

MINISTRY OF ENERGY AND MINES

BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** Honourable Rich Coleman, Minister of Energy and Mines
- II ISSUE:** Meeting with Janice Cheam, President and Chief Executive Officer, Energy Aware Technology Inc., on April 2, 2012 regarding enhancing British Columbia's Smart Meter Initiative with in-home display devices.

III BACKGROUND:

Energy Aware Technology Inc. (Energy Aware) is a Vancouver-based company, founded in 2005, that develops residential demand-side energy management products. The company offers utilities products that provide real-time feedback and information on consumption that allow greater control of in-home energy distribution and management.

The company's PowerTab™ In-Home Display provides customers wireless real-time information on power consumption and electricity rates. The device's energy monitoring abilities are intended to give customers instant access to the information they need to make choices about their energy use. The company designs its products and out-sources the manufacture of the products within British Columbia.

Janice Cheam advised Ministry staff that she would like to inform the Minister about the opportunities the company sees in working with BC Hydro in order to have customers participate in a pilot project using an in-home display device. The type of pilot project she envisions would involve using an in-home display device and would highlight for British Columbians the practical value of BC Hydro's Smart Meter Initiative (SMI) that is replacing current electromechanical meters with modern digital meters. Without an in-home display device that displays real-time consumption information using data available on radio frequency, a consumer will be able to access online consumption information that is up-to-the-previous day only. Other jurisdictions have encouraged use of these devices to support voluntary time-of-use rates.

In particular, Janice Cheam argues the pilot program would highlight the value of smart meters in supporting in-home display devices that enable customers to become aware of inefficient electricity consumption patterns, and help save money immediately.

Janice Cheam asserts that BC Hydro's customer rebate program contemplated next year under the SMI Business Plan could introduce and encourage the use of in-home display devices among British Columbians, and would work better if it were launched after a pilot program that would first serve to raise customer awareness.

IV DISCUSSION:

The *Clean Energy Act* requires BC Hydro to install smart meters by the end of 2012, leading to the implementation of BC Hydro's SMI. The Smart Meter and Smart Grid Regulation, enacted in December 2010, define the functional requirements of smart meters and the smart grid. The SMI is the first step in modernizing BC Hydro's grid by installing new, digital meters along with a telecommunications system that supports two-way communications between the meters and BC Hydro.

BC Hydro is currently more than half-way through installing smart meters at customer homes across the province (approximately one million meters have been installed). The only region BC Hydro has not begun smart meter installation is in the Kootenay region, where installation is expected to begin in May. Overall, more than 99 percent of customers are accepting of the installation of smart meters.

BC Hydro has planned to offer BC Hydro customers in-home consumption feedback through a secure online BC Hydro account that would provide up-to-the-previous-day information regarding power consumption patterns. BC Hydro plans to implement a community by community roll-out of this online feature starting in August 2012, following a consumer awareness initiative this spring.

Regarding in-home display devices, the In-home Feedback Department within BC Hydro's SMI is completing the technical specifications, including the necessary laboratory testing, that is needed to support a roll out of these devices with the functionality that Energy Aware is advocating, including real-time information of consumption patterns.

As part of this process, in December 2011, BC Hydro conducted an expression of interest process among vendors of in-home display devices to ascertain the interest in participating in the development of technical product requirements. About 70 vendors including Energy Aware Technology Inc., participated. A product requirements workshop is scheduled for the end of April to finalize the draft technical requirements, and to explain the testing and marketing processes. Depending on laboratory testing (the Energy Awareness product is included in the testing), BC Hydro will schedule one or more small technical trials likely starting this year, and a market trial is anticipated by the end of 2012.

The BC Hydro Review recommended that proposed rebates for in-house displays be revisited. BC Hydro will require approval from the British Columbia Utilities Commission regarding a consumer rebate program. Depending on the results achieved, BC Hydro will seek approval in 2013.

V RECOMMENDED RESPONSE:

The emerging technology of in-home display devices is an important means to enable customers to monitor and adjust consumption in order to save electricity. Before field trials of in-home display devices occur, several technical steps are to be undertaken by BC Hydro. BC Hydro is testing Energy Aware products. The robust laboratory testing program will be complimented by a field trial program, which is also likely to involve Energy Aware products. The timing and scope of the field trials will depend on the results of the testing. This approach to a roll out will ensure customers will be able to commission in-home display devices from a variety of vendors that are stable, and provide for a consumer experience that engenders conservation behavior.

The Ministry encourages Energy Aware to continue to actively participate with the In-home Feedback Department of BC Hydro, and in the stage-by-stage process that should precede the field trials and eventual roll out of the in-home display devices in British Columbia.

DRAFTED BY:

Oswald Dias
250-953-3747

APPROVED BY:

Sue Bonnyman, Director, GRB, ✓
Les MacLaren, ADM, EAED and A/DM, ✓

MINISTRY OF ENERGY AND MINES

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister

II ISSUE: April 24, 2012 meeting with Scott Thurlow, President of the Canadian Renewable Fuels Association, Doug Hooper and Fred Ghatala of Waterfall Group, Don O'Connor of (S&T)², Marie-Hélène Labrie of Enerkem, and Robert Cash of Archer Daniels Midland Company.

III BACKGROUND:

The Canadian Renewable Fuels Association (CRFA) was founded in 1984 and is a non-profit organization promoting the use of renewable fuels for transportation through consumer awareness and government liaison activities. The CRFA is based in Ottawa with an office in Toronto.

The CRFA membership is composed of representatives from all levels of the ethanol and biodiesel industry, including oil and gas companies such as Suncor Energy Products Ltd. and Shell Canada Products Ltd. The CRFA has estimated that the Renewable and Low Carbon Fuel Requirements Regulation (Regulation) results in economic savings of more than \$80 million.

On November 8, 2010, Imperial Oil released a report by Purvin & Gertz which claimed that the Regulation would result in compliance costs as high as \$265/tonne on average, and \$464/tonne on an incremental basis.

In October 2011, Pollution Probe hosted a Workshop on Low Carbon Fuel Standards in Victoria, where representatives of the transportation fuel industry, local governments and non-governmental organizations discussed concerns and options for low carbon fuel regulations.

John Yap, former Parliamentary Secretary for Clean Technology, submitted a report recommending a number of changes to the Regulation, including:

s.13

The CRFA participated in the Parliamentary Secretary's stakeholder consultations and in the October 2011 workshop. They commissioned a study to review the

Regulation and the results of the Purvin & Gertz study commissioned by Imperial Oil.

IV DISCUSSION:

The CRFA will present conclusions of their study, titled "Review of BC's Renewable and Low Carbon Fuel Requirement Regulation". This review was presented to Ministry of Energy and Mines staff on March 8, 2012, and conclusions include:

- The report demonstrates a number of scenarios that could achieve compliance in the period from 2010 to 2020;
- The report finds that Purvin & Gertz likely overestimated the cost of compliance and it is possible that the Regulation could result in cost savings to the suppliers with no net incremental fuel costs;
- The Regulation (with the contemplated amendments) will likely result in tangible greenhouse gas emission reductions from the transportation sector;
- The Regulation is expected to drive capital investment, economic growth and jobs in the emerging clean technology sector;

s.13

- The CRFA continues to support British Columbia's policy to wait for the science to evolve sufficiently before including indirect land use effects in the carbon intensity of fuels;
- The CRFA supports British Columbia's approach to setting a single value for the carbon intensity of petroleum-based gasoline and diesel fuel; and

s.13

V CONCLUSION:

The CRFA has identified cost-effective scenarios to lower the carbon intensity of transportation fuels. They also identify the Regulation as instrumental in creating demand for renewable fuels, and that it is a good example of a performance-based regulation that supports market transformation.

The CRFA supports changes to the *Greenhouse Gas Reduction (Renewable and Low Carbon Fuels Requirements) Act* and the ongoing implementation of the Regulation.

s.13

DRAFTED BY:

Michael Rensing, Manager, Renewable and Low Carbon Fuels

APPROVED BY:

Paul Wieringa, A/ADM
Steve Carr, DM ✓

**MINISTRY OF ENERGY AND MINES
BRIEFING NOTE FOR INFORMATION**

I PREPARED FOR: Honourable Rich Coleman, Minister of Energy and Mines

II ISSUE: Meeting with Yoga Yogendran, Director Technology Deployment and Commercialization, National Research Council (NRC), on April 23, 2012

III BACKGROUND:

Since its inception in 2002, the National Research Council's Institute for Fuel Cell Innovation (NRC-IFCI) has become an internationally recognized fuel cell research centre located in British Columbia.

NRC-IFCI and the Ministry of Energy and Mines have partnered on clean technology research and development initiatives since 2005 including the development of the Hydrogen Highway and the establishment of the \$19 million NRC-IFCI facility at the University of British Columbia that currently employs approximately 150 researchers, scientists and engineers.

NRC-IFCI has typically operated with a base budget of \$4 million per year, with supplemental budgets for special projects or programs. A recent review of all NRC research centres and the recent federal budget have resulted in a change of operations for NRC research centres whereby they no longer have base budgets and will have to compete for funding under distinct program areas that are aligned with industry interests. While these program areas have not yet been finalized,

s.13

s.13

IV DISCUSSION:

With the change in operation for NRC research centres, NRC-IFCI will no longer be a fuel cell-only research centre, but will now be responsible for leading business activities related to clean energy more broadly. The NRC-IFCI is looking for a continued strong partnership with the provincial government where it can leverage its access to federal program funding with provincial investments.

s.13, s.17

Bioenergy

The NRC has been in discussions with the Ministry of Jobs, Tourism and Innovation, the University of Northern British Columbia, and industry to develop a concept for a Bioenergy and Clean Technology Centre with one or two research chairs in bioenergy and clean technology, coordinate training, research and education programs, and facilitate the deployment of bioenergy and other clean energy technologies in British Columbia.

This Centre is expected to help deliver on some of the recommendations identified in the BC Bio-economy report produced by the BC Committee on Bio-economy.

Remote Community Energy Systems and Microgrids

The NRC helped establish the CleanTech Community Gateway (CTCG), a not-for-profit organization, with public and private sector partners, whose mandate is to develop community-based clean energy projects and accelerate the commercialization of BC clean technology firms in local and global emerging markets. The CTCG's first project has involved strategic energy planning with the Council of Haida Nation with the objective to support the development of integrated clean energy projects on Haida Gwaii.

The BC Hydro Remote Community Electrification Program and the provincially-funded Remote Community Implementation (RCI) Program support clean energy systems, including bioenergy, microhydro, wind, smart grid and energy efficiency projects in remote communities across the Province.

Mining Energy Efficiency

The NRC is interested in exploring opportunities to support energy efficiency and clean technology deployment in the mining and mineral processing sector. The Ministry is pursuing three industrial energy efficiency initiatives:

- the *Energy and Water Efficiency Act* includes industrial energy efficiency reporting;
- developing a BC Energy Efficiency Network that will conduct research, run training programs, administer incentives and support policy development; and
- supporting BC Hydro in their Integrated Customer Solution Program for load displacement and energy efficiency measures.

V CONCLUSION:

The Province has effectively partnered with the NRC-IFCI to leverage federal investment in British Columbia's hydrogen and fuel cell industry since 2005. The NRC-IFCI has now undergone an operational change where its mandate has broadened to focus more broadly across the clean energy sector, and it is now required to compete for federal program funding with other federal research centres. As such, the NRC-IFCI is interested in exploring partnership opportunities with the Province where it can leverage its access to federal program funding with provincial investments.

The Ministry and utilities are interested in pursuing collaboration with NRC-IFCI, in bioenergy, remote communities and industrial energy efficiency since the Province or utilities are already making investments in these areas. The NRC-IFCI should continue discussions with the Innovative Clean Energy Fund to identify immediate collaboration opportunities.

DRAFTED BY:

Christina Ianniciello
250-952-0686

APPROVED BY:

Paul Wieringa, Ex. Dir.✓
Les MacLaren, ADM✓

Attachment:

Not Responsive

MINISTRY OF ENERGY AND MINES
BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** Honourable Rich Coleman, Minister of Energy and Mines
- II ISSUE:** Meeting with the Tides Canada representatives on April 24, 2012 regarding Tides Canada's support for a national energy strategy and Shell Canada's proposed coal bed methane project in the Klappen Valley.

III BACKGROUND:

Tides Canada requested a meeting with the Premier in a letter sent January 27, 2012 to discuss Tides Canada's work in promoting the development of a national energy plan. The April 24, 2012 meeting has been setup in response to their letter.

Tides Canada is a national non-profit organization that engages businesses, communities and civil societies on environmental and social issues. Tides Canada is active in BC and has been involved in variety of environmental non-governmental organization initiatives, including efforts to preserve the Great Bear Rainforest.

In early 2011, Tides Canada released a discussion paper called "A New Energy Vision for Canada" based on consultation with Canada's business, faith, labour, health, environment, and aboriginal communities. The document envisions Canada moving to clean and renewable energy sources by 2050, and includes a set of recommendations for a national energy strategy or framework that would deliver such a future. Tides Canada has had the document endorsed by over 150 organizations, and it was presented to energy and mines ministers in July 2011.

Tides Canada was encouraged by Premier Christy Clark, Premier Redford, and Premier Wall's December 2011 announcement supporting the idea of a Canadian Energy Strategy. Given Tides Canada's work that calls for a national energy strategy focusing on renewable energy development and energy efficiency measures they have requested a meeting with Minister Coleman to:

- Outline their work going forward on their vision and describe how they hope to present BC's commitment to sustainable energy as part of their work; and
- Discuss their current thinking on the top policy priorities for BC in growing jobs and the economy through the sustainable energy sector.

s.13, s.21

IV DISCUSSION:

There have been discussions at a political level to establish a Canadian Energy Strategy over the last two years. The idea for a the strategy originated when Energy and Mines

Ministers met in 2010 and directed officials, “to identify areas of common interest as well as goals and objectives related to energy that will lead to greater Pan-Canadian collaboration.”

This “Pan-Canadian Approach to Energy Collaboration” concept was refined in preparation for the meeting of Energy and Mines Ministers when they met in July 2011. At that meeting, ministers supported a collaborative approach to energy and agreed to a shared vision for Canada as a recognized global leader in secure and sustainable energy supply, use and innovation. National working groups were established to define common principles and objectives to guide energy policies and are expected to report to energy ministers when they meet again in September 2012.

Since July 2011 some jurisdictions have expressed a desire for a more robust Canadian Energy Strategy and this has displaced the concept of the Pan-Canadian Approach.

s.16, s.13

V RECOMMENDED RESPONSE:

The Province is pleased that Tides Canada supports British Columbia’s efforts to promote clean energy development and actions to reduce greenhouse gases.

s.13, s.16

s.13, s.16

British Columbia continues to encourage industry to pursue clean energy business development opportunities in British Columbia. The Government is committed to enabling the development and operation of three LNG terminals by 2020, with available grid connected electricity while keeping rates low for all British Columbians.

s.13

Regarding activities in the Klappan

The Government of British Columbia is committed to ensuring the protection of the natural environment and watersheds in the Klappan region. The Province has a comprehensive network of laws, regulations and standards to protect water quality and fisheries, and ensure that resource development occurs responsibly.

The Skeena River and its tributaries are protected by provincial as well as federal regulations. In addition, the Province will continue to assess the current period of inactivity placed on coalbed gas development in the area. This will include ongoing discussions with the Tahltan and Iskut First Nations.

The Ministry of Energy and Mines has a responsibility to ensure that all energy and mineral development in British Columbia is economically, socially and environmentally responsible. The Province's robust regulatory regime is designed to protect the environment, minimize impacts during development and ensure site restoration once operations cease.

DRAFTED BY:

Scott Cutler, GRB
250-952-0706

APPROVED BY:

Sue Bonnyman, Dir. Electricity ✓
Derek Griffin, Exec. Dir., Electricity ✓
Les MacLaren, ADM, EAED ✓
Steve Carr, DM ✓

OFFICE OF HOUSING AND CONSTRUCTION STANDARDS

MEETING INFORMATION NOTE

DATE: April 20, 2012

PREPARED FOR: Honourable Rich Coleman, Minister Responsible For Housing

MEETING DETAILS: Modernizing the Building Regulatory System
John Leech, Executive Director, Applied Science Technologists
and Technicians of British Columbia
Monday April 23, 2012

BACKGROUND:

John Leech, Executive Director of the Applied Science Technologists and Technicians of BC has requested a meeting with Minister Coleman to discuss the current public review of proposals to modernize the building regulatory system.

ISSUES:

John Leech provided the Building and Safety Standards Branch a submission on behalf of the Applied Science Technologists and Technicians of BC in response to the White Papers on *Certification of Local Government Building Officials* and *Modern Regulatory System*.

He indicates that his association is in support of the current proposal for a uniform building code. He is also recommending the Province undertake additional actions that directly benefit his organization.

Concerns related to modernizing the building regulatory system:

Letters of Assurance should be introduced for Part 9 buildings.

s.13

Concerns related to certification of local government building officials:

Requirement for an Applied Science Technologists and Technicians of BC member to be members of the Building Officials' Association BC in order to practice as a building official.

s.13

OFFICE OF HOUSING AND CONSTRUCTION STANDARDS

MEETING INFORMATION NOTE

s.13

Applied Science Technologists and Technicians of BC members in management positions within a local government building department should be exempt from requirement to be a member of the Building Officials' Association BC.

s.13

Other concerns:

Professional recognition of Applied Science Technologists and Technicians of BC - registered building designers.

s.13

RECOMMENDED RESPONSE:

- We are grateful to Applied Science Technologists and Technicians of BC members for taking the time to respond to the online public review, participate at working sessions around the Province, and for providing a formal submission to the Building and Safety Standards Branch.

OFFICE OF HOUSING AND CONSTRUCTION STANDARDS MEETING INFORMATION NOTE

Enclosures/Attachments

Not Responsive

Prepared by:

Roger Lam
Senior Policy Analyst
Building and Safety Standards
250-356-0087

Reviewed By:

Tracy Green
Manager
Building and Safety Standards

Initial:

Date:

Trudy Rotgans
Executive Director
Building and Safety Standards

Jeff Vasey
Assistant Deputy Minister
Office of Housing and
Construction Standards

Steve Carr
Deputy Minister
Ministry of Energy and Mines

____SC

April
20/12

OFFICE OF HOUSING AND CONSTRUCTION STANDARDS

DECISION NOTE

DATE: April 23, 2012

PREPARED FOR: Honourable Rich Coleman, Minister Responsible for Housing

ISSUE: Village of Pemberton Building Bylaw: wildfire interface provisions

BACKGROUND:

- The *Community Charter* requires local government building bylaws with standards that are or could be dealt with in the BC Building Code to be approved by the Minister responsible.
- The Village of Pemberton has submitted its building bylaw for the Minister's approval.

DISCUSSION:

- The Village of Pemberton is seeking the Minister's approval for two wildfire interface provisions in its building bylaw that vary from the BC Building Code by specifying roofing and soffit materials.
- The Building and Safety Standards Branch believes that these provisions are justified, given the demonstrated level of wildfire risk in Pemberton.
- Pemberton is located in a climatic zone that is subject to significant wildfire hazard. Several areas in the Village have been rated at extreme risk of wildfire.
- Designation of a wildfire development permit area (DPA) is the primary tool local governments have to establish wildfire interface guidelines that developers must meet, such as restrictions on the combustibility of building materials.
- However, owners and developers must apply for a development permit to build in a wildfire or other development permit area. This is typically a lengthy process that involves significant additional expense and that must be completed before a building permit can be issued.
- In contrast, wildfire interface provisions enacted in a building bylaw automatically apply to construction, without the need for additional permits or time-consuming processes.
- As part of the building bylaw, interface requirements would apply to some construction not within extreme wildfire risk areas. However, developers would not need a development permit to build in these areas, eliminating red tape.
- As part of the implementation of the uniform Building Code, staff will investigate the need for Building Code provisions that consistently address wildfire interface hazard.

OFFICE OF HOUSING AND CONSTRUCTION STANDARDS DECISION NOTE

RECOMMENDATION:

- In the interim, staff recommend signature of the attached letter approving the Village of Pemberton Building Bylaw.

Not Responsive

Enclosures/Attachments

Not Responsive

Approved/Not Approved

Date:

Honourable Rich Coleman
Minister

Prepared by:

Christine Webb
Senior Policy Advisor
356-8165

Reviewed By:

Trudy Rotgans
Executive Director
Building and Safety Standards
Branch

Initial:

Date:

Jeff Vasey
Assistant Deputy Minister
Office of Housing and
Construction Standards

Steve Carr
Deputy Minister
Ministry of Energy and Mines

_SC

April
30/2012

MINISTRY OF ENERGY AND MINES
BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Energy and Mines

II ISSUE: Meeting with Ron Thiessen, Chief Executive Office of Hunter Dickinson Inc., and Jason Quigley, Executive Vice President, Stakeholder and Regulatory Affairs, Hunter Dickinson Inc., on April 25, 2012.

III BACKGROUND:

Hunter Dickinson Inc. (HDI) is a global mining group that provides management and technical services to a diverse portfolio of mineral companies and properties. HDI has contributed to the discovery, development and operation of several BC mines including Golden Bear, Mt Milligan, Kemess, Gibraltar and Prosperity.

Ron Thiessen, CEO of HDI and Jason Quigley, Executive Vice President, Stakeholder and Regulatory Affairs, would like to meet with Minister Coleman to discuss HDI investment in BC, their vision for innovation in First Nations engagement and how they believe HDI and the Province can work more effectively together.

IV DISCUSSION:

HDI's February 9, 2012, letter to the Minister outlines the key elements of their approach to First Nations engagement including:

1. Commission Ethno-historical Research and Preliminary Strength of Claim Assessment

s.13

2. Undertake Early Engagement with Relevant Aboriginal Groups

s.13

3. Explore Early Engagement Agreement and Provisions of Capacity Funding

s.13

4. Solicit and Use Feedback from Ministry Officials
 - HDI welcomes feedback from Ministry staff. HDI believes that there are improvements that can be made to the permitting process and would like to work with Ministry staff to identify these opportunities.
5. Ensure that Economic Benefits Discussion Remains Separate from Crown Consultation

s.13

Challenges identified by HDI

HDI has identified a number of challenges that they believe, if addressed, would improve the permitting process:

s.13

V RECOMMENDED RESPONSE

- The Province continues to encourage proponents to be pro-active in engaging First Nations early in the project development process.
- It is encouraging that HDI is working hard to be a leader in aboriginal relations.
- HDI's proposed approach to dealing with First Nations is generally consistent with the provincial consultation Guide for Proponents posted to the Ministry of Aboriginal Relations and Reconciliation (MARR) site:
http://www.gov.bc.ca/arr/consultation/down/guide_to_involving_proponents_2011.pdf

s.13

•
s.13

PREPARED BY:

Mark Haines
250-952-8007

REVIEWED BY:

Nathaniel Amann-Blake, A/ED ✓
David Morel, ADM ✓
Steve Carr, DM ✓

MINISTRY OF ENERGY AND MINES

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Energy and Mines

II ISSUE: The Gething coal project and First Nations consultation

III BACKGROUND:

The Gething coal project is located in northeast British Columbia. The proponent is Canadian Kailuan Dehua Mines Co., Ltd. (CKD), a partnership formed in July 2010 that includes the Kailuan Group Co., Ltd, Shougang Group and Canadian Dehua International Mines Group Inc. In November 2011, the Premier announced that CKD estimates that its total investment into the Gething project will be \$860 million.

The Gething project is located within Treaty 8 traditional territory

s.13, s.16

IV DISCUSSION:

The Province is engaging with the four First Nations potentially affected by the Gething project. CKD has applied for five permits for Gething, and the Province has referred all of these applications to the four potentially affected First Nations.

Geotechnical Investigation Permit and Licence to Cut Applications

West Moberly First Nations

s.13, s.16

Saulteau First Nations

s.13, s.16

McLeod Lake Indian Band

s.13, s.16

Halfway River First Nation

s.13, s.16

Site Preparation, Waste Discharge and Bulk Sample Permit Applications

- Referred to all four First Nations on March 23, 2012.
- FLNRO staff are meeting with McLeod Lake and Saulteau in late April 2012.
- A meeting has not yet been scheduled with West Moberly.

V CONCLUSION:

FLNRO is continuing to consult with all four potentially affected First Nations on applications related to the Gething project proposed by CKD. FLNRO staff have been in close contact with CKD's Judy Matkaluk and Canadian Dehua's John Cavanaugh.

PREPARED BY:

Sara Bose
250-387-5491

REVIEWED BY:

Nathaniel Amann-Blake, A/ED ✓
David Morel, ADM ✓
Steve Carr, DM ✓

MINISTRY OF ENERGY AND MINES

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Energy and Mines.

II ISSUE: Meeting on April 16, 2012 with Canadian Natural Resources Limited representatives: Mr. Bill Clapperton, Vice-President, Regulatory, Stakeholder and Environmental Affairs, and Mr. Nicholas Gafuik, Public Affairs Advisor.

III BACKGROUND:

With headquarters in Calgary, Canadian Natural Resources Limited (CNRL) is the second largest producer of natural gas in British Columbia (BC). The company has a significant land position in the Montney region and has an experimental scheme approval in the Cordova Embayment Region

Not Responsive

IV DISCUSSION:

CNRL met with Ministry of Energy and Mines (MEM) on March 12, 2012 and the following outlines key issues that CNRL may raise during its Ministerial meeting:

1. The Sierra Yoyo Desan (SYD) Road Upgrade project

December 2008, the SYD Road Upgrade was approved for \$187 million in capital funding to enable improved access critical to Horn River Basin and Cordova Embayment shale gas developments. MEM works collaboratively with Ministry of Transportation and Infrastructure to deliver the project with approximately \$77 million invested to date.

January 2012, Treasury Board approved a reduction of the SYD Road Upgrade budget to \$137 million. The remaining unspent SYD funds, approximately \$60 million, will allow for a nine metre (m) wide, dust-controlled gravel surface from kilometre (km) 30.5 to km 121. This scope will provide upgraded access to the eastern half of the Horn River, as well as providing improvements to over two-thirds of the distance into the Cordova Embayment.

s.13, s.17

CNRL and other oil and gas producers operating in the Cordova Embayment and Helmet areas have expressed concerns regarding the potential impact the reallocation of funds from the SYD Road Upgrade may have on their operations. MEM recognizes the importance of CNRL's Helmet area investments and the Cordova Embayment as an emerging shale gas basin. Enhanced maintenance and road improvements will continue on the SYD Road to support safety, access and increased industrial activity.

2. Greenhouse Gas Emissions, Monitoring and Reporting

As per the Reporting Regulation under the *Greenhouse Gas Reduction (Cap and Trade) Act*, (*GHG Act*) companies are required to complete a count of all pneumatic components to the Ministry of Environment (MoE). CNRL has not completed all its pneumatic component counts. The Reporting Regulation allows operators to use Process and Instrument Diagrams for component count instead of a physical count to reduce staff field time and costs. CNRL believes the extra cost to establish metering is \$7 million. MEM has had discussions with MoE who has requested a meeting with CNRL to clarify and discuss their reporting situation. CNRL contributes to the Natural Gas Climate Action Working Group and participated in consultation on proposed *GHG Act* regulations.

3. Deep Royalty Credit Program

CNRL, along with the Canadian Association of Petroleum Producers, (CAPP), has requested that MEM review the eligibility for the deep well royalty credit program.

s.13, s.17

4. Woodland Caribou

CNRL submitted comments to Environment Canada on the proposed *Recovery Strategy for the Woodland Caribou, Boreal population (Rangifer tarandus caribou) in Canada*. CNRL believes there is an over-emphasis on habitat protection which could interfere with provincial responsibilities for and approaches to management.

s.13, s.16

s.13, s.16

MoE, with support from MEM and Ministry of Forests, Lands and Natural Resource Operations has developed an Implementation Plan for Management of Boreal Caribou.

s.13, s.16

The Province has signed a memorandum of understanding (MOU) with industry (including CAPP) which establishes a framework to collaboratively support implementation of BC's boreal caribou management plan. The MOU also secures funding for research and monitoring activities related to boreal caribou management. As a CAPP member, the MOU framework provides the best avenue to CNRL for ongoing management coordination and cooperation for boreal caribou management in BC.

PREPARED BY:

Olga Klimko
Aaron Nelson, Jennifer Purcell
May Mah-Paulson

REVIEWED BY:

Linda Beltrano, ED/GSI ✓
Ines Piccinino, A/ADM/OGD _ ✓ _
David Morel, A/DM ✓

MINISTRY OF ENERGY AND MINES

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Rich Coleman, Minister of Energy and Mines

II ISSUE: Backgrounder for April 24, 2012 meeting with Mr. Dave Collyer, President of the Canadian Association of Petroleum Producers; Mr. Tim Egan, President of the Canadian Gas Association; and Mr. Philippe Reicher, Vice President of Communications and Stakeholder Relations of the Canadian Energy Pipeline Association.

III BACKGROUND:

The Canadian Natural Gas Initiative (CNGI) is a national initiative that aims to demonstrate to Canadians how natural gas is a foundation for Canada's evolving energy mix and to encourage public support for natural gas development and use. CNGI is being led by associations representing the upstream production, midstream and downstream aspects of the natural gas value chain. While the three 'streams' are distinct, with unique requirements, regulations and technologies, they are fully interconnected and share a common purpose of reliably and safely delivering Canadian natural gas to markets. CNGI is represented by the Canadian Association of Petroleum Producers (CAPP), the Canadian Gas Association (CGA), and the Canadian Energy Pipeline Association (CEPA).

CAPP represents companies that explore for, develop and produce natural gas and oil in Canada (\$110 billion-a-year national industry).

CGA is the voice of Canada's natural gas distribution industry. Its members are distribution companies, transmission companies, equipment manufacturers and other service providers. CGA acts on behalf of its members to advance policy positions with federal and provincial decision makers and energy stakeholders.

CEPA represents transmission pipeline companies which transport 97 percent of the oil and natural gas produced in Canada to markets throughout Canada and the United States.

The Ministry of Energy and Mines (MEM) works closely with all three associations.

IV DISCUSSION:

The purpose of the CNGI is to develop objective, fact-based educational materials about Canada's valuable natural gas resources and to raise understanding of the role that natural gas should play in achieving Canada's energy, environmental, and economic objectives.

.../2

In February 2012, the Province of British Columbia released its Natural Gas Strategy outlining actions and strategies addressing the promotion of natural gas as a transportation fuel, the development of new markets for natural gas, ensuring reliable and abundant supply, engaging and consulting with communities, and others. CNGI shares similar objectives. CNGI and MEM representatives have already discussed how to cooperatively communicate to the public that natural gas is a major part of the British Columbia's energy supply, a clean energy alternative, and a driver for economic growth and job creation.

CNGI's previous presentations have told a story about robust natural gas supply in Canada and CGNI's aim to secure natural gas's position in the marketplace. They have focused on retaining market share in residential, commercial, institutional, and industrial markets by driving efficiency gains, utilizing more integrated systems, and moving towards gas-electric convergence.

V CONCLUSION:

The natural gas industry is a significant contributor to British Columbia's economy. Industry groups, such as CNGI, work collaboratively with MEM and can be recognized for efforts in developing British Columbia's natural gas industry. The meeting with CGNI presents an opportunity to work collaboratively with industry towards the actions and strategies contained in the Natural Gas Strategy.

PREPARED BY:

Matt Zahynacz
250-952-6271

REVIEWED BY:

Linda Beltrano, ED-OGD	<u>✓</u>
Graeme McLaren, ADM-OGD	<u>✓</u>
Steve Carr, DM	<u>✓</u>

MINISTRY OF ENERGY AND MINES
BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** Honourable Rich Coleman, Minister of Energy and Mines
- II ISSUE:** Meeting with His Excellency W.J.P. Geerts, Ambassador of the Netherlands to Canada, on Friday, April 27, 2012.

III BACKGROUND:

Ambassador Geerts is coming to British Columbia to celebrate Holland's Queen's Day at an official reception for the Ambassador at Van Dusen Gardens on April 27th. Topics provided for discussion at this meeting are Dutch involvement in shale gas development, waste to energy and biofuels.

The Netherlands is a constitutional monarchy and a parliamentary democracy. Queen Beatrix is the monarch. On April 23, 2012, Mark Rutte, the Prime Minister of Netherlands' coalition government, met with Queen Beatrix to announce the fall of his government, after the coalition parties were unable to reach agreement on an austerity budget in line with European Union rules.

IV DISCUSSION:

British Columbia Shale Gas and LNG Development

British Columbia's shales are recognized as world-class natural gas reservoirs, containing an estimated 1,200 trillion cubic feet (Tcf) of gas-in-place. British Columbia's shale gas areas are in the northeast of the province and include the Montney play trend, where Shell has invested.

British Columbia's Liquefied Natural Gas (LNG) strategy released in February 2012, committed the province to having its first LNG plant in operation by 2015 and three LNG facilities running by 2020. The first commercial LNG export facility in Canada is scheduled to open near Kitimat on British Columbia's central coast by 2015. In October 2011, the Kitimat LNG facility was granted the first-ever federal licence to export LNG from Canada.

British Columbia currently produces 1.2 Tcf of natural gas per year. Meeting our LNG development goals could add another 1.9 Tcf per year.

Shell has proposed one of at least four other British Columbia LNG projects that are in the early conceptual stage. In 2011, Shell purchased a Kitimat site for a potential LNG export terminal.

s.13, s.17

Dutch Experience with Natural Gas

The Shell group of energy and petrochemical companies is headquartered in The Hague, the Netherlands. Its parent company is Royal Dutch Shell PLC. Shell has been operating in Canada since 1911, and the Shell Oil Company of British Columbia was incorporated in 1929.

In August 2008, Shell invested more than \$5 billion in Duvernay Oil Corp, increasing Shell's tight gas position in the prolific Montney field. In 2010 Shell produced approximately one half Tcf of natural gas from the Alberta and British Columbia.

Shell holds petroleum and natural gas tenure to explore for coalbed methane in the Klappan area, in northwest British Columbia.

s.13, s.21

The Netherlands exported 38 percent of the 3.1 Tcf of natural gas it produced in 2010. Dutch company Royal Boskalis Westminster N.V. played a major role in developing one of the largest LNG export facilities in the world in Ras Laffan Port, Qatar.

Waste to Energy

In 2010, British Columbia's *Clean Energy Act* encouraged the use of waste heat, biogas and biomass. Local governments across British Columbia are considering Waste to Energy facilities as a sustainable alternative to landfills. Electricity generated from municipal organic waste is considered clean or renewable.

In July 2011, the Minister of the Environment approved Metro Vancouver pursuing Waste to Energy as an option. In March 2012, there were 13 biogas/biomass projects delivering clean, renewable power to BC Hydro.

Amsterdam's Waste and Energy Company, Afval Energie Bedrijf produces green electricity to supply Amsterdam City Hall, streetcars, underground trains and street lights. The heat generated during waste incineration provides 12,000 households with hot water and heating.

Biofuel from Woody Biomass

The BC Bioenergy Strategy supports energy capture from landfills, agricultural waste, sawmill and logging residues, and other renewable sources. At present, approximately 4,000 gigawatt hours per year of British Columbia's electricity generation comes from wood residue combustion. In 2010, the British Columbia wood pellet industry produced more than one million tonnes of pellets. Approximately 90 percent of these pellets were exported for thermal power production.

V CONCLUSION:

British Columbia offers significant opportunities related to its shale gas development, proposed LNG export facilities, waste to energy, and biofuel from woody biomass. In addition to their experience producing Canadian natural gas, Netherlands companies have substantial expertise in developing LNG export facilities and in waste to energy, and there are considerable opportunities for Dutch involvement in British Columbia clean energy development.

DRAFTED BY:

Russ Francis
952-0529

APPROVED BY:

Karen Koncohrada, ED, CPPL
Laurel Nash, EL, TACRD ✓

MINISTRY OF ENERGY AND MINES

BRIEFING NOTE FOR INFORMATION

- I PREPARED FOR:** Honourable Rich Coleman, Minister of Energy and Mines
- II ISSUE:** Meeting with His Excellency Erik Vilstrup, Ambassador of Denmark, on Tuesday, May 1st, 2012.

III BACKGROUND:

Ambassador Vilstrup has expressed an interest in discussing the role of energy and natural resources in economic development in British Columbia, including the environment and local employment, Greenland and common issues and local employment, working with Asian countries and British Columbia's approach to the Keystone XL pipeline.

The Kingdom of Denmark is a constitutional monarchy and sovereign state consisting of the country of Denmark in northern Europe and two autonomous constituent countries, the Faroe Islands in the North Atlantic and Greenland in North America.

Denmark has considerable sources of oil and natural gas in the North Sea and ranks as number 32 in the world among net exporters of crude oil. In 2009, it was producing 260,000 barrels of crude oil a day. Most electricity is produced from coal, but almost 20 percent of electricity demand is supplied through wind turbines. Denmark is a long time leader in wind energy and, as of May 2011, Denmark derived 3.1 percent of its gross domestic product from renewable (clean) energy technology and energy efficiency, or around \$9.4 billion. Denmark has integrated fluctuating and unpredictable energy sources such as wind power into the grid. Denmark now aims to focus on intelligent battery systems and plug-in vehicles in the transport sector. Denmark is connected by electric transmission lines to other European countries.

It is a general feature of the economies of the Faroe Islands and Greenland that they are vulnerable to fluctuations in a single industry, e.g., the fishing industry, and consequently experience greater fluctuations in growth rates than Denmark.

British Columbia's Liquefied Natural Gas (LNG) strategy released in February 2012, committed the province to having its first LNG plant in operation by 2015 and three LNG facilities running by 2020. The first commercial LNG export facility in Canada is scheduled to open near Kitimat on British Columbia's central coast by 2015. In October 2011, the Kitimat LNG facility was granted the first-ever federal licence from the National Energy Board to export LNG from Canada.

A smaller British Columbia Douglas Channel LNG plant has also received approval for an export license from the National Energy Board. At least four other British Columbia LNG projects are in the early conceptual stage of development.

s.13, s.17

British Columbia currently produces 1.2 Trillion cubic feet (Tcf) of natural gas per year. Meeting our LNG development goals could add another 1.9 Tcf per year.

IV DISCUSSION:

British Columbia is currently focused on maximizing the benefits of natural gas development with a focus on LNG exports to Asia. British Columbia is planning to continue to grow its natural gas industry over the coming decades which will maintain the province's leadership on climate change and clean energy. Export of British Columbia's LNG could significantly lower global greenhouse gas production by replacing coal-fired power plants and oil-based transportation fuels with a much cleaner alternative.

British Columbia's *Clean Energy Act* sets an energy objective to generate at least 93 percent of the electricity in British Columbia from clean or renewable resources. BC Hydro currently uses two natural gas generating stations, one in Metro Vancouver and the other in Fort Nelson. Any new natural gas generation will need to be implemented while ensuring that the province's 93 percent clean or renewable electricity objective is maintained.

British Columbia is highly endowed with many commodities the world needs. Copper and metallurgical coal are the province's top exports and Canada's only molybdenum mines are located here. British Columbia produced over \$8 billion worth of mine products in 2011. Under the BC Jobs Plan, the province has committed to open eight new mines and expand nine existing mines by 2015.

A world-class service industry is in place for the thousands of oil, gas and mining companies that already make British Columbia their destination or home. In Vancouver alone 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 knowledge and information flowing.

Extractive industries benefit from low corporate tax rates, generous incentives and tax or royalty credits and low-cost power – doing business in British Columbia is good for the bottom line. British Columbia benefits from Canada's sound financial system and enjoys an AAA-plus credit rating and stable economy that makes it a favoured port of call for investors.

The rapid expansion of British Columbia's energy sector over the past decade has resulted in a growing number of permanent, well-paying jobs for British Columbians. Over the next five years, an additional 1,000 to 2,000 job openings – mostly in the province's northeast – are expected, due to expanded natural gas exploration and production required to supply new LNG projects. Further jobs will be created to construct and operate the clean energy projects to power them.

British Columbia's Jobs Plan and the BC Energy Plan have identified strategies for skills training and labour, including: increasing access to skills and apprenticeship training, refocusing provincial investments to meet regional labour market needs, improving First Nations access and outcomes in our education system. First Nations communities are an important part of the future workforce in northern regions.

Working with Asian Countries

British Columbia is strategically located to reach key and growing global markets. Perched on the Pacific Rim, it is at the commercial crossroads of the Asia-Pacific region and North America. The Province is the only gateway on the west coast of the Americas served by three transcontinental railways, which serve ports on the Atlantic, Pacific and Gulf coasts.

British Columbia is at the forefront to develop the capacity to export LNG. As new opportunities like LNG emerge, the preservation of current markets will ensure industry development continues to support jobs and resource development in British Columbia. Demand for natural gas is growing in Asia and Europe, primarily for electricity generation and heating purposes, as well as in transportation. China and Japan are both pursuing new supply options – China to fuel its massive modernization and Japan to diversify its fuel supply. With demand growing quickly, prices in Asia are up to four times higher than they are in North America. Export of LNG from British Columbia could significantly lower global greenhouse gas emissions by replacing coal-fired power plants and oil-based transportation fuels with a much cleaner alternative. This is a great opportunity for the province and an important part of the BC Jobs Plan.

Keystone Pipeline Project

The Keystone XL Expansion will carry Alberta oil sands crude oil to United States markets. The Pipeline project is a 2,673-kilometre (1,661-mile), ~ US \$13 billion (TransCanada Corporation), 36-inch crude oil pipeline that would begin at Hardisty, AB, and extend southeast through Saskatchewan, Montana, South Dakota and Nebraska. The project will ensure adequate capacity exists to connect growing Western Canadian Sedimentary Basin oil supply to the large United States Gulf Coast market. Economic benefits of the Keystone Pipeline Project are expected to be derived mainly from increased competition and additional transportation options for shippers.

s.13, s.16

Canadian regulatory National Energy Board approval was given on March 10, 2010, but the project awaits final approval from United States regulators.

US opposition to the pipeline is mainly protest directed at the environmental impact of oil sands production and the view that oil sands oil is “dirty oil”. In April 2012, TransCanada Corp. proposed a new route for the Keystone XL oil pipeline through Nebraska that avoids the state’s environmentally sensitive Sandhills region.

V CONCLUSION:

British Columbia’s natural resource sectors are key job creators and play a pivotal role in the successful implementation of the BC Jobs Plan, growing our economy and ensuring First Nation and non-First Nation communities alike can benefit from environmentally responsible management of land use opportunities and remain resilient through changing economic conditions.

DRAFTED BY:

Guy Gensey
952-0283

APPROVED BY:

Barbara Thomson, A/ED, CPPL ✓
Laurel Nash, EL, TACRD ✓
Steve Carr, DM ✓