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July 5, 2021

B.C. Sustainable Energy Association
c/o William J. Andrews, Barrister & Solicitor
70 Talbot Street
Guelph, ON
N1G 2E9

Attention: Mr. William J. Andrews

Dear Mr. Andrews:

Re: FortisBC Energy Inc. (FEI)

Project No. 1599152

Application for a Certificate of Public Convenience and Necessity for the Okanagan Capacity Upgrade Project (Application)

Response to the B.C. Sustainable Energy Association (BCSEA) Information Request (IR) No. 3

On November 16, 2020, FEI filed the Application referenced above. In accordance with the British Columbia Utilities Commission Order G-166-21 setting out the Regulatory Timetable for the review of the Application, FEI respectfully submits the attached response to BCSEA IR No. 3.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachments

cc (email only): Commission Secretary
Registered Parties

FortisBC Energy Inc. (FEI or the Company) Application for a Certificate of Public Convenience and Necessity for the Okanagan Capacity Upgrade Project (Application)	Submission Date: July 5, 2021
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1 **31.0 Topic: GHG emissions**

2 **Reference: Exhibit B-20, FEI Response to PIB IR1 13.8; Exhibit B-16, FEI Response**
3 **to BCOAPO IR2 14.1**

4 FEI says that “the transition to renewable gas and the associated GHG emissions
5 reductions are expected to significantly outpace the incremental demand and GHG
6 emissions associated with the OCU Project.”

7 FEI states:

8 “The OCU Project supports growing demand in the region and those changes in
9 demand, regardless of their cause, will impact greenhouse gas emissions. The
10 impact in GHG emissions from the OCU Project will be small relative to the
11 significant GHG reductions expected from FEI’s transition to renewable gas,
12 consistent with provincial targets and the CleanBC plan.

13 FEI estimates that annual demand for energy from its system in the area
14 impacted by the OCU Project will grow by up to 1,800 terajoules (TJ) between
15 2022 (the year in which current capacity of the system in the Okanagan is
16 expected to be reached) and 2030. The combustion of this gas would result in
17 approximately 90,000 tonnes of CO2 emissions.

18 The estimated forecast of demand attributable to the OCU Project in 2022 based
19 on the annual demand forecast provided in the 2017 LTGRP is 20,800 TJ.
20 Estimated demand growth is therefore approximately 9 percent over that period.
21 Over the same period, FEI expects to increase renewable gas content to at least
22 15 percent as stipulated in the provincial climate plan, CleanBC. As such, the
23 transition to renewable gas and the associated GHG emissions reductions are
24 expected to significantly outpace the incremental demand and GHG emissions
25 associated with the OCU Project.

26 For example, by 2030, FEI anticipates that 30 petajoules (PJ) of renewable gas
27 will be brought online to achieve CleanBC’s 15 percent renewable gas target.
28 The transition to 15 percent renewable gas content will achieve at least 1.5
29 million tonnes of CO2 emissions reductions compared to the 90,000 tonnes
30 associated with the increase in gas demand in the Okanagan region.
31 Furthermore, as described in the response to BCOAPO IR2 14.1, by 2050 FEI
32 intends to transition the majority of its gas portfolio to be renewable in order to
33 reach the Province’s legislated 80 percent GHG reduction target.” [underline
34 added, footnotes omitted]

35 31.1 To clarify, what is the amount of annual GHG emissions reduction (in tonnes
36 CO2e/year) for the Okanagan region associated with 15 percent renewable gas
37 content in 2030, for comparison with the estimated increase of 90,000 tonnes



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1 CO2e/year due to combustion of increased gas demand in the Okanagan region
2 to be facilitated by the OCU project?

3
4 **Response:**

5 FEI views its system as an integrated energy delivery mechanism that can support greenhouse
6 gas (GHG) reductions across its entire service territory. Therefore, FEI used the system-wide
7 GHG emissions reduction figures in its response. This approach is consistent with how the
8 Province treats GHG reductions in CleanBC at a provincial versus a regional or municipal level.
9 However, in order to be responsive FEI has calculated the GHG emissions reductions
10 associated with 15 percent renewable natural gas (RNG) content in the Okanagan region as
11 follows.

12 If RNG supplies in 2030 were allocated proportionally based on load across the FEI service
13 region, the comparable GHG emission reductions for the Okanagan region would be
14 approximately 169,000 tonnes CO2e. The anticipated total demand in the Okanagan region for
15 2030 is approximately 22,600 TJ annually which is determined by summing 20,800 TJ (from the
16 2022 load forecast in the 2017 LTGRP) plus 1,800 TJ (forecast load growth between 2022 and
17 2030). Fifteen percent of this total annual demand is 3,390 TJ. FEI uses a lifecycle carbon
18 emission factor of 0.0598 tonnes CO2e/GJ for conventional natural gas and 0.0100 tonnes
19 CO2e for RNG. Thus, the resulting emission reductions from supplying 15 percent of the
20 Okanagan region demand in 2030 with RNG would be 169,000 tonnes¹ CO2e annually. In other
21 words, the use of 15 percent RNG in the Okanagan region would more than offset the GHG
22 emissions associated with load growth in the region by a factor of 1.88 (equal to 169,000 /
23 90,000 tonnes CO2e).

24 FEI expects renewable gas content to continue to grow beyond 2030, thus emissions reductions
25 enabled by the OCU Project will also continue to grow over time.

26
27

28
29 31.1.1 When FEI says, “The transition to 15 percent renewable gas content will
30 achieve at least 1.5 million tonnes of CO2 emissions reductions
31 compared to the 90,000 tonnes associated with the increase in gas
32 demand in the Okanagan region,” is the 1.5 million tonnes of CO2e (per
33 year) due to RNG system-wide?

34
35 **Response:**

36 Confirmed. Please also refer to the response to BCSEA IR3 31.1 where FEI explains why it
37 used the system-wide GHG emissions reduction figure.

¹ 169,000 tonnes CO2e (annually) = 22,600,000 GJ x 15% x (0.0598 tonnes CO2e/GJ for natural gas – 0.0100 tonnes CO2e/GJ for RNG).



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31.2 Is FEI's expectation of 15 percent renewable gas content, 30 PJ, in 2030 a firm commitment?

Response:

FEI views the Province's commitment to reducing greenhouse gas reductions, the related policies, and FEI's role in enabling these reductions as a firm commitment. The Province's *Climate Change Accountability Act* stipulates specific reduction targets and has an accountability framework as noted below:

- BC has legislated targets for reducing greenhouse gas emissions 40 percent below 2007 levels by 2030, 60 percent by 2040, and 80 percent by 2050.
- The Province has set a target of a 33 to 38 percent reduction from 2007 levels by 2030 for the oil and gas sector.
- The Province created a climate change accountability framework, which includes an independent advisory committee and detailed annual reporting on actions taken to reduce emissions and manage climate change risks.

The requirement for 15 percent renewable natural gas content in BC is an initiative within CleanBC,² the Province's climate and economic strategy. Since publishing CleanBC, the Province has taken a significant step forward in advancing renewable gas through the recent amendments to the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR)³. The amendments included an increase in the maximum allowable volume and an expanded definition to include hydrogen, synthesis gas, and lignin as allowable feedstocks.

FEI anticipates the Province will consult further with FEI to build on the success of the GGRR amendments and further define the nature of the 15 percent target in CleanBC.

31.3 In FEI's view, should progress on increasing the percentage of renewable gas content be a condition of approval of the OCU project?

Response:

No. FEI's efforts to increase the renewable gas content in its gas supply portfolio should be viewed as a measure to achieve CleanBC's renewable gas target and not as a condition for the

² <https://cleanbc.gov.bc.ca/>
³ Order in Council No. 306, May 25, 2021.



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1 approval of the OCU Project. The increase in renewable gas content will occur regardless of
2 whether the OCU Project proceeds. This increase in renewable gas content is driven by
3 government policy, as outlined in CleanBC.⁴ The initial target of 15 percent in buildings and
4 industry for 2030 has already been enabled by the most recent change to the Greenhouse Gas
5 Reduction (Clean Energy) Regulation. FEI has incorporated that renewable content into its
6 30BY30 goal for 2030. There is the expectation that, in order to achieve the provincial
7 government’s Net-Zero by 2050 goal, renewable content will need to continue to increase over
8 time, independent of the OCU Project.

9 The need and justification for the OCU Project is driven by ongoing load growth in the central
10 and north Okanagan regions that will lead to a shortfall in ITS capacity by the 2023/2024 winter
11 peak demand period. As explained in the Application, if this situation is not addressed in a
12 timely manner, FEI will not be able to provide natural gas service to its customers safely and
13 reliably which in the worst-case scenario could result in the loss of natural gas supply and its
14 customers being left without gas for heat, hot water, and cooking.

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⁴ CleanBC: our nature. our power. our future. (gov.bc.ca):
https://blog.gov.bc.ca/app/uploads/sites/436/2019/02/CleanBC_Full_Report_Updated_Mar2019.pdf.