William J. Andrews

Barrister & Solicitor

1958 Parkside Lane, North Vancouver, BC, Canada, V7G 1X5
Phone: 604-924-0921, Fax: 604-924-0918, Email: wjandrews@shaw.ca

September 4, 2020

Ms. Diane Roy
Vice President, Regulatory Affairs
FortisBC Energy Inc.
16705 Fraser Highway
Surrey, B.C. V4N 0E8
By Email: gas.regulatory.affairs@fortisbc.com

Dear Ms. Roy:

Re: BCUC Project No. 1599120, FortisBC Energy Inc. Annual Review for 2020 and 2021 Rates
B.C. Sustainable Energy Association Information Request No. 1 to FEI

Attached please find BCSEA's Information Request No. 1 to FEI. A version in Word format will be provided separately. If you have any questions, please do not hesitate to contact me.

Yours truly,

William J. Andrews

Barrister & Solicitor

Encl.

REQUESTOR NAME:**BC Sustainable Energy Association (BCSEA)**
INFORMATION REQUEST ROUND NO: 1
TO: **FortisBC Energy Inc.**
DATE: **September 4, 2020**
PROJECT NO: **1599120**
APPLICATION NAME: **FortisBC Energy Inc. Annual Review for 2020 and 2021 Rates**

1.0 Topic: COVID-19 Pandemic
Reference: Exhibit B-2, Section 12.2.1 COVID-19 Pandemic

FEI discusses the COVID-19 pandemic under the heading of Exogenous Factors. FEI states:

> "Due to the uncertainty, FEI is not seeking approval of exogenous factor treatment for incremental impacts related to COVID-19 at this time. Instead, over the coming months, FEI will evaluate the COVID-19 incremental costs and related savings. If the incremental costs and related savings are determined to be significant, FEI proposes to include the amounts in the previously approved COVID-19 Customer Recovery Fund Deferral Account. The amounts will then be reviewed in 2021 when actual 2020 amounts and forecasts for future years can be ascertained, and an appropriate recovery method can be determined." [pdf pp.172-173.]

1.1 Setting aside exogenous factor treatment for incremental impacts related to COVID-19, please discuss the impact of the COVID-19 pandemic on FEI's demand-side management (DSM) spending and energy savings in 2020 and 2021.

2.0 Topic: Total Energy Demand
Reference: Exhibit B-2, Figure 3-1, pdf p.25

2.1 Is it a coincidence that Total Energy Demand for 2020 Projected, at 235.4 PJ, is the same as for 2019 Approved? If not, please explain why this would be the case.

3.0 Topic: Demand Forecast
Reference: Exhibit B-2, Section 3.3, Demand Forecast,

"FEI's total energy demand consists of the <u>weather normalized</u> residential and commercial demand and the industrial and NGT demand." [pdf p.24, underline added]

3.1 Are the "Actual" numbers in Figures 3-1, 3-2, 3-3 and 3-4 weather normalized?

3.2 Please explain why Figure 3-4 is titled "<u>Normalized</u> Residential Demand." Does this mean that other Figures, or other numbers in other Figures, are not weather normalized?

3.3 For greater certainty, is the data in Figure 3-3, Rate Schedule 1 UPC (Residential Use Per Customer), weather normalized?

4.0 Topic: LNG Demand
Reference: Exhibit B-2, Section 3.3.4 Natural Gas for Transportation and LNG Demand

Regarding Table 3-2: FEI Total Natural Gas Demand for NGT and non-NGT (GJ per year), FEI states "As directed in Order G-86-15, FEI has included the forecast of demand provided to customers under spot purchase agreements (i.e., not under firm take-or-pay commitments) in the total NGT and non-NGT demand."

4.1 Please provide a version of Table 3-2 that breaks out spot purchase agreements so that the Total NGT and Non-NGT Demand adds up.

4.2 In Table 3-2, the numbers for LNG Demand for 2020 Projected and 2021 Forecast are 1,643,386 GJ and 1,784,400 GJ, respectively. In Figure 3-11, the numbers for "RS 46 - LNG (NGT)" appear to correspond (with rounding) to the numbers for LNG Demand in Table 3-2. However, in Figure 3-11 there is another row, titled "RS 46 - LNG (Non-NGT)," that for 2020P and 2021F is 0.9 PJ and 3.7 PJ. Please explain this apparent inconsistency.

5.0 Topic: Biomethane
Reference: Exhibit B-2, Section 6.3.5, Clean Growth Initiative - Biomethane O&M,

"The 2020 Projected and 2021 Forecast total Biomethane O&M is $1.807 million and $1.848 million, respectively." [pdf p.58]

5.1 Please provide an update on the biomethane (RNG) program.

6.0 Topic: Other Renewable Gases
Reference: Exhibit B-2, Section 6.3.6, Clean Growth Initiative – Renewable Gas Development, pdf p. 58

"In order to support the continued growth of the renewable gas portfolio, including investigating the feasibility of other renewable gases such as hydrogen and synthetic methane, FEI requires additional resources within its Renewable Gas team to support work on safety, codes and standards, and feasibility work more generally. The O&M requirements for this initial phase of hydrogen development are approximately $0.400 million in 2020, increasing to approximately $0.750 million in 2021 to hire or contract resources to proceed with work on safety, codes and standards, and feasibility work."

6.1 Please confirm, or otherwise explain, that the proposed spending on Renewable Gas Development referred to in the preamble does not overlap with spending under the Clean Growth Innovation Fund.

6.2 How will FEI report on the results of its further development of other renewable gases such as hydrogen and synthetic methane?

7.0 Topic: 2022 LTGRP Spending
Reference: Exhibit B-2, pdf p.76

FEI seeks approval of a deferral account for the costs of external resources required for the 2022 Long Term Gas Resource Plan that are incremental to the costs in FEI's Base O&M for the LTGRP. FEI says these incremental costs are required to comply with the BCUC directives from the 2010, 2014, 2017 and 2019 LTGRP Decisions to conduct work incremental to that required for past resource plans.

FEI notes that the 2019 LTGRP Decision (Order G-39-19) includes a specific direction to address climate action and GHG emissions in the 2022 LTGRP, as follows:

> "5. In the next LTGRP, the Panel directs FEI to address the implications for FEI's long-term resource and conservation planning of the 2018 CleanBC plan released by the Government of BC on December 6, 2018 and to provide an update on its analysis of GHG targets. In particular, the Panel expects that FEI should address the long term impacts to FEI of:
> • Initiatives targeting more energy efficient buildings, in terms of gas
> • Requirements for 15 percent of natural gas consumption to be from renewable gas;
> • Industrial electrification, with respect to demand for natural gas;
> • How 2018 CleanBC's plans for clean transportation affect FEI's forecast for its NGT programs; and
> • Other initiatives to be developed by the Government of BC over the next 18 to 24 months."

FEI provides 2022 LTGRP Estimated Expenditures in Table 7-10.

7.1 Is FEI confident that the proposed spending outlined in Table 7-10 will be adequate to fully address climate action and GHG emissions in the 2022 LTGRP, including the particular points identified by the Panel in the 2019 LTGRP Decision?

7.2 What is FEI's timetable for developing the 2022 LTGRP?

8.0 Topic: FEI GHG Emissions
Reference: FEI Annual Review for 2019 Rates, Exhibit B-4, FEI Response to BCSEA IR 1.7.1, pdf pp.15-16.

In the Annual Review for FEI's 2019 Rates, FEI provided the following information regarding its reported annual GHG emissions from 2009 to 2017:

	Estimated GHG Emission (tCO2e)
2009	161,793
2010	153,993
2011	137,059
2012	134,355
2013	127,940

	Estimated GHG Emission (tCO2e)
2014	140,507 *
2015	120,997 *
2016	124,077 *a
2017	137,903 *b

Notes:

* GHG Emissions for 2014-2017 adopted IPCC 4th Assessment Report for global warming potential.

a Value reported to BC Ministry of Environment. GHG emission reported to Environment Canada and Climate Change was 126,613 tCO2e. The difference is attributed to differing reporting requirements.

b Value reported to BC Ministry of Environment. GHG emission reported to Environment Canada and Climate Change was 142,534 tCO2e. The difference is attributed to differing reporting requirements.

The Environment Canada and Climate Change website provides GHG emission values for the organization based on the revised Global Warming Potential adopted in 2014 (as noted by the asterisk in the table provided above). Reporting using the Environment Canada Global Warming Potential standard provides a more comparable year to year comparison of GHG emissions. The revised GHG Emission values for FEI using the Environment Canada Global Warming Potential standard are as follows:

	Estimated GHG Emission (tCO2e)
2009	177,827
2010	171,059
2011	153,611
2012	150,648
2013	141,947

8.1 Please provide a table showing FEI's annual reported estimated GHG emissions for 2009 up to the most recent available year. For 2009 to 2013, please use the revised figures based on the 2014 Environment Canada Global Warming Potential (for methane).

8.2 What measures did FEI take in 2019 and 2020 year-to-date to control and reduce its GHG emissions? Please provide an estimate of the cost in 2019 and 2020 year-to-date of carrying out these measures.

8.3 How do these measures and their cost compare with measures taken in 2018?

8.4 How do these measures and their cost compare with measures expected in 2021?

In its September 18, 2018 response to BCSEA IR 1 in the FEI Annual Review for 2019 Rates proceeding, FEI stated:

> "Lastly, other compliance measures associated with GHG emissions reporting and compliance requirements face uncertainty. Specifically, Environment and Climate Change Canada (ECCC) Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds are subject to equivalency agreements between ECCC with BC Ministry of Environment. Should ECCC requirements be adopted, additional O&M and capital compliance costs are expected. The timeframe associated with adopting these changes is not expected until 2020." [pdf p.18]

8.5 What is the status of the BC Ministry of Environment's adoption of the ECCC Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds, and FEI's associated additional O&M and capital compliance costs?

9.0 Topic: FortisBC Corporate and Sustainability Report
Reference: https://www.fortisbc.com/sustainabilityreport/home

In Decision and Order G-165-20, p.167, the Panel noted that FEI said that it expects that interveners will be free to ask questions regarding FortisBC's Annual Sustainability Report within the Annual Review process.

On its website, FortisBC says its 2019 Corporate and Sustainability Report has "moved online" to: https://www.fortisbc.com/sustainabilityreport/home.

9.1 Please file a pdf copy of FortisBC's 2019 Corporate and Sustainability Report if possible.

10.0 Topic: FortisBC Corporate and Sustainability Report, Environmental Indicators
Reference: https://www.fortisbc.com/sustainabilityreport/2019-performance-indicators/protecting-our-environment

In its 2019 FortisBC Corporate and Sustainability Report, FortisBC provides data for performance indicators in various tables.

The table "Protecting Our Environment, Performance Summary," says in Footnote 1 "This summary table reports on sustainability data for FortisBC Energy Inc. (FEI) and FortisBC Inc. (FBC) as of December 31, 2019."

The table and notes for the first two indicators, under the heading Emissions, are as follows:

Indicator	2017	2018	2019
Emissions			
Direct greenhouse gas (GHG) emissions (scope 1)[2] (figures in tCO_2e)	153,000	130,000	158,000
Indirect GHG emissions (scope 2)[3] (figures in tCO_2e)	5,300	7,200	7,000

[2] Scope 1 emissions, as defined under the Greenhouse Gas Protocol, are direct emissions from owned or controlled sources. For 2019, this includes externally verified scope 1 GHG emissions as reported to the BC Ministry of Environment of 138,000 tCO_2e and 7,500 tCO_2e for FortisBC Energy Inc. and LNG operations, respectively.

[3] Scope 2 emissions, as defined under the Greenhouse Gas Protocol, are indirect emissions from the generation of purchased electricity for own use. Not included is externally verified scope 3 GHG emissions for FBC as reported to the BC Ministry of Environment in 2019 of approximately 56,000 tCO_2e.

10.1 Please clarify whether the figures for Direct GHG emissions and for Indirect GHG emissions include GHG emissions attributable to FBC (electric). If so, please provide figures for FEI (gas) alone.

10.2 For Direct GHG emissions, what explains the drop from 2017 to 2018 and the increase from 2018 to 2019?

10.3 What are FEI's expectations for Direct GHG emissions in 2020, based on year-to-do and projections?

The table and notes for the next indicators, under the heading Environmental benefits from FortisBC energy solutions, are as follows:

Indicator	2017	2018	2019
Environmental benefits from FortisBC energy solutions			
GHG emissions saved from natural gas used for transportation[4] (figures in tCO_2e)	48,000	45,000	37,100
GHG emissions saved from liquefied natural gas (LNG) used for marine bunkering (figures in tCO_2e)	9,000	17,000	34,200
GHG emissions saved from Renewable Natural Gas[5] (figures in tCO_2e)	7,700	8,900	11,100
Reduction in criteria air contaminants (CAC) released to the environment through the use of LNG and compressed natural gas (CNG) by customers[6] (figures in tonnes CAC)	249	269	294
Lifetime energy saved from conservation and energy management programs[7] (figures in tCO_2e)	292,000	334,000	483,000

[4] Value differs from the compliance credits as determined by the Renewable and Low Carbon Fuel Requirements Regulation due to designated allowable limits as determined by the BC Government for the purposes of reporting under that regulation.

[5] Renewable Natural Gas is produced in a different manner than conventional natural gas. It 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 carbon neutral Renewable Natural Gas (also called biomethane).

[6] The CAC value includes nitrogen oxides (NOx) and sulphur oxides (SOx) but excludes particulate matter. The formation of particulate matter is related to the concentration of NOx and SOx in the exhaust. Given the decrease in NOx and SOx emissions for the use of natural gas versus diesel, a decrease in particulate matter is expected.

[7] The lifetime energy saved is based on the net present value (NPV) estimates on energy savings from gas and electric programs that commenced in the reporting year as published in FortisBC's conservation and energy management filings to the British Columbia Utilities Commission (BCUC) as well as lifecycle GHG emission factor for gas using models adopted by the BC Government.

10.4 What explains the decline in GHG emissions saved from natural gas used for transportation from 2017 to 2019? What are FEI's expectations for 2020 and 2021?

10.5 For GHG emissions saved from liquefied natural gas (LNG) used for marine bunkering, what are FEI's expectations for 2020 and 2021?

10.6 What explains the substantial increase in Lifetime energy saved from conservation and energy management programs from 2017 to 2019? What are FEI's expectations for 2020 and 2021?

11.0 Topic: FortisBC Corporate and Sustainability Report, Partners and Communities Indicators
Reference: https://www.fortisbc.com/sustainabilityreport/2019-performance-indicators/working-with-our-partners-and-communities

Under the heading "Working with our partners and communities," the table and notes for the performance indicators under the subheading "Economic" are as follows:

Performance summary[1]

Indicator	2017	2018	2019
Economic			
Community events participated in[2]	505	429	332
Communities that received investment	85	75	76
Number of Indigenous communities that received training from the First Nations Emergency Services Society	126	120	70

[1] This summary table reports on sustainability data for FortisBC Energy Inc. and FortisBC Inc. as of December 31, 2019.

[2] A FortisBC event or activity open to members of the public (inclusive of virtual activities) where a FortisBC employee is present to answer questions and share information about the company.

[3] Revenues as reported per external financial statements for FortisBC Energy Inc. and FortisBC Inc.

11.1 Please provide a revised version of the table in the preamble, showing data for FEI alone.

11.2 For "Community events participated in," does the declining trend from 2017 to 2019 apply to FEI alone? If so, what explains the decline? What does FEI expect for 2020 and 2021?

11.3 For "Number of Indigenous communities that received training from the First Nations Emergency Services Society," does the declining trend from 2017 to 2019 apply to FEI alone? If so, what explains the decline? What does FEI expect for 2020 and 2021?

12.0 Topic: Clean Growth Pathway to 2050, 30BY30 Target
Reference: Fortis BC Clean Growth Pathway to 2050 (https://www.cdn.fortisbc.com/libraries/docs/default-source/about-us-documents/clean-growth-pathway-brochure.pdf?sfvrsn=1a4b811f_2); FortisBC 30BY30 Target (https://www.fortisbc.com/news-events/media-centre-details/2019/09/23/fortisbc-sets-30by30-target-for-a-lower-carbon-future)

FortisBC's "Clean Growth Pathway to 2050" outlined four key areas in which FortisBC would make substantial reductions in GHG emissions across the province:

- "tripling investment in energy efficiency in homes, businesses and industry and developing innovative energy projects in BC's communities
- investing in low and zero-carbon vehicles and transportation infrastructure
- increasing Renewable Gas inventory by increasing Renewable Natural Gas (RNG) supply and advancing hydrogen deployment
- positioning BC as a vital domestic and international Liquefied Natural Gas (LNG) provider to lower global GHG emissions."

On September 23, 2019 FortisBC issued its 30BY30 Target to reduce its customers' greenhouse gas emissions by 30 per cent by the year 2030. FortisBC says:

> "Our 30BY30 target is part of the next phase of our [2018] Clean Growth Pathway to 2050. It will help focus us on our path, allow us to track our progress and drive us to find innovative new solutions that advance a sustainable future – in an affordable way." [https://www.fortisbc.com/about-us/sustainability]

12.1 Please describe in more detail the relationship between the Clean Growth Pathway to 2050 and the 30BY30 target.

12.2 How does the 30% customer GHG reduction target deal with changes in the number of customers over time?

12.3 Does the customer GHG reduction target apply to customers' GHG emissions from energy supplied by FortisBC or from all sources?

12.3.1 Does the customer GHG reduction target include GHG emissions reductions due to substitution of lower-carbon fuel for higher-carbon fuel?

12.4 Does the 30BY30 Target apply only to customers' GHG emissions within BC?

12.4.1 Does the target include GHG emissions from customers' out-of-province use of LNG from FEI?

12.4.2 How does the 30BY30 Target apply to customers' GHG emissions reductions associated with FEI's marine LNG service or "export customers"?

12.5 How does FortisBC determine the quantity of customers' GHG emissions in terms of the 30BY30 Target?

12.6 Does the reduction target apply to GHG emissions by FBC (electric) customers in addition to GHG emissions by FEI (gas) customers?

12.7 Please confirm, or otherwise explain, that the reduction target applies to the total GHG emissions from all customers, and not to GHG emissions from individual customers.

12.8 What is the 2020 GHG emissions baseline in annual tonnes CO_2e to which the 30% reduction target is applicable? For greater certainty, please specify the 2030 target in annual tonnes CO_2e.

12.9 Does FEI have intermediate milestones for 30BY30, such as percentage reductions by year?

12.10 Will FEI report annually on progress toward achieving the 30% customer GHG reduction target?

12.11 What measures will FEI undertake in 2020 and 2021 (a) to implement the 30BY30 program and (b) to achieve the reductions in customers' GHG emissions?

12.12 Please file any documentation FEI has that further elaborates the 30BY30 Target beyond the September 2019 media release noted in the preamble.

13.0 Topic: LNG Sales to Customers From China
Reference: FortisBC 2019 Corporate and Sustainability Report

The FortisBC 2019 Corporate and Sustainability Report cites a FortisBC article titled "Tilbury LNG exports can reduce lifecycle GHGs in China: study" (https://talkingenergy.ca/topic/tilbury-lng-exports-can-reduce-lifecycle-ghgs-china-study).

The article states that "Customers from China are purchasing LNG produce [sic] at Tilbury is [sic] to displace coal as a source of energy for heating, industrial processes and power generation."

13.1 Can FEI provide evidence that LNG sold to customers from China is purchased for the purpose of displacing coal as a source of energy for heating, industrial processes and power generation?