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British Columbia
Utilities Commission

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June 15, 2021

Sent via email/eFile

FEI CPCN APPLICATION FOR OKANAGAN CAPACITY UPGRADE PROJECT	EXHIBIT A-10

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

Re: FortisBC Energy Inc. – Application for a Certificate of Public Convenience and Necessity for the Okanagan Capacity Upgrade Project – Project Number 1599152 – Information Request No. 3

Dear Ms. Roy:

Further to your November 16, 2020 filing of the above noted application, enclosed please find British Columbia Utilities Commission Information Request No. 3. In accordance with the regulatory timetable for this proceeding, please file your responses on or before Monday, July 5, 2021.

Sincerely,

Original signed by:

Patrick Wruck
Commission Secretary

PS/dg
Enclosure

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FortisBC Energy Inc.
Application for a Certificate of Public Convenience and Necessity
for the Okanagan Capacity Upgrade Project

INFORMATION REQUEST NO. 3 TO FORTISBC ENERGY INC.

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A. PROJECT NEED

65.0 Reference: PROJECT NEED
Exhibit B-2, BCUC IR 5.3
Exhibit B-14, BCUC IR 42.2.1, 42.4.1, 42.5, 42.5.1
Use Per Customer Peak (UPCpeak)

In response to British Columbia Utilities Commission (BCUC) Information Request (IR) 42.2.1, FortisBC Energy Inc. (FEI) states:

> Aside from FEI's adjustment to the system design temperature in 2017, the historical record does not show significant variation in residential UPCpeak. Commercial UPCpeak values have slightly increased and show periods of slight upwards and downwards trends. As such, FEI has no basis to conclude that the UPCpeak would increase or decrease materially in the next 10 years.

In response to BCUC IR 5.3, FEI provides the following table:

ITS Historical UPC_{peak} (GJ/Hr)

Year	ITS UPC_{peak} (GJ/Hr)		
	RS 1	RS 2	RS 3
2009	0.0487	0.1763	1.8831
2010	0.0479	0.1758	1.8749
2011	0.0470	0.1739	1.8718
2012	0.0475	0.1857	1.9181
2013	0.0485	0.1975	1.9629
2014	0.0494	0.2113	2.0586
2015	0.0499	0.2155	2.1111
2016	0.0502	0.2190	2.2240
2017	0.0452	0.1946	2.0447
2018	0.0449	0.1937	2.0176
2019	0.0448	0.1918	1.9723

ITS - Historical Rate Schedule 1 UPC_{peak}

In response to BCUC IR 42.4.1, FEI states:

> The relationship between annual energy savings and peak demand day savings resulting from FEI's current DSM [Demand Side Management] portfolio continues to be uncertain. FEI's analysis of peak demand versus the capacity of the Interior Transmission System indicates that the savings on peak day demand from the DSM portfolio that are reflected in current customer consumption used to calculate UPCpeak are currently insufficient to defer the need for the OCU [Okanagan Capacity Upgrade] Project.

In response to IR 42.5, FEI provides the following table:

Year	Forecast Cumulative Annual Energy Savings (GJ)*	Forecast Gross Annual Energy Demand (GJ)**	Savings as a percentage of Gross Energy Demand
2019	875,933	192,899,700	0.5
2020	1,796,901	193,249,740	0.9
2021	2,892,538	193,684,523	1.5
2022	4,067,599	194,132,108	2.1

Notes:

* Values shown are estimated (forecast) annual energy savings as shown in the FEI 2019 to 2022 DSM Expenditures Plan. Cumulative values for 2020 and 2021 were not presented in the DSM Plan and have been estimated here to account for those savings that do not persist through all years of the Plan. Therefore these values are slightly less than the sum of the annual savings for the prior years as shown in the DSM Plan.

** Values shown are from the Annual Demand forecast presented in the 2017 LTGRP, Appendix B, Reference Case Demand forecast.

In response to BCUC IR 42.5.1, FEI states:

> FEI has no data that demonstrate that a relationship between annual energy savings and peak demand reduction across its portfolio is one-to-one as the suggested method assumes…
> FEI believes the premise of directly applying annual DSM energy reductions to peak demand is incorrect for the reasons listed below:
> …
> The relationship between annual energy savings and peak demand reduction is likely to be different among different sectors and rate classes…
>
> When determining the system capacity, the location of peak demand on the system is highly relevant. The assumption that all customers across the system are experiencing the same savings in peak demand is not supported by evidence.

65.1 Please discuss whether FEI's position at this time is that historical UPCpeak trends and values are the only relevant considerations for forecasting the UPCpeak.

65.1.1 Please discuss whether FEI considers there are any circumstances where adjustments to the future UPCpeak, on an annual or other basis, would be appropriate.

65.1.2 Please discuss how FEI's approach to calculating the UPCpeak compares to other gas utilities.

65.2 Please confirm, or explain otherwise, that for the years 2017 – 2019 (i.e. the years after the adjustment to the system design temperature, which are used in the calculation of the peak demand forecast) there has been an annual reduction in UPCpeak for all rate schedules.

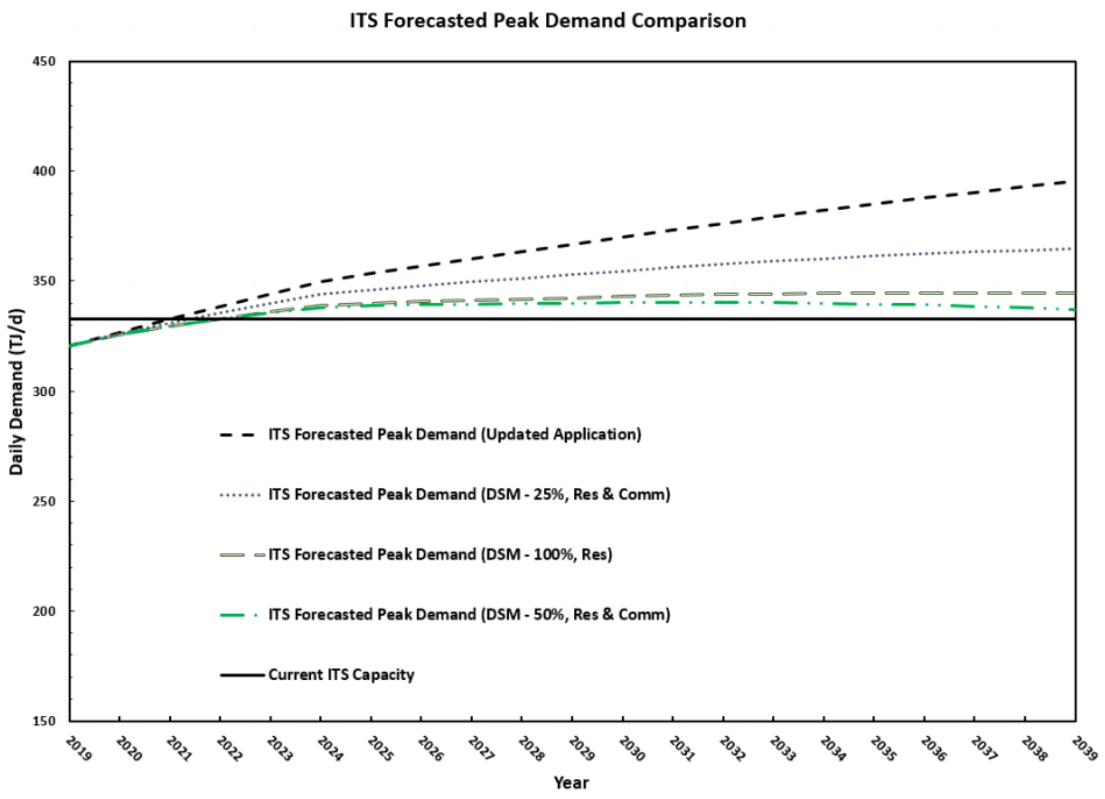
65.2.1 Please describe how the proportion of reduction in the UPCpeak compares to the proportion of annual energy savings from DSM programs in that time.

65.3 Please provide further explanation of the statement: "The relationship between annual energy savings and peak demand reduction is likely to be different among different sectors and rate classes."

65.4 Please provide further explanation of the statement: "The assumption that all customers across the system are experiencing the same savings in peak demand is not supported by evidence." Please identify any specific considerations with respect to customers in the Interior Transmission System (ITS).

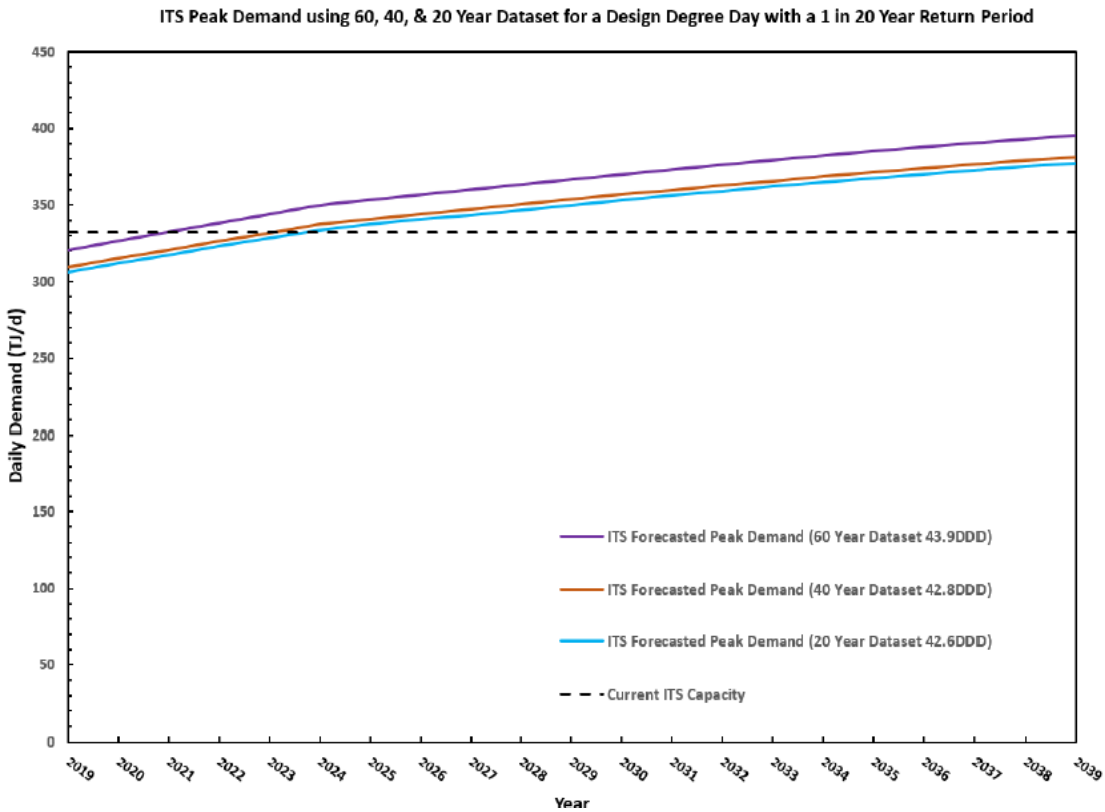
66.0 Reference: PROJECT NEED
Exhibit B-14, BCUC IR 42.5.1, 42.5.1.2, 43.2, 50.1
Peak Demand Scenarios

In response to BCUC IR 42.5.1, FEI provides the following figure showing peak demand forecasts with hypothetical savings from DSM measures:



In response to BCUC IR 42.5.1.2, FEI states: "At this time, FEI is not able to predict the direction of its annual incremental DSM energy savings beyond 2022."

In response to BCUC IR 43.2, FEI provides the ITS peak demand using a 60, 40 and 20 year dataset:



66.1 Please clarify whether in its response to BCUC IR 42.5.1, the line representing "DSM – 100% Res" is intended to represent residential and commercial customers.

66.1.1 If required, please correct the data in the figure and corresponding table to show the scenario with demand savings from commercial customers included.

66.2 Please complete versions of the table below for the following scenarios:

- ITS peak day forecasts in column B using a 60 year, 40 year and 20 year data-set for the calculation of the Design Degree Day (DDD);
- Capacity shortfall with and without short-term mitigation measures; and
- DSM savings in column E using the same assumptions as in FEI's response to BCUC IR 42.5.1, and an optional alternate scenario for post-2022 DSM savings (if FEI considers there is a more reasonable forecast assumption for future DSM energy savings following its current 2019 – 2022 plan).

A	B	C	D	E	F
Year	ITS Peak Day Forecast - 60 Year Dataset	Capacity Shortfall - With Mitigation Measures, Total	Capacity Shortfall - With Mitigation Measures, Percentage (C/B)	Cumulative DSM Energy Savings as Percentage of Total Energy Demand	Proportion of DSM Energy Savings Needed to Reduce Peak Demand (D/E)
	TJ/d	TJ/d	%	%	%
2021					
2022					
2023					
2024					
2025					
2026					
2027					
2028					
2029					
2030					
2031					
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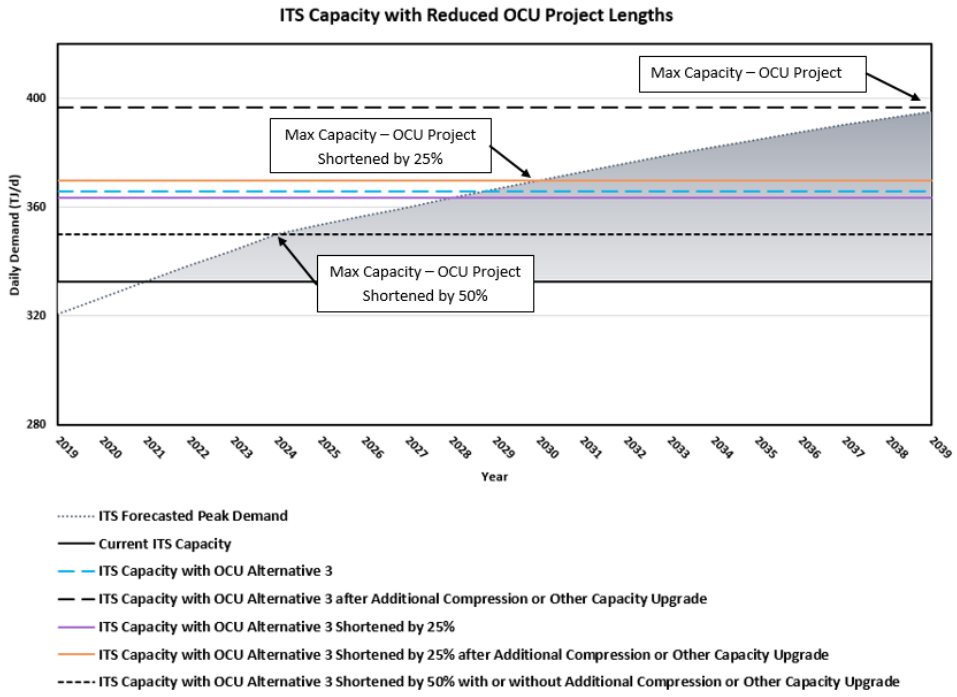
2039					

In response to BCUC IR 50.1, FEI provided the graph below illustrating the ITS capacity if the proposed pipeline was shortened by 25 percent or by 50 percent.



66.3 Please provide versions of the figures provided in response to BCUC IR 42.5.1 and IR 43.2 overlayed with the capacity of the alternatives outlined in the response to BCUC IR 50.1.

66.3.1 Please also estimate the length of pipeline that would be required to meet each of the peak demand forecasts outlined in BCUC IR 42.5.1 and IR 43.2.

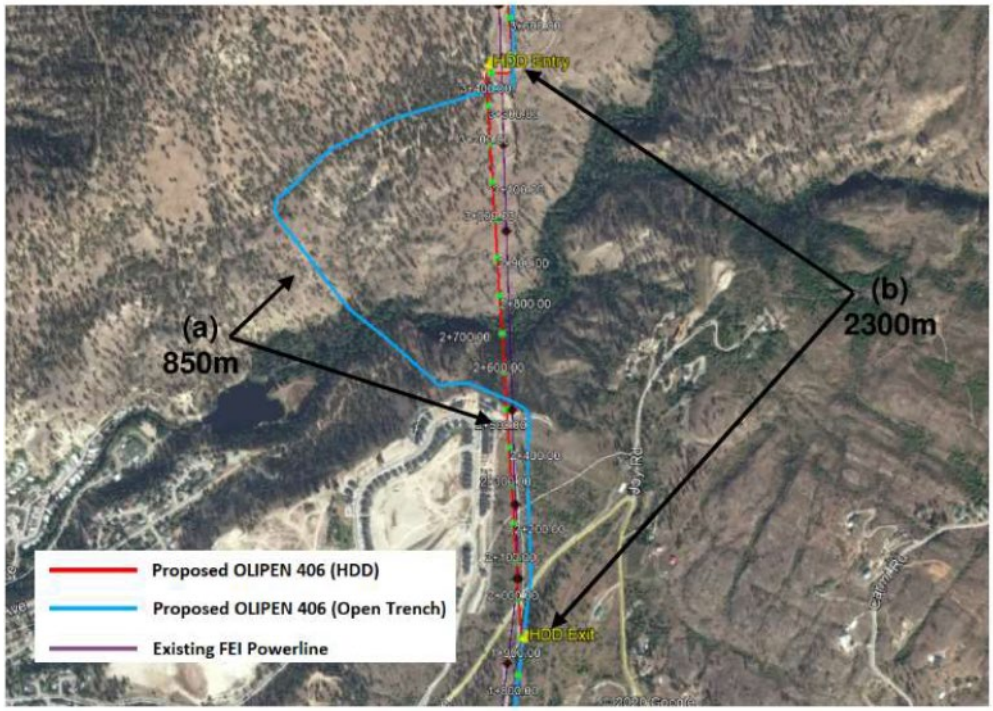
B. PROJECT DESCRIPTION

67.0 Reference: PROJECT DESCRIPTION
Exhibit B-14, BCUC IR 54.1; Exhibit B-2, BCUC IR 26.4
Penticton Creek Crossing

In response to BCUC IR 54.1, FEI states:

> In the event that a material change to the proposed route alignment, outside the bounds of the Penticton Creek crossing, is necessary (i.e., a portion of the pipeline cannot be constructed in the approved corridor), FEI will file an application for approval from the BCUC to modify the route at least 90 days before construction is proposed to commence.

In response to BCUC IR 26.4, FEI provides the following map showing the proposed route alignments for horizontal directional drilling (HDD) and open trench crossings of Penticton Creek.



67.1 Please identify the bounds of the Penticton Creek crossing on the map provided in the preamble and explain how these boundaries were determined.

67.2 Please discuss whether FEI has identified any potential issues with the proposed route alignments for HDD and open trench crossings that may require a portion of the route alignment to be outside the identified bounds of the Penticton Creek crossing.

67.3 Please discuss whether FEI has identified any alternative crossing of Penticton Creek which is partially or fully outside the identified bounds.

67.3.1 If yes, please describe the alternative in detail and provide a map showing the route.

C. DESCRIPTION AND EVALUATIONS OF ALTERNATIVES

68.0 Reference: DESCRIPTION AND EVALUATIONS OF ALTERNATIVES
Exhibit B-14, BCUC IR 50.2
Alternative 3 – OLI PEN 406 Extension

In response to BCUC IR 50.2, FEI states that constructing the OCU Project in phases (i.e. southern portion completed initially and northern portion later) would "ultimately be more costly, less efficient, and more impactful on the stakeholders and Indigenous groups."

68.1 Please provide the additional cost associated with a phased construction of the OCU Project.

68.2 Please describe in detail any efficiency impacts from a phased construction of the OCU Project.

68.3 Please explain why FEI believes that phased construction of the OCU Project would have a greater impact on stakeholders and Indigenous groups.

68.3.1 If available, please provide details of any discussion with stakeholders or Indigenous groups related to phased construction of the OCU Project.

D. CONSULTATION

69.0 Reference: CONSULTATION
Exhibit B-14, BCUC IR 64.2
Expropriation

In response to BCUC IR 64.2, FEI states:

> FEI has not been required to expropriate land rights with respect to any recent CPCN applications, including the Inland Gas Upgrades project which is currently underway. The OCU Project is unique due to the amount of new right-of-way to be acquired. Information on expropriation costs and process was determined through consultation with legal counsel, and considered in both the Project cost estimate and schedule.
>
> FEI considers land acquisition timelines within the overall Project schedule. Allowances are made for uncertainties arising from land acquisition activities. If FEI is unable to negotiate an acceptable agreement, FEI would rely on acquisition through expropriation as the last resort. As a legal process, expropriation timelines can be uncertain, and alternative scenarios are considered with regards to potential impacts on scheduling. For example, FEI may consider phasing work away from an expropriation property until access is granted.

69.1 Please provide an update (confidentially if necessary) on progress with respect to landowner negotiations.

69.1.1 Where expropriation remains a possibility, please provide additional details (confidentially) on the properties with respect to number, length of right of way sought, and current land-use.

69.2 In the event that expropriation is required, please discuss the contingency that has been provided for in terms of both timing and project cost.

69.3 Should any of the expropriations be challenged, please discuss the possible impacts on the project in terms of cost and timing, should alternative scenarios, such as phasing work away from the contested properties, be required.

70.0 Reference: CONSULTATION
Exhibit B-1-2 (Updated Application), Appendix I-4; Exhibit B-14, BCUC IR 62.1
Indigenous Engagement and Consultation

Appendix I-4 of the Updated Application includes Indigenous engagement logs prior to October 2020.

In response to BCUC 62.1, FEI updated Appendix I-4 to include engagement activities since filing the Updated Application.

70.1 Please provide an updated version of Appendix I-4 to include any engagement activities since responding to BCUC IR 62.1.