Date: November 1, 2018 CLIFF: 105452

#### MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable John Horgan, Premier of British Columbia

II ISSUE: An overview of FortisBC's current and planned activities

#### III BACKGROUND:

In 2004, Newfoundland-based Fortis Inc., the largest investor-owned distribution utility in Canada, acquired all the distribution, transmission and generation assets of the West Kootenay Power and Light Company and renamed it FortisBC Inc. In 2007, Fortis Inc. purchased Terasen Inc., which included the Terasen Gas group of companies, from Houston-based Kinder Morgan Inc. In July 2010, Terasen Inc. and FortisBC Inc. started sharing the same leadership team, and in March 2011, the Terasen group of companies began operating under the FortisBC brand name. Today, the natural gas and electricity businesses continue to operate as before, as separate legal entities, while sharing the name FortisBC.

The FortisBC group of companies (collectively FortisBC) provides electricity, natural gas, and thermal energy services to more than 1.1 million homes, businesses and transportation customers in 135 communities in BC. FortisBC Inc (electricity) has 7,200 kilometres (km) of electricity transmission and distribution power lines and four hydroelectric generating plants in the Okanagan and Kootenays regions. FortisBC Energy Inc. (natural gas) owns and operates 48,700 km of natural gas transmission and distribution pipelines throughout BC as well as two liquefied natural gas (LNG) storage facilities at Tilbury Island in Delta, and Mt. Hayes near Ladysmith. In addition, FortisBC Holdings Inc. and FortisBC Midstream Inc. hold additional investments in electricity and gas infrastructure within the province.

FortisBC delivers approximately 21% of the total energy consumed in BC. Although residential customers comprise 90% of its customer base, annual demand from the residential sector is only 35% of the total energy delivered. Conversely, industrial customers count for less than 1% of FortisBC's customer base but account for nearly 40% of total annual gas demand. Commercial customers represent 9% of FortisBC's customer base and consume just over a quarter of the total energy delivered.

#### IV DISCUSSION:

#### **Enbridge Update**

On October 9, 2018 Enbridge experienced a natural gas pipeline rupture near Prince George. When a pipeline is restricted, such as the case with Enbridge, first priority is given to those customers who hold firm service commitments. Firm service, also called uninterruptible service, is service that is intended to be available at all times. Services to homes and small businesses are usually firm. Some businesses that cannot

afford interruptions, such as hospitals, also have firm service and short-term back-up fuel sources in the event of interruption.

The rupture occurred on a 36-inch natural gas transmission pipeline, causing the natural gas being transported to ignite. The fire on the pipeline was extinguished, and the line was isolated and fully depressurized. As a precaution, an adjacent 30-inch natural gas transmission pipeline owned and operated by Enbridge was also depressurized.

No FortisBC infrastructure was affected; however, these transmission pipelines are the two main lines through which gas is moved onto FortisBC's gas system and serves 70% of FortisBC customers. Without gas flowing into the system, there is a risk of loss of service to a significant number of customers south of Prince George.

On the evening of October 10, FortisBC received notification that Enbridge had National Energy Board (NEB) approval to restart its 30-inch natural gas line, and had begun the process to return it to service. Due to gas supply constraints, the entire province will be limited to 50% to 80% of normal levels. This means that the natural gas system will be challenged in times of high demand throughout the winter.

FortisBC is actively working to make more gas available including working with TransCanada to maximize output of the Southern Crossing pipeline that feeds into the Interior from Alberta.

On October 31, 2018, Enbridge announced it had completed repairs to its 36-pipeline, about two weeks ahead of schedule. The Minister and Deputy Minister of Energy, Mines and Petroleum Resources (EMPR) have written to federal Minister Sohi and Enbridge, respectively, urging safe and timely resumption of gas deliveries to avoid the public safety and economic implications of natural gas shortages over the winter months.

#### Climate Action - Clean Growth Pathway

FortisBC has emphasized that its natural gas utility will continue to be a critical component of a decarbonized energy system in BC. Its natural gas infrastructure is a multi-billion dollar asset that provides reliable, safe, affordable and high-quality energy services to British Columbians. This infrastructure is designed to serve difficult-to-decarbonize end-uses such as building and industrial heating and heavy-duty freight. Additionally, BC's gas infrastructure is equipped to handle decarbonization pathways that use drop-in fuels such as Renewable Natural Gas (RNG) and hydrogen, along with other key mitigation options like carbon capture and storage.

FortisBC's submission to the Clean Growth Strategy calls for four significant shifts in our energy systems by 2030 to foster market transformation:

- Making significant investments in both low and zero carbon vehicles and infrastructure in the transportation sector;
- Transitioning from higher carbon energy sources to lower carbon sources by ramping up RNG deployment;
- Positioning BC as a vital domestic and international LNG provider to lower greenhouse gas (GHG) emissions; and

 Increasing our investment in energy efficiency in the built environment and developing innovative energy projects BC's communities.

#### 1) Investments in Transportation

#### i. Natural Gas in Transportation

As a natural gas service provider, FortisBC Energy is striving to align its business with evolving climate action policies, which are likely to see, among other actions, a shift away from fossil fuels toward greater use of renewables. As such, FortisBC has been developing new lines of business, including compressed natural gas (CNG) and LNG in transportation, along with RNG, as well as trying to expand its natural gas customer base in order to respond to changes in BC's marketplace.

In meeting these goals, FortisBC has been proactive in accessing initiatives under the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR). FortisBC's programs have contributed greatly to the overall accomplishments under this regulation. To date, the GGRR has resulted in commitments for more than 749 natural gas vehicles and 7 seven marine vessels. The adoption of natural gas for these vessels and vehicles is expected to result in the reduction of over 71,000 tonnes of CO2e emissions annually. In addition, FortisBC has completed construction on a total of 12 fueling stations under the GGRR: seven CNG stations; and 5 LNG stations.

#### ii. Electric Vehicle Charging Infrastructure Initiatives

FortisBC, in partnership with the Community Energy Association, is participating in the Accelerate Kootenays project, a two-year, \$1.5 million multi-stakeholder initiative that includes the deployment of a 13 Direct Current Fast Charger (DCFC) network in the Kootenays. With access to provincial, federal and other partner funding opportunities, FortisBC plans to invest \$0.2 million to construct, own and operate the five DCFC stations.

On December 22, 2017, FortisBC submitted an application to the Commission for approval of rate design and rates for electric vehicle (EV) charging which will, in part, cover the costs of the installation and ownership of five DCFC stations located along the Highway 3 corridor in Greenwood, Christina Lake, Castlegar, Salmo and Creston. On January 12, 2018, the BCUC approved an interim time-based rate of \$9.00 per 30 minute period for charging at FortisBC owned DCFC stations. The BCUC deferred a decision on a permanent rate structure pending the completion of an inquiry it has initiated to explore questions around the regulation of EV charging services in BC.

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#### iii. The BC Low Carbon Fuel Standard

The *Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act* (Act) and the Renewable and Low Carbon Fuel Requirements Regulation (Regulation) (together the BC Low Carbon Fuel Standard, or BC-LCFS), support the Province's climate action objectives by reducing BC's reliance on non-renewable fuels, reducing the environmental impact of transportation fuels, and contributing to a new low-carbon economy. Under the program, participants may supply more low carbon fuels, acquire credits through a Part 3 Agreement, and/or trade credits with other suppliers.

FortisBC is interested in earning credits for lower carbon LNG used in trans-pacific shipping under the BC-LCFS. The program does not currently apply to marine bunker fuel because it is not used in substitution for diesel. A fuel can generate credits only if it replaces diesel which is not the case for High Sulfur Fuel or Marine Gas Oil, the two most common marine fuels used in shipping. EMPR is currently consulting on approaches that would provide incentives to reduce the carbon intensity of those fuels, and therefore make additional compliance credits available to the credit market.

FortisBC has been an active participant in the consultation discussion, and EMPR will continue to work with the utility as the program evolves.

#### 2) Transitioning to Renewable Natural Gas

FortisBC's voluntary RNG program, launched in 2011, gives customers the option of designating 5%, 10%, 25%, 50% or 100% of their natural gas use as RNG. The acquisition of RNG is a notional concept. Customers do not actually receive the RNG molecules. Instead, FortisBC injects an equivalent amount of RNG into the FortisBC distribution system to displace fossil fuel natural gas that otherwise would have been brought into the system. Customers also receive a credit on the BC carbon tax on their bill. There is no need to upgrade appliances or do anything differently because RNG has the same properties as conventional natural gas, but is GHG-neutral.

Currently, the RNG program has over 9,100 customers, a mix of both residential and commercial customers including the University of BC, Thrifty Foods and Lush Manufacturing, and demand is rising. For the average household using 90 gigajoules of natural gas every year, the cost for signing up for a 5% blended RNG is \$2.63 extra per month.

BC is the only jurisdiction in North America to have a utility program for RNG. Gas utilities have a large role in supporting BC's transition to lower carbon fuels. In general terms, EMPR supports the adoption and expansion of RNG programs as part of the Province's overall efforts to reduce GHGs. Amendments to GGRR, made in 2017, have already enabled FortisBC and other natural gas utilities to establish a Renewable Portfolio Allowance. Gas utilities may acquire RNG supplies at a maximum price of \$30/gigajoule (GJ), up to a total annual volume that is not to exceed 5% of the total volume of natural gas sold in 2015.

Amendments also enable FortisBC to establish programs to incent the use of RNG in the heavy-duty vehicle sector. FortisBC has initiated a Request for Expressions of Interest and received an overwhelming response from potential suppliers in BC, across Canada and from the United States.

#### 3) Federal/Provincial/Industry Collaboration at the Port of Vancouver

The Port of Vancouver (Port) has been working on an emissions reduction strategy and has been considering natural gas for applications that have no low carbon options currently available, such as for large marine vessels. As part of its low carbon drayage study, for drayage trucks at the Port itself, it is actively promoting electric and hydrogen fuel cell options. However, the electric options will most likely come with some form of fossil fuel range extender (hybrids), of which one is the natural gas option.

There is also significant market opportunity to provide lower carbon LNG for marine bunkering services in Vancouver. It is estimated that the international marine shipping industry contributes between 2-3% of global GHG emissions each year. Shipping companies are now facing higher standards for emission controls under the International Marine Organization's (IMO's) global sulphur limit which will come into force in 2020 (the IMO is the regulatory authority for international shipping). This will significantly reduce the amount of sulphur oxides emanating from ships and should have major health and environmental benefits for populations living close to ports. It is expected that many shipping companies will convert their vessels from higher-carbon fuels to LNG to meet compliance.

There is a significant market opportunity to provide BC LNG for marine bunkering services in Vancouver. EMPR is working with the Port, colleagues across the Provincial government, the marine sector, the federal government and FortisBC to spearhead efforts to position the Port as a premier global LNG bunkering destination. The Port is ideally positioned to become one of the few LNG bunkering stations on the west coast, and FortisBC's Tilbury LNG facility is well-situated to deliver LNG to vessels in the Port. Timing is critical in capitalizing on this opportunity, as the Port of Tacoma is advancing its own plans for LNG marine bunkering.

Success will require active participation by the federal government, which has jurisdiction over the Port, as well as the legislative and regulatory framework needed to accelerate/implement LNG bunkering facilities at the Port. At a provincial level, the Ministry of Transportation and Infrastructure is the lead liaison with the federal government on all matters relating to the Port.

#### 4) Resource Planning

#### i. Demand Side Management

FortisBC supports the effort to reduce GHG emissions and customer choice has played a prominent role in developing innovative energy offerings to provide customers with more efficient and cleaner energy options. FortisBC's Conservation and Energy Management programs for use in buildings and industry promote energy efficiency, conservation behaviour, GHG reduction, and energy education.

FortisBC has been delivering a broad portfolio of cost-effective Demand Side Management (DSM) measures that address the expectations of both natural gas and electric customers while meeting the requirements for public utilities to pursue cost-effective DSM. FortisBC's DSM programming has provided programs covering a variety of areas related to natural gas, including: residential; low income; commercial; conservation education and outreach; industrial; and innovative technologies.

In addition, FortisBC and other utilities have been actively developing low carbon thermal energy systems for nearly a decade and FortisBC's partnership with the City of Vancouver will support mutual programs, goals and objectives for reducing emissions and promoting renewable energy supply.

#### ii. Long Term Resource Planning

On December 14, 2017, FortisBC filed its 2017 Long Term Gas Resource Plan for acceptance by the Commission. FortisBC's 2017 Plan presents its long-term view of the demand-side and supply-side resources identified to meet expected future natural gas demand and reliability requirements taking into consideration the cost to customers over the 20-year planning horizon (2017-2036).

A wide range of factors influence the long-term analysis and planning decisions. The North American natural gas market remains in a low commodity pricing environment which is expected to continue for several years to come.

Over the past several years in North America, growth in industrial demand, specifically from the petrochemical sectors and United States gas exports to Mexico, has been increasing demand for natural gas. The market is also seeing increased natural gas demand from the power sector due to more switching from coal to natural gas electricity production, as well as from the retirement of coal plants and low commodity costs have improved the price competitiveness of using natural gas over electricity on an operating cost basis.

#### Investment Update

#### 1) Eagle Mountain Pipeline to Serve Woodfibre LNG

FortisBC is meeting weekly with Woodfibre LNG and EMPR to work through a variety of issues and engineering design associated with Eagle Mountain Pipeline. Currently discussions include the variable rate structure, compressor station locations, pipeline routing and acceptance from Tsleil-Waututh Nation, Impact Benefits Agreements with First Nations, BC Hydro Right of Way access, and completion of service agreements.

Woodfibre has recently approved and is releasing funds for the next quarter's work plan, an important milestone, and both parties are on track to have the Transportation Services Agreement and Construction Security Agreement ready for execution by November 30, 2018.

#### 2) Tilbury Pacific

The Tilbury Pacific project (also known as the WesPac Tilbury Marine Jetty) has been proposed by WesPac Midstream-Vancouver LLC and is adjacent to FortisBC's Tilbury LNG Plant. The project includes the berthing and transferring of LNG to marine barges and carriers for delivery to local fuel markets and offshore export markets. The supply of LNG will come via a pipeline from the existing FortisBC LNG plant.

The project submitted a draft of its application for an Environmental Assessment Certificate on October 16, 2018. The application is currently being reviewed by the BC Environmental Assessment Office for completeness, a process that will be concluded within 30 calendar days. Once the application meets the requirements laid out in the Application Information Requirements, it can be officially submitted for consideration.

#### V CONCLUSION:

The Province continues to work closely with FortisBC and appreciates their continued investments and the significant role that they play in the province's energy system.

The Province is engaged with Enbridge, the federal government and the NEB to support restoration of natural gas supply to Fortis and its customers.

EMPR staff are working with FortisBC, industry players, and other areas of Government to promote fuel switching from higher GHG intensive fossil fuels to natural gas where electrification and renewable energy are not feasible.

FortisBC is likely to request that government continue to provide regulatory certainty for its renewable natural gas program and to support its initiatives with the Port of Vancouver. The GGRR remains available as a tool for implementing policies as the new energy roadmap and clean growth strategy are developed.

#### Appendices:

- 1. Fortis meeting attendee biographies
- 2. Fortis Proposed agenda

DRAFTED BY: APPROVED BY:

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Date: November 15, 2018 Cliff No.: 105526

#### MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

#### BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable John Horgan, Premier of British Columbia

II ISSUE: Zero-emission vehicle announcement for November 2018

#### III BACKGROUND:

Transportation accounts for 39 percent (%) of greenhouse gas (GHG) emissions in BC. To meet our legislated targets under CleanBC will require switching transportation to electricity and hydrogen wherever possible, with any remaining liquid transportation fuels switching to the lowest carbon content. Benefits of this transition in the market include: lower transportation fuel bills for British Columbians; using made-in-BC electricity, hydrogen and renewable fuels; economic growth and high-paying jobs in clean technology and fuels; and new markets for BC minerals.

The Clean Energy Vehicle (CEV) Program has been in operation since December 2011, with an initial target of zero-emission vehicle (ZEV) sales reaching 5% of all light-duty vehicle (LDV) sales by 2020. To-date, the CEV Program's strategy has focused on stimulating market demand through investments totalling over \$84 million in: vehicle incentives to increase affordability across all vehicle classes (light-duty, trucks, buses, port and airport equipment); electric charging and hydrogen fuelling infrastructure; targeted support for fleet adoption; public education and awareness; and research, training and economic development programs. BC currently has the highest rate of CEV adoption, at 4% of new light-duty vehicle sales, and one of the largest charging and hydrogen fuelling infrastructure networks in Canada.

#### IV DISCUSSION:

The Ministry of Energy, Mines and Petroleum Resources' (EMPR) Clean Transportation Strategy proposed under CleanBC is designed to deliver over half of the economy-wide emissions reductions to meet the 2030 targets – primarily through the Renewable and Low Carbon Fuel and new renewable fuel production measures, and secondarily through the Zero-Emission Vehicle measures.

Two measures are being announced prior to the launch of the CleanBC strategy:

- 1. a Zero-Emission Vehicle Availability Standard (ZEV Standard), and
- 2. a top-up of \$20 million this fiscal to the existing CEV Program to continue vehicle incentives to April 2019 when the expanded CEV Program can be launched.

Both measures were part of the CleanBC public consultation process conducted over the summer of 2018.

#### **Zero-Emission Vehicle Availability Standard (ZEV Standard)**

The Province will introduce legislation in spring 2019 to set phased-in targets for the sale of ZEVs such that ZEVs will reach 10% of LDV sales by 2025, 30% by 2030, and 100% by 2040. Automakers will be able to meet the targets through either direct sales of ZEVs into the BC

market, or through alternative compliance mechanisms such as credit-trading with other automakers who exceed the targets. Following the announcement, EMPR will engage with automakers, dealers, and other stakeholders to inform the final design of the ZEV Standard. This will allow EMPR to build off of the models used in Quebec and the 15 U.S. states who have ZEV mandates in place, while adopting lessons learned from the implementation of those mandates.

#### Providing an additional \$20M to the CEV Program for vehicle incentives

EMPR will deploy the additional \$20 million in funding to keep the current point-of-sale vehicle incentive program running through to the end of March 2019, after which a new and expanded CEV Program can be launched. This is in addition to the \$27 million provided through Budget 2017, and the \$10 million provided in the September 2018 contingencies of which there is approximately \$3.8 million in funds remaining (expected to be depleted by January 2019 at current uptake rates). This funding will support the purchase of approximately 4,800 new zero-emission vehicles in BC delivering approximately 288,000 tonnes of GHG reductions over a 15-year period. This will also support market continuity and maintain momentum for CEV adoption in BC between the launch of CleanBC and the implementation of the expanded CEV Program as part of Budget 2019.

#### Stakeholder reactions

In the summer 2018 public consultation on the CleanBC, there was high public interest in the transportation proposals - 70% of online comments and 60% of individual submissions were related to transportation. On vehicle incentives, there was broad support across all stakeholders (public, local governments, industry, non-government organizations, etc.) for continuing vehicle incentives. The announcement of the \$20 million in funding for continued vehicle incentives might, however, raise questions on the Province's plans to expand the CEV Program beyond March 2019, particularly on measures that support increased access to ZEVs for lower-and-middle-income earners.

On a ZEV Standard, the general public was highly supportive, with some asking for higher targets sooner, however there were divergent views among other stakeholders. These stakeholders' varying level of support is presented in Table 1 below.

**Table 1: ZEV Standard Stakeholder Positions** 

Stakeholders strongly in	Supportive Stakeholders	Stakeholders not in
favour		favour
Local governments	Infrastructure providers	Auto dealers
	(electric and hydrogen)	
Environmental and non-	Canadian Hydrogen Fuel	Traditional automakers*
government organizations	Cell Association	
(e.g. Clean Energy Canada;		
Fraser Basin Council)		
Electric Vehicle Owner		Traditional fuel suppliers
Associations		
Tesla		

<sup>\*</sup> Since the time of the consultations, it is worth noting that two automakers have come out publicly in support of ZEV mandates in North America (General Motors and Honda).

Organizations who are opposed to a ZEV Standard cite a preference for greater government investments in demand-side measures, concern over picking technology winners (electric and hydrogen fuel cell vehicles in this case), and preference for harmonization across the country. Traditional automakers and dealers are generally opposed to ZEV mandates as sales of ZEVs preclude sales of other, more profitable fossil fuel-powered vehicles. Because ZEVs are newer technology, automakers are still trying to recover their development costs, meaning they make less of a profit on each sale. Dealers also make less of a profit, as automakers provide significantly higher financial bonuses to dealers who sell higher value pick-up trucks and crossover / SUVs, while limiting the margin they can claim on ZEVs.

Ministry staff have heard anecdotally from automaker representatives that a ZEV mandate is needed in the province to help them argue for greater numbers and choice of vehicles from their head offices. In addition, Ministry staff have heard from other jurisdictions with ZEV mandates that, once a jurisdiction announces it will proceed with a regulatory requirement, automakers will work to comply and rarely come out in public opposition so as not to brand themselves publicly as non-innovative or anti-environmental.

#### Key messages

**Affordability:** The current CEV Program makes ZEVs more affordable for British Columbians by reducing the up-front purchase price. The eligibility price cap of \$77,000 helps ensure that incentives are directed towards affordable ZEVs. Further measures to increase affordable access to ZEVs will be announced in CleanBC. Since 2016, sales of ZEVs prices below this cap have increased by almost 600% in BC, while sales of luxury ZEVs have increased by approximately 60%.

Choice for Consumers: A ZEV Standard is expected to encourage automakers to make more ZEVs available in more affordable price ranges across a wider range of vehicle types. This will increase ZEV consumer choices for British Columbians. Currently, some automakers only allocate their ZEV models to jurisdictions with mandates, and a recent study completed by Clean Energy Canada of dealers across BC indicated only 40% had ZEVs on their lots despite there being high consumer demand.

Ensuring a balanced approach: The ZEV Standard is combined with CEV Program investments, ensuring a balanced approach to increase ZEV adoption in BC. The CEV Program makes the necessary investments in awareness, affordability, infrastructure, training and economic development to help build a robust market. The ZEV Standard ensures increased ZEV availability of supply for British Columbians, and provides certainty on reaching the CleanBC targets.

**Impacts on Dealers:** A ZEV Availability Standard is expected to result in automakers making it more profitable for dealers to sell ZEVs, compared to their limited margins now. In addition, the proposed CEV Program investment measures are intended to support consumer demand for ZEVs and address some of the automaker and dealer concerns. The auto industry will need to adjust its business and service offerings over the longer- term to respond to reduced revenue from servicing ZEVs (this is an industry-wide issue as the vehicle industry globally transitions to ZEVs).

#### V CONCLUSION:

- The Province is announcing a ZEV Standard, along with an additional \$20 million in funding for the CEV Program point-of-sale vehicle incentives. The upcoming CleanBC strategy will include a comprehensive plan to further enable a rapid transition to zero-emission vehicles and low carbon fuels in the transportation sector.
- The Province is taking a balanced approach, addressing consumer demand and supply barriers, by continuing the CEV Program and implementing a ZEV Availability Standard.
- In finalizing the ZEV Standard, the Province will work with stakeholders to build on the lessons learned from other jurisdictions.

**DRAFTED BY:** 

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**APPROVED BY:** 

Dan Green, ED, AED  $\sqrt{}$ Les MacLaren, ADM, EAED  $\sqrt{}$ Dave Nikolejsin, DM  $\sqrt{}$ 

## MINISTRY OF CHILDREN AND FAMILY DEVELOPMENT DECISION NOTE

**DATE:** September 24, 2018 **DATE OF PREVIOUS NOTE (if applicable):** 

CLIFF#: 239302 PREVIOUS CLIFF # (if applicable):

PREPARED FOR: Honourable Katrine Conroy, Minister of Children and Family Development &

Honourable Katrina Chen, Minister of State for Child Care

**ISSUE:** Universal Child Care Prototype Sites Update and Communications Plan (Updated)

#### **BACKGROUND:**

Through the Province's Early Learning and Child Care Agreement (ELCC) with the federal government, the Province is investing \$60 million to convert child care spaces into low-cost, \$10/day spaces at existing child care facilities across BC.

Over an 18-month period, starting in fall 2018, these new Universal Child Care Prototype Sites will help test funding and operational models required to move British Columbia toward a universal child care system.

Through an Expression of Interest, 318 applications were received by the July 9 deadline, representing over 10,000 child care spaces. Applications were adjudicated by Ministry staff and reviewed by an internal cross ministry committee to identify and recommend a group of successful applicants. The final group of selected prototype sites were then taken to an external review committee comprised of child care experts and stakeholders from across BC and Canada for final consideration and endorsement on August 20.

The result is 53 sites reflecting the diversity of BC's geography, license types, organization and business models, and that accomplish the priorities outlined in the ELCC Agreement. These sites operate 2,464 licensed child care spaces, significantly more than the 1,800 spaces that made up the original target.

The following tables provide a breakdown of the sites selected and how they meet the program criteria.

# of Spaces per License Type	# of Spaces	% of Total
Group Spaces - Under 36 Months	760	31%
Group Spaces 30 Months – School Age	990	40%
Preschool	132	5%
Group Spaces – School Age	446	18%
Group Spaces – Multi-Age	84	3%
In Home Multi-Age	24	1%
Family	28	1%

Combined, the number 0-5 spaces (1,750) alone nearly surpass the target and will make up over 70% of all funded spaces. Also, it should be noted that with the exception of preschool and school age spaces, infants/toddlers can be cared for under all other license types, thereby further increasing the number of 0-5 spaces. The number of school age spaces is higher than anticipated; however, all sites offer spaces children 0-5. The Federal Government has confirmed their approval for the results.

# of Spaces per Health Authority	# of Spaces	% of Total
Fraser Health	610	25%
Interior Health	763	31%
Island Health	450	18%
Northern Health	197	8%
Vancouver Coastal Health	444	18%

The selection process sought to balance the number and percentage of prototype site spaces with the percentage of CCOF funded spaces by health authority. However, in order to appropriate weigh the priorities within the ELCC Agreement, some regions were over represented and others under represented. Both the Northern and Interior health authorities are over represented to ensure sufficient numbers of rural sites and due to the high number of quality applications from these two regions.

# of Spaces Offering Specific Services	# of Spaces	% of Total selected
Indigenous Programming	1,462	59%
Programs for Families New to Canada	975	40%
Provide care to French speaking families	1,531	62%
Service to Young Families	1,880	76%
Rural	646	26%
Inclusive Settings/Policies	1,814	74%
Extended Hours (Past 6:00PM, weekends)	60	2%

By nearly all criteria, the spaces in selected prototype sites exceed the priorities relative to the percentage of all eligible applications.

Please see appendix A for a list of all 53 prototype sites by Health Authority.

#### **DISCUSSION:**

With the selection process complete, the Ministry will begin working with organizations/owners of selected prototype sites to enter into contracts to fund their operations — with the exception of \$10/day or \$200/per month, per FTE — until March 2020. The notification of applicants and the contract negotiation process is expected to begin the week of October 1, 2018, with the selected prototype sites asked to sign a non-disclosure agreement for the duration of the negotiating period. The Ministry will provide prototype sites opportunities to ask questions and clarify the contractual terms through conference calls scheduled in early October. Program staff will work to finalize as many contracts as possible by October 20 — which is an operational cut-off date for prototype sites to be able to transition from the CCOF to the new contract and launch on November 1. Sites that are not in contract by October 20 will defer launch until December 1.

The uncertainty of the negotiating process creates some communication challenges for purposes of planning a public announcement. Key considerations are captured in the options below.

### **OPTIONS:**

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DECISION	and S	SIGN	<b>ATURE</b>
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**DATE SIGNED** 

Honourable Katrine Conroy Minister of Children and Family Development

#### Attachments:

A. List of Universal Child Care Prototype Sites

Contact	Alternate Contact	Prepared by:
Assistant Deputy Minister:	for content:	
Christine Massey	Jonathan Barry	Andy Davidson
Early years and Inclusion	Executive Director, Child Care	Director, Child Care Capital
	Capital, Community, and ECE	and Community Services
	Registry Services	
(778) 698-7121	(778) 698-5313	250-818-2731



## Meeting with Michael Bloomfield Victoria

## **Briefing Note**

#### What:

Meeting with Michael Bloomfield, Executive Director Harmony Foundation of Canada, regarding concerns for caribou

#### Who:

Premier John Horgan

Michael Bloomfield, Executive Director Harmony Foundation of Canada

### **Executive Summary:**

In 2017, in recognition of the perilous situation caribou are in across much of the province, the government initiated a Provincial Caribou Recovery Program (The Program) supported by a three year budget of \$27 million.

Initiation of the Program included a broad engagement process involving environmental organizations.

Harmony Foundation is a registered charitable organization that promotes socially and environmentally sustainable development.

Bloomfield has expressed concerns about continued destruction of caribou habitat from industrial development and requested on-going engagement on the matter.

## **Background:**

British Columbia has a long history of managing caribou.

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# Meeting with Michael Bloomfield Victoria

Caribou are designated as threatened and in decline across the province, largely due to impacts to habitat from industrial development.

The Program is delivering a broad array of caribou recovery actions including the management of predators, controlling winter recreation, and protecting and restoring habitat.

The province is collaborating with Canada and Indigenous communities to develop and deploy management tools to achieve caribou recovery, including an intensive recovery plan in the South Peace Area (Central Group).

The Program is working with the mining, oil and gas, and forestry sectors to identify ways to avoid or mitigate impacts from their operations.

The Program is integrated with the land use planning and species at risk legislation initiatives.

Program staff have discussed caribou recovery with Bloomfield and other environmental organizations several times in meetings or conference calls since May 2018.

#### **Recommendations:**

Encourage Bloomfield and his constituency to engage with staff on the Caribou Recovery Program to provide constructive input to caribou management in BC.

#### **Attachments:**

Appendix 1 – Provincial Caribou Recovery Program Discussion Paper

2

Prepared For: Meeting with Jackson Widjaja of Paper Excellence

Meeting: November 6, 2018 - 1:45 - 2:30

Attendees: Jackson Widjaja, Owner

Brian Baarda, CEO

Pedro Chang, Deputy CEO

**Topic of Meeting:** Paper Excellence Operations in British Columbia

## Paper Excellence / Sinar Mas Background:

Jackson Widjaja is the sole owner of Paper Excellence, a Canadian company legally independent from other parts of the Widjaja family's Sinar Mas Group. Jackson is the son of the Chairman of Sinar Mas, the grandson of the company's founder and a former Sinar Mas executive.

The Widjaja family's global business empire began when grandfather Eka Tjipta Widjaja (now 97) began selling cookies from a rickshaw as a teenager. Along with his first legal wife (Jackson's grandmother, deceased 2017), Eka Tjipta built an enterprise that includes the Sinar Mas Group, Golden Agri Resources and Bank International Indonesia from the ground up.

Prior to announcing the intent to purchase Catalyst Paper, Paper Excellence owned 10 mills worldwide including 7 in Canada. The first of these (Meadow Lake in Saskatchewan) was purchased in 2007. As a private company, the nature of any family financial ties with the company's growth and capital investment plans are not known.

## **Growth History:**

Paper Excellence Canada Holdings is a privately owned subsidiary of Paper Excellence B.V. The company has close to two million tonnes of pulp production capacity through five operating (two non-operating) mills in Canada and two mills in France. On October 9, 2018 the company announced its intent to acquire the operations of Catalyst Paper in British Columbia in a share purchase that includes the three mills, the Surrey Distribution Centre and the company's head office in Richmond. S.13

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Paper Excellence had also lost out on a late-2017 purchase of Fibra Celulose SA of Brazil, and are in arbitration over the abrupt seller cancellation of an agreement to purchase Eldorado Brasil Celulose SA, by primary shareholders Joesley and Wesley Batista. The Batista brothers had been ordered to pay significant fines related to corruption scandals and insider trading. Court documents reflect that representatives of the brothers demanded large additional payments due to rising pulp prices, in what was later described as "informal and preliminary conversations."

## **Meeting Topics:**

Fibre Supply: Jackson Widjaja will raise the importance of fibre supply to the company's successful operation, including through the Coast Revitalization Process. Paper Excellence has also reported recent challenges with fibre costs for its Mackenzie operation, s.16

Capital Investment: The company may discuss its preliminary capital investment plans, s.13

Energy Purchase Agreements: Paper Excellence is aware of government's pending decisions around the renewal of Energy Purchase Agreements (EPA) as part of the BC Hydro review. At least until a capital investment plan is developed and implemented at Powell River, the company considers the revenue from the EPA to be essential to continuing to operate the facility, and regards interim renewal of the EPA as a condition precedent to completing the share purchase agreement. The company has other EPAs, and will be interested in impressing upon government the importance of these arrangements to the continued viability of the pulp and paper sector.

Catalyst Arrangements: Paper Excellence management has made visits to all of the Catalyst facilities, and has reassured staff in all locations of their plans to continue operations and build the company for the future. They have made a submission to the federal competition bureau, and will seek information support from the Province as needed. No specific requests for support have been made to date, but the Province expects to receive requests for assistance related to some environmental transition matters. Having achieved Government's intent of continued three-mill operation, it will be necessary to lift the provisions of the Pension Benefits Standards Regulation amendment to allow pension plan payment in the ordinary course of business operations.

Christine Kennedy

s.17



#### BRIEFING NOTE FOR INFORMATION

**DATE:** October 29, 2018

PREPARED FOR: Honourable John Horgan, Premier of British Columbia

**MEETING:** With Lake Babine Nation

**ISSUE:** Collaborating on a coordinated approach to mitigate negative impacts from LNG

Canada projects and associated camps.

#### **SUMMARY:**

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• In October 2018, LNG Canada made a Final Investment Decision (FID), which has prompted increased interest in monitoring and mitigating the effects of associated camps.

• s.13,s.16

- LBN has recently expressed an interest in securing funding to continuing the community
  work they are doing with respect to industrial work camps and wish to convene a discussion
  with Indigenous women to help them prepare for industrial development in their region.
- . In response to this request, staff will be exploring potential resourcing options.
- MIRR recommends a meeting with the Premier of British Columbia and appropriate Ministers at the First Nations Leaders' Gathering in November.

#### BACKGROUND:

On October 3, 2018 Lake Babine Nation wrote to the Premier of British Columbia with respect to the FID of LNG Canada and requested a meeting to discuss the topic of impacts from the project's associated camps (see Appendix 1). They have also requested funding to reconvene Indigenous women to help them to prepare for industrial development in their region.

By way of background, Lake Babine has expressed concerns about industrial work camps dating back to 2014. During the negotiation of Pipeline Benefits Agreements in 2014-15, Lake Babine (LBN) and Nak'azdli Whut'en (NAK) First Nations raised concerns regarding the social impacts of proposed industrial work camps associated with the construction of Coastal GasLink and Prince Rupert Gas Transmission projects.

In 2016, the Ministry of Indigenous Relations and Reconciliation (MIRR) and the Ministry of Energy, Mines, and Petroleum Resources provided \$132,490 to LBN and NAK to conduct research to examine the social impacts of industrial camps located near First Nations communities and identify mitigation strategies. They worked with the Firelight Consulting Group to do this research and released the report, 'Indigenous Communities and Industrial Camps' in February 2017. Subsequently, the Province provided LBN a grant of \$255,000 to develop a community response to their report findings.

In March 2017, Deputy Ministers endorsed striking the ICIC Working Group to review the Firelight report recommendations and develop a provincial response. The ICIC Working Group is comprised of social and natural resource sector ministries/agencies, as well as representatives from LBN, NAK and



the Minister's Advisory Council on Indigenous Women. The Firelight Consulting Group also participates in the ICIC Working Group meetings to support LBN and NAK.

The ICIC Working Group has been considering the impacts of industrial camps and mobile workforces on Indigenous communities across British Columbia (BC), on and off reserve, and including research and recommendations outlined in reports beyond those of the Firelight Group.

The ICIC Working Group has conducted targeted engagement with over 50 stakeholders and organizations (i.e. ministries, Federal government, RCMP, service providers, etc.), undertaken a legislative scan, a cross jurisdictional review, and summarized five emerging theme areas:

- 1. Improving camp operations;
- 2. Increasing understanding and addressing information gaps;
- 3. Improving awareness:
- 4. Legislation, regulatory reform and policy tools; and,
- 5. Supporting Indigenous women and children through community funding and social services.

The ICIC Working Group has written a Discussion Paper, which summarizes the work to date. \$.13

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See Appendix 2 for ICIC Working Group project timeline.

#### DISCUSSION:

On October 1, 2018, LNG Canada announced their FID to build the LNG Canada export facility in Kitimat, BC. TransCanada Corporation will build, own and operate the 670 km Coastal GasLink (CGL) pipeline that will connect natural gas from northeastern BC to the export plant in Kitimat.

The FID, and resulting active construction, has prompted increased interest in monitoring and mitigating the effects of associated camps, and in improving the health and safety of Indigenous women and communities in the context of industrial development. LNG Canada and Coastal Gas Link are actively engaged in discussions on the case studies and recognize with the FID that actions will need to be taken to fulfil LNG Canada's commitment to ensuring this project, including the industrial camps, will be the safest in Canada. LNG Canada and Coastal Gas Link wish to work with their contractors, the Province and Indigenous partners to fulfil this commitment.

As noted in the Background section, for several years LBN has been a strong advocate for mitigating impacts of industrial camps and creating safe and healthy communities. They have requested a meeting to discuss further coordination on this matter with the Province. More specifically, LBN proposes to bring together Indigenous women, as they did in 2016, to prepare for industrial development in their region.

In response to this request, potential resourcing options will be explored by staff. MIRR recommends a meeting with the Premier of British Columbia and appropriate Ministers at the First Nations Leaders'



Gathering in November. In preparation for that meeting, more information about potential resourcing options will be available.

Also, MIRR will be setting up a series of briefings, including LNG CANADA and CGL, to get an update on their work and to better understand how the companies intend to address safety in work camps. This information will then be shared with LBN and other communities when appropriate and available.

#### **KEY MESSAGES:**

- Ensuring the safety and wellbeing of Indigenous women and children as the project moves forward is a high priority for government.
- The ICIC Working Group, which includes LBN and NAK, will continue to work on developing an approach that supports the safe management of industrial camps. Thank you for LBN's participation on this working group.
- To further discuss this matter and options for collectively moving forward, we are recommending a formal meeting with the Premier of British Columbia and appropriate Ministers at the First Nations Leaders' Gathering in November.

#### Attachments:

- Appendix 1 LBN letter
- Appendix 2 ICIC Project Timeline Graphic

#### PREPARED BY:

Ingrid Schmidt, Senior Advisor Socio-Economic Partnerships Branch (778) 698-9715



#### BRIEFING NOTE FOR INFORMATION

Date: November 7, 2018

**Prepared For:** Honourable Selina Robinson, Minister of Municipal Affairs and Housing

Title: Community Housing Fund Announcement

**Issue:** Announcement on First Round of Successful Proposals

#### **SUMMARY:**

 An announcement of the first round of successful proponents from the recent CHF proposal call is tentatively scheduled for November 13, 2018.

• The announcement will commit approximately \$492 million in funding to deliver more than 4,900 homes in 42 communities across B.C.

#### **BACKGROUND:**

The Building BC: Community Housing Fund (CHF) is a \$1.9 billion investment over 10 years to build more than 14,000 affordable rental homes for seniors, families and low- and middle-income earners.

The Request for Proposals was issued in April and closed in September. BC Housing received 147 submissions under this proposal call.

Proposals were assessed according to a variety of criteria, including identified client group and the overall impact the proposed project would have on its community's specific rental housing needs.

#### DISCUSSION:

An announcement of the first round of successful proponents from the CHF proposal call is tentatively scheduled for 10am on November 13, 2018, at New Chelsea Society's Chelsea Gardens in Vancouver, an affordable housing complex with 55 townhomes for families and seniors.

This announcement will commit approximately \$492 million in funding to deliver more than 4,900 homes in 42 communities across British Columbia (BC), which will include a mix of units for middle-, moderate- and low-income households, with many to include child care. The 4,900 homes will include both non-profit and co-op housing and will be built over the next two or three years. See Appendix for a community breakdown of the projects.

Speakers at the event will include:

- Emcee: MLA George Chow (Vancouver-Fraserview)
- o Hon. John Horgan, Premier
- Hon. Selina Robinson, Minister of Municipal Affairs and Housing
- Councillor Adriane Carr, City of Vancouver
- o Jill Atkey, CEO, BC Non-Profit Housing Association (BCNPHA)
- o Patrick Buchannon, Executive Director, New Chelsea Society
- Mrs. Hafsah Zeyan, Tenant, Chelsea Gardens



#### **Attachments:**

1. Community breakdown of first set of approved projects

PREPARED BY:

Cathy Shen, Strategic Advisor BC Housing (778) 452-6428 APPROVED BY:

Greg Steves, Assistant Deputy Minister Office of Housing and Construction Standards

Jacqueline Dawes, Deputy Minister

DATE APPROVED:

November 7, 2018





#### Appendix - Community breakdown of first set of approved projects

#### Interior – 17 projects / 673 homes

- Clearwater 1 project / 20 homes
  - Seniors
- Fernie 1 project / 14 homes
  - o Individuals, families
- Kamloops 3 projects / 199 homes
  - Individuals, families, seniors, people with disabilities
- Kelowna 2 projects / 73 homes
  - o Individuals, families, seniors, women with children
- Keremeos 1 project / 41 homes
  - o Families, seniors
- Merritt 1 project / 40 homes
  - Seniors
- Nelson 1 project / 45 homes
  - o Individuals, families, seniors
- Oliver 1 project / 47 homes
  - o Individuals, families, seniors
- Salmon Arm 1 project / 71 homes
  - o Individuals, families, seniors
- Sicamous 1 project / 36 homes
  - Seniors
- Trail 1 project / 9 homes
  - o Individuals, families, seniors
- Vernon 3 projects / 78 homes
  - Individuals, families, seniors, people with disabilities

#### North - 6 projects / 78 homes

- Queen Charlotte / 1 project / 4 homes
  - o Individuals, families, seniors
- Smithers / 1 project / 15 homes
  - Individuals, families
- Valemount 1 project / 13 homes
  - Individuals, families
- Vanderhoof 2 projects / 34 homes
  - Seniors
- Village of Telkwa 1 project / 12 homes
  - Seniors



#### Fraser - 15 projects / 1,400 homes

- Burnaby 4 projects / 366 homes
  - o Individuals, families, seniors, people with developmental disabilities
- Coquitlam 3 projects / 301 homes
  - o Individuals, families, seniors, people with disabilities
- Delta 1 project / 54 homes
  - Individuals, families, seniors
- Ladner 1 project / 146 homes
  - o Individuals, families
- Langley 2 projects / 191 homes
  - o Individuals, families, seniors, people with disabilities
- Maple Ridge 1 project / 21 homes
  - o Women and their family recovering from violence
- Mission 1 project / 74 homes
  - o Seniors
- Surrey 1 project / 87 homes
  - o families, seniors, people with disabilities
- Tsawwassen 1 project / 160 homes
  - Seniors

#### Vancouver Coastal – 14 projects / 1,477 homes

- North Vancouver 2 projects / 196 homes
  - o Individuals, families
- Sechelt 1 project / 104 homes
  - Seniors
- Squamish 1 project / 76 homes
  - o Individuals, families
- Vancouver 10 projects / 1,101 homes
  - o Individuals, families, seniors, seniors with mental health challenges



#### Vancouver Island - 20 projects / 1,274 homes

- Bowser 1 project / 22 homes
  - Seniors
- Campbell River 1 project / 40 homes
  - o Women and their family
- Cortes Island 1 project / 4 homes
  - Seniors
- Esquimalt 1 project / 137 homes
  - o Individuals, families, seniors
- Hornby Island 1 project / 26 homes
  - Housing for workers
- Ladysmith 1 project / 36 homes
  - o Individuals, families, seniors
- Langford 1 project / 80 homes
  - o Individuals, families, seniors, people with disabilities
- Nanaimo 3 projects / 121 homes
  - o Individuals, families, seniors, people with mental health and addiction challenges
- Port Alberni 2 projects / 87 homes
  - o Individuals, families, seniors, Indigenous people
- Saanich 1 project / 85 homes
  - o Seniors
- Salt Spring Island 1 project / 24 homes
  - o Individuals, families
- Victoria 6 projects / 612 homes
  - o Individuals, families, seniors, Indigenous people, people with disabilities

Total: 72 projects / 4,902 homes



#### BRIEFING NOTE FOR INFORMATION

Date: November 19, 2018

Prepared For: Honourable John Horgan, Premier

Title: Retrofit and Repairs for Existing Social Housing

**Briefing Date:** November 20, 2018

#### SUMMARY:

The Province is committing \$1.1 billion over 10 years towards the Capital Renewal Fund. This
fund will help protect existing affordable housing by focusing on the capital renewal and
rehabilitation needs of aging social housing stock throughout British Columbia.

- In addition to renewal and rehabilitation of the stock of existing social housing, key aspects of
  the improvements will support improved energy efficiency and reduced greenhouse gas
  emissions, helping the Province meet its ambitious targets for reducing carbon emissions.
- More than 375 social housing buildings throughout the province will benefit from improvements through this fund, with an estimated reduction in greenhouse gas emissions from the social housing stock of 40 percent over 2005 levels.
- BC Housing selected the identified projects by working with non-profit housing providers to identify priority capital renewal projects.

#### **BACKGROUND:**

One of BC Housing's Service Plan objectives is to protect existing affordable housing, focusing on the capital renewal and rehabilitation needs of the approximately 51,000 social housing units across the province over the long-term. Many of these buildings have reached a time when major building components require replacement or repair.

Capital Renewal Fund investments will be used to prevent the condition of existing social housing buildings from deteriorating and carry out needed seismic, life and safety and energy performance improvements, enabling the stock to provide reliable service for the foreseeable future. BC Housing works with non-profit housing providers to identify priority capital renewal projects.

The Capital Renewal Fund includes \$98 million for both society and provincially owned housing stock in the 2018/19 fiscal year, and \$135 million and \$145 million in the next two years respectively, with the remainder of the approved funding committed over the next 10 years.

Energy retrofits occur both as stand-alone projects and as part of larger scope renewal projects. Approximately 1/3 of the Capital Renewal Fund will be targeted to the Energy Efficiency Retrofit Program, which will help non-profit housing providers make a variety of energy saving upgrades to enhance tenant comfort and safety, realize ongoing energy savings, and take action to reduce greenhouse gas emissions (GHG).



Energy audits will be undertaken on buildings, to provide recommendations on measures to incorporate into the project scopes of renewal projects, and to measure the outcome of projects once completed. Examples of energy performance upgrades include:

- Weather Stripping and air sealing the building
- o Improving window thermal performance
- o Adding insulation to exterior walls
- o Adding insulation to roofs
- o Modernizing lighting and controls
- Switching to more efficient, lower GHG fuels
- Improving appliance efficiency
- Reducing water consumption through low flow water fixtures
- Hot Water heat recovery
- Improving hot water efficiency with modern preheat systems
- Heating plant upgrades
- Modernizing and optimize boiler plant controls
- Building automation systems

#### PROJECT PROFILE EXAMPLE:

Grandview Terrace, Vancouver, was built in 1969 and provides 154 units for low-income families, singles and seniors who are housed in a midrise apartment and six blocks of town homes. BC Housing has committed a \$13.4 million renovation budget from the Capital Renewal Fund program for retrofits that are projected to extend the service life of this complex by 24 years and reduce GHG's by 50 percent over the 2005 baseline.

Douglas Drummond Manor, Burnaby, was built in 1975 and provides 125 units for seniors. This is a three-storey wood framed building. BC Housing has committed a \$10.8 million renovation budget from the Capital Renewal Fund program for retrofits that are projected to extend the service life of this building by 20 years and reduce GHG's by 38 percent over the 2005 baseline.

PREPARED BY:

Elizabeth McNabb BC Housing (604) 439-4703 APPROVED BY:

DATE APPROVED:

Greg Steves, Assistant Deputy Minister
Office of Housing and Construction Standards Nove



# Meeting with BYD (Build Your Dreams) Company Location: N/A

#### What:

- Meeting with BYD regarding LNG exports and public transportation opportunities in BC.
- Opportunity for BYD to share with BC its successes with other partners in Canada as well as other advanced economies.

#### Who:

- Ted Dowling, Vice President, BYD Canada is requesting to meet Premier John Horgan Executive Summary:
- BYD is based in Shenzhen China and develops battery electric vehicles.
- BYD's interests relate to Provincial efforts to reduce GHGs in the transportation sector, specifically targeting trucking, passenger vehicles and public transit.
- BYD is actively soliciting partnerships with North American transit agencies for trail runs and the purchase of BYD electric buses.
- BC Transit has been mandated to provide a low emission strategy to the Provincial Government by March 2019 aligning with anticipated provincially legislated targets.
- Battery electric bus technology has progressed globally over the last several years.
   However, it has not evolved to the point where larger, established North American bus companies are aggressively pushing products to market, believing that the technology needs to be refined further.

#### **Background:**

### **Trucking**

 The Province and Port of Vancouver plan to launch a "Clean Trucking Initiative" pilot program by the end of 2018, to explore the use of low emission vehicles in the drayage sector. Starting in 2019, the pilot will explore and test new technologies to support the evolution of the industry by allowing drivers to trail low carbon fuel heavy-duty trucks without the financial risk of buying a new one.



## Meeting with BYD (Build Your Dreams) Company Location: N/A

### **Public Transit**

- BC Transit is taking a judicious approach to integrating battery electric buses into its fleet by undertaking research and analysis and ongoing active participation in trials and pilots.
- Bus manufacturers notably BYD (China) and Proterra (USA) are actively soliciting partnerships with North American transit agencies for trail runs and purchase of their electric buses.
- In 2018 BC Transit partnered with BYD and New Flyer Industries to conduct two separate battery electric bus trials in Victoria. The partners provided the bus and charging infrastructure to BC Transit at no cost. The trail is now completed, and BC Transit is analysing data in order to provide a report and recommendations to the Province.
- Both major bus manufacturers in Canada (New Flyer Industries, Nova Bus) have recently directed a significant amount of their efforts toward battery electric buses to meet demand for more effective low emission buses.
- New entrants to the electric bus market may increase the competitiveness of bids received from established suppliers.
- BC Transit is familiar with directly operating battery electric buses. From 2009 to 2014 in Whistler, BC Transit implemented a demonstration fleet of hydrogen fuel cell buses.

#### Recommendations:

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Meeting with BYD (Build Your Dreams) Company Location: N/A

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