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October 19, 2021

Penticton Indian Band
c/o Mandell Pinder LLP
433 - 1080 Mainland Street
Vancouver, B.C.
V6B 2T4

Attention: Ms. Tarlan Razzaghi

Dear Ms. Razzaghi:

Re: FortisBC Energy Inc. (FEI)

Project No. 1599152

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

FEI Information Request (IR) No. 1 to Penticton Indian Band (PIB)

On November 16, 2020, FEI filed the Application referenced above. In accordance with the regulatory timetable established in British Columbia Utilities Commission Order G-275-21 for the review of the Application, FEI respectfully submits the attached IR No. 1 to PIB.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties

REQUESTOR NAME: **FortisBC Energy Inc. (FEI)**
IR ROUND NO: **1**
TO: **Penticton Indian Band (PIB)**
DATE: **Oct 19, 2021**
PROJECT NO: **1599152**
APPLICATION NAME: **FEI Application for a Certificate of Public Convenience and Necessity for the Okanagan Capacity Upgrade (OCU) Project (Application)**

1.0 Topic: Consultation

Reference: Exhibit C5-9, paragraph 2d and 25 (Written Submissions of Snpink'tna)

“no Crown consultation has occurred with PIB on the OCU Project;”

“There has been no Crown consultation on the OCU Project to date and no consultation has been directed as such by the Crown on the application for a certificate of public convenience and necessity before the BCUC. The Crown entity has sought PIB’s consent to the OCU Project with respect to whether PIB consents to the OCU Project proceeding through unceded lands”.

Reference: Exhibit B-1-2, Updated Application, pp. 119–120, 123 and Table 8-3; Exhibit B-14, BCUC-FEI IR 2.62.1 and 2.62.2

The referenced documents describe FEI’s engagement activities.

Reference: Exhibit B-14, BCUC-FEI IR 2.62.6

“The BCOGC is the Crown agency responsible for Indigenous consultation. The BCOGC’s Oil and Gas Activity Application Manual includes guidance for proponents regarding engagement, including encouraging early and frequent engagement and providing documentation for the BCOGC review process. FEI has heeded this advice and has engaged early and will continue to engage as often as it can. Evidence of FEI’s engagement is found in the responses to BCUC IR2 62.1 and 62.2, as well as in Section 8 of the Updated Application.

In addition to the engagement that FEI has and will be undertaking, during the BCOGC led permitting and consultation process that will occur prior to construction, more detailed Project information will be provided to Indigenous groups for review and comment including up-to-date mapping and environmental management plans. The BCOGC also acknowledges that “[w]here concerns are identified by the First Nation, there may be additional time required to complete the consultation process. The [BCOGC] will discuss those concerns and potential solutions with the First Nation. In some cases, this may include facilitating meetings between the First Nation and applicant to discuss concerns and proposed accommodation measures.”

Reference: BCOGC Oil and Gas Activity Application Manual, page 279, online at <https://www.bcoqc.ca/files/application-manuals/Oil-and-Gas-Activity-Application-Manual/OGAAM-Chapter-6.3.pdf>:

“As an agent of the Crown, the Commission fulfils any provincial obligation to consult with First Nations on any potential impacts to their rights recognized and affirmed by Section 35(1) of the Constitution Act, 1982.”

Reference: <https://www.bcoqc.ca/how-we-regulate/engage-with-indigenous-communities/commission-indigenous-relations/>

“The BC Oil and Gas Commission is committed to reconciliation with Indigenous People; this includes Provincial commitments to implementing principled, pragmatic, and organized approaches informed by the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), the Truth and Reconciliation Commission’s (TRC) Calls to Action, and the Supreme Court of Canada Tsilhqot’in decision and other established law. The provincial government passed the Declaration on the Rights of Indigenous Peoples Act in November 2019 to implement the UN Declaration, which the Truth and Reconciliation Commission confirms as the framework for reconciliation.”

- 1.1 Please confirm that FEI has engaged with PIB and shared information regarding the OCU Project. If not confirmed, please explain.
- 1.2 Please confirm that the BC Oil and Gas Commission has stated that it is responsible for the Crown’s legal obligations to consult and accommodate Indigenous groups within its regulatory scope. If not confirmed, please explain.
- 1.3 Please confirm that the BC Oil and Gas Commission has stated that it is committed to reconciliation with Indigenous People, including provincial commitments to implementing principled, pragmatic, and organized approaches informed by the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). If not confirmed, please explain.
- 1.4 Please explain which “Crown entity has sought PIB’s consent to the OCU Project”.

2.0 Topic: Project Need

Reference: Exhibit C5-9, Appendix E, page 19 - Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph

“The Project clearly will not serve BC energy objectives (g), (h), (i), and (l) nor contribute constructively towards BC’s objectives articulated in the 2018 CleanBC plan. Instead, the OCUP is a major infrastructure investment that will serve to expand consumption of natural gas use and raise GHG emissions, hampering the province from achieving its GHG goals. Higher consumption of traditional natural

gas is inconsistent with BC's energy objectives, yet the OCUP is a project to facilitate expanded consumption of natural gas"

Reference: Utilities Commission Act, ss. 28, 38 and 39

"Utility must provide service if supply line near

28 (1) On being requested by the owner or occupier of the premises to do so, a public utility must supply its service to premises that are located within 200 metres of its supply line or any lesser distance that the commission prescribes suitable for that purpose. ...

...

Public utility must provide service

38 A public utility must

(a) provide, and

(b) maintain its property and equipment in a condition to enable it to provide,

a service to the public that the commission considers is in all respects adequate, safe, efficient, just and reasonable.

No discrimination or delay in service

39 On reasonable notice, a public utility must provide suitable service without undue discrimination or undue delay to all persons who

(a) apply for service,

(b) are reasonably entitled to it, and

(c) pay or agree to pay the rates established for that service under this Act."

2.1 Does Dr. Joseph acknowledge that FEI has a legal obligation to serve existing and new customers under the Utilities Commission Act?

3.0 Topic: Peak Demand Forecasting

Reference: Exhibit C5-9, Appendix E, section 3.2, pages 3-4 (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

"Fortis' Forecasting Method Relies Substantially on Historical Trends ... Fortis therefore assumes that *future* gas consumption will be the function of the number of future gas customers, *past* gas customers' gas consumption during times of peak demand (i.e., cold winter days), and past temperatures in the service area."

- 3.1 Please confirm that Dr. Joseph's analysis does not anticipate a decline in the population of the area served by the ITS. If not confirmed, please provide the basis for the conclusions.
- 3.2 Given that to calculate peak demand FEI uses the most recent two years of customer consumption available at the time the forecast is prepared, please confirm that it would be more accurate to describe FEI's peak demand assessment as reflecting most recent consumption rather than past consumption? If not confirmed, please explain.

4.0 Topic: Peak Demand Forecasting

Reference: Exhibit C5-9, Appendix E, section 3.3, page 4 (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

On page 4 of his report, Dr. Chris Joseph states that "Fortis Does Not Directly Consider the Impacts of Climate Change In the 2020 application Fortis noted that gas demand is 'strongly correlated with ambient temperature and weather conditions', but the 2021 updated application Fortis does not include this sentence nor does it explicitly discuss climate change and the potential for climate change to influence gas demand."

Reference: Exhibit B-1-2, FEI's Application Section 3.3.1.1

"FEI's DDD temperature for any system operating within a region is the coldest day that is statistically likely to occur only once in any given 20 year period. In determining the DDD value, FEI uses an extreme value statistical method called the Gumbel Method of Moments. This method returns the expected extreme value for a given historical data set based on a specified return period. FEI uses a 1 in 20 return period on a data set that represents the coldest recorded daily mean temperature at the region's weather station each winter over a 60 year period."

Reference: Exhibit B-2, BCUC-FEI IRs 1.8.1 and 1.8.1.1

In the response to BCUC IR1 8.1 FEI provided a table showing that while not exceeding the current Design Degree Day (DDD) that in December 2008 the North/Central Okanagan came with 1.7 °C of the design temperature for that region.

In the response to BCUC IR1 8.1.1 FEI provided a table showing multiple instances where the current Design Degree Day (DDD) was exceeded in several cases multiple times in 1968 and 1969. While this period is within the current 60 year period used to calculate the DDD only the single most extreme value for each year is used in the statistical method. As a result the method to determine the DDD is not overly weighted by these multiple occurrences in the 1960's. In addition the 60 year period includes recent periods where warming trends may influence the observed extremes.

- 4.1 Does Dr. Joseph agree that FEI's method for determining the DDDs for the ITS includes weather data collected over the period where the climate is reported to be warming and the result therefore is influenced by warming trends that are currently present reflected in the weather record?
- 4.2 If Dr. Joseph does not agree, please explain Dr. Joseph's interpretation of FEI's method.

5.0 Topic: Peak Demand Forecasting

Reference: Exhibit C5-9, Appendix E, section 3.4, page 5 (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

"This review forecasted a 1.3 to 1.9°C rise in annual mean temperature as early as 2031 – just over a decade compared to the nearly 70 years it took for the same temperature rise to occur, and a 2008 federal government study predicted a temperature increase of over 1°C by the 2020s and over 2°C by the 2050s"

- 5.1 Does Dr. Joseph agree that FEI must design its infrastructure to sustain loads under worst-case (design) cold conditions, rather than "average" days to avoid a potential loss of service, including natural gas heating, to customers? If not, then please explain.
- 5.2 Can Dr. Joseph confirm that the "low-end" projection offered by the referenced report was a warming of 0.8°C, which could occur as late as 2050 according to this same report? If not confirmed, please explain.

6.0 Topic: Peak Demand Forecasting

Reference: Exhibit C5-9, Appendix E, section 3.5, page 6 (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

On page 6 of his report, Dr. Chris Joseph states that "Fortis Refuses to Consider Future Climate Change in its Gas Demand Forecasting"

- 6.1 Does Dr. Joseph agree that if FEI was to revise its modelling to place less emphasis on recent demand and greater emphasis on warmer average temperatures, that would increase the risk of adverse economic and health impacted to the communities served by the ITS if extreme cold events did occur?
 - 6.1.1 If not, why? Please elaborate.

7.0 Topic: Peak Demand Forecasting

Reference: Exhibit C5-9, Appendix E, section 3.9, page 12 (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

“Fortis assumes continual growth for gas demand in the Okanagan region through 2039 as I discuss above in s.2 and as illustrated by Fortis in Figure 1, but this forecast is inconsistent with BC government modeling which forecasts that natural gas demand is going to decline.”

7.1 Please confirm that by “BC government modeling”, Dr. Joseph is referring to the Navius report, and not modeling prepared by the provincial government. If confirmed, please provide a reference for this statement. If not confirmed, please provide the modelling to which Dr. Joseph is referring.

8.0 Topic: Peak Demand Forecasting

Reference: February 2021: Historic Winter Storm and Arctic Outbreak
<https://www.weather.gov/fwd/Feb-2021-WinterEvent>
<https://www.nytimes.com/2021/02/19/us/texas-deaths-winter-storm.html>

With respect to the record setting extreme cold event that occurred in Texas in February 2021 that overwhelmed that state's gas and electric infrastructure and resulted in multiple deaths and very severe economic and social consequences for the state's residents:

8.1 Please discuss whether or not Dr. Joseph would potentially attribute this extreme cold event to climate change.

8.2 Please explain whether Dr. Joseph agrees that record setting extreme cold events may continue to occur in British Columbia. If not, why?

8.3 Does Dr. Joseph agree that both hot and cold extreme weather events have been linked to climate change?

9.0 Topic: Peak Demand Forecasting

Reference: Exhibit C5-9, Appendix E, section 3.4, pages 4-5 (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

“A 2020 report, Climate Projections for the Okanagan Region, prepared through a collaboration of regional districts in the Okanagan, the federal government, the regional water board, and BC’s preeminent climate modeling institution, the Pacific Climate Impacts Consortium (PCIC) (“2020 Okanagan Report”) noted warming weather and increasing frequency of extreme weather events as a result of climate

change in the past 20 years, including ice jams, catastrophic wildfires, and flooding.”

Reference: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation

IPCC, 2012 – Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (Eds.) Available from Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU ENGLAND, 582 pp. Available from June 2012

Chapter 3 Pg 116: A large amount of the available scientific literature on climate extremes is based on the use of so-called ‘extreme indices,’ which can either be based on the probability of occurrence of given quantities or on threshold exceedances (Section 3.1.2). Typical indices that are seen in the scientific literature include the number, percentage, or fraction of days with maximum temperature (Tmax) or minimum temperature (Tmin), below the 1st, 5th, or 10th percentile, or above the 90th, 95th, or 99th percentile, generally defined for given time frames (days, month, season, annual) with respect to the 1961-1990 reference time period. Commonly, indices for 10th and 90th percentiles of Tmax/Tmin computed on daily time frames are referred to as ‘cold/warm days/nights’

Chapter 3 Pg 133: Trends in temperature extremes (either observed or projected) can sometimes be different for the most extreme temperatures (e.g., annual maximum/minimum daily maximum/minimum temperature) than for less extreme events [e.g., cold/warm days/nights; see, for instance, Brown et al. (2008) versus Alexander et al. (2006)]. One reason for this is that ‘moderate extremes’ such as warm/cold days/nights are generally computed for each day with respect to the long-term statistics for that day, thus, for example, an increase in warm days for annual analyses does not necessarily imply warming for the very warmest days of the year.

- 9.1 Please discuss/confirm whether the included references from the IPCC 2012 Report indicate that the trend in the Coldest day / Coldest Night from the RDNO 2020 Report should or should not be directly be applied to FEI's Extreme Low temperature derived from and Extreme Value Analysis of the observed most extreme temperatures.
- 9.2 Please confirm that climate change could result in a colder or unchanged extreme temperature even while a coldest day / coldest night indicator may be warming. If not confirmed, please explain.

10.0 Topic: Peak Demand Forecasting

Reference: Exhibit C5-9, Appendix E, section 3.4, page 6 (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

“Heating degree days – an indicator of the amount of energy needed to heat buildings – are projected to decrease by about 20% by the 2050s. Accordingly, a 2°C change in coldest night, 10 days fewer ice days, a 7% reduction in heating degree days can be expected by 2030 – only nine years away.”

10.1 Does Dr. Joseph acknowledge that an average unit is not the same as a peak unit of measure? If not, please explain.

10.2 If so, does Dr. Joseph agree that a 7% reduction in average heating degree days may not be sufficient to mitigate a 9% increase in peak load demand by 2030? If not, please explain.

11.0 Topic: Climate Change

Reference: Exhibit C5-9, Appendix E, section 3.8, page 12 (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

“The recent BC government study forecasted a decline in household and overall natural gas demand under the climate policies in place in 2017, and even more of a decline under the stronger policies in the CleanBC plan.”

11.1 Can Dr. Joseph confirm that average household natural gas demand is not the same unit of measure as the peak household natural gas demand? If not, why?

11.2 Does Dr. Joseph acknowledge that it is possible to have a decrease in overall household demand while having an increase peak household demand? If not, why?

12.0 Topic: Climate Change

Reference: Exhibit C5-9, Appendix E, section 3.13, pages 17-18 (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

“While Fortis’ chosen method of gas demand forecasting used in the OCUP application leads to a conclusion that expansion of gas distribution infrastructure is necessary, it is important to remember that Fortis’ objective as an energy utility is to sell energy, such as gas. Fortis serves five times more gas customers than electricity, and Fortis noted in the LTGRP that while carbon policy and competition from other energy types create a risk for its gas distribution business it sees potential for opportunities for growth in gas demand from the transportation sector

and industrial growth. These statements signal Fortis' interest in maximizing sales when it is clear from BC's energy objectives that the goal is to reduce gas consumption, not maximize it."

12.1 Does Dr. Joseph acknowledge that increased natural gas sales benefit customers through spreading fixed costs over more volumes, but do not result in a benefit to FEI under regulatory rate setting methods? If not, why?

13.0 Topic: Evaluation Criteria

Reference: Exhibit C5-9, Appendix E (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

"The problem is that these criteria and their weights reflect the corporate, financial, and other interests of Fortis. While Fortis' internal staff may have various professional titles, accreditations, and skills within their professions, these staff still operate within an organizational culture and orientation and have an occupational interest to further the interests of the organization itself."

13.1 Please explain why in Dr. Joseph's view system capacity is a problematic criterion.

13.1.1 Please explain for whom this criterion is problematic.

13.2 Please explain why in Dr. Joseph's view operational flexibility is a problematic criterion.

13.2.1 Please explain for whom this criterion is problematic.

13.3 Please explain why in Dr. Joseph's view environmental, public and Indigenous impacts are problematic criteria.

13.3.1 Please explain for whom these criteria are problematic.

13.4 Please explain why in Dr. Joseph's view rate impacts is a problematic criterion.

13.4.1 Please explain for whom this criterion is problematic.

14.0 Topic: Evaluation Criteria

Reference: Exhibit C5-9, Appendix E, page 27 (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

"BC Hydro, for example, regularly involves stakeholders in not just developing evaluation criteria but evaluations themselves. In a context of the United Nations Declaration on the Rights of Indigenous People, BC's *Declaration on the Rights of*

Indigenous Peoples Act, and Fortis' own stated interest in further reconciliation in its recently filed LTERP, the omission of Indigenous peoples in project planning is inconsistent. Therefore, the project design process is not only swayed by Fortis' perspective on what matters (i.e., the evaluation criteria discussed above in s.4.2) but is then evaluated through the lens of Fortis' interests.”

14.1 Please confirm that BC Hydro is a Crown agent.

15.0 Topic: Economic Benefits

Reference: Exhibit C5-9, Appendix E, section 5, page 32 (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

“If built, the OCUP – like these other Fortis projects – will involve investment, labour will be needed to construct and operate the Project, and some contracts may go to local and Indigenous contractors, however none of this establishes that there will be a net economic benefit to BC from the Project. Spending, contrary to Fortis' statement just quoted, is not indicative of a net economic benefit. What is needed to establish net economic benefits of the OCUP is a comprehensive summing of the costs and benefits of this Project relative to the costs and benefits of alternative investments that would be made if this Project did not proceed. Cost-benefit analysis and its variants are appropriate methods to answer such questions.”

15.1 Please confirm that in his report Dr. Joseph does not include an analysis of the societal cost of natural gas curtailment in the communities of West Kelowna, Lumby and Lavington in its net benefit analysis. If not, why?

15.2 Please confirm that in his report Dr. Joseph does not quantify the economic costs of natural gas curtailment in West Kelowna, Lumby and Lavington in its net benefit analysis. If not, why?

16.0 Topic: Economic Benefits

Reference: Exhibit C5-9, Appendix E, page 37, Table 3 (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

16.1 Please confirm that in his report Dr. Joseph does not quantify the alleged effects on land access.

16.2 Please confirm that in his report Dr. Joseph does not quantify the alleged effects on aesthetics.

16.3 Please confirm that in his report Dr. Joseph does not quantify the alleged effects on property values.

1.0 Topic: Economic Benefits

Reference: Exhibit C5-9, Appendix E, page 36 (Fortis OCUP: Critique of Public Convenience and Necessity Report of Dr. Chris Joseph)

“Secondly, as the Project’s footprint will cross Syilx territory that have not been ceded by treaty, the Project poses impacts on Indigenous economic interests. Fortis has noted potential opportunities for Indigenous workers and businesses with the Project, and Fortis indicates in its application that it is in discussions with Indigenous groups about such opportunities, but opportunities and economic benefits from the use of Indigenous lands and resources are not the same thing.”

16.4 Does Dr. Joseph agree that economic benefits from the OCU Project to the Syilx people are possible?

17.0 Topic: Environmental Impact Assessment and Mitigation

Reference: Exhibit C5-9, Appendix F (Okanagan Capacity Upgrade Project Environmental Summary Report of LGL Limited)

17.1 Please confirm that the LGL Limited PIB: OCUP Environmental Summary Report does not conclude that potential environmental impacts discussed in the report cannot be mitigated. If not, please identify the portion of the report that states this.

18.0 Topic: Environmental Impact Assessment and Mitigation

Reference: Exhibit C5-9, Appendix F, section 2, page 1 (Okanagan Capacity Upgrade Project Environmental Summary Report of LGL Limited)

18.1 Please confirm that the LGL studies and the Hemmera studies used different study areas.

18.1.1 If confirmed, why was the difference in study areas not defined or discussed in the LGL report?

18.2 Please confirm if the differences in study areas may lead to the identification of the alleged “gaps and deficiencies”. If not, please explain.

19.0 Topic: Environmental Impact Assessment and Mitigation

Reference: Exhibit C5-9, Appendix F, section 3, pages 3-4 (Okanagan Capacity Upgrade Project Environmental Summary Report of LGL Limited)

“Prior to completing desktop and field-based studies of specific environmental receptors, we completed a critical review of environmental documents associated with the proposed project. The intent of the review was to identify whether notable deficiencies or data gaps existed relative to those documents. Specifically, we reviewed:

- Fortis Energy Inc. Application for a Certificate of Public Convenience and necessity (CPCN) for the Okanagan Capacity Upgrader Project: Appendix F: Environmental Overview Assessment
- Okanagan Capacity Upgrade Project: Penticton Creek Horizontal Directional Drilling: Environmental Management Plan PIB: OCUP Environmental Summary Report Assessments OCUP Environmental Summary Report
- Okanagan Capacity Upgrade Project: Pre-construction Site Assessment – Penticton Creek HDD
- Responses to Information Requests contained in 210513_FEI OCU CPCN_PIB IR1 Response_FF

Our review revealed considerable data gaps and deficiencies making it difficult to assess the potential impacts of the proposed project or how the proposed environmental management would mitigate those impacts.”

19.1 Was the full scope version of the Okanagan Capacity Upgrade Pre-Construction Site Assessment, which was provided to PIB on February 2, 2021, also reviewed or was just the OCU Project: Pre-construction Site Assessment – Penticton Creek HDD report reviewed?

19.1.1 If the full scope report was not reviewed, why not?

20.0 Topic: Environmental Impact Assessment and Mitigation

Reference: Exhibit C5-9, Appendix F, section 4.1.1 (Okanagan Capacity Upgrade Project Environmental Summary Report of LGL Limited)

The report identifies plants that are “in the nearby area” of the Project.

20.1 Please define “nearby” as used in the referenced text.

21.0 Topic: Environmental Impact Assessment and Mitigation

Reference: Exhibit C5-9, Appendix F, section 4.1 (Okanagan Capacity Upgrade Project Environmental Summary Report of LGL Limited)

“Subsequent reviews (LGL Limited 2021a,b,c) found that the project’s environmental documents had failed to detect all CDC recorded occurrences of at-risk plants and communities in the project area, and that similar erroneous information regarding the lack of CDC recorded occurrences of at-risk plants was repeated in the EOA, PCSA, and EMP. For example, our review of the provincial database identified the following provincial Red- or Blue-listed (and OGC-listed) species in the nearby area or immediate vicinity of the Project:

- Pale evening primrose, *Oenothera pallida ssp. pallida* (above Penticton at project terminus).”

21.1 Please confirm that the occurrence of pale evening primrose was identified in the figures of the Hemmera reports, but was located outside of the defined study area.

22.0 Topic: Environmental Impact Assessment and Mitigation

Reference: Exhibit C5-9, Appendix F, section 4.1 (Okanagan Capacity Upgrade Project Environmental Summary Report of LGL Limited)

“Subsequent reviews (LGL Limited 2021a,b,c) found that the project’s environmental documents had failed to detect all CDC recorded occurrences of at-risk plants and communities in the project area, and that similar erroneous information regarding the lack of CDC recorded occurrences of at-risk plants was repeated in the EOA, PCSA, and EMP. For example, our review of the provincial database identified the following provincial Red- or Blue-listed (and OGC-listed) species in the nearby area or immediate vicinity of the Project:

- Pale evening primrose, *Oenothera pallida ssp. pallida* (above Penticton at project terminus).”
- The Dalles milk-vetch, *Astragalus sclerocarpus* (Skaha Lake just south of Penticton)
- Small-flowered lipocarpha, *Lipocarpha micrantha* (directly on the opposite side of Okanagan Lake)
- Short-rayed aster, *Symphyotrichum frondosum*, (Skaha Lake)
- Columbian carpet moss, *Bryoerythrophyllum columbianum* (along lakeshore north of Naramata)
- Tiny tassel, *Crossidium seriatum* (Johnson Spring Creek)
- Nugget moss, *Microbryum vlassovii* (Penticton)

- Toothcup, *Rotala ramosior* (directly across the lake at Sun-Oka)
- Prairie gentian, *Gentiana affinis* (Summerland)

Moreover, Thurber’s needlegrass does not range particularly closely to the study area, the closest recorded locations being Oliver/Osoyoos — hence it was unclear why this species was singled out for mention in the EOA over other, more local species.”

22.1 Please confirm that the occurrences identified above are beyond the defined study areas of the Hemmera reports, some by several kilometres.

23.0 Topic: Environmental Impact Assessment and Mitigation

Reference: Exhibit C5-9, Appendix F, section 4.1.1 (Okanagan Capacity Upgrade Project Environmental Summary Report of LGL Limited)

“It was further noted (LGL Limited 2021a) that the Province has mapped the following at-risk ecological communities within, or near to, the study area:

- Trembling Aspen / Common Snowberry (possibly overlapping with project’s south terminus)
- Common Cattail Marsh
- Baltic Rush / Common Silverweed
- Hard-stemmed Bulrush Deep Marsh
- Big Sagebrush / Bluebunch Wheatgrass”

23.1 Please confirm that the occurrences identified above are beyond the defined study areas of the Hemmera reports.

24.0 Topic: Environmental Impact Assessment and Mitigation

Reference: Exhibit C5-9, Appendix F, Section 4.1.3.2 At-Risk Ecological Communities (Okanagan Capacity Upgrade Project Environmental Summary Report of LGL Limited)

24.1 What are the distances of the identified ecological communities from the proposed centreline?

25.0 Topic: Environmental Impact Assessment and Mitigation
Reference: Exhibit C5-9, Appendix F, Section 4.3.2.2 – Sensitive Ecosystem Inventory (Okanagan Capacity Upgrade Project Environmental Summary Report of LGL Limited)

25.1 Please confirm that the descriptions of the ecosystems are for the entire province, and not necessarily specific to the study area.

26.0 Topic: Environmental Impact Assessment and Mitigation
Reference: Exhibit C5-9, Appendix F, Section 4.3.3.2 Field Assessment (Okanagan Capacity Upgrade Project Environmental Summary Report of LGL Limited)

26.1 Please confirm that no active dens or migration corridors were identified during the field assessment.

27.0 Topic: Environmental Impact Assessment and Mitigation
Reference: Exhibit C5-9, Appendix F, Section 5.2 – Ungulate Winter Range and Old Growth Mitigations sections (Okanagan Capacity Upgrade Project Environmental Summary Report of LGL Limited)

27.1 Please explain why the creation of an additional, separate ROW is the recommended mitigation compared to a slightly wider single ROW?

27.2 Please confirm that a separate ROW may have more potential environmental impacts than a slightly wider parallel one? If not confirmed, please explain why.

28.0 Topic: Environmental Impact Assessment and Mitigation
Reference: Exhibit C5-9, Appendix F, Table 2 (Okanagan Capacity Upgrade Project Environmental Summary Report of LGL Limited)

Hemmera QEP in response - "Deer winter range is made up of several habitat components, including shrub forage habitat, security cover, thermal cover, and snow interception habitat. The PPxh is within the very shallow snowpack zone, the IDfxh and IDFdm are in the shallow snow zone and the MSdm is within the moderate snow zone. In shallow snow zones ungulates do not generally need to select areas that reduce snow depth, and availability of forage is more important than canopy closure or tree age. Hence, there are no canopy closure criteria specified in the provincial management strategy for this UWR for the low-snowpack IDfxh or the PPxh."

- 28.1 Please explain why the winter range quality was based solely on modelling of the snow interception habitat component, and modelled the same way within all subzones, including the low snowpack subzones.
- 28.2 Please explain why the model of snow interception habitat does not include tree species in its criteria as suitable snow interception cover, as defined in the management strategy for this UWR, is restricted to stands where Douglas-fir is dominant.