

### ISSUE: BC Hydro Smart Meter and Smart Grid Programs

#### KEY MESSAGES:

- BC Hydro's Smart Meter and Smart Grid Projects are intended to modernize 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 SMI would not create added costs for BC Hydro's customers. Accordingly, smart meters would 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. 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 has installed 93 percent (1.73 million of 1.87 million) smart meters, and has been 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.

#### 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 recognized that of the approximately 1.8 million meter installations required by the statutory deadline of December 31, 2012, approximately 85,000 installations had been deferred due to customer objections and were not scheduled to be completed by the end of 2012. An additional 45,000 meters would not have been installed in time for practical reasons. The 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.
- The most recent update indicates that about 40 per cent of the time, installation crews visited customers' premises when the customer was not home. In March 2013, BC Hydro staff projected that by May 2013 approximately 25,000 to 50,000 smart meters will remain to be installed out of the 130,000 outstanding installations at the end of 2012. A significant proportion is expected to be customers who were placed on the deferred list and who are continuing to refuse a smart meter despite additional one-on-one customer communications. By April 2013, all customers on the deferred list will have been visited and a better estimate of the options will be available then.
- In addition, a BCUC proceeding related to FortisBC's July 2012 application to seek approval for the utility's Advanced Meter Initiative (AMI) is ongoing. A BCUC decision is expected by June 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 operated at the customer's own cost.
- Such an outcome would reflect the regulator's approach in Quebec and some U.S. jurisdictions, and could be considered for BC Hydro.

**CONTACT:** Les MacLaren, ADM



## BRIEFING NOTE

### ISSUE: Dawson Creek/Chetwynd Area Transmission Project

#### KEY MESSAGES:

- Power demand is expected to increase in British Columbia's northeast due to population growth and increased economic activity.
- The proposed Dawson Creek/Chetwynd Area Transmission Project will supply clean, grid power to residential and industrial ratepayers.
- The transmission reinforcement will improve reliability as well as enable industrial development and job creation in the region. It will also support the Province's climate action objectives.

#### BACKGROUND:

- The proposed Dawson Creek/Chetwynd Area Transmission (DCAT) project would increase the voltage of existing lines from 138 kilovolts (kV) to 230 kV, as well as add a new substation and upgrade two others.
- BC Hydro proposed this project due to large forecast residential and gas production/processing load growth in the Dawson Creek area.
- The projected cost of DCAT is between \$150 million and \$250 million.
- BC Hydro submitted the DCAT proposal to the British Columbia Utilities Commission (BCUC) for a Certificate of Public Convenience and Necessity (CPCN) review on July 11, 2011.
- BC Hydro felt DCAT did not need regulatory support from Government to obtain a CPCN given the projected load growth in the region. BC Hydro also received letters of credit from companies to mitigate ratepayer risk.
- The BCUC panel and interveners, particularly the Association of Major Power Consumers, raised several broad policy questions that BC Hydro could not answer without first obtaining Government direction. Consequently, BC Hydro requested and obtained a suspension to the proceeding, and sought Government input.
- The Ministry of Energy, Mines and Natural Gas (EMNG) staff believed that the CPCN proceeding was not the appropriate venue to discuss broad industrial electricity policy issues. Accordingly, EMNG submitted a letter to the BCUC requesting late intervenor status and committed to holding a public process to address outstanding industrial electricity policy issues outside the CPCN process.
- EMNG's intervention (in conjunction with private sector interveners) enabled BC Hydro to persuade the BCUC panel to limit the scope of the CPCN to the merits of DCAT only. The BCUC issued a final decision approving the CPCN for DCAT on October 10, 2012. However, approval was subject to BC Hydro completing additional consultations with affected First Nations.
- BC Hydro indicates that supplementary First Nations consultation is complete. BC Hydro expects to complete its procurement procedure over the summer of 2013 and begin construction in fall 2013.



- On January 13, 2013, EMNG announced the Industrial Electricity Policy Review and appointed a task force to carry it out. More information is included in the Industrial Electricity Policy Review Information Note.

**CROSS-REFERENCE:**

Information Note: 15 - Industrial Electricity Policy Review

**CONTACT:** Les MacLaren, ADM

**BRIEFING NOTE****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.
- 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.

**CONTACT:** Les MacLaren, ADM

## BRIEFING NOTE

### ISSUE: Industrial Electricity Rate Policy Review

#### KEY MESSAGES:

- Several ad hoc industrial electricity policy issues arose during the British Columbia Utilities Commission (Commission) hearing on the Dawson Creek-Chetwynd Area Transmission (DCAT) Reinforcement 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 has conducted two rounds of oral and written consultations and is scheduled to issue its Draft Task Force Report by May 31, 2013 and its final report by July 31, 2013 (subject to Ministerial direction).




#### BACKGROUND:

- BC Hydro's current industrial tariff governing how new industrial customers connect to the provincial grid was implemented in 1991. It does not reflect the changed circumstances for both industrial customers and BC Hydro.
- The British Columbia Utilities Commission (Commission) 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. This complicated the Commission decision-making process for DCAT.
- 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 Terms of Reference (ToR) for the Industrial Electricity Policy Review and appointed a task force to oversee the Review in January 2013.
- The task force consists of Chris Trumpy, former Deputy Minister, Peter Ostergaard, former Assistant Deputy Minister and Chair of the Commission, 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, Mines and Natural Gas in July 2013.



- 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 compiling the input it received from all stakeholders on May 1, 2013. It expects to receive comments from stakeholders by May 15, 2013.
- The task force intends to release a draft task force report to stakeholders on May 31, 2013. It will not include definitive recommendations. Stakeholders would be given two weeks to provide comments on the report and/or meet with the task force to discuss report contents.
- The final task force report will be developed based on input from the draft. <sup>s.13</sup>  
<sup>s.13</sup> The Ministry will set up a task force briefing for the incoming minister early in his or her tenure.
- The ToR requires the task force to release a final report publicly by July 31, 2013.

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- The Commission indicated it would launch its own review of BC Hydro's industrial tariff and the TSR if Government did not follow through on its commitment in DCAT. This would place the process and potential  commendations beyond Government's reach.

**CONTACT:** Les MacLaren, ADM

**BRIEFING NOTE****ISSUE: BC Hydro Integrated Resource Plan****KEY MESSAGES:**

- BC Hydro has completed consultation on its 2013 Integrated Resource Plan (IRP). The 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 include options for managing an anticipated surplus of electricity.
- Government may choose whether or not to approve the IRP at that time.

**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, Mines and Natural Gas 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.



- 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 an extension to August 3, 2013 to incorporate more information about LNG demand.
- More recent information suggests that BC Hydro's final IRP will report a substantial energy surplus, eliminating the need for large-scale procurement until the early 2020's.

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- 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.



**CONTACT:** Les MacLaren, ADM

## BRIEFING NOTE

### 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 Accounts; 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 local taxes paid by BC Hydro to the Province and local Governments.
- Crown corporations also pay grants-in-lieu of taxes to local Governments.
- New annual data for the parameters above will be available in the 2012/13 Public Accounts.

**CONTACT:** Les MacLaren, ADM



## BRIEFING NOTE

### 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 about \$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 Office 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 the following areas of significant impact: 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/STATUS:

- 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.
- 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 was 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).
- During the EA-related consultations, BC Hydro will also explore benefit agreements with First Nation groups and regional communities.



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- 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, Mines and Natural Gas, 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, ADM



**BRIEFING NOTE****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 (UCA)* was amended in spring 2010 to implement many elements of the Province's clean energy strategy.
- The purpose of the amendments in the *Clean Energy Act (CEA)* was to ensure that the clean energy objectives, how utilities deliver on these objectives, and how the BCUC regulates utilities, are all in alignment.

**BACKGROUND:**

- The BCUC is an independent regulatory tribunal. The Minister of Justice is responsible for administering most aspects of the *UCA* 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 *UCA*, first proclaimed in 1980, expanded utility regulation - which previously existed for only investor owned utilities - to include BC Hydro.
- In the 1990s, 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. Legislation was also passed 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 2002 Energy Plan confirmed a commitment to restore "an independent BC Utilities Commission" and to return BC Hydro to full BCUC regulation.
- The *UCA* 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.
- 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 *CEA* introduced a new requirement for the BCUC to ensure that BC Hydro ratepayers do not pay for expenditures for export.



- The *CEA* also exempted certain key/strategic investments and procurement processes from BCUC review, although the BCUC retains the power to examine the prudence of expenditures on these investments when setting BC Hydro's rates.
- The *CEA* and the changes to the *UCA* modified the legal 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.

**CONTACT:** Les MacLaren, ADM

**BRIEFING NOTE****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; 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.
- 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.

**CONTACT:** Les MacLaren, ADM

## BRIEFING NOTE

### 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.

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#### 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 British Columbia FIT would 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, Mines and Natural Gas (EMNG) 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.

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**CONTACT:** Les MacLaren, ADM



**BRIEFING NOTE****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 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 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.
- During stakeholder consultations in 2011 and 2012, while the Regulation was under development, Shell, Ferus and Clean Energy Fuels raised concerns that the Regulation creates a non-level playing field for non-regulated entities and could impact non-regulated companies' ability to enter the CNG or LNG for transportation markets in British Columbia.

- 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.
- During development of the Regulation, FortisBC requested that the Regulation permit utilities to invest in developing LNG supply. However, the Regulation does not include LNG supply development or new LNG production capability, as the LNG supply market is already a competitive market. As such, if FortisBC is interested in developing new LNG supply, this would need to go to the BCUC for approval.
- 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.
- FortisBC's August 2012 application to the BCUC for rate treatment of its expenditures on incentives, fuelling stations, and past incentives, issued prior to the Regulation and previously denied by the BCUC, is currently in process with the BCUC, with decisions expected in late spring/summer 2013.

**CONTACT:** Les MacLaren, ADM



## BRIEFING NOTE

### ISSUE:           Columbia River Treaty 2014 Review

#### KEY MESSAGES:

- The Columbia River Treaty (CRT) has provided significant benefits to both Canada and the United States (U.S.), and it is the standard against which other international water coordination agreements are compared.
- The Province 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 Province has initiated a CRT Review process to evaluate future decision options, including possible continuation, amendment or termination of the Treaty. The Ministry of Energy, Mines and Natural Gas is the coordinating agency for the Review and has established a CRT Review Team to provide recommendations to Cabinet in late 2013.
- The Province is committed to conducting a thorough public and First Nations engagement process on options for future decisions regarding the Treaty.

#### BACKGROUND:

- The CRT is a trans-boundary water management agreement between the U.S. and Canada 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.
- 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 Canada to obtain 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 during 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 (Kootenay 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 designated to have the responsibility to implement the Treaty on behalf of the Province and Canada. The Province of British Columbia 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 US 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, Mines and Natural Gas 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 until August 2013 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 discussions.
- 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 spring and 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.

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*June 2013*

*The Ministry of Energy and Mines Information Binder*

- CRT Review Team will be providing a recommendation to Cabinet, informed by the public and First Nations consultations, in late 2013.

**CONTACT:** Les MacLaren, ADM

## BRIEFING NOTE

### 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 later this spring.
- 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.

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- 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.

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- The Community Mentorship initiative, developed by the Ministry of Energy, Mines and Natural Gas (EMNG), 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.

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**CONTACT:** Les MacLaren, ADM

## BRIEFING NOTE

### 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 customer energy costs.
- The Ministry of Energy, Mines and Natural Gas (EMNG) chairs the Remote Community Energy Network (RCEN), which includes the Province, BC Hydro and Aboriginal Affairs and Northern Development Canada (AANDC). The objective of the RCEN is to assist British Columbia remote communities in implementing community energy solutions by coordinating access to and leveraging network members' programs.
- In 2009, the Province signed a Memorandum of Understanding (MOU) with BC Hydro and AANDC to ensure the federal government continued to meet its fiscal obligation to provide funding for energy services in First Nations communities.

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#### 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 are 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 expertise to maintain them properly.



- 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 becoming “Non Integrated Areas” (NIA) customers of BC Hydro with discrete generation and distribution systems within the community.
- Remote communities that are not BC Hydro customers pay approximately 40 cents/kWh for electricity. Under the RCE Program, communities that become NIA customers pay Zone 2 rates (approximately 10 cents/kWh), while communities that are connected to the grid pay Zone 1 rates (approximately 6 cents/kWh).
- The RCE Program results in significant long term cost-savings and a reduced administration burden for AANDC in remote First Nations communities, as under the RCE Program BC Hydro takes over operation, maintenance, billing, and capital upgrades of energy systems in these communities.
- 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.

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**CONTACT:** Les MacLaren, ADM

## BRIEFING NOTE

### ISSUE:

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### 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.

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- In March 2012, EESR amendments were approved by the Province to delay the effective date for 40-60W light bulb standards by two years (to December 31, 2014) to align with NRCan regulations.

### 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 geoechange heat pumps.

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***March 2012 EESR amendments***

- In March 2012, EESR amendments established a delayed effective date for efficiency standards for 40-60W light bulbs, 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.

**CONTACT:** Les MacLaren, ADM

## BRIEFING NOTE

### ISSUES: Energy Efficiency Strategy

#### KEY MESSAGES:

- Buildings account for 25 percent of British Columbia's energy consumption and 11 percent of its greenhouse gas (GHG) emissions.
- Industrial energy use accounts for more than 40 percent of British Columbia's energy use and 36 percent of provincial GHG emissions.
- The Ministry has released two strategies for energy efficiency in buildings, in 2005 and 2008, which included targets, funding commitments and regulatory plans.

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#### BACKGROUND:

- Opportunities exist for saving large quantities of energy for British Columbia buildings. However, many barriers remain (e.g., consumer bias against upfront costs; split incentives between landlords and tenants; a lack of industry capacity; and poor information).
- The economic case for energy efficient buildings in British Columbia is more difficult than in some jurisdictions because of the province's generally mild climate and low energy prices.
- Tackling these challenges will require a comprehensive and coordinated approach by the Ministry and utilities.

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**CONTACT:** Les MacLaren, ADM



## BRIEFING NOTE

### ISSUE:

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### 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.

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### 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.

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- 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, EMNG sits on the Canadian Standards Association Technical Committee on Energy Management, responsible for developing, maintaining and advancing Canadian energy management system standards. EMNG 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.

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**CONTACT:** Les MacLaren, ADM



## BRIEFING NOTE

### 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 to reduce the cost of 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 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 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 increases;
  - reduced energy affordability for families and small business competitiveness; and
  - reduced economic activity and job stimulation.
- 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 most 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 projected 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 beneficiaries.

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**CONTACT:** Les MacLaren, ADM



**BRIEFING NOTE****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 S17 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. It is therefore expected that some businesses will choose not to upgrade their energy systems, resulting in lost opportunities to improve the energy efficiency of buildings in British Columbia.

**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 LiveSmartBC: 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 (accommodation, food service, retail, agriculture and office space) and regions (Northeast, North Coast/Nechako, Cariboo, Kootenays, Thompson/Okanagan, Vancouver Island/Coast, and Mainland/Southwest).

- 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 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.

**CONTACT:** Les MacLaren, ADM



## BRIEFING NOTE

### 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 for 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.

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#### 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, ADM

**BRIEFING NOTE****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 through until 2022. 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 2013/2014 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.
- BC Hydro is forecast to have an electricity supply surplus until 2022. 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.



- EMNG 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).

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- By contrast, the FortisBC Energy Utilities spending on DSM has increased dramatically in recent years, from \$4.5 million in 2009 to \$23.8 million in 2012. This is a result of an increased corporate commitment as well as enabling provisions in the DSM Regulation.

**CONTACT:** Les MacLaren, ADM

**BRIEFING NOTE****ISSUE: California Renewable Portfolio Standard****KEY MESSAGES:**

- The State of California passed a Renewable Portfolio Standard Bill (RPS) calling for at least 33 percent of its electricity to come from renewable energy resources by December 31, 2020.
- This represents a large potential market for British Columbia to sell “eligible” renewable electricity.
- Most run-of-river (RoR) power generated in British Columbia would be ineligible under the RPS as currently defined.
- The RPS requires the California Energy Commission (CEC) to complete a study of British Columbia RoR resources to determine whether they should be considered “renewable” for RPS compliance purposes. This could expand eligibility to RoR power.
- British Columbia wind and biomass energy is considered “renewable” under California’s RPS.

**BACKGROUND:**

- California passed its RPS on March 29, 2011. It was signed into law by Governor Brown on April 12, 2011.
- The RPS requires California utilities to obtain at least 33 percent of their electricity supply from eligible renewable energy resources by December 31, 2020.
- The RPS also directs California utilities to procure 75 percent of renewable energy from in-state producers. The remaining 25 percent can come from out-of-state producers, either as firmed and shaped delivered power product, or as tradable renewable energy credits.
- In summer 2010, British Columbia pursued electricity export advocacy as part of a larger intergovernmental initiative with California to promote climate and clean energy partnerships British Columbia has developed.
- Part of the export strategy focused on informing California Government officials, legislators and Non-Governmental Organizations, of the positive attributes of British Columbia’s RoR energy. This was because RoR energy is currently not eligible as a “renewable energy resource” for export into California’s premium “renewable portfolio” market. In contrast, British Columbia wind and biomass energy are eligible resources.
- The RPS included “study language” that would require the California Energy Commission (CEC) to:
  - carry out a study of British Columbia’s RoR hydroelectric energy and its environmental attributes by June 30, 2012 and
  - recommend to the Legislature whether British Columbia’s RoR energy should become an eligible energy resource under California’s RPS law.



- The Bill required that the CEC consider the following environmental factors:
  - emissions of carbon dioxide and other greenhouse gases
  - emissions of air pollutants
  - water quality, recreation, and fisheries and
  - any other environmental impact caused by run-of-river hydroelectric generating facilities.
- The CEC received a draft report on British Columbia RoR eligibility in spring 2012. However, the internal vetting process has taken almost a year. CEC staff held a workshop on the draft report in March 2012. The Ministry of Energy, Mines and Natural Gas (EMNG) coordinated provincial and BC Hydro comments on the CEC report.
- The draft report is generally favourable to British Columbia interests. The Ministry of Forests, Lands and Natural Resource Operations (FLNRO) and the Environmental Assessment Office (EAO) provided some technical comments and clarifications. BC Hydro and Powerex provided comments on the need to clarify precise certification standards and expectations for a project to be RPS eligible.

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**CONTACT:** Les MacLaren, ADM

Pages 147 through 148 redacted for the following reasons:

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## BRIEFING NOTE

### **ISSUES:        Regional Transmission 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, Mines and Natural Gas (EMNG) 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.
- EMNG represents British Columbia on the State-Provincial Steering Committee led by WIEB. BC Hydro represents the Province on the Scenario Planning Steering Group (SPSG) led by WECC. These positions enable British Columbia to influence regional transmission planning in a manner that supports the Province's energy strategy.
- The SPSG provides input to WECC's Transmission Expansion Planning and Policy Committee that recommends regional transmission plans to the WECC Board of Directors for approval.

- The SPSG reached consensus 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. It will consolidate comments and present a revised plan at the SPSG quarterly meeting in late May 2013. WECC will hold another comment period during the summer prior to finalizing the draft plan for Board approval in September 2013.
- EMNG will put forward comments as part of the WIEB, but also has the option to put forward its own comments if deemed appropriate. EMNG 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.
- WECC is currently undergoing a mandate review in light of several reliability events in the Western Interconnection, notably the San Diego Blackout in fall 2011. The new WECC structure may have a material 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.

**CONTACT:** Les MacLaren, ADM





**BRIEFING NOTE****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 invests 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, 19 ICE Fund projects are complete and have created 353 construction jobs and 164 ongoing jobs. At this time, 15 projects underway are anticipated to create 282 construction jobs and 128 ongoing jobs when completed.

**BACKGROUND:*****Status (see Appendix 1):***

- As of March 31, 2013, approved ICE Fund commitments total \$61.13 million, of which \$38.85 million has been dispersed.
- Of 62 approved projects, 19 projects are complete, 15 projects are underway, 13 are seeking partners or additional project funding, 5 projects have withdrawn and 10 projects 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.
- The ICE Fund Levy was re-instated April 1, 2013, with the return of PST. There will be no ICE Fund levy on electricity sales and it is estimated the levy will now generate \$7 million per year at current natural gas 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.

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**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. The remaining three projects have a combined value of \$21.26 million and will receive \$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.

**CONTACT:** Les MacLaren, ADM



## Appendix 1: Innovative Clean Energy (ICE) Fund Summary

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Page 1: Status of Announced Projects

Page 2: Active Project Summary with GHG and Employment Benefits

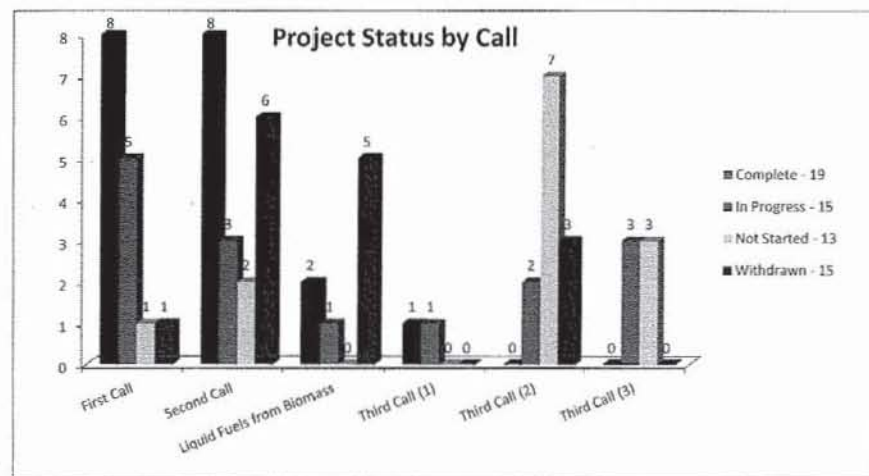
Page 3: Active Projects by Region and Technology

Updated March 31, 2013

## Status of Announced Projects

| Call                          | Announcement     |           |                         | Current Status |           |                         |
|-------------------------------|------------------|-----------|-------------------------|----------------|-----------|-------------------------|
|                               | 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         | 3              | 9         | \$ 6,044,756.00         |
| Third Call - 3rd Announcement | January 29, 2012 | 6         | \$ 5,977,790.00         | 0              | 6         | \$ 5,977,790.00         |
| <b>Total</b>                  |                  | <b>62</b> | <b>\$ 77,812,054.64</b> | <b>15</b>      | <b>47</b> | <b>\$ 61,134,641.00</b> |

|                  | First Call | Second Cal | Liquid Fuel | Third Call ( | Third Call ( | Third Call (3) |
|------------------|------------|------------|-------------|--------------|--------------|----------------|
| Complete - 19    | 8          | 8          | 2           | 1            | 0            | 0              |
| In Progress - 15 | 5          | 3          | 1           | 1            | 2            | 3              |
| Not Started - 13 | 1          | 2          | 0           | 0            | 7            | 3              |
| Withdrawn - 15   | 1          | 6          | 5           | 0            | 3            | 0              |





## Active Project Summary with GHG and Employment Benefits

| Call                        | ICE Committed           | Total Project            | Expenditure            |                         |                         |                        |                        |                         | Percent    |            |
|-----------------------------|-------------------------|--------------------------|------------------------|-------------------------|-------------------------|------------------------|------------------------|-------------------------|------------|------------|
|                             |                         |                          | 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          | \$ 368,727.62          | \$ 6,453,309.37         | 48%        | 52%        |
| 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 | \$ 6,044,756.00         | \$ 43,605,809.00         | \$ -                   | \$ -                    | \$ -                    | \$ 355,355.00          | \$ 451,273.00          | \$ 806,628.00           | 13%        | 87%        |
| Third Call-3rd Announcement | \$ 5,977,790.00         | \$ 53,302,529.00         | \$ -                   | \$ -                    | \$ -                    | \$ -                   | \$ 1,166,486.45        | \$ 1,166,486.45         | 20%        | 80%        |
| <b>Total</b>                | <b>\$ 61,134,641.00</b> | <b>\$ 278,405,878.00</b> | <b>\$ 2,590,926.33</b> | <b>\$ 10,167,797.46</b> | <b>\$ 13,666,840.60</b> | <b>\$ 9,159,138.48</b> | <b>\$ 3,260,472.17</b> | <b>\$ 38,845,175.04</b> | <b>64%</b> | <b>36%</b> |

| Call                        | GHG Benefits - Tonnes / Year |                |                |
|-----------------------------|------------------------------|----------------|----------------|
|                             | Completed                    | Anticipated*   | Total          |
| First Call                  | 62,004                       | 140,741        | 202,745        |
| 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 | 0                            | 75,509         | 75,509         |
| Third Call-3rd Announcement | 0                            | 16,112         | 16,112         |
| <b>Total</b>                | <b>71,673</b>                | <b>269,872</b> | <b>341,545</b> |

| Call                        | Employment Benefits |              |            |                    |              |            |
|-----------------------------|---------------------|--------------|------------|--------------------|--------------|------------|
|                             | Temporary Jobs      |              |            | Ongoing Jobs       |              |            |
|                             | Completed Projects  | Anticipated* | Total      | Completed Projects | Anticipated* | Total      |
| First Call                  | 244                 | 59           | 303        | 95                 | 29           | 124        |
| 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 | 0                   | 97           | 97         | 0                  | 61           | 61         |
| Third Call-3rd Announcement | 0                   | 96           | 96         | 0                  | 88           | 88         |
| <b>Total</b>                | <b>353</b>          | <b>563</b>   | <b>916</b> | <b>164</b>         | <b>243</b>   | <b>407</b> |

\* Anticipated Benefits from In Progress and Not Started Projects

## Active ICE Fund Projects by Region and Technology

| Region           | # Projects | ICE Funding             | %           | Total Project Value      | GHG            | Employment |            |
|------------------|------------|-------------------------|-------------|--------------------------|----------------|------------|------------|
|                  |            |                         |             |                          |                | 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        | 52%         | \$ 155,420,840.00        | 79,079         | 350        | 184        |
| Okanagan         | 4          | \$ 1,664,083.00         | 3%          | \$ 5,101,750.00          | 16,739         | 40         | 26         |
| Omineca          | 8          | \$ 13,604,730.00        | 22%         | \$ 49,046,699.00         | 151,076        | 313        | 42         |
| 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 | 7          | \$ 7,975,115.00         | 13%         | \$ 30,313,969.00         | 84,937         | 98         | 84         |
| <b>Total</b>     | <b>47</b>  | <b>\$ 61,134,641.00</b> | <b>100%</b> | <b>\$ 278,405,878.00</b> | <b>341,544</b> | <b>917</b> | <b>407</b> |

| Percent of Total Funding |     |
|--------------------------|-----|
| Cariboo                  | 2%  |
| Kootenay                 | 3%  |
| Lower Mainland           | 52% |
| Okanagan                 | 3%  |
| Omineca                  | 22% |
| Skeena                   | 5%  |
| Thompson Nicola          | 0%  |
| Vancouver Island         | 13% |

| Energy Category     | # Projects | ICE Funding             |             |
|---------------------|------------|-------------------------|-------------|
| Bioenergy           | 22         | \$ 39,089,102.00        | 64%         |
| Energy Conservation | 5          | \$ 5,857,669.00         | 10%         |
| Energy Management   | 6          | \$ 9,410,000.00         | 15%         |
| 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         | 3%          |
| Waste to Energy     | 1          | \$ 666,667.00           | 1%          |
| Transportation      | 1          | \$ 225,000.00           | 0%          |
| <b>Total</b>        | <b>47</b>  | <b>\$ 61,134,641.00</b> | <b>100%</b> |



**BRIEFING NOTE****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).
- 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. S12  
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.
- 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.

**ATTACHMENTS:**

BC Hydro Energy Procurement Update, April 2013

**CONTACT:** Les MacLaren, ADM



Pages 159 through 162 redacted for the following reasons:

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S13, S16, S17

S13,S16, S17

**BRIEFING NOTE****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 March 2013, there were 79 operational projects with Electricity Purchase Agreements (EPAs) with BC Hydro. BC Hydro also manages another 51 EPAs for projects in the pre-commercial operation stage. Additionally, there are 13 applications proceeding through the Standing Offer Program (SOP) review process.
- Of the 79 projects delivering power to BC Hydro:
  - 55 are hydro projects, including ten storage hydro projects;
  - three are wind projects;
  - 15 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 15,074 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.
- 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 April 23, 2013, there are 563 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 April 23, 2013, 215 Power-General water licences have been issued that are still current. Some clean, renewable waterpower projects are issued two or more licences. Of the 215 licences, 30 were issued prior to May 2001.
- 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

**CONTACT:** Les MacLaren, ADM

## 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 BChydro 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 March 2013, BC Hydro has Electricity Purchase Agreements with 73 clean, renewable power projects. Of these operational projects, 51 are waterpower projects (45 non-storage hydro and six storage hydro), 15 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 April 23, 2013, there were 563 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 215 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 must 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*.



**BRIEFING NOTE****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.
- As of March 2013, BC Hydro managed 79 EPAs for projects in commercial operation, delivering 15,074 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 75 EPAs with smaller private clean energy producers.

- BC Hydro manages 51 EPAs for projects in the pre-commercial operation stage, representing 8,086 GWh/year of contracted energy, or about 4,967 GWh/year when adjusted for potential attrition and including 32 non-storage hydro projects.
- 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. This remains to be implemented due to the current fiscal situation.
- 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).

**CONTACT:** Les MacLaren



## BRIEFING NOTE

### 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 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. This would lead 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/STATUS:

- 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.
- 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**

s.14

**CONTACT:** Les MacLaren, ADM



Pages 176 through 177 redacted for the following reasons:

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## BRIEFING NOTE

### 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.

#### 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.
- 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.
- 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 next CIMC meeting is scheduled for May 28, 2013.
- Local media coverage of the project has been overwhelmingly positive and Columbia Power 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 allocates the amount of water available to the completed project; was completed in October 2012.
- BC Hydro and Fortis BC are in discussions regarding an Energy Export Agreement, pertaining to the WAX capacity. They anticipate filing with the BCUC in May 2013.
- 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.

**CONTACT:** Les MacLaren, ADM

## BRIEFING NOTE

### ISSUE: Northwest Transmission Line – 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.
- 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 \$617 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.

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- The Tahltan First Nation supports the higher voltage line. However, it wants to ensure the Crown's obligation to consult, and if necessary accommodate, First Nations is met. BC Hydro will engage directly with the Tahltan on facilities it will construct. Imperial is required to meet the Crown's duty to consult for the transmission line.
- Official engagement between BC Hydro and the Tahltan started in April 2013. Imperial has a commercial arrangement with the Tahltan Nation Development Corporation to facilitate direct economic benefits for its portion of the project.
- Imperial is currently securing Crown permits for the transmission line. BC Hydro is currently securing Crown permits for upgrades to the Bob Quinn substation, the new Tatogga substation and the distribution line from Tatogga to Iskut. It is expected that construction will begin in summer 2013.

**CONTACT:** Les MacLaren, ADM

**BRIEFING NOTE****ISSUE:        *Utilities Commission Act 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 BC's interests. To that end, the BCUC has launched an inquiry on MRS implementation and will make recommendations to Government.

**BACKGROUND/STATUS:**

- 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.
- 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 WECC reliability standards to identify those that may be suitable for adoption in British Columbia.
- Government approved a statutory amendment to the *UCA* that would 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. They argued that industrial loads do not represent a “real” reliability risk since BC Hydro has the ability to drop them from the system. They also argued that MRS would impose an incremental reporting cost on them to demonstrate compliance. Finally, they argued that it is BC Hydro’s responsibility to ensure system reliability, so reporting requirements and associated risk should accrue to the utility.
- BC Hydro and the BCUC argued that industrial customers are legally required to adhere to WECC standards under the Regulation and that there is inherent benefit to undergoing reliability audits and demonstrating compliance in writing. The BCUC went further arguing that MRS is akin to other regulatory regimes adopted for the public interest, such as Work Safe BC.
- The BCUC admits that there have been implementation issues associated with MRS. It also acknowledges that the regime should reflect provincial interests in order to uphold provincial sovereignty. However, the BCUC believes that the best way to address the outstanding issues is to hold an inquiry where all stakeholders can present their views.
- 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.
- BCUC launched its process in October 2012. Final written submissions are due May 30, 2013. The Commission will provide recommendations to Government over the summer of 2013.

**CONTACT:** Les MacLaren, ADM

# Mines and Mineral Resources Division

## 1. Purpose of Division

The Mines and Mineral Resources Division (MMRD) manages and facilitates the responsible development of British Columbia's mineral resources. The Division administers the *Mines Act*, the *Mineral Tenure Act* and the *Coal Act* and develops policies and regulations for British Columbia's mineral exploration and mining sector. MMRD is headquartered in Victoria with staff around the Province, including offices in Vancouver, Kamloops, Cranbrook, Prince George and Smithers.

To achieve the Province's strategic goals and vision for the mineral exploration and mining sector, MMRD focuses on the following objectives and strategies:

- Ensuring strong, responsible and safe mineral and coal exploration and mine development, production, closure and reclamation;
- Delivering responsible tenure and permit decisions;
- Stimulating the development and growth of the British Columbia mineral exploration and mining industry with globally competitive policies and publicly accessible geoscience;
- Streamlining regulations and internal processes to facilitate decision making;
- Achieving the Province's strategic social, economic and environmental goals;
- Advising on mineral resource potential both externally and in cross-agency initiatives;
- Promoting British Columbia's many mineral opportunities; and
- Developing and maintaining positive relationships with industry, First Nations, and communities.

## 2. Context

Mineral exploration and mining is a key economic driver in British Columbia. British Columbia mines produced an estimated \$8.3 billion worth of commodities in 2012—nearly 18 percent of the Canadian total. While this was a decrease from 2011, when the production value was nearly \$9 billion, 2012 was a strong year given that commodity prices were significantly lower and ongoing uncertainties in global financial markets.

At an estimated \$680 million, exploration spending in British Columbia hit record levels in 2012. 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). Within Canada, British Columbia ranked second (after Ontario) for exploration spending in 2012, with approximately 19 percent of all investment in Canadian exploration projects occurring in this Province.

Home to more than half of Canada's mineral exploration companies, British Columbia is Canada's single largest exporter of coal, the country's largest producer of copper and its only producer of molybdenum. British Columbia is ideally positioned as Canada's Pacific Gateway to supply key and growing global markets such as China and India. There are currently nine coal mines in operation, ten metal mines, more than thirty industrial minerals mines, and hundreds of aggregate pits and quarries. In addition, there are hundreds of active exploration sites around the Province. With dozens of proposals for new mines and expansions to existing operations in various stages of the approvals process, exploration and mining activity in British Columbia will remain strong in the coming years.

The mineral exploration and mining industry provides thousands of well-paying jobs for British Columbians. Over 30,000 people were employed in mineral exploration, mining and related sectors in 2012, mostly in rural British Columbia. 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. In addition, mineral tax revenues for 2012/13 were valued at more than \$200 million, supporting essential infrastructure and government programs that benefit all British Columbians.

British Columbia 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. Vancouver is world-renowned as a centre of one of the world's largest pools of international expertise in geology, mine engineering, project financing, and environmental sustainability. More than 800 exploration and mine development companies are headquartered in Vancouver, and every year, the city 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.

### **3. Branch/Work Unit Descriptions**

#### **3.1 Geological Survey Branch (British Columbia Geological Survey)**

##### **Mandate**

To act as the developer, disseminator and custodian of provincial geoscientific knowledge, leading the way for informed decision making by a wide variety of clients.

##### **Description**

The Geological Survey Branch, also known as the 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. Established in 1895, the BCGS was the first provincial science organization, and over the course of its long history, it has been expanding knowledge of British Columbia's geology and coal and mineral deposits through field surveys. The Branch creates, maintains and delivers geoscience information in order to:

- advise government on the best use of the Province's mineral resources to benefit all British Columbians;
- provide geoscience assessments on the nature and economic health of the British Columbia mineral exploration and mining industry to guide government policy; and
- attract companies and individuals to British Columbia to explore for mineral and coal resources.

##### **Key Functions**

- Conduct new geoscience surveys and generate maps, databases and publications;
- Direct the domestic and international marketing of British Columbia's mineral resources and growth opportunities through the British Columbia Mineral Development Office;
- Manage databases, applications (e.g., MapPlace, MINFILE) and website delivery;
- Monitor and report on mineral exploration and mining activity and geoscientific research activities;
- Provide technical geoscience information and advice to the mineral exploration community and to various government initiatives;
- Lead and actively participate in various trade missions, conferences and task forces; and
- Provide exploration targets, information and risk-reduction ideas to assist and encourage exploration companies and individuals searching for mineral and coal deposits in British Columbia.



## 3.2 Health, Safety and Permitting Branch

### Mandate

To develop and maintain a strong, responsible and safe mining culture in the Province.

### Description

The *Mines Act* and the accompanying Health, Safety and Reclamation Code for Mines in British Columbia (the Code) protect workers and the public through provisions for minimizing the health, safety and environmental risks related to mineral exploration and mining activities. MMRD's Health, Safety and Permitting Branch reviews technical applications, issues permits and completes inspections and audits to ensure compliance with the *Mines Act*, the Code and permit conditions. Branch staff conduct timely and efficient technical reviews and provide expert guidance to industry on the development and operation of mines. The Branch also works closely and collaboratively with other provincial and federal agencies and local governments to issue approvals. Branch staff can be found in all five of MMRD's regional offices (i.e., in Victoria, Smithers, Prince George, Cranbrook and Kamloops).

### Key Functions

- Regulate all mine sites in British Columbia (including metal and coal mines, sand and gravel operations, mineral exploration projects, placer and quarry operations and historical mine sites as defined under the *Mines Act*):
  - Conduct regular mine inspections and audits
  - Enforce compliance with the Code
  - Set permit conditions that consider a range of values (including socioeconomic and environmental values)
  - Ensure that the duty to consult and, where appropriate, accommodate First Nations has been met before issuing a *Mines Act* permit
- Administer certifications, examinations, and reclamation securities; and
- Liaise with mine management, unions and workers, communities, First Nations and other technical organizations, committees and government agencies.

### 3.3 Mineral Titles Branch

#### Mandate

To manage provincial Crown coal, mineral and placer rights in a manner that provides continuing economic benefit from resource development, supports an active industry and is responsive to public concerns.

#### Description

The Mineral Titles Branch administers the *Mineral Tenure Act*, the *Coal Act* and related enactments. The Branch manages the acquisition, maintenance and registry of mineral, placer and coal rights in the Province, including the web-based Mineral Titles Online application. The Chief Gold Commissioner leads the Branch and adjudicates on matters relating to mineral, placer and coal rights; issues mineral and placer leases and coal licenses and leases; establishes mineral, placer and coal land reserves; and is responsible for the provincial registry of Crown mineral, placer and coal rights. Branch staff conduct field inspections of mineral and coal titles for auditing and compliance purposes.

#### Key Functions

- Crown mineral, placer and coal rights administration;
- Mineral and coal land reserve administration;
- Statutory decisions on tenures under the *Mineral Tenure Act* and *Coal Act*;
- Industry, First Nations, local government and federal and provincial agency liaison; and
- Investigation and resolution of complaints and disputes arising from the exercise of subsurface rights under the *Mineral Tenure Act*, *Coal Act* and related acts and regulations.

### 3.4 Policy, Legislation and Issues Resolution Branch

#### Mandate

To provide corporate leadership to the Mines and Mineral Resources Division in policy, legislation, issues resolution and the development and management of strategic initiatives to advance the responsible growth of mineral exploration and mining in British Columbia.

#### Description

The Policy, Legislation and Issues Resolution Branch leads major legislative and policy initiatives and guides the division's efforts to streamline processes in the regulation of the mining sector. The Branch plays a central role in issues management for the division and represents the division's strategic interests in various forums, including multi-stakeholder initiatives to resolve issues related to mineral development in British Columbia. In addition, Branch staff conduct



economic and financial analyses and compile and publish statistical data on the mineral exploration and mining sector in British Columbia.

#### Key Functions

- Development of legislation, regulations and policies;
- Business and strategic planning for the division;
- Economic, statistical and financial analyses;
- Issues tracking and management for major mine development projects around British Columbia;
- Research and writing support for the division;
- Development and maintenance of website content for the Division;
- Strategic advice and recommendations on emerging issues; and
- Industry, First Nations and federal and provincial agency liaison.

## 4. Organization Chart, Budget and FTEs

Budget:

S17

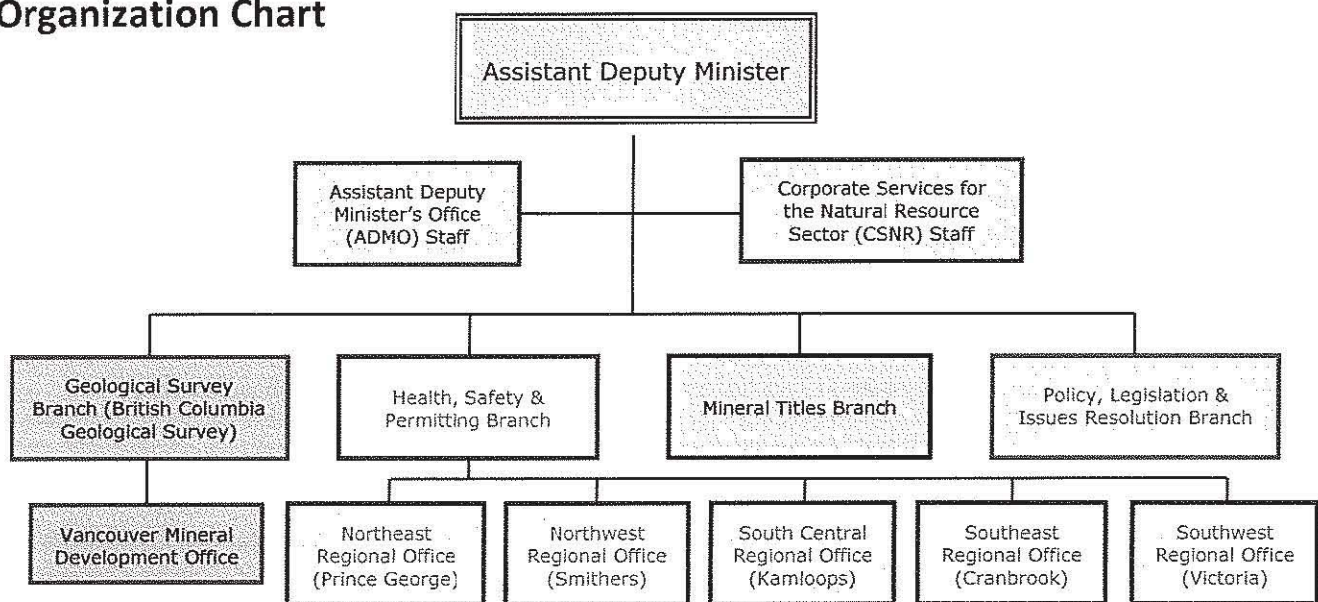
S17

Full Time Equivalents (FTEs): 140.5

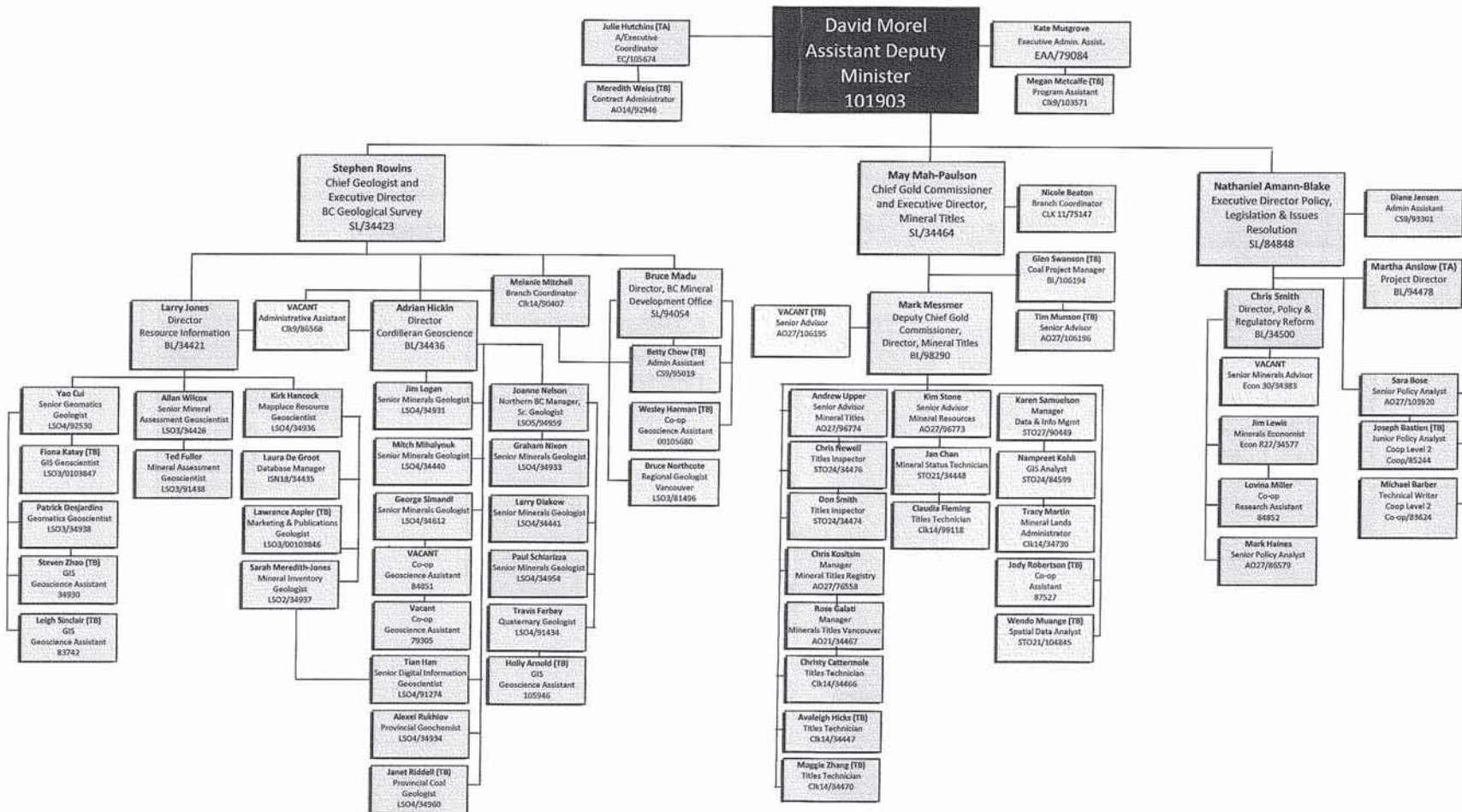
S17

S17

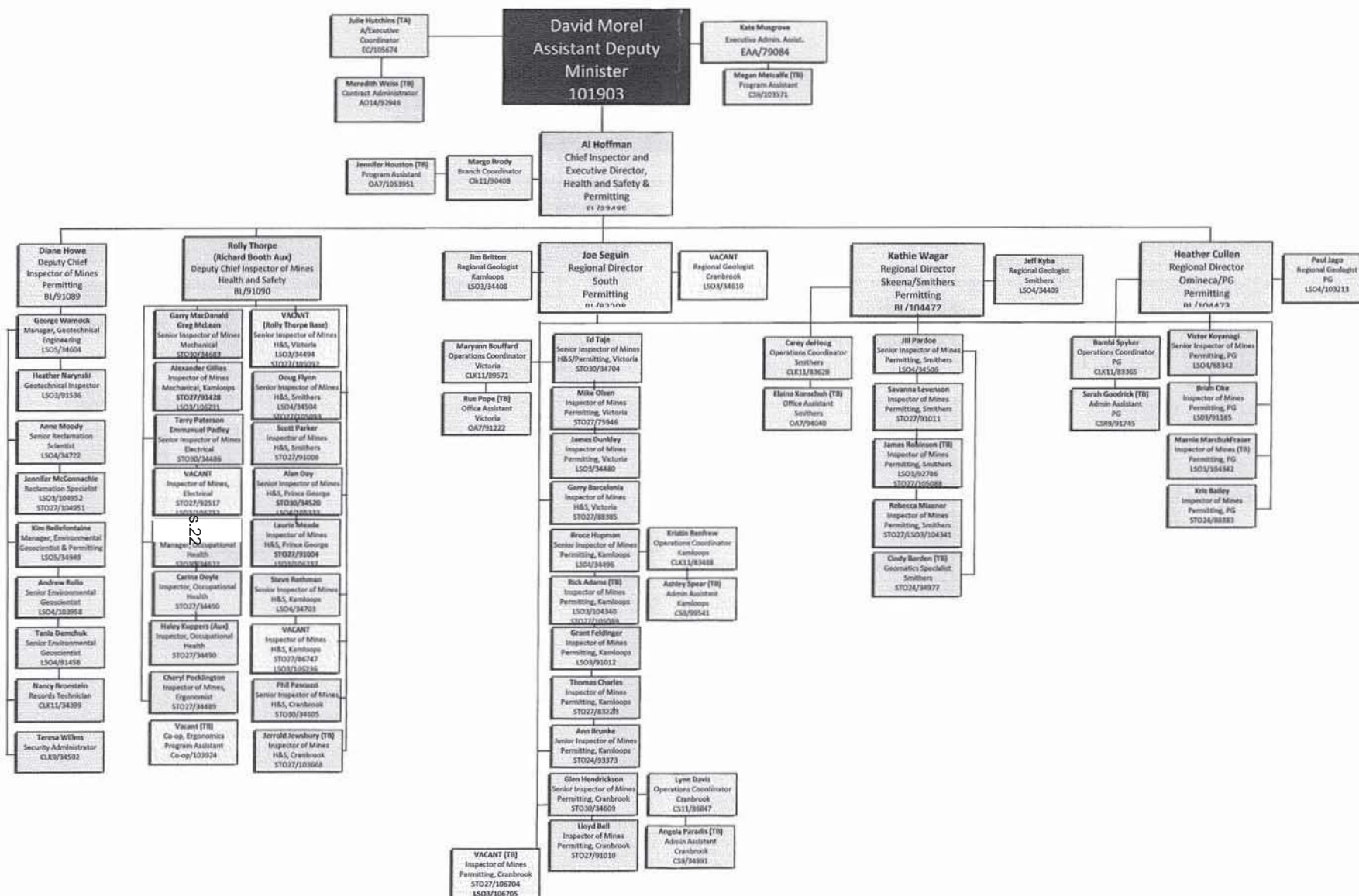
### Organization Chart



Detailed Branch organization charts follow.







# **Mines and Mineral Resources**

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## BRIEFING NOTE

### 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 percent of the Canadian total.
- According to preliminary estimates, exploration spending in BC hit a record-setting \$680 million in 2012. This is a 47 percent 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, ten metal mines, more than thirty industrial minerals mines, and hundreds of aggregate pits and quarries.
- There are 19 new major mine and two 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 \$225 million.
- 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, ADM



**BRIEFING NOTE****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 over \$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             |

- In March 2012, Walter Energy announced it was curtailing production at its Willow Creek metallurgical coal 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% of coal mined in BC is high-quality metallurgical (steel-making) coal.
- Two major expansions to existing coal mines were approved in January 2012 (Elkview and Quinsam).

S13

- There are six potential new coal mine developments active in the BC environmental assessment (EA) process (Arctos Anthracite, Carbon Creek, Echo Hill, Murray River, Raven and Sukunka).

S13

S13

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

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- 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 environmental assessment process.

**CONTACT:** David Morel, ADM



**BRIEFING NOTE****ISSUE: Operating Metal Mines in BC****KEY MESSAGES:**

- There are currently 10 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:

| <b>Operation</b>       | <b>Company</b>  | <b>Community</b> | <b>Est. FTEs</b> | <b>Commodity/ies</b>          |
|------------------------|---|------------------|------------------|-------------------------------|
| 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            |
| Treasure Mountain      | Huldra Silver Inc.  | Hope             | 25               | Silver/Lead/Zinc              |
| 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 August 2011, five currently operating metal mines have received approval to expand their operations: Mount Polley; Highland Valley Copper; Huckleberry; Endako; and Gibraltar.
- The New Afton mine near Kamloops held its opening ceremony in September 2012. The operation employs over 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.

- The Treasure Mountain mine, located 28 km east of Hope, also recently began production. This 200 tonne/day underground silver-lead-zinc mine currently employs 25 people and has an estimated mine life of 15–20 years. The operation received its *Mines Act* permit in May 2012.
- 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 \$470 million; if it reaches production, this mine will employ approximately 300 people full time over an expected 28-year mine life.
  - The Bonanza Ledge gold mine, located about 60 km east of Quesnel, is also under construction.
- The proposed Kitsault silver-lead-tungsten mine received a provincial environmental assessment certificate in March 2013. The proponent, Avanti Mining Inc. submitted a joint application for a *Mines Act* permit and a construction-phase *Environmental Management Act* permit on April 26, 2013.

S13

S13

The estimated capital cost of the Kitsault project, located in northwestern BC approximately 140 km north of Prince Rupert, is \$837 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.

**CONTACT:** David Morel, ADM





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-Canbo

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

## 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 Proposed Mine
  - 18 Significant Project
  - 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  
Ba - Barite  
Bn - Bentonite  
Bs - Basalt  
Bu - Building Stone  
Cy - Clay  
Do - Dolomite  
Fr - Fuller's earth  
Gy - Gypsum  
Jd - Jade  
Ls - Limestone  
Mg - Magnesium  
Mt - Magnesite  
Mw - Mineral Wool  
Nb - Niobium  
Op - Opal  
Pm - Pumice  
RE - Rare Earth  
Sh - Shale  
Si - Silica  
Sy - Syenite  
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. Gilles Bay (Ls, At)
7. Van Anda (Ls)
8. K2 (Bu)
9. Earle Creek (At)
10. Sechelt Mine (At)
- \*11. McNab Valley (Au)
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. Lima Creek (Ls)
28. Crawford Bay (Do)
29. 4J (Gy)
30. Eikhorn (Gy)
31. Mount Brussilof (Mt)
32. Moberly (Si)
- \*33. Blue River (Ta, Nb)
- \*34. Angus (Si)
- \*35. Carbonate Syndicate (RE)
- \*36. Carbo (RE)
- \*37. Aley (Nb)
- \*38. Provencher, Kulcho, Cassiar (Jd)
39. Fireside (Ba)
- \*40. Nonda (Si)
- \*41. Hoof (Mg)
- \* Exploration Projects



0 100 200  
Kilometers



## **BRIEFING NOTE**

### **ISSUE: Health and Safety at BC Mines**

#### **KEY MESSAGES:**

- Mining is one of the safest heavy industries in the Province.
- This record is a result of the cooperative efforts of mine employees, mine management, unions and regulators.
- Ministry of Energy, Mines and Natural Gas (EMNG) 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, EMNG recognizes the need for due diligence and continuous improvement.

#### **BACKGROUND:**

- British Columbia has a diverse mining industry ranging from small-scale placer and gravel operations to world-class surface mines and underground metal and coal mines.
- EMNG 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 EMNG'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.
- There were 695 mine visits conducted in 2005; 777 mine visits in 2006; 986 mine visits in 2007; 1,015 mine visits in 2008; 1,035 mine visits in 2009; 1,058 mine visits in 2010; 795 mine visits in 2011; and 1,159 mine visits in 2012.
- In 2012, there was one fatality related to an avalanche on an exploration site. There were no mine related fatalities in British Columbia in 2010 and 2011. This was the longest period of time with no mine fatalities since records started to be collected in 1898.
- In 2011 (latest figures available from WorkSafeBC), larger British Columbia 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           |

**CONTACT:** David Morel, ADM

## BRIEFING NOTE

### ISSUE: Southeast BC Coal Mines

#### KEY MESSAGES:

- Teck Resources Ltd. (Teck) has plans to expand all five of its currently operating coal mines in southeast BC: Coal Mountain, Elkview, Fording River, Greenhills and Line Creek Operations.
- The Elk Valley watershed, which is located downstream of these mines, has increasing trends of selenium with concentrations above provincial water quality guidelines for the protection of aquatic life, and in some areas above drinking-water quality guidelines.
- On April 15, 2013 the Minister of Environment issued an order to Teck requiring the company to submit a plan to address the high levels of selenium and other contaminants in the Elk Valley watershed. Teck is responsible for completing and submitting the plan to the minister within 12 months of the Terms of Reference being approved.

#### BACKGROUND:

- 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.

S13, S16

- Teck's Line Creek Operations Phase II project is currently under review in the BC environmental assessment (EA) process.

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S13, S21



- Teck currently employs close to 3,700 people at its southeast BC coal mines and is planning to expand all of these operations.
- In February 2013, Teck released the first version of its Valley-Wide Selenium Management Action Plan to address the cumulative nature of water-quality effects from its southeast BC coal mines.
  - This action plan aims to maintain selenium levels in Lake Koocanusa below BC Water Quality Guidelines to meet US and Montana interests.
  - The action plan includes investments of up to \$600 million by Teck over the next five years for installation of water diversion and treatment facilities, research and development to improve selenium management, and ongoing aquatic monitoring.
- The 2013 Ministerial Order, issued under section 89 of the *Environmental Management Act*, covers the Elk Valley watershed, including Fording River and Lake Koocanusa, and stipulates the development of 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, including:
  - 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, which Teck expects can be achieved using water treatment technologies described in its draft Valley-Wide Selenium Management Action Plan.
- Teck will develop the area-based management plan in collaboration with stakeholders, First Nations and various levels of government.

**CONTACT:** David Morel, ADM

**ISSUE: Mineral Tax Revenue Forecast (2012/2013)**

**KEY MESSAGES:**

S13, S17

**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: the lower net current proceeds tax at two percent of operating profits and the net revenue tax at thirteen percent of defined profits 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.

S13, S17

**CONTACT:** David Morel, ADM



## **BRIEFING NOTE**

### **ISSUE: Revenue Sharing with First Nations**

#### **KEY MESSAGES:**

- BC is committed to sharing wealth generated by new mines and mine expansions with First Nations.
- 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.

#### **BACKGROUND:**

- In 2008, BC became the first province in Canada to introduce a policy to share mineral tax revenue from new and expanded mine projects with First Nations.
- The Ministry of Aboriginal Relations and Reconciliation leads the negotiation of Economic and Community Development Agreements (ECDAs) with First Nations to share mineral tax from mine developments in their traditional territories.
- Under these agreements, First Nations receive a percentage of mineral tax revenue. The percentage can be up to 37.5 percent with possible reductions for potential environmental liabilities, strength of claim and other considerations.
- Several ECDAs have already been signed for new mines and mine expansions (including for New Afton, Mt. Milligan, Mount Polley, Copper Mountain and Highland Valley Copper).
- An ECDA was signed with the Ktunaxa First Nation (Jan 29, 2013) which is applicable to new mines and mine expansions in the Elk Valley.

S13, S16

**CONTACT:** David Morel, ADM

**BRIEFING NOTE****ISSUE: Mine Expansions****KEY MESSAGES:**

- Since August 2011, seven currently operating major mines have received *Mines Act* permit amendments to expand their operations.
- 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 require amending an existing *Mines Act* permit and can also trigger the environmental assessment (EA) process.
- The following currently operating mines have received permit amendments since August 2011 allowing them to expand their operations: Mount Polley, 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   | Nearby Community/ies | Commodity/ies        | Status  |
|---|---|----------------------|----------------------|---|
| Line Creek Operations – Phase II                    | Teck Resources Limited  | Sparwood             | Coal                 | EA application under review (timeline suspended)      |
| Fording River Operations – Swift River Coal Project | Teck Resources Limited  | Elkford              | Coal                 | EA pre-application                                    |
| Greenhills Expansion                                | Teck Resources Limited  | Elkford              | Coal                 | <i>Mines Act</i> permit amendment application pending |
| Mount Polley Expansion                              | Imperial Metals Corporation   | Williams Lake        | Copper, gold         | <i>Mines Act</i> permit amendment application pending |
| Quinsam – 7 South Area 5                            | Quinsam Coal Corporation (Vitol Anker International B.V.)                         | Campbell River       | Coal                 | <i>Mines Act</i> permit amendment application pending |
| Wolverine – EB Pit                                  | Walter Energy Western Coal  | Tumbler Ridge        | Coal                 | <i>Mines Act</i> permit amendment application pending |
| Copper Mountain Expansion                           | Copper Mountain Mining Corporation (75%) & Mitsubishi Materials Corporation (25%) | Princeton            | Copper, gold, silver | Exploration work is ongoing                           |



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

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If the project receives an EA certificate, the next step in the approval process is a *Mines Act* permit amendment application.

- Teck also has plans to expand its Fording River Operations and Greenhills coal mine. The expansion proposal for Fording River, called the Swift River Coal Project, is currently in the pre-application phase of the BC EA process. The Greenhills proposal does not trigger the EA process. Both of these expansion proposals will require *Mines Act* permit amendments.

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- The Copper Mine began production in June 2011. The mine currently employs over 270 people full time and is 75 percent owned by Copper Mountain Mining Corporation and 25 percent owned by Mitsubishi Materials Corporation, a major Japanese resource company.

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s.13, s.21

**CONTACT:** David Morel, ADM

**BRIEFING NOTE****ISSUE: Mine Development Projects in BC****KEY MESSAGES:**

- Three metal mines are currently under construction in BC.
- There are 19 new major mine and two expansion proposals currently active in the *Mines Act* permitting and/or the BC environmental assessment (EA) processes.
- Several other projects are close to entering the *Mines Act*/EA processes.
- This places the province 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.
- In northwestern BC, the Red Chris copper-gold mine is currently under construction. This mine is being developed at an estimated capital cost of \$470 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 km east of Quesnel, is also under construction.
- The Bonanza Ledge and Ruby Creek mines have *Mines Act* permits allowing them to undertake construction activities. Bonanza Ledge has begun pre-construction and plans to continue these activities in 2013. S21
- A decision on Teck Resources Limited's *Mines Act* permit amendment application for the Quintette coal mine is expected by the summer of 2013. Located approximately 20 km south of Tumber Ridge in northeastern BC, Quintette closed in 2000 after 18 years of operations. If approved, this project would be re-developed at an estimated capital cost of \$858 million and employ 400 people full time over an estimated 12-year mine life.
- Peace River Coal Ltd.'s Roman project, located 30 km southwest of Tumbler Ridge in northeastern BC, received a BC EA certificate in December 2012 and recently submitted a *Mines Act* permit application for phase 1 construction work. If approved, this mine will provide full-time employment for approximately 375 people over its 10-year mine life.
- The proposed Kitsault silver-lead-tungsten mine received a BC EA certificate in March 2013. The proponent, Avanti Mining Inc., submitted a joint application for a *Mines Act* permit and a construction-phase *Environmental Management Act* permit for Kitsault sometime on April 26, 2013. S13

S13

The estimated capital cost of the Kitsault project, located in northwestern BC approximately 140 km north of Prince Rupert, is \$837 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.

- The following 15 new mine development proposals are currently active in the pre-application phase of the BC EA process:

| Project           | Company  | Community            | Est. FTEs | Est. Capital Costs (\$M) | Commodity/ies                 |
|-------------------|--|----------------------|-----------|--------------------------|-------------------------------|
| Ajax              | KGHM Ajax Mining Inc. [Abacus Mining & Exploration Corporation (20%) & KGHM Polska Miedz S.A. (80%)]                                   | Kamloops             | 380       | 795                      | Copper/Gold                   |
| Arctos Anthracite | Arctos Anthracite Joint Venture [Fortune Minerals Limited (80%) & POSCAN (20%)]  | Iskut                | 500       | 790                      | Coal                          |
| Blackwater        | New Gold Inc.  | Vanderhoof           | 500       | 1,800                    | Gold/Silver/Lead/Zinc         |
| Brucejack         | Pretium Resources Inc.   | Stewart              | 300       | 450                      | Gold/Silver                   |
| Carbon Creek      | Cardero Resource Corp.   | Hudson Hope          | 875       | 475                      | Coal                          |
| Echo Hill         | Hillsborough Resources Limited (wholly owned subsidiary of the Vitol Group of companies)   | Tumbler Ridge        | 80        | 35                       | Coal                          |
| Harper Creek      | Yellowhead Mining Inc.   | Vavenby              | 430       | 840                      | Copper/Gold/Silver            |
| Kootenay West     | CertainTeed Gypsum Canada Inc.   | Canal Flats          | 17        | 7–10                     | Gypsum                        |
| KSM               | Seabridge Gold Inc.  | Stewart              | 650       | 5,250                    | Copper/Gold/Silver            |
| Kutcho Creek      | Kutcho Copper Corp. (Capstone Mining Corp.)  | Iskut                | 145       | 190                      | Copper/Zinc/Silver/Gold       |
| Murray River      | HD Mining International Ltd. [Huiyong Holdings Ltd. (55%), Canadian Dehua International Mines Group Ltd. (40%) & another partner (5%). | Tumbler Ridge        | 600       | 300                      | Coal                          |
| Raven             | Comox Joint Venture (partnership between Compliance Energy Corporation, ITOCHU Corporation & LG International Corporation)             | Comox/Courtenay      | 350       | 240                      | Coal                          |
| Schaft Creek      | Copper Fox Metals Inc.   | Telegraph Creek      | 700       | 2,950                    | Copper/Gold/Molybdenum/Silver |
| Spanish Mountain  | Spanish Mountain Gold Ltd.   | Likely/Williams Lake | 175       | 760                      | Gold                          |
| Sukunka           | Xstrata Coal British Columbia [Xstrata plc. (75%) and JX Nippon Oil & Energy Corporation (25%)]  | Tumbler Ridge        | 700       | 1,800                    | Coal                          |

**CONTACT:** David Morel, ADM

## BRIEFING NOTE

### ISSUE: Exploration in British Columbia

#### KEY MESSAGES:

- According to preliminary estimates, exploration spending in BC hit a record-setting \$680 million in 2012. This is a 47 percent 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 BC communities since so many deposits are found in rural areas of the Province.
- 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.
- According to preliminary estimates, 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.
- There are currently a number of advanced exploration projects across BC, including Xstrata's Suska coal project in northeastern BC; Castle Resources' work on the past-producing Granduc copper/gold/silver mine near Stewart; and Imperial Metals' Ruddock Creek lead/zinc project northwest of Revelstoke.

**CONTACT:** David Morel, ADM



## BRIEFING NOTE

### ISSUE: Public Geoscience in BC

#### KEY MESSAGES:

- “Public geoscience” is funded by taxpayer dollars. Its processes are open and transparent and its results are freely available to all. It provides stewardship for public data, information, and knowledge on earth dynamics and natural resources.
- Public geoscience is essential to the discovery and development of new mineral and energy resources.
- Providers of public geoscience in BC include the Ministry of Energy, Mines and Natural Gas’ BC Geological Survey Branch (BCGS) and Oil and Gas Division; the Geological Survey of Canada; and Geoscience BC.

#### BACKGROUND:

- BCGS is the oldest science agency in the BC Government with more than 115 years of service.
- The 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 providing geoscience expertise to support government’s sustainable development objectives and job creation.
- BCGS is the keeper of all provincial geoscience knowledge. Databases are world class and are always ranked in the top ten globally in the Fraser Institute annual industry poll (#1 in 2005/2006).
- BCGS leads the mining industry to frontier areas of BC with high mineral potential through strategic, multi-year geoscience projects.
- Geoscience BC is an industry-led, industry-focused, non-governmental organization that generates new geoscience information that complements the applied geoscience activities of the BCGS and the Oil and Gas Division.
- Since it was established in 2005, the Province supported Geoscience BC through a series of grants totaling nearly \$50 million.

- BC is the only jurisdiction in Canada that uses a non-governmental organization like Geoscience BC to assist in the delivery of public geoscience. S13

S13

**CONTACT:** David Morel, ADM



## BRIEFING NOTE

### ISSUE: Mining Exploration Tax Incentive Programs

#### KEY MESSAGES:

- BC and Canada have comprehensive mining exploration tax incentive programs to encourage exploration 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. That is 47 percent more than the 2011 expenditures of \$463 million.
- BC supports Canada's Flow Through Share Tax Credit program which was extended to March 31, 2014 by the 2013 federal budget.

#### BACKGROUND

- The Federal Flow Through Share Tax Credit and BC Mining Flow Through Share Tax Credit program combine to produce "Super Flow Through Shares," which can make the after-tax cost of exploration in BC the third lowest in Canada.

#### ***BC's mining exploration tax incentive programs include:***

- BC Mining Exploration Tax Credit – This provides a 20 percent refundable tax credit for eligible grassroots exploration expenditures until December 31, 2016. In 2007, this tax credit was increased to 30 percent for eligible exploration in areas affected by the mountain pine beetle.
- BC Mining Flow Through Share Tax Credit – The 2010 budget extended this non-refundable 20 percent tax credit until December 31, 2013. It is harmonized with the federal flow through share tax credit program.

#### ***Canada's mining exploration tax incentive programs include:***

- Flow Through Shares – This program allows companies to flow Canadian exploration expenses through to investors who can then deduct these expenses from otherwise taxable income. This reduces the funds an investor has at risk.
- Federal Flow Through Share Tax Credit (Federal Mineral Exploration Tax Credit) – This program provides a non-refundable 15 percent tax credit on grassroots exploration expenses under a flow through shares agreement. The recent federal budget extended this program until March 31, 2014.

**CONTACT:** David Morel, ADM

**BRIEFING NOTE****ISSUE: Mineral and Coal Tenure in BC****KEY MESSAGES:**

- The Mineral Titles Branch of the Ministry of Energy, Mines and Natural Gas (EMNG) 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 titles 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 landowner 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.
- 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 242 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.

**CONTACT:** David Morel, ADM

Pages 216 through 217 redacted for the following reasons:

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S13, S14, S17



## **Stakeholder Organizations/Industry Associations**

### **Electricity and Alternative Energy**

#### **BC Sustainable Energy Association (BCSEA)**

The BCSEA is a non-profit society of citizens, professionals and practitioners committed to promoting the understanding, development and adoption of sustainable energy, energy efficiency and conservation in British Columbia. Their Mission is to facilitate the transition to a sustainable energy future through education, advocacy and tangible community projects.

**Key Contact**

Guy Dauncey, Communications Director, Victoria

Phone (general): 250-881-1304

Email: [guydauncey@earthfuture.com](mailto:guydauncey@earthfuture.com)

<http://www.bcsea.org/>

#### **Canadian Electricity Association (CEA)**

The CEA is made up of corporate utility member companies, major electrical manufacturers, corporate consulting companies and several hundred other company and individual members. Founded in 1891, the CEA is the voice of the Canadian electricity industry, promoting electricity as the critical enabler of the economy and Canadians' expectations for an enhanced quality of life. Their Mission to contribute to the regional, national, and international success of its members is based on the belief that safe, secure, reliable, sustainable and competitively-priced supply of electricity is essential to Canada's prosperity.

**Key Contact:**

Jim Burpee, President and CEO

Phone: 613-230-4762

Email: [burpee@electricity.ca](mailto:burpee@electricity.ca)

<http://www.electricity.ca>

#### **Canadian Renewable Fuels Association (CRFA)**

Founded in 1994, the CRFA is a non-profit organization with a mission to promote the use of renewable fuels for transportation through consumer awareness and government liaison activities. The CRFA membership is comprised of representatives from all levels of the ethanol and biodiesel industry, including: grain and cellulose ethanol producers, biodiesel producers, fuel technology providers, and agricultural associations.

**Key Contact**

W. Scott Thurlow, President

Phone: (head office) 613-594-5528

Email: [s.thurlow@greenfuels.org](mailto:s.thurlow@greenfuels.org)

<http://www.greenfuels.org/>

**Clean Energy BC (formerly Independent Power Producers Association of British Columbia)**

Since 1992, the Clean Energy Association of British Columbia (formerly the Independent Power Producers of British Columbia) has been the voice of Clean Energy Producers in BC, to government and the public - when the members have chosen to send a collective signal. Members and non members also send their own corporate signals. The mandate of the Clean Energy Association of British Columbia is to develop a viable independent power industry in British Columbia that serves the public interest by providing cost-effective electricity through the efficient and environmentally responsible development of the Province's energy resources. Clean Energy BC has been active in advocacy with government electricity policy formulation, regulatory processes, permitting procedures, BC Hydro procurement, BCTC services, media coverage, informing the public, local and First Nations governments and resource users throughout BC.

**Key Contact**

Paul Kariya, Executive Director

Phone (general): 604-568-4778

<http://www.cleanenergybc.org>Email: [paul.kariya@cleanenergybc.org](mailto:paul.kariya@cleanenergybc.org)**Canadian Hydrogen and Fuel Cell Association (CHFCA)**

CHFCA is the national industry association dedicated to accelerating Canada's world-leading hydrogen and fuel cell industry. Their Mission is to accelerate Canada's world-leading hydrogen and fuel cell industry. Members cover most types of hydrogen and fuel cell technologies, components, systems supply and integration, fuelling systems, fuel storage, and engineering and financial services.

**Key Contacts**

Chair: Eric Denhoff, President &amp; CEO

Email: [edenhoff@chfca.ca](mailto:edenhoff@chfca.ca)

Carolyn Bailey, Manager, Business Development &amp; External Relations

Phone: 604-783-5542 Email: [cbailey@chfca.ca](mailto:cbailey@chfca.ca)<http://www.h2fcc.ca/cfm/index.cfm>**Joint Industry Electricity Steering Committee (JIESC)**

The industry steering committee represents about 25 industrial operators including pulp and paper mills, mining companies and chemical manufacturers who annually account for about one-third of total power consumed in BC.

**Key Contact**

Richard Stout, Executive Director

Phone: 604-564-2012

Email: [roninconsult@live.com](mailto:roninconsult@live.com)



## Multi-Sectoral

### Energy Council of Canada

The Energy Council of Canada is the Canadian national member of the World Energy Council, and is made up of representatives from all facets of Canada's energy sector. The Energy Council is a vehicle for strategic thinking, networking and action by senior executives in the private and public sectors who have a broad interest in national, continental and global energy issues. The Energy Council seeks to forge a better understanding of energy issues, in order to optimally shape the energy sector for the benefit of all Canadians.

#### Key Contacts

Chair: John Muir, Director of Canadian Energy Policy, GE Energy

President: Greg Schmidt      Email: [greg.schmidt@energy.ca](mailto:greg.schmidt@energy.ca)

Phone: 613-232-8239      Email: [brigitte.svarich@energy.ca](mailto:brigitte.svarich@energy.ca)

<http://www.energy.ca/users/folder.asp>

### Public Interest Advocacy Centre (PIAC)

PIAC is a non-profit organization that provides legal and research services on behalf of consumer interests, and, in particular, vulnerable consumer interests, concerning the provision of important public services.

#### Key Contacts

Leigha Worth, Executive Director

Phone: 604-687-3063      Email: [support@bcpiac.com](mailto:support@bcpiac.com)

<http://www.piac.ca/>

## **Stakeholder Organizations/Industry Associations**

### **Mineral Exploration and Mining**

#### **Aggregate Producers Association of British Columbia**

The Aggregate Producers Association of BC is a not-for-profit association representing members comprised of aggregate producers, suppliers, and associates throughout the province of British Columbia. The Association works with governing bodies and seeks to ensure the industry has an effective and lasting contribution to the economy and to the building of British Columbia. Their Mission is to encourage government policy development to support sustainable development of the aggregate resource, provide a network for the exchange of information (provincially and nationally), communicate with the public and government, and provide cost effective service to their members.

**Key Contact**

Paul Allard, Executive Director

Phone (general) 778-571-2670 Email [gravelbc@telus.net](mailto:gravelbc@telus.net)

<http://www.gravelbc.ca/>

#### **Association for Mineral Exploration British Columbia (AME BC)**

AME BC (formerly the BC & Yukon Chamber of Mines) was established in 1912 and represents over 4,000 members, including geoscientists, prospectors, engineers, entrepreneurs, exploration companies, suppliers, mineral producers, and associations who are directly or indirectly engaged in mineral exploration in British Columbia and throughout the world. Through leadership, partnerships, and advocacy, AME BC promotes a sustainable environment and business climate for the mineral exploration industry on behalf of its members.

**Key Contact**

Gavin Dirom, President and CEO

Phone (general) 604-630-3920 [gdirom@amebc.ca](mailto:gdirom@amebc.ca)

<http://www.amebc.ca/>

#### **British Columbia Placer Miners' Association (BCPMA)**

The BCPMA is the umbrella association for all placer mining associations in B.C.

**Key Contact**

Bruce Chaytor, President

s.22

[bcpma@shaw.ca](mailto:bcpma@shaw.ca)

<http://bcpma.ca/>



**Mining Association of British Columbia (MABC)**

Established in 1901, MABC represents the interests of BC's mining industry. Maintaining mining as BC's second largest resource industry is a primary goal of the MABC which represents the collective needs and interests of operating coal, metal and industrial mineral mining companies. MABC liaises with government legislators, lobbies for regulatory advancement and publicly promotes the economic and social value of mining. In addition, they provide member companies services such as: participation in key government/industry committees, updates on regulatory change, information exchange opportunities, joint industry action on issues of common concern, and the availability of staff expertise on the areas of greatest interest.

**Key Contacts**

Karina Briño, President and CEO

Phone 604-681-4321 [kbrino@mining.bc.ca](mailto:kbrino@mining.bc.ca)<http://www.mining.bc.ca/>**Regional Mining Associations in British Columbia****Kamloops Exploration Group (KEG)**

Kamloops Exploration Group is a registered, non-profit society that generally promotes the interests of mining and prospecting for minerals, metals, and petroleum to the general public; furthers members' knowledge of mineral exploration and mining by offering informational lectures; holds prospecting classes and promotes other educational projects in connection with mining and prospecting; and furthers the general public's knowledge on the subject of Geoscience.

**Key Contacts**

Colin Russell, President

Phone 250-578-2068 Email [russellgeoscience@gmail.com](mailto:russellgeoscience@gmail.com)<http://www.keg.bc.ca/>**Smithers Exploration Group**

Formed in 1971, Smithers Exploration Group serves and promotes the mineral industry in Northwest British Columbia. They work to advance geology, exploration and mining in the northwest. Membership includes prospectors, geologists, miners, engineers, pilots, expeditors, contractors, line-cutters, drillers and many people from supporting professions.

**Key Contacts**

Rob Boyce, President and Christine Ogryzlo, Director of Communications

Phone (general) 250-877-7883

Email address: [info@smithersexplorationgroup.com](mailto:info@smithersexplorationgroup.com)<http://www.smithersexplorationgroup.com/>

**Chamber of Mines of Eastern British Columbia**

The Chamber of Mines of Eastern British Columbia is a non-profit organization providing information to the general public and the mining industry. Our members include everyone from individual prospectors to large mining and engineering companies. They advocate for the mining industry, especially for prospectors and explorationists, as well as serve as an information and resource library with an extensive collection of geological information and maps, as well as rock and mineral specimens. They host elementary to high school classes as well as provide prospecting and other courses.

**Key Contacts**

Lloyd Addie, President

Phone (general) 250-352-5242 Email [chamberofmines@netidea.com](mailto:chamberofmines@netidea.com)<http://www.cmebc.com/>**Atlin Placer Miners' Association (APMA)**

The APMA represents placer miners in the Atlin area, which has a long history of placer mining.

**Key Contacts**

Linda Dandy

Daniel Johns

s.22

Randy Mille

**Coal Association of Canada (CAC)**

The CAC represents companies engaged in the exploration, development, use and transportation of coal. Its members include major coal producers and coal-using utilities, the railroads and ports that ship coal, industry suppliers of goods and services, and municipalities that have an interest in furthering the objectives of the Coal Association. The Vision of the CAC is "A world which recognizes coal as the vital energy source because it is abundant, safe, reliable, economic and environmentally acceptable."

**Key Contacts**

Ann Marie Hann, President

Phone (general) 403- 262-1544 e-mail: [hann@coal.ca](mailto:hann@coal.ca)<http://www.coal.ca/>



**Geoscience BC**

Geoscience BC is an industry-led, not-for-profit, applied geoscience organization. Geoscience BC works in partnership with industry, academia, government, First Nations, and communities to fund applied geoscience projects with the objective to attract mineral and oil & gas exploration to British Columbia. Geoscience BC's mandate includes the collection, interpretation, and delivery of geoscience data and expertise, to promote investment in resource exploration and development in British Columbia.

**Key Contact**

C.D. ('Lyn) Anglin, PhD, President & CEO

Phone (general) 604-662-4147 Email: [anglin@geosciencebc.com](mailto:anglin@geosciencebc.com)

<http://www.geosciencebc.com/s/Home.asp>

**Mining Association of Canada (MAC)**

MAC was originally incorporated in 1935 (as the Canadian Metal Mining Association) and is a national organization of the Canadian mining industry. It comprises companies engaged in mineral exploration, mining, smelting, refining and semi-fabrication. Member companies account for the vast majority of Canada's output of metals and major industrial minerals. MAC's mission is to promote, through the collective action of members, the growth and development of Canada's mining and mineral-processing industry, for the benefit of all Canadians.

**Key Contacts**

Pierre Gratton, President and Chief Executive Officer

Phone (general) 613-233-9391

<http://www.mining.ca/>

**Prospectors and Developers Association of Canada (PDAC)**

The PDAC exists to protect and promote the interests of the Canadian mineral exploration sector and to ensure a robust mining industry in Canada. The PDAC encourages the highest standards of technical, environmental, safety and social practices in Canada and internationally. The PDAC is a national association representing the interests of the mineral exploration and development industry. The association, which includes individual and corporate members, was established in March 1932. The association's activities can be classified broadly under the following headings: advocacy, information, and networking and are summarized in PDAC Activities, an annual publication. The association is best known for its annual convention, trade show, and investors exchange. In 2008, this event attracted over 20,000 attendees from more than 100 countries.

**Key Contacts**

Glenn Nolan, President and Lisa McDonald, Chief Operating Officer

Phone (general) 416-362-1969 ext. 223 [lmcdonald@pdac.ca](mailto:lmcdonald@pdac.ca),

<http://www.pdac.ca/>

**Calendar of Events June 2013 to May 2014**

| <b>Week of:<br/>(Monday<br/>to<br/>Sunday)</b> | <b>Event/Activity</b><br><i>What, where, who (is organizing/sponsoring/etc), when, role - the Ministry's role and whether it is a potential Minister's event and or speaking opportunity.</i>  |
|--|--|
| <b>June 2013</b>                               |  |
| 3-9  | <p><b>Annual Sparwood Coal Symposium, June 7-9.</b><br/>MMRD organized meeting. Usually attracts approx. 50 people from coal sector for a workshop, sponsored by industry with talks by GSB Geologists.</p> <p><b>Provincial Mine Rescue Competition and Mine Health and Safety Awards Banquet – Revelstoke, BC, June 6-8.</b><br/>Annual competition sponsored by MMRD along with mining associations and industry. Attended by ADM, Chief Inspector of Mines and Mine Inspectors.<br/>The Provincial Mine Rescue and First Aid Competition is held annually and brings together mine rescue teams from across BC to test their emergency response and rescue abilities. Teams compete in either surface or underground competitions.</p> |
| 10-16  | <p><b>Hydrogen + Fuel Cells 2013 (HFC 2013) Vancouver Convention Centre, June 16-19</b><br/>This is the sixth edition of its kind, a leading international conference for the hydrogen and fuel cell industry hosted by the Canadian Hydrogen and Fuel Cell Association. HFC 2013 will feature prominent industry and government leaders as keynote speakers as well as plenary and parallel sessions focusing on key issues and new initiatives within the sector. The Exhibition and Trade Show area of the conference will provide attendees with a place to network and partner with global leaders in the business, government and scientific communities.</p>  |
| 17-23  | <b>Clean Energy BC's AGM &amp; Industry Outlook –</b> Postponed to June 18. Premier and Minister Coleman invited.  |
| 24-30  |  |
| <b>July 2013</b>                               |  |
| 1-7  | <i>BC Ministries' Annual Reports tabled and published on government website.</i>   |
| 8-14   |  |
| 15-21  |  |
| 22-28  | <p><b>GeoWeb, Morris J. Wosk Centre for Dialogue, Vancouver, BC, July 22-26</b><br/>Conference focuses exclusively on geographic information systems, the Internet, and the economic potential associated with their convergence. Focus on the reciprocal impact of the Web and Geographic Information, and the ever-increasing need for collaboration in light of global economic and environmental concerns. Public and Private sectors to meet.</p>   |
| 29-Aug 4                                       |  |



## Calendar of Events June 2013 to May 2014

| August 2013    |   |
|----------------|---|
| 5-11           |   |
| 12-18          |   |
| 19-25          | <p><b>Energy and Mines Minister's Conference, Yellowknife, NWT, August 24-27.</b> Minister and DM usually attend.</p> <p><b>National Geological Survey Committee, Yellowknife, NWT, August 24-25.</b> The heads of Canadian geological surveys meet every two years to build partnerships, learning from other agencies, and attend annual field trip.</p>  |
| 26-Sept 1      |   |
| September 2013 |   |
| 2-8            | <p><b>Western Regional Mine Rescue Competition, Fernie, BC, September 6-7.</b> Provincial and Territorial Surface and Underground Mine Rescue winners from Western Canada Alberta, British Columbia, Manitoba, Saskatchewan, Yukon and Northwest Territories/Nunavut as well, as the winning surface and underground teams from the Northwestern United States make up the competition. Each team participates in five tasks including first aid, fire and smoke simulation, rope task and a written exam. ADM, Chief Inspector of Mines, Mine Inspectors usually attend.</p>   |
| 9-15           |   |
| 16-22          |   |
| 23-29          |   |
| 30-Oct 6       |   |
| October 2013   |   |
| 7-13           |   |
| 14-20          |   |
| 21-27          | <p><b>Professional Engineers and Geoscientists AGM and Annual Conference, Whistler, October 24-26.</b></p> <p><b>Generate 2013, October 26-29</b> – Clean Energy BC's annual fall conference that brings together all stakeholders involved in the Clean Energy industry in British Columbia. This year will be CEBC's 11<sup>th</sup> annual conference which has grown significantly in past years. Generate 2012 had 85 exhibitor companies and over 900 delegates passed through the doors by attending field trips, short courses, panel or plenary sessions. It is the only conference of its kind in British Columbia each year.</p> |
| 28-Nov 3       |   |
| November 2013  |   |
| 4-10           | <p><b>BC Geological Survey Open House, Victoria, BC, Date TBD.</b> Presentations on the geology and mineral deposits of BC. The Open House is co-sponsored by the Pacific Section of the Geological Association of Canada (PAC-GAC). Presentations will be given by geologists from BCGS, UVic staff and students.</p>  |

## Calendar of Events June 2013 to May 2014

|                      |  |
|----------------------|--|
|                      | <p><b>Asia-Pacific Trade and Investment Trip Mission, TBD.</b> Potential Minister's mission to establish trade relationships and market BC's energy and mineral wealth and investment potential to existing partners (Japan and Korea) and emerging powers (China and India). Centered around attendance at China Mining Forum in early November, destinations could include Tianjin, Beijing, Shanghai and Tokyo. ADM or DM, and technical staff have attended in the past.</p>   |
|                      | <p><b>Minerals South, Nelson BC, November 5-7.</b><br/>This education and outreach community event attracts broad audience from local politicians, through community members to mineral industry personnel. Can range from 150 to over 400 participants. Marketing BC's mineral wealth and investment potential. MMRD Regional Director/staff; GSB Director/staff usually attend.</p>  |
| 11-17                | <p><b>Yukon Geoscience Forum, Whitehorse, YT. November 17-20</b> Technical conference with broad representation from Yukon mining and proximal areas of BC and Alaska. 300 - 400 participants. Northwest Regional Geologist and GSB geologist usually attend.</p>  |
| 18-24                |  |
| 25-Dec 1             |  |
| <b>December 2013</b> |  |
| 2-8                  |  |
| 9-15                 |  |
| 16-22                |  |
| 23-29                |  |
| 30-Jan 5             |  |
| <b>January 2014</b>  |  |
| 6-12                 |  |
| 13-19                | <p><b>Vancouver Resource Investment Conference (Cambridge), Vancouver Convention Centre, Vancouver, BC, January 19-20.</b><br/>This investors' conference held annually that attracts thousands of investors and hundreds of BC mining companies. Director, BC Mineral Development Office and Chief Geologist usually attend.</p>  |
| 20-26                |  |
| 27-30                | <p><b>Mineral Exploration Roundup, Vancouver Westin Bayshore, Vancouver, BC, January 27-30.</b> International audience largely from mineral exploration industry with some from the mining and financial sectors. Attracts more than 6,000 registrants. MMRD presents several geoscience talks. Marketing BC's mineral wealth and investment potential. Minister, DM, ADM of MMRD, Chief Geologist, Chief Inspector of Mines, senior staff and all GSB technical staff. The BC Minister traditionally opens Roundup.</p> |
| 27-Feb 2             |  |



## Calendar of Events June 2013 to May 2014

| February 2014 |   |
|---------------|---|
| 3-9           |   |
| 10-16         |   |
| 17-23         |   |
| 24-Mar 2      |   |
| March 2014    |   |
| 3-9           | <b>Prospectors and Developers Association of Canada, Toronto, Ont., March 2-5, 2014.</b> Metro Toronto Convention Centre. Largest mineral industry conference in the world with more than 12,000 participants. Large BC booth and staff marketing BC's mineral wealth and investment potential. Minister, DM, ADM, Chief Geologist and several staff attend.  |
| 10-16         |   |
| 17-23         |   |
| 24-30         |   |
| 31-Apr 6      |   |
| April 2014    |   |
| 7-13          |   |
|               | <b>KEG Conference, Kamloops, BC, April 8-12.</b> Key meeting/technical conference to reach companies and prospectors exploring in BC. The provincial review of exploration activity that attracts 400 or more mineral exploration industry personnel. MMRD contributes 7 or 8 regional geologists and geoscience presentations. Marketing BC's mineral wealth and investment potential. Minister, DM, ADM, geologists.  |
| 14-20         |   |
| 21-27         |   |
| 28-May 3      | <b>MABC Mining Week, Vancouver, BC.</b> As declared by the legislature of BC, there is a week in May dedicated to BC Mining Week. Mining is one of BC's largest and oldest industries and BC Mining Week is an opportunity to recognize and celebrate the importance of the modern industry and promote awareness of the role that new technology plays in keeping industry competitive while maintaining a solid commitment to environmental and reclamation standards. Activities are planned for Vancouver and communities all around the province of BC. (Contact MABC) |
| May 2014      |   |
| 5-11          |   |
| 12-18         | <b>Canadian Institute of Mining Metallurgy and Petroleum (CIM), Vancouver Convention Centre, Vancouver, BC, May 11-14.</b><br>Key Technical conference for the provincial, national and international review and knowledge transfer on technical mining issues. Attracts 500 participants from industry and government. Usually attended by BC's Chief Inspector, Deputy Chief Inspectors, mine inspectors and geologists.  |
| 19-25         | <b>Geological Association of Canada Annual Meeting, Fredericton, NB.</b><br>This annual national geoscience meeting. Professional training opportunity for GSB.   |
| 26-Jun 1      |   |

## 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.

### ***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.

### ***Clean Energy Act*** (brought into force June 2010)

The *Clean Energy Act* builds on the foundation of the BC Energy Plan and the Climate Action Plan and has three overarching goals: promoting electricity self-sufficiency, creating jobs and reducing greenhouse gas emissions. Its more specific goals include: expediting clean energy investments, protecting B.C. ratepayers, ensuring competitive rates, encouraging conservation, strengthening environmental protection and promoting regional job creation and First Nations' involvement in clean electricity development opportunities.

### ***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) (potentially shared with Ministry of Natural Gas Development)

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. This Act mirrors federal legislation related to the agreement, and is linked to the *Indian Reserve Mineral Resource Act*.



**Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act (brought into force January 2010)**

The *Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act* establishes a framework to reduce carbon dioxide emissions from transportation fuels and sets out requirements for renewable fuel content in, and greenhouse gas emissions from, transportation fuels.

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

The *Hydro and Power Authority Act* establishes BC Hydro and Power Authority (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 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*. This Act mirrors federal legislation related to the agreement.

**Mineral Land Tax Act (brought into force June 1973)**

The *Mineral Land Tax Act* provides for the imposition of a property tax on freehold privately owned subsurface mineral (including coal, petroleum and natural gas) ownership.

**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.

**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. All land in the province is open to mineral exploration unless otherwise restricted under the Act.

**Mines Act (brought into force July 1990)**

The *Mines Act* is the primary regulatory mechanism for mining in British Columbia. The Act provides for the appointment and powers of inspectors, sets out requirements for obtaining a permit, establishes advisory committees, provides mechanism for developing the Health, Safety and Reclamation Code, sets offence penalties for non-compliance with orders, establishes mine managers' responsibilities and establishes a mine reclamation fund for each mine..

**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, under the *Mineral Tenure Act*, to gain access over private and Crown land for purposes of constructing, maintaining, and operating facilities 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)  
(shared with Ministry of Natural Gas Development)**

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, 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 to the businesses' viability. The Power for Jobs program was cancelled in 2001, however the Act has been maintained to facilitate the management of existing Power for Jobs contracts.

**Special Accounts Appropriation and Control Act s.9.5 [Innovative Clean Energy Fund]) (brought into force September 2007)**

Section 9.5 of the *Special Accounts Appropriation and Control Act* establishes the Innovative Clean Energy (ICE) Fund special account and outlines the revenue received through the ICE Fund Levy in the *Provincial Sales Tax Act*. Eligibility for clean energy and energy efficiency projects, programs, and initiatives are identified.



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

The *West Kootenay Power and Light Company Act, 1897* is a Special Act of the Legislature. In the days before the *Business Corporations Act* (or its precursor), special acts of the legislature were required to create corporations, and the *West Kootenay Power and Light Company Act, 1897* was used to incorporate the West Kootenay Power and Light Company which is now part of FortisBC.