°CICERO Shades of Green

FortisBC

Green Bond Second Opinion

June 01, 2020

FortisBC is a utility company in British Columbia, Canada. It is the largest energy provider in the region and mainly operates in the natural gas and electricity sector. FortisBC owns BC's largest underground natural gas storage facility, four hydroelectric generating plants and two liquefied natural gas (LNG) facilities. FortisBC focuses its business activities mainly on British Columbia, but also exports LNG to Asian markets. British Columbia's current goal is to reduce emissions by 40% by 2030.

FortisBC's green bonds under this framework provide the opportunity to finance increased production of biogas (RNG) as well as natural gas incentive programs that aim to support British Columbia's emissions reductions goal. This includes incentives for medium and heavy on-road commercial transport natural gas fuel switch as well as natural gas demand side management. CO_2 emissions can be reduced by approximately 33% compared to diesel and heavy bunker fuels and are substantially reduced in terms of local emissions such as SO_x and NO_x, but can potentially lock in emissions in the long-term. According to a new report from the Global Carbon Project, emissions from natural gas are now the main driver of growth in global fossil CO_2 emissions and respective natural gas emission increases are picking up in speed.

CICERO Green views FortisBC's investments into capturing and utilizing biogas from waste and agriculture as Renewable Natural Gas (RNG) as a viable solution to replace natural gas. CNG/LNG engines are able to handle RNG without any further modifications. FortisBC aims to reduce their customers' absolute GHG emissions associated with their energy use by 30% by 2030 compared to 2007, which includes the compliance with the governmental target of a 15% share of RNG by 2030. Additional efforts are needed to increase RNG supply to avoid locking in conventional natural gas based infrastructure.

FortisBC excludes investments into new or existing natural gas production and distribution infrastructure, but does not provide preferential incentive structures for RNG. LNG incentives for shipping will mainly be provided to regional ferries. Oil & gas related shipping and trucking is excluded. The framework would benefit from RNG prioritization, higher RNG incentives compared to LNG/CNG and more rigorous long-term RNG supply strategies as well as a broader approach regarding hydrogen and electric solutions such as for short-haul ferries. Additionally, FortisBC should conduct systematic Scope 3 emissions accounting (e.g., transportation, appliances etc.), raise climate targets, and increase transparency on impact reporting.

Based on the overall assessment of the project types that will be financed by the green bonds, governance and transparency considerations, FortisBC's green bond framework receives a **CICERO Light Green** shading and governance score of **Good**. FortisBC provides a short-term solution for important efficiency improvements based on natural gas but does not provide a long-term strategy to a low-carbon and climate resilient future.

SHADES OF GREEN

Based on our review, we rate FortisBC's green bond framework **CICERO Light Green.**

Included in the overall shading is an assessment of the governance structure of the green bond framework. CICERO Shades of Green finds the governance procedures in FortisBC's framework to be **Good**.

GREEN BOND PRINCIPLES

Based on this review, this Framework is found in alignment with the principles.

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1 Terms and methodology

This note provides CICERO Shades of Green's (CICERO Green) second opinion of the FortisBC's green bond framework dated **June 2020.** This second opinion remains relevant to all green bonds issued under this framework for the duration of three years from publication of this second opinion, as long as the framework remains unchanged. Any amendments or updates to the framework require a revised second opinion. CICERO Green encourages the client to make this second opinion publicly available. If any part of the second opinion is quoted, the full report must be made available.

The second opinion is based on a review of the framework and documentation of the issuer's policies and processes, as well as information gathered during meetings, teleconferences and email correspondence with the issuer. Second opinions are restricted to an evaluation of the mechanisms or framework for selecting eligible projects at a general level. CICERO Green is not responsible for an issuer's implementation of a framework, nor does it guarantee or certify the climate effects of investments in eligible projects.

Expressing concerns with 'Shades of Green'

CICERO Green second opinions are graded dark green, medium green or light green, reflecting a broad, qualitative review of the climate and environmental risks and ambitions of the bonds. The shading methodology aims to provide transparency to investors that seek to understand and act upon potential exposure to climate risks and impacts. Investments in all shades of green projects are necessary in order to successfully implement the ambition of the Paris Climate agreement. The shades are intended to communicate the following:

CICERO Shades of Green	Examples
Dark green is allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate resilient future. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Ideally, exposure to transitional and physical climate risk is considered or mitigated.	Wind energy projects with a strong governance structure that integrates environmental concerns
Medium green is allocated to projects and solutions that represent steps towards the long-term vision, but are not quite there yet. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Physical and transition climate risks might be considered.	Bridging technologies such as plug-in hybrid buses
Light green is allocated to projects and solutions that are climate friendly but do not represent or contribute to the long-term vision. These represent necessary and potentially significant short-term GHG emission reductions, but need to be managed to avoid extension of equipment lifetime that can lock-in fossil fuel elements. Projects may be exposed to the physical and transitional climate risk without appropriate strategies in place to protect them.	Efficiency investments for fossil fuel technologies where clean alternatives are not available
Brown is allocated to projects and solutions that are in opposition to the long-term vision of a low carbon and climate resilient future.	New infrastructure for coal

Sound governance and transparency processes facilitate delivery of issuers' climate and environmental ambitions laid out in the framework. Hence, the governance aspects are carefully considered and reflected in the overall shading of the green bond framework. CICERO Green considers four factors in its review of an issuer's governance processes: 1) the policies and goals of relevance to the green bond framework; 2) the selection process used to identify and approve eligible projects under the framework, 3) the management of proceeds and 4) the reporting on the projects to investors. Based on these factors, we assign an overall governance grade: Fair, Good or Excellent.

2 Brief description of FortisBC's green bond framework and related policies

FortisBC is a utility company in British Columbia, Canada, and the largest energy provider in the region. It is a subsidiary of the public company Fortis Inc. and mainly operates in the natural gas and electricity sector. FortisBC has more than 2,400 employees, owns natural gas and electric power transmission and distribution networks, British Columbia's largest underground natural gas storage facility, four hydroelectric generating plants and two liquefied natural gas (LNG) facilities. FortisBC focuses its business activities mainly on British Columbia, but also exports LNG to Asian markets.

Environmental Strategies and Policies:

FortisBC has a sustainability framework in place that names environment as one of its four primary focus areas. In the issuer's sustainability report both renewable natural gas and LNG are mentioned as energy solutions to reduce greenhouse gas emissions (GHG) from the transportation sector. FortisBC offers conservation and energy management programs to reduce energy demand from customers. FortisBC reports according to the Global Reporting Initiative (GRI) and has decreased its reportable GHG emissions (Scope 1 and 2) by 13.3% in 2018 compared to 2017 from gas operations, aims to reduce their customers' absolute GHG emissions associated with their energy use by 30% by 2030 ("30by30") compared to 2007. According to FortisBC, reportable emissions include combustion, flaring, fugitive and venting emissions associated with operations assets (pipeline, meter sets, compressor stations, LNG stations, etc.). This specifically excludes office and fleet related assets, which is considered minor relative to the GHG emissions of Operations Assets (<10% in 2018). FortisBC reports some externally verified Scope 3 GHG emissions to the Ministry of Environment of British Columbia. In 2018, respective Scope 3 emissions amounted to 77,000 tCO2e, which represents 35.9% of FortisBC's total emissions (Scope 1,2,3), but FortisBC does not systematically track and report all Scope 3 emissions.

FortisBC outlines its strategy to address climate change in its "Clean growth pathway to 2050". The strategy aims to align with British Columbia's goal to reduce emissions while maintaining economic growth. British Columbia's current goal is reducing emissions by 40% by 2030 and by 60% by 2040 compared to 2007. In its strategy, FortisBC mentions that it believes "that gas—as an energy carrier—will continue to be a critical component of a decarbonized energy system in [British Columbia]". FortisBC's strategy to support British Columbia to reduce emissions and respond to climate change is also outlined in the 2017 Long-Term Gas Resource Plan. According to FortisBC, the gas infrastructure will also be able to handle zero-carbon fuels (renewable natural gas (RNG) or hydrogen) and could operate together with carbon capture and storage. Extensive screening is conducted regarding fugitive emissions and reported to the government of British Columbia. Currently, no screening is conducted regarding possible risks of lock-in of gas infrastructure in British Columbia.

FortisBC informed us that it is aware of the TCFD recommendations but is currently still in the preparation phase of implementation. According to the issuer, no isolated policies regarding climate resilience are currently in place, but resilience is part of strategic and business planning.

Use of proceeds:

According to the green bond framework, proceeds will be used to finance or refinance assets within the five project categories: renewable energy; renewable natural gas (biogas); energy efficiency; pollution prevention and control;

and clean transportation. According to the issuer, the majority of proceeds will be allocated to existing projects, mostly to the categories renewable natural gas, energy efficiency, and pollution prevention and control. Projects are eligible if they have been completed by FortisBC within 36 months preceding the date of the green bond issuance.

By allocating proceeds to the production, storage and distribution of renewable natural gas (RNG), liquefied natural gas (LNG) and compressed natural gas (CNG) as well as demand-side management (DSM) initiatives, the issuer aims to achieve substantial emissions reductions according to their 30by30 strategy. FortisBC defines RNG as a net carbon-neutral energy source that is derived from biogas, which is produced from decomposing organic waste from landfills, agricultural waste and wastewater from treatment facilities. The biogas is captured and cleaned to create the RNG. FortisBC confirmed that only waste based RNG will be considered.

FortisBC excludes investments into new or existing natural gas production and distribution infrastructure.

Selection:

The selection process is a key governance factor to consider in CICERO Green's assessment. CICERO Green typically looks at how climate and environmental considerations are considered when evaluating whether projects can qualify for green bond funding. The broader the project categories, the more importance CICERO Green places on the governance process.

Projects will be screened and selected by a Selection Committee which will be comprised of individuals from the Finance Department and the Sustainability Department. Decisions will be made in consensus and documented in the sustainable financing report. Apart from the eligibility criteria outlined below, eligible projects will have to comply with local regulations and FortisBC's internal policies and guidelines. According to the issuer, for projects that involve LNG/CNG, the Selection Committee will conduct screening based on economic feasibility as there are no set minimum criteria associated with environmental benefits. According to the issuer, the environmental benefits occur by default in case of fuel switching from diesel/heavier hydro carbon fluids to LNG/CNG.

The issuer informed us that this process will partly consider life cycle assessments, supply chain emissions as well as climate resilience and rebound effects. This includes lifecycle GHG emissions of CNG/LNG, DSM programs and electric vehicle fleet. Supply chain emissions will only be considered for waste transportation for RNG production, but FortisBC currently assumes that all RNG projects considered will lead to an overall GHG reduction and, thus, eligible under this framework. FortisBC stated that rebound effects are not anticipated for any of the project categories. Rebound effects could only be determined on a case-by-case basis as GHG savings are calculated in accordance with the British Columbia Low Carbon Fuels Compliance Pathway Assessment, which does not consider rebound effects for fuel switching.

The Selection Committee will also be tasked with reviewing existing eligible projects for compliance as part of the annual reporting and disclosure process. Projects will be removed, or changes will be made, should the projects not comply with the eligibility criteria.

Management of proceeds:

CICERO Green finds the management of proceeds of FortisBC to be in accordance with the Green Bond Principles. FortisBC's Finance Department will allocate the proceeds to approved projects, track them separately in FortisBC's records and fully allocate the net proceeds within 24 months of the issuance. Proceeds can be allocated to projects that are underway or completed within 36 months preceding the date of any green bond issuance.

Unallocated proceeds can be held as cash, cash equivalents or temporary investment instruments that do not include greenhouse gas intensive projects and, according to the issuer, would need to comply with the eligibility criteria of this framework, or to repay indebtedness of a revolving nature.

Reporting:

Transparency, reporting, and verification of impacts are key to enable investors to follow the implementation of green bond programs. Procedures for reporting and disclosure of green bond investments are also vital to build confidence that green bonds are contributing towards a sustainable and climate-friendly future, both among investors and in society.

FortisBC plans to publish an annual information report addressing allocation and impact on their web page. The report will be on a project-by-project basis, where possible, and include a summary of FortisBC's green bond developments including current and future eligible projects; allocation of the proceeds from the green bond into categories and/or eligible projects and updates with respect to the distribution of unspent proceeds; project updates and status reports for categories and/or eligible projects; and key performance indicators and environmental benefits, where possible.

The issuer provided a list with key performance indicators in the framework and informed us that the methodology will also be disclosed in the report. According to the issuer, it is anticipated that all projects will be listed in the report and that impact reporting will be provided on a project level.

The issuer informed us that post issuance FortisBC will obtain internal verification that the Eligible Projects are in alignment with the Framework, that the allocation and use of the proceeds are in accordance with the established framework, and that the controls and systems in place surrounding the Green Bond program are appropriate and sufficient. However, no external verification of impacts or methodologies used is required.

3 Assessment of FortisBC's green bond framework and policies

The framework and procedures for FortisBC green bond investments are assessed and their strengths and weaknesses are discussed in this section. The strengths of an investment framework with respect to environmental impact are areas where it clearly supports low-carbon projects; weaknesses are typically areas that are unclear or too general. Pitfalls are also raised in this section to note areas where issuers should be aware of potential macro-level impacts of investment projects.

Overall shading

Based on the project category shadings detailed below, and consideration of environmental ambitions and governance structure reflected in FortisBC's green bond framework, we rate the framework **CICERO Light Green.**

Eligible projects under the FortisBC green bond framework

At the basic level, the selection of eligible project categories is the primary mechanism to ensure that projects deliver environmental benefits. Through selection of project categories with clear environmental benefits, green bonds aim to provide investors with certainty that their investments deliver environmental returns as well as financial returns. The Green Bond Principles (GBP) state that the "overall environmental profile" of a project should be assessed and that the selection process should be "well defined".

Category	Eligible project types	Green Shading and some concerns
Renewable Energy	Production, storage and distribution of renewable energy, including geothermal, hydrogen, wind and solar.	**Dark Green** ✓ The issuer informed us that only geothermal, wind, solar, waste steam or hydrogen from renewable energy production is eligible. ✓ Solar and wind power are key to a low-carbon transition. ✓ The issuer informed us that geothermal energy projects are mainly small scale systems for buildings: consider potential emissions and complex environmental impacts of geothermal projects. ✓ Potential concerns regarding supply-chain emissions of energy generation technology (e.g., solar cells) ✓ All construction projects can have adverse local environmental impacts.

Renewable Natural Gas (GBP category: "Renewable Energy") 	• Purchase, production, processing, storage, and distribution of renewable natural gas (RNG), including bio-methane and other renewable energy sources. • This includes financial incentives provided to customers to convert their engines to RNG and investments in infrastructure to support production, processing, storage and distribution of RNG.	**Medium to Dark Green** ✓ FortisBC confirmed that RNG will only be sourced from waste materials (wastewater treatment plants, agricultural waste, landfill waste, or residential or commercial organic waste). ✓ According to issuer, distribution of renewable energy does not include fossil fuel infrastructure, such as CNG or LNG pipelines. ✓ Despite reports that Canada has a significant RNG potential and current natural gas based infrastructure being able to also utilize 100% RNG, scalability of RNG supply is a concern: FortisBC will comply with the goal of a 15% share of RNG by 2030. ✓ Potential concerns regarding rebound effects with incentivizing waste production as opposed to fully circular economy solutions. ✓ Capturing biogas from waste or farms feature lower fugitive emissions than without capturing.
Energy Efficiency 	• Demand Side Management (DSM) initiatives, including: ○ projects that reduce energy consumption, emissions or improve overall efficiency; and ○ supporting initiatives such as research and energy use studies. • Equipment upgrades for monitoring energy performance: digital controls, sensors, building information systems, or energy management and reduction systems.	**Light Green** ✓ This category supports British Columbia's long-term emissions reduction target. Investments in new or existing fossil fuel production and delivery infrastructure are excluded from financing. ✓ Examples under the DSM program include water heater upgrades, hot water conservation, fire place upgrades and building efficiency education and upgrades. The issuer confirmed: Only projects related to energy efficiency (e.g., rebates for customers for the purchase of energy efficient appliances) can be financed and not the underlying natural gas production and delivery infrastructure. ✓ DSM initiatives' purpose is to curb consumption of natural gas for residential/commercial/industrial customers and install more efficient natural gas based infrastructure. According to FortisBC, 95% of participants in the DSM program is anticipated to receive funding for replacing existing appliances. ✓ The issuer confirmed that rebound effects are closely monitored, that investments are in line with FortisBC's goal of reducing customers' absolute emissions by 30% by 2030 compared to 2007. FortisBC informed us that values determined are then reviewed by not only the British Columbia Utilities Commission but also peer reviewed by various stakeholders including NGOs and environmental groups.

		✓ Minimum requirements (such as percentage of efficiency improvement) are case dependent and depend, e.g., on customer class, type of appliances etc. and are not part of the framework. ✓ Increased monitoring and control of energy performance is an important part of improved energy efficiency. ✓ According to the issuer, the mining industry is excluded.
Pollution Prevention and Control 	• Financial incentives provided to customers in the marine and commercial transportation sector to convert their engines to cleaner fuels, such as CNG and LNG.	**Light Green** ✓ This category incentivizes fuel switch but does not take into account renewable energy alternatives (e.g., electric ferries). ✓ Examples include incentives for LNG engines for marine vessels, CNG/LNG fueling stations, fuel switch subsidies from Diesel to CNG/LNG for medium and heavy trucks or marine vessels. ✓ Fossil fuel infrastructure and LNG fuel switch in shipping is mainly incentivized for regional ferries. Fossil fuel related shipping (e.g., LNG carriers) and trucking activities are excluded. ✓ According to the issuer, the mining industry as well as railways are excluded. ✓ Investments in fossil fuel production and delivery infrastructure are excluded. ✓ Potential risk of lock-in of emissions by investing in LNG as an important solution to cut emissions in the shipping industry is mitigated by, e.g., ability to retrofit with electric solutions in the future according to issuer. ✓ No general minimum requirements (such as percentage of efficiency improvement) for financing in this category. Requirements are case dependent. ✓ Replacing Diesel and bunker fuels with LNG/CNG significantly decreases NO_x, PM, Sulphur and SO_x emissions and can have other environmental benefits.
Clean Transportation 	The electrification of on-road transportation, including fleets, which may include maintenance and support vehicles, and infrastructure for clean energy vehicles.	**Dark Green** ✓ Electric vehicles qualify as dark green. ✓ The issuer informed us that hybrid vehicles are not currently being considered. ✓ Electric cars contribute to the transition to a low-carbon society. However, be aware of the electricity grid emissions.

Table 1. Eligible project categories

Background

Given the technologies available today, natural gas can play an important role for transitioning sectors that are particularly difficult to decarbonize. However, as emissions related to coal are in decline globally, emissions from natural gas are now the main driver of growth in global fossil CO_2 emissions and respective natural gas emission increases are picking up speed.[1]

FortisBC includes incentive structures under the Demand Side Management (DSM) measures in order to curb natural gas consumption and in the pollution prevention and control category in order to reduce emissions through direct CNG/LNG incentive programs. The transportation sector, especially shipping and heavy road transportation, is one of these sectors where natural gas can function as viable short-term solution. The International Maritime Organization (IMO) set a target to reduce emissions from shipping by at least 50% from the 2008 levels by 2050 and limiting the sulfur content to no more than 0.5% by 2020[2]. The International Energy Agency's (IEA) 2018 World Energy Outlook foresees that switching to LNG would not be sufficient on its own to achieve the IMO's long-term target[3]. The IEA argues that the main reason is the IMO's tighter regulation regarding sulfur emissions and not necessarily CO_2 benefits. According to the IEA, heavy duty vehicles' emissions have increased by 2.2% annually since 2000.[4] Possible solutions to address this increase include electrification, fuel cell cars as well as biofuels and electro-fuels. In the IEA's energy outlook's New Policies Scenario (2.7-3.3°C warming), the natural gas demand (CNG/LNG) in transportation will triple by 2040 due to policy-driven efforts, especially in China. According to the British Columbia Low Carbons Fuels Compliance Pathway Assessment[5], diesel has a carbon intensity (LCA) value of 94.76 $gCO2_e$/MJ while LNG from conventional gas has an LCA value of 63.04 gCO_2e/MJ constituting potential emission reductions of about 33%. The same assessment estimates the carbon intensity of RNG to be around 5-10gCO_2e/MJ.

CNG/LNG can reduce SO_x emissions as well as NO_x, particulate matter, up to 33% of CO_2 and other GHG emissions but do not constitute a long-term green solution for shipping and heavy road transportation. Emissions from energy and transportation should be zero in the long-term, which does not allow for the combustion of CNG and LNG.

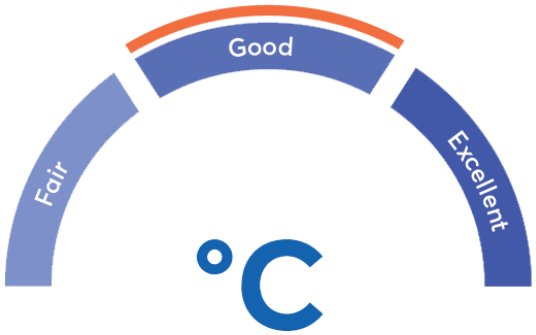
CICERO Green's Light Green shading is allocated to vital efficiency improvements in the fossil fuel related infrastructure particularly in sectors that are difficult to decarbonize. Despite the fact that the projects might be exposed to the risk of lock-in of emissions, CICERO Green views efficiency improvements as necessary to reach the well below 2°C target. The long-haul shipping industry is an example where no viable fossil-free alternatives yet exist. For the heavy road transportation industry, however, solutions with RNG already exist. Due to the long range expectations and market demands, conventional natural gas solutions can constitute a short-term solution.

Governance Assessment

Four aspects are studied when assessing FortisBC's governance procedures: 1) the policies and goals of relevance to the green bond framework; 2) the selection process used to identify eligible projects under the framework; 3) the management of proceeds; and 4) the reporting on the projects to investors. Based on these aspects, an overall grading is given on governance strength falling into one of three classes: Fair, Good or Excellent.

[1] https://www.globalcarbonproject.org/carbonbudget/19/infographics.htm
[2] http://www.imo.org/en/MediaCentre/HotTopics/GHG/Pages/default.aspx
[3] https://www.iea.org/weo
[4] https://www.iea.org/tcep/transport/trucks
[5] https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/electricity-alternative-energy/transportation/renewable-low-carbon-fuels/pathway_assessment_2017.pdf

FortisBC has in place a sound management and governance structure as well as regular and transparent reporting regarding green bond project achievements to investors and the public. FortisBC has targets in place regarding the share of RNG in their gas portfolio and a mitigation strategy that builds on CNG and LNG usage in British Columbia in close alignment with its government. FortisBC does not track scope 3 emissions systematically, but recently established a 30% GHG emissions reduction target by 2030 compared to 2007 for scope 1 and 2. FortisBC has a consensus based project selection process that includes screening procedures for LNG/CNG projects and some considerations regarding lifecycle, rebound effects, supply chain and climate resilience. FortisBC has selected key indicators and publishes project impacts as well as respective methodologies in the report but does not obtain external verification for allocation or impact reporting. The overall assessment of the governance structure of FortisBC gives it a rating of **Good**.



Strengths

FortisBC is focusing on natural gas as a fuel to reduce GHG emissions as well as local emissions. By also focusing on RNG as a future replacement of conventional natural gas, FortisBC provides a strategy to transition into a low-carbon future. Despite the fact that RNG is still limited in supply, FortisBC moves the market into the direction of cleaner fuels in the Canadian context. FortisBC confirmed that RNG is still in its early stages as a technology and that the RNG production and potential will expand in the coming years. This can further increase the emission reduction potential from natural gas infrastructure further. No modification of equipment is needed to switch from CNG/LNG to RNG

The DSM category has significant potential to reduce emissions. According to FortisBC, by replacing boilers/water heaters and other energy efficiency measures, within the next three years emissions could be reduced by a total of 1.9MtCO_2. According to FortisBC, 95% of participants in the DSM program is anticipated to receive funding for replacing existing appliances.

In order for the green bond proceeds to be used for the pollution prevention and control category, the project needs to lead to environmental benefits/GHG reduction and, ultimately, be used for the commercial on-road transportation/marine sector. The project manager has to prove to the Selection Committee that these benefits exist. In addition, annual reporting and internal verification will provide further validation. The issuer informed us that they intend to establish certain finance related controls (for example, reconciliations, tracking mechanisms etc.) that help to ensure that the funds are only spent on eligible categories.

The issuer confirmed that incentive structures for fuel switching in the transportation sector are monitored and externally reviewed regarding fairness and reasonability for each financial incentive issued. An example of such an incentive is a diesel vehicle versus a more expensive CNG/LNG vehicle, which can also be used with RNG as a fuel source without further modification. FortisBC currently provides up to 70% of the price differential between the two vehicle types as a financial incentive to the customer. There are strict controls in place to ensure that the incentives are not used for anything other than engine upgrades, including various internal and external verification processes. FortisBC reports all financial incentives provided to CNG/LNG/RNG customers to the government as part of their annual Green House Gas Reduction (GGRR) legislation requirements. FortisBC aims to invest up to CAD 224 million for on-road and marine segment upgrade incentives.

Promoting the use of CNG/LNG for these transportation solutions effectively build on fossil fuels as a stepping stone toward RNG. No technical modification of engine technology is needed to use RNG instead of CNG/LNG and marine vessels could be retrofitted with electric engines in the future. FortisBC therefore addresses a key emission reduction issue of the shipping and heavy road transport industry. Fuel supply contracts between the commercial transportation sector and FortisBC can last up to 15 years, but do not require a specific type of fuel. This potentially contributes to reducing the risk of lock-in of emissions. At the moment, RNG is more expensive than LNG/CNG making it an economical decision for customers which fuel type they use. FortisBC informed us that financing of the mining industry as well as railways and LNG carriers is excluded under this framework.

An example for a fuel switch is the local bus company Translink[6], which recently switched to 100% RNG for their CNG-fleet (20% of total fleet) without any modifications of their technology. From a sustainability perspective RNG is the preferred choice, reducing CO_2 emissions by up to 90 percent. However, the lack of supply is hampering the use of RNG at scale. FortisBC is actively working to secure production of RNG to enable the roll-out of the more sustainable gas solutions on a larger scale.

Weaknesses

Including new Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) related incentive mechanisms as eligible category should be considered a bridging solution. It will lead to greenhouse gas emissions through fossil fuel combustion by medium and heavy trucks as well as by marine vessels. FortisBC currently does not have a longer term strategy to supply sufficient Renewable Natural Gas (RNG) in order to serve all customers that will receive financing for CNG/LNG infrastructure. Current RNG supply is based on waste and landfills and might include wood derived biogas in the future.

It is a weakness that CNG/LNG projects are financed without any preferential treatment of RNG as a fuel. The framework would benefit from RNG prioritization, higher RNG incentives compared to LNG/CNG and more rigorous long-term RNG supply strategies as well as broaden the approach regarding hydrogen and electric solutions.

Pitfalls

FortisBC does not consider minimum distances or other minimum requirements for efficiency improvements for on-road and marine transportation. Despite the fact that it appears economically unlikely that projects will be financed that only feature negligible improvements, it nevertheless bears the risk of low ambition fossil fuel infrastructure financing.

Both the DSM as well as the pollution prevention and control category bear a significant risk of rebound effects. Through these categories, overall emissions could increase, since potential customers are incentivized to utilize a CNG/LNG solution without conducting an assessment of potential long-term alternatives, such as electric, hydrogen or RNG. The categories do not evaluate alternatives to fossil fuel solutions such as electrification or hydrogen for short-haul shipping and road transportation and do not prioritize these solutions accordingly over CNG/LNG solutions. FortisBC informed us that they do not expect non-fossil fuel (electric, hydrogen etc.) solutions to be broadly commercially available, within the next 3 years that this framework is valid.

[6] https://www.translink.ca/About-Us/Media/2019/April/TransLink-introduces-Renewable-Natural-Gas-to-its-bus-fleet.aspx

Currently, no screening is conducted regarding possible risk of lock-in of gas infrastructure in British Columbia. This bears a risk, as alternative low-carbon pathways for British Columbia, e.g., electrification of heating or other solutions for transport instead of RNG or hydrogen, could make gas infrastructure obsolete.

Regarding transparency, FortisBC reports on several impact indicators but only reports on CO_2 avoidance in the categories related to CNG/LNG. This bears a significant risk for investors to misrepresent the actual impact they achieve as CO_2 avoidance does not necessarily convey the climate impact of the projects. Other indicators could include, e.g., number of boilers/vehicles/vessels financed, fuel consumption before/after, etc. This pitfall is exacerbated by the fact that FortisBC does not obtain third party verification of impacts or methodologies used. Additionally, FortisBC could conduct systematic scope 3 emissions accounting (e.g., transportation, appliances etc.) and raise climate targets

Despite the fact that the Greenhouse Gas Reduction Regulation (GGRR) is monitored and subject to reporting, it does not distinguish between RNG and CNG/LNG incentives, e.g., by prioritizing the former over the latter.

Appendix 1:
Referenced Documents List

Document Number	Document Name	Description
0	FortisBC green bond framework June, 2020	FortisBC ’s green bond framework
1	FortisBC Sustainability Report 2017	https://www.cdn.fortisbc.com/libraries/docs/default-source/about-us-documents/18-107-1_sustainability_report2017_final5.pdf?sfvrsn=62b7328c_0
2	Fortis BC Corporate Report 2017	https://fbcdotcomprod.blob.core.windows.net/libraries/docs/default-source/about-us-documents/17-338-corpreport2017_web-hi-res.pdf
4	Fortis Corporate and Sustainability Report 2018	https://www.cdn.fortisbc.com/libraries/docs/default-source/about-us-documents/corporate-and-sustainability-report-2018.pdf?sfvrsn=e392ec4a_2
5	Clean growth pathway 2050	FortisBC’s strategy toward a low-carbon, renewable energy future
6	2017 Long Term Gas Resource Plan	Long term resource plan as required by the Utilities Commission Act (UCA) presenting a long term view of demand and supply-side
7	CARBON INTENSITY OF FORTISBC TILBURY LNG	Study of LNG carbon intensity at FortisBC’s facility in Tilbury
8	NATURAL GAS USE IN THE MEDIUM AND HEAVY-DUTY VEHICLE TRANSPORTATION SECTOR	Roadmap defining use of natural gas in BC for medium and heavy-duty vehicles

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Appendix 2:
About CICERO Shades of Green

CICERO Shades of Green (CICERO Green) is a subsidiary of the climate research institute CICERO. CICERO is Norway's foremost institute for interdisciplinary climate research. We deliver new insight that helps solve the climate challenge and strengthen international cooperation. CICERO has garnered attention for its work on the effects of manmade emissions on the climate and has played an active role in the UN's IPCC since 1995. CICERO staff provide quality control and methodological development for CICERO Green.

CICERO Green provides second opinions on institutions' frameworks and guidance for assessing and selecting eligible projects for green bond investments. CICERO Green is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO Green is independent of the entity issuing the bond, its directors, senior management and advisers, and is remunerated in a way that prevents any conflicts of interests arising as a result of the fee structure. CICERO Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

We work with both international and domestic issuers, drawing on the global expertise of the Expert Network on Second Opinions (ENSO). Led by CICERO Green, ENSO contributes expertise to the second opinions, and is comprised of a network of trusted, independent research institutions and reputable experts on climate change and other environmental issues, including the Basque Center for Climate Change (BC3), the Stockholm Environment Institute, the Institute of Energy, Environment and Economy at Tsinghua University and the International Institute for Sustainable Development (IISD).