



April 29, 2020

Sent by email (commission.secretary@bcuc.com)

Mr. Patrick Wruck
Commission Secretary
British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

**Re: British Columbia Utilities Commission (Commission)
Boralex Ocean Falls Limited Partnership (Boralex LP)
Application for Approval of Rates and Terms and Conditions of Service
for Boralex LP's Service to British Columbia Hydro and Power Authority
Response to Commission Information Request No. 2
Project No. 1599046**

Dear Mr. Wruck,

In accordance with the regulatory timetable set out in Order G-3-20, enclosed is Boralex LP's response to Commission Information Request No. 2.

Yours truly,

Boralex Ocean Falls Limited Partnership

A handwritten signature in blue ink, appearing to read "Maxime Tremblay".

Maxime Tremblay, ing.
Regional Manager, wind and hydro
maxime.tremblay@boralex.com

Enclosure



Boralex – Ocean Falls
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Borex Ocean Falls Limited Partnership
Application for Rates and Terms and Conditions for Service to British Columbia
Hydro and Power Authority - July 1, 2019 to December 31, 2022

BCUC INFORMATION REQUEST NO. 2 TO BORALEX OCEAN FALLS LIMITED PARTNERSHIP

A. COST OF SERVICE

**30.0 Reference: COST OF SERVICE
Exhibit B-6, British Columbia Utilities Commission Information Request 1.2.2.3
Cost Allocation**

In its response to British Columbia Utilities Commission (BCUC) Information Request (IR) 1.2.2.3 Borex Limited Partnership (Borex LP) submits:

If Borex LP had no retail or industrial customers, the only costs that Borex LP would be able to avoid are the relatively minor costs associated with the distribution lines in the Ocean Falls town site and Martin Valley.

And

...with regard to Borex LP's two industrial customers, these customers are not entitled to any capacity from the Ocean Falls facilities and Borex LP would not avoid any material costs if it did not sell electricity to these customers.

30.1. Please discuss the pros and cons associated with using the following cost allocation methodologies to set rates for service to British Columbia Hydro and Power Authority (BC Hydro):

- Marginal costs
- Incremental costs
- Embedded costs.

RESPONSE:

The primary and predominant purpose of the Ocean Falls Facilities is to provide electric service to BC Hydro and the Bella Bella NIA. The facilities would not have been acquired (and upgraded) by Central Coast Power Corporation from the Province of British Columbia in 1986 without the Bella Bella load and the sale of electricity to BC Hydro to serve the load under the 1986 EPA that was entered into at the time of the acquisition of the facilities. There were no industrial customers at that time (Mowi Canada West did not become a customer until 2002 and Ocean Falls Blockchain only became a customer in 2018) and the retail load in Ocean Falls was (and remains) far too small to support the acquisition, maintenance and operation of the facilities. Accordingly, without the Bella Bella load there would have been no Ocean Falls utility in the first place.

With regard to marginal costs, the cost to produce and deliver the first MW of power to BC Hydro is essentially equal to Borex LP's gross revenue requirement, with the marginal cost required to produce and deliver each additional increment of power extremely low. The marginal cost to serve the retail and industrial customers in Ocean Falls is also extremely low, with the only additional costs required to serve these loads the distribution lines in the Ocean Falls town site and Martin Valley. The rates paid by the retail and industrial customers are

forecast to generate approximately \$600,000 in annual revenue in 2020, 2021 and 2022, which as noted in Boralex LP's response to BCUC IR 32.2.1, exceeds the marginal cost to serve these customer. Consequently, crediting the revenue from retail and industrial customers to the gross revenue requirement as set out in the Application reduces the net revenue requirement (and the marginal cost) that needs to be recovered from BC Hydro.

With regard to incremental cost, Boralex LP generally understands incremental and marginal cost to mean the same thing. However, if incremental cost in this context means the cost of incremental capital and operating costs, virtually all the incremental costs at Ocean Falls have been incurred, and will continue to be incurred, to serve the Bella Bella NIA load. The only incremental costs incurred to serve the retail and industrial loads in Ocean Falls are the relatively minor distribution costs in the Ocean Falls town site and in Martin Valley. Consequently, crediting the revenue from retail and industrial customers to the gross revenue requirement as set out in the Application reduces the net revenue requirement (and the incremental cost) that needs to be recovered from BC Hydro.

With regard to embedded cost, apart from the relatively small cost of serving the retail and industrial customers in Ocean Falls, Boralex LP's gross revenue requirement represents the embedded cost to provide service to BC Hydro and the Bella Bella NIA. Since the cost to serve the retail and industrial customers is less than the revenue generated by the rates charged to the retail and industrial customers, crediting the forecast revenue from these customers to the gross revenue requirement as set out in the Application results in BC Hydro paying less than the embedded cost required to serve the Bella Bella NIA.

In summary, because the cost to serve the retail and industrial customers in Ocean Falls is less than the revenue generated by the rates charged to those customers, the use of marginal cost, incremental cost or embedded cost to set rates for service to BC Hydro would result in higher rates to BC Hydro than those set out in the Application. It also means that unless Boralex LP reduced the rates charged to its retail and industrial customers to a level equal to the cost of serving those customers (which in the case of its retail customers it is not permitted to do and in the case of its industrial customers would result in them paying lower rates than the rates they have already agreed to pay), the use of one of these methodologies to set the rates for service to BC Hydro would result in Boralex LP over recovering its revenue requirement.

- 30.2.** Considering the response to BCUC IR 1.2.2.3 regarding avoided costs, please discuss if the approach for allocating costs to BC Hydro, as proposed in the Application, is consistent with either a marginal, incremental or embedded cost allocation methodology.

RESPONSE:

Boralex LP has determined the rates for service to BC Hydro based on its forecast gross revenue requirement and then deducting the forecast revenue from its retail and industrial customers. This is consistent with marginal, incremental and embedded cost methodologies discussed in Boralex LP's response to BCUC IR 30.1. However, as noted in that response, because the cost to serve the retail and industrial customers is less than the revenue generated by the rates charged to those customers, the use of marginal, incremental or embedded costs to set the rates for service to BC Hydro would result in higher rates to BC Hydro than those set out in the Application.

In its response to BCUC IR 1.2.4.1 Boralex LP submits that:

If Boralex LP was required to allocate costs to its retail and industrial customers that exceed the revenue that Boralex LP is able to recover from those customers under the rates established under Order G-26-10, then Boralex LP would not be able to recover its cost of service, including its allowed return on common equity.

In its response to BCUC IR 1.2.6.1 Boralex LP submits it "...has not considered undertaking a Cost of Service Allocation (COSA) study for the reasons set out in Boralex LP's responses to BCUC IRs 2.3 and 2.4."

30.3. Please discuss the feasibility, costs and timing of conducting a COSA study.

RESPONSE:

Boralex LP does not believe that conducting a COSA study is feasible in the sense that, regardless of the results of such a study, Boralex LP cannot adjust the rates charged to its retail and industrial customers because those rates are already regulated and determined in accordance with order G-26-10 (as confirmed by Order G-143-19). Moreover, as discussed in Boralex LP's responses to BCUC IR's 30.1 and 32.2, the allocated costs to these customers under the methodologies discussed in those responses are lower than the revenue generated from the rates charged by Boralex LP to these customers.

30.4. Please clarify if the methodology used to allocate costs to BC Hydro, as proposed in the Application, balances the fair allocation of costs to BC Hydro with the ability of Boralex to recover its cost of service, including its allowed return on common equity.

RESPONSE:

Yes, determining the rates for Boralex LP's service to BC Hydro based on Boralex LP's gross forecast revenue requirement and then deducting the forecast revenue from its retail and industrial customers does balance the fair allocation of costs to BC Hydro with the ability of Boralex LP to recover its cost of service, including its allowed return on common equity.

With regard to the fair allocation of costs to BC Hydro, as noted in Boralex LP's response to BCUC IR 30.1, the primary and predominant purpose of the Ocean Falls Facilities is to provide service to BC Hydro. The Ocean Falls utility would never have been formed without the sale of power to BC Hydro to serve the Bella Bella NIA. The cost to provide service to Boralex LP's retail and industrial customers in Ocean Falls is very low and is less than the revenue generated by the rates charged to the retail and industrial customers. Accordingly, the ability of Boralex LP to provide service to retail and industrial customers actually reduces the costs that would otherwise need to be recovered from BC Hydro.

With regard to the ability of Boralex LP to recover its cost of service, including its allowed return on common equity, the rates that Boralex LP is able to charge its retail and industrial customers are already regulated and determined in accordance with Order G-26-10 (as confirmed by Order G-143-19) and not through some form of cost allocation. The rates to the retail customers are required to be the same as BC Hydro's Zone II rates and the rates to the two industrial customers are negotiated rates based on what those customers were willing and able to pay having regard to the other costs of locating their operations in Ocean Falls, a remote and isolated location. Accordingly, Boralex LP is not able to charge different rates to these customers. Therefore, if Boralex LP was required to allocate costs to its retail and industrial customers that exceeded the revenue that Boralex LP is able to recover in the rates established under Order G-26-10 (as confirmed by Order G-143-19), then Boralex LP would not

be able to recover its cost of service, including its allowed return on common equity. Determining the rates for Boralex LP's service to BC Hydro based on its gross forecast revenue requirement and then deducting the forecast revenue from its retail and industrial customers does provide Boralex LP with the opportunity to recover its cost of service, including its allowed return on common equity.

**31.0 Reference: COST OF SERVICE
Exhibit B-6, BCUC IR 2.2.1
Cost of Service and Alternatives**

In its response to BCUC IR 1.2.2.1 Boralex LP submits that:

Boralex LP has applied to the Commission for cost of service based rates because other rate setting methodologies (including those identified on page 3 of the Commission's letter to Boralex LP and BC Hydro dated May 3, 2018, such as a rate pegged to a tariff of another utility or some form of benchmark rate plus inflation) would not be reflective of Boralex LP's forecast capital and operating costs or result in rates that were not unjust or unreasonable within the meaning of Section 59(5) of the Utilities Commission Act.

- 31.1.** Please clarify if Boralex LP considered performance-based ratemaking for setting its rates for service to BC Hydro and discuss the pros and cons of setting rates for BC Hydro using this methodology.

RESPONSE:

As this is Boralex LP's first rate application to the Commission, Boralex LP did not believe that the adoption of some form of performance-based rating setting methodology would be appropriate until a proper base case was established as a result of the Commission's decision in this proceeding. Boralex LP will consider performance-based rate setting methodologies in future rate applications.

**32.0 Reference: COST OF SERVICE
Exhibit B-1, p. 17
Exhibit B-3, 'Depreciation' tab
Exhibit B-6, BCUC IR 2.3.2
Exhibit B-9, updated response to BCUC IR 2.1
Alternative Cost Allocation Methodologies**

In its updated response to BCUC IR 2.1, Boralex LP provides an updated Table 3 (Revenue Requirement 2019 to 2022).

- 32.1.** In table form, please calculate the annual revenue requirement for BC Hydro if the gross revenue requirement were allocated to BC Hydro based on the following methods: (i) BC Hydro's actual/forecasted consumption (kWh) as a proportion of the total consumption of all customers, and (ii) BC Hydro's peak load (MW) as a proportion of the sum of peak loads for all customers.

RESPONSE:

(i) BC Hydro's actual/forecasted consumption as a proportion of the total consumption of all customers (based on the April 29, 2020 Application Update):

		2019 (Q3-Q-4)	2020	2021	2022
BC Hydro (MWh)		6,083	13,100	11,816	12,005
Industrial Customers (MWh)		4,977	8,873	7,981	7,981
Retail Customers (MWh)		342	751	751	751
TOTAL (MWh)		11,403	22,723	20,548	20,737
BC Hydro		53%	58%	58%	58%
Industrial Customers		44%	39%	39%	38%
Retail Customers		3%	3%	4%	4%

						TOTAL
Gross Revenue Requirement	[a]	\$1,843,956	\$3,641,881	\$4,241,141	\$4,486,799	\$14,213,777
Industrial and Retail Customer Revenue	[b]	\$353,856	\$627,136	\$598,948	\$609,925	\$2,189,865
Net Revenue Requirement	[c] = a - b	\$1,490,100	\$3,014,745	\$3,642,193	\$3,876,874	\$12,023,912
Allocation of Gross Revenue Requirement to BC Hydro based upon % of annual sales	[d]	\$983,761	\$2,099,532	\$2,438,848	\$2,597,495	\$8,119,636
Difference (i.e. unrecovered Net Revenue Requirement)	[e] = c - d	\$506,339	\$915,213	\$1,203,345	\$1,279,379	\$3,904,276

32.2. (ii) BC Hydro's peak load as a proportion of the sum of peak loads for all customers (based on the April 29, 2020 Application Update):

		2019	2020	2021	2022	
BC Hydro (MW)		3,532	3,593	3,654	3,717	
Industrial Customers (MW)		1,150	1,150	1,150	1,150	
Retail Customers (MW)		165	168	170	173	
TOTAL (MW)		4,847	4,911	4,974	5,040	
BC Hydro		73%	73%	73%	74%	
Industrial Customers		24%	23%	23%	23%	
Retail Customers		3%	3%	3%	3%	
						TOTAL

Gross Revenue Requirement	[a]	\$1,843,956	\$3,641,881	\$4,241,141	\$4,486,799	\$14,213,777
Industrial and Retail Customer Revenue	[b]	\$353,856	\$627,136	\$598,948	\$609,925	\$2,189,865
Net Revenue Requirement	[c] = a - b	\$1,490,100	\$3,014,745	\$3,642,193	\$3,876,874	\$12,023,912
Allocation of Gross Revenue Requirement to BC Hydro based upon % of system peak	[d]	\$1,343,687	\$2,664,484	\$3,115,627	\$3,309,014	\$10,432,812
Difference (i.e. unrecovered Net Revenue Requirement)	[e] = c - d	\$146,413	\$350,261	\$526,566	\$ 567,859	\$1,591,100

32.2.1 Assuming the same forecasted revenue from Ocean Falls retail and industrial customers indicated in the updated Table 3, for method (i) and (ii) please also indicate the resulting shortfall or surplus compared to the net revenue requirement in the updated Table 3.

RESPONSE:

As shown in Boralex LP's response to BCUC 32.2:

- (a) method (i) results in Boralex LP under-recovering \$3,904,276 of the net revenue requirement over the test period; and**
- (b) method (ii) results in Boralex LP under-recovering \$1,591,100 of the net revenue requirement over the test period.**

32.2.2 Assuming the same forecasted revenue from Ocean Falls retail and industrial customers indicated in the updated Table 3, for method (i) and (ii) please provide the 2019, 2020, 2021 and 2022 rates applicable to BC Hydro in the same format as the table provided on page 2 of the Application.

RESPONSE:

- (i) BC Hydro's actual/forecasted consumption as a proportion of the total consumption of all customers:**

	(\$/MWh)	
	2019*	2020
Tier 1 (up to 13.10 GWh/year)	\$182.74	\$186.39
Tier 2 (greater than 13.1 GWh/ year)	\$50.00	\$51.00

*July 1 to December 31 for rate and energy amount

	(\$/MWh)	
	2021	2022
Tier 1 (up to 11.63 GWh/year)	\$190.12	\$193.92
Tier 2 (greater than 11.63 GWh/y ear)	\$52.02	\$53.06

(ii) BC Hydro's peak load as a proportion of the total system peak consumption:

	(\$/MWh)	
	2019*	2020
Tier 1 (up to 13.10 GWh/year)	\$235.25	\$239.95
Tier 2 (greater than 13.1 GWh/ year)	\$50.00	\$51.00

*July 1 to December 31 for rate and energy amount

	(\$/MWh)	
	2021	2022
Tier 1 (up to 11.63 GWh/year)	\$244.75	\$249.65
Tier 2 (greater than 11.63 GWh/y ear)	\$52.02	\$53.06

32.2.3 Please discuss the strengths and weaknesses of allocating the revenue requirement by each method, including the impacts on Boralex LP.

RESPONSE:

Neither method is appropriate or results in just and reasonable rates for Boralex LP's service to BC Hydro because they would (i) result in Boralex LP being unable to recover its revenue requirement and earn its allowed return on common equity because Boralex LP would not be able to recover the revenue deficiency from its retail and industrial customers in Ocean Falls, as discussed in Boralex LP's response to BCUC IR 30.4, and (ii) fail to properly allocate costs to BC Hydro, also as discussed in Boralex LP's response to BCUC IR 30.4,.

In Table 5 of the Application, Boralex LP lists ten asset categories, which are also used in the Ocean Falls Cost of Service Model.

In response to BCUC IR 2.3.2, Boralex LP states:

First, virtually all of Boralex LP's capital and operating costs are required to provide service to BC Hydro and the Bella Bella NIA. If Boralex LP had no retail or industrial customers, the only costs that Boralex LP would be able to avoid are the relatively minor costs associated with the distribution lines in the Ocean Falls town site and Martin Valley.

32.3. For each of the ten asset categories, please indicate whether the assets within the category can

be classified as follows:

- (a) All assets are required for providing service to all of Boralex LP’s customers;
- (b) All assets are for the sole or predominant purpose of serving BC Hydro; or
- (c) Some assets are for the sole or predominant purpose of serving BC Hydro, and some assets are required for serving all of Boralex LP’s customers (and/or assets required for serving Ocean Falls retail and industrial customers only).

RESPONSE:

Please see the following table for requested classification of the assets.

<i>Asset Category</i>	<i>Asset Category Description</i>	<i>Categorization per BCUC IR 32.2</i>
1	Major Civil Works (Dam, Spillway, Tailrace)	(b) All assets are for the sole or predominant purpose of serving BC Hydro
2	Miscellaneous Civil Works (Powerhouse, Workshop, Access Roads)	(b) All assets are for the sole or predominant purpose of serving BC Hydro
3	Inlet Gates	(b) All assets are for the sole or predominant purpose of serving BC Hydro
4	Penstocks	(b) All assets are for the sole or predominant purpose of serving BC Hydro
5	Turbine-Generators	(b) All assets are for the sole or predominant purpose of serving BC Hydro
6	Controls & Ancillary Systems	(b) All assets are for the sole or predominant purpose of serving BC Hydro
7	Substation Equipment	(b) All assets are for the sole or predominant purpose of serving BC Hydro
8	Overhead Distribution	(c) Some assets are for the sole or predominant purpose of serving BC Hydro, and some assets are required for serving all of Boralex LP’s customers (and/or assets required for serving Ocean Falls retail and industrial customers only).
9	Subsea Distribution Cable	(b) All assets are for the sole or predominant purpose of serving BC Hydro
10	General Plant	(c) Some assets are for the sole or predominant purpose of serving BC Hydro, and some assets are required for serving all of Boralex LP’s customers (and/or assets required for serving Ocean Falls retail and industrial customers only).

32.3.1 To provide an estimate for allocating the revenue requirement based on the proportion of capital assets required to serve BC Hydro, please calculate the following steps for each year of the test period (see the table below for a simplified worked example):

- i. For each year of the test period, take the Residual Rate Base After Depreciation by asset category (i.e. Column C below, sourced from the “Depreciation” tab of the Ocean Falls Cost of service model).
- ii. For asset categories identified as (a) per BCUC IR 32.2, assume BC Hydro is allocated a percentage of the rate base value, based on its actual/forecasted consumption (kWh) as a proportion of the total consumption of all customers.
- iii. For asset categories identified as (b) per BCUC IR 32.2, assume BC Hydro is allocated 100% of the rate base value.
- iv. For asset categories identified as (c) per BCUC IR 32.2, please provide an estimate of the percentage of the rate base value used to provide service to BC Hydro only. If there are assets serving only Ocean Falls retail and industrial customers, allocate zero to BC Hydro; and for the remainder of the rate base, allocate to BC Hydro on a kWh basis as in

step (ii) of BCUC IR 32.2.1. Please briefly note and explain any assumptions. If a reasonable estimate is not feasible, please follow the assumption described in step (ii) of BCUC IR 32.2.1.

- v. Calculate the total and percentage of the rate base allocated to BC Hydro by applying the percentages calculated in steps (ii)-(iv) of BCUC IR 32.2.1 to the respective rate base values for each category (Columns E and F).
- vi. Apply the overall percentage of rate base allocated to BC Hydro to the Gross Revenue Requirement provided in the updated Table 3 to calculate the revenue requirement for BC Hydro (Column H).
- vii. Please also indicate the resulting shortfall or surplus compared to the net revenue requirement in the updated Table 3, and the rates for BC Hydro based on this cost allocation.
- viii. Please repeat the above steps assuming that for step (ii) of BCUC IR 32.2.1, BC Hydro is allocated a percentage based on peak load (MW) as a proportion of the sum of peak loads for all customers.

RESPONSE:

(a) BC Hydro’s actual/forecasted consumption as a proportion of the total consumption of all customers (based on the April 29, 2020 Application Update):

Year 2019

BC Hydro Revenue Requirement Calculation Using Rate Base Allocation Methodology							
Asset Category	Residual Rate Base 2019 (\$)	Asset Category Classified as (a) (b) or (c)	Allocation to BC Hydro	Rate Base Allocated to BC Hydro (\$) [B*D]	BC Hydro Percentage of Total Rate Base [E/B]	Gross Revenue Requirement Q3/Q4 2019 (\$)	BC Hydro Revenue Requirement Q3/Q4 2019 (\$) [F*G]
1	\$2,936,210	(b)	100%	\$2,936,210			
2	\$1,773,180	(b)	100%	\$1,773,180			
3	\$1,046,488	(b)	100%	\$1,046,488			
4	\$1,685,448	(b)	100%	\$1,685,448			
5	\$1,865,125	(b)	100%	\$1,865,125			
6	\$86,582	(b)	100%	\$86,582			
7	\$262,869	(b)	100%	\$262,869			
8	\$1,255,102	(c)	98%	\$1,225,827			
9	\$1,314,169	(b)	100%	\$1,314,169			
10	\$882,201	(c)	95%	\$841,047			
Total	\$13,107,374			\$13,036,945	99.5%	\$1,843,956	\$1,834,048

Year 2020

BC Hydro Revenue Requirement Calculation Using Rate Base Allocation Methodology							
Asset Category	Residual Rate Base 2020 (\$)	Asset Category Classified as (a) (b) or (c)	Allocation to BC Hydro	Rate Base Allocated to BC Hydro (\$) [B*D]	BC Hydro Percentage of Total Rate Base [E/B]	Gross Revenue Requirement Q3/Q4 2020 (\$)	BC Hydro Revenue Requirement Q3/Q4 2020 (\$) [F*G]
1	\$2,903,881	(b)	100%	\$2,903,881			

2	\$1,746,272	(b)	100%	\$1,746,272			
3	\$1,031,999	(b)	100%	\$1,031,999			
4	\$1,659,927	(b)	100%	\$1,659,927			
5	\$2,146,959	(b)	100%	\$2,146,959			
6	\$241,960	(b)	100%	\$241,960			
7	\$318,216	(b)	100%	\$318,216			
8	\$1,218,671	(c)	98%	\$1,192,866			
9	\$1,261,741	(b)	100%	\$1,261,741			
10	\$974,529	(c)	96%	\$933,257			
Total	\$13,504,155			\$13,437,077	99.5%	\$3,641,881	\$3,623,791

Year 2021

BC Hydro Revenue Requirement Calculation Using Rate Base Allocation Methodology							
Asset Category	Residual Rate Base 2021 (\$)	Asset Category Classified as (a) (b) or (c)	Allocation to BC Hydro	Rate Base Allocated to BC Hydro (\$) [B*D]	BC Hydro Percentage of Total Rate Base [E/B]	Gross Revenue Requirement Q3/Q4 2021 (\$)	BC Hydro Revenue Requirement Q3/Q4 2021 (\$) [F*G]
1	\$2,871,552	(b)	100%	\$2,871,552			
2	\$1,719,364	(b)	100%	\$1,719,364			
3	\$1,017,511	(b)	100%	\$1,017,511			
4	\$2,696,417	(b)	100%	\$2,696,417			
5	\$2,379,587	(b)	100%	\$2,379,587			
6	253,679	(b)	100%	\$253,679			
7	\$927,460	(b)	100%	\$927,460			
8	\$1,364,056	(c)	98%	\$1,335,073			
9	\$1,209,313	(b)	100%	\$1,209,313			
10	\$1,065,656	(c)	96%	\$1,020,370			
Total	\$15,504,594			\$15,430,326	99.5%	\$4,241,141	\$4,220,826

Year 2022

BC Hydro Revenue Requirement Calculation Using Rate Base Allocation Methodology							
Asset Category	Residual Rate Base 2022 (\$)	Asset Category Classified as (a) (b) or (c)	Allocation to BC Hydro	Rate Base Allocated to BC Hydro (\$) [B*D]	BC Hydro Percentage of Total Rate Base [E/B]	Gross Revenue Requirement Q3/Q4 2022 (\$)	BC Hydro Revenue Requirement Q3/Q4 2022 (\$) [F*G]
1	\$2,876,725	(b)	100%	\$2,876,725			
2	\$1,692,455	(b)	100%	\$1,692,455			
3	\$1,003,022	(b)	100%	\$1,003,022			
4	\$5,201,317	(b)	100%	\$5,201,317			
5	\$2,584,966	(b)	100%	\$2,584,966			
6	\$259,211	(b)	100%	\$259,211			
7	\$1,723,578	(b)	100%	\$1,723,578			

8	\$1,509,902	(c)	98%	\$1,478,112			
9	\$1,156,885	(b)	100%	\$1,156,885			
10	\$1,340,866	(c)	96%	\$1,284,405			
Total	\$19,348,928			\$19,260,677	99.5%	\$4,486,799	\$4,466,334

(b) BC Hydro's peak load as a proportion of the total system peak consumption:

Year 2019

BC Hydro Revenue Requirement Calculation Using Peak Load Allocation Methodology							
Asset Category	Residual Rate Base 2019 (\$)	Asset Category Classified as (a) (b) or (c)	Allocation to BC Hydro	Rate Base Allocated to BC Hydro (\$) [B*D]	BC Hydro Percentage of Total Rate Base [E/B]	Gross Revenue Requirement Q3/Q4 2019 (\$)	BC Hydro Revenue Requirement Q3/Q4 2019 (\$) [F*G]
1	\$2,936,210	(b)	100%	\$2,936,210			
2	\$1,773,180	(b)	100%	\$1,773,180			
3	\$1,046,488	(b)	100%	\$1,046,488			
4	\$1,685,448	(b)	100%	\$1,685,448			
5	\$1,865,125	(b)	100%	\$1,865,125			
6	\$86,582	(b)	100%	\$86,582			
7	\$262,869	(b)	100%	\$262,869			
8	\$1,255,102	(c)	99%	\$1,238,074			
9	\$1,314,169	(b)	100%	\$1,314,169			
10	\$882,201	(c)	97%	\$858,262			
Total	\$13,107,374			\$13,066,407	99.7%	\$1,843,956	\$1,838,193

Year 2020

BC Hydro Revenue Requirement Calculation Using Peak Load Allocation Methodology							
Asset Category	Residual Rate Base 2020 (\$)	Asset Category Classified as (a) (b) or (c)	Allocation to BC Hydro	Rate Base Allocated to BC Hydro (\$) [B*D]	BC Hydro Percentage of Total Rate Base [E/B]	Gross Revenue Requirement Q3/Q4 2020 (\$)	BC Hydro Revenue Requirement Q3/Q4 2020 (\$) [F*G]
1	\$2,903,881	(b)	100%	\$2,903,881			
2	\$1,746,272	(b)	100%	\$1,746,272			
3	\$1,031,999	(b)	100%	\$1,031,999			
4	\$1,659,927	(b)	100%	\$1,659,927			
5	\$2,146,959	(b)	100%	\$2,146,959			
6	\$241,960	(b)	100%	\$241,960			
7	\$318,216	(b)	100%	\$318,216			
8	\$1,218,671	(c)	99%	\$1,202,320			
9	\$1,261,741	(b)	100%	\$1,261,741			
10	\$974,529	(c)	97%	\$948,379			
Total	\$13,504,155			\$13,461,654	99.7%	\$3,641,881	\$3,630,419

Year 2021

BC Hydro Revenue Requirement Calculation Using Peak Load Allocation Methodology							
Asset Category	Residual Rate Base 2021 (\$)	Asset Category Classified as (a) (b) or (c)	Allocation to BC Hydro	Rate Base Allocated to BC Hydro (\$) [B*D]	BC Hydro Percentage of Total Rate Base [E/B]	Gross Revenue Requirement Q3/Q4 2021 (\$)	BC Hydro Revenue Requirement Q3/Q4 2021 (\$) [F*G]
1	\$2,871,552	(b)	100%	\$2,871,552			
2	\$1,719,364	(b)	100%	\$1,719,364			
3	\$1,017,511	(b)	100%	\$1,017,511			
4	\$2,696,417	(b)	100%	\$2,696,417			
5	\$2,379,587	(b)	100%	\$2,379,587			
6	\$253,679	(b)	100%	\$253,679			
7	\$927,460	(b)	100%	\$927,460			
8	\$1,364,056	(c)	99%	\$1,345,954			
9	\$1,209,313	(b)	100%	\$1,209,313			
10	\$1,065,656	(c)	97%	\$1,037,370			
Total	\$15,504,594			\$15,458,206	99.7%	\$4,241,141	\$4,228,452

Year 2022

BC Hydro Revenue Requirement Calculation Using Peak Load Allocation Methodology							
Asset Category	Residual Rate Base 2022 (\$)	Asset Category Classified as (a) (b) or (c)	Allocation to BC Hydro	Rate Base Allocated to BC Hydro (\$) [B*D]	BC Hydro Percentage of Total Rate Base [E/B]	Gross Revenue Requirement Q3/Q4 2022 (\$)	BC Hydro Revenue Requirement Q3/Q4 2022 (\$) [F*G]
1	\$2,876,725	(b)	100%	\$2,876,725			
2	\$1,692,455	(b)	100%	\$1,692,455			
3	\$1,003,022	(b)	100%	\$1,003,022			
4	\$5,201,317	(b)	100%	\$5,201,317			
5	\$2,584,966	(b)	100%	\$2,584,966			
6	\$259,211	(b)	100%	\$259,211			
7	\$1,723,578	(b)	100%	\$1,723,578			
8	\$1,509,902	(c)	99%	\$1,490,081			
9	\$1,156,885	(b)	100%	\$1,156,885			
10	\$1,340,866	(c)	97%	\$1,305,663			
Total	\$19,348,928			\$19,293,904	99.7%	\$4,486,799	\$4,474,039

32.3.1.1 Please discuss the strengths and weaknesses of allocating the revenue requirement by such a method, including the impacts upon Boralex LP.

(The below worked example assumes BC Hydro is responsible for 75% of overall consumption).

A	B	C	D	E	F	G	H
Asset Category	Residual Rate Base 2019 (\$)	Asset Category Classified as a) b) or c)	Allocation to BC Hydro	Rate Base Allocated to BC Hydro (\$) [B*D]	BC Hydro Percentage of Total Rate Base [E/B]	Gross Revenue Requirement 2019 (\$)	BC Hydro Revenue Requirement 2019 (\$) [F*G]
1	100	a	75%	75			
2	200	b	100%	200			
3	300	c	87.5%	262.5			
Total	600			537.5	89.6%	5000	4479.17
		Assumes 50% of asset value relates to service provided to BC Hydro only, and 50% to provide service to all customers					

RESPONSE:

Using the allocation methodology outlined in Boralex LP’s response to BCUC 32.3.1, BC Hydro would be required to pay a greater amount of the gross revenue requirement under both the percentage of load methodology as well as the percentage of peak demand methodology. Because Boralex LP’s rates for its retail and industrial customers are already regulated and determined in accordance with Order G-26-10 (as confirmed by Order G-143-19), both methodologies would result in Boralex LP collecting more than the gross revenue requirement.

	Percentage of Load Methodology			
	Q3-Q4 2019	2020	2021	2022
[A]: Net Revenue Requirement per April 29, 2020 Application Update	\$1,490,100	\$3,014,745	\$3,642,193	\$3,876,874
[B]: Allocation of Gross Revenue Requirement to BC Hydro as per BCUC IR 32.2.2	\$1,834,048	\$3,623,791	\$4,220,826	\$4,466,334
Difference ([B] - [A])	\$343,948	\$609,046	\$578,633	\$589,461

	Percentage of Peak Demand Methodology			
	Q3-Q4 2019	2020	2021	2022
[A]: Net Revenue Requirement per April 29, 2020 Application Update	\$1,490,100	\$3,014,745	\$3,642,193	\$3,876,874
[B]: Allocation of Gross Revenue Requirement to BC Hydro as per BCUC IR 32.2.2	\$1,838,193	\$3,630,419	\$4,228,452	\$4,474,039
Difference ([B] - [A])	\$348,092	\$615,674	\$586,259	\$597,166

**33.0 Reference: COST OF SERVICE
Exhibit B-3
Financial Model**

Attached to Exhibit B-3, Boralex LP provides the Ocean Falls Cost of Service Model.

33.1. Please provide an updated version of the model including the changes made since the filing of the Application.

RESPONSE:

An updated version of the model has been filed with Boralex LP's April 29, 2020 Application Update.

B. DEPRECIATION

**34.0 Reference: DEPRECIATION
Exhibit B-1, p. 27
Exhibit B-6, BCUC IR 6.1
Depreciation Lives**

In response to BCUC IR 6.1, Boralex LP states:

With regard to the hydroelectric asset categories in Table 7 (i.e., Major Civil Works: Dam, Spillway, Tailrace; Miscellaneous Civil Works: Powerhouse, Workshop, Access Roads; Penstocks; Turbine-Generators), Boralex LP based the depreciation lives in general conformance with the recommendations in a depreciation study by Gannett Fleming filed with the Ontario Energy Board by Ontario Power Generation (OPG) in its 2013 cost of service revenue requirement application. The Gannett Fleming study assessed the regulated asset depreciation rates applied by OPG, and compared those rates against the rates used by other major Canadian utilities including BC Hydro. Boralex LP slightly adjusted some asset category depreciation lives to accommodate for the historical pooled nature of Boralex LP's rate base.

With regard to the distribution, substation, communications and general plant asset categories, Boralex LP based the depreciation lives set out in Table 7 on the depreciation lives typically used by other Canadian electric utilities for similar asset groups.

Boralex also provides a comparison of depreciation lives with Alectra Utilities' distribution and substation assets.

34.1. Does Boralex consider there are any technical, regulatory or economic factors that would limit the overall lifespan of the Ocean Falls facilities to less than 100 years?

RESPONSE:

Boralex LP is not presently aware of any technical, regulatory or economic factors that would limit the remaining service life of the Ocean Falls Facilities to less than 100 years, assuming diligent maintenance of the assets and replacement of any components with shorter service lives when asset condition indicates that replacement is required. 100 years is, of course, an extremely long period and it is conceivable that technical, regulatory or economic factors could arise over such an extended period which might limit the overall lifespan of the facilities to less than 100 years.

- 34.2.** Please explain on what basis Boralex LP selected the comparable utilities, and discuss why Boralex LP considers these utilities to be the most appropriate comparison for the Ocean Falls facilities.

RESPONSE:

Boralex LP selected the comparable utilities based upon the public availability of the selected information in a format that could be applied to the Application. In Boralex LP's understanding, the depreciation lives utilized by the selected example utilities generally align well with the representative range of asset depreciation lives for similar assets used by many Canadian electric utilities.

- 34.3.** Please clarify further the process for assessing the depreciation lives "typically used by other Canadian electric utilities for similar asset groups" with respect to distribution, substation, communications and general plant. Which utilities were selected, and on what basis did Boralex LP determine what depreciation lives were "typical"?

RESPONSE:

In its response to BCUC IR 6.1, Boralex LP provided the depreciation lives for distribution, substation, communications and general plant utilized by Alectra Utilities in its most recent rate filing with the Ontario Energy Board. Alectra is a representative example of a Canadian electric utility which operates similar facilities. Based on its general understanding of the depreciation lives used by other Canadian electric utilities, Boralex LP believes the depreciation lives utilized in the Application are representative of typical values used by other Canadian utilities.

- 34.3.1** Please explain if there are any unique considerations for the Ocean Falls facilities that would result in a different expected useful life than the typical Canadian electric utility.

RESPONSE:

The weather and geography characteristic of the BC central coast region where the Ocean Falls Facilities are located present unique challenges to operating and maintaining utility assets. For example, it is challenging to operate and maintain outdoor facilities in a region that receives over 4 meters of annual precipitation. The 45 km 25 kV transmission line that interconnects the Ocean Falls plant to the Bella Bella NIA is generally situated on steep, forested oceanside slopes that feature discontinuous land access and persistently inclement ambient weather conditions. These facilities are almost continuously wet, and must be diligently monitored and tested to ensure their ongoing serviceability. Another local challenge is the requirement to ensure that the exterior surfaces of all building envelopes are maintained in fully waterproof condition to prevent damage to building structural components and the interior electrical and mechanical equipment.

Boralex LP has extensive experience reliably operating and maintaining the Ocean Falls Facilities and believes that the selected depreciation periods reflect reasonable achievable service lives for the assets comprising the categories identified in the Application.

- 34.4.** Please explain if Boralex LP reviewed the depreciation lives used by BC Hydro, or other regulated

utilities in British Columbia.

RESPONSE:

Borex LP did not specifically review the depreciation lives used by BC Hydro or other regulated utilities in British Columbia when initially preparing the Application.

34.4.1 If yes, please provide a comparison with the depreciation lives in Table 7 of the Application, including a discussion of any notable differences.

RESPONSE:

In preparing this response, Borex LP reviewed the depreciation lives used by BC Hydro as set out in BC Hydro’s F2020-F2021 Revenue Requirements Application. The following table compares the depreciation lives of Borex LP’s asset categories shown in Table 7 with existing and recommended depreciation lives of similar BC Hydro asset categories from BC Hydro’s F2020-F2021 Revenue Requirements Application, Gannet Fleming Depreciation Study, Tables 1 and 2 (Exhibit B-34):

Asset Category	Borex Asset Category Description	Description of Representative BC Hydro Asset Category (BCH Profile ID)	Borex Depreciation Life (years)	BC Hydro Depreciation Life (years)	
				Existing	Recommended
1	Major Civil Works (Dam, Spillway, Tailrace)	Dam – Embankment / Concrete (21001)	100	100	100
2	Miscellaneous Civil Works (Powerhouse, Workshop, Access Roads)	Building – Composite Pool (22005)	75	40	60
3	Inlet Gates	Gate (23604)	75	50	40
4	Penstocks	Penstock – Steel (23201)	75	50	75
5	Turbine – Generators	Turbine – Hydro Composite Pool (41007)	75	50	50
6	Controls & Ancillary Systems	Excitor – Composite Pool (42104)	25	40	40
7	Substation Equipment	Transformer – Power – Composite Pool (52106)	45	33	45
8	Overhead Distribution	Pole Structures (25202)	45	35	50
9	Subsea Distribution Cable	Cable, Submarine <60 kV (55304)	30	35	35
10	General Plant	Tools and Work Equipment (82550)	30	20	15

34.5. Please further explain how and why Borex LP made adjustments due to the “historical pooled nature of Borex LP’s rate base.”

RESPONSE:

The assets comprising the historical Ocean Falls rate base at the time of Borex LP’s acquisition of the facilities in 2009 were grouped into several high-level categories. Each category includes a range of non-homogeneous equipment and components which was not broken out into constituent parts. Borex LP determined that while there would be little

value in developing comprehensive categorization by all individual asset elements for depreciation purposes, it was practical to at least estimate the proportions of the powerhouse and interconnection line asset categories that should reasonably be depreciated using different lives than the base asset category lives.

For example, undersea electrical cables have significantly shorter expected useful lives than overhead electrical facilities, so a portion of the interconnection line asset category was extracted into an undersea cable category. The reasonableness of this was empirically demonstrated when one of the Johnson Channel cables failed after approximately 30 years in service, whereas the expected service lives of the overhead line sections are in the 45 year range, notwithstanding that individual overhead structures and line sections have failed in less than 45 years, due either to location-specific ground conditions or as the result of meteorological events such as ice storms, extreme wind fronts and lightning strikes.

The original powerhouse category comprises both the powerhouse building and the enclosed generation equipment. The concrete powerhouse structure (appropriately maintained) has a longer expected service life than the generation units, which have historically required, and are expected to continue requiring, greater maintenance and rehabilitation attention than the powerhouse building.

- 34.6.** Please discuss at a high level Boralex LP's view of the homogeneity of the assets within each asset category in Table 7 of the Application, with respect to expected useful life.

RESPONSE:

The homogeneity of the assets within each asset category in Table 7 is adequate for the purpose of determining the cost of service-based revenue requirement for the Ocean Falls Facilities. Ocean Falls is a small utility with a very limited portfolio of assets, and the incremental investments being made over the forecast period are largely focused into a few main categories (i.e., Penstock 2, Turbines, Stations, Overhead Lines, Powerhouse electrical/control systems and General Plant). There is sufficient homogeneity in the asset categories that are the subject of these incremental investments that a more granular breakout of depreciation categories would likely not impact the revenue requirement as much as would the expense of developing and maintaining the more complex accounting treatment.

- 34.6.1** Where Boralex LP has aggregated non-homogenous assets into an asset category, please explain how Boralex LP determined the appropriate depreciation life.

RESPONSE:

As discussed in Boralex LP's response to BCUC IR 5.1, Boralex LP has not aggregated non-homogeneous assets into different asset categories. Boralex LP is continuing to utilize the asset categories it inherited at the time of acquiring the Ocean Falls Facilities, with the exception of the two new categories broken out to recognize the different expected useful lives of undersea versus overhead lines, and of the powerhouse building versus the generating equipment, as described in Boralex LP's response to BCUC IR 34.5.

34.6.2 Does Boralex LP consider the depreciation life assumptions represent the approximate upper, lower or average expected lifetimes of assets in the category?

RESPONSE:

Boralex LP considers the depreciation life assumptions shown in Table 7 to represent the average expected lifetimes for the assets comprising each category. Individual assets and components may have longer or shorter realized useful lives due to a variety of factors, including original manufacturing and construction differences and defects, meteorological events, tree-falls, human and animal interference, but no more than would be expected in the useful life distribution typical of utility assets.

On page 27 of the Application, Boralex LP states:

The Ocean Falls to Shearwater 45 km 25 kV transmission line is situated in rugged terrain and a challenging climatic zone that accelerates deterioration of structures and other line components. Assets are wet almost continuously throughout the year and often exposed to fog and sea spray, which promotes wood rot, metal corrosion and equipment contamination.

34.7. Please discuss if Boralex LP has made any adjustments to its depreciation life assumptions for the transmission line based on the climatic conditions.

RESPONSE:

Yes, in less inclement climatic conditions Boralex LP would expect the overhead line components to have longer expected service lives than the 45 years adopted in Table 7 of the Application. In a drier setting, the overhead structures and cross-arms could have average expected lives of 50 to 55 years.

34.8. Please discuss if and how the climatic conditions accelerate the deterioration of any other asset classes.

RESPONSE:

Among other things, the local climatic conditions negatively impact the weathering of exposed concrete and the expected service lives of roofing and building envelope waterproof membranes. In addition, the persistent wetness promotes abundant and rapid growth of moss, algae, lichen, bushes and trees, which requires diligent maintenance to avoid negative operational impacts, and in the case of bushes and trees, active brushing efforts on the line right of way to prevent line contact outages and tree-fall damage. Also, the saturated soils on steep slopes are prone to mass debris movement and landslides, which in past years have destroyed sections of overhead line, including a stretch between the Ocean Falls town site and Martin Valley.

C. HISTORICAL CAPITAL EXPENDITURES

**35.0 Reference: HISTORICAL CAPITAL EXPENDITURES
Exhibit B-3, 'CAPEX Historic' tab**

Exhibit B-6, BCUC IR 4.5

Link River Bridge

In response to BCUC IR 4.5, Boralex LP states:

The Link River bridge is a private bridge owned and used by Boralex LP. The bridge is also used by Mowi Canada West to access its fish hatchery operation, by Ocean Falls Blockchain to access its cryptocurrency mining operation in the space leased from Boralex LP in Boralex LP's workshop/storage building, and occasionally by members of the public to access the local landfill. Mowi Canada West contributed \$200,000 to the cost of the new bridge and supplied the quarry rock required for the bridge construction in exchange for its use of the bridge.

In the Ocean Falls Cost of Service Model, \$1,004,000 of expenditure is recorded with respect to the Link River bridge replacement in 2011 ("CAPEX Historic" tab, cell F12).

- 35.1.** Please confirm and explain whether the \$1,004,000 includes or excludes the \$200,000 contribution from Mowi Canada West.

RESPONSE:

The \$1,004,000 excludes the \$200,000 contribution from Mowi Canada West. It also excludes the value of the quarry rock required for bridge construction that was supplied by Mowi Canada West.

- 35.2.** Please discuss on what basis the \$200,000 contribution from Mowi Canada West was agreed upon.

RESPONSE:

The \$200,000 contribution and supply of the quarry rock required for bridge construction was agreed upon through negotiations with Mowi Canada West.

- 35.3.** Please discuss whether Boralex LP pursued any public funding for the project. If not, please explain why not.

RESPONSE:

Boralex LP approached the BC Ministry of Transportation & Infrastructure to request replacement of the Link River bridge after it failed. However, the Ministry did not consider the replacement of the bridge to be a priority project for the Province and would not agree to replace the bridge or provide funding.

**36.0 Reference: HISTORICAL CAPITAL EXPENDITURES
Exhibit B-6, BCUC IR 4.2
Dam and Spillway Work**

In response to BCUC IR 4.2, Boralex LP states:

The concrete dam and spillway work conducted in 2009-2011 is expected to last at least 50 years. The concrete dam and spillway work conducted in 2009-2011 did not

remediate all of the dam, and some elements still require remediation in the future. The overall dam structure is anticipated to remain serviceable for 100 more years with regular inspection and maintenance.

- 36.1.** Please confirm Boralex LP is proposing the concrete dam and spillway work conducted in 2009-2011 be amortized over a period of 100 years.

RESPONSE:

Confirmed.

- 36.1.1** If confirmed, please explain why this depreciation life is appropriate, considering the works are expected to last “at least 50 years” and further remediation is needed in future.

RESPONSE:

The concrete work was undertaken to rehabilitate deteriorated dam concrete surfaces in order to keep the dam in serviceable condition. The dam is expected to last for another 100 years if properly maintained. Although the recently completed concrete repairs may become eroded again over time and the dam concrete may require subsequent repairs, by continuing to appropriately maintain the concrete surfaces the intended life extension of the dam will be achieved.

D. FORECAST CAPITAL EXPENDITURES

- 37.0 Reference: FORECAST CAPITAL EXPENDITURES
Exhibit B-1, p. 23
Exhibit B-6, BCUC IR 7.11
Turbine Rehabilitation**

On page 23 of the Application, Boralex LP states:

Project 2 scope involves dismantling the G2, G3 and G4 turbines, removing the shafts, non-destructive testing to locate shaft surface cracks, shaft rehabilitation (repairing cracks, machine and add shaft sleeves at the water bearing locations), replace water bearings, and rehabilitate or replace babbitt bearings, bearing pedestals and bearing housings.

In response to BCUC IR 7.11, Boralex LP states:

The unit G3 rehabilitation work originally proposed for 2020 will be started after unit G4 is back in service (as discussed in Boralex LP’s response to BCUC 7.1) and was not undertaken to coincide with the 2016 rehabilitation work because it had not been identified as being required in 2016. In 2016, the unit G3 runner and wicket gates were identified as the primary sources of operating issues with the G3 turbine. Although the unit G3 runner repair and wicket gates were successfully remediated in 2016, residual shaft vibration and bearing issues have been observed with the unit.

- 37.1.** Please provide Boralex LP’s view of the expected life of the forecasted rehabilitation work to the G2, G3 and G4 turbines, and the work undertaken on unit G3 in 2016. Please discuss if there is any significant variance between each of the turbines.

RESPONSE:

Boralex LP anticipates that the bulk of the G2, G3 and G4 turbine rehabilitation work will last for several decades after the work is completed. Some components, such as water seals and bearing babbits, may require subsequent rehabilitation or replacement earlier than components such as the shaft sleeves and bearing pedestals, just as some G3 wicket gate guides and actuator coupling components may require subsequent refurbishment before the gates and arms themselves need to be replaced, and the G3 turbine runner surfaces may require additional repairs before the runners themselves need to be replaced. By diligently performing maintenance and component replacements as needed, Boralex LP expects that the original units can be kept serviceable for many more decades, so the rehabilitations are expected to achieve the desired long-term outcome of significantly extending unit operational life, thereby maintaining low marginal cost generating capacity at Ocean Falls.

Some common operating problems have been observed with all the units prior to their individual disassembly, including excessive vibration, deteriorated bearing pedestals, axial misalignment and leaking water seals. The actual condition of the individual components of units G2, G3 and G4 will not be known until each of the units is disassembled and major components (such as shafts) non-destructively tested.

One difference between the turbines is that G3 and G4 are dual turbine units and G1 and G2 are single turbine units.

37.1.1 If different from the above, please discuss Boralex LP's expectation of the overall lifetime of the turbines, assuming regular inspection and maintenance.

RESPONSE:

Boralex LP anticipates that with appropriate inspection, maintenance and performing major capital repairs when required, the remaining lifetime of the turbines can be extended for another 75 years.

37.1.2 Please identify if Boralex LP anticipates further rehabilitation work will be required following the test period.

RESPONSE:

While it is always possible that problems with one or more units might eventually emerge that cannot be identified during the rehabilitation work, when the rehabilitation work planned for the present maintenance cycle has been completed (including planned rehabilitation of the G1 turbine post-2022), Boralex LP does not expect that any subsequent major turbine rehabilitation work will be required for at least two decades.

**38.0 Reference: FORECAST CAPITAL EXPENDITURES
Exhibit B-6, BCUC IR 8.7**

Interconnection Line Capital Maintenance Project

On page 27 of the Application, Boralex LP describes the Interconnection Line Capital Maintenance project. In response to BCUC IR 8.7, Boralex LP states:

Boralex LP only plans to capitalize costs related to line inspections, repairs and maintenance work that comprises capital maintenance life extension projects, such as structure and line component replacements. For example, a significant section of the 45 km 25 kV transmission line was destroyed by a major ice and wind storm in 2011 and had to be replaced. The cost of this work was capitalized.

- 38.1.** For clarity, please confirm routine inspection and maintenance work on the 25 kV transmission line is not capitalized.

RESPONSE:

- 38.2. Confirmed. Routine inspection and maintenance work on the 25 kV transmission line is not capitalized.**

**39.0 Reference: FORECAST CAPITAL EXPENDITURES
Exhibit B-7, BC Hydro IR 2.1, 2.2
Capital Planning**

In response to BC Hydro IR 2.1, Boralex LP states:

Boralex Inc. does not have a formal corporate policy for the approval of capital expenditures by its subsidiaries with operating facilities, but it does have a rigorous budget and governance process.

- 39.1.** Please discuss, in the view of Boralex LP, the pros and cons of establishing a formal corporate policy for the approval of capital expenditures with respect to expenditures at the Ocean Falls facilities.

RESPONSE:

Boralex LP wishes to clarify that Boralex Inc. does have a formal corporate process for the approval of capital expenditures by its subsidiaries with operating facilities, including the Ocean Falls Facilities, but this process is not consolidated into a written policy. The process followed annually and specifically in 2019 for 2020 was summarized in Boralex LP's response to BC Hydro IR 2.1. With regard to step 5 in Boralex LP's response to BC Hydro IR 2.1, Boralex LP wishes to clarify that the Board of Directors of Boralex Inc. met in mid-December, 2019 (not mid-November, 2019) and the list of capital projects and expenditures presented to the Board of Directors at that time was in respect of development projects only. The information in respect of operating facilities, including Ocean Falls, was presented on a global basis based on the projects and expenditures approved by the President and Chief Executive Officer, the Vice President and Chief Financial Officer and the Chief Financial Officer of Boralex Inc. (as outlined in step 4 in Boralex LP's response to BC Hydro IR 2.1). The budget and governance process summarized in Boralex LP's response to BC Hydro 2.1 has been approved by Senior Management and by the Board of Directors of Boralex Inc. and occurs every year to review and approve the following year's budget and authorized capital expenditures for the operating facilities, including Ocean Falls.

In response to BC Hydro IR 2.2, Boralex LP states:

Boralex LP does not have formal 10-year capital plan or other longer term capital plan for the Ocean Falls facilities outside of the information that was provided to BC Hydro during the course of the confidential EPA negotiations between Boralex LP and BC Hydro.

- 39.2.** Please discuss why Boralex LP does not produce a long-term capital plan for the Ocean Falls facilities. Please identify any risks associated with this and the measures Boralex LP has in place to mitigate these risks.

RESPONSE:

Boralex LP has not historically produced a formal long-term capital plan for the Ocean Falls facilities because it has not been necessary or cost-effective to do so. The Boralex LP facility manager, supervisors and operators are fully aware of the condition of the facilities, and continue to build upon the 35 year record of prudently keeping the facilities in excellent operating condition, and providing highly reliable electricity supply to BC Hydro's Bella Bella NIA and the non-BC Hydro customers in Ocean Falls.

The interconnection between the Ocean Falls plant and BC Hydro's Bella Bella NIA at Shearwater comprises almost exclusively radial facilities, so there is no need for complex system planning analysis to maintain and operate those facilities (focused technical studies such as protection settings analyses are carried out as required).

There is a single dam and penstock, with the capacity to provide as much water for generation as will conceivably be demanded in the foreseeable future by the interconnected loads.

The power plant was originally built to serve a large pulp and paper operation and the associated community, so there is adequate built-in generating capacity to enable extended unit rehabilitation outages without jeopardizing local power supply, even under high demand scenarios. This built-in unit redundancy is presently proving to be of great benefit, as G4 (one of the two larger units) remains out of service for the rehabilitation work that was initiated in 2019 and which was unable to be completed prior to the 2019/2020 winter peak period.

- 39.3.** Please identify the most significant capital expenditures anticipated beyond the test period for the long-term operation of the Ocean Falls facilities.

RESPONSE:

The most significant capital expenditures anticipated beyond the test period for the long-term operation of the Ocean Falls Facilities are the completion of the Penstock 2 rehabilitation project, any dam remediation that may be needed, and ongoing capital maintenance of 45 km 25 kV transmission line between Ocean Falls and Shearwater as the structures and other line components reach end of life condition over the next 20 years.

- 39.4.** Please discuss how Boralex LP expects capital expenditures within the test period to compare directionally to future test periods.

RESPONSE:

Boralex is presently undertaking refurbishment or replacement of several larger and more

expensive Ocean Falls assets which are at or approaching end of life, to enable the facilities to continue providing highly reliable service over the long term. Once the projects presently underway and the future major projects referred to Boralex LP's response to BCUC IR 39.3 have been completed, Boralex LP anticipates there will be an extended period of lower annual capital expenditure requirements.

**40.0 Reference: FORECAST CAPITAL EXPENDITURES
Exhibit B-6, BCUC IR 20.1, 20.2
Electricity Purchased under Tariff Supplement No. 7**

In response to BCUC IR 20.1, Boralex LP states:

The cost incurred by Boralex LP to purchase electricity from BC Hydro under Tariff Supplement No. 7 in 2018 and 2019 was capitalized as part of the projects undertaken in those years that required shutdowns of the Ocean Falls Facilities to complete. The forecast cost of purchasing electricity from BC Hydro under Tariff Supplement No. 7 in 2020, 2021 and 2022 in connection with the shutdowns required for the penstock rehabilitation project is included in the line item "Oil, Fuel and BC Hydro Power" in Table 27 of the Application. These forecast costs, like the cost of purchasing power in 2018 and 2019, should also be capitalized as part of the penstock rehabilitation project. This change in the treatment of power costs will be reflected in the updated version of Table 3 to be filed by Boralex LP...

In response to BCUC IR 20.2, Boralex LP provides the actual and forecasted annual cost of purchasing electricity from BC Hydro under Tariff Supplement No. 7 for 2018 to 2022.

40.1. Please confirm, or explain otherwise, the electricity purchased under Tariff Supplement No. 7 during shutdowns for capital projects (both past and future) is primarily to serve Boralex LP's retail and industrial customers.

RESPONSE:

The electricity purchased by Boralex LP under Tariff Supplement No. 7 during shutdowns for capital projects (both past and future) is used by Boralex LP to serve its retail customers in Ocean Falls and to provide basic service only (e.g., shop lighting, but not operational loads) to the two industrial customers.

40.1.1 Please also discuss if electricity purchased under Tariff Supplement No. 7 is required for activities directly required to complete the capital projects, and/or any other purposes.

RESPONSE:

When the Ocean Falls generating facilities are shutdown for capital work the only source of power available to Boralex LP in Ocean Falls is the electricity purchased from BC Hydro under Tariff Supplement No. 7, which is back-fed on the 45 Km 25 kV transmission line between Ocean Falls and Shearwater. Accordingly, electricity purchased under Tariff Supplement No. 7 is required by Boralex LP and its contractors for activities directly required to complete the capital projects (e.g., powering electric tools and equipment). As noted in Boralex LP's response to BCUC IR 20.4, Boralex LP has made arrangements to install a 311 kW emergency backup generator at Ocean Falls, but this would only be used in the event there was an outage from BC Hydro or an outage on the transmission line between Ocean Falls and Shearwater when BC Hydro is supplying power to Boralex LP.

40.1.2 Please provide a breakdown of the costs outlined in Boralex LP's response to BCUC IR 20.2 for the following end uses:

- Boralex LP's retail and industrial customers;
- Activities directly related to the capital projects; and
- Any other purposes.

RESPONSE:

Although Boralex LP meters electricity sales to its retail and industrial customers, it does not read the meters on a daily basis (the retail customer meters are read every second month and the two industrial customer meters are read monthly) and therefore cannot precisely provide a breakdown of how much electricity was consumed by each customer during the two prior shutdown periods when Boralex LP purchased electricity from BC Hydro under Tariff Supplement No. 7 (i.e., May 18 to May 30, 2018 and May 5 to May 16, 2019). However, the retail customers would have consumed the bulk of the electricity during the two shutdown periods because the two industrial customers were also shutdown during these periods and would only have had minimal electricity consumption (e.g. shop lighting).

40.2. Please explain why, in the view of Boralex LP, the historical and forecast costs of electricity purchased under Tariff Supplement No. 7 for the purposes of serving Boralex LP's retail and industrial customers should be included in a cost allocation for BC Hydro.

RESPONSE:

Boralex LP has an obligation to provide service in Ocean Falls and the cost to provide this service, including during periods when Boralex LP is required to purchase electricity from BC Hydro, is part of Boralex LP's gross revenue requirement, like all other costs of providing service. Although the rates charged by Boralex LP to its non-BC Hydro customers are regulated and determined in accordance with Order G-26-10 (as confirmed by Order G-143-19) and are not being determined by the Commission in this proceeding, the gross revenue requirement is nevertheless recovered from all customers.

Boralex LP notes that the forecast revenue received by Boralex LP from its customers in Ocean Falls (all of which is credited to the gross revenue requirement to reduce BC Hydro's rates) includes revenue from these customers during the forecast periods when Boralex LP is purchasing electricity from BC Hydro under Tariff Supplement No. 7 to serve those customers.

40.3. Please explain why, in the view of Boralex LP, the historical and forecast costs of electricity purchased under Tariff Supplement No. 7 should be capitalized rather than expensed.

RESPONSE:

Please see the April 29, 2020 Application Update. Based on discussions with its external auditors Boralex LP has now determined that the cost of electricity should be expensed, as was set out in the initial filing, and not capitalized.

41.0 Reference: FORECAST CAPITAL EXPENDITURES
Exhibit B-1, p. 29
Exhibit B-6, BCUC IR 1.91
Exhibit B-8, British Columbia Old Age Pensioners' Organization et al. IR 17.2
Working Capital

British Columbia Old Age Pensioners' Organization *et al.* (BCOAPO) IR 17.2 requests the following information: "It is noted that the difference between receivables and payables is negative. Please explain why this leads to a positive working capital requirement." In response, Boralex LP submits:

The calculation of the working capital requirement is guided by the average difference between payables and receivables. Working capital requirement plus receivables, on average over the 2014 to 2017 period as described in Exhibit B-4, equates to the Boralex LP payables.

On page A-3 of Exhibit B-4 Boralex LP submits:

Boralex LP estimated its working capital requirements of \$400,000 by first calculating the difference between its balance sheet receivables and its balance sheet payables over the past five years. The calculation is presented in the table below which shows an average working capital requirement of \$380,000 from 2014 to 2017.

The average working capital requirement of \$380,000 is corrected to \$407,000 in response to BCUC IR 9.1.

- 41.1.** Please clarify if the difference between the balance sheet receivables and the balance sheet payables indicates a positive or a negative working capital requirement of \$407,000 from 2014 to 2017. Please provide the rationale for the response.

RESPONSE:

As noted in Boralex LP's response to BCUC IR 9.1 and in paragraph 126 of the Application, the estimated working capital amount of \$400,000 was based on approximately three months of O&M expenses. In the absence of another method (such as a formal lead-lag study), Boralex LP also endeavoured to estimate its working capital requirement by calculating the difference between its balance sheet receivables and payables. For 2014 to 2017, Boralex LP's year end balance sheet payables exceeded year end balance sheet receivables by an average of \$407,000. While this suggests a negative working capital amount (which is not sustainable for any going concern business), it also means that it would have required an average of \$407,000 of additional working capital for Boralex LP to be in a position, together with the average amount of its year end receivables, to be able to meet the average amount of its year end payables.

- 41.1.1** Please elaborate on the reasons why a positive working capital requirement of \$400,000 is proposed, given that, historically, payables have been greater than receivables in each year between 2014 and 2018.

RESPONSE:

Please see Boralex LP response to BCUC IR 41.1.

On page 29 of the Application Boralex LP states a “\$400,000 working capital allowance has been included to cover approximately three months’ worth of operating, maintenance and administration (“O&M”) expenses, and to address timing issues in payment and receipt of invoices.”

In its response to BCUC IR 9.1 Boralex LP submits:

Three months was selected because it represents the average working capital required in a typical year to deal with the estimated average timing differences between the collection of receivables and the payment of payables.

Boralex LP also estimated its working capital requirements of \$400,000 by calculating the difference between its balance sheet receivables and its balance sheet payables over the past five years using the data in the revised table below.

- 41.2.** Please elaborate on why Boralex LP believes three months is representative of the average demands on working capital during the year and provide any supporting evidence.

The working capital amount of \$400,000 is approximately equal to three months of 2019 forecast O&M expenses (which was \$1,590,000 in the initial filing). Based on the average forecast annual O&M expenses for 2020, 2021 or 2022 (\$2,125,000), \$400,000 represents about two and a quarter months of the forecast expenses. Boralex LP acknowledges that \$400,000 is an estimate only, but believes that it is representative of Boralex LP’s working capital requirements associated with the O&M expenses and also having regard to the greater demand on Boralex LP’s liquidity and cash over the test period as a result of the capital program and to the fact that the forecast costs do not include any amount for AFUDC.

Page 28 of the Economics For Regulation by Canadian Gas Association course notes state:¹

Often the regulator requires the utility to conduct a “lead-lag” study intended to determine the investor supplied funds which a utility effectively should set aside to ensure all liabilities are paid when they fall due. An alternative approach, sometimes used when a lead-lag study has not been conducted, is the 45-day rule where 1/8 of a year (45 days) of the utility’s operating and maintenance expenses is designated as the working capital allowance.

- 41.3.** Please confirm, or explain otherwise, the following calculation represents working capital requirements based on a 45 days lag:

2019 Forecast O&M	\$1,881,000
Lag Days	45
Lag Days as a Function of 365 Days	0.1233
Working Capital Requirement	\$231,904

RESPONSE:

Confirmed.

- 41.3.1** Please discuss the reasonableness of using a 45 day lag to estimate the working capital

¹ https://na.eventscloud.com/file_uploads/eab3515fe5dd937153302e80a65ed0ab_RateRegulatoryFramework.pdf.

requirements for Boralex LP, in the absence of a lead lag study.

RESPONSE:

Boralex LP believes that the use of a 45 day lag to estimate the working capital requirements for Boralex LP is not unreasonable in the absence of a lead lag study. However, Boralex LP believes that the working capital requirement determined by this method should use Boralex LP's forecast O&M requirements over the test period as follows (based on the April 29, 2020 Application Update):

Average Annual O&M (2019 Actual and 2020, 2021 and 2022 Forecast)	\$2,125,000
Lag Days	45
Lag Days as a Function of 365 Days	0.1233
Working Capital Requirement	\$262,000

E. REVENUE REQUIREMENT COMPONENTS

**42.0 Reference: REVENUE REQUIREMENT COMPONENTS
Exhibit B-1, pp. 31-36
Exhibit B-6, BCUC IR 11.2
Capital structure and rate of return on common equity**

On pages 31 to 36, Boralex LP provides its proposed capital structure and allowed rate of return on common equity (ROE) by reference to the benchmark utility, FortisBC Energy Inc. (FEI), used by the BCUC to establish the capital structure and ROE for other regulated utilities. In Table 22 on page 35, Boralex LP proposes the following:

Table 22: Equity Ratio and Return on Equity

Equity Ratio	50%
Benchmark Utility ROE	8.75%
Boralex LP Risk Premium	125 basis points
Resulting Boralex LP ROE	10.0%

In response to BCUC IR 11.2, Boralex LP provides the following table showing its actual equity ratio and ROE since 2009.

	\$ figures in thousands	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009 (9 months)
A	Net Earnings/ (Loss)	\$51	\$59	-\$134	\$272	\$367	\$100	-\$54	-\$86	-\$201	-\$230
B	Partners' Equity	\$13,495	\$13,444	\$13,385	\$12,419	\$12,147	\$11,780	\$11,680	\$11,734	\$12,409	\$6,770
C	Total Liabilities + Partners' Equity	\$21,382	\$21,281	\$21,608	\$21,146	\$21,554	\$21,820	\$22,514	\$22,847	\$23,584	\$22,226
B/C	Equity Ratio	63%	63%	59%	62%	56%	54%	52%	51%	53%	30%
A/B	Return on Equity	0.4%	0.4%	2.2%	-1.0%	3.0%	0.8%	-0.5%	-0.7%	-1.6%	-3.4%

42.1. Please confirm, or otherwise clarify, that the columns for years 2015 and 2016 are transposed. If so, please provide an amended table.

RESPONSE:

Confirmed, the Equity Ratio and Return on Equity for 2015 and 2016 were inadvertently transposed. The following is the corrected table which now also includes 2019 actual figures:

	\$ figures in thousands	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009 (9 months)
A	Net Earnings/ (Loss)	-\$60	\$51	\$59	-\$134	\$272	\$367	\$100	-\$54	-\$86	-\$201	-\$230
B	Partners' Equity	\$13,435	\$13,495	\$13,444	\$13,385	\$12,149	\$12,147	\$11,780	\$11,680	\$11,734	\$12,409	\$6,770
C	Total Liabilities + Partners' Equity	\$22,063	\$21,382	\$21,281	\$21,608	\$21,146	\$21,554	\$21,820	\$22,514	\$22,847	\$23,584	\$22,226
B/C	Equity Ratio	61%	63%	63%	62%	59%	56%	54%	52%	51%	53%	30%
A/B	Return on Equity	-0.4%	0.4%	0.4%	-1.0%	2.2%	3.0%	0.8%	-0.5%	-0.7%	-1.6%	-3.4%

42.1.1 Please update the table to include 2019 actual figures.

RESPONSE:

Please see the updated table in response to BCUC IR 42.1.

42.2. Boralex LP's equity ratio has been increasing from 53% in 2010 to 63% in 2018. The equity ratio increase appears to be a result of a larger partner's equity portion, while liabilities appear to be relatively constant. How does Boralex LP plan to achieve an equity ratio of 50%, if its capital structure proposal is approved?

RESPONSE:

Boralex LP’s equity ratio has been increasing since 2010 because (i) Boralex Inc. has injected additional equity into Boralex LP to fund capital expenditures, and (ii) Boralex LP has been paying down the long term third party debt that was issued following the acquisition of the Ocean Falls Facilities. The third party loan bears interest at 6.55% per annum with monthly payments of principal and interest, and matures in April 2024. Boralex LP would intend to refinance the existing debt or raise additional debt, which would have the effect of reducing the equity ratio from the current levels. In its decision to refinance the existing debt prior to maturity, Boralex LP would have to consider the make-whole provisions of the current loan, which is an obligation of Boralex LP to make the lender whole for any difference between the contracted interest rate and the interest rate applicable to any new financing.

**43.0 Reference: REVENUE REQUIREMENT COMPONENTS
Exhibit B-1, pp. 31-35, 37
Exhibit B-6, BCUC IR 10.3.1, 11.3.1
Considerations for cost of capital and debt interest rate**

In Table 21 on pages 31 to 35 of the Application, Boralex LP provides a modified version of the BCUC’s risk matrix, which compares the risks faced by Boralex LP with those of FEI. In Table 22 on page 35, Boralex LP proposes the following:

Table 22: Equity Ratio and Return on Equity

Equity Ratio	50%
Benchmark Utility ROE	8.75%
Boralex LP Risk Premium	125 basis points
Resulting Boralex LP ROE	10.0%

In response to BCUC IR 11.3.1, Boralex LP states:

Boralex LP has assessed its risk profile from the perspective of the entire utility, which is how equity investors would assess Boralex LP’s risk profile. While the rates paid by Boralex LP’s retail and industrial customers are determined in accordance with Order G-26-10 (and as confirmed under Order G-143-19) and are not being set by the Commission in this proceeding, this does not change the fact that Boralex LP is reliant on the revenue from both BC Hydro and its retail and industrial customers to recover its gross revenue requirement and to support its allowed return on common equity.

On page 37 of the Application, Boralex LP states it believes an appropriate deemed interest rate on the debt component of its capital structure is 5.5%. In response to BCUC IR 10.3.1, Boralex LP states:

Boralex LP has assessed the deemed interest rate on the debt component of its capital structure from the perspective of the entire utility’s debt profile, which is how debt lenders would view it. While the rates paid by Boralex LP’s retail and industrial customers are determined in accordance with Order G-26-10 (and as confirmed by Order G-143-19) and are not being set by the Commission in this proceeding, this does not change the fact that Boralex LP is reliant on the revenue from both BC Hydro and its retail and industrial customers to recover its gross revenue requirement and to support its debt payment obligations. Accordingly the Commission should consider Boralex LP’s

debt requirements on the utility as a whole.

- 43.1.** Please explain whether Boralex LP is aware of any similar cases and/or findings in other regulatory jurisdictions that apply to Boralex LP's situation. Specifically, how do these cases address whether a customer (i.e. BC Hydro) under a regulated utility should compensate the regulated utility for the risks associated with an exempt part of its business (i.e. Boralex LP's retail and industrial customers)?

RESPONSE:

Boralex LP carries on only one utility business, namely, the provision of electrical service to BC Hydro and to its retail and industrial customers in Ocean Falls. The fact that the rates charged by Boralex LP to its retail and industrial customers are regulated and determined in accordance with Commission Order G-26-10 (as confirmed by Order G-143-19) and are not being determined by the Commission in this proceeding does not mean that Boralex LP has two businesses, namely, a regulated part (service to BC Hydro) and an exempt part (service to retail and industrial customers).

Moreover, the fact that the rates payable by the retail and industrial customers are regulated and determined in accordance with Order G-26-10 (as confirmed by Order G-143-19) and not pursuant to a specific allocation of Boralex LP's gross revenue requirement, does not mean that the risks associated with those customers are not relevant to an assessment of Boralex LP's business risks. Boralex LP's gross revenue requirement is recovered from all customers. The forecast revenue from the retail and industrial customers is approximately \$600,000 per year in 2020, 2021 and 2022 and all of this revenue has been credited to the gross revenue requirement to reduce the rates paid by BC Hydro. Therefore, the risks associated with the recovery of this revenue are directly relevant to a consideration of Boralex LP's overall business risks.

In the time available Boralex LP has not been able to canvass similar circumstances in other jurisdictions, but in British Columbia there are a number of analogous situations where the rates for a particular utility customer or customer group are not determined through an allocation of the utility's cost of service to that customer or customer group, but rather are negotiated or determined on some other basis and the associated revenue is then credited to the revenue requirement to be recovered from other customers. In these cases the Commission has not considered the service to these customers or customer groups to be an "exempt part" of the utility's business simply because the rates paid by the customer or customer group are negotiated or determined on some basis other than an allocation of the utility's cost of service.

Pacific Northern Gas Ltd.: Load Retention Rates

In its July 31, 2002 Decision regarding PNG's 2002 Revenue Requirements Application the Commission approved a load retention rate for PNG's service to Methanex Corporation which had been negotiated between PNG and Methanex. The load retention rate resulted in a revenue reduction from Methanex which was then recovered from PNG's other customers, which the Commission noted was consistent with the Commissions' prior actions in similar circumstances. In particular, the Commission stated (at pages 13-14) as follows in the Decision:

"The Commission approved the MOA [between PNG and Methanex] in Section 2.3 and determined that, compared to the alternative of Methanex closure, the MOA will provide the maximum likely revenue to PNG so as to minimize the revenue

requirement from other customers. The issue addressed in this section is the extent to which the Commission will allow PNG to recover from customers other than Methanex the entire amount of any revenue deficiency resulting from the MOA.

The Commission notes that the allocation of the revenue reduction from Methanex to the other customers is consistent with previous actions of the Commission. Revenue requirement and rate design proceedings are done to allocate the total revenue requirement to all customer classes. The Commission has approved load retention rates in several instances and has never approved the methodology proposed by the Forest Companies [the Forest Companies submitted that PNG should absorb the revenue reduction from Methanex]. Bypass rates are treated in a similar manner as load retention rates, and revenue reductions from such rates are borne by other customers. Other customers benefit by the amount that the load retention rate is higher than a utility's variable cost of serving the load or other best other option for using the pipeline capacity.

.....

The Commission denies the requests to reduce PNG's revenue requirement by an amount equivalent to the reduction in revenues from Methanex."

Even though the load retention rates were negotiated between PNG and Methanex (and not based on an allocation of PNG's cost of service), the Commission did not then consider the service to Methanex to be an exempt part of PNG's business and disregard the ongoing risks associated with the Methanex load in assessing PNG's business risks. In fact, in the same July 31, 2002 Decision the Commission specifically considered how the new load retention agreement with Methanex affected PNG's overall business risks in determining the appropriate deemed common equity ratio for PNG.

Fortis BC: By-Pass Rates

The Commission has approved by-pass rates negotiated by FortisBC with certain of its industrial customers who are located close to the natural gas transmission system of Westcoast Energy Inc. The by-pass rates are based on the customer's estimated cost to construct and operate facilities that would connect directly to the Westcoast system and by-pass FortisBC's facilities. As noted in the PNG Decision above, revenue reductions from such rates are borne by FortisBC's other customers. Even though FortisBC negotiated these by-pass rates with the by-pass customers, to Boralex LP's knowledge the Commission did not then consider the service to the bypass customers to be an exempt part of FortisBC's operations and disregard the risks associated with the by-pass customers in assessing FortisBC's overall business risks.

BC Hydro: Non-Integrated Area Rates

Boralex LP does not know how BC Hydro's rates for service to customers in BC Hydro's non-integrated areas (Zones II and IB) are determined. However, Boralex LP does understand that the cost to provide service to customers in the non-integrated areas exceeds the rate revenue recovered by BC Hydro from these customers and that the revenue deficiency is recovered from BC Hydro's other customers.² While not directly analogous because the Commission does not determine BC Hydro's capital structure for ratemaking purposes, if the Commission

² For example, in BC Hydro's 2007 Rate Design Application (Phase II) proceeding (Project No. 3698455), BC Hydro indicated that its net margin in serving the Bella Bella NIA in F2006 was negative \$1.521 million (Exhibit B-103, Response to BC Hydro Undertaking from Commission Counsel at T. Volume 13, page 2219).

was required to assess BC Hydro's business risks, the risks associated with serving customers in the non-integrated areas could not be disregarded because variances in the revenue recovered from the non-integrated areas would directly impact the recovery of BC Hydro's total revenue requirement.

- 43.2.** In the hypothetical scenario where the BCUC determines Boralex LP's equity ratio and return on equity must be considered solely to the risks related to providing service to BC Hydro, please provide an alternative risk matrix as shown in Table 21.

RESPONSE:

Since Boralex LP carries on only one utility business, and because the BC Hydro rates reflect a credit of all of Boralex LP's forecast revenue from its retail and industrial customers, Boralex LP does not know how to hypothetically assess Boralex LP's equity ratio and return on equity solely with regard to the risks relating to the provision of service to BC Hydro. Embedded in the rates for the provision of this service is the forecast revenue that Boralex LP expects to generate from its other customers. As noted in Boralex LP's response to BCUC IR 43.1, in circumstances where other utilities in BC have customers whose rates are not determined on a cost of service basis (e.g., load retention or by-pass rates) the Commission has not attempted to determine the equity ratio and return on equity for these utilities solely with regard to the risks of serving the utilities' other customers.

- 43.2.1** In consideration of the alternative risk matrix, please state any changes to Boralex LP's proposed equity ratio and return on equity. If they remain the same, please justify.

RESPONSE:

Please see Boralex LP's response to BCUC IR 43.2.

- 43.3.** In the hypothetical scenario where the BCUC determines Boralex LP's deemed interest rate on the debt component of its capital structure must be considered solely to the risks related to provide service to BC Hydro, please provide an alternative debt assessment and any changes to Boralex LP's proposed deemed interest rate of 5.5%. If the proposed interest rate remains the same, please justify.

RESPONSE:

Please see Boralex LP's response to BCUC IR 43.2. Since Boralex LP carries on only one utility business, and because the BC Hydro rates reflect a credit of all of Boralex LP's forecast revenue from its retail and industrial customers, Boralex LP does not know how to hypothetically assess the deemed interest rate on the debt component of its capital structure solely with regard to the risks relating to the provision of service to BC Hydro. The forecast revenue from the retail and industrial customers is part of the cash flow available to Boralex LP for debt service and therefore cannot be ignored in assessing the deemed interest rate on the debt component of Boralex LP's capital structure.

F. OPERATING AND MAINTAINANCE AND OTHER EXPENSES

**44.0 Reference: OPERATING AND MAINTENANCE AND OTHER EXPENSES
Exhibit B-1, p. 38
Exhibit B-6, BCUC IR 14.2
Property and School Taxes**

On page 38 of its Application Boralex LP submits:

Boralex LP’s property and school taxes increased significantly starting in 2016. The property and school taxes for 2018 were \$337,000 and water rentals were \$64,000, for a total of \$401,000. Boralex LP successfully appealed the 2016, 2017 and 2018 property tax assessments, resulting in a credit in 2018 of \$252,000 (the 2018 amount shown in Table 24 reflects this credit).

In its response to BCUC IR 14.2 Boralex LP confirms the 2018 “tax credit of \$252,000 relates to 2016, 2017 and 2018 property and school tax expenses. For 2016 the credit was \$80,000, for 2017 the credit was \$82,000, and for 2017 the credit was \$85,000.”

44.1. Please confirm the table below is correct and complete the following items within the table:

- Actual provincial water rentals for 2016 and 2017;
- Property and school taxes, net of credit, for 2016 and 2017; and
- Updates for any information that Boralex considers to be incorrect with an explanation for any updates.

	Actual						Forecast		
	2016	2017	2018	2019 Q1-Q2	2019 Q3-Q4	2019 Total	2020	2021	2022
Property and School Taxes and Water Rentals	\$ 380,000	\$ 388,000	\$ 401,000	\$ 208,203	\$ 208,203	\$ 416,407	\$ 428,249	\$ 440,433	\$ 452,970
Water Rentals			\$ 64,000	\$ 32,500	\$ 32,500	\$ 65,000	\$ 66,300	\$ 67,626	\$ 68,979
Credit Applied to Year	\$ 80,000	\$ 82,000	\$ 85,000						
Property Taxes (Net of Credit)			\$ 252,000	\$ 175,703	\$ 175,703	\$ 351,407	\$ 361,949	\$ 372,807	\$ 383,991

RESPONSE:

The table above is correct. Provincial water rentals for 2016 and 2017 were:

- \$59,000 in 2016; and
- \$60,000 in 2017.

Property and school taxes (net of credit) for 2016 and 2017 were:

- \$241,000 in 2016 and
- \$246,000 in 2017.

44.1.1 Please explain the reason(s) for the increase in property and school taxes from \$252,000 in 2018 to \$351,407 in 2019.

RESPONSE:

As noted in Boralex LP’s response to BCUC IR 14.1, the 2019 assessed value of the Ocean Falls Facilities is similar to the lower assessed value of the facilities that Boralex LP was able to obtain through its appeal of the 2016, 2017 and 2018 assessments. The increase in 2019 is not driven by an increase in the assessed value of the facilities but rather by a significant increase

in the tax rate (i.e., mill rate) charged by the Ocean Falls Improvement District to Boralex LP, from approximately 10% in 2018 to approximately 24% in 2019. Based on Boralex LP's discussions with the District on this matter, the increase in the tax rate is due to an increase in the District's operating budget to support basic services and infrastructure. Boralex LP has no ability to control or mitigate changes in property and school taxes, aside from appealing assessment values. However, unlike assessment values, increases in the District's operating budget or the tax rate cannot be appealed.

45.0 Reference: OPERATING AND MAINTENANCE AND OTHER EXPENSES
Exhibit B-1, pp. 38-40
Exhibit B-6, BCUC IR 15.1
Exhibit B-9, BCUC IR 15.1
Employee Costs

In its response to BCUC IR 15.1 Boralex LP submits that the "overlap period for the operators is approximately 2 years."

- 45.1.** Please explain the justification for the two-year overlap period for the operators, including the activities that will be undertaken by these employees during the overlap period beyond usual tasks, and any risks associated with a shorter length of time.

RESPONSE:

The operators of the Ocean Falls Facilities have a broader range of responsibilities than operators of a typical hydroelectric generation plant. At Ocean Falls, the operators are not only responsible to ensure that the power plant, dam and reservoir are kept in good operating condition, but they are also responsible to carry out all the other duties provided by a larger team in a typical integrated utility.

For example, the operators act as the system controllers for the Ocean Falls/Bella Bella electrical island, they inspect and maintain the Boralex LP substation facilities at Shearwater (Denny Island substation) and the Ocean Falls switchyard, they inspect and maintain the 45 km 25 kV transmission line between Ocean Falls and Shearwater and the local distribution facilities in the Ocean Falls town site and Martin Valley, and they operate and maintain the vehicles, vessels, heavy equipment and tools used to carry out all the functions of the Ocean Falls utility.

The operators have to be trained to operate trucks, heavy equipment and vessels (tug, crew boat, barge), they have to be able to gather, yard and dispose of large woody debris from the reservoir forebay, they have to be trained in switching operations, firefighting duties, first aid, and need to be certified in multiple trades in order to carry out their basic duties as Ocean Falls operators. Also, the operators work on a shift basis and the required training courses are at locations throughout the province and the sequence and timing of the courses do not always coincide with the shift schedules which adds to the time required to complete the required courses and training.

The existing operators have gained much experience by carrying out these duties for decades, as demonstrated by the resulting reliability performance of the facilities. New operators need at least two years of working side-by-side with the existing operators to adequately benefit from their decades of knowledge and experience. Boralex LP believes that a shorter overlap period would potentially put operational continuity and system reliability at risk.

Boralex LP provided an updated Table 27 in Exhibit B-9, which reflects changes in the timing of retirements.

- 45.2.** For each of 2019, 2020, 2021 and 2022 please reconcile the change in Salaries and Benefits expense as compared to the previous year with the changes due to inflation, new hires, retirements and retirement allowances.

RESPONSE:

Salaries and Benefits represent the cost of the salaries and benefits of the direct employees of Boralex LP. Based on the April 29, 2020 Application Update:

(i) between 2019 and 2020, the change in the cost of Salaries and Benefits is due to increases in salaries and benefits (including cost of living adjustment) (there is no year over year change in the number of employees);

(ii) between 2020 and 2021, the changes in the cost of Salaries and Benefits are due to the addition of two employees in 2021 and one employee retiring in late 2021, and increases in salaries and benefits (including cost of living adjustment). The changes in the number of employees account for approximately 85% of the year over year increase in the cost of Salaries and Benefits of \$187,000; and

(iii) between 2021 and 2022, the changes in the cost of Salaries and Benefits are due to the retirement of one employee in late 2021, the retirement of one employee in the first quarter of 2022, the full year addition of the two employees hired in 2021, and increases in salaries and benefits (which include cost of living adjustment). The changes in the number of employees more than offsets the year over year increases in salaries and benefits, resulting in a net year over year decrease in the cost of Salaries and Benefits of approximately \$17,000.

- 46.0 Reference: OPERATING AND MAINTENANCE AND OTHER EXPENSES
Exhibit B-6, BCUC IR 16.1, 17.3
Corporate Services Costs**

In its response to BCUC IR 16.1 Boralex LP submits:

Boralex does not have a code of conduct or transfer pricing policy in place for corporate services provided by Boralex Inc. to Boralex LP. Boralex LP is wholly-owned by Boralex Inc. and there are no outside partners with whom to share the costs of providing corporate services. As such, Boralex Inc. has had no commercial, financial or other business reason to establish a code of conduct or transfer pricing policy.

- 46.1.** Do Boralex LP and Boralex Inc. have a services agreement related to shared services? If not, please explain why. If yes, please provide a copy of the agreement.

RESPONSE:

There is no services agreement between Boralex Inc. and Boralex LP with regard to the provision of the shared Corporate Service by Boralex Inc. to Boralex LP. The parties have not entered into such an agreement because Boralex LP is wholly-owned by Boralex Inc. Boralex Inc. needs to provide, and will continue to provide, all of the various Corporate Services

required by Boralex LP to carry on business at Ocean Falls regardless of whether there is a formal agreement covering these services.

In its response to BCUC IR 17.3 Boralex LP states that “[n]o time studies were conducted to assess the actual time spent by Boralex Inc. Employees on activities related to Boralex LP in 2016, 2017 and/or 2018.”

46.2. Please provide an estimate of the cost associated with preparing the following:

- an annual time study to assess the actual time spent by Boralex Inc. employees on activities related to Boralex LP; and
- a system for Boralex Inc. employees to track actual time spent on Boralex LP activities.

RESPONSE:

Boralex Inc. has been unable due to COVID-19 to solicit cost estimates for such a study and system. The Corporate Services costs included in the Application were based on the number of hours spent by Boralex Inc. employees on Boralex LP matters, as estimated by the Boralex Inc. employees themselves. Boralex Inc. believes that this is a good proxy for an annual time study to assess the actual time spent by Boralex Inc. employees on activities related to Boralex LP, and intends to maintain this system for tracking purposes and for future rate applications. The cost of providing all such tracking of Boralex Inc. employees’ time is part of the cost of Regulatory Affairs included in the cost of Corporate Services.

**47.0 Reference: OPERATING AND MAINTENANCE AND OTHER EXPENSES
Exhibit B-4, pp. A-1 – A-2
Exhibit B-6, BCUC IR 18.2
Corporate Services Costs – Regulatory**

In its response to BCUC IR 18.2 Boralex LP submits:

The amount shown for Corporate Services – Regulatory Affairs is the cost of an additional person responsible for providing utility regulatory support to Boralex LP, including tracking and reporting of information, maintaining utility accounting records, ensuring that corporate services provided by Boralex Inc. to Ocean Falls are accurately estimated, liaising with other departments within Boralex Inc. to ensure all reporting to, and communication with, the Commission are handled in an effective and efficient manner, preparing reports required by the Commission, liaising with Commission staff, and keeping abreast of regulatory developments in British Columbia.

The Regulatory Affairs costs included in Corporate Services costs are \$0 in Q3 and Q4 2019, \$137,863 in 2020, \$141,999 in 2021 and \$146,259 in 2022.

47.1. For each of Q3/4 2019, 2020, 2021 and 2022, please provide a breakdown of the Regulatory Affairs costs included in Corporate services between Employee Costs and Other and provide the number of full-time equivalents (FTEs) that contribute to the Employee Costs.

RESPONSE:

The Regulatory Affairs costs form part of the total cost of Corporate Services and are as follows based upon the April 29, 2020 Application Update:

- \$0 in Q3 and Q4 2019,
- \$34,000 in 2020,
- \$142,000 in 2021 and
- \$146,000 in 2022

All of these costs are for employee costs, and represent 1 full-time equivalent starting in Q4 2020 (i.e., 0.25 FTE in 2020, 1 FTE in 2021, and 1FTE in 2022).

- 47.2. Please clarify how the services that generate Corporate Services – Regulatory costs differ from those services that generate other Corporate Services costs, specifically Accounting, Finance and Tax and Legal.

RESPONSE:

Excluding Regulatory Affairs, the cost of Corporate Services included in the Application reflect only the current level of Corporate Services activities provided by Boralex Inc., and in particular as they relate to Accounting, Finance and Tax, and Legal services they do not include any incremental costs associated with rate regulation. In light of this, Boralex Inc. believes that one additional staff member familiar with rate regulation is required.

The services covered under Corporate Services - Regulatory Affairs consist of providing utility regulatory support to Boralex LP, including the activities outlined in Boralex LP's response to BCUC IR 18.2. These activities include tracking and reporting of information, building and maintaining the knowledge base required for the provision of Corporate Services, in general, and as they relate to Accounting, Finance and Tax, and Legal services, in particular, include activities such as the following:

Accounting:

- time tracking by Boralex Inc. employees on activities related to Boralex LP, as further described in Boralex LP's response to BCUC IR 46.2
- understanding and implementing the effects of rate regulation on Boralex Inc.'s financial statements and notes thereto
- potentially higher auditing costs as a result of rate regulation of Boralex LP
- monitoring, tracking, and reporting of information as required by the Commission

Legal:

- preparation and filing of future rate applications, as well as responding to information requests regarding future rate applications

Finance and Tax:

- maintaining and populating the cost of service model for future rate applications
- liaising with third party lenders

If Boralex Inc. did not hire a staff member to handle regulatory affairs matters (thereby negating the need for Corporate Services – Regulatory Affairs costs), the costs of all other Corporate Services departments would have to be increased to reflect the additional workload. Boralex Inc. believes that the centralization of all regulatory functions and knowledge within the additional staff person would be more efficient than a decentralization of these functions, in which every department would have to create and maintain its own

knowledge base.

**48.0 Reference: OPERATING AND MAINTENANCE AND OTHER EXPENSES
Exhibit B-4, pp. A-1 – A-2
Corporate Services Costs – Accounting**

48.1. For each of Q3/4 2019, 2020, 2021 and 2022, please provide a breakdown of the Accounting costs included in Corporate services between Employee Costs and Other and provide the number of full-time equivalents (FTEs) that contribute to the Employee Costs.

RESPONSE:

There are 0.4 full-time equivalent accounting resources for Q3/Q4 2019 and 0.8 for 2020, 2021 and 2022. Please note that these costs are included in Corporate Services in Table 27, not in Employee Costs.

**49.0 Reference: OPERATING AND MAINTENANCE AND OTHER EXPENSES
Exhibit B-4, pp. A-1 – A-2
Exhibit B-6, BCUC IR 18.5
Corporate Services Costs – Operations Site Management**

49.1. For each of Q3/4 2019, 2020, 2021 and 2022, please provide a breakdown of the Operations Site Management costs included in Corporate services between Employee Costs and Other and provide the number of full-time equivalents (FTEs) that contribute to the Employee Costs.

RESPONSE:

Based on the April 29, 2020 Application Update, (i) there are 0.28 full-time equivalent Operations Site Management personnel costs for Q3/4 2019, (ii) 0.56 full-time equivalent Operations Site Management personnel costs for 2020, and (iii) 1.12 full-time equivalent Operations Site Management personnel costs for 2021 and 2022. Please note that these costs are included in Corporate Services in Table 27, not in Employee Costs.

In its response to BCUC IR 18.5, Boralex LP submits that the “additional supervisor is expected to be hired in Q1 2020.”

49.2. Please provide an update on the timing of hiring the additional supervisor.

RESPONSE:

The additional supervisor was expected to be hired in Q1 2020. However, mainly because of the adjustment to the 2020 capital program due to COVID 19, Boralex LP is now planning to hire the additional supervisor in Q1 2021.

**50.0 Reference: OPERATING AND MAINTENANCE AND OTHER EXPENSES
Exhibit B-9, BCUC IR 15.1**

Updated Table 27

Boralex provided an updated Table 27 with forecast Operating and Maintenance expenses in Exhibit B-9.

- 50.1.** Please explain the reasons for the increase in the 2019 Maintenance and Repairs expenses, specifically, Control systems, machinery, heavy machinery and mobile equipment, dam, buildings and land, as compared to the original forecast.

RESPONSE:

The main factors which accounted for the higher actual Maintenance and Repairs expenses in 2019 relative to the forecast were (i) unplanned outages on the 45 km 25 kV transmission line due to a landslide required engagement of emergency contractors and equipment, resulting in higher costs for control systems, machinery and heavy machinery and mobile equipment (including contact workers, helicopter costs, barges, fuel, supplies and materials), and (ii) Penstock 2 inspection costs were higher than originally forecast.

G. BC HYDRO LOAD FORECAST AND NON-BC HYDRO REVENUE FORECAST

- 51.0** Reference: BC HYDRO LOAD FORECAST AND NON-BC HYDRO REVENUE FORECAST
Exhibit B-1, Section 10.1, p. 42
Exhibit B-8, BCOAPO 5.1
BC Hydro Load Forecast

In response to BCOAPO IR 5.1, Boralex LP provides the following table:

Table 1: Historic Energy Sales (MWh)							
Customer	2014	2015	2016	2017	2018	2019	Average
BC Hydro	12,881	12,661	12,919	14,192	12,707	12,953	13,052
Retail Customers	800	733	720	803	699	766	753
Industrial Customers	2,924	2,760	2,590	2,735	6,076	9,233	4,386
Total	16,605	16,154	16,229	17,730	19,481	22,952	18,192

- 51.1.** Based on the updated actual load for 2019, please provide updated forecast deliveries to BC Hydro for 2020-2022 period, if applicable.

RESPONSE:

As shown in Table 1 of the Application, average deliveries to BC Hydro over the five year period from 2014 to 2018 were 13,072 MWh. For forecasting purposes, the 13,072 MWh was rounded to 13,100 MWh and a 1.6% escalation factor was applied based on Boralex LP's understanding of what BC Hydro believes is a reasonable growth rate for the load in Bella Bella. As shown in Table 1 in Boralex LP's response to BCOAPO IR 5.1, with the inclusion of actual deliveries for 2019 the average deliveries to BC Hydro over the six year period from 2014 to 2019 were 13,052 MWh and the average deliveries over the five year period from 2015 to 2019 were 13,086 MWh. Boralex LP believes that it is still reasonable to round either the six year or five year averages to 13,100 MWh for forecasting purposes, and therefore the forecast deliveries to BC Hydro do not change as a result of the updated actual deliveries for 2019.

51.1.1 Please provide a revised net revenue requirement for each year in the test period and BC Hydro rates based on the updated forecast BC Hydro deliveries.

RESPONSE:

Please see the April 29, 2020 Application Update for the revised net revenue requirement for each year of the test period and BC Hydro rates. The updated forecast BC Hydro deliveries takes into account that there will now be no penstock related shut-down in 2020.

Based on the above table, the growth rate for BC Hydro load ranges from -10.5% (from 2017 to 2018) to 9.5% (from 2016 to 2017).

51.2. Please provide detailed explanations for the yearly changes in the actual load for the 2015 to 2019 period.

RESPONSE:

Boralex LP has no direct insight or control over electricity consumption by BC Hydro customers in the Bella Bella NIA and therefore cannot provide detailed explanations for the yearly changes in load in prior years. However, Boralex LP believes that it is reasonable to assume that weather changes are the primary reason for the variations in load.

51.3. Please provide a sensitivity analysis, with supporting calculations, to show the change in the revenue deficiency/sufficiency if BC Hydro forecast load is both 10% greater than forecast and 10% less than forecast. Please provide the analysis for each year in the test period.

RESPONSE:

Please see the following table which is based on the April 29, 2020 Application Update.

	Forecast			
BC Hydro Load	2020	2021	2022	
Baseline (MWh)	13,100	11,816	12,005	
Tier 1 Energy (MWh)	13,100	11,630	11,630	
Tier 1 Rate	\$276.23	\$281.75	\$287.39	
Tier 1 Revenue	\$3,618,604	\$3,276,798	\$3,342,334	
Tier 2 Energy	-	186	375	
Tier 2 Rate	\$51.00	\$52.02	\$53.06	
Tier 2 Revenue	\$0	\$9,678	\$19,903	
				TOTAL
Total Baseline Revenue	\$3,618,604	\$3,286,476	\$3,362,237	\$10,267,317

	Forecast			
BC Hydro Load	2020	2021	2022	

Baseline +10% (MWh)	14,410	12,998	13,206	
Tier 1 Energy (MWh)	13,100	11,630	11,630	
Tier 1 Rate	\$276.23	\$281.75	\$287.39	
Tier 1 Revenue	\$3,618,604	\$3,276,798	\$3,342,334	
Tier 2 Energy	2,780	1,368	1,576	
Tier 2 Rate	\$51.00	\$52.02	\$53.06	
Tier 2 Revenue	\$141,780	\$71,145	\$83,602	
				TOTAL
Total Baseline Revenue	\$3,618,604	\$3,286,476	\$3,362,237	\$10,267,317
Total Baseline Revenue +10% Increase in Load	\$3,760,384	\$3,347,943	\$3,425,937	\$10,534,264
Difference	\$141,780	\$61,467	\$63,700	\$266,947

	Forecast			
BC Hydro Load	2020	2021	2022	
Baseline -10% (MWh)	11,790	10,634	10,805	
Tier 1 Energy (MWh)	11,790	10,634	10,805	
Tier 1 Rate	\$276.23	\$281.75	\$287.39	
Tier 1 Revenue	\$3,256,744	\$2,996,295	\$3,105,120	
Tier 2 Energy	-	-	-	
Tier 2 Rate	\$51.00	\$52.02	\$53.06	
Tier 2 Revenue	\$0	\$0	\$0	
				TOTAL
Total Baseline Revenue	\$3,618,604	\$3,286,476	\$3,362,237	\$10,267,317
Total Baseline Revenue -10% Decrease in Load	\$3,256,744	\$2,996,295	\$3,105,120	\$9,358,159
Difference	-\$361,860	-\$290,181	-\$257,117	-\$909,158

52.0 Reference: BC HYDRO LOAD FORECAST AND NON-BC HYDRO REVENUE FORECAST
Exhibit B-1, Section 10.2, pp. 42-43
Exhibit B-6, BCUC IR 22.4.2, 22.5
Exhibit B-8, BCOAPO 5.1
Retail and Industrial Revenue Forecast

In response to BCOAPO IR 5.1, Boralex provides the following table:

Table 1: Historic Energy Sales (MWh)							
Customer	2014	2015	2016	2017	2018	2019	Average
BC Hydro	12,881	12,661	12,919	14,192	12,707	12,953	13,052
Retail Customers	800	733	720	803	699	766	753
Industrial Customers	2,924	2,760	2,590	2,735	6,076	9,233	4,386
Total	16,605	16,154	16,229	17,730	19,481	22,952	18,192

52.1. Based on the updated actual load for 2019, please provide updated forecast revenue for Boralex LP's retail and industrial customers for 2020-2022 period, if applicable.

RESPONSE:

Please see Table 3 of the April 29, 2020 Application Update for the updated forecast revenue for Boralex LP's retail and industrial customers for the 2020 to 2022 period.

52.1.1 Please provide a revised net revenue requirement for each year in the test period and BC Hydro rates based on the updated forecast retail and industrial forecast revenues.

RESPONSE:

Please see the April 29, 2020 Application Update.

In response to BCUC IR 22.4.2, Boralex LP provides the following table:

Year	Retail Customer Load (MWh)	Yr / Yr Change (%)
2010	798	
2011	825	3.5%
2012	829	0.4%
2013	689	-16.8%
2014	800	16.1%
2015	733	-8.4%
2016	720	-1.7%
2017	803	11.6%
2018	699	-13.0%

52.2. Please provide detailed explanations for the yearly changes in the actual load from retail customers for the 2015-2019 period.

RESPONSE:

The number of retail customer accounts in Ocean Falls has been relatively stable since 2015. Therefore, Boralex LP believes that weather changes are the primary reason for the yearly variations in the retail customer load.

- 52.3.** Please provide a sensitivity analysis, with supporting calculations, to show the change in the revenue deficiency/sufficiency if retail and industrial load is both 10% greater than forecast and 10% less than forecast. Please provide the analysis for each year in the test period.

RESPONSE:

Please see the table below which is based on the April 29, 2020 Application Update.

	Forecast			
	2020	2021	2022	TOTAL
Baseline Retail and Industrial Customer Revenue	\$627,136	\$598,948	\$609,925	\$1,836,009
10% Increase in Load	\$689,850	\$658,843	\$670,918	\$2,019,610
Difference	\$62,714	\$59,895	\$60,993	\$183,601
	Forecast			
	2020	2021	2022	TOTAL
Baseline Retail and Industrial Customer Revenue	\$627,136	\$598,948	\$609,925	\$1,836,009
10% Decrease in Load	\$564,422	\$539,053	\$548,933	\$1,652,409
Difference	-\$62,714	-\$59,895	-\$60,993	-\$183,601

BC Hydro's Fiscal (F) 2020 to 2021 Revenue Requirements Application (RRA) includes a request for a 6.85 percent general rate increase effective April 1, 2019 and a 0.99 percent general rate decrease effective April 1, 2020. The BCUC approved the F2020 rate increase of 6.85 percent on an interim basis by Order G-45-19.

In its response to BCUC IR 22.5 Boralex LP submits:

Boralex LP had regard for the interim Zone II rate increases approved by Order G-45-19, but the rates are interim and only cover F2020 (April 1, 2019 to May 31, 2020) and F2021 (April, 2020 to May 31, 2021). Boralex LP has no ability to predict BC Hydro's actual Zone II rates over the forecast period (July, 1 2019 to December 31, 2022) and therefore chose a 2% annual increase which Boralex LP believes is generally indicative of forecast inflation over this period.

On page 8 of the Application Boralex LP submits:

The rates charged by Boralex LP to its retail customers are regulated under the terms of Order G-26-10 in that the rates are required to be the same as the rates charged by BC Hydro in Rate Zone II, which apply to BC Hydro customers in most of its non-integrated areas

- 52.4.** Please provide the actual 2019 and 2020 rates and forecast 2021 and 2022 rates charged by Boralex LP to its retail customers.

RESPONSE:

The actual rates charged by Boralex LP to its retail customers are equal to the BC Hydro Zone II rates in effect as of April 1 each year. Boralex LP's has assumed retail customer revenue of \$94,000, \$96,000 and \$98,000 for 2020, 2021, and 2022, respectively. The forecast is based on average historical revenue over the period 2014 to 2018 and an assumed 2% annual increase in revenue. Accordingly, the forecast is not based on a forecast of rates multiplied by forecast deliveries to retail customers.

52.4.1 In the event that BC Hydro Zone II rates are approved by the BCUC on a permanent basis, effective April 1, 2019 and April 1, 2020, are different from the rates charged to Boralex LP's retail customers 2019 and 2020, respectively, please discuss if there are any mechanisms in place to account for the difference in rates. If not, please discuss why not.

RESPONSE:

Any differences, positive or negative, between the forecast and actual revenue from Boralex LP's retail customers will be for Boralex LP's account. Boralex LP has not proposed any mechanisms to account for either differences in retail rates or load because such differences will not have a material impact on Boralex LP's rates for service to BC Hydro. As shown in Boralex LP's response to BCOAPO IR 5.1, between 2014 and 2019 the annual revenue from retail customers has averaged \$95,000, with a low of \$86,000 (2018) and a high of \$113,000 (2017). A variance of even 20% in the forecast annual revenue from the retail customers (either as a result of higher or lower rates or higher or lower loads, or a combination of both) would be approximately \$19,000, representing only about 0.05% of the net revenue requirement used to fix the BC Hydro rates.

52.4.2 Please provide a revised net revenue requirement for each year in the test period and BC Hydro rates by applying a 6.85 percent general rate increase effective April 1, 2019 and a 0.99 percent general rate decrease effective April 1, 2020 to the calculation of retail customer revenue.

RESPONSE:

Please see Boralex LP's response to BCUC IR 52.4. The retail customer revenue forecast was not based on a forecast of retail customer rates multiplied by a forecast load. Nevertheless, employing a 6.85 percent general rate increase effective April 1, 2019 and a 0.99 percent general rate decrease effective April 1, 2020 to the calculation of retail customer revenue (and 2% for years 2021 and 2022) will result in the following:

	Actual	Actual	Forecast	Forecast	Forecast
	2018	2019	2020	2021	2022
Retail Customer Revenue	\$86,197	\$102,964	\$93,727	\$95,601	\$97,513
Retail Customer Sales (MWh)	699	766	751	751	751
Average Rate (\$/MWh)	\$123.39	\$134.48	\$124.81	\$127.30	\$129.85

Using the following annual rate changes and the retail customer loads from the above table,

the difference in revenue from the retail customers would be as follows:

Using 6.85% Increase April 1, 2019 and 0.99% decrease April 1, 2020 and 2% Increase thereafter	100.0%	105.1%	106.2%	108.3%	110.4%
Rate	\$123.39	\$129.73	\$130.99	\$133.61	\$136.28
Revenue	\$86,198	\$99,325	\$98,366	\$100,333	\$102,340
Difference	\$ -	-\$3,639	\$4,639	\$4,732	\$4,827

An approximately \$5,000 per annum change in the revenue from the retail customers would change the BC Hydro rates by approximately 0.1 %.

**53.0 Reference: BC HYDRO LOAD FORECAST AND NON-BC HYDRO REVENUE FORECAST
Exhibit B-1, pp. 8 - 9
Industrial Customer Rates**

On pages 8 and 9 of the Application Boralex LP submits:

- Boralex LP supplies electricity to Mowi Canada West under an electricity purchase agreement that was initially entered into in 2002 and renewed several times. The current agreement, which expires in 2022, has an energy charge rate structure with no minimum consumption, fixed charge, take-or-pay or similar obligations on the part of Mowi Canada West.
- Boralex LP supplies electricity to Ocean Falls Blockchain under an electricity purchase agreement entered into in February 2018. The agreement has a five year term starting in July, 2018 when Ocean Falls Blockchain commenced operations, and may be renewed by mutual agreement of the parties for an additional five year period.

Order G-26-10 states:

[N]ew industrial customers are to be charged negotiated rates in accordance with Sections 5.8 and 5.9 of the Decision, Commission Orders G-40-86 and G-30-02 and the commitments made by Boralex LP in response to Commission Information Request 1.9.2 also attached as Appendix B to this Order.

Order G-30-02 states:

[I]ndustrial customers are to be charged rates as negotiated by the parties, but not to exceed the rate authorized by B.C. Hydro’s Rate Schedules 1821, 1200, 1201, 1210, or 1211 as amended from time to time, for similar service.

53.1. For Ocean Falls Blockchain and Mowi Canada West, please provide the electricity purchase agreements and any current renewals and the current rates charged by Boralex.

RESPONSE:

The electricity purchase agreements with Mowi Canada West and Ocean Falls Blockchain are confidential and contain commercially sensitive information. Accordingly, Boralex LP has filed the agreements confidentially with the Commission by separate filing.

53.1.1 On page 1 of the Application, Boralex submits that “the rates charged by Boralex LP to its industrial customers are negotiated rates not to exceed the comparable BC Hydro industrial rates.” Please confirm the “comparable BC Hydro rates” are BC Hydro Rate Schedules 1821, 1200, 1201, 1210 or 1211. If not confirmed, please provide the applicable BC Hydro rate schedules.

RESPONSE:

The comparable BC Hydro rates for Boralex LP’s service to Mowi Canada West and Ocean Falls Blockchain are those set out in BC Hydro Rate Schedule 1200, with the discounts set out in Rate Schedule 1211. Boralex LP believes that Rate Schedule 1821 may have been discontinued.

53.2. Please confirm, or explain otherwise, Ocean Falls Blockchain is not a related party to Boralex LP. If not confirmed, please discuss any risks associated with related party transactions between the parties and discuss any measures in place to mitigate these risks.

RESPONSE:

Ocean Falls Blockchain is not related in any way to Boralex LP, Boralex Inc. or any entity affiliated with Boralex Inc.

H. RATE STRUCTURE

**54.0 Reference: RATE STRUCTURE
Exhibit B-1, p. 44
Exhibit B-6, BCUC IR 24.2, 24.3, 24.9, 28.3
Exhibit B-9, p. 2
Proposed Tier 1 and Tier 2 rates and alternatives**

On page 44 of the Application, Boralex LP states:

Boralex LP is seeking Commission approval of a two-tier energy charge rate structure for its service to BC Hydro, consisting of a Tier 1 rate per GWh for the first 11.63 GWh of electricity in any year and a lower Tier 2 rate for all electricity above 11.63 GWh for that year.

In its Exhibit B-9 update to IR No. 1 responses, Boralex LP provides the following rates update with actual Q3-Q4 2019 data:

	(\$/MWh)			
	2019*	2020	2021	2022
Tier 1 (up to 11.63 GWh/year)	\$285.29	\$291.0	\$296.82	\$302.75
Tier 2 (greater than 11.63 GWh/year)	\$50.00	\$51.00	\$52.02	\$53.06

***July 1 to December 31 for rate and energy amount.**

In response to BCUC IR 24.2, Boralex LP states:

...if BC Hydro's actual load in any year is less than 11.630 GWh, Boralex LP will lose significantly more revenue (all at the Tier 1 rate) than it would gain if the actual load is greater than the forecast load of 11.63 GWh in 2020, 11,816 GWh in 2021 and 12,005 GWh in 2022 (all at the Tier 2 rate).

In response to BCUC IRs 24.9, 24.3, and 28.3, Boralex LP states respectively:

Boralex LP has not considered any other rate structure options other than the two-tier declining block rate structure. Boralex LP believes this structure is beneficial to BC Hydro because it does not impose any minimum take or fixed charge payment obligations on BC Hydro and it allows BC Hydro to reduce its average cost of energy in years when its load is greater than 11.63 GWh. Moreover, Boralex LP believes that BC Hydro is supportive of this proposed rate structure.

Boralex LP has not proposed any minimum take or fixed charge obligation on BC Hydro because this has not been how power sales to BC Hydro from Ocean Falls have been structured since 1986 and because this would effectively transfer system operating risk to BC Hydro. Boralex LP believes that it is reasonable that Boralex LP should be responsible for managing this risk.

Boralex LP notes that under the energy charge rate structure, Boralex LP will continue to have a strong incentive to continue to operate at a very high level of reliability and not curtail or interrupt service to BC Hydro.

- 54.1.** Please state the rate design objectives for Boralex LP's service to BC Hydro (e.g. incent high level of reliability of Boralex LP, no curtailment or interruption of service to BC Hydro, incent load growth, low average cost of energy for BC Hydro where possible).

RESPONSE:

The rate design objectives for Boralex LP's service to BC Hydro can be summarized as follows:

- 1. Recovery of Boralex LP's revenue requirement: The BC Hydro rates have been designed to recover the forecast net revenue requirement (i.e., Boralex LP's forecast gross revenue requirement less that portion of the gross revenue requirement forecast to be recovered from Boralex LP's retail and industrial customers in Ocean Falls).**
- 2. Consistency: The BC Hydro rates are designed to be consistent with the two tier declining block energy charge rate structure that has been in place since service to BC Hydro commenced under the 1986 EPA.**
- 3. Customer understanding and acceptance: The two tier rate structure for BC Hydro is well understood, practical and cost effective to implement. Boralex LP believes that BC Hydro is supportive of the two tier energy charge rate structure. The rate structure does not impose any fixed charge obligation on BC Hydro (i.e., no payment in circumstances where Boralex LP fails or is unable to provide service to BC Hydro) and the significantly lower Tier 2 rate allows BC Hydro to reduce its average cost of energy when its consumption exceeds the Tier 1/Tier 2 threshold.**
- 4. Simplicity and freedom of controversies as to proper interpretation: The two tier energy charge rate structure is not complex and Boralex LP does not believe there should be any controversies as to its interpretation or application. The rate structure can be adopted without the need to make rate-related modifications to the proposed terms and conditions of service for Boralex LP's service to BC Hydro, which are based on the terms and conditions of service set out in the 1986 EPA. Other rate**

methodologies, such as minimum take or fixed charge methodologies, would require revisions to terms and conditions of service including, for example, to address the circumstances, if any, where BC Hydro would be relieved of the minimum take or fixed charge obligation.

5. **Incent high level of service reliability:** Under the energy charge rate structure Boralex LP only receives payment for electricity that is actually delivered to BC Hydro. Accordingly, Boralex LP has a very strong incentive to continue to provide highly reliable service to BC Hydro in order to recover its annual revenue requirement, including its allowed return on common equity.
6. **No curtailment of service to BC Hydro:** Similarly, under the energy charge rate structure Boralex LP has a very strong incentive to not curtail service to BC Hydro. This is beneficial to BC Hydro and the local communities in Bella Bella and Shearwater because it enable BC Hydro to avoid operating its expensive and environmentally undesirable diesel generating station in Shearwater.
7. **Encourage load growth through fuel conversion in the Bella Bella NIA:** The lower Tier 2 energy charge rate should give BC Hydro an incentive to encourage the greater use of electricity in the Bella Bella NIA (e.g., through the conversion of oil-fired or propane-fired space heaters to air electric heat pumps) because, as noted in Boralex LP's response to BCUC IR 24.6, the Tier 2 rate is lower than the Zone IB rates charged by BC Hydro in the Bella Bella NIA.
8. **Reduce BC Hydro's average cost of energy:** Because the Tier 2 rate is significantly lower than the Tier 1 rate, BC Hydro can, unlike in the case of single energy charge or two tier inclining block energy charge rate structures, reduce its average cost of energy when its consumption exceeds the Tier 1/Tier 2 threshold.

54.1.1 Please discuss how these objectives are different when Boralex LP designs rates for all other non-BC Hydro ratepayers.

RESPONSE:

Boralex LP's other customers are its retail customers and two industrial customers in Ocean Falls.

The rates that Boralex LP is permitted to charge its retail customers are regulated and determined under the terms of Order G-26-10 (as confirmed by Order G-143-19), which requires that these rates be the same as the rates charged by BC Hydro to its customers in BC Hydro Rate Zone II. Accordingly, Boralex LP does not design rates for its retail customers in Ocean Falls.

Under the terms of Order G-26-10 (as confirmed by Order G-143-19), the rates that Boralex LP charges its two industrial customers are negotiated rates that may not to exceed the rates authorized by BC Hydro's Rate Schedules 1200, 1201, 1210 or 1211 for similar service. The rates that Boralex LP has been able to negotiate with the two customers, and the structure of the rates, reflect what the customers were willing and able to pay having regard for the total cost of locating and operating in Ocean Falls, a remote and isolated location. The rates have an energy charge rate structure and the forecast revenue from the two customers has been credited to the forecast gross revenue requirement to reduce BC Hydro's rates. Accordingly, like the BC Hydro energy charge rate structure, Boralex LP has a very strong incentive to

continue to operate at a high level of reliability and not curtail or interrupt service to these customers as any loss of revenue from these customers will be for Boralex LP's account.

- 54.2.** Please confirm, or otherwise explain, that Boralex LP is proposing that the threshold between Tier 1 and Tier 2 remain constant at 11.63 GWh for the 2019 through 2022 test period.

RESPONSE:

Boralex LP is proposing to use a constant threshold between Tier 1 and Tier 2. As discussed in the April 29, 2020 Application Update, because there will no longer be a penstock related outage in 2020 the proposed Tier 1/Tier 2 threshold will now be 13.1 GWh for 2019 and 2020 and 11.63 GWh for 2021 and 2022.

- 54.2.1** Please discuss why it may, or may not, be appropriate to design the Tier 1 and Tier 2 threshold to match the load forecast (i.e. 11.63 GWh in 2020, 11.816 GWh in 2021 and 12.005 GWh in 2022).

RESPONSE:

54.2.2 The Tier 1 and Tier 2 threshold could be designed to match the load forecast. This would mean though that the BC Hydro load in 2021 and 2022 would need to reach the full load forecast in each of these years (i.e., 11.816 GWh in 2021 and 12.005 GWh in 2022) before BC Hydro was able to take advantage of the significantly lower Tier 2 rate.

- 54.3.** Please clarify whether the term “minimum take” is equivalent to a take or pay³ provision. For example, a customer agrees to pay for a certain amount of electricity, regardless of whether the electricity is actually delivered or not. If “minimum take” has a different meaning, please specify.

RESPONSE:

Yes, as used in Boralex LP's response to BCUC IR 24.3 the term “minimum take” is equivalent to a “take or pay” provision. Coupled with an energy charge rate structure (as proposed by Boralex LP for the BC Hydro rates), minimum take (or take or pay) provisions achieve the same result as a fixed charge obligation because the energy rate multiplied by the minimum take amount effectively becomes a fixed charge obligation.

- 54.4.** In the hypothetical scenario where a minimum take must be implemented, please discuss and model such scenario. Provide the rationale for the minimum take, and assess how a minimum take may, or may not, achieve the stated rate design objectives. State the corresponding impact to the proposed two tiered rates.

RESPONSE:

Under a minimum take methodology, there would be no need to change the level of the applied-for BC Hydro energy rates because the forecast net revenue requirement and the forecast BC Hydro load would not change. However, the tariff and terms and conditions of service would need to be revised to obligate BC Hydro to take, or otherwise pay for, a

³ <https://dictionary.cambridge.org/dictionary/english/take-or-pay>.

minimum amount of electricity from Boralex LP. The tariff and terms and conditions of service would also need to address the circumstances, if any, where BC Hydro would be relieved of the minimum take obligation.

A minimum take methodology would be consistent with objectives 1, 7 and 8 above. It would not be consistent with objectives 2, 3 and 4 and, depending on the level at which the minimum take was fixed, could undermine objectives 5 and 6 because it would provide Boralex LP with a minimum assured revenue recovery regardless of actual deliveries to BC Hydro.

54.4.1 Discuss the benefits to Boralex LP, BC Hydro, and all other ratepayers, if a minimum take is to be implemented.

RESPONSE:

A minimum take methodology would shift some load forecasting and operating risk from Boralex LP to BC Hydro. The extent of this shift would depend on the terms and level of the minimum take obligation. This would provide some benefit to Boralex LP but not to BC Hydro.

The rates payable by Boralex LP's retail and industrial customers in Ocean Falls are already fixed and therefore the implementation of a minimum take provision for Boralex LP's service to BC Hydro would have no impact on Boralex LP's retail and industrial customers.

54.4.2 Have Boralex LP and BC Hydro discussed the possibility of a minimum take component during their negotiations? If so, what were the results. If not, why?

RESPONSE:

Boralex LP and BC Hydro did not, to Boralex LP's recollection, discuss a minimum take component during the negotiations.

54.5. In the hypothetical scenario where a fixed charge must be implemented, please discuss and model such scenario. Provide the rationale for the fixed charge, and assess how a fixed charge may, or may not, achieve the stated rate design objectives. State the corresponding impact to the proposed two tiered rates.

RESPONSE:

Under a fixed charge methodology the forecast net revenue requirement and the forecast BC Hydro load would not change, but some portion of the forecast net revenue requirement to be recovered from the energy charge would be shifted to a monthly fixed charge component. This would lower the level of the proposed two tier rates depending on the amount of the forecast net revenue requirement recovered through the fixed charge.

A fixed charge methodology would be consistent with objective 1, 7 and 8, but would not be consistent with objectives 2, 3 and 4. Depending on the level of the fixed charge, such a methodology could undermine objectives 5 and 6 because it would provide Boralex LP with a minimum assured revenue recovery regardless of actual deliveries to BC Hydro.

54.5.1 Discuss the benefits to Boralex LP, BC Hydro, and all other ratepayers, if a fixed charge is to be implemented.

RESPONSE:

The implementation of a fixed charge methodology would shift some load forecasting and operating risk from Boralex LP to BC Hydro. The extent of this shift would depend on the terms and level of the fixed charge obligation. This would provide some benefit to Boralex LP but not to BC Hydro.

The rates payable by Boralex LP's retail and industrial customers in Ocean Falls are already fixed and therefore the implementation of a fixed charge for Boralex LP's service to BC Hydro would have no impact on Boralex LP's retail and industrial customers.

54.5.2 Have Boralex LP and BC Hydro discussed the possibility of a fixed charge during their negotiations? If so, what were the results? If not, why?

RESPONSE:

Boralex LP recalls that the parties did have some very early discussions regarding structuring the rate to include a fixed charge component, but the parties focused on trying to reach agreement on rates under a two tier energy charge rate structure as Boralex LP has proposed in the Application.

54.6. In the hypothetical scenario where the BCUC determined that a flat energy rate must be implemented, please discuss and model such a scenario and assess how a flat energy rate may, or may not, achieve the stated rate design objectives. Provide the calculation for the flat rate charge.

RESPONSE:

Under a flat energy rate there would be a single energy charge for Boralex LP's service to BC Hydro. The single energy charge would be close to the applied-for Tier 1 rate because most of the forecast net revenue requirement is recovered through the Tier 1 rate.

Based on the April 29, 2020 Application Update, the flat energy rate for all amounts of electricity purchased by BC Hydro in a year would be \$268.09 in 2019 (Q3-Q4), \$273.45 in 2020, \$278.92 in 2021, and \$284.49 in 2022. This is calculated by dividing the levelized forecast net revenue requirement each year by the BC Hydro load forecast for such year.

A flat energy rate methodology would be consistent with rate design objectives 1, 4, 5 and 6, but would not be consistent with objectives 2, 3, 7 and 8.

54.6.1 Discuss the benefits and costs to Boralex LP, BC Hydro, and all other ratepayers if a flat rate were to be implemented.

RESPONSE:

A flat energy charge would be beneficial to Boralex LP compared to the applied-for two tier declining block rate structure in that Boralex LP would recover significantly more revenue from BC Hydro (at no incremental cost) when BC Hydro's actual load exceeds the BC Hydro's load forecast because the rate for that energy would be the single energy charge and not the significantly lower Tier 2 rate. A flat energy charge would not alter Boralex LP's downside risk if BC Hydro's actual load is lower than forecast because, as noted above, a flat energy charge would be similar to the Tier 1 rate (please see Boralex LP's response to BCUC IR 53.1 which shows how under the applied-for two-tier rate structure Boralex LP will lose significantly more revenue if BC Hydro's actual load is below the load forecast compared to the revenue it would gain if the actual load is above the load forecast). Conversely BC Hydro would be disadvantaged by paying the significantly higher flat energy charge when its actual load exceeds the forecast load.

A flat energy charge would also not encourage load growth through fuel conversion in the Bella Bella NIA or allow BC Hydro to reduce its average cost of energy, and for these reasons is not beneficial to either Boralex LP or BC Hydro or to the communities of Bella Bella and Shearwater.

The rates payable by Boralex LP's retail and industrial customers in Ocean Falls are already fixed and therefore the implementation of a flat energy charge for Boralex LP's service to BC Hydro would have no impact on Boralex LP's retail and industrial customers.

54.6.2 Have Boralex LP and BC Hydro discussed the possibility of a flat rate during their negotiations? If so, what were the results? If not, why?

RESPONSE:

To Boralex LP's recollection, Boralex LP and BC Hydro did not discuss a flat energy charge rate structure.

**55.0 Reference: RATE STRUCTURE
Exhibit B-6, BCUC IR 26.3
Levelized Rates**

In its response to BCUC IR 26.3, Boralex LP provides a table that shows the amount of any revenue sufficiency/deficiency moved from or added to each test year from another test year in the calculation of levelized rates.

55.1. Please explain if the calculation of levelized rates during the test period includes an accrued interest component related to moving a portion of the revenue deficiency/sufficiency from one test period to another. If yes, please provide the interest rate and the justification for the rate. If not, please explain why not.

RESPONSE:

The proposed levelized rates result in the identical net present value of the net revenue requirement that is calculated using unlevelized rates. The discount rate used in the net present value calculation is Boralex LP's applied-for weighted average cost of capital. The weighted average cost of capital is used because it is representative of the cost (or benefit) to

Boralex LP of changing the timing of receipt of the unlevelized rates. For example, Boralex LP is economically indifferent between receiving a dollar today compared to receiving a dollar in one year, as long as the future dollar includes one year of interest, calculated using the weighted average cost of capital as the annual interest rate.

55.2. Please discuss any transparency issues associated with the proposed rate smoothing mechanism, as compared to the use of a deferral account, and how Boralex LP proposed to mitigate the issues identified.

RESPONSE:

Boralex LP does not believe that there are any transparency issues with the proposed rate smoothing mechanism. Boralex LP believes that a deferral account is a different concept (i.e., set up to record variances between forecast and actual loads or costs in one period for disposition in a subsequent period) and therefore the use of a deferral account is not comparable to the proposed rate smoothing mechanism.

56.0 Reference: RATE STRUCTURE
 Exhibit B-1, p. 2
 Exhibit B-5-1, p. 2
 Exhibit B-6-1, Confidential BCUC IR 1.2.2
 Bill Impact

In its response to confidential BCUC IR 1.2.2 Boralex LP provides the estimated bill impact for BC Hydro resulting from the proposed rate changes in both percentage and total dollars.

56.1. Please provide a revised response to confidential BCUC IR 1.2.2 with the following information:

- A column for “Actual 2018” results; and
- Rows for the following categories for each period: Tier 1 rates, Tier 1 sales volume, Tier 1 revenue, Tier 2 rates, Tier 2 sales volume, Tier 2 revenue, other revenue and total BC Hydro electricity bill.

If the IR response is filed as part of the confidential responses, please file a redacted version of the response as part of the non-confidential IR responses, where possible.

RESPONSE:

The following is a revised response (redacted) to confidential BCUC IR 2.2 based on the April 29, 2020 Application Update with the requested additional information. An unredacted version of this response has been included in Boralex LP’s responses to BCUC Confidential IR No. 2.

	Actual	Actual	Actual	Forecast	Forecast	Forecast
	2018	2019 Q1-Q2	2019 Q3-Q4	2020	2021	2022
BC Hydro Energy Sales (MWh)	12,707	6,870	6,083	13,100	11,816	12,005
Tier 1 Volume (MWh)	[redacted]	[redacted]	6,083	13,100	11,630	11,630

Tier 1 Rate (\$/MWh)	[redacted]	[redacted]	\$270.81	\$276.23	\$281.75	\$287.39
Tier 1 Revenue	[redacted]	[redacted]	\$1,647,446	\$3,618,604	\$3,276,798	\$3,342,334
Tier 2 Volume	[redacted]	[redacted]	-	-	186	375
Tier 2 Rate (\$/MWh)	[redacted]	[redacted]	\$50.00	\$51.00	\$52.02	\$53.06
Tier 2 Revenue	[redacted]	[redacted]	\$0	\$0	\$9,678	\$19,903
BC Hydro Electricity Bill	[redacted]	[redacted]	\$1,647,446	\$3,618,604	\$3,286,476	\$3,362,237
% Change		[redacted]	[redacted]	9.82%	-9.18%	2.31%

I. FIRST NATIONS DEFERRAL ACCOUNT

**57.0 Reference: FIRST NATIONS DEFERRAL ACCOUNT
Exhibit B-7, BC Hydro IR 19.2
First Nations Deferral Account**

In response to BC Hydro IR 19.2, Boralex LP states:

The Ocean Falls Facilities are located in the traditional territory of the Heiltsuk Nation and most of the end-users of the electricity generated by the Ocean Falls facilities are members of the Heiltsuk Nation. Boralex LP believes that fostering and maintaining a positive relationship with the community is beneficial to Boralex LP’s ongoing operations at Ocean Falls and to all of those who rely on the Ocean Falls facilities. Boralex LP also believes that these relationship building activities are fully consistent with and supportive of the expectations of the Province of British Columbia regarding relations with Indigenous communities, including those set out in the February 21, 2019 mandate letter to BC Hydro from the Minister of Energy Mines and Petroleum Resources.

57.1. Please provide specific examples of how positive relationships with the Heiltsuk Nation could benefit the operation of the Ocean Falls facilities.

RESPONSE:

The Heiltsuk Nation in Bella Bella provides Boralex LP with local skilled workers who are necessary for annual vegetation control on the transmission line between Ocean Falls and Shearwater that is conducted on a yearly basis. This work is important to the reliability of the transmission line. Boralex LP would like to work with the Heiltsuk Nation to identify other employment and contracting opportunities for members of the community, which provides community benefits and has the potential to reduce operating costs given that Bella Bella is the closest community to Ocean Falls.

57.2. Please provide Boralex LP’s view on how the expectations of the Province of British Columbia regarding relations with Indigenous communities are applicable to privately owned companies such as Boralex LP.

RESPONSE:

As indicated in Boralex LP's response to BCUC IR 19.2, from its own perspective Boralex LP believes that fostering and maintaining a positive relationship with the Heiltsuk Nation is beneficial to Boralex LP's ongoing operations at Ocean Falls. Boralex LP also believes that the Province of British Columbia would generally expect and encourage private enterprises to foster and maintain positive relationships with Indigenous communities. In this case, both BC Hydro and Boralex LP interact with the Heiltsuk Nation and Boralex LP believes that its relationship building activities are consistent with and supportive of those expected of BC Hydro.

- 57.3.** Please discuss whether Boralex LP has engaged with BC Hydro with respect to potential collaborative efforts regarding relationship building with the Heiltsuk Nation.

RESPONSE:

Boralex LP engages regularly with BC Hydro at the operating level with respect to potential collaborative efforts regarding relationship building with the Heiltsuk Nation. Boralex LP and BC Hydro have common interests in fostering and maintaining a positive relationship with the Heiltsuk Nation, including with respect to consultation regarding lease, statutory rights of way and other land interest matters required for each parties operations in the area and with respect to the hiring of local workers and contractors which benefits the local economy.

- 57.4.** Please discuss the implications to Boralex LP if the deferral account is not approved.

RESPONSE:

If the MOU is finalized and the deferral account is not approved, then either Boralex LP would potentially incur costs under the MOU during the test period that it could not recover (thereby reducing its ability to achieve its allowed return on common equity), or it would try to defer those costs to a future test period.