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Utilities Commission

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December 19, 2019

Sent via email/eFile

CB POWERLINE LTD. – EXEMPTION APPLICATION EXHIBIT A-7

Mr. Jim Pinter
Pinter Electrical Consulting Inc.
7229 Heritage Court
Lake Country, BC V4V 2L3
jim@pinterco.ca

Re: CB Powerline Ltd. – Application for an Exemption from Part 3 of the *Utilities Commission Act*, pursuant to Section 88(3) – Project No. 1599020 – Information Request No. 2

Dear Mr. Pinter:

Further to the June 13, 2019 filing of the above-noted application, enclosed please find British Columbia Utilities Commission Information Request No. 2. In accordance with the regulatory timetable established by Order G-315-19, please file your responses on or before Thursday, January 16, 2020.

Sincerely,

Original signed by:

Patrick Wruck
Commission Secretary

DB/dg
Enclosure

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CB Powerline Ltd.
Application for an exemption from Part 3 of the *Utilities Commission Act*, pursuant to section 88(3)

INFORMATION REQUEST NO. 2 TO CB POWERLINE LTD.

Table of Contents **Page no.**

A. APPLICANT

20.0 Reference: CB POWERLINE LTD.
Exhibit B-2, BCUC IR 3.1, 3.3, 3.4, 3.4.1.1, 3.5, 3.11
Applicant

In response to British Columbia Utilities Commission (BCUC) Information Request (IR) 3.1, CB Powerline Ltd. (CBP) stated:

> Monopoly power risks can include actions such as deferring or eliminating various maintenance activities in order to maximize short-term value for the corporation (i.e., externalizing risk/cost to its shareholders). As discussed in section 4.2 of the original application, for example, this risk does not exist for CBP's shareholders (i.e., the Buyers), as CBP:
>
> - Is a community member founded and administered not-for-profit corporation.
> - Directors and officers are members of the Cosens Bay community.
> - Buyers are members of the Cosens Bay community.
> - Service area is limited to Cosens Bay.
>
> Practically, CBP cannot externalize such risk in a manner that a public utility with monopoly power could. Further, as community members are responsible for the decisions of CBP they are the ones that would incur any related consequences; there is simply no incentive or structure for CBP to behave like a public utility with monopoly power.

In response to BCUC IR 3.3, CBP stated:

> As required by the Shareholders' Agreement, there will be at least one annual meeting of shareholders. At the annual meeting, or other properly constituted shareholder

meetings, decisions such as the election/re-election of Directors, project budgeting, and the annual operating budgets will be subject to an ordinary (i.e., majority or 50%) resolution of the shareholders. CBP recognizes that annual budget approval by shareholders may be unusual, however, given the close-knit community and the capital dollars involved, it was proactively decided to seek shareholder approval of the budget annually.

20.1 Please explain why CBP decided to have the project budgeting and the annual operating budgets subject to an ordinary resolution of the shareholders.

20.1.1 Please explain whether CBP considered alternatives to having the budgets subject to ordinary resolution of the shareholder. If so, please provide details of the options considered and explain why the options were discounted.

20.2 CBP states that an example of monopoly power risks can include actions such as deferring or eliminating various maintenance activities in order to maximize short-term value for the corporation. Considering that project budgeting and annual operating budgets will be subject to an ordinary resolution of the shareholders and that the end-users of the utility are also the shareholders, please explain what mechanisms are be in place to ensure that essential maintenance activities are not deferred or eliminated because the individual shareholders may not be willing or able to meet the capital required to undertake the work.

In response to BCUC IR 3.4, CBP stated:

> Section 2.3 of the Shareholders' Agreement states that the corporation shall have up to five (5) directors. Each of these directors concurrently hold the positions of officers. CBP does not have any employees, nor are any contemplated. There is no minimum number of directors specified in the Shareholders' Agreement; nevertheless, at all times the directors must adhere to the terms and conditions of the Shareholders' Agreement. It is CBP's view that this structure, and associated number of directors, is sufficient for it to function effectively

20.3 Please explain why the Shareholders' Agreement does not specify a minimum number of directors.

20.4 In the absence of any employees, please discuss what the roles and responsibilities of CBP's volunteer directors would be.

In response to BCUC 3.4.1.1, CBP stated:

> CBP remains of the view that this management approach is both practicable and sufficient for the efficient, on-going operation of CBP. Further, such a management approach is common across many private enterprises in Canada.

20.5 Please provide examples of any public utilities that utilize a similar management approach to the one proposed by CBP.

In response to BCUC IR 3.11, CBP stated:

> It is the view of CBP's officers/directors, all of whom have more than 30 years direct industry experience with private and public enterprise, that the standard of care is the same.

20.6 Please discuss what risks to the ongoing safe and reliable operation of the utility and to customers if future directors with comparable industry experience cannot be identified.

20.6.1 Please discuss whether CBP would seek to employ external directors with relevant experience that are not shareholders of CBP. If not, why not? And what steps will CBP take to ensure the continued safe and reliable operation of the utility?

21.0 Reference: CB POWERLINE LTD.
Exhibit B-2, BCUC IR 3.7, 3.7.1, 3.8.3, 3.8.5, 3.10.1; Exhibit B-1, Attachment A-1
Operation and Maintenance Contractor

In response to BCUC IR 3.7, CBP provided examples of the Pinter Electrical Consulting Inc.'s (PEC) experience in undertaking project of this type and cites experience with submarine cable specification, procurement, and installation and directional drilling.

21.1 Please discuss further PEC's experience with submarine cables and directional drilling. Please provide: details of the referenced projects; discus any issues or challenges encountered with the work; and explain how the lessons learnt have informed the design of CBP's project.

In response to BCUC IR 3.7.1 CBP provides examples of similar projects undertaken by PEC.

21.2 Please provide any further examples of distribution system projects similar to that proposed by CBP, undertaken by PEC in British Columbia.

21.3 Please discuss whether CBP or PEC has undertaken any similar projects which have been subject to exemptions from regulation. Please provide details of any such projects.

In response to BCUC IR 3.8.3, CBP stated:

> At this stage in the Project (i.e., design/development), it is CBP's plan to employ a qualified contractor to operate and maintain the distribution system. If/as the Project advances, CBP will evaluate and select a qualified contractor based upon a number of criteria, including for example relevant experience, proximity to project location, health, environment and safety policies, and suitable commercial terms.

CBP stated further, in response to BCUC IR 3.8.5:

> PEC has direct experience employing subcontractors to provide ongoing operations and maintenance services; it is likely CBP will rely upon this expertise at an appropriate time in the Project's lifecycle.

In Attachment A-1 of Exhibit B-1, CBP submits a copy of the Power Purchase Agreement which states that the:

> Seller [CBP] shall maintain and operate the Power Line materially in compliance with Good Operating Practice and Applicable Law and shall hold, maintain and comply with all Approvals required by Applicable Law in order to fulfill its obligations hereunder.

21.4 Please discuss the criteria CBP will use to evaluate qualified contractors to operate the utility.

21.4.1 Please clarify what would be an acceptable "proximity to project location."

21.4.2 Please confirm whether the qualified contractor would also be required to coordinate with local area first responders in case of an emergency.

21.5 Please provide examples of PEC's direct experience employing subcontractors to provide ongoing operations and maintenance services of similar distribution utility projects.

21.6 Please confirm whether CBP has defined to its Buyers the quality and timeliness of emergency utility service response that will be provided in compliance with Good Operating Practices.

21.6.1 If not, does CBP intend to do so. If so, please elaborate on the quality and timeliness of emergency response that will be expected.

21.6.2 Please elaborate on Power Purchase Agreement definition of Good Operating Practices.

21.7 Please discuss what responsibilities CBP anticipates the contractor will need to undertake to operate and maintain the distribution system.

In response to BCUC IR 3.10.1, CBP provided an overview of the inspection work required for the submarine cable.

21.8 Please explain whether CBP's forecast operating costs currently include any allowances for inspecting the submarine cable.

21.8.1 If so, please provide the allowance amount and detail the assumptions made.

21.8.2 If not, please discuss how CBP would fund the inspection costs.

21.9 Please explain whether CBP's forecast operating costs currently include any allowances for contracted third parties.

21.9.1 If so, please provide the allowance amount and detail the assumptions made.

21.9.2 If not, please discuss how CBP would fund the costs for contracted third parties.

B. PROJECT NEED, ALTERNATIVES AND JUSTIFICATION

22.0 Reference: PROJECT RATIONALE
Exhibit B-2, BCUC IR 4.10, 5.2, 5.3, 10.2; Attachment 4.10
Project Alternatives

In response to BCUC IR 4.10, CBP provided correspondence between CBP and British Columbia Hydro and Power Authority (BC Hydro) regarding the possible connection options and alternatives.

Page 1 of Attachment 4.10 provides e-mail correspondence between BC Hydro and PEC, which states:

> BCHydro will not be building or taking ownership of customer build lines for the proposed Cosens bay project however we may be able to secondary meter customers and bill them directly given that services are built to BCH standards (see our secondary metering guide). The CB powerline would receive a credit for owning and maintaining the infrastructure through our rate structure.

22.1 Please discuss what consideration CBP gave to the option of BC Hydro providing secondary meter services. In your response please discuss the possible benefits or risks considered and explain why the option was deemed to not be feasible.

In response to BCUC IR 10.2, CBP stated:

> The material agreements required to support route alternatives 2B and 2C, which will allow the Project to proceed as planned, include the following:
>
> - Option Agreements have been signed with three property owners on the west side of Kalamalka Lake. These agreements, and the subsequent statutory right-

of -way agreements, will allow CBP to gain access from the BCH proposed point of connection along Highway 97 down to the lakeshore. It should be noted that since the Option Agreements have been executed, one agreement holder has signaled their desire to withdraw from the Project. At this stage, CBP is attempting to work with this landowner to see if they would rejoin the Project; in the meantime, it is the Project's view that a valid agreement remains in place and both alternate routes remain feasible.

- A statutory right-of-way agreement with KPE for Landing Site #2, where the submarine cable lands on the east side of Kalamalka Lake, and for Project infrastructure on KPE lands is required. CBP currently has a letter of support from KPE indicating they intend to enter into a formal agreement with CBP.

- A road use agreement is required by MOTI for use and occupation of a provincial public highway by Project infrastructure. This agreement would cover all Project works within MOTI roadways including Landing Site #1 (if ultimately advanced). CBP met with the MOTI on June 20, 2019 to review the Project and no issues were immediately raised by MOTI based on the Project scope presented by CBP.

In response to BCUC IR 5.2, CBP provides Table 5.2 which summarizes the comparative evaluation of the route alternatives considered for the Project:

Table 5.2: Comparative Evaluation	**Route Alternative**					
Route Selection Criteria	**1A**	**2A**	**1B**	**2B**	**1C**	**2C**
BC Hydro three phase power proximity	A	A	✓	✓	A	A
Access to West Kalamalka Lake	x	x	✓	✓	A	A
Access to East Kalamalka Lake	A	✓	A	✓	A	✓
Private landowner negotiations	x	x	A	A	✓	✓
Horizontal Directional Drill into Kalamalka Lake	x	x	✓	✓	A	A
Regulatory and environmental constraints	A	✓	A	A	A	✓
Submarine Cable Length	✓	✓	x	A	x	A

The result of this comparative evaluation was the identification two feasible alternatives: 2B and 2C. In comparing alternatives 2B and 2C, and noting both remain feasible, it was determined to pursue both options in parallel as the Project works through its regulatory process.

In response to BCUC IR 5.3, CBP stated:

During the Project's operations phase, revenue requirements are simply the sum of incurred third-party costs, both of a variable and fixed cost nature. The revenue requirement is equal to the recovery of actual costs incurred (again CBP is operated as a not-for-profit entity). Given that, collectively, the Seller and Buyers under the [Power Purchase Agreements] PPAs are one and the same, determining the revenue requirement of CBP is not seen as a meaningful measure and thus has not been done.

22.2 Please explain whether CBP considered capital costs in its evaluation of the alternative route options.

22.2.1 If so, please provide details on estimated costs for each option.

22.2.2 If not, please explain why not.

22.3 Please elaborate further on the statement that “determining the revenue requirement of CBP is not seen as a meaningful measure.” In your response please discuss what consideration CBP gave to ongoing operating costs, emergency reserve funds and the affordability of rates.

22.4 Please provide an update on the progress of CBP’s negotiations with the landowner who has signaled a desire to withdraw from the Project.

22.5 If CBP’s negotiations with the landowner are not successful, please explain whether preferred route alternatives 2B and 2C remain viable.

22.5.1 If 2B and 2C are not viable, please discuss which route alternatives CBP will pursue and provide the anticipated costs.

22.6 Please provide a copy of the Option Agreement.

22.7 Please confirm if CBP has entered into a statutory right-of-way agreement with KPE.

22.7.1 If confirmed, please provide details of the agreement.

22.7.2 If not confirmed, please discuss when the agreement is set to take place.

22.8 Please discuss the impact to the Project and the proposed routing should Kalamalka Park Estates (KPE) not enter into this agreement with CBP.

22.9 Please provide an update on the required road use agreement by the Ministry of Transportation and Infrastructure (MOTI).

23.0 Reference: PROJECT RATIONALE
Exhibit B-2, BCUC IR 7.1.1; Exhibit C1-3, BCUC IR 1.1.3
Project Alternatives

In response to BCUC IR 7.1.1, CBP stated:

> In addition to the work with the community, from November 2018 thru January/February 2019, CBP had meetings that culminated in a presentation to the Greater Vernon Advisory Committee ("GVAC"). GVAC is a sub-committee of the Regional District of North Okanagan ("RDNO"). This presentation resulted in GVAC passing a resolution in support of CBP drilling under the Okanagan Rail Trail (note: land title of the relevant section of the Trail is in RDNO's name) to bring electricity to the Cosens Bay community. In February 2019, the RDNO board accepted the GVAC that recommendation. A CBP crossing agreement is currently under development with RDNO.

In response to BCUC IR 1.1.3, BC Hydro stated:

> The Lake Option requires the installation of an underground power line under the Okanagan Rail Trail. When BC Hydro assessed the Lake Option, the Regional District of North Okanagan (RDNO) declined to grant a statutory right of way for that crossing….The required statutory right of way agreements for permanent and safe access on private property have not been obtained.

23.1 Please provide an update on CBP’s crossing agreement with RDNO.

23.1.1 Please provide the term length of the agreement with RDNO.

24.0 Reference: THE PROJECT
Exhibit B-2, BCUC IR 5.1; Exhibit C1-3, BCUC IR 1.3.5
Project Alternatives and Justification

In response to BCUC IR 5.1, CBP stated:

> Following the failed search for a feasible connection alternative with Fortis and BCH, the concept of an islanded electrical system was contemplated by CBP as a possible solution to the year-round supply of electricity. However, after contemplation, an islanded system was not considered a feasible option for community power. This consideration was made in part because an islanded system presents numerous challenges, versus a grid connected system, including:
>
> - No dependable or clean fuel source is available in the area of Cosens Bay
> - Complicated generator infrastructure would be required.
> - Operation of an islanded electrical generation and distribution system would require resources well beyond what is necessary to operate a grid connected system.
> - The power supply, based upon the above challenges, would not be as reliable as grid connected power.
>
> Based upon these considerations, CBP abandoned any further work on an islanded electrical system; in turn focusing its efforts on its own grid connected system.

In response to BCUC IR 1.3.5, BC Hydro stated:

> The following is a non-exhaustive list of potential issues that BC Hydro has identified with CBP's project that could result in a delay to interconnect the project at the proposed point of delivery (based on the two options identified in BC Hydro's response to BCUC IR 1.3.4):
>
> - MOTI approvals and permits associated with BC Hydro overhead build on Highway 97 (previous applications rejected by MOTI);
> - MOTI approvals and permits associated with directional drilling under Highway 97;
> - BC Hydro acquisition of SRW on Crown land;
> - Geotechnical work to ensure feasibility of directional drill (anticipate rock);
> - BC Hydro acquisition and registration for SRW on private property; and
> - Obtaining access rights to BC Hydro assets for operation and maintenance.
>
> Based on BC Hydro's knowledge of CBP's Project, the following is a non-exhaustive list of potential issues beyond BC Hydro's point of delivery:
>
> - Consultation with First Nations;
> - Environmental and heritage impacts and mitigation;
> - Acquiring necessary property rights on private property;
> - Acquiring necessary property rights on the "Rail Trail";
> - Design and construction of the submarine cable crossing and egress;
> - Obtaining necessary approvals and permits from all regulatory bodies; and
> - Mitigation of UXOs.

24.1 Please discuss whether the potential issues identified by BC Hydro regarding the proposed project were taken into consideration when CBP decided not to proceed further with an islanded system option.

24.2 Please discuss whether any cost estimates have been completed for an islanded system with fossil fuel generation.

C. CONSULTATION

25.0 Reference: REGULATORY
Exhibit B-2, BCUC IR 6.1, 6.2, 6.3.1
Indigenous Consultation

In response to BCUC IR 6.1, CBP stated:

> It is our understanding that only the Crown can consult; as such any consultation must be carried out by the Crown. This understanding was discussed with FLNRO during the July 4, 2019 meeting (see below). It is also understood that the Crown may delegate the procedural aspects of consultation to a project proponent (as further discussed in IR 6.2).
>
> The following is the discussion record with FrontCounter BC:
>
> - July 2, 2019: Telephone conversation between Jim Pinter (PEC) and Patrick Tobin, Senior Authorizations Officer, Ministry of Forests, Lands and Natural Resource (FLNRO), Vernon office, introducing the Project.
> - July 2, 2019: Patrick Tobin reply email to the above telephone call explaining that FrontCounter BC would manage the project from their Kamloops office, see Attachment 6.1
> - July2, 2019: Telephone conversation between Jim Pinter (PEC) and Jason Ladyman (FLNRO) in the Kamloops office introducing the Project.
> - July 2, 2019: Jason Ladyman (FLNRO) reply email to the above telephone conversation confirming that FrontCounter BC would manage the project from their Kamloops office, see Attachment 6.1
> - July 4, 2019: Meeting at FrontCounterBC office in Kamloops, present were; Jim Pinter (PEC), Dave Ethier (CBP), Darryl Arsenault (by phone, Arsenault Environmental), and Jason Ladyman and Keith Weir (FLNRO). One of the topics of the meeting was First Nations consultation, where it was confirmed by FLNRO that they will consult with the First Nations as part of the project application if/as necessary. FLNRO also emphasized and encouraged the Project to engage with First Nations independent of FLNRO's consultation obligations.
>
> It is based upon this early and direct work with FLNRO that the Project understands the Crown would lead all consultation efforts; with the proponent leading any requisite engagement activities.

25.1 Please provide an update on consultation efforts carried out by the Crown and/or CBP.

25.2 Please provide information on any further discussions held with FLNRO and/or FrontCounter BC since July 4, 2019.

In response to BCUC IR 6.2, CBP stated:

> Notwithstanding the Government's consultation obligations and advising role, CBP has proactively conducted a review of First Nations in the project area to help assess which Indigenous community(ies) might be potentially affected by the Project.

> The results of the CAD search (see Attachment 6.2.b) did not identify any First Nations in the immediate project area. Given the results of this search, the Project expanded its consideration to the closest First Nation to the Project, the Okanagan Indian Band.

In response to BCUC IR 6.3.1, CBP stated: "Information regarding the Project was sent by email to the Colleen Marchand, Director of Territorial Stewardship, Okanagan Indian Band on July 12, 2019. No response has been received to date."

25.3 Please discuss if CBP has received any response from the Okanagan Indian Band. In your response please provide any related correspondence.

25.4 Please confirm if any other Indigenous groups have been identified in or near to the project area.

25.4.1 If confirmed, please discuss any consultation that is planned to take place with the Indigenous groups affected or potentially affected by the Project.

D. PROJECT DESCRIPTION

26.0 Reference: PROJECT DESCRIPTION
Exhibit B-2, BCUC IR 8.1, 8.2.1, 8.3
Load Forecast

In response to BCUC IR 8.1, CBP stated:

> Given the electrical history of Cosens Bay (i.e., no third-party grid connected service and any generation that does exists has been created on a property-specific basis), there is no historical load data for the Cosens Bay community.
>
> […]
>
> The 20-year load forecast completed for CBP was based upon the following set of parameters:
>
> - Average base load of 4 MWh/yr per Buyer (i.e., per PPA), which for the avoidance of doubt includes the KPE water pumphouse.
> - Estimated growth in connected Buyers of 2 per year for 20 years.
> - Average yearly load increase is linear to 8 MWh/yr per Buyer at year 20.
> - Attachment 8.1.1 shows the Project's 20-year load forecast.

26.1 Please explain how the average base load of 4MWh/year per Buyer was estimated. In your response please provide details of any data referenced and explain why the base load is considered to be appropriate.

26.2 Please explain why the growth in connected Buyers is estimated to be 2 per year for 20 years.

26.3 Please explain how the yearly load increase up to 8 MWh/yr per Buyer at year 20 was estimated. In your response please provide details of any data referenced and explain why the load increase amount is considered to be appropriate.

In response to BCUC IR 8.2.1, CBP stated:

> There is no historical load data for the Cosens Bay community. As shown in response to IR 8.1, the load:
>
> - Has been classified as a residential load that is seasonal in nature.
> - Is anticipated to grow (including peak load growth)
>
> The 20-year peak load forecast is based upon the following set of parameters:
>
> - Average base peak load of 5 kW per customer.
> - Estimated growth in connected customers, 2 per year for 20 years.
> - Average yearly peak load increase per customer linear to 7 kw at year 20.

In response to BCUC IR 8.3 CBP stated:

> The 2-year monthly peak load forecast is based upon the following set of parameters:
>
> - 12-month average peak load profile that varies from 1 kW in winter to 5 kW in summer per Buyer.

26.4 Please explain how the average base peak load of 5kW per customer was estimated. In your response please provide details of any data referenced and explain why the base peak load is considered to be appropriate.

26.5 Please explain how the yearly peak load increase up to 7 kW at year 20 was estimated. In your response please provide details of any data referenced and explain why the peak load increase amount is considered to be appropriate.

26.6 Please explain how the average base peak load of 1kW per customer in winter and 5kW per customer in summer was estimated. In your response please provide details of any data referenced and explain why the base peak load is considered to be appropriate.

27.0 Reference: PROJECT DESCRIPTION
Exhibit B-2, BCUC IR 9.6; Exhibit C1-3, BCUC IR 1.1.5
New Public Works

In response to BCUC IR 9.6, CBP stated: "Based upon the current design, the only new public works required by the Project is BCH's installation of a single power pole within the Highway 97 right-of-way in order to connect the Project."

In response to BCUC IR 1.1.5, BC Hydro stated: "BC Hydro is unable to obtain permits for adding BC Hydro assets on Highway 97."

27.1 Please confirm whether CBP is responsible for the cost to design and install any new public works.

27.1.1 If not confirmed, please explain who is responsible for this work.

27.2 Please discuss whether CB Powerline has obtained any assurances that installing a new power pole within the Highway 97 right-of-way is feasible.

27.2.1 If BC Hydro is unable to install the power pole, what impact will this have on the project.

28.0 Reference: PROJECT DESCRIPTION
Exhibit C1-3, BCUC IR 1.1.4, 1.3.2
Point of Connection

In response to BCUC IR 1.1.4, BC Hydro stated: "CBP is currently in the process of submitting a formal PSC application to BC Hydro. However, as discussed in BC Hydro's response to BCUC IR 1.1.3, CBP has not finalized a location to take service from BC Hydro."

In response to BCUC IR 1.3.2, BC Hydro stated: "BC Hydro notes that CBP must provide its permit for connection from Technical Safety BC, as well as a permit to operate as a utility, before BC Hydro would authorize CBP's connection to BC Hydro's system."

28.1 Please explain whether CBP has identified the final location to take service from BC Hydro.

28.1.1 If so, please identify the final location.

28.1.2 If not, please explain when CBP anticipates finalizing the location.

28.1.3 If the final location is anticipated to be different from the location identified for Route Alternative 2B, please discuss the impact that this location will have on the project costs, schedule and risks.

28.2 Please provide an update on CBP's discussions with Technical Safety BC.

28.3 Please confirm which authority provides the "permit to operate as a utility."

28.3.1 Please provide an update on CBP's application for this permit.

29.0 Reference: PROJECT DESCRIPTION
Exhibit C1-3, BCUC IR 1.2.5
Submarine Cable

In response to BCUC IR 1.2.5, BC Hydro stated:

> BC Hydro continues to decline to take ownership of CBP's proposed project, given the complexity of CBP's submarine cable project anticipated. The design and construction of submarine cables requires expertise from several disciplines and is, relative to the construction of overhead distribution lines, orders of magnitude more complex.
>
> A factor that BC Hydro considers in its decision to take ownership of a customer-built powerline is whether, in BC Hydro's opinion, the customer can construct the powerline in a manner consistent with how BC Hydro would construct the powerline. In this case, BC Hydro is not certain that CBP would be able to design and construct the submarine cable to have the equivalent operating life or maintainability as a submarine cable designed and constructed by BC Hydro.
>
> BC Hydro designs submarine crossings to have an operating life of at least 40 years. As discussed in BC Hydro's response to BCUC IR 1.3.8, every submarine cable presents unique design considerations and, therefore, BC Hydro is unable to develop standard design or construction requirements for them. Instead, BC Hydro relies on its specialist engineers and subject matter experts to be involved in all aspects of a submarine cable project, including:
>
> - Materials: BC Hydro audits and inspects manufacturers during production and testing of submarine cables;

- Route design: BC Hydro designs a crossing route based on a topographic marine survey. The selected route for the cable mitigates the mechanical stress on the cable along the marine floor and also the future repairability of the cable, so the route is typically not the shortest point-to-point route; and

- Cable installation: Submarine cables typically experience the greatest stress during the laying of the cable, which may significantly affect its longevity. Inspections after installation are not able to determine whether the cable was subject to such mechanical stress. BC Hydro does not rely on external contractors to perform such work, but procures the equipment and resources so that it is able to undertake the work itself.

29.1 Please discuss whether CBP intends to instruct subject matter experts to be involved in the submarine cable aspect of the project. Please provide details of any such experts.

29.2 Please discuss CBP's proposals with respect to materials, route design and cable installation.

29.3 Please discuss whether CBP considers it necessary to design and construct the submarine cable to have the equivalent operating life or maintainability as a submarine cable designed and constructed by BC Hydro.

30.0 Reference: PROJECT DESCRIPTION
Exhibit B-2, BCUC IR 4.10, 9.1; Attachment 4.10
Direct Buried Power Cable

In response to BCUC IR 4.10, CBP has provided correspondence between the Applicant and both BC Hydro and Fortis BC. The correspondence includes BC Hydro response to a CBP question regarding ownership and operation of CBP's proposed electrical distribution system upon commercial operation. In an email included in Attachment 4.10, BC Hydro stated:

> BCHydro will not be building or taking ownership of customer build lines for the proposed Cosens bay project however we may be able to secondary meter customers and bill them directly given that services are built to BCH standards (see our secondary metering guide)

Attachment 4.10 includes correspondence with Fortis BC, including a response to CBP's question whether Fortis BC would consider a direct buried cable design. In an email included in Attachment 4.10, Fortis BC stated:

> Unfortunately our standard with underground cables is that they be installed in duct. I have attached our standard drawing for underground Duct depths for which the cables [will] reside in. This is pretty standard across BC as you've already found out with BC Hydro. Duct is required for ease of operation and access. If a piece of cable fails it can be pulled out and replaced easily with minimum interruption to customers and minimum cost to the utility to locate problem and fix/replace.

In response to BCUC IR 9.1, CBP stated that the design for the underground 25 kV power cables included as part of the Project scope shall be "direct buried to a minimum depth of 1,000 mm below grade." Similarly, the underground 240 V secondary service cables shall be "direct buried to a minimum depth of 750 mm below grade." CBP further stated in the same response that "The engineering and design of the Project will follow all applicable Codes, Standards, and Reference Guides."

30.1 Please explain the decision to proceed with a direct buried cable design.

30.1.1 Please discuss how a direct buried cable design would impact future maintenance costs in comparison to a ducted installation.

30.2 Please confirm whether a direct buried cable design would potentially limit any future involvement by BC Hydro or Fortis BC in the operation, maintenance or administration of CBP's electrical distribution system.

31.0 Reference: PROJECT DESCRIPTION
Exhibit C1-3, BCUC IR 1.3.8
Design Standards

In response to BCUC IR 1.3.8, BC Hydro states that its distribution standards are designed in accordance with the standards that form Canadian Electrical Code Part III, which include:

- CSA C22.3 No. 1-15, Overhead Systems;
- CSA-C22.3 No. 7-15, Underground Systems;
- CAN/CSA-C22.3 No. 3-98 (R 2013), Electrical Coordination;
- C22.3 No. 4-74 (R 2015), Control of Electrochemical Corrosion of Underground Metallic Structures;
- C22.3 No. 5.1-93 (R 2013), Recommended Practices for Electrical Protection - Electrical Contact Between Overhead Supply and Communication Lines;
- CAN/CSAC22.3 No. 6-13, Principles and Practices of Electrical Coordination Between Pipelines and Electric Supply Lines; and
- CAN/CSA-C22.3 No. 9-08 (R 2015), Interconnection of Distributed Resources with Electricity Supply Systems.

BC Hydro states that its distribution standards apply these national codes as the design basis to create BC hydro's design and construction standards. These standards series are:

- ES43, Overhead Distribution Standards;
- ES53, Underground Electrical Distribution Standards;
- ES54, Underground Civil Distribution Standards; and
- ES55, Distribution Design Standards.

31.1 Please confirm, or otherwise explain, whether CBP's distribution system will be designed in accordance with the Canadian Electrical Code Part III and the standards noted in the preamble above. Please discuss any areas of non-conformance.

32.0 Reference: PROJECT DESCRIPTION
Exhibit B-2, BCUC IR 9.3
Metering

In response to BCUC IR 9.3, CBP stated: "Buyer revenue meters will be installed at a location determined by the customer on their property, i.e. CBP is not responsible for any project infrastructure on customers property."

32.1 Please explain what type of meters CBP proposes to use for Buyer revenue meters.

32.1.1 Please provide the anticipated costs for the meters and explain whether the costs have been included in the capital costs.

32.1.2 In the event CBP decides to engage in BC Hydro's secondary metering program, please discuss if CBP's proposed meters would meet BC Hydro's requirements for secondary voltage revenue metering.

33.0 Reference: PROJECT DESCRIPTION
Exhibit B-2, BCUC IR 5.5, 10.1, 10.5
Permits

In response to BCUC IR 5.5, CBP stated: "Presently, Arsenault Environmental Consulting is carrying out the environmental impact assessment that will ultimately be utilized by the Project in its filings with FrontCounter BC."

In response to BCUC IR 10.5, CBP stated:

> Arsenault Environmental Consulting's scope is to undertake all works necessary to support the Project's combined Environmental Impact Assessment ("EIA") and Environmental Management Plan ("EMP") filings with, and through to approval by, FrontCounter BC. Arsenault has the same scope for work under the Water Sustainability Act, Navigable Waters Act, and Fisheries Act as shown in Attachment 10.1

33.1 Please provide an update on the environmental work being carried out by Arsenault Environmental Consulting.

In response to BCUC IR 10.1, CBP stated: "Attachment 10.1 shows a detailed list of approvals, permits, licences, or authorizations required for the Project, along with each permit's forecasted timing, the responsible agency, and current status."

33.2 Please provide an update to Attachment 10.1 detailing any progress made on the current status of required approvals.

34.0 Reference: PROJECT DESCRIPTION
Exhibit B-2, BCUC IR 16.1, 16.3; Exhibit C1-3, BCUC IR 1.3.1
Clean Electricity

In response to BCUC IR 16.1, CBP stated:

> No, CBP will not be considered a Net Metering customer of BC Hydro as the Project does not anticipate distributed generation ("DG") connected its distribution system will generate a sufficient amount of electricity to offset the load demand of all the Buyers.
>
> In the event that the capacity of DG connected to the CBP distribution system approaches the load demand of the community, CBP will implement the following measures to ensure that CBP does not generate electricity into the BCH distribution system:
>
> - Reduce the amount of DG generation during off peak seasons.
> - Only allow DGs to offset on-site energy consumption (e.g., DGs would not generate into the CBP distribution system).
> - Revise the connection with BCH to allow CBP to export electricity.

In response to BCUC IR 16.3.1, CBP stated: "Should CBP implement a net metering program, the DG connected Buyers would be allowed to participate in net metering, see IR 16.1."

In response to BCUC IR 1.3.1, BC Hydro stated:

> In addition, based on CBP's response to BCUC IR 16.2 and 16.3 (Exhibit B-2), BC Hydro understands that CBP intends to offer a service similar to BC Hydro's Net Metering service (rate schedule 1289). Doing so would result in a connection of generation parallel to BC Hydro's system that, per section 3.9.2 of BC Hydro's Primary Guide for primary voltage services, would require compliance with BC Hydro's Distribution Generator Interconnection requirements. BC Hydro has not received an application from CBP to generate power parallel to BC Hydro's supply.

34.1 Please confirm, or otherwise explain, whether distributed generation located within the Cosens Bay community will be connected to the distribution system.

34.1.1 If so, please confirm that CBP will submit an application to generate power parallel to BC Hydro's supply for each distributed generation system a Buyer proposes to connect to CBP's distribution system.

34.1.2 Please provide the expected cost for an application to BC Hydro.

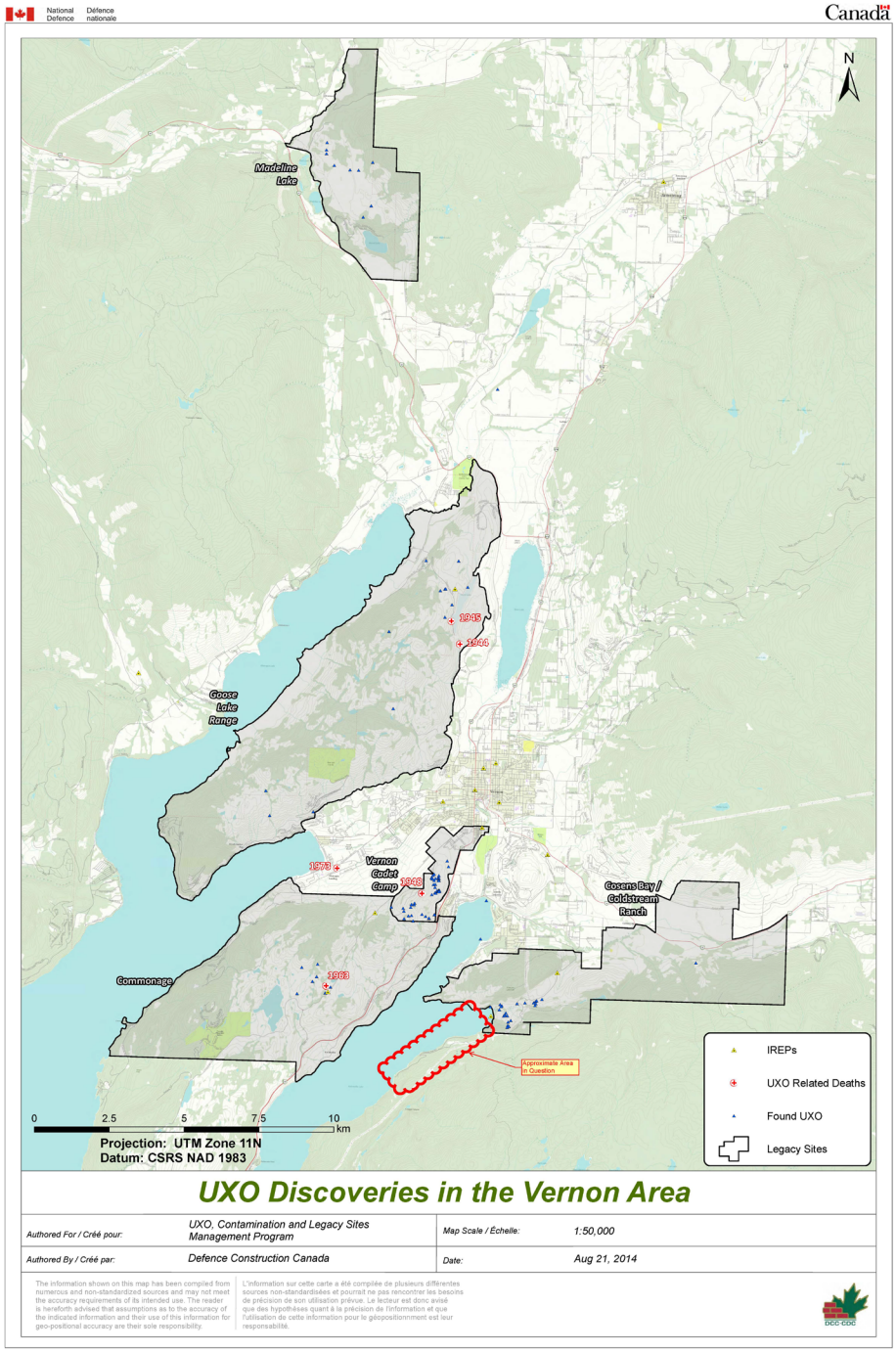
34.2 Please explain how CBP will administer the net metering program.

34.3 Please discuss whether BC Hydro's application requirements for Buyers who wish to generate power parallel to BC Hydro's supply will impact CBP's ability to offer or administer the proposed net metering program.

35.0 Reference: PROJECT DESCRIPTION
Exhibit C1-3, BCUC IR 1.1.3, 1.3.5
Unexploded Ordnance

In response to BCUC IR 1.3.5, BC Hydro stated:

> Specifically regarding the last point, the mitigation of UXOs, the Department of National defence has confirmed that the greater Vernon area has several locations of increased risk of UXOs. See the attached map (Attachment 1)[1], which shows locations where UXOs have been found and where there have been UXO related deaths.
>
> [1] In the legend on the map there is a reference to "IREP", which BC Hydro understands to be an abbreviation for "Explosive Ordnance Disposal Initial Report."



In response to BCUC IR 1.1.3, BC Hydro stated:

> As with the Park Option, BC Hydro has also not been able to fully assess whether the Lake Option is safe, because the risk of UXOs near and under the Lake has not been fully assessed by Department of National Defense. Please refer to BC Hydro's response to BCUC IR 1.3.5.

35.1 Please provide details of CBP's discussions with the Department of National Defense with respect to unexploded ordnances (UXO) and CBP's proposed project.

35.2 Please confirm, or otherwise explain, whether CBP intends to request that the Department of National Defense assess the lake and CBP's proposed route for UXO.

35.2.1 If not, please explain why not and how the public interest would be served by not assessing the lake and proposed route for potential UXO.

35.2.2 If confirmed, please provide the anticipated timeline and costs for conducting the assessment.

35.2.3 Please discuss whether CBP has factored in a UXO assessment, and any potential outcomes of that assessment, on the cost estimate and timeline previously provided for the project.

35.3 Please explain if the customers of CBP are aware of the risk of UXO.

35.3.1 Please discuss what steps CBP will take to mitigate any risks mentioned above.

E. PROJECT COST ESTIMATE

36.0 Reference: THE PROJECT
Exhibit B-1, Section 2, pp. 4–5; Exhibit B-2, BCUC IR 17.1, 17.4, 17.5, 17.6, 17.6.1, 17.7; Attachment 17.1; Attachment 3.2, p. 9; Exhibit C1-3, BCUC IR 1.1.8
Project Costs

In response to BCUC IR 17.1, CBP has provided the cost estimate for the project including the actual expenses incurred to date in Attachment 17.1 under both alternatives 2B and 2C.

36.1 Please provide a detailed rationale including the sources of the estimates for each line item of the project construction budget provided in Attachment 17.1 under both alternatives 2B and 2C.

36.1.1 Has CBP acquired any quotes or entered into any contracts for installation and equipment as detailed in Attachment 17.1.

36.1.2 If yes, please provide details of such third-party quotes/contracts.

36.2 In your response to the question above, please confirm if CBP has any comparable data to support the project budget provided in Attachment 17.1.

36.2.1 If yes, please provide details of such comparable project cost data including the source for the same.

In response to BCUC IR 17.1, CBP stated the following: "Project contingency amount is $58,678 and $58,920 for options 2B and 2C respectively based on 10% of the installation portion of construction (Line Item 5.7)."

36.3 Please explain CBP's rationale to include contingencies only for the installation portion of the project estimate.

36.4 Please confirm whether CBP has entered into or intends to enter into fixed or time and material based contracts for the equipment and installation required for the construction of the project.

In response to BCUC IR 17.5, CBP stated the following: "The $50,000 funding cap was decided upon in 2017 at a community meeting; simply as a maximum, reasonable threshold that the Cosens Bay landowners could possibly afford."

Further in response to BCUC IR 17.6.1, CBP stated: "55 PPAs were legally closed on August 15, 2019. As supported by the response to IR 17.4, this is considered by CBP to be the minimum number required."

36.5 In the event that the cost of the construction of the project is higher than the estimate (e.g. $3.5 million), please provide details of CBP's plan to ensure that the project remains fully funded and on schedule.

Further in response to BCUC IR 17.7, CBP stated: "Nevertheless, in the instance where a PPA is terminated, CBP would not request additional funding from its remaining Buyers."

36.6 If CBP considered 55 participants to be the minimum number required to fund the project and only the minimum number of participants have signed the executed PPAs, please detail CBP's plan in the event of a Buyers inability to pay the funding cap or the above-mentioned cost overruns occurring?

In response to BCUC IR 17.4, CBP stated:

> The available capital determination was calculated as follows:
>
> • 53 (full cost) Series 1 Buyers (53 x $47,500 = $2,517,500)
> • 1 (half cost) Series 1 Buyer (0.5 x $47,500 = $23,750)
> • 1 Series 2 Buyer (1 x $90,000 = $90,000)
> • EOI funding ($162,250)

Further in response to BCUC IR 17.6, CBP stated: "The Series 1 Buyer's development funding commitment is capped at $50,000 (comprised of $2,500 under the EOI and $47,500 under the PPA). The funding cap for a Series 2 Buyer is $90,000 and the funding cap for the Series 3 Buyer is $100,000."

In Attachment 3.2 of Exhibit B-2, CBP submits a copy of the Shareholders' Agreement which on page 9 states:

> 2.11 Commitments under Power Purchase Agreements
>
> Unless otherwise approved by the Shareholders pursuant to Section 2.10(e), any Power Purchase Agreement entered into with:
>
> (a) a Series 1 Buyer will have a Funding Cap of $47,500;
> (b) a Series 2 Buyer will have a Funding Cap equal to:
> ($2,500 + the amount of anticipated Funding Requests for an individual Series 1 Buyer) x 1.8 to a maximum of $90,000; and
> (c) a Series 3 Buyer will have an upfront participation fee of $100,000
>
> collectively, the "Commitment Levels."

36.7 Please explain what is a 'half-cost' Series 1 buyer and if they would receive any different services compared to a Series 1, 2 or 3 buyers.

36.8 Please explain the rationale for higher funding requirements for Series 2 and 3 buyers. In your response please explain how the funding cap for Series 2 and 3 buyers was decided.

36.9 Please explain why a Series 3 buyer has an upfront participation fee equal to their funding cap.

36.10 Please explain why a funding cap is not mentioned for a Series 3 buyer in the Shareholders Agreement.

36.11 Please discuss what funding, if any, CBP would pursue should the project be cancelled.

Further on page 9 of Attachment 3.2 the Shareholder's Agreement states:

> Following the commercial operation date of the Power Line, the Directors may, from time to time and in their discretion, pay to Series 1 Buyers (on a pro rata basis) an amount up to the Funding Requests actually paid by the Series 1 Buyers, from amounts received from Series 2 Buyers and Series 3 Buyers in respect of their Commitment Levels. Following the full repayment of the Series 1 Buyers, the Directors may, from time to time and in their discretion, pay to Series 2 Buyers (on a pro rata basis) an amount up to the Funding Requests actually paid by the Series 2 Buyers, from amounts received from Series 3 Buyers in respect of their Commitment Levels.

36.12 Please explain why the Series 1 and 2 buyers will be paid back up to the Funding Requests made from amounts received from subsequent buyers.

36.13 In the event that the project does not go through please confirm if the Series 1 buyers will be paid back from the amounts collected from Series 2 buyers.

36.13.1 If confirmed, please explain why this is the case.

In response to BCUC IR 1.1.8, BC Hydro has provided its estimate of costs of providing service with a BC Hydro engineered submarine cable excluding the distribution system under Kalamalka Lake (Lake Option) would be $8.0 million (-50% to +200%) based on the routing proposed by CBP.

36.14 Please comment on the cost estimate provided by BC Hydro above and explain, if possible, why CBP's cost estimate for the project is significantly lower.

In response to BCUC IR 1.3.4, BC Hydro has provided its estimate of costs based on CBP's proposed point of delivery on the west side of Kalamalka Lake.

36.15 Please comment on the cost estimate provided by BC Hydro and explain, if possible, why CBP's cost estimate for the project is significantly lower.

37.0 Reference: PPA STRUCTURE
Exhibit B-1, Section 2, p. 5; Section 4.1, p. 9; Attachment A-1, p. 4; Exhibit B-2, BCUC IR 18.3, 18.4
Rates & Working Capital

In response to BCUC IR 18.3, CBP stated:

> As to the total rate applicable to these 55 Buyers, this will be calculated based upon the formula set out in PPA section 5, summarized as:
>
> Contract Price = Procurement Price + O&M Fee + Recovery Amount

37.1 Please provide complete details on the process of setting yearly rates for the Contract Price. In your response please include details on the frequency of setting the Contract Price, how this will be communicated to the Participants and any other details of the Contract Price setting process.

In response to BCUC IR 18.4, CBP stated:

> The logic in not forecasting these costs at this time is that the quantum of each cost is extremely difficult to ascertain and will depend upon time spent for administrative, reporting, compliance, engineering, legal, accounting, and repairs and maintenance.

Cost discovery after the first and second year of operations will greatly improve the ability of CBP to forecast its annual operating budget. In any case, the annual operating budget must be approved by the shareholders.

37.2 Please confirm if the O&M fee of the Contract Price will be for the first and second year of operations will be based on forecast or actual operating costs.

37.3 Please explain how CBP will manage the yearly variance between forecast and actual annual operating budget after CBP commences operations and how the shortfall, if any, will be funded.