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Natural Gas

Fuelling B.C.'s Economy for the Next Decade and Beyond



Ministry of Energy and Mines

Message from the Premier

B.C. WAS BUILT ON ITS NATURAL RESOURCES and our resources continue to fuel our economy. *The BC Jobs Plan* released in September is about using our competitive advantages to benefit all British Columbians. We want to open new markets for our exports, strengthen infrastructure to get our goods to market, and work with employers and communities to help grow and strengthen our economy and create jobs in every region of the province.

The natural gas industry is an important revenue generator for British Columbia. With new, undeveloped shale gas deposits in the northeast, there is a real opportunity for growth. In partnership with First Nations and communities we can reach our goals of new investment, job creation and other economic opportunities, while protecting the environment.

Now is the time to adopt a more aggressive approach to environmentally responsible industrial development. I am confident British Columbia can create a prosperous industry that will bring local jobs to communities and economic benefits for all British Columbians for years to come.



Honourable Christy Clark Premier of British Columbia

Message from the Minister

BRITISH COLUMBIA HAS THE POTENTIAL TO BE A GLOBAL LEADER

in environmentally responsible natural gas development and export.

We are building partnerships and collaborating with other jurisdictions to ensure B.C.'s natural gas policies and programs provide efficient environmental assessment and regulatory oversight. We will advance natural gas actions and strategies to help fuel B.C.'s economy for the next decade and beyond. These will contribute to our leadership in the transition to a low carbon global economy.

Natural gas is the world's cleanest-burning fossil fuel. Over the next 20 years, global demand for natural gas is expected to rise dramatically, fuelled by rapid economic growth in Asia. With demand growing quickly, prices in Asia are up to four times higher than they are in North America. With the development of liquefied natural gas (LNG) – a shippable form of natural gas – B.C. is ideally positioned to compete for a share of that lucrative market.

Export of B.C. LNG could also significantly lower global greenhouse gas production by replacing coal-fired power plants and oil-based transportation fuels with a much cleaner alternative. In *The BC Jobs Plan*, the province has committed to having B.C.'s first clean energy-powered LNG plant in operation by 2015 and three LNG facilities running by 2020. I am confident that we can meet these bold targets.



Honourable Rich Coleman Minister of Energy and Mines and Minister Responsible for Housing

Introduction

Natural Gas and Our Low Carbon Future

Natural gas is the world's cleanest-burning fossil fuel. B.C. exports of liquefied natural gas (LNG) can significantly lower global greenhouse gas emissions by replacing coal-fired power plants and oil-based transportation fuels with a much cleaner alternative.

LNG development in B.C. can have lower lifecycle greenhouse gas emissions than anywhere else in the world by promoting the use of clean electricity to power LNG plants.

B.C.'s LNG industry will contribute to our leadership in the transition to a low carbon global economy.

For over 50 years, British Columbia has ranked second only to Alberta in natural gas production in Canada. B.C.'s natural gas sector employs tens of thousands and industry investment has grown from \$1.8 billion in 2000 to \$7.1 billion in 2010.

The natural gas industry has been a significant economic driver and revenue generator for our province. Natural gas revenue in B.C. generated \$1.35 billion in 2009/10 and has been as high as \$2.6 billion, in 2005/06, helping to fund vital social services such as health care and education.

The Province is planning to continue to grow the industry over the next 10 years. In the *BC Jobs Plan* released in September, the Province committed to having our first LNG plant in operation by 2015 and three LNG facilities operating by 2020, assuming all environmental approvals are in place.

B.C.'s natural gas resources contained in shale and other fine grained sedimentary rocks (also referred to as tight gas) are immense, and modern drilling technology is now making this gas accessible.

A May 2011 report from the National Energy Board and the B.C. Ministry of Energy and Mines gave a medium estimate of 78 trillion cubic feet (Tcf) of gas that could be developed from the Horn River Basin alone. Resource estimates for the Montney, Liard and Cordova basins have yet to be compiled and these will add significantly to our marketable resources.

To put this in perspective, B.C. currently produces 1.1 Tcf annually and shale and tight gas now comprise 50 per cent of this volume. A 2011 report from the BC Oil and Gas Commission confirmed that B.C. experienced a 42 per cent increase in year-end natural gas reserves over 2009. This represents the highest level of established natural gas reserves and the largest yearly increase in the province's history, continuing a 10-year trend of increases. Meeting LNG development goals will see annual natural gas production approach 3 Tcf per year by 2020.

Vision: Global Leader in Natural Gas

British Columbia can be a global leader in secure and sustainable natural gas investment, development and export.

To achieve this vision, B.C. needs to:

- Maintain current and develop new markets
- Ensure a reliable, abundant supply
- Maintain competitiveness
- Maximize the benefits of natural gas development
- Ensure environmentally responsible development
- Build partnerships to promote development



Courtesy of Nexen Inc.





Courtesy of Nexen Inc.

Developing Current and New Markets

Keep B.C. Competitive in the Global LNG Market

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 B.C. liquefied natural gas (LNG) 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 B.C. and an important part of the *BC Jobs Plan*.

B.C. is at the forefront to develop the capacity to export LNG. The first large commercial LNG export facility in Canada is scheduled to open near Kitimat, on B.C.'s central coast by 2015¹. Kitimat LNG has already earned federal and provincial environmental assessment approvals. It has strong support from the Haisla Nation, on whose land it is being built. In October 2011, it was granted the first-ever federal licence to export LNG from Canada.

The smaller British Columbia Douglas Channel LNG plant is seeking approval of an export license from the National Energy Board. Several other B.C. LNG projects are in the early conceptual stage of development. These LNG projects will bring about \$18 billion in investment plus billions of dollars in exploration and development. These projects could also bring substantial revenue to the Province. For example, it is estimated that production from the first phase of the proposed Kitimat LNG plant could result in \$90 million annually in revenue, totalling more than \$1 billion by 2035.

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. B.C. will remain engaged with the National Energy Board so the province's natural gas will continue to benefit and accommodate energy needs across Canada.

Market Diversification

Most of British Columbia's natural gas is exported. Of the three billion cubic feet per day of gas currently produced in B.C., 16 per cent is consumed within B.C., 41 per cent is exported to the U.S. through two pipeline systems and 43 per cent is delivered to other regions of Canada by pipeline.

Kitimat LNG partners are Apache Corporation, EOG Resources Inc., and Encana Corporation.

In addition to global market diversification, there are new and expanded uses of natural gas in North America and British Columbia, including transportation, fuel switching from coal to natural gas for power generation, and as a feedstock to make other products.

Promote Natural Gas as a Transportation Fuel

Natural gas can help reduce greenhouse gas emissions by replacing diesel in heavy and medium vehicle fleets.

Natural gas is 25 to 40 per cent cheaper than gasoline and diesel. A natural gas vehicle produces 20 to 30 per cent fewer greenhouse gas emissions compared to a gasoline or diesel vehicle.

British Columbia is home to world-leading natural gas vehicle industries, including engine and refuelling technology. To assist in transforming the market, the Province's point-of-sale incentives provide up to \$2,500 off the sticker price for qualifying compressed natural gas vehicles. Investments in natural gas vehicles will lead to growth and new jobs in this local industry.

The Clean Energy Act provides the framework for a planned five-year, \$62 million program to reduce transportation emissions for heavy duty natural gas vehicles.

Develop New Markets for Natural Gas

Natural gas has great potential in applications that could develop new industries for British Columbia. These include:

- Gas-To-Liquids: Natural gas can be converted into high-value liquid products like clean diesel, naphtha, or jet fuel.
- Methanol: Synthesized mainly from natural gas, methanol is a key ingredient in the production of plastics, plywood, paints, and permanent press textiles. It also can be used in motor vehicle fuel, solvent, antifreeze and windshield washer fluid.
- Fertilizers: Natural gas can be used to produce ammonia for fertilizer production.

These new natural gas-related industries could open up markets, creating new, high-paying jobs for British Columbians.

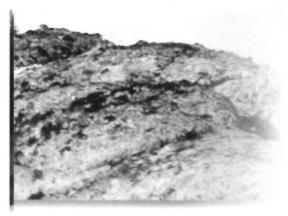






A natural gas powered school bus





Geological Survey of Canada: Mapping shale gas host rocks

Ensuring a Reliable, Abundant Supply

Shale Gas is a "Game Changer"

Shale and tight gas is natural gas produced from shale and other finegrained sedimentary rocks.

Over the past decade, the development of horizontal drilling, and improvements to hydraulic fracturing have made abundant shale gas recoverable. This has changed the natural gas industry forever, making natural gas an abundant natural resource.

The development of shale gas resources in northeast B.C. began in 2005 and has rapidly evolved to generate billions of dollars in provincial revenue from natural gas tenure sales and royalties.

With shale gas now in play, it is conservatively estimated that B.C. has at least 100 trillion cubic feet of recoverable gas. This compares with total production of 22.5 trillion cubic feet in the province between 1954 and 2010.

Our enormous resources of natural gas will be a major contributor to our economy.

Just a few years ago, people were bracing for a shortage of natural gas in North America. Supplies of conventionally accessible gas were declining and proposals for importing LNG from overseas were being advanced. That all changed with the advent of technologies allowing for recovery of shale gas in numerous locations in Canada and the United States. This has driven down the price of natural gas in North American markets.

Despite the recent recession and low natural gas prices, development activity has remained robust in B.C., which currently produces roughly three billion cubic feet per day or 1.1 trillion cubic feet per year of marketable natural gas. However, if North American natural gas supply remains high and prices remain low, it may become difficult to maintain this level of activity.

Managing B.C.'s natural gas reserves depends on the collection, interpretation and public delivery of natural gas geoscience data. This information reduces investment risk in the exploration and development of B.C.'s natural gas resources. Knowledge of the province's resources supports a competitive royalty structure that maximizes the financial benefit to British Columbians.

B.C. needs to continually assess our geological resources to maintain an effective regulatory system that maximizes responsible, sustainable resource development.

Maintaining Competitiveness

Ensure an Effective Royalty Regime

Approximately 90 per cent of oil and gas resources in British Columbia are owned by the Province. The Province sells exploration and production rights to industry. Industry produces and markets the oil and natural gas it finds in exchange for royalty payments to the Province.

The oil and gas sector is a significant source of revenue for B.C. In 2009/10, total revenue from oil and gas, including petroleum and natural gas rights sales, totalled \$1.35 billion – almost 60 per cent of total direct revenues from B.C.'s resource industries and four per cent of total provincial revenues. This helps to fund vital social services such as education and health care.

Our royalty programs help encourage oil and gas development in B.C. by providing incentives designed to meet B.C.'s unique resource challenges such as infrastructure development in remote northern locations. B.C. royalty programs are competitive with other North American programs and reflect the cost to extract the resource.

Ensure Infrastructure is Available to Encourage Investment

Ensuring adequate road and pipeline infrastructure is an essential component of maintaining B.C.'s investment competitiveness. B.C.'s innovative natural gas infrastructure programs encourage new, incremental investment that would not otherwise be carried out. The Province offers three natural gas infrastructure programs:

- The Infrastructure Royalty Credit Program facilitates all-season road projects and new pipeline projects.
- The Oil and Gas Rural Roads Improvement Program invests in the upgrade of public roads and bridges heavily used and required by the oil and gas industry.
- The Sierra Yoyo Desan (SYD) Road project is a public-private partnership to upgrade the SYD Road located near Fort Nelson, providing reliable year-round access to the Horn River and Cordova Basins.

Continuing and expanding these programs is vital to the development of B.C.'s emerging LNG industry. Exploring collaborative approaches to the development of pipeline infrastructure to support LNG projects is also key to ensure our natural gas reaches markets.

Amend Natural Gas Act and Regulations

The B.C. Government is reviewing the tenure provisions of the *Petroleum* and *Natural Gas Act* and its regulations. This is in response to significant technological advances allowing the development of unconventional natural gas resources, the implementation of the *Oil and Gas Activities Act* and emergent environmental issues.











Courtesy of Nexen Inc.

New Jobs for B.C.

The rapid expansion of B.C.'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.

New Skills Training

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.

The Kitimat LNG terminal alone is expected to provide 1,500 construction jobs and 125 permanent jobs. An additional 1,500 pipeline construction jobs will be required for the Kitimat to Summit Lake pipeline project. Additional LNG projects and pipelines will expand on this.

Through the Labour Market Partnerships program, the Province has funded the development of a comprehensive human resource strategy for the resource sector in northern B.C., focusing on four industries, including the oil and gas sector.

Post-secondary institutions in B.C.'s north provide a wide array of training in support of the sector. Additionally, several labour market programs include skills training for the natural resources and construction sectors in the north.

Attracting and retaining a skilled work force also requires the municipal infrastructure to support economic activity and housing. This includes schools, health, recreation and cultural facilities.

The BC Jobs Plan also calls for the creation of Regional Workforce Tables as a new platform for educators, industry, employers, local chambers of commerce, First Nations, labour and others to plan how best to align training programs with regional needs. This will inform how the Province delivers regionally based skills development programs, including \$15 million to further support regional post-secondary institutions to address local labour needs.

Engaging and Consulting B.C. Communities and First Nations



Protect Health and Air Quality

Natural gas is a safe fuel. However, there are some public concerns about potential health issues as a result of oil and gas development. These concerns relate to air quality, water use, exposure to sour gas and emergency response.

The Province is conducting a health study of the oil and gas sector to address these concerns. This study includes stakeholder engagement and is expected to be complete by mid-2012. The Province is also initiating work with industries and local communities to establish an airshed monitoring association for the Peace area. In addition, regional water studies are already well underway, including work with GeoScience BC. Both of these initiatives will complement the health study.

Engage with Communities

People who live near oil and gas operations may have some concerns about how this work may affect them. The Province is working with local governments to find out what the concerns are in each community, and exploring new ways to work directly with groups and communities. B.C. is also exploring creative solutions to ensure local communities reap the benefits of natural gas development.







Continue Consulting with First Nations

Many First Nations live in areas where oil and gas development is underway. It is essential the Province consult and accommodate their interests when developing resources to open new areas of B.C. to longer-term economic certainty and stability.

To further improve the investment climate, the Province, in partnership with First Nations, will create a new Aboriginal Business and Investment Council to promote First Nations opportunities with investors and stimulate new economic prospects for communities around B.C.

Northeast British Columbia First Nations

The Province has had a long and collaborative relationship with Treaty 8 First Nations whose communities are impacted by exploration and development of oil and gas resources.

Since 1998, the Province has negotiated Consultation Process Agreements (CPAs) between the Oil and Gas Commission (OGC) and Treaty 8 First Nations. These CPAs have provided significant consultation resources directly to First Nation communities.

The Province and several Treaty 8 First Nations also have Economic Benefit Agreements (EBAs) which provide a framework for relationship building and financial benefits.

The EBAs are 15 year agreements which provide one-time up front disbursements by the Province, along with annual payments based on resource development activity within Treaty 8. Approximately \$43.6 million has been provided to Treaty 8 First Nations through the EBAs. The EBAs also include a framework for an ongoing relationship between the Province and First Nations through Long Term Oil and Gas Agreements (LTOGA).

Northwest and Interior British Columbia First Nations

First Nations strongly support the recently approved Kitimat LNG terminal and connecting pipeline. The Province worked with First Nations along the pipeline route to address interests from those communities to become partners in the development. This resulted in an agreement between the Province and the First Nations Limited Partnership comprising 15 potentially affected First Nations along the pipeline route. This agreement will provide up to \$35 million to the First Nations, \$32 million of which is intended to assist in securing equity participation in the project.

The Kitimat LNG facility is proposed to be built on the Haisla Nation Indian Reserve at Bish Cove near Kitimat. The Haisla Nation is also a partner in the proposal to establish a smaller LNG facility through the Douglas Channel Energy Partnership.

Ensuring Environmentally Responsible Development

Oil and gas activities in British Columbia are regulated by the BC Oil and Gas Commission (OGC), a Crown Corporation and agent of the Crown. The OGC is a "single-window" regulator that works with industry, First Nations, communities and stakeholders to provide efficient and effective oversight of oil and gas activity. The OGC reviews applications and, once approved, inspects and monitors construction, operation and reclamation. The OGC is also responsible for reviewing and approving land tenure, water use, forest harvesting, waste disposal and potential heritage impacts.

B.C.'s environmental assessment process, managed by the Environmental Assessment Office, reviews major projects to ensure they meet the goals of environmental, economic and social sustainability. The assessment process considers issues and concerns to the public, First Nations, interested stakeholders and government agencies.

Natural Gas is a Climate Solution

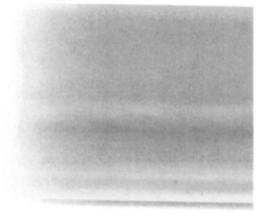
Natural Gas is a climate solution – it is widely recognized as a transition fuel to a low carbon global economy.

We have an important role in helping to lower global greenhouse gas emissions. B.C. can make a significant contribution to global reduction targets when B.C. gas is exported to Asia as LNG and replaces coal and/or diesel as fuel for electricity production or transportation.

The Natural Gas Climate Action Working Group, which includes members from industry and government, is developing strategies to balance natural gas development with climate objectives with minimal economic impact. Some options include electrification of gas-fired equipment, energy efficiency measures, carbon capture and storage, and enhanced oil recovery.

One area where considerable progress is being made is with flaring—the controlled burning of natural gas that cannot be processed or sold—at oil and gas production sites. The 2007 *BC Energy Plan* committed to eliminating routine flaring by 2016, limiting flaring to short-term well testing, well work-overs, or during maintenance or emergency situations. The Oil and Gas Commission reported in 2010 that the interim goal to cut flaring in half by 2011 had already been achieved.

Another area with considerable potential is carbon capture and storage, an emissions mitigation technology that involves capturing, transporting and storing industrial sourced carbon dioxide in the pore space of rock formations deep underground. This internationally promoted measure can contribute significantly to reducing emissions.







Courtesy of Nexen Inc.







Optimal underground storage sites exist in northeastern British Columbia. Close proximity to current natural gas industry activity make these sites excellent candidates for carbon capture and storage projects.

British Columbia also has projects that are producing biomethane from landfills and biomass. The biomethane is sold either directly into the natural gas distribution network or is used to generate clean electricity.

Clean energy is an important part of LNG development in B.C. For instance, once operational the Kitimat LNG plant will be the first in the world to use clean electricity. As a result, LNG development in B.C. can have a lower lifecycle for greenhouse gas emissions than anywhere else. This will differentiate B.C. in the global LNG export market.

B.C. is a clean energy leader, supported by the *BC Energy Plan* and the landmark *Climate Action Plan* with the most comprehensive carbon price in North America under the Revenue Neutral Carbon Tax. Reaching \$30/tonne in 2012, the carbon tax creates a price incentive to eliminate waste and reduce the consumption of fossil fuels. By legislation, all of the revenues must be returned into the B.C. economy through tax cuts that improve economic competitiveness and productivity. The benefits include a competitive corporate tax rate, the lowest personal income tax rates in Canada, and incentives like the Northern and Rural Homeowner Benefit.

Using natural gas efficiently in B.C. not only reduces emissions; it also reduces the cost of doing business, increases productivity and improves the standard of living that British Columbians have come to expect. Government and utilities are pursuing opportunities to increase the efficiency of buildings and industrial processes through policies and programs.

Effectively Manage Water Quality and Sustainability

Water quality and sustainability are critical to natural gas development. The Province is modernizing the *Water Act* to keep drinking water safe. This Act will consider industry's use of water, current groundwater protection and evaluate hydraulic fracturing operations to ensure sustainable water management.

B.C. also has a regulatory framework to manage water use for natural gas development. The *Oil and Gas Activities Act* and associated regulations, which were brought into force in 2010, were designed to encompass the technologies now being employed in natural gas development, including hydraulic fracturing and the use of water. The Act and regulations will continue to be monitored to ensure that they are effective, community concerns are addressed and industry's need for water is met. A B.C.-led New West Partnership (involving B.C., Alberta and Saskatchewan) working group has been established to develop and share information on best practices related to water use in shale gas development.

As a first step to address First Nation and public concerns, B.C. requires mandatory disclosure of the hydraulic fracturing fluids injected into the subsurface by industry. A public disclosure registry for hydraulic fracturing additives was launched in early 2012. The FracFocus.ca registry provides British Columbians with additional information about hydraulic fracturing and water management in shale gas development.

Continue Managing Boreal Caribou

Approximately 1,300 Boreal Caribou live in northeast British Columbia, members of a population believed to be in decline. This may be due to habitat loss, fragmentation of the herd, alteration of their habitat and increased predation.

Boreal Caribou are listed as 'threatened' under the federal *Species at Risk Act*, are provincially red-listed (Threatened to Endangered) and are identified as Priority 1 under the BC Conservation Framework.

The Province is taking action to slow this decline and ensure Boreal Caribou are maintained in British Columbia for future generations. The Province has developed an implementation plan to manage Boreal Caribou.

The plan balances habitat protection and management of Boreal Caribou with oil and gas development. Actions supporting the implementation plan include establishing areas where oil and gas tenures will not be offered for a minimum of five years, establishing management practices for activities that are proceeding within certain caribou habitat areas and collaboration with industry on funding habitat restoration and research into Boreal Caribou and their habitat.



Building Partnerships to Promote Development



Collaborate with Other Jurisdictions

Under the Canadian Constitution Act, provincial governments are responsible for natural resources within their jurisdictions and the federal government is responsible for natural resources in the territories and has authority in other areas affecting the natural resource sector, such as international trade, transportation and external relations. As a result, government policies and programs affecting natural gas development result from an integrated and sometimes overlapping set of authorities.

Canada's federal, provincial and territorial ministers responsible for energy and mines meet annually to discuss and take collaborative action on issues of common interest.

In 2011, energy ministers agreed on a pan-Canadian energy framework with a shared vision for Canada as a recognized global leader in secure and sustainable energy supply, use and innovation.

Within this framework, there are three key initiatives relating to B.C.'s Natural Gas Strategy:

- Diversifying international export markets and attracting investment for the energy sector.
- Improving the alignment of federal-provincial regulatory systems.
- 3. Building on past energy efficiency accomplishments.

British Columbia, Alberta and Saskatchewan launched the New West Partnership in 2010, creating an economic powerhouse of nine million people. This ambitious agreement creates Canada's largest interprovincial barrier-free trade and investment market. An energy memorandum of understanding was signed by the three provinces in 2010, establishing a collaborative framework to strengthen and expand the region's energy sectors.

The Province is also working with the federal government to achieve greater efficiencies in environmental assessments of major projects. For example, the BC Environmental Assessment Office and the National Energy Board signed an Environmental Assessment Equivalency Agreement in 2010, which specifies that where a proposed project requires

both a B.C. Environmental Assessment Certificate and approval under the *National Energy Board Act*, the assessment completed by the National Energy Board is considered equivalent to the B.C. process.

To further streamline regulatory processes and to provide investment certainty, B.C. recommended in November 2011 that the federal *Environmental Assessment Act* be amended to include an option to eliminate the need for a separate federal environmental assessment of projects where a provincial environmental assessment is required. The "one project – one environmental assessment" would replace two overlapping review systems with a single system that is rigorous, comprehensive, efficient and timely. Many major natural gas development projects are subject to National Energy Board review; however, for those projects subject to separate provincial and federal environmental assessments, the one project – one assessment approach offers greater efficiencies without reducing environmental standards or the rigour of the review process.

Pacific Northwest Economic Region (PNWER)

PNWER is a regional non-partisan U.S.-Canadian forum dedicated to encouraging global economic competitiveness and preserving the world-class natural environment of the region. Its member jurisdictions are British Columbia, Alberta, Saskatchewan, the Yukon Territory, the Northwest Territories, Alaska, Washington, Idaho, Montana and Oregon. It is recognized by both the American and Canadian federal governments as the model for regional and bi-national cooperation because of its proven success. Energy is a key topic at PNWER conferences and workshops, where delegates share information on best practices, new policies and technologies, and resource development and infrastructure projects.

Pacific Coast Collaborative

With a combined population of 52 million and a GDP of \$2.5 trillion, Alaska, British Columbia, California, Oregon and Washington are poised to emerge as a mega-region and global economic powerhouse driven by innovation, energy, geographic location and sustainable resource management, attracting new jobs and investment while enhancing an already unparalleled quality of life.

On June 30, 2008, the leaders of the five jurisdictions signed the Pacific Coast Collaborative Agreement, the first agreement that brings together the Pacific leaders as a common front to set a cooperative direction into the Pacific Century. Out of this agreement was born the Pacific Coast Collaborative – a formal basis for cooperative action, a forum for leadership and information sharing, and a common voice on issues facing Pacific North America.



Summary of Actions/ Strategies

Keep B.C. Competitive in the Global Liquefied Natural Gas (LNG) Market

- Coordinate permitting and approval processes among agencies to ensure timely project construction.
- Contribute to trade missions and other marketing initiatives that demonstrate government support for LNG exports.
- 3. Invest in critical infrastructure to power future LNG facilities in balance with the need to keep electricity rates affordable for the people of British Columbia.
- **4.** Ensure the availability of sufficient clean and renewable electricity to make possible the development and operation of an LNG industry.
- 5. Explore collaborative solutions for natural gas pipeline development.

Current Markets:

 Remain engaged with the National Energy Board on proposals that effect access to current markets.

Promote Natural Gas as a Transportation Fuel

- Work to introduce a regulation under the Clean Energy Act to advance a proposed natural gas vehicle program.
- 2. Work with the business community, fuel suppliers and natural gas producers to increase the use of natural gas in the transportation sector.

Develop New Markets for Natural Gas

- Attract investment for new value-added projects to B.C. by providing a stable, supportive development framework.
- Encourage value-added industries through innovative government programs that reward industry for creating new applications for B.C.'s natural gas.
- Promote the use of high efficiency natural gas electricity generation in export markets, and in specific markets in B.C., to meet the demand for capacity.

Ensuring a Reliable, Abundant Supply

- Improve B.C.'s resource estimates by completing resource assessments
 of the Montney Play, the Liard Basin and other significant areas.
- Identify, evaluate and provide the geological and hydrological context for surface, subsurface, and deep saline water resources in Northeast British Columbia.
- 3. Conduct regional, basin-scale studies directed at enhancing the understanding of the geological framework that hosts British Columbia's oil and gas resources.
- 4. Investigate, evaluate and promote new conventional and unconventional natural gas opportunities to increase investment and encourage exploration.
- Continue to host the BC Unconventional Gas Technical Forum to facilitate information sharing about development activities and technical advances in the industry.

Ensure an Effective Royalty Regime

Monitor and evaluate B.C.'s royalty system and recommend expanded or new programs, as necessary, to make sure the province remains highly competitive.

Ensure Infrastructure is Available to Encourage Investment

- Continue to offer the \$120 million royalty credit allocation through the Infrastructure Royalty Credit Program, to enhance industry capital planning and investment in emerging or under-explored areas.
- Continue the Oil and Gas Rural Road Improvement Program to target investments in public road infrastructure required for natural gas development.
- Complete improved road access investments that will enable development of the Horn River Basin and Cordova Embayment shale gas areas.
- 4. Explore collaborative approaches for pipeline infrastructure development to ensure B.C.'s gas is available to supply LNG export plants.

Amend Natural Gas Act and Regulations

 Amend the Petroleum and Natural Gas Act and regulations to improve and update administration for Crown-owned natural gas subsurface resources.

New Jobs for B.C.

Skilled Workers:

- 1. Promote greater use of the Employment Skills Access program, which provides free skills training at public post-secondary institutions across the province for entry or re-entry into the labour market.
- **2.** Implement a Northeast Regional Workforce Table, as outlined in the *BC Jobs Plan*.
- 3. Provide leadership to the post-secondary system to support the education and training needs of the natural gas development sector.
- **4.** Create a Labour Market partnership to develop strategies that address the natural gas sector's future needs.

Engaging and Consulting B.C. Communities and First Nations

Health and Air Quality:

- Develop and implement a three-phase health study of oil and gas development.
- 2. Work with communities and industries to develop and implement an airshed monitoring association.
- Complete and publish scientific studies on water resources in the northeast.

Engaging Communities:

- Work with communities and stakeholders to develop a "made in B.C. approach" to local engagement.
- 2. Work with communities to support job development and service sector opportunities, including an evaluation of current grant programs to consider the economic benefits of natural gas development.

First Nations:

- **1.** Negotiate new Oil and Gas Commission Consultation Process Agreements with Treaty 8 First Nations.
- Implement Economic Benefit Agreements with four Treaty 8 First Nations.
- **3.** Continue to build partnerships and support with Northwest and Interior British Columbia First Nations.
- **4.** Continue to engage with the First Nations Limited Partnership to implement the Partnership Agreement.

Natural Gas Is a Climate Solution

Addressing Emissions Targets:

- Continue to implement emission reduction measures while allowing the natural gas sector to maintain its competitive position.
- Continue to reduce natural gas flaring using innovative solutions, practices and emission reduction technologies designed to reach BC Energy Plan goals.
- 3. Promote the use of carbon capture and storage in B.C. by:
 - Completing development of a regulatory framework.
 - Amending legislation, if required.
 - Working with the BC Oil and Gas Commission to develop regulations.
 - Evaluate potential projects.
- 4. Establish a BC Energy Efficiency Network to promote improved productivity of B.C.'s industrial sector through the efficient use of natural gas.
- **5.** Develop a revised Energy Efficient Buildings Strategy in 2013 with an emphasis on natural gas efficiency.
- **6.** Encourage biomethane opportunities, including offering consumers low-carbon natural gas.

Effectively Manage Water Quality and Sustainability

- Continue to develop the FracFocus.ca registry, recently created by the BC Oil and Gas Commission, to ensure it provides public disclosure of ingredients injected into the subsurface for natural gas development.
- 2. Further protect B.C.'s water resources by developing a comprehensive northeast BC Shale Gas Hydraulic Fracturing Water Strategy by 2013.

Continue Managing Boreal Caribou

- Continue consulting with First Nations and stakeholders on the Boreal Caribou implementation plan.
- Monitor and evaluate the effectiveness of implementation measures, including tenure deferrals, management practices, habitat restoration and research.
- 3. Work with other provinces on a coordinated response to Environment Canada on the federal recovery strategy for the Woodland Caribou, Boreal population.

Collaborate With Other Jurisdictions

- Collaborate on and improve natural gas and LNG market information gathering and monitoring with the National Energy Board, and through the New West Partnership.
- Continue working with the federal government to eliminate the need for duplicate federal and provincial environmental assessments and decisions on proposed projects.
- 3. Continue to engage in intergovernmental and regional forums.
- Complete negotiations with Haisla Nation and Canada on the regulatory regime for the Kitimat LNG facility on the Haisla Nation reserve near Kitimat.



Courtesy of Nexen Inc.



THE BC JOBS PLAN





Canada's Oil and Natural Gas Producers

November 9, 2015

Ms. Kim Henderson
Deputy Minister
Ministry of Finance
Government of British Columbia
PO BOX 9417 STN PROV GOVT
Victoria, BC V8W 9V1
(via e-mail to kim.henderson@gov.bc.ca)

Dear Ms. Henderson:

Re: Carbon Tax Act

We are writing to request changes to the Carbon Tax Act ("CTA") and the Carbon Tax Regulation ("CTR") to simplify its application to fuels, particularly pentanes plus that are purchased for export from the Province. We also request some clarification and simplification in the procedures to be used by collectors particularly those selling to natural gas wholesalers.

The Canadian Association of Petroleum Producers ("CAPP") represents large and small companies that explore for, develop and produce natural gas and crude oil throughout Canada. CAPP's member companies produce about 90 per cent of Canada's natural gas and crude oil. CAPP's associate members provide a wide range of services that support the upstream crude oil and natural gas industry. Together CAPP's members and associate members are an important part of a national industry with revenues of about \$120 billion a year. CAPP's mission, on behalf of the Canadian upstream oil and gas industry, is to advocate for and enable economic competitiveness and ensure safe, environmentally and socially responsible performance.

1. Legislative Amendments

a) Pentanes Plus

Pentanes plus, which is included in the definition of fuel subject to carbon tax, is used primarily as a diluent of crude oil and bitumen to decrease their viscosity to allow the oil or bitumen to be transported by pipeline. Bitumen in its undiluted state is too viscous and dense to be transported by pipeline, rail or truck. Once the crude oil or bitumen reaches its destination, the pentanes plus is removed from the crude oil or bitumen and re-used to dilute subsequent shipments of product. In this scenario, the pentanes plus is never combusted or burned.

As the pentanes plus does not produce greenhouse gases when it is used for this purpose, carbon tax or security should not apply. The CTA does not currently provide an exemption or refund for pentanes plus purchased for this use. Accordingly, we are requesting that section 17 of the CTR be

November 9, 2015 Ms. Kim Henderson Deputy Minister, Ministry of Finance

Re: Carbon Tax Act

amended to add an exemption for pentanes plus when purchased for use as a diluent of crude oil or bitumen.

b) Exemption for fuel for export by common carrier

Section 14(2) (c) of the CTA provides an exemption for fuel that is purchased for use outside of British Columbia, however, it requires that the seller or a person acting on behalf of the seller contract with a common carrier for removal of the fuel. While section 14(2) (d) of the CTA provides for the ability to exempt "fuel that is purchased in British Columbia for use outside of British Columbia and is to be removed from British Columbia in prescribed circumstances", no circumstances have been prescribed. The current provisions limit a buyer's ability to make its own arrangements to remove fuel from the Province, thereby preventing it from taking advantage of global transportation contracts for which the seller of fuel may not qualify. Additionally, while section 14(2)(c) provides an exemption for fuel purchased for use outside British Columbia, we understand that it is the Director's position that "resale" is not generally considered "use". Accordingly, fuel purchased for resale outside of the Province that is ultimately consumed outside of the Province does not qualify for the above referenced exemption. This position embeds a cost to the reseller (either the tax cost or the cost of having that cash held by the Director until a refund is provided) that does not exist when the fuel is exported by a seller using a common carrier.

Prescribing broader export provisions would also remove the cash cost of purchasing fuel for export from the Province. Under the current legislation, the first seller must remit security to the Province and all subsequent buyers must pay security to their seller on non-retail sales of fuel in the Province. This includes where the buyers arrange for the subsequent removal of that fuel from the Province, even though it is clear to the parties involved that these buyers would be able to subsequently claim a refund of that tax. As a result, these buyers are penalized for the time value of money between the time the collectors are paid and the time the Director issues the refund. This often takes a significant amount of time (greater than six months) and involves a significant amount of dollars.

Further, while section 30(6) of the CTA provides the Director with the ability to exempt a collector from having to remit security in these circumstances, the discretion for these exemptions lies solely with the Director. As such, the process for obtaining an exemption is not widely known, is time consuming and is usually specific to a particular transaction or group of transactions.

In corresponding with representatives of the Fuel and Carbon Tax section of the Consumer Taxation Programs Branch, they have provided some further clarification in respect of their administrative policy regarding the collector exemption. Currently, the policy permits a collector to apply for an exemption under subsection 30(6) when selling to a non-resident entity for resale. However, where the fuel is removed by truck, the Director will not exempt this fuel due to "the higher risk of diversion compared to vessel or pipeline exports". Basing the method of exempting sales based on the method of transport is, in our view, unnecessary, given that the movement of each volume of fuel purchased and sold is tracked and reported for the seller and purchaser's records, as well as for each jurisdiction's stringent tax reporting requirements. Since diverting fuel is not a likely occurrence, we see this divergent treatment as a barrier to doing business in the Province. It should be noted that we understand the need for the fuel to be transported by common carrier rather than in the buyer's own vehicle.

November 9, 2015 Ms. Kim Henderson Deputy Minister, Ministry of Finance

Re: Carbon Tax Act

The cost and red tape involved in having to pay and claim refunds makes some buyers reluctant to purchase fuel in the Province and is inconsistent with British Columbia's role as a gateway to the Pacific. Accordingly, we ask that the Province prescribe circumstances (similar to that used in other provinces) that relieve carbon tax from fuel purchased for immediate removal from British Columbia.

2. Administrative Changes

The CTA and CTR have many provisions that base the requirement to collect security or the right to a refund on conditions or documents satisfactory to the Director. In a self-assessing system such as carbon tax, it is essential that taxpayers and tax collectors acting for the Province know what information is needed, at the time of the transaction, to meet the director's requirements. Unfortunately, the current process is quite informal, which can make it difficult for a tax collector to know what documents are needed. Accordingly, our members would like to work with the Ministry to simplify and clarify the documentation requirements that tax collectors are required to obtain to support the application of security or tax. The documentation needed to support the exemption of natural gas sold to wholesalers is one example that is discussed in more detail below.

a) Sales to Natural Gas Wholesalers

Where wholesale dealers (as defined in the Act) do not combust natural gas, they are not required to pay carbon tax under section 8 as they are not purchasers of the natural gas. Further, section 33 of the CTA prohibits the collection and payment of carbon tax on natural gas sales.

Subsection 35(2) of the CTR provides for the seller of natural gas to: a) include the buyer's registration number on the invoice, purchase order, receipt or similar documents or b) obtain a declaration in the form acceptable to the director. The FIN-187 "Certificate of Exemption as a Natural Gas Wholesaler Dealer" is the form that is prescribed for this purpose. Due to the legislative requirement that the certificate be issued prior to or at the time of the sale and the information requested in the form, buyers are required to provide a form for each individual purchase declaring the estimated sales volumes and not the volumes that are actually transacted. As such, the volumes delivered may not match the volumes on the exemption certificates. Thus, the exemption process is quite inefficient from exemption certificate issuing and auditing perspectives.

Accordingly, we suggest the following changes be made to the procedures for documenting the exemption:

- Agree that registered buyers could provide a blanket certificate whereby the buyer certifies that
 all of its purchases made during a specified period of time are for resale and not for their own
 use;
- Modify the FIN 187 such that the registered buyer would certify the total amount of fuel being purchased including the estimated taxable and non-taxable volumes rather than certify the exact amount being purchased for resale. The seller would then collect on the taxable volume and the buyer would be responsible for accounting for the fuel purchased exempt for resale; and

Re: Carbon Tax Act

Modify the FIN 187 so that it could be used by those wholesale dealers that are not registered
and are not required to register where it is clear that they will not owe carbon tax on the fuel
being acquired (e.g. they have no facilities in the Province).

b) Refiner-collector appointments

We also have concerns with respect to the appointment of refiner-collectors; in particular, the criteria and process for appointment as a refiner-collector pursuant to section 16.2.1 of the CTA. This section provides for the appointment of a collector to be a refiner-collector with respect to the same type or subcategory of a type of fuel as the collector is appointed if (i) the director considers the applicant suitable, and (ii) the collector or one or more interrelated entities of the collector, individually or collectively, own and operate a crude oil refinery in Canada.

We are concerned that all the factors used by the director in determining the suitability of an otherwise qualifying applicant are not publicly available and may unduly restrict these appointments. For example, our members have been told that the Canadian crude oil refinery must produce products that are subject to carbon tax in order for the appointment as a refiner collector. In our view, this requirement is not appropriate, and should be removed as a factor in determining the suitability of an applicant.

Lastly, while we appreciate the ability for the Director to provide an effective date of the appointment of a person as a refiner-collector for up to four years before the date of approval, we note that, absent proof that carbon tax was remitted to the Province or that the subsequent purchaser would have been eligible for a refund of any tax paid, any back-dated appointment would also bring a potentially large liability for remitting carbon tax. As such, we would like clarification of the documents that are needed to prove that the tax was remitted or the purchaser was eligible for a refund of the tax to show that there is no carbon tax leakage.

Our members would, of course, be pleased to meet with your officials to discuss these issues in more detail.

Sincerely,

Ben Brunnen

Manager, Fiscal and Economic Policy

Canadian Association of Petroleum Producers

MINISTRY OF NATURAL GAS DEVELOPMENT AND MINISTER RESPONSIBLE FOR HOUSING LNG TASK FORCE ESTIMATES BRIEFING NOTE 2015/16

ISSUE: Air Quality and Emissions Management

KEY MESSAGES:

- We are working closely with industry and stakeholders to ensure emissions from LNG development and the cumulative impacts on the airshed are managed effectively.
- We will ensure the highest environmental standards and health standards for the citizens of this province continue to be met for our future generations.
- We have established world-leading interim ambient air quality objectives for nitrogen oxides and sulfur oxides (NO_x and SO_x) for industry which includes the LNG sector.

BACKGROUND:

- Emissions from natural gas turbine power generation are potentially the largest source of emissions from LNG facilities.
- Canadian Ambient Air Quality Standards (CAAQS) were recently adopted for fine particulate matter (PM2.5) and ground-level ozone. CAAQS for nitrogen dioxide (NO₂) and sulfur dioxide (SO₂) are under development but not expected to be finalized until late 2015 at the earliest.
- To bridge the gap until new national standards are available and to ensure that major new developments are assessed using objectives that reflect the current state of science, interim ambient air quality objectives (IAAQOs) for NO₂ and SO₂ have been established at 100 parts per billion of NO₂ and 75 parts per billion of SO₂ as the daily 1-hour maximum.
- These objectives replace previous provincial and national objectives used in BC.
- In 2013, the Province funded a scientific study to help inform regulatory and policy development for future industrial activity in the Kitimat area. The study looked at cumulative effects of industrial air emissions, primarily sulphur and nitrogen oxides.
- The Kitimat Airshed Study determined that with proper management, Kitimat's airshed can safely accommodate LNG and other new industrial growth, while still protecting human health and the environment.
- In December 2014, the Province funded an independent science-based study to better understand the potential cumulative impacts from industrial air emissions in the Prince Rupert, building on information from the Kitimat Airshed Study.
- These reports are helping to shape management strategies to protect air quality, human health and our overall environment.

Contact:

Brian Hansen

Cell Phone: s.22

Date:

March 3, 2015

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- As part of the Environmental Assessment process, LNG proponents will be required to conduct an impact assessment on air quality as well as a cumulative effects assessment. The Province is actively participating in the environmental assessment process (provincial and federal) for the various LNG terminal facilities, pipelines, and gas processing plants. The Province has met with a majority of the proponents as well as the BC LNG Alliance.
- Ministry of Environment (MOE) staff has also been dedicated to collaboration and support of Environmental Management Act permitting, which, in this case, is the responsibility of the Oil and Gas Commission (OGC), as well as the sharing of information and expertise with the Ministry of Natural Gas Development.
- MOE has formed a dedicated team of expert staff to review all environmental aspects of LNG projects, including the setting of relevant emissions standards, supporting environmental assessment, and issuing the necessary construction permits. The OGC is responsible for permitting LNG plant operations under the Environmental Management Act.
- The Province has conducted discussions with most LNG proponents regarding the studies and data needed to properly predict potential environmental effects from air emissions at LNG facilities.

Estimate Note: 20

Contact: Cell Phone: Date:

Brian Hansen s 22

March 3, 2015

MINISTRY OF NATURAL GAS DEVELOPMENT AND MINISTER RESPONSIBLE FOR HOUSING LNG TASK FORCE ESTIMATES BRIEFING NOTE 2015/16

ISSUE:

Greenhouse Gas (GHG) Management in the liquefied natural

gas (LNG) sector

KEY MESSAGES:

 Our government promised the cleanest LNG facilities in the world, and that is exactly what we will deliver.

- BC's GHG benchmark sets the highest standard for LNG facilities in the world.
- Incentives and flexible options will encourage industry to invest in energy efficiency and clean energy – keeping our LNG industry clean, and competitive.
- By developing the cleanest LNG facilities in the world, we will proudly build on our track record of growing the economy while protecting our environment.
- Climate change is a global issue. Exporting BC's natural gas can avoid global GHG emissions by supplying growing markets with the cleanestburning fossil fuel.

BACKGROUND:

- On October 20, 2014, the Province introduced the GHG Industrial Reporting & Control Act to ensure BC has the cleanest LNG facilities in the world.
- The GHG emissions intensity benchmark has been set at 0.16 tonnes of carbon dioxide equivalent per tonne of LNG produced (tCO2e/tLNG). This includes all facility GHG emissions (i.e., combustion, electricity generation, venting and fugitives) from the point where gas enters a facility to where it is loaded onto a ship or rail car to go to market.
- The 0.16 benchmark sets a new global standard for LNG facilities. Independent studies and government analysis determined that leading global facilities had emissions intensities of between 0.18 and 0.27 tCO2e/tLNG.
- LNG proponents will have the flexibility to meet the benchmark through facility design
 by improving energy efficiency or increasing the use of clean electricity. If a
 proponent determines that reducing facility emissions is not immediately economically
 favourable, they also have the option to invest in BC-based emissions reduction
 projects (i.e., offsets) at market prices or to contribute to a technology fund at a rate of
 \$25 per tonne of CO2e.
- Investments from both offsets and the technology fund will be used to further reduce GHG emissions in the natural gas and other sectors in BC.

Contact:

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Date:

March 3, 2015

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LNG Environmental Impacts

- LNG facilities that perform below the 0.16 benchmark will be eligible to receive earned credits, which can be sold to other facilities.
- The LNG Environmental Incentive Program will reward facilities achieving emission intensities between 0.23 and 0.16 tCO2e/tLNG by providing an escalating incentive based on their compliance costs.

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Contact: Cell Phone: s 22 Date:

Brian Hansen

March 3, 2015

MINISTRY OF NATURAL GAS DEVELOPMENT AND MINISTER RESPONSIBLE FOR HOUSING LNG TASK FORCE ESTIMATES BRIEFING NOTE 2015/16

ISSUE: Prince Rupert Airshed Assessment

KEY MESSAGES:

- The Province is conducting a study to better understand the effects of LNG facilities and existing and proposed industrial development will have on the Prince Rupert airshed.
- We are working closely with industry and stakeholders to ensure emissions from LNG development and the cumulative impacts to the airshed are managed effectively.
- We will ensure the highest environmental standards and health standards for the citizens of this province continue to be met for our future generations.

BACKGROUND:

- On December 2, 2014, the Province issued a Request for Proposal (RFP) to conduct a study of the Prince Rupert airshed. The Province is funding this \$500,000 study to help inform future decisions on industrial development within the airshed while examining any potential environmental and health impacts.
- The successful proposal was put forward by ESSA Technologies of Vancouver, BC.
- The study will include a thorough review and analysis of the cumulative effects of existing and proposed industrial air emissions from:
 - Six proposed LNG terminals (Pacific Northwest, Prince Rupert, WCC, Woodside, Aurora, Watson Island. Initially Aurora had two options; now they are focusing on Digby Island.),
 - o Existing and proposed Prince Rupert Port Authority development,
 - o Gas turbine powered electrical generation facilities, and
 - Related rail and marine transportation.
- The study will assess the impact of emissions (Nitrogen Dioxide, Sulphur Dioxide and Particulate Matter 2.5) through seven scenarios or case studies, including their potential effects on surface water, soils, vegetation and human health.
- Conclusions from the study will be used to inform environmental assessment work as well as future permitting and regulatory decisions for LNG and other industrial proponents in the Prince Rupert airshed.
- The final report is due to government by the end of May 2015 and will undergo a series of reviews, including reviews by technical experts and First Nations (among others to be determined), prior to being publically released.

Contact:

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Cell Phone: s 22

Date:

March 3, 2015

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LNG Environmental Impacts

The Province has established world-leading interim ambient air quality objectives (NO2 and SO2) for industry including the LNG sector (for more information see Air Quality and Emissions Management note).

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Brian Hansen

March 3, 2015 Date:

MINISTRY OF NATURAL GAS DEVELOPMENT AND MINISTER RESPONSIBLE FOR HOUSING LNG TASK FORCE ESTIMATES BRIEFING NOTE 2015/16

ISSUE: Cumulative Environmental Effects

KEY MESSAGES:

- The Province is working closely with industry and stakeholders to ensure the cumulative effects from LNG development are assessed and managed effectively.
- Cumulative effects are the likely impacts from a reviewable industrial project, combined with the impacts from prior development, existing activities and reasonably foreseeable future development.
- Both project effects and cumulative effects (if any) are assessed for significance in an environmental assessment of an LNG facility or pipeline.
- The Environmental Assessment Office (EAO) is committed to working with other natural resource ministries on developing a consistent framework and tools to support the assessment and management of cumulative effects.

BACKGROUND:

- The BC Environmental Assessment Act provides for the ability of the Executive Director to assess for cumulative effects. In practice, EAO requires proponents to complete a cumulative effects assessment through its section 11 Order and Application Information Requirements.
- Proposed projects that require assessment under the Canadian Environmental Assessment Act, 2012 (coordinated or substituted process) must also complete a cumulative effects assessment.
- The Ministry of Forests, Lands and Natural Resource Operations is leading in the development of a Cumulative Effects Assessment Framework for BC.
- EAO participates in an interagency steering committee for the provincial Cumulative Effects Assessment Framework.
- The Province's Environmental Stewardship Initiative is another tool in which the Province works in collaboration with First Nations to assess and manage cumulative effects.
- In 2013, the Province funded a scientific study to help inform regulatory and policy development for future industrial activity in the Kitimat area. The study looked at cumulative effects of industrial air emissions, primarily sulphur and nitrogen oxides.

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- The Kitimat Airshed Study determined that with proper management, Kitimat's airshed can safely accommodate LNG and other new industrial growth, while still protecting human health and the environment.
- In December 2014, the Province funded an independent science-based study to better understand the potential cumulative impacts from industrial air emissions in Prince Rupert, building on information from the Kitimat Airshed Study.
- Canadian Ambient Air Quality Standards (CAAQS) were recently adopted for fine particulate matter (PM2.5) and ground-level ozone. CAAQS for NO2 and SO2 are under development but not expected to be finalized until late 2015 at the earliest.
- To bridge the gap until new national standards are available and to ensure that cumulative existing and proposed major developments are assessed using objectives that reflect the current state of science, interim ambient air quality objectives (IAAQOs) for NO2 and SO2 have been established at 100 parts per billion of NO2 and 75 parts per billion of SO2 as the daily 1-hour maximum.

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These objectives replace previous provincial and national objectives used in BC.

Contact: Cell Phone: s 22 Date:

Brian Hansen

March 3, 2015

MINISTRY OF NATURAL GAS DEVELOPMENT AND MINISTER RESPONSIBLE FOR HOUSING UPSTREAM DEVELOPMENT DIVISION ESTIMATES BRIEFING NOTE 2015/16

ISSUE: Carbon Capture and Sequestration

KEY MESSAGES:

- Carbon Capture and Storage (CCS) is an emissions mitigation measure
 with the potential to significantly reduce greenhouse gas (GHG)
 emissions from the natural gas industry and to address targets under the
 Greenhouse Gas Reduction Targets Act.
- Actions to promote CCS have been identified in the BC Natural Gas Strategy and include completing a regulatory framework and evaluating projects.
- The Ministry of Natural Gas Development has pursued CCS opportunities
 with industry and is working to develop a comprehensive regulatory
 policy framework that will provide certainty to industry, protect the public
 and the environment, and enable CCS projects to proceed.
- The Ministry initiated a public consultation process on a proposed regulatory policy framework and has worked with the BC Oil and Gas Commission (OGC) to update the policy based on feedback received.
- With appropriate regulations, CCS can be used in the near term to complement other emission reduction strategies such as improvements in energy efficiency, electrification, enhanced oil recovery and the development of renewable alternative energy sources.

BACKGROUND:

- CCS is the process of capturing carbon dioxide (CO₂) from an industrial source, transporting it (generally via pipeline) to a geological storage site where it is injected and permanently retained deep underground within the pore space of the rock.
- Sequestration technology is not new. There are currently 9 active acid-gas injection sites in British Columbia. Acid-gas is a combination of naturally occurring hydrogen sulphide and CO₂.
- CCS development is focusing on Northeast BC (NEBC) due to available
 infrastructure and a strong understanding of the regional geology. In NEBC, point
 sources of CO₂ from natural gas processing plants are located relatively close to
 prospective geological storage sites such as depleted gas reservoirs and deep
 saltwater-filled formations.
- BC has appropriate regulations in place to govern oil and gas sourced acid-gas injection, but enhancements are required for large-scale applications of CCS. The Ministry, in conjunction with the OGC, are developing a regulatory framework that

Contact:

Inés Piccinino

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s.22

Date:

May 1, 2015

- identifies gaps and will address site selection and approval processes, measuring, monitoring and verification, and long-term liability issues.
- Implementation of the framework will require significant amendments to the Petroleum and Natural Gas Act as well as potential changes to regulations under the Oil and Gas Activities Act.
- The Ministry conducted consultation with First Nations in NEBC on the CCS regulatory framework in Winter 2012. The Ministry led a broader consultation on the CCS regulatory framework including northeast communities, industry associations and the general public in Spring 2014.
- Under the New West Partnership Agreement with the Governments of Alberta and Saskatchewan, the Province of British Columbia has a Memorandum of Understanding for "Collaboration on Carbon Capture and Storage Technology and Policy." The Ministry contributed, as participants, to the Alberta CCS Regulatory Framework Assessment in 2011/12.
- The Ministry networks internationally on CCS, leveraging knowledge sharing through collaboration with organizations such as the Global CCS Institute and the Integrated CO₂ Network. The Ministry monitors CCS activity and research by international organizations such as the International Energy Agency based in France, and contributes to CCS regulatory policy reports.
- The Ministry has been working with Spectra Energy Inc. (Spectra) on a major proposed CCS project at its Fort Nelson gas plant - potentially one of the largest CCS projects in the world with a designed capacity of 2 million tonnes CO₂ per year:
- No advancements were made on the project in 2013 or 2014. In early 2015 Spectra
 completed long-term suspension of the project's well until the feasibility of the project
 improves.

s.13

Contact: Inés Piccinino Cell Phone: s.22

Date: May 1, 2015

MINISTRY OF NATURAL GAS DEVELOPMENT AND MINISTER RESPONSIBLE FOR HOUSING UPSTREAM DEVELOPMENT DIVISION ESTIMATES BRIEFING NOTE 2015/16

ISSUE: Greenhouse Gas (GHG) Emissions and the Upstream Natural

Gas Industry

KEY MESSAGES:

- Climate change is a global issue. Natural gas is the cleanest burning
 fossil fuel. By developing our natural gas industry and exporting liquefied
 natural gas, BC will help to reduce the use of coal and diesel fuels in Asia
 and contribute to global greenhouse gas emissions reductions.
- The Ministry of Natural Gas Development, the BC Oil and Gas Commission (OGC) and the Climate Action Secretariat (CAS) work collaboratively with the Canadian Association of Petroleum Producers (CAPP), pipeline companies, producers and processors to develop strategies to manage GHG emissions, while achieving the goals of environmental protection and economic growth.
- We continue to advance actions to address GHG emissions identified in the 2012 BC Natural Gas Strategy, which includes reducing flaring and promoting the use of carbon capture and storage (CCS) in BC by introduction of a regulatory framework.
- We have completed public consultation on a proposed CCS regulatory policy framework and will continue advancing CCS policy development.
- The Government of British Columbia set a goal to eliminate all routine flaring at wells and production facilities by 2016. We met that goal by 2010 – six years early.
- Provincial legislation requires natural gas to be conserved where possible, which limits the amount of methane that can be vented.
- The OGC has robust processes and regulations in place for the detection, measurement and assessment of fugitive methane leakage from oil and gas wells.
- Natural gas producers are also motivated to reduce emissions as they
 must pay the carbon tax on all fuel burned by the industry.

BACKGROUND:

 There are a number of potential areas along the natural gas production chain where GHG emission can occur. At the well, emissions arise from flaring, venting and equipment exhaust. Other sources include emissions from transportation, processing, transmission pipelines and distribution of gas.

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Date: February 26, 2015

- Emission management measures such as carbon capture and storage (CCS), enhanced oil recovery, electrification, and energy efficiency have been identified as viable emission reduction strategies.
- Electrification can provide significant potential for GHG emissions reduction by replacing gas-fired equipment (primarily compressors) with electric-powered equipment. BC Hydro and the natural gas industry continue to assess the opportunity, identifying constraints and finding solutions to enable maximum. electrification.
- Energy efficiency measures such as waste heat recovery and fuel gas efficiency from compressor drivers have the potential to improve the energy efficiency of the industry and reduce GHG emissions.
- The Ministry of Natural Gas Development and CAS developed a Best Achievable Techniques Economically Available Guideline for industry proponents. Use of these guidelines by industry will support emission reductions when used in conjunction with a GHG Management Plan, while ensuring projects remain economic.
- Environmental Assessment Certificates issued for the Fortune Creek Gas Plant and three proposed pipeline projects; the Coastal GasLink Pipeline project, the Westcoast Connector Gas Transmission pipeline and, the Prince Rupert Gas Transmission pipeline included certificate conditions requiring the proponents to:
 - develop a GHG management plan that includes adherence to the Ministry's guidance on Best Available Techniques Economically Achievable; and
 - o fulfill regulatory requirements to report on GHG emissions and planned sitespecific mitigations for emissions management.
- Requirements for liquefied natural gas facilities to meet an emissions intensity benchmark through flexible options which include purchasing offsets or contributing to a technology fund may lead to opportunities for emission reduction projects in the upstream.
- In 2013 Environment Canada began a process of drafting regulations for industrial GHG emissions under the Canadian Environmental Protection Act for the oil and natural gas sector. In December 2014 the Federal Government indicated it would not be advancing regulations in the sector at this time given the low price of oil.

Contact: Cell Phone: s 22

Inés Piccinino

Date:

February 26, 2015

MINISTRY OF NATURAL GAS DEVELOPMENT AND MINISTER RESPONSIBLE FOR HOUSING UPSTREAM DEVELOPMENT DIVISION ESTIMATES BRIEFING NOTE 2015/16

ISSUE: Air Quality Monitoring in the Northeast

KEY MESSAGES:

- A comprehensive air quality monitoring system will be established in the Dawson Creek/Fort St. John area.
- The system will be developed through the Northeast Air Monitoring Project which is a multi-year partnership between the Ministry of Environment, the BC Oil and Gas Commission (OGC), the Canadian Association of Petroleum Producers (CAPP), Spectra Energy and the Ministry of Natural Gas Development.
- The Project is working in collaboration with northeast communities and scientists to establish an air monitoring network that will monitor, assess and report out on air quality data, in response to concerns about the potential influence of ongoing oil and gas sector operations on air quality in the region.
- Three continuous monitoring stations have now been installed and are operational at Doig River, Farmington and Tomslake.

BACKGROUND:

- The Ministry of Environment (MOE) has been actively monitoring air quality in the Northeast since 1993 and local air quality information is readily available to the public online and by request from MOE.
- Short-term monitoring stations also rotate through NEBC communities including Hudson's Hope, Dawson Creek, Chetwynd and Tumbler Ridge to assess air pollution from a variety of sources. Air quality information from these sites is available through the regional MOE office in Prince George.
- In 2010, MOE and OGC conducted an air quality assessment study using the Mobile Air Monitoring Laboratory (MAML) in the Dawson Creek area. Intermittent monitoring occurred at Tomslake, Rolla, Groundbirch, Kelly Lake and Farmington.
- For the duration of the MAML monitoring, pollutant levels in these communities were well below thresholds that would pose a risk to the public health or environment.
- The Northeast Air Monitoring Project was announced in 2012 and is a proactive initiative to meet Government's goal for responsible resource development and protection of human health and the environment. While it is an initiative independent of the Human Health Risk Assessment being conducted by the B.C. Ministry of Health, establishing an air quality monitoring network is expected to help alleviate public concerns.

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Date:

February 24, 2015

- Phase 1 (June 2012 to March 2014) focused on establishing an initial set of monitoring stations, information assessment, and initial engagement with representatives of the local communities.
- During Phase 1, engagement was conducted through an interim Strategic Advisory Group (SAG) which in addition to government representatives contained members from the Peace River Regional District, Industry Representatives; NE Health Advisory Committee; Peace River Regional Cattlemen's Association, B.C. Grain Producers Association: Treaty 8 Tribal Association and a Citizen Representative.
- Site selection of priority locations for three continuous monitoring stations was made with input from a technical team of experts, SAG and the Canadian Association of Petroleum Producers. The monitoring station locations chosen were Doig River. Farmington and Tomslake. As of January 30, 2014 all three stations were operating.
- Phase 2 (2014/15) is focused on ongoing community engagement, characterizing air quality, developing governance options, and expanding air quality monitoring and reporting.
- Phase 2 of the Project is led by MOE with guidance from a Steering Committee and two working groups with members drawn from the partner agencies.
 - The Technical Advisory Group's purpose is to provide advice on the design. and operation of the air quality network and also includes technical air quality experts from academia and the federal government.
 - The Public Outreach Group's purpose is to provide advice on public communications and includes community members, many of whom participated on the Phase 1 SAG.
- Funding of \$160,000 for Phase 2 has been secured from the OGC's Science and Community Environmental Knowledge Fund (SCEK). The MOE is separately funding a core Fort St. John monitoring station which, under the SCEK agreement, is framed as an associated project. s.13,s.17 s.13,s.17
- Phase 3 (2015/16) would consider the new data generated from expanded monitoring, assessment and modelling to inform the structure of an ongoing Northeast Air Quality monitoring network and a governance model that is suited to the nature of the network and takes into account input received through the community engagement process.

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New pages being developed for the website BCAirQuality.ca will soon present a complete picture of the northeast B.C. air quality monitoring project.

Contact: Cell Phone: s 22 Date:

Inés Piccinino

February 24, 2015

MINISTRY OF NATURAL GAS DEVELOPMENT AND MINISTER RESPONSIBLE FOR HOUSING UPSTREAM DEVELOPMENT DIVISION ESTIMATES BRIEFING NOTE 2015/16

ISSUE: Gasoline Regulation and Prices

KEY MESSAGES:

- Gasoline prices across Canada vary due to a number of factors, including world oil prices, refinery and retail margins, as well as taxes.
- The only provinces where gasoline prices are regulated are Prince Edward Island, Newfoundland and Labrador, Québec, Nova Scotia, and New Brunswick.
- While the regulation of gasoline prices provides some price stability, research shows that it does not lead to lower prices for consumers.

BACKGROUND:

- Gasoline prices (year-to-date (YTD) to March 24, 2015), are lower than the same period of 2014 due to lower crude oil prices.
- In 2015 (YTD to March 24, 2015), Canadian gasoline prices averaged \$1.01 per litre, compared with \$1.29 per litre in the same period of 2014.
- Gasoline prices in major B.C. centres averaged \$1.05 per litre in early 2015 (YTD to March 25, 2015), compared with \$1.27 in the same period of 2014.
- Within BC, gasoline prices can vary from region to region due to transportation costs, competitive conditions, retail margins and taxes.
- Public concerns about price spikes before a long weekend cannot be proven empirically.
- Provincial governments have the authority to regulate retail gasoline prices, but most provinces and territories prefer to allow market forces to determine prices.
- Two studies conducted on behalf of the BC Provincial Government during the 1990s to review gasoline pricing in BC concluded that marketplace competition is preferable to direct government intervention in setting prices or enacting other regulatory controls.
- External studies have also concluded that regulation is not the solution for high gasoline prices.

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May 1, 2015

MINISTRY OF NATURAL GAS DEVELOPMENT AND MINISTER RESPONSIBLE FOR HOUSING UPSTREAM DEVELOPMENT DIVISION ESTIMATES BRIEFING NOTE 2015/16

ISSUE: Human Health Risk Assessment of Oil and Gas Development

KEY MESSAGES:

- We have strong policies and regulations in place and an excellent safety record in BC when it comes to oil and gas activity.
- To maintain the highest standards possible, the BC Government conducted a Northeast BC Oil and Gas Human Health Risk Assessment that would identify, explore and assess human health risks, including any dangers from chemical exposures.
- The three-phase study was led by the Ministry of Health (MOH), and involves the Ministry of Natural Gas Development (MNGD), Ministry of Environment (MOE), BC Oil and Gas Commission (OGC), Environmental Assessment Office, industry, First Nations, local government, and impacted communities.
- Phase 1, completed in June 2012 by the Fraser Basin Council, involved canvassing non-commercial stakeholders about their health concerns related to oil and gas activity in Northeastern BC.
- Phase 2, the human health risk assessment phase was released on March 26, 2015.
- The results from Phase 2 found that the risk to human health from emissions from oil and gas activities in the Northeast remains low.
- The data and information compiled will serve as a valuable baseline for monitoring the health effects of future development of natural gas and other resource activities in our region.
- Phase 2 also found that the existing regulatory framework is extensive and broadly protective of human health, and there is room for improvement in some selected areas.
- The Province has accepted the recommendations and has already taken action to address some of these issues through implementation of the Northeast Air Monitoring Project. In addition, the Northeast Water Strategy that was recently released by government will address three out of 14 recommendations through monitoring and testing.
- Phase 3 involves reporting back to the public and stakeholders on the findings. The first public information session was held in Fort St. John on March 31st.

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BACKGROUND:

- Public concerns over health and safety in the oil and gas sector have been expressed over a number of years in BC.
- On June 28, 2011, MOH agreed to conduct a health assessment of oil and gas sector operations in Northeast BC.
- The Assessment is led by the MOH, with a fixed contract budget of \$898,630 to March 31, 2014 (Fiscal Year 2012-13 allocated \$235,410; and Fiscal Year 2013-14 allocated \$663,220). In the Fiscal Year 2012-13, MNGD contributed \$24,843.75 and MOE contributed \$14,906.25.
- Potential human health hazards subject to review included gas extraction methods, emergency events such as well blowouts and pipeline breaks, chemicals in drilling waste, air quality issues from well venting, processing and land reclamation.
- OGC is responsible for regulatory oversight of the oil and gas sector while MOE is accountable for human health related to air and water and some oilfield waste issues. At MOH, the Emergency Management Unit is responsible for health emergency responses, while the Health Protection Branch deals with drinking water quality.

Phase 1 (Completed)

- The Province of British Columbia contracted the Fraser Basin Council to canvass the public, local governments. First Nations, and other groups and individuals to determine stakeholder perceptions of human health hazards and develop subject areas for inquiry and review.
- A report released on June 6, 2012 summarized the identified concerns.
- No attempt was made to link public perception and existing scientific data.

Phase 2 (Completed)

- Phase 2 of the project, undertaken by Intrinsik, included a detailed human health risk assessment (HHRA), a review of the regulatory framework and a recommendations report.
- Phase 2 began with a Screening Level Risk Assessment (SLRA) to identify the potential oil and gas related emission sources in the region that present the greatest potential risk to human health, and to provide a means of prioritizing scenarios for a quantitative assessment in the detailed HHRA. Based on the decision made within the SLRA, the HHRA evaluated the potential adverse health risks in relation to oil and gas activity in NEBC from continuous air emissions scenarios from gas processing plants and production facilities.
- Intrinsik conducted the detailed qualitative analysis for air emissions using widely accepted methods endorsed by regulatory organizations worldwide. It focussed on a list of representative chemicals that are known to be associated with the identified emission sources and have the potential to, at high enough concentrations, cause a number of the health effects.
- · Recommendations for improvement included: emergency planning; flaring, venting and fugitive emission management; hydraulic fracturing; information management; and environmental monitoring.

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Phase 3

- Phase 3 will report back to the public and stakeholders on the findings and any
 recommendations for improvement that may be appropriate. The first public
 information session was held in Fort St. John on Tuesday March 31st. Additional
 sessions will be scheduled in the following months.
- The MOH has created a webpage about the HHRA to keep the public up to date about progress on the project and to post the latest available reports.

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MINISTRY OF NATURAL GAS DEVELOPMENT AND MINISTER RESPONSIBLE FOR HOUSING **UPSTREAM DEVELOPMENT DIVISION ESTIMATES BRIEFING NOTE 2015/16**

ISSUE: National Energy Board (NEB) Regulatory Pipeline Hearings

KEY MESSAGES:

- Natural gas pipeline systems are important to BC. They currently transport BC natural gas to service local markets, Canadian markets, and U.S. markets.
- In Northeast BC (NEBC) several pipeline proposals are in various stages of planning and regulatory review that would carry natural gas to connect to traditional markets or to proposed pipelines to the BC coast for shipment to offshore markets.
- Pipelines that cross interprovincial or international borders are regulated by the National Energy Board (NEB).
- The Ministry of Natural Gas Development can participate as an intervener in NEB regulatory pipeline hearings to represent government interests.
- The ministry's 2014/15 2016/17 Service Plan commits to being engaged with the NEB on pipeline proposals that affect BC's access to natural gas markets and affect natural gas royalties.

BACKGROUND:

- The ministry monitors and evaluates NEB pipeline applications and prepares for, participates in and/or monitors NEB hearings. The ministry leads cross-government working groups and works with legal counsel to coordinate input into the hearing process as needed.
- Issues in a hearing can include but are not limited to:
 - the need for the pipeline project;
 - o environmental assessments:
 - economic feasibility of the project;
 - o potential commercial impacts;
 - tolling costs; and
 - standards for determining the recovery of costs.
- Commercial issues can affect BC's natural gas royalties.

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- In 2014, the ministry intervened in the NEB hearing for the proposed North Montney Pipeline Project (NMPP).
 - o The NMPP is strategic to the development of a liquefied natural gas (LNG) industry in BC, as it will be able to provide natural gas feedstock to both the proposed Prince Rupert Gas Transmission pipeline project and the proposed TransCanada Coastal GasLink pipeline.
 - o The proposed pipeline will connect to the existing NGTL Groundbirch Mainline, 35 kilometers (km) southwest of Fort St. John and end 187 km Northwest of Fort St. John. It will include 306 km of up to 48 inch diameter pipe and related components (see attachment 1 Map).
 - The NMPP has the potential to connect BC's upstream natural gas resources to over 40MTPA (5.7Bcf/day) of proposed LNG production and generate approximately \$750 million per year in incremental natural gas royalties.
 - o Benefits associated with constructing the NMPP include estimates of 4,000 jobs during construction, \$135 million in provincial tax revenue, and \$154,000 in municipal tax revenue (not counting property tax). During operations it will pay approximately \$8 million in property taxes each year.
 - On April 15, the NEB issued its report on NGTL's application for the NMPP. The report includes a recommendation to Governor in Council (GinC) regarding issuing a Certificate of Public Convenience and Necessity (Certificate) and a decision on the toll structure (attachment 2 NMPP report summary). GinC generally has 3 months to make a decision on issuing a Certificate.
- The ministry intervened in the Alliance Pipeline application for new services and related tolls and tariffs for transporting natural gas to the Chicago market. The ministry submitted information requests and presented a final oral argument at the NEB in Calgary on April 16, 2015 to represent BC interests. The NEB will issue its decision within 12 weeks of the final oral argument.
- In 2015, the ministry anticipates intervening in the proposed TransCanada Pipeline Merrick Pipeline project (Merrick).
 - Merrick will be another strategic pipeline with a potential to connect other proposed LNG projects.
 - Merrick will connect approximately 2 km from the west end of the existing Groundbirch Mainline just west of Dawson Creek, to a compressor station near Summit Lake, just north of Prince George. NGTL will own and operate the 255 km corridor. Pipeline diameter and final routing will be determined through 2015.
- The ministry also monitors and provides comment on NEB regulatory and policy development.

ATTACHMENTS:

- 1. Maps of the proposed North Montney Pipeline Project and Merrick Pipeline Project
- 2. Bullets on the NMPP decision

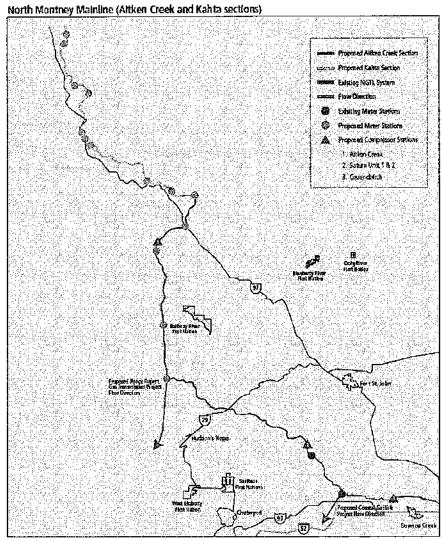
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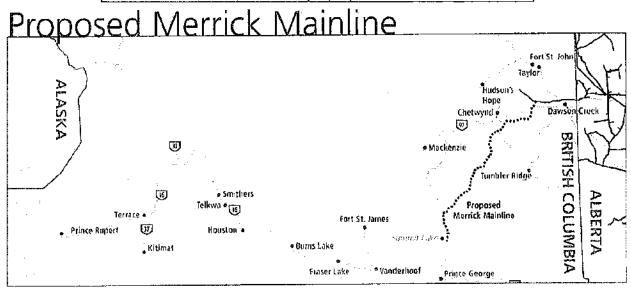
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Attachment 1





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Attachment 2

NMPP Facilities Certificate

- The majority of the Board recommends that a Certificate be issued for the construction and operation of the Project's pipeline and related facilities. The Board has set out terms and conditions to which the Certificate would be subject if the GinC were to direct the Board to issue the Certificate. The Board determined that with the 45 conditions and implementation of NGTL's environmental protection procedures and mitigation, the project is not likely to cause significant environmental effects. The conditions include pipeline integrity, the protection of the environment, and matters of public and aboriginal consultation.
- The Board's conditions also include specific measures to consider First Nation interest in the Peace Moberly Tract (PMT) and to eliminate or minimize to the greatest extent possible the Project's potential effects within the PMT. NGTL will be required to submit a protection plan, a consultation plan with West Moberly and Saulteau and additional reporting requirements on success of mitigation measures.
- The Board's recommendations included comments to the Province and to the Oil and Gas Commission:
 - o "The Board encourages the Province of BC to seek continuous improvements to these processes, in response to the evolving demands and interests associated with the assessment and management of cumulative effects."
 - o "The Board encourages BCOGC to continue developing the Area Based Analysis (ABA)program and to expedite its implementation."
- Additionally of note: with respect to the request from MFLNRO and BCOGC to re-route around the Pine River Dunes feature, the Board is satisfied with the mitigation and reclamation plan proposed by NGTL.
- Board member Parrish dissented in part from the majority recommendation. Parrish recommended that the federal cabinet approve the Kahta to Mackie Creek portion of the pipeline but deny the Mackie Creek to Saturn segment.
- Parrish concerns for this segment are due to it crossing the PMT and its special significance to First Nations who have been seeking to have it protected from encroaching industrial development. Both Saulteau (SFN)and West Moberly First Nations (WMFN) opposed a project route crossing the PMT.
- Parish also recommended BC, SFN and WMFN commit to expedited timelines for the conclusion of negotiations about the protection of the PMT.

Implications

- Subject to GinC approval pipeline construction can proceed as is scheduled to begin in the third quarter of 2015.
- The Province is already intends to implement a cumulative effects assessment framework aligned with OGC ABA program and in consultation with First Nations.
- Considering member Parrish's comments First Nations may be encouraged to pursue formal protection of the PMT.

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Tolls

- The board denied NGTL's plan to roll the cost of the new facilities into the existing rate base for the life of the project, finding that would result in excessive levels of cross-subsidization of the project by existing NGTL shippers.
- The Board made a decision to allow the use of NGTL's current tolling methodology only during a Transition Period from the time the pipeline comes into service in 2016 and approximately 2019 when gas is first delivered to the Prince Rupert Transmission Line. After the Transition Period, NGTL will have the option of implementing stand-alone tolling on the Project or applying to the Board for a revised tolling methodology.

Implications

- In the hearing NGTL and Progress said that 98% of the time gas would flow from the progress production area to the LNG plant on the coast. It is projected that for 2% of the time Progress will have needs to access NGTL for operational flexibility.
- Analysis in the hearing demonstrated that a stand-alone toll was estimated at \$0.25/mcf vs NGTL rolled-in toll projections of \$0.325/Mcf.

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