BORALEX

April 28, 2023

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) Application for Approval of Rates for Service to British Columbia Hydro and Power Authority (BC Hydro)

Dear Mr. Wruck,

Enclosed for filing with the Commission is Boralex's Application for Approval of Rates for Boralex's service to BC Hydro, which covers the period January 1, 2023 to December 31, 2027.

Please contact the undersigned with any questions regarding the Application

Yours truly,

Boralex Ocean Falls Limited Partnership

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Boralex Ocean Falls Limited Partnership

Application to the British Columbia Utilities Commission for Approval of Rates for Service to British Columbia Hydro and Power Authority January 1, 2023 to December 31, 2027

April 28, 2023

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1. OVERVIEW AND APPROVALS SOUGHT

1. Boralex Ocean Falls Limited Partnership ("Boralex") owns and operates hydroelectric generation, transmission and distribution facilities (the "Ocean Falls Facilities") at Ocean Falls on the central coast of British Columbia. The Ocean Falls Facilities are used by Boralex to supply electricity to approximately 100 retail customers and two industrial customers located at Ocean Falls and to British Columbia Hydro and Power Authority ("BC Hydro") which in turn serves its customers in the communities of Bella Bella and Shearwater within BC Hydro's Bella Bella NIA, or BC Hydro's Rate Zone IB.

2. Boralex was formed in May, 2008 as a limited partnership under the laws of British Columbia for the sole purpose of acquiring, owning and operating the Ocean Falls Facilities. The general partner of the partnership is Boralex Western Energy Inc., an indirect wholly-owned subsidiary of Boralex Inc., and the sole limited partner of Boralex is Boralex Inc. Boralex Inc. is a public company that develops, builds and operates renewable energy power facilities in Canada, France, the United Kingdom and the United States.

3. In accordance with British Columbia Utilities Commission ("BCUC") Order G-26-10 dated February 18, 2010 (the "BCUC Exemption Order"), the rates charged by Boralex to its retail and industrial customers were exempt from the application of the *Utilities Commission Act* (the "UCA") under the condition that Boralex charge its retail customers the same rates as BC Hydro Zone II rates, and charge its industrial customers at negotiated rates not to exceed the comparable BC Hydro rates.

4. Pursuant to Order G-143-19 dated June 27, 2019, the BCUC modified the BCUC Exemption Order to exempt Boralex from application of the UCA except for certain sections, including sections 58 to 63 of the UCA, relating to the rates charged by Boralex for service to BC Hydro. However, the BCUC Exemption Order remains in effect with respect to Boralex's service to its retail and industrial customers and therefore the rates charged to Boralex's retail and industrial customers continue to be determined as set out in the BCUC Exemption Order.

5. On September 30, 2019 Boralex applied to the BCUC pursuant to sections 59 to 61 of the UCA and Order G-143-19 for approval of interim and permanent rates for service to BC Hydro for the period July 1, 2019 to December 31, 2022, terms and conditions for service to BC Hydro, and a First Nations relationship building deferral account (the "2019 Rate Application"). Boralex subsequently filed an application update on April 29, 2020 to reflect updates to its test period revenue requirements and rates for service to BC Hydro.

6. The 2019 Rate Application was Boralex's first rate application filed with the BCUC to set rates for service to BC Hydro following the expiry on June 30, 2019 of the 1986 Electricity Purchase Agreement between Boralex and BC Hydro. The 2019 Rate Application sets out the history and background of the Ocean Falls Facilities and contains a detailed description of the facilities and Boralex's customer base. A map showing the location of Ocean Falls and the Ocean Falls Facilities is attached as Appendix A to this Application.

7. By Decision and Order G-270-20 dated October 27, 2020, the BCUC ordered, among other things, that Boralex is approved to recover on a permanent basis the rates for service to BC Hydro for the period July 1, 2019 to December 31, 2022, subject to the adjustments resulting from the directives and determinations contained in Order G-270-20 and the Decision (the "2020 Rate Decision"). In Directives 3 and 4 of Order G-270-20, Boralex was directed to (i) recalculate its revenue requirements and rates for electric service to BC Hydro for the period July 1, 2019 to December 31, 2022, subject to the adjustments resulting from the directives and determinations contained in Order G-270-20 and the 2020 Rate Decision, and (ii) file updated regulatory schedules for approval by the BCUC. Boralex was also directed to address the matters set out in Directives 11 to 16 in Appendix A to Order G-270-20 in its future rate applications.

8. On December 14, 2020, Boralex filed a compliance filing pursuant to Directives 3 and 4 of Order G-270-20 containing updated regulatory schedules for service to BC Hydro for the period July 1, 2019 to December 31, 2022 (the "Compliance Filing"). By Order G-16-21 dated January 18, 2021 the BCUC approved the Compliance Filing and permanent rates for service to BC Hydro as set out in the Compliance Filing.

9. By Order G-342-22 dated November 28, 2022 the BCUC approved rates for Boralex's service to BC Hydro on an interim basis effective January 1, 2023.

10. In this Application Boralex is seeking approval, pursuant to Order G-143-19 and sections 59 to 61 of the UCA, of permanent rates for service to BC Hydro covering a five year test period from January 1, 2023 to December 31, 2027. The rates for Boralex's service to its retail and industrial customers continue to be determined in accordance with the BCUC Exemption Order.

11. As with the 2019 Rate Application and as approved by the BCUC in the 2020 Rate Decision, the rates for BC Hydro set out in this Application have been determined on a utility cost of service basis based on the historic depreciated cost of the Ocean Falls Facilities and Boralex's

forecast revenue requirement for each of 2023, 2024, 2025, 2026 and 2027, after deducting from the revenue requirement the forecast revenue from Boralex's retail and industrial customers in Ocean Falls.

12. Boralex believes that the five-year test period for this Application is reasonable and appropriate having regard for the desire to limit the frequency and cost of Boralex's rate applications to the BCUC for its service to BC Hydro, particularly in light of the small size of Boralex.

13. Also as with the 2019 Rate Application and as approved by the BCUC in the 2020 Rate Decision, the rates for BC Hydro set out in this Application are based on a two-tier energy charge ($/MWh) rate structure consisting of a Tier 1 rate per MWh for the first tier of electricity in any year up to a threshold amount and a lower Tier 2 rate per MWh for all electricity above the threshold amount. The threshold amount is 11.97 GWh for 2023, 2024, 2025 and 2026, which represents the average annual normalized amount of electricity delivered by Boralex to BC Hydro over the last five years of 13.53 GWh, adjusted downward to account for planned outages in each of these years required to complete the penstock rehabilitation project approved in the 2020 Rate Decision. The threshold amount is 13.53 GWh in 2027 as there is no planned shutdown in that year.

14. This two-tier energy charge rate structure does not impose any minimum take or fixed charge payment obligations on BC Hydro and allows BC Hydro to reduce its average cost of energy in years when its load exceeds the threshold amount.

15. Boralex is also seeking BCUC approval to:

    a) continue to maintain a deferral account to record the revenue requirement impact, positive and negative, associated with any differences between the forecast and actual capital additions in the test period, which is a continuation of the capital additions deferral account approved by the BCUC in the 2020 Rate Decision for the prior test period;

    b) continue to maintain the First Nations relationship building deferral account approved by the BCUC in the 2020 Rate Decision; and

    c) maintain a permanent Participant Assistance/Cost Award (PACA) funding cost deferral account to record any PACA funding costs that Boralex is directed to pay arising out of this Application and future rate applications.

16. Boralex is not proposing any changes to the terms and conditions of Boralex's service to BC Hydro as approved by the BCUC in the 2020 Rate Decision.

17. Boralex hereby seeks the following BCUC approvals pursuant to Order G-143-19 and sections 59 to 61 of the UCA:

    a) an order approving the following rates for Boralex's service to BC Hydro for the period January 1, 2023 to December 31, 2027 that have been determined in accordance with this Application:

	2023	2024	2025	2026	2027
Tier 1 ($/MWh)	$340.71	$347.53	$354.48	$361.57	$368.80
Tier 2 ($/MWh)	$54.12	$55.20	$56.31	$57.43	$58.58
Tier 1/2 Threshold (GWh)	11.97	11.97	11.97	11.97	13.53

    b) an order approving the capital additions deferral account, the First Nations relationship building deferral account, and the PACA funding cost deferral account.

18. Details regarding Boralex's forecast revenue requirements and the determination of the rates for Boralex's service to BC Hydro are set out in Sections 4 to 8 of this Application.

19. Boralex's response to BCUC Directives 11 to 16 set out in Appendix A to Order G-270-20 are set out in Appendix B to this Application.

20. Boralex submits that the most efficient and cost-effective regulatory review process for this Application is a written hearing process.

2. REVENUE REQUIREMENT SUMMARY

21. **Table 1** shows Boralex's forecast annual revenue requirements for the 2023 to 2027 test period.

Table 1: Revenue Requirement 2023 to 2027 ($000's)

	2023	2024	2025	2026	2027
Rate Base	$19,895	$23,940	$28,808	$32,973	$34,748
Deemed Equity	$9,251	$11,132	$13,396	$15,332	$16,158
Deemed Debt	$10,644	$12,808	$15,412	$17,641	$18,590

	2023	2024	2025	2026	2027
Return on Equity	$879	$1,058	$1,273	$1,457	$1,535
Return on Debt	$639	$768	$925	$1,058	$1,115
Depreciation Expense	$443	$511	$587	$650	$689
Income Taxes	$0	$0	$0	$0	$0
Property and School Taxes	$366	$377	$385	$392	$400
Water Rentals	$78	$80	$82	$83	$85
Net O&M Expense	$1,923	$2,100	$2,035	$2,053	$1,900
Deferral Accounts	-$66	$0	$0	$0	$0
Gross Revenue Requirement	**$4,261**	**$4,894**	**$5,286**	**$5,694**	**$5,725**
Ocean Falls Retail and Industrial Customer Revenue	$728	$746	$759	$772	$842
Net Revenue Requirement	**$3,533**	**$4,148**	**$4,526**	**$4,922**	**$4,883**

22. Details regarding the determination of Boralex's opening rate base balance as of January 1, 2023 and the forecast rate base balances for each year of the test period are set out in Sections 3 and 4. A detailed capital additions variance analysis with respect to the prior test period is

set out in Appendix B in Boralex's response to BCUC Directive 13 in Appendix A to Order G-270-20.

23. Details regarding each component of Boralex's forecast revenue requirement for each year of the test period are set out in Section 5 below. A detailed cost of service variance analysis with respect to the prior test period is set out in Appendix B in Boralex's response to BCUC Directive 15 in Appendix A to Order G-270-20.

24. Details regarding Boralex's historic and forecast revenue from its retail and industrial customers in Ocean Falls are set out in Sections 6 and 7.

3. OPENING RATE BASE: JANUARY 1, 2023

3.1 Opening Rate Base

25. The opening rate base for the Ocean Falls Facilities as at January 1, 2023 has been determined by (i) starting with the 2019 rate base set out in Table 20 of the Compliance Filing approved by the BCUC in Order G-16-21, (ii) adding the capital additions made by Boralex over the 2019 to 2022 period (including capitalized overheads), and (iii) deducting depreciation expense over the 2019 to 2022 period.

26. The opening rate base has been calculated using the average of the opening and closing net book value of the assets in service over the 2019 to 2022 period as directed at page 27 of the 2020 Rate Decision.

3.2 Capital Additions: 2019 to 2022

27. Since 2019 Boralex has invested $7.2 million in capital additions to maintain the structural and operational integrity of the Ocean Falls Facilities and provide safe, reliable and secure service to BC Hydro and its other customers in Ocean Falls. The cost of these additions by year, grouped into the same ten asset categories set out in the 2019 Rate Application, are shown in **Table 2**.

Table 2: Capital Additions by Asset Category 2019 to 2022 ($000's)

	Asset Category	2019	2020	2021	2022	Total
1	Major Civil Works (Dam, Spillway, Tailrace)	$0	$0	$0	$0	**$0**
2	Miscellaneous Civil Works (Powerhouse, Access Roads)	$0	$0	$0	$0	**$0**
3	Inlet Gates	$0	$0	$0	$0	**$0**
4	Penstocks	$473	$0	$1,763	$2,943	**$5,180**
5	Turbine-Generators	$0	$101	$27	$27	**$155**
6	Controls & Ancillary Systems	$0	$0	$0	$0	**$0**
7	Substation Equipment	$0	$225	$546	$235	**$1,006**
8	Overhead Distribution	$0	$0	$193	$8	**$201**
9	Subsea Distribution Cable	$0	$0	$0	$0	**$0**
10	General Plant	$204	$173	$150	$159	**$686**
Total		**$677**	**$499**	**$2,679**	**$3,371**	**$7,228**

28. The capital projects undertaken or that were planned to be undertaken by Boralex since 2019 are the same capital projects set out in Table 11 of the 2019 Rate Application and which were reviewed by the BCUC in Section 3.1.4 of the 2020 Rate Decision. **Table 3** below shows actual expenditures by project in each year of the prior test period, followed by a summary discussion of the work and expenditures for each project.

Table 3: Capital Additions by Project 2019 to 2022 ($000's)

Project		2019	2020	2021	2022	Total
1	Penstock Rehabilitation	$473	$0	$1,763	$2,943	**$5,180**
2	Turbine Rehabilitation	$0	$101	$27	$27	**$155**
3	Powerhouse Electrical	$0	$0	$0	$0	**$0**
4	Ocean Falls Switchyard	$0	$0	$0	$0	**$0**
5	Shearwater Substation	$0	$225	$546	$235	**$1,006**
6	Interconnection Line	$0	$0	$193	$8	**$201**
7	General Plant	$204	$173	$150	$159	**$686**
Total		**$677**	**$499**	**$2,679**	**$3,371**	**$7,228**

Penstock Rehabilitation

In 2021 and 2022 the lower sections of the original riveted steel penstock, including the manifold (except G3 & G4 branches) and bellows, were replaced with new spiral welded steel penstock. The work also involved replacement of concrete thrust blocks and saddles.

The photos below show work in progress on the manifold section during the 2022 shutdown.

Turbine Rehabilitation

Following disassembly of the turbines for detailed inspection, Boralex determined that the shafts, seals and bearings were less deteriorated than was anticipated in the 2019 Rate Application. Based on these results, Boralex believes that major components of the turbine rehabilitation work planned for the prior test period such as shaft re-machining can be deferred beyond the 2023 to 2027 test period.

Powerhouse Electrical

Due to supply chain constraints and problems encountered during equipment specification and design, the replacement unit breakers and exciters were not able to be procured and delivered to site during the prior test period. The breakers are presently in production and will be installed during the 2024 penstock outage.

Ocean Falls Switchyard

Boralex had originally planned to replace oil circuit breaker 25CB51 in the Ocean Falls switchyard during the 2022 penstock outage. A rapid increase in T11 off-gassing was observed during the prior test period, which required the planned switchyard work activities to be re-prioritized. The planned breaker replacement was deferred, a replacement transformer for T11 was procured and its foundation was constructed in 2022. However, the replacement transformer did not arrive on site in time to be installed during the 2022 penstock outage so the work is now planned for completion during the 2023 penstock outage.

Shearwater Substation

This project was executed as planned. Costs were higher than estimated due to increased prices for the required equipment and materials, exacerbated by mobilization and productivity constraints associated with the COVID-19 pandemic.

Interconnection Line

Program work generally tracked plan in 2021, but 2022 activities fell below plan due to a shortage of available local labour and coordination conflicts with other ongoing capital work. However, field inspections in 2021 indicated that most of the structures expected to require replacement in 2022 were in good enough condition that their replacements could be deferred into the current test period.

General Plant

This program covers a broad range of equipment and facility spending directed to assets that do not directly generate or deliver electricity. Spending generally tracked above plan from 2019 to 2021, but fell below plan in 2022 as the planned dock and stairway rehabilitation work, barge repairs and 4x4 acquisitions were deferred.

29. Further details regarding these projects and a detailed capital additions variance analysis with respect to the prior test period is set out in Appendix B in Boralex's response to BCUC Directive 13 in Appendix A to Order G-270-20.

3.3 Depreciation Expense: 2019 to 2022

30. Boralex has calculated depreciation expense for the Ocean Falls Facilities on a straight-line basis using the depreciation rates set out in the Compliance Filing approved by Order G-16-21. As set out in the Compliance Filing, there are two pools of assets with different depreciation rates, namely, the assets acquired by Boralex from Central Coast Power Corporation ("CCPC") in 2009 and the assets represented by all capital additions made by Boralex after the acquisition of the Ocean Falls Facilities from CCPC.

31. **Tables 4** and **5** below show the depreciation expense on these two asset pools over the 2019 to 2022 period, and **Table 6** shows the combined depreciation expense over this period.

Table 4: Depreciation Expense: Assets Acquired by Boralex from CCPC ($000's)

Asset Category	2019	2020	2021	2022
1	$0	$0	$0	$0
2	$11	$11	$11	$11
3	$0	$0	$0	$0
4	$21	$21	$21	$21
5	$22	$22	$22	$22
6	$30	$30	$30	$30
7	$9	$9	$9	$9
8	$48	$48	$48	$48
9	$0	$0	$0	$0
10	$31	$31	$31	$31
Total	**$171**	**$171**	**$171**	**$171**

Table 5: Depreciation Expense: Capital Additions by Boralex ($000's)

Asset Category	2019	2020	2021	2022
1	$32	$32	$32	$32
2	$17	$17	$17	$17
3	$13	$13	$13	$13
4	$5	$8	$19	$51
5	$2	$2	$3	$4
6	$0	$0	$0	$0
7	$0	$3	$11	$20
8	$7	$7	$9	$11
9	$43	$43	$43	$43
10	$13	$19	$25	$30
Total	**$132**	**$145**	**$173**	**$221**

Table 6: Depreciation Expense: Total ($000's)

Asset Category	2019	2020	2021	2022
1	$32	$32	$32	$32
2	$28	$28	$28	$28
3	$13	$13	$13	$13
4	$25	$29	$40	$72
5	$24	$24	$25	$26
6	$30	$30	$30	$30
7	$9	$11	$20	$29
8	$55	$55	$57	$59
9	$43	$43	$43	$43
10	$44	$50	$56	$61
Total	**$303**	**$316**	**$345**	**$393**

3.4 Rate Base: January 1, 2023

32. Taking the rate base as at December 31, 2018, adding the capital additions from 2019 to 2022, and subtracting depreciation expense from 2019 to 2022, the resulting rate base as at December 31, 2022 (excluding working capital) is $18.1 million as shown in **Table 7**.

Table 7: Rate Base By Asset Category ($000's)

Asset Category		Rate Base (End of 2018)	CAPEX (2019-2022)	Depreciation (2019-2022)	Rate Base (End of 2022)
1	Major Civil Works (Dam, Spillway, Tailrace)	$2,969	$0	$129	$2,839
2	Miscellaneous Civil Works (Powerhouse, Access Roads)	$1,802	$0	$112	$1,690
3	Inlet Gates	$964	$0	$53	$911
4	Penstocks	$1,390	$5,180	$166	$6,404
5	Turbine-Generators	$1,455	$155	$99	$1,511
6	Controls & Ancillary Systems	$328	$0	$121	$207
7	Substation Equipment	$258	$1,006	$69	$1,195
8	Overhead Distribution	$1,108	$201	$226	$1,083
9	Subsea Distribution Cable	$1,173	$0	$171	$1,002
10	General Plant	$760	$686	$211	$1,236

Total	**$12,207**	**$7,228**	**$1,357**	**$18,078**

33. **Table 8** summarizes the rate base additions and depreciation expense over the period 2019 to 2022. With the inclusion of working capital, the rate base at the end of 2022 is $18.3 million.

Table 8: Rate Base Additions and Depreciation Expense 2019 to 2022 ($000's)

	2019	**2020**	**2021**	**2022**
Initial Rate Base	$12,207	$12,581	$12,765	$15,099
Capital Additions	$677	$499	$2,679	$3,371
Depreciation	-$303	-$316	-$345	-$393
Total	**$12,581**	**$12,765**	**$15,099**	**$18,078**
Working Capital	$236	$219	$215	$246
Ending Rate Base	**$12,817**	**$12,984**	**$15,315**	**$18,325**

4. FORECAST RATE BASE: 2023 TO 2027

4.1 Forecast Capital Additions

34. Although the Ocean Falls Facilities are generally in good operating condition, the plant is over 100 years old and, unsurprisingly, some components require replacement or rehabilitation. A number of capital projects are planned for 2023 to 2027 to address the deteriorated condition of specific assets, including completion of the penstock rehabilitation project. **Table 9** summarizes the projects comprising the 2023 to 2027 forecast capital expenditures.

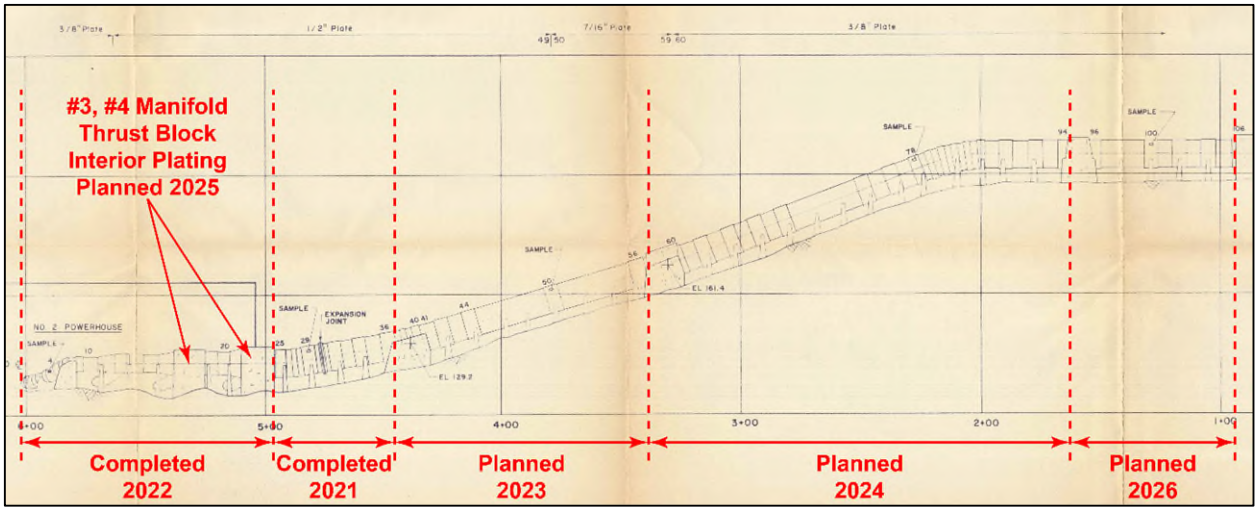
Table 9: Forecast Capital Additions 2023 to 2027 ($000's)

Project		2023	2024	2025	2026	2027	Total
1	Penstock Rehabilitation	$3,006	$3,555	$857	$3,301	$0	**$10,720**
2	Dam Reinforcement	$46	$91	$2,744	$198	$150	**$3,229**
3	Turbine-Generators	$0	$21	$11	$66	$94	**$192**
4	Powerhouse Electrical	$0	$1,045	$289	$0	$0	**$1,335**
5	Ocean Falls Switchyard	$278	$79	$0	$0	$0	**$357**
6	Interconnection Line	$77	$285	$275	$282	$320	**$1,239**
7	General Plant	$170	$344	$1,255	$284	$234	**$2,286**
Total		**$3,577**	**$5,420**	**$5,431**	**$4,132**	**$797**	**$19,357**

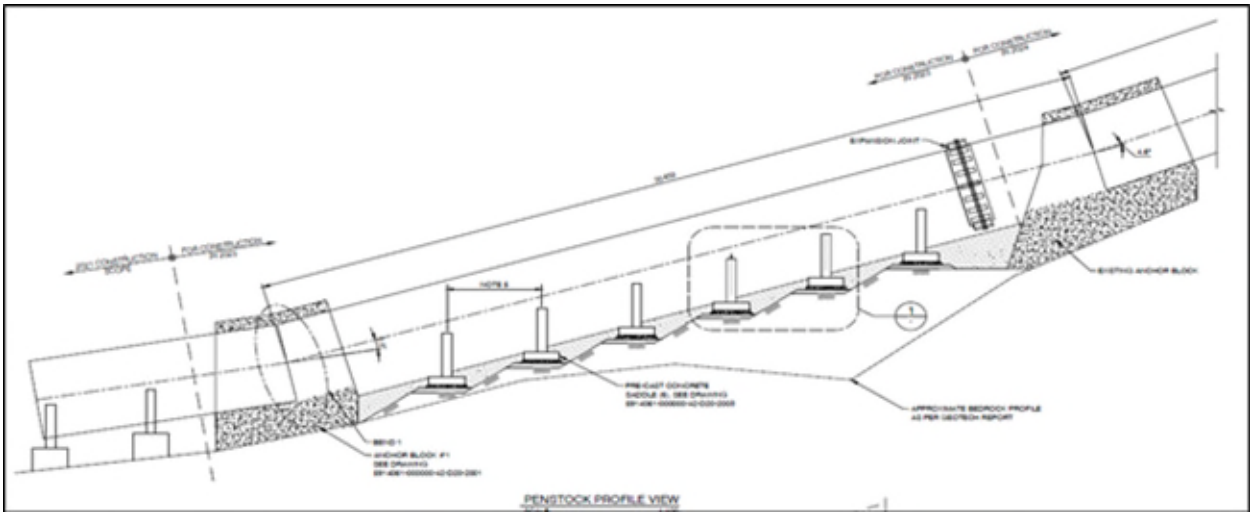
35. Details regarding the capital projects listed in **Table 9** are set out below.

Project 1 – Penstock Rehabilitation

The planned work for the upcoming test period represents continuation of the work initiated and executed during the prior test period. An overview of project phasing by year is shown in the figure below.



A detailed drawing of the penstock segment that will be replaced during the 2023 plant shutdown is shown in the following figure.



In addition to the penstock segment replacement shown above, the manifold segments supplying each unit are being reinforced with interior steel plating where they pass through the powerhouse exterior walls.

In 2024 the next upslope section of the penstock and associated anchor blocks and saddles will be replaced.

In 2025, internal steel plating will be added within the unit 3 & 4 manifold bifurcation crotches.

In 2026, the final segment of the penstock at the base of the dam will be replaced.

As identified during the 2019 Rate Application proceeding, a full-flow closure device such as a butterfly valve may need to be installed in the

penstock to mitigate the risk associated with a penstock breach, since the existing headgate cannot close under flow and upgrading the headgate to enable full-flow closure is not economically practical given its configuration and condition. Boralex and its dam safety experts continue to evaluate whether such a device will be required following completion of the penstock rehabilitation project. After the penstock has been upgraded to meet prevailing seismic and structural codes it may be able to be categorized as part of the dam, in which case the turbine inlet valves will satisfy the requirement to provide full flow closure.

Regardless of the ultimate engineering determination, Boralex does not expect it will need to install a full-flow closure device during the 2023 to 27 test period.

Project 2 – Dam Reinforcement

Preliminary engineering work (including interaction with the BC Director of Dam Safety) was initiated during the prior test period to determine the need for and scope of structural reinforcement of the dam to meet prevailing seismic and streamflow dam safety standards. The requirement for structural reinforcement of the dam has been confirmed, and preliminary engineering work continues into the 2023 to 2027 test period with finite element modeling of the structure presently being undertaken to determine the final scope of the mitigation project.

The present project schedule involves completing the analysis, engineering design and contract award in 2023 and 2024, and executing the required dam anchoring in 2025.

Project 3 – Turbine-Generators

Work in the test period involves replacement of the scroll case wear rings and generator slip rings for all four units. Unit 4 pivot arm bushings will also be replaced.

All units require shaft re-machining, as well as bearing and seal rehabilitation or replacement. Boralex plans to defer this work into a subsequent test period.

Project 4 – Powerhouse Electrical

Four new unit breakers will be installed during the 2024 penstock shutdown (this work has been deferred from 2021 and 2022 due to supply chain issues). The exciters for all units will be upgraded to static exciters as the existing excitation technology is obsolete and replacement parts are unavailable. In addition, neutral and phase cabinets will be upgraded when the breakers are replaced, and ground wires will be relocated from under the turbines at the same time.

Project 5 – Ocean Falls Switchyard

A new foundation for replacement transformer T12 was constructed in 2022, the transformer is on site and will be installed in 2023. Insulating gravel will also be replaced and a new fence installed during the upcoming test period.

Project 6 – Interconnection Line

This program covers the ongoing annual rehabilitation work of 25 kV interconnection line 25F51 between Ocean Falls and the Shearwater point of interconnection to the Bella Bella NIA over the test period. This program is expected to continue beyond the test period, representing a measured and focused approach to replacing those structures and interconnection components that are in deteriorating condition and which pose an unacceptable risk to reliable service to the Bella Bella NIA. Cost increases over the test period are due to inflationary pressures rather than changes in planned scope from the 2019 Rate Application.

Project 7 – General Plant:

This program covers replacement or refurbishment of a range of facilities and equipment required for operation of the Ocean Falls Facilities that are not directly involved in generating, transmitting or distributing power, including:

- Wood burner: Required to facilitate disposal of wood debris from the headpond that is trapped by the containment boom, and to satisfy prevailing emissions standards.

- Headpond boom replacement: Necessary to prevent entrainment of wood debris in the headpond into the penstock. The existing boom is in very poor condition and is at risk of failure.

- Building envelope rehabilitation: The shop roof requires replacement and the shop walls require exterior patching to repair water damage.

- Road repairs: Required maintenance and resurfacing of dam and powerhouse access roads to maintain safe work environment.

- Bridge Upkeep: Addition of cathodic protection to mitigate structural rusting; required bridge maintenance and repairs.

- The Link Lake barge will be repaired to support the dam anchoring project work.

- A 4x4 truck will be acquired under a capital lease.

4.2 Depreciation Expense: 2023 to 2027

36. Depreciation expense over the 2023 to 2027 period is calculated for the two pools of assets using the depreciation rates set out in the Compliance Filing approved by Order G-16-21.

37. **Tables 10** and **11** below show the depreciation expense on these two asset pools over the 2023 to 2027 period, and **Table 12** shows the combined depreciation expense over this period.

Table 10: Depreciation Expense: Assets Acquired by Boralex from CCPC ($000's)

Asset Category	2023	2024	2025	2026	2027
1	$0	$0	$0	$0	$0
2	$11	$11	$11	$11	$11
3	$0	$0	$0	$0	$0
4	$21	$21	$21	$21	$21
5	$22	$22	$22	$22	$22
6	$28	$26	$26	$26	$26
7	$9	$9	$9	$9	$9
8	$48	$48	$48	$48	$48
9	$0	$0	$0	$0	$0
10	$31	$31	$31	$30	$30
Total	**$169**	**$167**	**$167**	**$167**	**$167**

Table 11: Depreciation Expense: Capital Additions by Boralex ($000's)

Asset Category	2023	2024	2025	2026	2027
1	$33	$33	$52	$71	$73
2	$17	$18	$19	$21	$22
3	$13	$13	$13	$13	$13
4	$90	$134	$164	$191	$213
5	$4	$6	$10	$13	$14
6	$1	$1	$1	$1	$1
7	$26	$38	$47	$47	$47
8	$12	$16	$22	$28	$35
9	$43	$43	$43	$43	$43
10	$35	$42	$49	$55	$62
Total	**$273**	**$344**	**$420**	**$484**	**$523**

Table 12: Depreciation Expense: Total ($000's)

Asset Category	2023	2024	2025	2026	2027
1	$33	$33	$52	$71	$73
2	$28	$29	$30	$32	$32
3	$13	$13	$13	$13	$13
4	$111	$155	$185	$212	$234
5	$26	$28	$32	$35	$36
6	$28	$27	$27	$27	$27
7	$34	$46	$55	$55	$55
8	$60	$64	$70	$77	$83
9	$43	$43	$43	$43	$43
10	$66	$73	$79	$86	$92
Total	**$443**	**$511**	**$587**	**$650**	**$689**

4.3 Working Capital

Boralex has continued to calculate the working capital allowance for each year of the test period using the forecast O&M expenses for the corresponding year and applying the 45-day lag rule, as approved by the BCUC at page 27 of the 2020 Rate Decision. **Table 13** shows this calculation of the working capital allowance for each year of the test period.

Table 13: Working Capital Calculation ($000's)

	2023	2024	2025	2026	2027
Gross O&M Expense	$2,024	$2,211	$2,142	$2,161	$2,000
Multiplier (45/365)	12.3%	12.3%	12.3%	12.3%	12.3%
Working Capital Allowance	**$249**	**$273**	**$264**	**$266**	**$247**

4.4 Forecast Rate Base: 2023 to 2027

38. **Table 14** shows the resulting rate base for the Ocean Falls Facilities for 2023 to 2027. As with all years prior to 2023, the rate base has been calculated using the average of the opening and closing net book value of the assets in service. Allocation of O&M Expenses and new Capital Additions are treated as mid-year additions, which is reflected in the Mid-Year Rate Base totals below.

Table 14: Forecast 2023 to 2027 Rate Base ($000's)

	2023	2024	2025	2026	2027
Starting Rate Base	$18,078	$21,213	$26,122	$30,966	$34,447
Subtract: Depreciation Expense	-$443	-$511	-$587	-$650	-$689
Ending Rate Base (Excluding Capital Additions)	$17,636	$20,702	$25,535	$30,316	$33,758
Mid-Period Rate Base (Excluding Capital Additions)	**$17,857**	**$20,958**	**$25,829**	**$30,641**	**$34,102**
Add: Capital Additions	$3,476	$5,310	$5,323	$4,023	$697
Add: Allocation of 5% of O&M Expenses	$101	$111	$107	$108	$100
Ending Rate Base	**$21,213**	**$26,122**	**$30,966**	**$34,447**	**$34,555**

Mid-Period Rate Base (Excluding Capital Additions)	$17,857	$20,958	$25,829	$30,641	$34,102
Add: Capital Additions (Half Year)	$1,789	$2,710	$2,715	$2,066	$399
Add: Working Capital Allowance	$249	$273	$264	$266	$247
Mid-Year Rate Base	**$19,895**	**$23,940**	**$28,808**	**$32,973**	**$34,748**

5. REVENUE REQUIREMENT COMPONENTS

5.1 Capital Structure and Rate of Return on Common Equity

39. For purposes of calculating the revenue requirement, and in turn setting rates for Boralex's service to BC Hydro, Boralex has used the 9.5% rate of return on common equity (ROE) and the 46.5% common equity ratio approved by the BCUC in the 2020 Rate Decision.[1]

40. Boralex recognizes that the BCUC is reviewing the cost of capital of the Benchmark Utility and other utilities regulated by it in the two-stage Generic Cost of Capital proceeding. However, the effective date of any adjustment to the cost of capital has not yet been determined and will depend on the timing and progress of the Generic Cost of Capital proceeding.

41. Accordingly, depending on the outcome of the Generic Cost of Capital proceeding, Boralex may at some point during the test period need to make adjustments to its ROE and capital structure and seek BCUC approval of any resulting change in its rates for service to BC Hydro.

5.2 Debt Interest Rate

42. In the 2020 Rate Decision the BCUC approved a deemed debt rate of 5.5% for use in calculating Boralex's revenue requirement, and in turn in setting rates for service to BC Hydro. In fixing this rate, the BCUC agreed with Boralex that its cost of debt can be observed through its then existing debt arrangements with its third-party lender, with a fixed interest rate of 6.55%, but also placed weight on the advice of Boralex's third-party lenders that the cost rate on the debt would be 5.3% if Boralex were to refinance the debt component of the capital structure. The 5.3% rate was based on a credit spread of 350 basis points over 30-year Government of Canada bond yields at the time.

43. Boralex repaid its third party debt in 2021, and accordingly there is no longer any third party debt financing the debt component of the capital structure. However, given the 2020 Rate Decision, Boralex nevertheless believes that 5.5% remains the appropriate deemed interest rate for the amount of debt financing the rate base as at the end of 2022 (i.e., 53.5% of the rate base). Boralex believes that for the 2023 to 2027 test period the deemed debt rate should be a combination of the 5.5% rate financing the existing rate base as approved by the

[1] In the 2020 Rate Decision the BCUC determined that Boralex's cost of capital determinations should be comparable to Pacific Northern Gas (N.E.) Ltd. Tumbler Ridge.

BCUC and a deemed interest rate on the additional debt required to finance the increase in the rate base from 2023 to 2027.

44. For purposes of estimating the interest rate on the additional debt required to finance the increase in the rate base over the 2023 to 2027 test period, Boralex has again based that rate on current 30-year Government of Canada bond yields plus a credit spread of 350 basis points, which results in a rate of 6.55%. The resulting weighted average interest rate, based on the 5.5% rate financing the debt component of the existing rate base as at the end of 2022 and the 6.55% rate financing the additional debt required to finance the increase in the rate base over the test period, is 6.00%. Accordingly, Boralex is proposing a deemed debt interest rate of 6.00% for the test period.

45. Boralex again recognizes that the BCUC is reviewing the cost of capital of the Benchmark Utility and other utilities regulated by it in the two-stage Generic Cost of Capital proceeding, including the deemed cost of debt. However, the effective date of any adjustment to the cost of capital has not yet been determined and will depend on the timing and progress of the Generic Cost of Capital proceeding.

46. Accordingly, as with the allowed ROE and capital structure, depending on the outcome of the Generic Cost of Capital proceeding, Boralex may at some point during the test period also need to make adjustments to its deemed debt interest rate and seek BCUC approval of any resulting change in its rates for service to BC Hydro.

5.3 Depreciation Expense

47. Depreciation expense over the 2023 to 2027 period is calculated as described in Section 4.2 above. The resulting annual depreciation expense is summarized in **Table 15**.

Table 15: Depreciation Expense 2023 to 2027 ($000's)

	2023	2024	2025	2026	2027	Total
Depreciation Expense	$443	$511	$587	$650	$689	**$2,880**

5.4 Income Taxes

48. Boralex has adopted the "flow-through" methodology for calculating income tax expense. Sufficient Capital Cost Allowance (CCA) is available to reduce utility income taxes payable over the 2023 to 2027 period to zero.

5.5 Property and School Taxes and Provincial Water Rentals

49. Historical and forecast property and school taxes and provincial water rental costs are shown in **Tables 16** and **17**. Property and school taxes for the test period are based on the 2022 actual amount adjusted for inflation.

Table 16: Property Taxes and Water Rentals 2019-2022 ($000's)

	2019	2020	2021	2022
Property and School Taxes	$351	$350	$352	$344
Water Rentals	$68	$68	$76	$73
Total	**$419**	**$418**	**$428**	**$417**

Table 17: Property Taxes and Water Rentals 2023-2027 ($000's)

	2023	2024	2025	2026	2027
Property and School Taxes	$366	$377	$385	$392	$400
Water Rentals	$78	$80	$82	$83	$85
Total	**$444**	**$457**	**$466**	**$476**	**$485**

5.6 Operating & Maintenance Expenses

50. **Table 18** summarizes the actual O&M expenses for the Ocean Falls Facilities from 2019 to 2022, while **Table 19** summarizes the forecast O&M expenses from 2023 to 2027.

Table 18: O&M Expenses 2019 to 2022 ($000's)

O&M Line Item	2019	2020	2021	2022
Employee Costs				
Salaries & Benefits	$481	$482	$552	$661
Expenses	$154	$157	$143	$109
Recruitment	$0	$0	$0	$0
Training	$5	$3	$5	$2
Aggregate Corporate Services				
Corporate Services	$158	$172	$138	$149
Engineering and Environment	$53	$55	$57	$55
Operations Senior Management	$8	$8	$19	$25
Operations Site Management	$97	$98	$33	$0
Maintenance and Repairs				
Control System	$343	$238	$116	$57
Machinery	$99	$37	$41	$37
Turbine-Generators	$42	$0	$7	$3
Heavy Machinery & Mobile Equipment	$33	$37	$35	$56
Dam, Buildings, and Land	$88	$45	$27	$72
Oil, Fuel, and BC Hydro Power	$36	$11	$119	$196
Health, Safety, and Environment	$48	$4	$14	$2
Insurance	$105	$111	$98	$194
Permits and Land Rights	$3	$4	$3	$3
Third Party Services	$44	$89	$128	$178
Regulatory Costs	$115	$224	$211	$201
Gross O&M Expenses	**$1,912**	**$1,776**	**$1,747**	**$1,998**
Capitalized Overheads	-$96	-$89	-$87	-$100
Net O&M Expenses	**$1,817**	**$1,687**	**$1,660**	**$1,899**

Table 19: Forecast O&M Expenses 2023 to 2027 ($000's)

O&M Line Item	2023	2024	2025	2026	2027
Employee Costs					
Salaries & Benefits	$671	$799	$701	$736	$772
Expenses	$123	$130	$136	$143	$150
Aggregate Corporate Services					
Corporate Services	$125	$129	$131	$134	$136
Engineering and Environment	$57	$59	$60	$61	$62
Operations Senior Management	$53	$55	$56	$57	$58
Maintenance and Repairs					
Control System	$204	$210	$214	$218	$223
Machinery	$54	$56	$57	$58	$59
Turbine-Generators	$38	$91	$93	$41	$42
Heavy Machinery & Mobile Equipment	$30	$31	$31	$32	$32
Dam, Buildings, and Land	$76	$42	$36	$38	$46
Oil, Fuel, and BC Hydro Power	$261	$269	$274	$280	$43
Health, Safety, and Environment	$29	$29	$30	$31	$31
Insurance	$194	$203	$214	$224	$236
Permits and Land Rights	$3	$3	$3	$3	$3
Third Party Services	$0	$0	$0	$0	$0
Regulatory Costs	$107	$107	$107	$107	$107
Gross O&M Expenses	**$2,024**	**$2,211**	**$2,142**	**$2,161**	**$2,000**
Capitalized Overheads	-$101	-$111	-$107	-$108	-$100
Net O&M Expenses	**$1,922**	**$2,100**	**$2,035**	**$2,053**	**$1,900**

51. A detailed O&M expense variance analysis with respect to the prior test period is set out in Appendix B in Boralex's response to BCUC Directive 15 in Appendix A to Order G-270-20.

52. As shown in **Table 19**, the forecast O&M expenses over the five year test period are essentially flat and at the same level as actual 2022 O&M expenses. The following is a summary of the main reasons for the changes in the forecast O&M expenses over the test period relative to the prior test period.

    Employee Salaries and Benefits: Salaries and Benefits represent the cost of the full time operators of the Ocean Falls Facilities. The forecast costs in 2023 and subsequent years are consistent with actual costs in 2022 adjusted for inflation and account for overlaps in 2023 and 2024 between operator retirements and new hires. The 2023 forecast is

comprised of seven operators, of which four are full year operators, two who are retiring during the year and one who is a new hire during the year. The 2024 forecast is comprised of six operators, of which four are full year operators, one who is retiring during the year and one who is a new hire during the year (the new employee has a six month overlap with the retiring employee to ensure continuity of operations and facilitate mentoring and training). The 2025, 2026 and 2027 forecast is comprised of five full year operators.

Employee Expenses: The forecast employee expenses, comprised primarily of costs related to operator travel (transportation, accommodations and meals) to and from Ocean Falls, are consistent with actual costs in recent years, adjusted for inflation.

Corporate Services: The forecast general Corporate Services costs (e.g., accounting, legal, human resources, finance, tax and information technology services provided by Boralex Inc.) remain at levels consistent with the prior test period, but the forecast costs are lower due primarily to the retirement of Boralex's third party debt in 2021 which results in reduced financial reporting requirements by the accounting group.

Engineering and Environment: The forecast Engineering and Environment Costs which form part of Corporate Services remain at levels consistent with the prior test period.

Operations Senior Management: Operations Senior Management represents a percentage allocation of the salary and benefits of Boralex Inc. employees responsible for senior management oversight of the Ocean Falls Facilities. The prior test period also included the forecast cost of Operations Site Management, but the responsible individual retired in 2021 and since then this function is performed primarily by a Boralex full time operator whose costs are included under Employee Salaries & Benefits, with assistance from Operations Senior Management.

Maintenance and Repairs: Control System costs (which include transmission line O&M costs) are expected to reflect a stable level of annual work with increasing unit costs due to inflation. Turbine-Generators maintenance work is expected to revert to long term stable levels after planned capital work has been completed. Forecast BC Hydro Power costs reflect the penstock work outages in 2023 to 2026. Forecast Oil and Fuel costs reflect the increasing cost of diesel fuel.

Third Party Services: No Third Party Services are anticipated during the test period.

Regulatory Costs: Regulatory Costs represent the forecast cost of preparing and participating in the BCUC's review of this Application amortized over the test period using the same methodology for the prior test period costs as directed at page 37 of the 2020 Rate Decision.

5.7 Deferral Account Balances

53. Boralex was directed in the 2020 Rate Decision to create a deferral account to record the revenue requirement impact, positive and negative, associated with any differences between the forecast and actual capital expenditures in the prior test period, attracting interest at Boralex's weighted average cost of debt ("WACD"). **Table 20** shows the calculations of this deferral account balance.

Table 20: Capital Additions Deferral Account ($000's)

	2019	**2020**	**2021**	**2022**
Forecast 2019-2022 Capital Additions (2019 Rate Application)	$639	$768	$2,419	$4,316
Actual 2019-2022 Capital Additions	$677	$499	$2,679	$3,371
Difference	$39	-$268	$261	-$945
Associated Depreciation Expense (Cumulative)	$0.7	-$2.0	-$4.5	-$15.4
Associated Return on Equity	$1.7	-$10.1	$1.6	-$39.4
Associated Return on Debt	$1.1	-$6.7	$1.1	-$26.3
Total	**$3.5**	**-$18.8**	**-$1.7**	**-$81.1**

Opening Balance	$0.0	$3.6	-$15.5	-$18.1
Additions	$3.5	-$18.8	-$1.7	-$81.1
Interest	$0.1	-$0.3	-$0.9	-$3.2
Closing Balance	**$3.6**	**-$15.5**	**-$18.1**	**-$102.4**

54. Pursuant to Order G-8-21 dated January 18, 2021, the BCUC approved a request by Boralex to establish a deferral account to capture $33,000 in PACA funding costs that Boralex was directed to pay to the British Columbia Old Age Pensioners' Organization et al. ("BCOAPO"), with interest on the deferral account balance at the WACD. **Table 21** shows the calculation of this deferral account balance.

Table 21: Participant Funding Deferral Account ($000's)

	2019	2020	2021	2022
Opening Balance	$0.0	$0.0	$33.1	$34.9
Additions	$0.0	$33.1	$0.0	$0.0
Interest	$0.0	$0.0	$1.8	$1.9
Closing Balance	**$0.0**	**$33.1**	**$34.9**	**$36.8**

55. In the 2020 Rate Decision the BCUC approved the First Nations relationship building deferral account to record any costs incurred by Boralex over the prior test period associated with its relationship building activities with the Heiltsuk Nation. Boralex did not record any costs in this deferral account over the prior test period.

56. In the 2020 Rate Decision, the BCUC also directed Boralex to create a revenue variance deferral account to capture any revenues earned from BC Hydro during 2021 and 2022 above the Tier1/Tier2 threshold in the event the penstock rehabilitation project work was delayed in those years (page 59 of the 2020 Rate Decision). The penstock rehabilitation project was not delayed in 2021 or 2022 and therefore Boralex did not record any revenues in this deferral account.

57. As shown in **Table 1: Revenue Requirement Summary**, Boralex is proposing that the net balance in the capital additions and PACA funding cost deferral accounts of $65,600 be credited in one year to the 2023 revenue requirement.

6. HISTORIC ELECTRICTY SALES AND REVENUE

58. **Table 22** shows Boralex's annual electricity sales over the last five years.

Table 22: Electricity Sales 2018 to 2022 (kWh)

	2018	2019	2020	2021	2022
BC Hydro	12,707,128	12,953,256	13,569,842	13,455,428	11,838,621
Ocean Falls Retail and Industrial Customers	6,774,236	9,998,965	6,943,119	9,699,011	14,215,890
Total	**19,481,364**	**22,952,221**	**20,512,961**	**23,154,439**	**26,054,511**

59. **Table 23** shows Boralex's annual revenue over this same five-year period from BC Hydro and Boralex's retail and industrial customers.

Table 23: Revenue 2018 to 2022 ($000's)

	2018	2019	2020	2021	2022
BC Hydro	$2,625	$2,652	$2,720	$3,087	$3,063
Ocean Falls Retail and Industrial Customers	$480	$674	$557	$679	$892
Total	**$3,105**	**$3,326**	**$3,278**	**$3,766**	**$3,955**

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

7.1 BC Hydro Load Forecast

60. **Table 24** shows Boralex's forecast deliveries of electricity to BC Hydro at the Shearwater interconnection point for the years 2023 to 2027.

Table 24: BC Hydro Electricity Delivery Forecast (MWh)

	2023	2024	2025	2026	2027
BC Hydro	11,974	12,191	12,411	12,634	14,412

61. The forecast deliveries to BC Hydro have been determined as follows:

a) 2023: The average of BC Hydro energy sales over the past five years is used (13,525 MWh), normalized to remove the impact of the shutdowns associated with the penstock rehabilitation project in 2021 and 2022 (estimated at 1,551 MWh). This amount is then reduced to account for the planned plant outage from mid-April to the end of May to account for the penstock rehabilitation work in 2023, resulting in an estimate of 11,974 MWh.

b) 2024 to 2026: The unadjusted forecast 2023 deliveries of 13,525 MWh are increased by 1.6% per year. This annual increase is the same as that used to forecast deliveries to BC Hydro in the 2019 Rate Application and is consistent with the actual annual increase in deliveries to BC Hydro over the past five years. Each of these amounts is then reduced to account for the planned 6 week plant outage from mid-April to the end of May (held constant at 1,551 MWh per year) to account for the penstock rehabilitation work in each of these years.

c) 2027: The unadjusted forecast 2023 deliveries of 13,525 MWh are increased by 1.6% per year, resulting in forecast deliveries of 14,412 MWh in 2027. There is no planned penstock rehabilitation work in 2027 and therefore no associated plant outage.

7.2 Non-BC Hydro Revenue Forecast

62. **Table 25** shows Boralex's forecast revenues from its retail and industrial customers in Ocean Falls for the years 2023 to 2027.

Table 25: Forecast Revenue 2023 to 2027 ($000's)

	2023	2024	2025	2026	2027
Ocean Falls Retail and Industrial Customers	$728	$746	$759	$772	$842

63. The forecast revenue from retail customers for 2023 is based on historical loads and the prevailing BC Hydro Zone II rates (i.e., the rates charged by Boralex to its retail customers). The forecast revenue in subsequent years is increased assuming Boralex's forecast annual inflation adjustments of 3% in 2024 and 2% thereafter.

64. Boralex currently has two industrial customers: Mowi Canada West Inc. ("Mowi") and Ocean Falls Blockchain Corp. ("OFBC").

65. Mowi has historically had a stable load and the EPA between Boralex and Mowi was renewed in February 2023. The forecast revenue from Mowi is based on the rates in the renewed EPA and Mowi's historical load.

66. In the case of OFBC, Boralex's EPA and lease with OFBC have not been renewed due to the fact that OFBC has been in arrears on its energy purchases and lease obligations since December 2022. Boralex intends to extend the EPA and lease on a month-to-month basis until such time that OFBC pays Boralex all overdue amounts. For the purposes of forecasting OFBC's load, Boralex has used the average energy sales to OFBC over the past five years and the electricity rates payable by OFBC in 2022 adjusted for inflation over the test period. The historic and forecast industrial customer revenue shown in **Tables 23** and **25** include the actual and forecast lease payments from OFBC to Boralex for OFBC's leased space in Boralex's workshop building.

67. The total forecast revenue shown in **Table 25** also includes an annual payment to Boralex from Telus of $5,500 for leasing space for telecommunications equipment on Boralex transmission line poles.

8. RATE STRUCTURE AND BC HYDRO RATES

8.1 Rate Structure

68. Boralex is seeking BCUC approval of the same two-tier energy charge rate structure for its service to BC Hydro approved in the 2020 Rate Decision, consisting of a Tier 1 rate per MWh for the first tier of electricity in any year up to a threshold amount and a lower Tier 2 rate per MWh for all electricity above the threshold amount.

69. The threshold amount is 11,974 MWh for 2023 to 2026, which represents the average annual normalized amount of electricity delivered by Boralex to BC Hydro over the last five years of 13,525 MWh (normalized to remove the impact of the penstock rehabilitation project in 2021 and 2022), adjusted downward by 1,551 MWh to account for outages required to complete the penstock rehabilitation project each year over the 2023 to 2027 test period.

70. The threshold amount is 13,525 MWh for 2027, which represents the average annual normalized amount of electricity delivered by Boralex to BC Hydro over the last five years of 13,525 MWh.

Tier 2 Rate

71. The starting point under the rate structure is to fix the Tier 2 rate and then deduct the forecast Tier 2 revenue (i.e., the forecast load greater than the threshold amount multiplied by the Tier 2 rate) from Boralex's net revenue requirement to determine the amount of revenue that needs to be recovered from the Tier 1 rate.

72. While the Tier 2 rate can be set higher or lower, Boralex is proposing a Tier 2 rate of $54.12 MWh starting in 2023, and escalating at 2% per year. The starting Tier 2 rate in 2023 is equal to Boralex's approved Tier 2 rate for 2022 of $53.06 MWh with a 2% escalation.

Tier 1 Rate

73. The Tier 1 rate is calculated to provide the balance of the net revenue requirement after deduction of the forecast Tier 2 revenue.

74. The Tier 1 rate has been structured to avoid large step changes from one year to the next (i.e., it is "levelized" or smoothed over the test period), with a 2% annual escalation. Without levelization, the Tier 1 rate would fluctuate from year to year as a function of the Tier 1 revenue requirement.

75. The levelized Tier 1 rate is calculated to generate the same net present value ("NPV") of Tier 1 revenue over the test period as would be the case if unlevelized Tier 1 rates were used. Boralex has applied its WACD to discount the test period revenues, as directed at page 60 of the 2020 Rate Decision. The steps of this calculation are as follows:

    a) The Tier 1 revenue requirement for each year of the test period is calculated.

    b) The NPV of the Tier 1 revenue requirement across all test period years is calculated.

    c) The Tier 1 rate is set such that (i) the NPV of the levelized Tier 1 revenue is equal to the NPV of the unlevelized Tier 1 revenue, and (ii) the Tier 1 rate escalates at 2% per year.

8.2 BC Hydro Rates

76. **Table 26** shows the resulting applied-for rates for Boralex's service to BC Hydro for the period January 1, 2023 to December 31, 2027.

Table 26: BC Hydro Rates

	2023	2024	2025	2026	2027
Tier 1 ($/MWh)	$340.71	$347.53	$354.48	$361.57	$368.80
Tier 2 ($/MWh)	$54.12	$55.20	$56.31	$57.43	$58.58
Tier 1/2 Threshold (GWh)	11.97	11.97	11.97	11.97	13.53

77. Boralex notes that that the Tier 1 rates over the test period reflect the forecast reduction in deliveries to BC Hydro as a result of the plant shutdowns required in each of 2023, 2024, 2025 and 2026 in order to complete the penstock rehabilitation project. Without these shutdowns, and assuming the same revenue requirements in each year of the test period, the Tier 1 rate would be $308.87 MWh in 2023 increasing to $334.33 MWh in 2027.

9. DEFERRAL ACCOUNTS

9.1 Capital Additions Deferral Account

78. Boralex is seeking approval in this Application to continue to maintain a capital additions deferral account to record the revenue requirement impact, positive and negative, associated with differences between the forecast and actual capital additions in the test period, with interest on any deferral account balance at Boralex's WACD. This is the same as the capital additions deferral account that Boralex was directed to maintain by the BCUC in the 2020 Rate Decision for the prior test period.

79. As outlined in Section 4, Boralex is planning significant capital expenditures over the test period, including the completion of the penstock rehabilitation project and the dam anchoring project. While Boralex is confident that these projects can be completed as planned, it also recognizes that there is some project scope and cost uncertainty over the five year test period, particularly with the dam anchoring project and more generally with the current and uncertain inflationary environment and persistent supply chain issues.

9.2 First Nations Relationship Building Deferral Account

80. Boralex is seeking approval in this Application to continue to maintain the First Nations Deferral Account approved by the BCUC in the 2020 Rate Decision to record any costs incurred by Boralex over the test period associated with its relationship building activities with the Heiltsuk Nation, with interest on any deferral account balance at Boralex's WACD.

81. The Ocean Falls Facilities are located on the traditional territory of the Heiltsuk Nation and most of the end-users of the electricity generated by Boralex are members of the Heiltsuk Nation.

82. Boralex has fostered a strong working relationship with the Heiltsuk Nation and both parties wish to maintain and build on this relationship based on mutual communication, goodwill, trust and respect. In this regard Boralex expect to continue negotiations with the Heiltsuk Nation of a Memorandum of Understanding (MOU) to guide the relationship between the parties as it pertains to the operation of the Ocean Falls Facilities within the traditional territory of the Heiltsuk Nation.

83. The negotiation and implementation of the MOU may result in Boralex incurring certain costs over the test period regarding the Ocean Falls Facilities that are not reflected in this Application. However, the nature, extent and timing of such costs cannot reasonably be forecasted by Boralex.

84. Boralex is not seeking approval of the disposition of any amounts that might be recorded in the First Nations Deferral Account during the test period. Any amounts recorded in the deferral account would only be disposed of in accordance with a separate future application by Boralex to the BCUC.

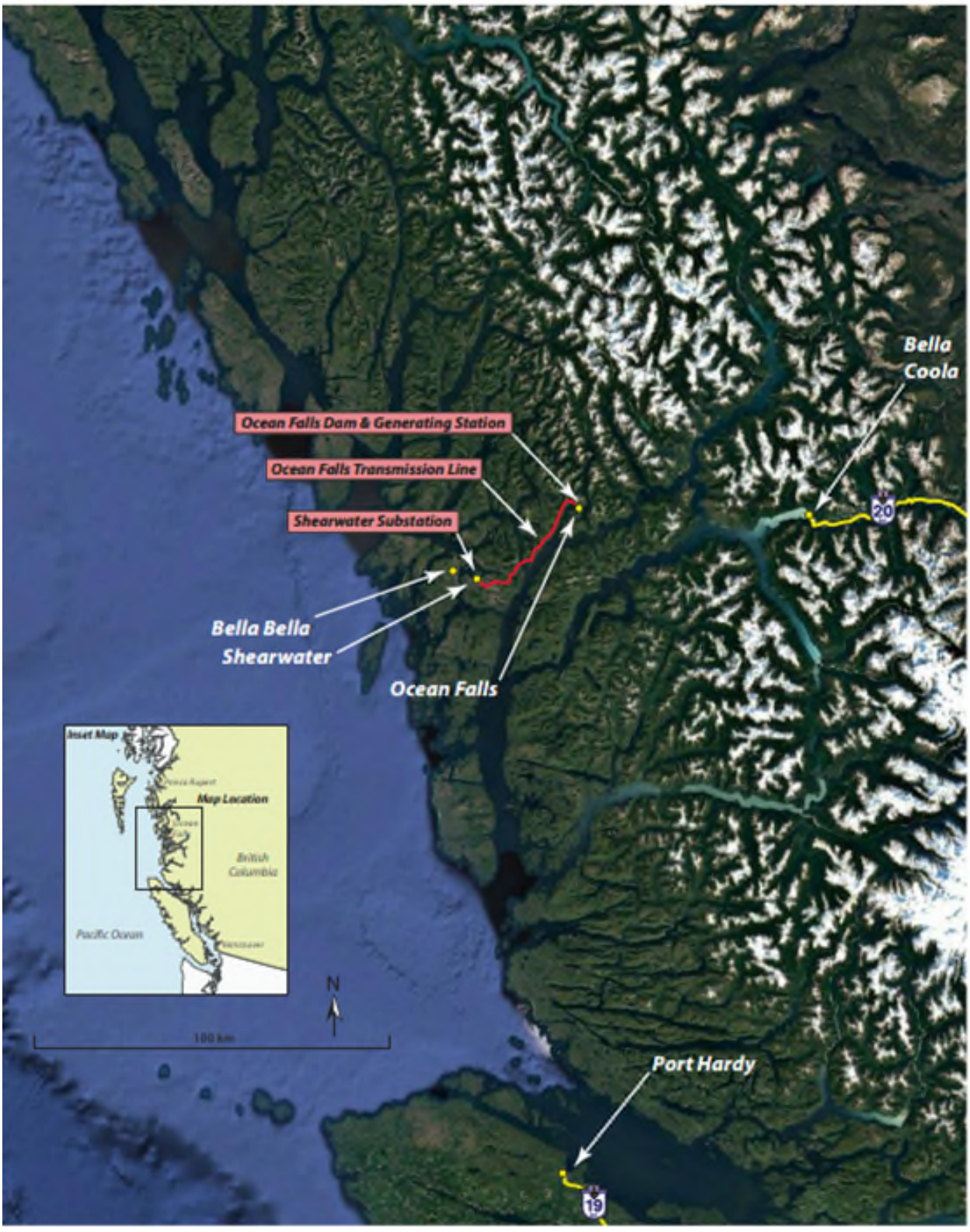
9.3 PACA Funding Deferral Account

85. Pursuant to Order G-8-21 dated January 11, 2021 the BCUC approved a request by Boralex to establish a deferral account to capture $33,000 of PACA costs awarded to the BCOAPO in connection with its participation in the 2019 Rate Application proceeding. In Order G-8-21 Boralex was also directed to address in its next rate application (i) the deferral account balance to be recovered in rates, (ii) the proposed amortization period for the recovery of the deferral account balance, and (iii) whether it would be appropriate to establish a permanent PACA funding cost deferral account.

86. With regard to items (i) and (ii), the deferral account balance and amortization period are addressed in Section 5.7 above. With regard to item (iii), Boralex believes that it is appropriate to establish a permanent PACA funding deferral account. PACA funding costs are a cost of carrying on Boralex's utility business, but management has no reliable means of forecasting these costs since the cost awards are made at the conclusion of the regulatory proceeding.

87. Accordingly, Boralex requests approval to establish a permanent PACA funding cost deferral account, with interest on any deferral account balance at Boralex's WACD.

APPENDIX A
MAP



APPENDIX B

RESPONSE TO BCUC DIRECTIVES 11 TO 16 SET OUT IN APPENDIX A TO ORDER G-270-20

The following are Boralex's responses to BCUC Directives 11 to 16 set out in Appendix A to Order G-270-20.

1. ***Directive 11 - Boralex is directed to address the appropriateness of the scope of the existing exemption orders in its next rates application.***

The BCUC Exemption Order, which exempted Boralex from the majority of the UCA, was issued by the BCUC when Boralex acquired the Ocean Falls facilities from CCPC in 2009. By Order G-143-19, the BCUC modified the BCUC Exemption Order to allow the BCUC to set rates for Boralex's service to BC Hydro, which the BCUC did pursuant to the 2020 Rate Decision and Order G-270-20. The BCUC Exemption Order remains in effect with respect to Boralex's service to its other customers. In particular, pursuant to the BCUC Exemption Order Boralex must charge its retail customers at the same rates as BC Hydro Zone II rates, and charge any industrial customers at negotiated rates not to exceed the comparable BC Hydro industrial rates.

The scope of the BCUC Exemption Order remains appropriate for the following reasons.

With regard to Boralex's service to BC Hydro, the BCUC Exemption Order permits the BCUC to continue to set rates for Boralex's service to BC Hydro, which was required and continues to be required following the expiry on June 30, 2019 of the 1986 Electricity Purchase Agreement between Boralex and BC Hydro.

With regard to Boralex's retail customers, the terms of the BCUC Exemption Order will continue to ensure that Boralex's retail customers will receive electricity service at the same rates as retail customers in BC Hydro's Zone II (non-integrated areas). This has been the case since the Ocean Falls facilities were acquired by CCPC from the Province in 1986 in accordance with Order G-40-86 dated July 4, 1986. Indeed it was a condition precedent in the acquisition agreement between the Province and CPPC that the BCUC issue an exemption order that tied the rates CCPC was permitted to charge retail customers in Ocean Falls to the rates charged by BC Hydro to its customers in Zone II. Moreover, the BC Hydro Zone IB rates (the Bella Bella non-integrated area) are the same as the BC Hydro Zone II rates, with the exception that the Zone IB rates do not have the second tier inclining block rate which is part of the Zone II rates (i.e., the Zone IB rates are the same as the Zone II tier 1 rates). Consequently, with the exception of the inclining tier 2 rate paid by retail customers in Ocean Falls, under the terms of the BCUC Exemption Order Boralex's retail customers in Ocean Falls pay the same rates as BC Hydro's customers in the Bella Bella NIA. This stands to reason from

a public policy perspective, and presumably why the Province would have made it a condition of the original sale, because both customer groups are in a non-integrated area of the Province and receive their electricity from the very same Ocean Falls Facilities.

With regard to Boralex's industrial customers, the terms of the BCUC Exemption Order will continue to provide Boralex with the flexibility to negotiate rates with industrial customers, subject to the condition that the rates may not exceed the comparable BC Hydro industrial rates. Given the remote and isolated location of Ocean Falls, Boralex needs this flexibility in order to attract and retain industrial customer load having regard for what an industrial customer would be willing and able to pay for electricity given the other costs of locating their operations in Ocean Falls. Boralex's continued ability to attract and retain industrial customer load is beneficial to BC Hydro because any industrial customer revenue that Boralex is able to generate enables Boralex to reduce the rates that it would otherwise need to charge BC Hydro.

2. ***Directive 12 – The Panel directs Boralex to include a discussion and documentation regarding its capital planning and approval process in future rate applications.***

Given the vintage of the Ocean Falls Facilities, the capital planning and approval process for Boralex is driven primarily by sustaining requirements. The process is relatively simple in comparison to the planning processes typically utilized by larger utilities, which is appropriate given the small size of Boralex, the constrained load growth, the limited number of assets in each class, and the hands-on familiarity of the operators with the assets.

The Ocean Falls operating team is small and focused, and operators observe the performance and condition of the Ocean Falls powerhouse, switchyard, penstock, and dam facilities on a daily basis. The operators similarly observe the condition of the local Ocean Falls and Martin Valley distribution facilities regularly, due to proximity and the small footprint of the facilities. The operators regularly inspect the Shearwater Substation facilities (up to 6 times per year), remotely monitor the Shearwater substation equipment on a daily basis, and maintain regular communications with the BC Hydro operators at the Bella Bella NIA to identify any emerging concerns at the Shearwater substation facilities. The interconnection line between Ocean Falls and the Bella Bella NIA is inspected by helicopter at least once per year, with additional walking inspections when line maintenance is being undertaken and on an as-needed basis when potential issues are identified via the helicopter inspections.

When the operators identify an asset condition or performance-based concern, the standard planning process for non-urgent issues that may involve capital expenditures is to either engage internal experts from Boralex Inc. or, when necessary, third-party experts with a particular expertise in the equipment or facilities of concern, to evaluate the situation and to recommend any necessary mitigation. If the recommended

mitigation options involve capital project alternatives, those project options are entered into the planned project portfolio for evaluation and approval.

Once a portfolio of potential capital projects or project options has been assembled, Boralex Inc.'s Hydro Director reviews the portfolio with the Ocean Falls operators and internal Boralex Inc. experts to select and prioritize the projects based on the level of assessed risk to reliable operations, personnel and public safety, and/or the environment. After being prioritized preliminary schedules are developed for each of the planned projects, taking into consideration available annual outage windows and the capacity of internal staff and third-party contractors to design, budget, procure and execute the projects in this remote location.

Budgetary estimates for the scheduled projects are presented to the Boralex Inc. management team for approval and financing. The Hydro Director relies on internal expertise but also third-party engineers in preparing capital expenditure recommendations on an annual basis. The annual capital expenditure program is presented to the Vice-President of Operations at Boralex Inc., who makes a final recommendation on capital expenditures for ultimate approval by executive management and the Board of Directors of Boralex Inc. as part of the annual budget approval process for Boralex Inc.'s operating facilities.

The approved project portfolio then forms the basis of the capital budget for each fiscal year.

Unplanned/urgent capital projects can be triggered when facilities are damaged or fail during real time operations. Historical examples include the failure of one of the undersea crossing cables on the interconnection line to Shearwater, as well as extreme weather events and landslides that have damaged individual or multiple overhead interconnection structures. Such unplanned projects may temporarily displace budgeted projects, depending upon staff capacity or annual capital spending constraints.

3. ***Directive 13 - Boralex is directed to provide a detailed capital additions variance analysis as part of its future rate applications filed with the BCUC.***

The following tables compare Boralex's actual versus forecast capital expenditures for the prior test period by project, followed by an explanation of any significant variances.

Actual Capital Expenditures ($000's)

Project		2019 (Q3-Q4)	2020	2021	2022	Total
1	Penstock Rehabilitation	$159	$0	$1,763	$2,943	**$4,865**
2	Turbine Rehabilitation	$0	$101	$27	$27	**$155**
3	Powerhouse Electrical	$0	$0	$0	$0	**$0**
4	Ocean Falls Switchyard	$0	$0	$0	$0	**$0**

5	Shearwater Substation	$0	$225	$546	$235	**$1,006**
6	Interconnection Line	$0	$0	$193	$8	**$201**
7	General Plant	$89	$173	$150	$159	**$572**
	Total	**$248**	**$499**	**$2,679**	**$3,371**	**$6,799**

Forecast Capital Expenditures ($000's)

Project		2019 (Q3-Q4)	2020	2021	2022	Total
1	Penstock Rehabilitation	$137	$0	$1,069	$2,562	**$3,768**
2	Turbine Rehabilitation	$0	$313	$268	$244	**$824**
3	Powerhouse Electrical	$0	$67	$362	$371	**$800**
4	Ocean Falls Switchyard	$0	$53	$0	$215	**$268**
5	Shearwater Substation	$0	$104	$288	$262	**$654**
6	Interconnection Line	$0	$15	$200	$205	**$420**
7	General Plant	$37	$125	$125	$354	**$641**
	Total	**$174**	**$678**	**$2,311**	**$4,212**	**$7,375**

Difference ($000's)

Project		2019 (Q3-Q4)	2020	2021	2022	Total	% Diff.
1	Penstock Rehabilitation	$22	$0	$694	$381	**$1,098**	29%
2	Turbine Rehabilitation	$0	-$212	-$240	-$217	**-$669**	- 81%
3	Powerhouse Electrical	$0	-$67	-$362	-$371	**-$800**	- 100%
4	Ocean Falls Switchyard	$0	-$53	$0	-$215	**-$268**	- 100%
5	Shearwater Substation	$0	$121	$258	-$27	**$352**	54%
6	Interconnection Line	$0	-$15	-$7	-$197	**-$219**	- 52%
7	General Plant	$52	$48	$25	-$195	**-$70**	- 11%
	Total	**$75**	**-$179**	**$368**	**-$841**	**-$577**	**- 8%**

Project 1: Penstock Rehabilitation

Progress on the penstock rehabilitation project proceeded as planned over the prior test period, despite the significant procurement, logistics and crew transportation challenges imposed by the Covid-19 pandemic restrictions and associated global supply chain constraints.

The highest pressure and most complex sections of the penstock (including the manifold) are now complete, with the exception of the interior steel plating of the four manifold sections where they pass through the powerhouse walls (being done in 2023) and interior plating of the unit 3 & 4 manifold crotches (to be done in 2025).

Although the scope of work completed during the prior test period generally tracked the original plan, total spending was $1,098k above forecast, primarily driven by the following factors:

- The cost of penstock steel increased 30% above initial forecast due to global commodity market constraints.
- The cost of logistics and crew transportation increased due to increased fuel costs and disruption of normal scheduled ferry and barge services driven by Covid-19 restrictions.
    - For example, scheduled ferry and barge services were cancelled on April 18, 2021, the day that work crews, equipment (e.g., welders), tools and materials were scheduled to begin mobilization to site for the 2021 penstock shutdown. This required equipment and materials to be transferred to a rental barge and alternative transportation to be arranged for work crews.
- All project services, material and equipment costs were impacted by a significant increase in general inflation above historical levels during the prior test period. For example, in 2021 and 2022, BC CPI was 2.7946% and 6.9067%, respectively, and Canada CPI was 3.3577% and 6.797%, respectively.[2]

Project 2: Turbine Rehabilitation

The forecast turbine rehabilitation work was originally estimated based upon turbine vibration trends and visual inspections that indicated significant shaft and bearing wear, which would not be unexpected for machines that began operating in 1917 and have now been in operation for over 100 years.

Complete disassembly of the units for detailed inspection was not possible prior to the previous application pending receipt of an engineering certification that single points of isolation – the individual unit turbine inlet valves – would be adequate to enable safe disassembly, inspection and repair of individual turbines while keeping the penstock watered up to permit ongoing operation of the other machines.

Upon disassembly and inspection of the turbines it was determined that although worn, the shafts and bearings of all units were in better condition than anticipated, enabling deferral of the bulk of planned rehabilitation work. As a result, spending on this project during the prior test period was able to be reduced $669k below forecast.

Only minor turbine rehabilitation work will be undertaken during the upcoming test period, namely, replacing the Unit 4 pivot arm bushings in 2024 and setting new scroll case wear rings in 2026 (Units 3 & 4) and 2027 (Units 1 & 2). Other major turbine

[2] https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1810000501&pickMembers%5B0%5D=1.2&cubeTimeFrame.startYear=2018&cubeTimeFrame.endYear=2022&referencePeriods=20180101%2C20220101

rehabilitation work, including shaft re-machining, and rehabilitation or replacement of bearings and seals is planned to be deferred beyond the current test period.

Project 3: Powerhouse Electrical

The planned powerhouse electrical work for the prior test period included replacement of all four unit breakers and breaker controls, and replacement of the obsolete analog exciters. Due to global supply constraints and problems finalizing breaker production specifications (including production drawings that had to be revised several times), the four unit breakers were unable to be delivered to site in time for the 2021 or 2022 penstock shutdown periods. The breakers are now in production, but will not arrive on site in time for the 2023 shutdown period, so their installation has been deferred until 2024.

Similarly, due to engineering, specification and procurement problems encountered during the prior test period, replacement of the unit analog exciters with static exciters has been deferred from the prior test period until 2024 (Units 3 & 4) and 2025 (Units 1 & 2).

As a result of the above-described factors, capitalization of costs incurred for this project during the prior test period was $800k below forecast.

Project 4: Ocean Falls Switchyard Refurbishment

Boralex planned to replace oil circuit breaker 25CB51 in the Ocean Falls switchyard during the 2022 penstock outage due to its deteriorated condition. Although the breaker remains in deteriorated condition (e.g., the trip spring must be manually recharged because the automatic recharge mechanism is worn), it was determined that the breaker replacement could be deferred beyond the upcoming test period by installing a new pole-mounted circuit recloser immediately outside the switchyard. The functionality of the new recloser (combined with the functionality of existing recloser 25CRO24 located west of Martin Valley) provides reliable line protection on the 25 kV interconnection to Bella Bella, and reduces or eliminates 25CB51 operations to clear line faults. The new line recloser and pole are on site in Ocean Falls and are planned to be installed during the upcoming 2023 shutdown.

Boralex had identified in the 2019 Rate Application that 25 kV transformer T11 in the Ocean Falls switchyard was in deteriorated condition but expected that its replacement could be deferred. However, the transformer began to exhibit excessive off-gassing during the prior test period, indicating an imminent risk of failure. In response, Boralex fast-tracked procurement of a replacement transformer (T12) and installed a new foundation in 2022. It was not possible to deliver the replacement transformer to site in time for the 2022 penstock outage, so its installation has been deferred to the 2023 penstock outage.

The insulating gravel and fence repairs planned for 2020 were also determined to be deferrable until the upcoming test period. The necessary materials are now on site and replacement will occur at an opportune time in the upcoming test period.

Although the bulk of materials and equipment costs required for the planned Ocean Falls switchyard refurbishment activities described above were incurred during the prior test period, including installation of the foundation for T12, capitalization of these costs has been deferred until the project is completed in 2023. As a result, prior period rate base additions were $268k below forecast for these assets.

Project 5: Shearwater Substation Refurbishment

The refurbishment work in the Shearwater Substation occurred as planned. Incurred actual costs were higher than forecast due to the combination of higher costs for procurement and shipping of equipment and materials, increased travel and accommodations costs for work crews due to the impacts of the Covid-19 restrictions, and the exceptional inflationary environment experienced in 2021 and 2022, as described above in the Penstock Refurbishment project discussion.

As a result of these factors, actual project costs during the prior test period were $352k higher than forecast.

Project 6: Interconnection Line Refurbishment

Minimal spending was forecast on this project during 2019 and 2020. Spending in 2021 generally tracked forecast, but the assessed line condition was better than anticipated after refurbishment activities had been undertaken in 2021, enabling the planned 2022 refurbishment work program to be deferred into the next test period.

This deferral helped Boralex mitigate crew and logistics constraints caused by the level of activity on other projects and the exacerbating effects of the Covid-19 travel and logistics constraints.

As a result of the above-described factors, spending on this project was able to be kept $219k below forecast.

Project 7: General Plant

General plant expenditures tracked slightly above forecast from 2019 to 2021, and fell $195k below forecast in 2022 due to several factors.

Of the two 4x4 truck replacements planned for the prior test period, one was offset by transferring a vehicle (at no cost to Boralex) from another Boralex Inc. project to Ocean Falls, and the other was deferred and will be acquired as a capital lease during the upcoming 2023 to 2027 test period.

In addition, headpond barge repairs necessary to support the planned 2025 dam anchoring work as well as the planned stairway and dock repairs were deferred into the current test period.

As a result of these deferrals, overall prior period general plant capitalization was $70k below forecast.

4. ***Directive 14 - Boralex is directed to file a comprehensive assessment of its allocations of O&M expenses to capital in the next rates application, including an analysis of the appropriate capital overhead rates and direct allocations to capital, whether a formal policy should be established, and a breakdown of the allocations to capital by year, between direct allocations and capitalized overhead, for the next test period.***

In the 2020 Rate Decision the BCUC directed that Boralex allocate 5 percent of its Test Period O&M expenses to capital in setting its test period rates for service to BC Hydro. This was consistent with BC Hydro's position that Boralex should allocate a portion of its O&M expenses as capitalized overheads and recommended 5 percent as a reasonable rate.[3]

Boralex has further considered this issue and believes that it continues to be appropriate to allocate a portion of O&M expenses as capitalized overheads. Boralex understands that it is common practice for utilities to capitalize a portion of their O&M expenses. Boralex has also considered the portion of O&M expenses that should be capitalized and believes that 5 percent remains a reasonable rate having regard for the nature and scope of Boralex's operations and capital projects. Boralex does not believe that a more detailed or formal capitalization policy, including direct allocations and the use of cost drivers, would produce significantly different results or would be cost effective given the small size of the utility.

The following table provides a breakdown of the allocations to capital by year over the 2023 to 2027 test period.

Capitalization of Overheads 2023 to 2027 ($000s)

	2023	2024	2025	2026	2027
Capitalization of Overheads	$101	$111	$107	$108	$100

[3][2020 Rate Decision page 25; BC Hydro Final Argument dated July 15, 2020, page 20.]

5. ***Directive 15 - Boralex is directed to provide a detailed cost of service variance analysis as part of its future rate applications filed with the BCUC.***

A detailed capital cost variance analysis is provided in response to Directive 13 above. The variances in forecast versus actual capital expenditures over the prior test period affects forecast versus actual depreciation expense and return on rate base.

The following tables compare forecast versus actual O&M expenses for the prior test period and an explanation of any significant dollar amount variances. The forecast O&M expenses for the prior test period are those set out in Table 27 of the Compliance Filing; the actual O&M expenses for the prior test period are those set out in Table 18 of the Application.

2019 Q3-Q4 O&M Expense Comparison ($000's)

O&M Item	Forecast	Actual	Diff.	% Diff.	Explanation of Significant Dollar Variances
Employee Costs					
Salaries & Benefits	$235	$240	$5	2%	
Expenses	$77	$77	$0	-1%	
Recruitment	$0	$0	$0	n/a	
Training	$2	$3	$0	2%	
Aggregate Corporate Services					
Corporate Services	$59	$79	$20	33%	
Engineering and Environment	$25	$27	$2	8%	
Operations Senior Management	$9	$4	-$5	-53%	
Operations Site Management	$49	$48	-$1	-1%	
Maintenance and Repairs					
Control System	$166	$172	$5	3%	
Machinery	$49	$50	$0	0%	
Turbine-Generators	$1	$21	$20	1918%	
Heavy Machinery & Mobile Equipment	$17	$17	$0	0%	

2019 Q3-Q4 O&M Expense Comparison ($000's)

O&M Item	Forecast	Actual	Diff.	% Diff.	Explanation of Significant Dollar Variances
Dam, Buildings, and Land	$44	$44	$0	0%	
Oil, Fuel, and BC Hydro Power	$18	$18	$0	1%	
Health, Safety, and Environment	$24	$24	$0	-2%	
Insurance	$52	$53	$0	0%	
Permits and Land Rights	$1	$2	$0	18%	
Third Party Services	$21	$22	$1	4%	
Regulatory Costs	$115	$115	$0	0%	
Total O&M Expenses	**$966**	**$1,014**	**$48**	**5%**	
Allocation of 5% to Capital	-$48	-$51	-$2	5%	
Net O&M Expenses	**$918**	**$963**	**$45**	**5%**	

2020 O&M Expense Comparison ($000's)

O&M Item	Forecast	Actual	Diff.	% Diff.	Explanation of Significant Dollar Variances
Employee Costs					
Salaries & Benefits	$506	$482	-$24	-5%	
Expenses	$224	$157	-$67	-30%	Travel expenses were lower than forecast due to COVID-19 restrictions.
Recruitment	$5	$0	-$5	-100%	Actual recruitment expenses were incurred and are included within Corporate Services (Human Resources).
Training	$15	$3	-$12	-80%	

2020 O&M Expense Comparison ($000's)

O&M Item	Forecast	Actual	Diff.	% Diff.	Explanation of Significant Dollar Variances
Aggregate Corporate Services					
Corporate Services	$132	$172	$40	30%	Actual costs were higher primarily due to higher regulatory support costs relative to the costs included in the forecast.
Engineering and Environment	$59	$55	-$4	-7%	
Operations Senior Management	$18	$8	-$10	-54%	
Operations Site Management	$107	$98	-$8	-8%	
Maintenance and Repairs					
Control System	$138	$238	$100	73%	Actual costs of maintenance of the transmission line were higher than forecast due to damage caused by several winter storm events.
Machinery	$35	$37	$2	7%	
Turbine-Generators	$50	$0	-$50	-100%	Actual maintenance costs were lower than forecast due to focus on turbine capital work in 2020.
Heavy Machinery & Mobile Equipment	$28	$37	$9	33%	
Dam, Buildings, and Land	$73	$45	-$28	-38%	
Oil, Fuel, and BC Hydro Power	$25	$11	-$14	-57%	

2020 O&M Expense Comparison ($000's)

O&M Item	Forecast	Actual	Diff.	% Diff.	Explanation of Significant Dollar Variances
Health, Safety, and Environment	$23	$4	-$19	-82%	Actual costs were lower than forecast but offset by costs incurred and included within Corporate Services (Environmental Services).
Insurance	$105	$111	$6	6%	
Permits and Land Rights	$6	$4	-$2	-35%	
Third Party Services	$15	$89	$74	504%	Actual legal costs were higher than forecast.
Regulatory Costs	$222	$224	$2	1%	
Total O&M Expenses	**$1,786**	**$1,776**	**-$9**	**-1%**	
Allocation of 5% to Capital	-$89	-$89	$0	-1%	
Net O&M Expenses	**$1,696**	**$1,687**	**-$9**	**-1%**	

2021 O&M Expense Comparison ($000's)

O&M Item	Forecast	Actual	Diff.	% Diff.	Explanation of Significant Dollar Variances
Employee Costs					
Salaries & Benefits	$673	$552	-$121	-18%	Costs were lower than forecast primarily due to the delayed hiring of one operator.
Expenses	$225	$143	-$82	-37%	Travel expenses were lower than forecast due to COVID-19 restrictions
Recruitment	$5	$0	-$5	-100%	Actual recruitment expenses were incurred and are included within Corporate Services (Human Resources).

2021 O&M Expense Comparison ($000's)

O&M Item	Forecast	Actual	Diff.	% Diff.	Explanation of Significant Dollar Variances
Training	$38	$5	-$33	-87%	Certain actual training costs were reimbursed to employees and are included in Expenses.
Aggregate Corporate Services					
Corporate Services	$169	$138	-$31	-18%	Actual costs were lower than forecast primarily due to reduced financial reporting requirements following the repayment of Boralex's third party debt in 2021.
Engineering and Environment	$61	$57	-$4	-6%	
Operations Senior Management	$19	$19	$0	1%	
Operations Site Management	$188	$33	-$154	-82%	The forecast costs included the cost of an individual for operations site management, but the individual retired in 2021. This function is now performed primarily by a Boralex full time operator whose costs are included in Salaries and Benefits.
Maintenance and Repairs					
Control System	$140	$116	-$24	-17%	
Machinery	$35	$41	$6	16%	
Turbine-Generators	$51	$7	-$44	-86%	Actual maintenance costs were lower than forecast due to focus on turbine capital work in 2021.
Heavy Machinery & Mobile Equipment	$28	$35	$7	23%	

2021 O&M Expense Comparison ($000's)

O&M Item	Forecast	Actual	Diff.	% Diff.	Explanation of Significant Dollar Variances
Dam, Buildings, and Land	$74	$27	-$47	-64%	O&M costs were lower than forecast due to reduced maintenance as a result of COVID-19 impacts and project re-prioritization.
Oil, Fuel, and BC Hydro Power	$77	$119	$42	55%	Actual costs were higher than forecast primarily due to the higher cost of electricity purchased from BC Hydro.
Health, Safety, and Environment	$23	$14	-$9	-39%	
Insurance	$107	$98	-$9	-9%	
Permits and Land Rights	$6	$3	-$3	-52%	
Third Party Services	$15	$128	$113	752%	Actual legal and IT costs were higher than forecast.
Regulatory Costs	$211	$211	$0	0%	
Total O&M Expenses	**$2,147**	**$1,747**	**-$400**	**-19%**	
Allocation of 5% to Capital	-$107	-$87	$20	-19%	
Net O&M Expenses	**$2,040**	**$1,660**	**-$380**	**-19%**	

2022 O&M Expense Comparison ($000's)

O&M Item	Forecast	Actual	Diff.	% Diff.	Explanation of Significant Dollar Variances
Employee Costs					
Salaries & Benefits	$658	$661	$3	0%	
Expenses	$164	$109	-$55	-34%	Travel expenses were lower than forecast due to COVID-19 restrictions.

2022 O&M Expense Comparison ($000's)

O&M Item	Forecast	Actual	Diff.	% Diff.	Explanation of Significant Dollar Variances
Recruitment	$0	$0	$0	n/a	
Training	$46	$2	-$44	-96%	Certain actual training costs were reimbursed to employees and are included in Expenses.
Aggregate Corporate Services					
Corporate Services	$174	$149	-$25	-14%	Actual costs were lower than forecast primarily due to reduced financial reporting requirements following the repayment of Boralex's third party debt in 2021.
Engineering and Environment	$63	$55	-$9	-13%	
Operations Senior Management	$19	$25	$5	27%	
Operations Site Management	$196	$0	-$196	-100%	The forecast costs included the cost of an individual for operations site management, but the individual retired in 2021. This function is now performed primarily by a Boralex full time operator whose costs are included in Salaries and Benefits.
Maintenance and Repairs					
Control System	$143	$57	-$86	-60%	Maintenance costs were lower than forecast due to more favourable weather conditions (i.e., no forced outages due to windstorms, icing or inclement weather conditions necessitating line repairs).

2022 O&M Expense Comparison ($000's)

O&M Item	Forecast	Actual	Diff.	% Diff.	Explanation of Significant Dollar Variances
Machinery	$36	$37	$1	2%	
Turbine-Generators	$52	$3	-$49	-94%	Reduced maintenance due to COVID-19 impacts and project re-prioritization.
Heavy Machinery & Mobile Equipment	$29	$56	$27	93%	
Dam, Buildings, and Land	$76	$72	-$4	-5%	
Oil, Fuel, and BC Hydro Power	$78	$196	$118	150%	Actual costs were higher than forecast primarily due to the higher cost of electricity purchased from BC Hydro.
Health, Safety, and Environment	$23	$2	-$21	-91%	Actual costs were lower than forecast but offset by costs incurred and included within Corporate Services (Environmental Services).
Insurance	$109	$194	$85	77%	Actual insurance costs were significantly higher than forecast, largely due to increased premiums on property insurance.
Permits and Land Rights	$6	$3	-$3	-53%	
Third Party Services	$15	$178	$163	1061%	Actual legal and IT costs were higher than forecast.
Regulatory Costs	$201	$201	$0	0%	
Total O&M Expenses	**$2,090**	**$1,998**	**-$91**	**-4%**	
Allocation of 5% to Capital	-$104	-$100	$5	-4%	
Net O&M Expenses	**$1,985**	**$1,899**	**-$87**	**-4%**	

6. ***Directive 16 - Boralex is directed to file the following information pertaining to corporate services costs in its next rates application:***

- ***A code of conduct and transfer pricing policy related to the corporate services provided by Boralex Inc. and a discussion of how this policy has been applied in determining corporate services costs in the next test period; and***

- ***Details of the forecast and actual hours and costs for each Boralex Inc. employee that are part of the corporate services cost allocation to Boralex, for each year of the Test Period.***

Code of Conduct and Transfer Pricing Policy

The following code of conduct and transfer pricing policy has been instituted with regard to the corporate services provided by Boralex Inc. to Boralex. This policy has been applied in determining corporate services costs for the 2023 to 2027 test period.

Dedicated Employee Services:

Certain Boralex Inc. employees provide operations senior management, engineering and environmental services to Boralex on a dedicated and on-going basis. The services of these employees are required to ensure the reliability, safety and security of the Ocean Falls facilities. The cost of these services is determined as follows:

- Boralex Inc. charges Boralex a fixed percentage of each dedicated employee's fully loaded salary (i.e., salary and benefits). No mark-up or any other fees or charges are charged by Boralex Inc. to Boralex for the services of these employees.

- This percentage reflects the average annual time spent by the employee and is reviewed from time to time to ensure that it remains reasonable and appropriate.

- For employees that leave Boralex Inc. in any given year, the percentage charged by Boralex Inc. is pro-rated for the actual time spent**.** For employees that join Boralex Inc. in any given year, the percentage charged by Boralex Inc. is pro-rated for the actual time spent.

General Corporate Services:

Certain Boralex Inc. departments and employees provide general corporate services to Boralex on an "as needed" basis. These employees provide mainly accounting, legal, human resources, finance, tax, information technology, engineering, and environmental

services. The cost of these services is determined as follows:

- Every department head at Boralex Inc. identifies the employees within their department that have provided or will be providing services to Boralex.
- Each identified Boralex Inc. employee tabulates the hours spent on providing corporate services to Boralex for each year of the test period.
- This exercise is completed for the current test period as well as prospectively for any upcoming test period.
- Each department head reviews and validates the hours spent by their employees.
- A fully loaded hourly rate for each employee (i.e., salary and benefits) is then applied to the hours spent and added up by department.
- These services are provided by Boralex Inc. at cost and no mark-up or any other fees or charges are charged by Boralex Inc. to Boralex for these services.

Third-Party Products and Services:

- Boralex Inc. acquires certain equipment, parts, material, consumables, engineering services and other products or services from third parties for or on behalf of Boralex.
- The cost of these third party products and services are charged by Boralex Inc. at cost and no mark-up or any other fees or charges are charged by Boralex Inc. to Boralex for these products or services.

Other than the inter-company charges described above, Boralex Inc. does not charge any management fee to Boralex or recover any other charges, fees or costs from Boralex.

Forecast and Actual Hours and Costs from the Prior Test Period

The following tables provide the forecast and actual hours and costs for each Boralex Inc. employee that are part of the corporate services cost allocation to Boralex for each year of the prior test period.

	2019 (Hours)			2019 ($)		
	Forecast	**Actual**	**Diff.**	**Forecast**	**Actual**	**Diff.**
Accounting	1586	887	-699			

	2019 (Hours)			2019 ($)		
	Forecast	**Actual**	**Diff.**	**Forecast**	**Actual**	**Diff.**
Accounting Other	832	15	-817	$53,539	$965	$52,574
Assistant Controller	52	350	298	$3,346	$22,523	$19,176
Auditor	78	52	-26	$5,019	$3,346	-$1,673
Budget	156	40	-116	$13,127	$2,574	$10,553
Controller	156	120	-36	$5,148	$10,098	$4,950
Payables	156	150	-6	$7,207	$4,950	-$2,257
Receivables	156	160	4	$7,207	$7,392	$185
Communications	21	21	0			
Community Relations	3	3	0	$198	$198	-
Media & Public Relations	6	6	0	$396	$396	-
Public Affairs & Communications Director	12	12	0	$1,525	$1,525	-
Development	80	80	0			
First Nations & Other	80	80	0	$5,280	$5,280	-
Engineering	656	656	0			
Civil Sr. Engineering	331	331	0	$25,134	$25,134	-
Electrical Sr. Engineering	214	214	0	$16,260	$16,260	-
Mechanical Jr. Engineering	110	110	0	$6,549	$6,549	-
Environment	24	80	56			
Environmental Director		0	0	$-	$-	-
Environmental specialist	24	80	56	$1,563	$5,280	$3,717
Finance & Tax	43	43	0			
Banking Relations Director	1	1	0	$91	$91	-
Finance & Tax Other		10	10	-	$611	$611
Financial Analyst (statements)	24	24	0	$1,465	$1,492	$26
Tax Director	15	5	-10	$1,361	$454	-$908
Treasury Technician (statements)	3	3	0	$183	$183	-
Human Resources	110	150	40			
HR Advisor (Benefits)	10	10	0	$594	$594	-

	2019 (Hours)			2019 ($)		
	Forecast	**Actual**	**Diff.**	**Forecast**	**Actual**	**Diff.**
HR Advisor (Employee Support)	10	10	0	$594	$594	-
HR Advisor (Manager Support)	30	30	0	$1,782	$1,782	
HR Advisor (On-Site Visits)	40	40	0	$2,376	$2,376	-
HR Advisor (Recruitment)	0	40	40	-	$2,376	$2,376
HR Corporate Director	10	10	0	$1,271	$908	-$363
HR Other		0	0	-	-	-
HR Technician (Benefits admin.)	10	10	0	$429	$429	-
Information Technology	60	60	0			
IT Infrastructure Manager	30	30	0	$1,931	$1,931	-
IT Support	30	30	0	$1,733	$1,733	-
Legal	40	60	20			
Legal Counsel	40	60	20	$2,970	$4,455	$1,485
Operations Management	200	200	0			
Purchasing Clerk	150	150	0	$5,693	$5,693	-
Purchasing Manager	50	50	0	$3,713	$3,713	-
Operations Site Management						
Health & Safety				$1,544	$1,544	-
Operations Management				$4,835	$4,835	-
Operations Services				$1,898	$1,898	-
Supervisor				$97,703	$96,545	-$1,158
Regulatory Affairs				$-	$69,450	$69,450
Grand Total	**2819**	**2237**	**-583**	**$283,662**	**$316,152**	**$32,490**

	2020 (Hours)			2020 ($)		
	Forecast	**Actual**	**Diff.**	**Forecast**	**Actual**	**Diff.**
Accounting	1586	712	-874			
Accounting Other	832	15	-817	$55,145	$985	-$54,161
Assistant Controller	52	260	208	$3,447	$17,066	$13,619
Auditor	78	52	-26	$5,170	$3,413	-$1,757
Budget	156	35	-121	$13,521	$2,297	-$11,224
Controller	156	90	-66	$5,302	$7,725	$2,423
Payables	156	100	-56	$7,423	$3,366	-$4,057
Receivables	156	160	4	$7,423	$7,540	$116
Communications	21	21	0			
Community Relations	3	3	0	$204	$202	-$2
Media & Public Relations	6	6	0	$408	$404	-$4
Public Affairs & Communications Director	12	12	0	$1,570	$1,555	-$15
Development	80	80	0			
First Nations & Other	80	80	0	$5,438	$5,386	-$53
Engineering	656	656	0			
Civil Sr. Engineering	331	331	0	$30,161	$25,636	-$4,524
Electrical Sr. Engineering	214	214	0	$19,512	$16,585	-$2,927
Mechanical Jr. Engineering	110	110	0	$7,859	$6,680	-$1,179
Environment	24	90	66			
Environmental Director		0	0	$-	$-	$-
Environmental specialist	24	90	66	$1,876	$6,059	$4,183
Finance & Tax	43	43	0			
Banking Relations Director	1	1	0	$93	$93	-$1
Finance & Tax Other		10	10	$-	$623	$623
Financial Analyst (statements)	24	24	0	$1,509	$1,521	$12
Tax Director	15	5	-10	$1,402	$463	-$939
Treasury Technician (statements)	3	3	0	$189	$187	-$2
Human Resources	110	150	40			
HR Advisor (Benefits)	10	10	0	$612	$606	-$6
HR Advisor (Employee Support)	10	10	0	$612	$606	-$6
HR Advisor (Manager Support)	30	30	0	$1,835	$1,818	-$18

HR Advisor (On-Site Visits)	40	40	0	$2,447	$2,424	-$24
HR Advisor (Recruitment)	0	40	40		$2,424	$2,424
HR Corporate Director	10	10	0	$1,309	$926	-$383
HR Other		0	0			
HR Technician (Benefits admin.)	10	10	0	$442	$438	-$4
Information Technology	60	60	0			
IT Infrastructure Manager	30	30	0	$1,988	$1,969	-$19
IT Support	30	30	0	$1,784	$1,767	-$17
Legal	40	142	102			
Legal Counsel	40	142	102	$3,059	$10,717	$7,657
Operations Management	200	200	0			
Purchasing Clerk	150	150	0	$5,863	$5,806	-$57
Purchasing Manager	50	50	0	$3,824	$3,787	-$37
Operations Site Management						
Health & Safety				$1,591	$1,575	-$15
Operations Management				$4,980	$4,931	-$48
Operations Services				$1,954	$1,935	-$19
Supervisor				$106,669	$98,476	-$8,193
Regulatory Affairs				$10,000	$85,850	$75,850
Grand Total	**2819**	**2153**	**-666**	**$316,623**	**$333,838**	**$17,215**

	2021 (Hours)			2021 ($)		
	Forecast	**Actual**	**Diff.**	**Forecast**	**Actual**	**Diff.**
Accounting	1586	856	-730			
Accounting Other	832	15	-817	$56,800	$1,004	-$55,795
Assistant Controller	52	260	208	$3,550	$17,407	$13,857
Auditor	78	52	-26	$5,325	$3,481	-$1,844
Budget	156	30	-126	$13,927	$2,008	-$11,918
Controller	156	60	-96	$5,462	$5,253	-$209
Payables	156	100	-56	$7,646	$3,433	-$4,213
Receivables	156	339	183	$7,646	$16,295	$8,648
Communications	21	21	0			
Community Relations	3	3	0	$210	$206	-$4
Media & Public Relations	6	6	0	$420	$412	-$8
Public Affairs & Communications Director	12	12	0	$1,617	$1,586	-$31
Development	80	80	0			
First Nations & Other	80	80	0	$5,602	$7,553	$1,952
Engineering	656	656	0			
Civil Sr. Engineering	331	331	0	$31,065	$26,149	-$4,916
Electrical Sr. Engineering	214	214	0	$20,097	$16,917	-$3,180
Mechanical Jr. Engineering	110	110	0	$8,094	$6,813	-$1,281
Environment	24	110	86			
Environmental Director		0	0	-	-	-
Environmental specialist	24	110	86	$1,932	$7,553	$5,621
Finance & Tax	43	80	37			
Banking Relations Director	1	10	9	$96	$944	$848
Finance & Tax Other		10	10		$635	$635
Financial Analyst (statements)	24	52	28	$1,554	$3,715	$2,160
Tax Director	15	5	-10	$1,444	$472	-$972
Treasury Technician (statements)	3	3	0	$194	$191	-$4
Human Resources	110	180	70			

	2021 (Hours)			2021 ($)		
	Forecast	**Actual**	**Diff.**	**Forecast**	**Actual**	**Diff.**
HR Advisor (Benefits)	10	10	0	$630	$618	-$12
HR Advisor (Employee Support)	10	10	0	$630	$618	-$12
HR Advisor (Manager Support)	30	30	0	$1,891	$1,854	-$37
HR Advisor (On-Site Visits)	40	40	0	$2,521	$2,472	-$49
HR Advisor (Recruitment)	0	40	40	-	$2,472	$2,472
HR Corporate Director	10	10	0	$1,348	$944	-$404
HR Other		30	30	-	$1,854	$1,854
HR Technician (Benefits admin.)	10	10	0	$455	$446	-$9
Information Technology	60	60	0			
IT Infrastructure Manager	30	30	0	$2,048	$2,008	-$40
IT Support	30	30	0	$1,838	$1,802	-$36
Legal	40	13	-28			
Legal Counsel	40	13	-28	$3,151	$966	-$2,185
Operations Management	200	200	0			
Purchasing Clerk	150	150	0	$6,039	$5,922	-$117
Purchasing Manager	50	50	0	$3,939	$3,862	-$76
Operations Site Management						
Health & Safety				$1,638	$1,607	-$32
Operations Management				$5,129	$15,295	$10,167
Operations Services				$2,013	$1,974	-$39
Supervisor				$187,578	$33,482	-$154,096
Regulatory Affairs				$43,000	$47,900	$4,900
Grand Total	**1586**	**856**	**-730**	**$436,530**	**$248,127**	**-$188,403**

	2022 (Hours)			2022 ($)		
	Forecast	**Actual**	**Diff.**	**Forecast**	**Actual**	**Diff.**
Accounting	1586	784	-802			
Accounting Other	832	15	-817	$58,504	$1,029	-$57,474
Assistant Controller	52	240	188	$3,656	$16,470	$12,813
Auditor	78	0	-78	$5,485	$-	-$5,485
Budget	156	30	-126	$14,345	$2,059	-$12,286
Controller	156	60	-96	$5,625	$5,384	-$241
Payables	156	100	-56	$7,876	$3,519	-$4,356
Receivables	156	339	183	$7,876	$16,702	$8,826
Communications	21	21	0	-	-	-
Community Relations	3	3	0	$216	$211	-$5
Media & Public Relations	6	6	0	$433	$422	-$10
Public Affairs & Communications Director	12	12	0	$1,666	$1,626	-$40
Development	80	80	0	-	-	-
First Nations & Other	80	80	0	$5,770	$7,742	$1,973
Engineering	656	656	0	-	-	-
Civil Sr. Engineering	331	331	0	$31,997	$26,803	-$5,194
Electrical Sr. Engineering	214	214	0	$20,700	$17,340	-$3,360
Mechanical Jr. Engineering	110	110	0	$8,337	$6,984	-$1,353
Environment	24	46	22	-	-	-
Environmental Director		6	6	$-	$581	$581
Environmental specialist	24	40	16	$1,990	$2,815	$826
Finance & Tax	43	15	-28	-	-	-
Banking Relations Director	1	0	-1	$99	$-	-$99
Finance & Tax Other		10	10		$651	$651
Financial Analyst (statements)	24	0	-24	$1,601	$-	-$1,601
Tax Director	15	5	-10	$1,487	$484	-$1,004
Treasury Technician (statements)	3	0	-3	$200	$-	-$200

	2022 (Hours)			2022 ($)		
	Forecast	**Actual**	**Diff.**	**Forecast**	**Actual**	**Diff.**
Human Resources	110	180	70			
HR Advisor (Benefits)	10	10	0	$649	$633	-$16
HR Advisor (Employee Support)	10	10	0	$649	$633	-$16
HR Advisor (Manager Support)	30	30	0	$1,947	$1,900	-$47
HR Advisor (On-Site Visits)	40	40	0	$2,596	$2,534	-$63
HR Advisor (Recruitment)	0	40	40		$2,534	$2,534
HR Corporate Director	10	10	0	$1,388	$968	-$421
HR Other		30	30		$1,900	$1,900
HR Technician (Benefits admin.)	10	10	0	$469	$457	-$11
Information Technology	60	60	0			
IT Infrastructure Manager	30	30	0	$2,110	$2,059	-$51
IT Support	30	30	0	$1,893	$1,848	-$46
Legal	40	0	-40			
Legal Counsel	40	0	-40	$3,245	$-	-$3,245
Operations Management	200	200	0			
Purchasing Clerk	150	150	0	$6,220	$6,071	-$150
Purchasing Manager	50	50	0	$4,057	$3,959	-$98
Operations Site Management						
Health & Safety				$1,688	$1,647	-$41
Operations Management				$5,283	$20,939	$15,656
Operations Services				$2,073	$2,024	-$50
Supervisor				$196,033	$-	-$196,033
Regulatory Affairs				$44,000	$66,798	$22,798
Grand Total	**2819**	**2042**	**-778**	**$452,163**	**$227,725**	**-$224,438**