

CREATIVENERGY

15 December 2023

Via E-filing

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

**Re: British Columbia Utilities Commission (BCUC, Commission)
Creative Energy Vancouver Platforms Inc. (Creative Energy)
2024 Revenue Requirements Application (RRA) for the Core Steam System (Application)**

Creative Energy writes to file the enclosed Application and requests the approvals set out in section 1.4. A draft order is attached at Appendix A. Attached to the Application electronically is a working MS Excel model of the Revenue Requirement Schedules that support the Application.

Creative Energy is requesting interim approval of 2024 rates effective January 1, 2024, as set out in the corresponding tariff page included at Appendix B.

Please contact the undersigned with any questions.

Sincerely,



Colin Robb
Director, Regulatory Affairs

Creative Energy Vancouver Platforms Inc.

Core Thermal Energy System

2024 Revenue Requirements Application

December 15, 2023

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1 Application Summary

1.1 Executive Summary

Creative Energy Vancouver Platforms Inc. (**Creative Energy, CEVP**) owns and operates the steam production plant at 720 Beatty Street and associated steam distribution network, which began operating in 1968 and now serves over 202 customers in downtown Vancouver and which also serves customers connected to the hot water distribution network in Northeast False Creek (**NEFC**). These two systems together comprise the Creative Energy **Core Thermal Energy System** (or **Core TES**).

This 2024 Revenue Requirements Application (**2024 RRA, Application**) presents the consolidated cost of service of the Core TES together with corresponding proposed rates for service in 2024.

Through this Application, Creative Energy seeks approval of an increase in thermal energy rates (as expressed on an equivalent \$/thousand pound of steam (**M#**) basis) of 11.4% above the amounts applied for in the 2023 Application, with an additional portion recovered over a period extending beyond the current Application through a proposed Revenue Deficiency Deferral Account (**RDDA**), as shown in Tables 1, 2 and 3 that follow below¹:

- Table 1 below presents a summary of the consolidated revenue requirements of the Core TES for the 2024 Test Year;
- Table 2 highlights the key cost-drivers, which factors and cost variances are elaborated upon and explained in section 4 of this Application; and
- Table 3 presents a summary of the overall average rate impacts and underlying cost drivers in the full context of the cost of service including fuel costs.

As reviewed in Tables 2 and 3 and further elaborated on in the sections below, the key drivers of the requested 2024 rate increase are in large part significant non-recurring costs that will be incurred in 2024. These costs are primarily attributable to long-term strategic investments relating to information technology and cybersecurity, implementation of the BCUC's decision in Stage 1 of the Generic Cost of Capital Proceeding, remote metering, and ongoing development and growth of Creative Energy's workforce to support the overall integrity of the utility. Creative Energy is also continuing to see persistent inflation above the historical average, which is leading to general cost increases, including in wages.

The full effect of these expenditures on Creative Energy's revenue requirement would result in an increase that exceeds the 11.4% noted above. Recognizing the non-recurring nature of these expenses, Creative Energy is proposing to mitigate the increase through implementation of a Revenue Deficiency Deferral Account (RDDA). Costs exceeding the 11.4% increase would accrue to this deferral account, with recovery occurring over a period extending beyond the 2024 RRA. Creative Energy submits that

¹ The Core TES RRA Schedules are attached electronically as well as a file that computes the declining block charges set out in Appendix B for interim approval.

this approach appropriately balances the immediate need to invest in the utility, while recognizing the accommodations that are needed to mitigate rate increases and smooth rates over a longer period of time.

Table 1: Consolidated 2024 Core Revenue Requirements –Summary

Cost or Rate Component	2023 Pending Approval	2023 Projected	2024 Application
O&M - Total	7,544,324	8,252,296	8,623,726
Wages and Benefits (Steam, Distribution & Management)	4,396,245	4,595,231	5,133,304
Information Technology Services	338,343	291,546	686,216
Water and Electricity Expenses	1,145,132	1,129,079	1,169,765
Maintenance and related functional Operations	649,602	707,093	709,022
Special Services (Regulatory, Audit, Legal, Consultant)	509,715	901,491	343,449
Other General & Administration & Sales Expense	505,287	627,856	581,971
Municipal Access Fee	338,627	334,927	360,861
Property Taxes ²	859,800	859,800	885,594
Income Taxes ³	200,500	192,631	131,000
Depreciation	1,222,740	1,223,440	1,274,540
Interest Expense (deemed)	1,367,000	1,236,450	1,385,000
Return on Equity	1,280,000	713,447	1,763,000
Total Return on Rate Base	2,647,000	1,949,897	3,148,000
Subtotal	12,812,991	12,812,991	14,423,722
Approved amortization of deferral accounts in steam rate	98,334	98,334	551,627
Revenue Deficiency Deferral Account (RDDA)			(500,000)
Revenue	12,911,325	12,911,325	14,475,349
Rate Summary			
Steam Load M# ⁴	1,144,000	1,144,000	1,147,000
Average Steam Rate \$/M#	11.29	11.29	12.58
Average Steam Rate % increase	15.3%	n/a	11.4%
Rate of Return Summary			
Rate Base	31,703,839	31,703,839	34,598,242
Debt	18,229,708	16,485,997	17,645,104
Equity	13,474,132	15,217,843	16,953,139
Debt %	57.5%	52.0%	51.0%
Equity %	42.5%	48.0%	49.0%
Weighted Average Cost of Debt (estimated)	7.5%	7.5%	7.9%
ROE	9.5%	4.7%	10.4%
Total Return on Rate Base	8.35%	6.15%	9.10%

Table 2 below identifies the specific areas of the consolidated revenue requirement that are driving year-over-year variances.

² Projected and actual property taxes are adjusted to the approved balance due to there being a deferral account.

³ It is difficult to split actual income taxes between energy systems as such this is a deemed number based on a 27% tax rate.

⁴ As there is a Load Forecast Variance Account, this is the approved load and not the actual or projected.

Table 2: Consolidated Revenue Requirements- Summary of Component Rate Increase and Variance from 2023 RRA to 2024 Test Year

2024 Rate Increase Components		2024 Test Year to 2023 Application	
Core Cost Component	General Category of Cost Control	Explanatory Variance of Overall Steam Rate Increase: 2023 to 2024	
O&M		1,079,402	8.4%
Wages and Benefits (Steam, Distribution & Management)	Internal	812,299	6.3%
	External	(86,008)	-0.7%
Information Technology Services	Internal	-	0.0%
	External	347,873	2.7%
Water-related expenses (Fees, treatment, electric service)	Internal	-	0.0%
	External	24,633	0.2%
Maintenance (including parts, supplies, safety, and vehicles)	Internal	59,420	0.5%
	External	-	0.0%
Special Services (Regulatory, Audit, third-party consultants)	Internal	183,945	1.4%
	External	(350,211)	-2.7%
Other General & Administration (e.g. insurance, office expenses)	Internal	20,784	0.2%
	External	55,901	0.4%
Municipal Access Fee	External	22,234	0.2%
Property Taxes	External	25,794	0.2%
Income Taxes	External	(69,500)	-0.5%
Depreciation	External	51,800	0.4%
Interest Expense	External	18,000	0.1%
Return on Equity	External	483,000	3.7%
Summary			
Amortization of deferral accounts		453,294	3.51%
RRA Internal control related		1,424,320	11.03%
RRA External control related		175,643	1.36%
Load M#		3,000	-0.22%
Revenue Deficiency Deferral Account		(500,000)	-3.9%
Total Core-related Steam Rate Increase 2024			11.4%

Outside of the revenue requirements summarized above and incorporated within the Application, Creative Energy has observed changes in steam demand of its customers through 2023. As described in Section 2 of the Application, these changes in loads continue to drive significant uncertainty in Creative Energy’s forecast. With the assumption that the Commission will approve the Load Forecast Variance Account (as applied for in the 2023 RRA), the expected balance in the variance account to the end of October 2023 is expected to be approximately \$730,000. This balance is subject to change depending on further variances between forecasted load and observed load through the remainder of the year.

Accordingly, Creative Energy is proposing a preliminary load forecast for 2024 that is derived from the 2023 forecast, with an adjustment to reflect known connections in the test year. Based on this approach, Creative Energy is calculating the current rates on the basis of a 2024 forecast of 1,147,000 M#.

However, knowing there are observed changes in load patterns, Creative Energy expects to file an evidentiary update early in 2024 after having the opportunity to fully assess the variations observed in

steam load through the winter months. In filing an evidentiary update, Creative Energy will determine whether a revised load forecast is warranted and will update the Application accordingly.

Notwithstanding the observed changes in load and the long-term investments being made in the utility, Creative Energy's rates for thermal energy will remain competitive in the industry, and will continue to reflect our embedded advantage of a significant economy of scale in thermal energy production and delivery, the conviction of a small team of committed staff to provide safe and reliable delivery of thermal energy services, and the business processes and projects we are pursuing to secure a low-carbon energy transition and a resilient utility on behalf of all of our customers.⁵

1.2 Average Core TES Customer Rate Impacts

Total average rates for thermal energy service are comprised of Core TES tariff rates (i.e., that recover the cost of service through the approved revenue requirements) and natural gas fuel cost charges (i.e., that recover the cost of natural gas service on a flow-through basis), which we express in Table 3 below on an equivalent \$/M# basis (not including the System Contribution Charge to customers connected to the NEFC network as reviewed and approved in the 2023 Application).

Table 3 below thus places the requested 2024 average rate increase and resultant average tariff rate that is the subject of this 2024 RRA in the context of the total charges to Core TES customers for service inclusive of fuel cost charges. When assessing the combined impact of the rates for thermal energy and associated gas costs, the overall change in rates represents a projected decrease in the customer rates of 11.0% over 2023 charges, owing to the reductions in gas charges incurred by customers of the Core TES.

By way of further background, Creative Energy obtains its natural gas requirements from FortisBC Energy Inc. (FEI) for both commodity and delivery under FEI Rate 5, which is a firm rate (moving from Rate 7). Creative Energy recovers its fuel costs from customers on a flow-through basis through a standard Fuel Cost Adjustment Charge (FCAC) based on annual forecast fuel costs divided by approved annual load. A FCAC Rate Rider may be approved from time to time if and as required to recover the balance in the Fuel Cost Stabilization Account (FCSA) if it exceeds a threshold balance.

The FCAC is approved by the Commission on a forecast basis for the Gas Year commencing November each year; that is, outside of Creative Energy revenue requirements applications and proceedings. A record of recent FCAC-related approvals is as follows:

- 2021/2022 Gas Year FCAC = \$16.50/M#, effective February 1, 2022 – Order G-55-22;
- 2022/2023 Gas Year FCAC = \$19.90/M#, effective November 1, 2022; Order G-334-22.
- 2023/2024 Gas Year FCAC= \$16.95/M#, effective November 1, 2023 – Order G-314-23;

Table 3 below shows the Customer Rate Impact associated with 2024 Test Year.

⁵ Refer also to the City of Vancouver annual comparison of its Neighbourhood Energy Utility rates to other energy providers, including Creative Energy: <https://council.vancouver.ca/20230627/documents/r7.pdf>

Table 3: Summary of Average Rate Impacts

	2023 Pending Approval	Total Steam Tariff-2023	2024 Test Year	RDDA Deferral	2024 Test Year After RDDA Deferral	Total Steam Tariff-2024	2024 Gas Year FCAC	Gas Incremental Cost	Steam + Gas for 2023 Pending Approval	Total 2024 Test year
Load, M#	1,144,000		1,147,000							
Revenue, \$	\$ 12,812,884		\$14,923,722	-\$500,000	\$ 14,423,722					
Increment, \$/M#	\$11.29	\$1.57	\$13.01	-\$0.44	\$12.58	\$ 1.29	\$16.95	-\$4.95	\$ 33.19	-\$3.66
Rate Increase %	16.2%	16.2%	15.2%	-3.9%	11.4%	11.4%		-22.6%		-11.0%

1.3 Application Assumptions

The 2024 RRA assumes that all requested approvals set out in the 2023 Application would be granted by the Commission, which altogether supports the filing of this 2024 RRA on a timely basis pursuant to a request for interim approval of rates effective January 1, 2024. As part of this approach, we contemplated that an evidentiary update would then be filed in 2024 to update the underlying basis of the requested approvals for 2024 as need may arise subject to the determinations and directives of a Commission decision into the 2023 Application or other decision impacting this application.

This application was prepared based on the following assumptions.

- Creative Energy’s proposed Inter-Affiliate Code of Conduct and Transfer Pricing Policy is approved;
- Creative Energy’s request for Load Variance Deferral Account is approved;
- Creative Energy’s request to close the COVID-19 Deferral Account is approved;
- Rates requested in the 2023 RRA are approved;
- After-Tax Regulatory Pension Asset Account is approved;
- Assumed interest rate is 7.85 percent for the 2024 Test Year; and
- Assumed inflation rate is three percent throughout the 2024 Test Year, unless stated otherwise.

1.4 Summary of Requested Approvals

In this Application, Creative Energy is seeking Orders of the Commission granting the approvals described below pursuant to the noted sections of the legislation. A draft Commission Order for interim approval of 2024 rates is provided in Appendix A to this Application while Appendix B provides the corresponding tariff page for interim approval.

Creative Energy requests the following approvals:

1. Interim approval, effective January 1, 2024 and pursuant to sections 58 to 60 and 90 of the *Utilities Commission Act (the Act)* and section 15 of the *Administrative Tribunals Act*, of the thermal energy rates and System Contribution Charge set forth in Appendix B;
2. Permanent approval, effective January 1, 2024 and pursuant to sections 58 to 60 of the Act of the thermal energy rates and System Contribution Charge that will result from our 2024 revenue requirement proposals as will be amended as part of a future evidentiary update in 2024 that will respond to applicable determinations set out in the Decision into the 2023 Application and subject to final balances in non-rate base deferral accounts to be confirmed as part of that future evidentiary update;

3. Approval of a 2024 thermal energy load forecast of an equivalent basis of 1,147,000M# for the purpose of determining the average rate increase in the 2024 RRA test period and for other rate-making purposes as required; and
4. Approval of the Revenue Deficiency Deferral Account.

1.5 Recommended Regulatory Review

Creative Energy proposes that this Application is suitable for review through a written hearing process of the Commission beginning in January 2024.

2 Load Forecast and Load Forecast Variance Account

2.1 Introduction

All costs will be recovered through the volume of thermal energy sold to Core TES customers. The thermal energy load forecast for the Core TES and for rate-setting purposes thus comprises:

- 1) Steam loads in M#, which are the essential billing determinants for the thermal energy consumption of customers connected to the steam distribution network, and
- 2) Hot water loads in MWh, which are the essential billing determinants for the thermal energy consumption of customers connected to the hot water distribution network.

For the purpose of determining the overall Core TES average rates and projected rate changes the forecast thermal energy consumption in MWh is converted to M# at a standardized conversion factor of 0.347 MWh/M# as reviewed in the 2022 RRA Application.

2.2 Load Forecast

Creative Energy is applying to set rates for 2024 on the basis of a load forecast of 1,147,000 M#. The forecast was established using the 2023 forecast, with the addition of 3,000 M# to account for the known connection of one customer.

Creative Energy continues to observe uncertainty relating to load post-pandemic. Based on the expected approval of the Load Forecast Variance Account, any load variance between forecast and actual load would accrue to the Load Variance Account⁶. More details on this are in [section 2.3](#) and [section 6.1](#) of this Application. Please refer to Table 4 below for the details of the load forecast.

Table 4: Thermal Energy Load Forecast

M#	2023 Forecast	2023 Actual/Projected		2024 Test Year
	Weather Normal	Actual	Weather Normal	Weather Normal
Core	1,073,691	1,008,662	984,901	1,076,691
NEFC	70,309	70,121	68,470	70,309
Total	1,144,000	1,078,783	1,053,371	1,147,000

2.3 Load Variance Observed in 2023

As expanded on in [section 6.1](#), the variance in load, and the associated accruals to the Load Forecast Variance Account, are expected to be \$738,913 (not including potential variances for November and December 2023). This figure is the anticipated closing balance of the Load Variance Account for the fiscal year 2023 based on the difference between actual loads and the forecasted loads to the end of October 2023.

⁶ Please refer to section 3.2 in the [2023 RRA Application for details on the Load Variance Account](#)

Creative Energy has observed a general inclination among a substantial portion of its customers toward energy conservation in steam consumption, particularly in the aftermath of the COVID-19 pandemic. This trend has led to various initiatives undertaken by customers, including the engagement of energy managers and consultants for system assessments, recalibration of setpoints and schedules, installation of heat recovery chillers, and adoption of alternative methodologies for harnessing building heat from server rooms. As a result of these initiatives, a reduction in consumption has been observed, particularly during the spring and summer months. Consequently, Creative Energy anticipates that the actual load for the fiscal year 2023 will fall below the load forecast presented in the 2023 RRA as could be seen in Table 4 above.

At the time of this application's filing, Creative Energy lacks enough data points to undertake a reassessment of its load forecast for the 2024 RRA. The organization expresses confidence that by late winter or early spring an adequate dataset will be available for review and will allow us to remodel the load forecast, thereby enhancing its accuracy. When this data is available, Creative Energy intends to undertake a study to fully understand the changes occurring in our loads. Subsequent to the finalization of this load study, an evidentiary update is planned to be submitted to the BCUC, reflecting any consequential changes to the load forecast.

Notwithstanding any potential changes to the 2024 load forecast that may result from the load study, Creative Energy expects that the balances within the Load Variance Account will be reduced over the next three years as loads continue to stabilize, after which any variations should mostly reflect normal variations arising from weather.

3 Remote Metering

Creative Energy is including capital additions in the 2024 RRA relating to Remote Metering, and consequently and in alignment with prior BCUC direction, is providing additional details relating to the project to facilitate the Commission's review of the expenditures. The sections that follow provide additional details relating to the scope of the project, a technical overview, budgets, and other details that are pertinent to Creative Energy's requested approvals.

3.1 Summary

Creative Energy submits that the Remote Metering Project is an essential investment to support the modernization of the Core System and necessary for the long-term resilience of the utility. Further, it puts us in-line with other utilities in the province, including BC Hydro and FortisBC, who are making strategic investments in advanced metering infrastructure to serve their customers.

The Remote Metering Project involves the installation of cabinets at customer sites which relay data from the existing condensate meters to Creative Energy's database. The data is transferred to the database through wireless communications over cellular networks. The data is captured every fifteen minutes and allows for remote data collection. Once in the database, the data can be analysed and displayed through dashboards to review consumption and proactively identify service issues.

Establishing remote monitoring capabilities across all customers of the Core System will have direct benefits to customers by allowing us to modernize the billing system and provide data that enables customers to manage their consumption and reduce thermal energy use. Further, it is an essential investment that encourages efficient energy use and enables the development of incremental demand-side management programs (including changes to rate design) in accordance with British Columbia's energy objectives, as described in the Clean Energy Act.

For Creative Energy, the Remote Metering Project will enhance the reliability of our operations by improving our ability to proactively detect anomalies in data that are indicative of potential failures, respond in real-time to operational upsets, and provide service technicians a valuable maintenance tool that improves the service we provide to customers.

The Remote Metering Project involves the installation of cabinets at customer sites which relay data from the existing condensate meters to Creative Energy's database. The data is transferred to the database through wireless communications over cellular networks. The data is captured every fifteen minutes and allows for remote data collection. Once in the database, the data can be analysed and displayed through dashboards to review consumption and proactively identify service issues.

3.2 Project Background and Scope

Creative Energy's current metering capabilities are limited by the analog nature of the current infrastructure. This infrastructure constrains our ability to meet the expectations of our customers and strategically advance key initiatives that will support the resilience of the Core System.

Except for the NEFC system, the Creative Energy Core System relies on manual metering reading to determine steam usage by our customers. While this is sufficient for the preparation of monthly bills, it

is not good practice for a large public utility. Utilities such as BC Hydro already collect hourly metering data from customers under their medium and large general service rates, rates which would cover most, if not all, of Creative Energy Core customers. On May 15, 2023, the British Columbia Utility Commission (BCUC) issued Decision and Order C-2-23 for the Fortis BC Advanced Metering Infrastructure (AMI) Project which will replace approximately 1,100,00 gas meters to provide remote monitoring and metering capabilities. The Creative Energy Remote Monitoring Project will provide Creative Energy with the same hourly demand data that BC Hydro currently has, and FortisBC will have at the completion of their AMI Project.

This data will provide the following direct benefits⁷:

- Improve the reliability of our utility service as the service team will be able to view metering in real time and better anticipate service needs.
- Address a direct request from our customers for more granular consumption data in their bills, helping to resolve disputes quickly and equitably.
- Allow our customers to better understand their consumption profile, allowing them to make informed decisions on how to operate their building systems to reduce thermal energy use.
- Support the development of alternative rate designs for the Core System that improve cost recovery, fairness, and overall efficiency.
- Support the development of future demand side management plans, which is something that the BCUC directed Creative Energy to do in their decision and order for the 2021 Long Term Resource Plan.
- Allow for the detection of instrument failures in real time, giving the Distribution team a valuable maintenance tool to improve service.
- Provide the data for future automated billing and customer dashboards.

The project has evolved over time with consequential changes to timing and cost. Creative Energy has been pursuing the Remote Metering project since 2017, however, the project experienced delays related to COVID-19 restrictions. In 2022, Creative Energy decided to recommence the Remote Metering Project once the COVID-19 restrictions had been relaxed and redeveloped the overall schedule and implementation plan. A systems engineer was hired in 2022, which was approved by the BCUC, to assess the viability of the technology, improve upon the original design, and expand the implementation of this project to more customers.

It is Creative Energy's intent to add meters to rate base as they are placed in service and the associated capital additions will be included in subsequent rate applications. The overall Remote Metering Project is on track to be completed by the end of 2026.

⁷ Further detail on the Remote Metering Project is provided in Attachment to IR 33 from [BCUC Information Request No.1](#)– Remote Metering Project Summary.

3.3 Technical Solution Overview and Implementation

The Remote Metering Project involves the installation of a cabinet which counts and relays data from the existing condensate meter to Creative Energy's datalake historian software (Inmation). Specifically,

- Existing steam or condensate meters are connected to a pulse counter which accumulates the total mass of steam consumed by the customer. Pulse counter data is read by a gateway device which serves up the data for wireless communication over cellular network (LTE-M).
- Inmation requests data from each installed cabinet every fifteen minutes. Once in Inmation, the data is historized and displayed on a dashboard which shows the total steam consumption, consumption rate, and any alarms that may indicate a service issue.

It should be noted that the controls hardware installed for the Project can be utilized for future Energy Transfer Stations if Creative Energy converts the Core System to hot water distribution.

Creative Energy began implementation of the Remote Metering Project in 2017, and by 2020 had procured 30 metering cabinets and installed 15 in customer buildings. Due to a lack of the necessary internal resources and the Covid-19 pandemic the project was then placed on hold in 2020. In 2022, with the approval of the BCUC, Creative Energy hired a Systems Engineer whose duties included the implementation of the Remote Metering Project. Since then, significant progress has been made, such that by the end of 2023 Creative Energy will have Remote Monitoring in place for our 57 largest customers, representing a total of 50% of our annual steam load.

Creative Energy intends to continue advancing the Remote Metering Project and will proceed with the installation of remote monitoring for all customers by 2026. The three-year implementation timeline will run from 2024 to 2026, with a cost of approximately \$500,000 per year. The addition in the 2024 RRA is \$1,518,370 which includes costs incurred up to the end of 2023 and 2024 costs relating to meters that will be in service by the end of 2024, representing approximately 100 customers. By the end of 2026, Creative Energy will connect 202 customers, covering the entirety of the load on the Core System.

3.4 Budget

3.4.1 Capital Expenditure Budget

Project costs and number of customers, and the associated percentage of steam load covered are provided in Table 5 below.

Table 5: Remote Metering Project Cost and Number of Customers in-service

Year	Capital Expenditures (\$)	Description	Number of Installed Remote Meters (units)	Number of in-service Remote Meters (units)	Percentage of Steam Load Metered and (Cumulative)
2017-2020	\$ 321,201	Procurement of 30 cabinets and installation of 15 cabinets	15	0	0%
2021 Actual	\$0	-			
2022 Actual	\$58,754	Procurement of 26 new cabinets and retrofits for the 30 previously purchased cabinets.			
2023 Actual to end of October 2023	\$423,117	Procurement and installation of 26 new cabinets and retrofit parts for 15 cabinets that were installed during 2017-2020.	41	56	50 (50)
2023 Forecast	\$608,415				
2024 Forecast	\$500,000	Hardware, installation, and commissioning	50	50	35 (85)
2025 Forecast	\$500,000	Hardware, installation, and commissioning	50	50	11 (96)
2026 Forecast	\$500,000	Hardware, installation, and commissioning	46	46	4 (100)
Total	\$2,379,955⁸		202	202	100

The average cost per customer is \$13,239. This includes engineering costs which will not be incurred for future installations. Creative Energy anticipates that future installations would cost in the order of \$10,000 per customer and has established future budgets on this basis.

Creative Energy is proceeding with the installation of remote monitoring for all our customers. Based on experience to date, installation of approximately 50 cabinets per year is achievable, representing

⁸ Total represents sum of actuals to end of 2022 and forecast for the balance of the project period.

one quarter of our customer base. Creative Energy is proceeding on the basis of a three-year implementation timeline, from 2024 to 2026, with a cost of approximately \$500,000 per year.

There is significant diversity in the size of Creative Energy's customers, and accordingly, the first 50% of Remote Metering installations will capture 85% of our steam load as the initial focus is on the largest consumers of steam. These installations are planned to be completed by end of 2024. As additional meters are installed, they will cover smaller customers, whose consumption represents a smaller proportion of total load on the system. Creative Energy plans to continue installing these meters for its smaller customers, bringing the total number of remote meters up to 202 by the end of 2026.

In implementing the project, Creative Energy will install remote monitoring for all customers by 2026 with a cost of approximately \$500,000 per year. In this Application, Creative Energy is seeking approval for the capital expenditures for the first tranche of installed cabinets as the infrastructure will be put into service.

3.4.2 Remote Metering Budget in the 2024 RRA

Other than the capital cost discussed above, cost directly associated with operations relating to Remote Metering are minimal and are distributed amongst different cost categories in the revenue requirement. Creative Energy expects that going forward beyond the 2024 RRA, operating cost may increase marginally, and the associated costs will be included in future applications, as necessary.

3.5 Risks

Creative Energy have developed a wealth of knowledge and experience from the completed Remote Metering installations. It is our view that the level of current and anticipated risks for the completion of installations and the remaining customers is low and manageable.

3.6 Approvals and Decisions relating to the Remote Metering Project

3.6.1 Previous Approvals and Decisions

The Commission has on various occasions noted the ongoing development and progression of the Remote Metering Project.

On page 16 of the 2019-2020 RRA Decision⁹, the BCUC stated "Since the costs associated with the Remote Metering Project are not capital additions in the current test period and Creative Energy is not requesting section 44.2 UCA expenditure schedule acceptance of the project, the Panel makes no determination on the need for, or the costs associated with this project. The BCUC will consider need, prudence, and project execution issues if Creative Energy files an expenditure schedule for acceptance or applies to have the project costs included in rates. Accordingly, the Panel made no determination on the Remote Metering Project or any of the costs associated with this project."

⁹ Found here: [Decision and Order G-227-20](#)

Subsequent to the 2019-2020 RRA Decision, Creative Energy filed additional information on the record of the 2023 RRA proceeding relating to the overall scope, timelines, and budget of the project. This information included Creative Energy's responses to BCUC and intervener information requests.

3.6.2 Approval Sought

Creative Energy submits that the project is essential to the long-term objectives of the utility and is filing herein the necessary information to ensure this essential project is approved and implemented for the benefit of our customers.

Creative Energy intends to include the capital expenditures in the current and future revenue requirement applications in accordance with the schedule provided above. In this Application, Creative Energy is including capital expenditures for the first tranche of installed cabinets in its rate application as the infrastructure is put into service. As additional metering infrastructure is placed into service, the capital expenditures will be included in subsequent revenue requirement applications in the year the metering infrastructure is installed and will be subject to the BCUC approval.

4 Revenue Requirements

4.1 Revenue Requirements Drivers

As previously stated in section [1.1](#), Core Revenue Requirements drivers are split into five, as follows:

1. [Operations and Maintenance](#);
2. [Municipal Access Fee](#);
3. [Property Taxes](#);
4. [Income Taxes](#); and
5. [Depreciation and Amortization Expenses](#).

The following sections discuss in detail each of the drivers.

4.2 Operations and Maintenance Budgeting

4.2.1 Introduction

Operations and Maintenance (O&M) budgets (and Capital budgets) are prepared by Creative Energy's management team and then approved by the CEVP Board. In general, and consistent with past practice as reviewed in the 2019-2020 through 2023 RRAs, prior year actuals and year-end projected amounts are used as benchmarks to identify the activities that need to be budgeted-for given that most O&M activities are recurring in nature and that these costs typically change with inflationary pressures.

Budgets are prepared to align with Creative Energy's business functions and the established BCUC accounts for each function where possible. Where informative and predictive, some maintenance expenses are pooled by equipment and analyzed on a combined and trended basis for budgeting purposes. Other cost categories such as water and electricity expenses are subject to rate increases set by a separate utility or governmental body and the amounts required vary by load and are estimated on those bases. Creative Energy develops an accurate operating budget reflecting anticipated inflation rates, supply cost increases, necessitated repairs, contractor services and a small built-in contingency budget. For some years, the actual budget will increase compared to the planned budget due to major repairs that were unplanned for, while in other years the actual budget will decrease as operational costs are the largest components of the budget.

4.2.2 O&M - Summary by Cost Driver and Control

To assist the underlying assessment of cost drivers, the following section and the individual O&M component review that follows illustrates O&M costs and variance explanations in relation to the following six categories of cost drivers.

1. Wages and Benefits (Steam, Distribution and Management);
2. Information Technology Services;
3. Special Services;
4. Water and Electricity Expenses;
5. Maintenance; and
6. Other General and Administrative plus Sales Expense.

This categorization is similar to the 2023 RRA with exception to item 2- Information Technology Services, which used to be part of item 7- Other General and Administrative plus Sales Expense. Information Technology is being provided separately to ensure greater transparency around the associated expenditures in 2024.

Consistent with prior RRAs, the intent of these groupings is both to offer clarity on the cost of service across the Core TES and to present the specific costs driving the requested rate increases in the 2024 test period.

Cost drivers¹⁰ are also grouped according to a qualitative assessment of where management is generally able to exercise budgeting control and decision-making as follows:

1. **Internal Cost:** this is where operating costs are commonly understood to be within the scope of management control; and
2. **External Cost:** this is where determination is outside Creative Energy (e.g., rates applicable to Creative Energy's water, electricity, and natural gas consumption).

Although Creative Energy adds caution to the level of precision, we consider it to be the best approach overall for providing insight and understanding of the drivers for the 2024 test-year cost of service. Please refer to Table below for an overall summary of costs in accordance with this approach.

Table 6: Total O&M by Cost Driver and Control

O&M		2023 Pending Approval			2023 Projected			2024 Test Year		
Cost Component	Cost Control	\$	% of O&M	% of Revenue	\$	% of O&M	% of Revenue	\$	% of O&M	% of Revenue
		7,544,324	100%	58%	8,171,153	100%	63%	8,743,085	100%	58%
Wages and Benefits	Internal	4,167,525	55%	32%	4,334,323	53%	34%	4,980,783	57%	33%
	External	228,720	3%	2%	260,908	3%	2%	153,486	2%	1%
Information Technology Services	Internal	-	0%	0%	-	0%	0%	-	0%	0%
	External	338,013	4%	3%	291,546	4%	2%	686,216	8%	5%
Special Services	Internal	111,752	1%	1%	295,697	4%	2%	295,697	3%	2%
	External	397,963	5%	3%	605,794	7%	5%	70,752	1%	0%
Water and Electricity Expenses	Internal	-	0%	0%	-	0%	0%	-	0%	0%
	External	1,145,132	15%	9%	1,129,079	14%	9%	1,169,765	13%	8%
Maintenance	Internal	649,602	9%	5%	707,093	9%	5%	709,028	8%	5%
	External	-	0%	0%	-	0%	0%	-	0%	0%
Other General, Administration and Sales Expenses	Internal	289,320	4%	2%	369,625	4%	3%	310,104	4%	2%
	External	215,967	3%	2%	258,231	3%	2%	271,868	3%	2%

The subsequent sections provide an explanation of the cost associated with each of the five categories summarized above. Total O&M cost is also assessed by business function, as shown in Table D-1 in Appendix D.

¹⁰ For clarity, expanded definitions of the six categories of cost drivers are discussed in Appendix C of this application.

4.2.3 Wages and Benefits

4.2.3.1 Approach and Summary

The Core TES system is supported by Plant and Distribution operations staff complemented by office and management staff, some of whom span business development and project engineering functions and allocate their time accordingly. Managing those functions to budget is the responsibility of the entire management team. Attracting and retaining talent is critical to the success of Creative Energy and accordingly serving customers. Creative Energy competes with other and typically much larger utilities in BC, other parts of Canada and in some cases North America for employees with specialized skillsets that are not widely available. In addition, there are specific risks associated with the size of Creative Energy. The loss of key employees can have a significant impact on the business given the small number of employees each having multiple skillsets and responsibilities.

Creative Energy's compensation strategy therefore continues to be to balance competitive compensation packages that attract, motivate, and retain talent with the skills required for key roles, while also aligning the compensation of each management and exempt employee to their individual level of responsibility. Total compensation includes an incentive program designed to complement the compensation strategy.

Labour costs and year over year increases for unionized employees primarily working in steam production and distribution functions are set in accordance with a collective agreement. Table 7 below provided a summary of Wages and Benefits.

Table 7: Summary of Total Wages and Benefits

Total Wages and Benefits	2023 Pending Approval	2023 Projected	2024 Test Year
500 Supervision and Labour	1,742,515	1,788,380	1,913,502
870 Supervision and Labour	876,770	921,093	919,892
920 Admin & General Salaries	1,585,210	1,711,358	2,069,708
926 Employee Benefits	191,750	174,400	231,168
Grand Total	4,396,245	4,595,231	5,134,269

4.2.3.2 Steam Production Supervision and Labour

Compared to 2023 RRA Application, steam production supervision and labour costs for the 2024 Test Year are planned to increase by 9.8 percent overall, details of which are shown below in Table 8. The variance between 2024 Test Year and 2023 RRA is in Appendix D- Table D-2.

Table 8: Steam Production Supervision and Labour – Account 500 – Summary

Account 500 Supervision and Labour	2023 Pending Approval	2023 Projected	2024 Test Year
Wages	1,397,846	1,393,829	1,568,350
Overtime	69,369	102,320	104,446
Benefits	133,944	133,944	154,029
Pension Costs	141,356	158,288	86,676
Total	1,742,515	1,788,380	1,913,502

Plant wages are based on a full-time equivalent (FTE) of eleven engineers, one chief engineer and an assistant chief engineer (added in 2024). The increase in the total expense from the 2023 application can be described by the following factors in Table 9.

Table 9: Factors Driving Increase in Cost of Steam Production Supervision and Labour

General salary increases of 3.3%	\$46,129
Overlap for Chief Engineer Transition (Succession Planning)	\$173,542
Overtime	\$35,077
Decrease in pension contribution rate to 6.90%	\$(54,680)
Other	\$(29,081)
Total	\$170,987 (9.8 percent)

The main driver for this increase is the hiring of an assistant chief engineer as part of our succession plan. The decision to hire an assistant chief engineer stems from our commitment to continuity and sustainability within Creative Energy. As the current chief engineer approaches retirement, it is imperative for us to transition responsibilities and leadership, maintaining the high standards of performance and reliability that our ratepayers have come to expect.

By bringing in an assistant chief engineer as part of our succession plan, we are not only preparing for the future but also ensuring a smooth transfer of knowledge, skills, and expertise. This strategic move is a proactive measure to mitigate any potential disruptions in our operations, ensuring the stability of our energy production. The assistant chief engineer shadows and collaborates with the current chief engineer, acquiring invaluable insights into the specifics of our systems, technologies, and operational dynamics.

With respect to overtime expense, Creative Energy notes that it requires a minimum number of staff for every shift at the steam plant for operational and safety reasons, which leads to a circumstance where overtime will be charged under short notice for rescheduling of shifts when any staff member is absent due to sickness. In addition, if a particular job in the steam plant or distribution network warrants a specific number of personnel for the safe completion of the work on that specific day, this work will in most circumstances have been preplanned and organized in advance, which may also lead to circumstances where the work cannot be rescheduled due to a staff absence without notice for being sick. Overtime may also occur during steam plant safety training, which must occur in an overtime capacity due to the fact steam plant personnel must remain on shift when scheduled for shift coverage. By contrast, distribution and service safety training is typically scheduled during workdays as there is more flexibility in this regard. Creative Energy’s overtime is a shared bucket of costs and hence overtime associated with the Core System is allocated based on the Mass formula to the various systems.

Forecast 2024 Test Year overtime expenses were calculated based on estimates from prior years and is consistent with actual overtime from 2023. Benefits are estimated based on projected rates for categories such as CPP, EI, WCB, employer health tax and extended health.

Pension costs are based on required contributions as prescribed by CEVP’s actuary. The contribution rate used in 2024 is 6.9 percent based on the three-year cycle actuarial valuation prepared in 2023. The existing defined benefit plan with the abovementioned contribution rate will continue for all unionized staff and staff that are already in the defined benefit plan. Variances in pension costs are captured in the approved Pension Expense Deferral Account. The contribution rate for both plans is the percentage that Creative Energy must contribute to the pension on the total wages for each employee enrolled in the plan. The contribution rate does not refer to the percentage of employees enrolled in the plan. The decrease in pension cost compared to the 2023 RRA is due to the contribution rate decreasing from 9.1% to 6.9% for fiscal year 2024.

4.2.3.3 Distribution Supervision and Labour

The Distribution team directly charges time to the energy systems it supports. The Distribution team supports the Core TES, and the Main & Keefer TES, South Downtown Heating TES and Cooling TES, Kensington Gardens TES, Mount Pleasant DCS, Horseshoe Bay TES, Pendrell TES and Alberni TES. There are specific employees that are assigned to support the steam network and specific employees to support the hot water network. However, throughout the year employees that are assigned to one team may support the other when there is a pressing need. This provides flexibility and allows Creative Energy to avoid the step cost of hiring additional employees for both networks when one shared employee may be able to assist on both. At present, the combined team consists of two managers and 10 unionized service technicians. There is no change in the headcount from 2023 or allocation between systems is planned for 2024; however, compared to 2023, Distribution supervision and labour costs for the 2024 Test Year are budgeted to increase by 5.7 percent compared to the 2023 RRA and close to the 2023 Projected cost. The components of these costs are illustrated in Table 10. The detailed variance table for this cost is in Appendix D-Table D-3. The reason for this moderate increase is primarily driven by the following factors in Table 10.

Table 10: Distribution Supervision and Labour – Account 870 - Summary

Account 870- Supervision and Labour	2023 Pending Approval	2023 Projected	2024 Test Year
Wages	716,682	731,706	757,571
Overtime	10,833	24,076	22,555
Benefits	73,809	76,861	84,354
Pension	75,446	88,451	55,411
Total	876,770	921,093	919,892

The increases in the total cost from the 2023 RRA are described by the following drivers in Table 11.

Table 11: Factors Driving Increase in Cost of Distribution Supervision and Labour

General salary increases of 3.3%	\$23,650
Salary increase for manager (switching from union role)	\$24,725
Overtime	\$11,722
Decrease in pension contribution rate to 6.90%	\$(20,035)
Other	\$3,060
Total	\$43,122 (5.7 percent)

4.2.3.4 Management Labour and Benefits

As shown in Table 12 below, Administration and General Salaries (Management Labour) are planned to increase for the 2024 Test Year by 30.6 percent over the 2023 RRA. Employee Benefits are also planned to increase by 20.56 percent, with an overall increase of 29.48 percent. Details on those variances are laid out in Table D-4 in Appendix D.

Table 12: Management Labour and Benefits – Accounts 920 and 926 - Summary

Account 920- Admin & General Salaries	2023 Pending Approval	2023 Projected	2024 Test Year
Wages	1,585,210	1,711,358	2,069,708
Account 926- Employee Benefits			
Benefits	179,832	160,231	219,769
Pension	11,918	14,169	11,399
Subtotal Total	191,750	174,400	231,168
Total	1,776,960	1,885,757	2,300,876

This increase in 2024 Test Year from 2023 RRA is due to an increase in Wages (Account 920) and associated increase in Benefits (Account 926). The increase relates primarily to Creative Energy’s continued focus on building the complement of staff that is necessary to maintain safe and reliable service, to maintain timely and effective regulatory compliance and to sustain and grow the customer base connected to the Core TES system. This variance in Wages and Benefits (\$523,916) is distributed as follows in Table 13.

Table 13: Summary of Management Labour and Benefits Variance by Allocation

Salary Increases	126,445
New Roles	429,331
Increase in Massachusetts Formula Percentage	7,448
Roles Hired at Higher Salaries than 2023 Budget	75,223
Reallocation of Time from 2023	(114,534)
Total	523,913

Table 14 also shows the costs by business unit for both 2023 RRA and 2024 Test Year as well as their respective variance.

Table 14: Summary of Management Labour and Benefits and Variance by Business Unit

	2023 Pending Approval	2024 Test Year	Variance
Business Development	273,339	340,528	67,189
Engineering & Projects	261,136	118,074	(143,062)
Executive Leadership	471,718	482,456	10,738
Finance and Customer Support	222,905	386,539	163,635
Human Resources	38,603	52,765	14,162
Information Technology Services	136,441	377,225	240,784
Operations Management	165,657	176,675	11,018
Regulatory	207,160	366,611	159,450
Total	1,776,960	2,300,873	523,913

In alignment with the vision outlined in this Application, Creative Energy recognized the need to support its Information Technology capabilities through strategic investments in new personnel. This strategic decision was driven by the aim to elevate Creative Energy's capabilities to an appropriate level to respond to the changing requirements and obligations that are being placed on utilities, as described in [section 4.2.4](#).

Furthermore, acknowledging the complex nature of our operations and given the regulated nature of the utility, it was deemed essential to make strategic hires in areas beyond Information Technology. Creative Energy determined a few vital roles supporting Finance, Regulatory Affairs, Customer Relations, and Customer Support. This comprehensive approach aimed to enhance our organizational capacities across various key functions, ensuring a resilient operational framework for the Core System.

Notably, as part of our forward-looking initiatives, new hires will be allocated to contribute to the success of the Remote Metering project. This project, detailed in [section 3](#), represents a critical initiative for Creative Energy. The recruitment of skilled professionals to support this project is essential to its execution and ultimate success.

For fiscal year 2024, Creative Energy plans to hire for the following roles that will support the Core system in a partial capacity. After allocation, they are listed below in order of magnitude impact on the 2024 Core Revenue Requirement.

>\$90K

- Manager, Enterprise Applications.
- Commercial Manager for Customer Support.

>\$75K

- Security Analyst.
- Regulatory Analyst.

<\$25K

- AP Clerk.
- HR Specialist.
- Marketing Associate.
- Commercial Analyst.
- Automation Specialist.

Costs for Wages and benefits under Accounts 920 and 926 that are associated with the Core System are allocated based on the Massachusetts formula or by direct assignment. Further details on this allocation are in Appendix F.

4.2.4 Information Technology Services

4.2.4.1 Introduction

Creative Energy's information technology services - including information technology, information systems, operational technology, and cybersecurity – are essential to the long-term resilience of the utility. As a result of ongoing development around the requirements for information technology services, as well as the historical underinvestment in critical infrastructure, Creative Energy is in a position where material investments are needed to support the overall operations of the system and

the utility. Accordingly, Creative Energy is requesting approval for expenditures related to information technology services that exceed prior applications. It is expected that these costs are exceptional costs, and once the investments are made, will not contribute to continued increases in rates in future applications. A description of the key areas of investment, costs and allocations are further described below.

Due to the scope of work Creative Energy will leverage contractors, consultants, and the Virtual Chief Information Officer (vCIO) engagements to augment the current available resources for implementation. Without engaging these additional resources, Creative Energy would undoubtedly create additional technical debt and incur even greater costs in the future. Appendix D, Table D-5, furnishes a thorough comparative analysis of Creative Energy's existing Information System against those of other utilities in British Columbia.

4.2.4.2 Information Systems

The following are systems Creative Energy plans to implement in 2024 and will lay the foundation for increasing the safety, reliability, and customer satisfaction. In addition, cybersecurity costs associated with the protection of customer data, server backups, and infrastructure support are shifted to other critical areas as Creative Energy's IT attack surface¹¹ is reduced.

The 2024 RRA budgetary requirements related to information systems reflect these efforts to build a solid foundation starting with replacement of our current accounting system and the adoption of a modern cloud-based accounting system. The advancement would allow implementation of AP automation tooling, improved data interoperability across departments, and the ability to integrate different systems and data. Creative Energy notes that these are the initial steps toward providing a better customer experience through billing and energy insights.

Modernization of operational tools, such as the implementation of a cloud-based Computerized Maintenance Management System (CMMS) will improve the operations teams' visibility into assets, preventive maintenance, predictive maintenance, work orders, and multitude of additional benefits. To then be able to integrate with a modern cloud-based accounting system further reduces administrative burden and increases employee efficiency.

A dedicated Human Resources Information System (HRIS) at Creative Energy would comprise of a suite of features, including a centralized employee database, onboarding workflows, Employee Self-Service (ESS), performance management tools, and benefits administration for enhanced workforce management. Prioritizing compliance, robust security, integration capabilities, and comprehensive user training, the HRIS would aim to enhance a modern, agile, and employee-centric environment.

¹¹ The number of all points, or attack vectors, where an unauthorized user can access a system and extract data.

4.2.4.3 Information Technology

The primary focus for 2024 is the continued cleanup, decommissioning of old equipment, and improved reliability of the IT infrastructure as well as continually enhancing support to employees to ensure they have the tools and access they require to perform their duties.

Commencing with the cleanup of the IT network infrastructure at the head office, these projects are crucial for the OT DMZ¹² and Steam Plant - both inter-dependent on IT infrastructure. By implementing enhancements such as improved network visibility, infrastructure redundancy, and increased internet bandwidth, the objective is to establish a stable and reliable state for the IT infrastructure. Failure to implement these changes would jeopardize the overall reliability and stability of the OT DMZ.

Additional IT projects focus on putting in the tools and systems to adopt the cybersecurity methodology of zero-trust - “never trust, always verify.” These solutions, such as Mobile Device Management (MDM), SharePoint Data Loss Protection (DLP), Password Management Tools, and others as identified as missing. These facilitate a solid foundation and cost-effective next steps in day-to-day operations and cybersecurity.

Annual operating costs for employee’s support, hardware, software, subscription services, and peripherals follow the Massachusetts formula.

4.2.4.4 Operational Technology

This is concerned with establishing and implementing the Remote Metering capital project, which is covered in [Chapter 3](#) of the Application.

4.2.4.5 Cybersecurity

On June 2023, the BCUC established the Cybersecurity Pilot Program¹³ and set forth annual declaration requirements for Cybersecurity and the adoption of NIST Critical Security Framework (CSF) by public utilities and CIS Controls v8. As such, Creative Energy has established that an effective cybersecurity program requires a certain level of foundational maturity from Information Technology, Information Systems, and Operational Technology. As outlined, each of these three areas must have their segments of technical debt addressed in conjunction with the overall cybersecurity program. Not addressing the technical debt is itself an unacceptable cybersecurity risk.

In the development of a formalized cybersecurity program aligned with NIST CSF and CIS and annual declaration requirements, Creative Energy has identified a resource gap for a comprehensive Security Operations Centre (SOC). Following the model of BC Hydro and FortisBC, Creative Energy plans to enlist the services of a Managed Security Service Provider (MSSP) to supplement internal capabilities. The MSSP will deliver 24/7 monitoring, incident response coverage, and cost-effective tools like Security Information and Event Management (SIEM), Managed Detection and Remediation (MDR), and corporate IT Managed Vulnerability Services (MVS), and additional services as identified. This strategic

¹² Operational Technology Demilitarized Zone

¹³ More detailed are found here: <https://www.bcuc.com/WhatWeDo/CybersecurityFramework>

initiative underscores Creative Energy's commitment to proactive cybersecurity, ensuring a resilient defense against potential threats. To maintain clarity, the MSSP will operate independently of the IT Managed Service Provider, establishing distinct lines of communication and responsibility.

Creative Energy will conduct an annual penetration test against both IT and OT environments and a compliance audit of our critical controls. The intention is to validate what we put in place and ensure anything missed or any ineffective controls are addressed.

Creative Energy leveraged Dragos (asset and vulnerability management solution for OT) in 2023 for proactive protection, threat hunting, threat detection, asset visibility, and incident investigation. Continued development, maintenance, and expansion of this solution to all facilities is necessary to stay ahead of the constantly developing threat landscape.

4.2.4.6 Cost Allocation and Summary

Creative Energy's 2024 budgetary allocations for Information Technology Services embody a holistic and foundational strategy aimed at enhancing operational efficiencies, bolstering proactive cybersecurity measures, and ensuring the delivery of safe and reliable services to customers. This comprehensive approach reflects a commitment to advancing technology initiatives that contribute to overall business excellence and customer satisfaction. Tables 15 below provides a high-level illustration of the t cost components of Information Technology Services.

Table 15: Summary of Information Technology Services:

Information Technology Services	2023 Pending Approval	2024 Test Year
General IT: Data Backup and Recovery, System Maintenance, Software Licenses, Cloud Infrastructure, SaaS subscriptions, IT Consulting, IT contractor costs, Peripherals and Accessories, Managed Service Provider, Professional Development, Internet Service Provider	175,226	337,687
Cyber Security: Managed Security Operations Center, Security Tools, Security Audits	162,787	348,529
Total	338,013	686,216

Table 16 below details the allocation of this total cost of Information Technology Services for the 2024 Test Year.

Table 16: Allocation of Cost of Information Technology Services

Directly Charged	332,485
Allocated via Mass formula	353,731
Total	686,216

Within the overall expenditure for Information Technology Services in 2024 Test Year, an additional cost of \$292,525, which is not discussed in the abovementioned tables, is allocated to Creative Energy's non-regulated entities.

4.2.5 Special Services

4.2.5.1 Introduction

Special Services include the following:

1. **Audit Fees:** The fee for the 2024 Test Year is based on the actual quote from Creative Energy’s auditor.
2. **Legal Fees:** Legal fees in this category of costs do not include expenses relating to regulatory applications and proceedings. Legal fees are typically driven by emergent priorities. An average forecast of legal fees has been determined using the most recent three-year weighted average approach (20/40/40 adjusted for inflation).
3. **External Services:** External Services are historically related to consulting costs for government advisory services, reviewing customer and business development opportunities, recruiting costs and external costs for preparing the tax return. There are also other items such as enterprise risk assessments, consulting related to benefits and the pension plan and ESG consultants. To estimate the base level of these costs Creative Energy has used costs from previous years adjusted for inflation.
4. **Regulatory:** Consistent with the fact that the level of activity and absolute costs are difficult to forecast, Creative Energy will continue to apply differences between forecast and actual amounts to the Third-Party Regulatory Costs Deferral Account as approved.
5. **Others:** Other costs included under Special Services are Steam Distribution Network Study and the Opportunity Assessments and 3rd Party Engineering

4.2.5.2 Summary

Table 17 below provides an overall summary of the Special Service costs. Overall, the 2024 Test Year forecast cost is lower than the 2023 RRA mainly because of the expected completion of the Steam Distribution Network Study and the Opportunity Assessments and the 3rd Party Engineering work before the beginning of 2024. Cost variance in the Steam Distribution Network Study between 2023 RRA and the 2023 Projected is captured in the Steam Distribution Network Study Deferral Account. [Section 5](#) provides further details on this account. Table D-6 in Appendix D provides a comprehensive overview of variances between 2023 RRA and 2024 Test Year.

Table 17: Special Services – Account 923 – Summary

923 Special Services	2023 Pending Approval	2023 Projected	2024 Test Year
Audit Fees	87,713	96,015	104,169
Legal Fees	28,685	38,806	40,806
External Services	83,067	256,891	70,591
Regulatory	150,000	212,289	150,883
Steam Distribution Network Study	140,000	297,490	-
Opportunity Assessments and 3 rd Party Engineering	20,250	-	-
Total	509,715	901,491	366,449

4.2.6 Water and Electricity Expenses

4.2.6.1 Introduction

The cost of water is one of the major expenses for the Core TES Steam plant. Creative Energy’s primary water usage consists of:

1. Feed water as an input in steam production;
2. Water cooling applied to Distribution system condensate within the steam plant so that it can safely be discharged into the City of Vancouver’s storm and sewer network; and
3. Electricity costs are included in this cost category to reflect the entirety of these costs and are broadly driven by factors and external rates outside of management control.

The methodology to forecast the water expense is based on a historic ratio of actual water expense and actual steam load multiplied by forecast steam load, given the direct relationship between the water input and steam produced.

4.2.6.2 Summary

Water and Electricity Related Expenses are shown in Table 18 below. The budget for 2024 Test Year is only 2.2 percent higher than 2023 RRA due to a small increase in water and electricity cost countered by a decrease in the water treatment cost. Details about the estimation methodology of each cost component are discussed in Appendix C. The variance for this cost category is in Table D-7 in Appendix D.

Table 18: Water and Electricity Related Expenses – Account 502 Partial and Account 874 – Summary

Accounts 502 and 874	2023 Pending Approval	2023 Projected	2024 Test Year
502 Steam Expenses - Partial			
Water	879,649	903,109	933,084
Electricity	100,324	118,415	109,049
Water Treatment	134,000	94,922	101,256
Subtotal	1,113,973	1,116,446	1,143,389
874 Mains and Services			
Electricity	278	320	287
Water Mains	30,881	12,314	26,089
NEFC Operating Costs	-		
Subtotal	31,159	12,633	26,376
Total	1,145,132	1,129,079	1,169,765

4.2.7 Maintenance

4.2.7.1 Introduction

Maintenance budgets are pooled across business functions overall and they may vary within the year based on priority or emergent need, as indicated by the variation in spend within and across the account category of expense. Maintenance cost includes multiple accounts as follows:

1. Steam Expenses – Maintenance & related Expenses;
2. Structures and Improvements;
3. Other Distribution Operation;
4. Transportation;
5. Mains and Services;
6. Meters & House Regulators; and
7. Maintenance of General Plant.

The budget is prepared by the plant and distribution management team based on expected spending needs in 2024.

4.2.7.2 Summary

Forecast 2024 maintenance costs exceed 2023 amounts by 9.15 percent as shown in Table 19. This is largely driven by an increase of 70.4 percent in Steam Expenses – Maintenance and Related Expenses. The reason for this increase is that Creative Energy has better tools to create a more accurate estimation for maintenance. As such, we believe that the budget for this component is more reflective of the maintenance cost for 2024. Based on the revised budgets, a more accurate representation of the planned operational requirements for maintenance has been developed, including cost relating to the procurement of replacement parts and their freight delivery, tool replacement, safety related costs, cost of service agreement for plant controls and consultants’ fees. Table D-8 in Appendix D gives further details on variances for this cost category.

Table 19: Maintenance and related functional operation – Multiple Accounts – Detailed Summary

	2023 Pending Approval	2023 Projected	2024 Test Year
502 Steam Expenses – Maintenance & Related Expenses	223,416	346,979	380,720
506 Structures and Improvements	98,789	-	-
880 Other Distribution Operation	-	-	-
933 Transportation	19,226	15,828	12,372
887 Mains and Services	89,476	91,425	86,891
889 Meters & House Regulators	186,647	231,654	196,798
932 Maintenance of General Plant	32,048	21,207	32,240
Total	649,602	707,093	709,022

4.2.8 Sales Expenses

The 2024 Test Year expense was a bottom-up budget consisting of promotional costs supporting the Low Carbon project and future growth in the Core TES. The components of this cost are as follows:

1. CORE - Advertising
2. CORE - Promotion
3. CORE - Commissions
4. CORE - Selling Expense-Trade Shows
5. Business Development Expense
6. CORE - Dues & Membership
7. CORE - Courses & Conferences
8. CORE - Bad Debt

As shown in Table 20 below, there is a moderate increase of 7.8 percent in the cost of sales primarily driven by business development expenses, dues, and courses, which are all activities that are proportional to the growth of business and the number of employees conducting this business.

Table 20: Sales Expense - Summary & Variance

Account 910	2023 Pending Approval	2023 Projected	2024 Test Year
910 Sales Expense	173,934	154,533	187,543

4.2.9 Other General & Administrative

4.2.9.1 Introduction

Other General and Administrative Cost comprise a relatively small percentage of Creative Energy’s cost of service. This cost is comprised of the following:

1. Directors Fees;
2. Office Supplies & Expenses;
3. Admin & General Expenses;
4. Insurance; and
5. Injuries & Damages – WCB.

Table 20 below illustrates the details of this cost. There is an increase of 18.9 percent for the 2024 Test Year over the 2023 RRA. This increase is primarily driven by increases in insurance costs. The variance table of the Other General & Administrative expenses is in Table D-9 in Appendix D.

Table 20: Other General and Administrative- Summary

	2023 Pending Approval	2023 Projected	2024 Test Year
915 Directors Fees	47,851	54,129	49,649
921 Office Supplies & Expenses	67,041	115,991	71,939
922 Admin & General Expenses	14,381	58,108	15,877
924 Insurance	194,786	234,686	243,953
925 Injuries & Damages - WCB	7,294	10,410	12,493
Total	331,353	473,324	393,911

4.3 Property Taxes

4.3.1 Allocation to Non-Regulated Operations

Creative Energy has historically allocated a portion of the total property tax to its non-Core TES operations; thus, reducing the amount of its regulated revenue requirement and benefiting customers through lower rates.

Creative Energy’s non-Core TES operations include leasing of surplus office space to tenants and parking rentals on land not used in utility operation. Creative Energy has allocated out a portion of property taxes related to office staff that are not specifically working on the Core TES consistent with the discussion if not determination in the Order G-310-21 2021 RRA decision.

To calculate the appropriate amount to be allocated to non-Core TES operations, Creative Energy applies the levy rates to the total assessed value of the land and building and a portion is then allocated using building and land square footage.

In the 2021 RRA decision, Creative Energy was directed to address the allocation of property taxes and the treatment of land located at 720 Beatty Street and 701 Expo Boulevard related to the redevelopment. There is currently no change in use of the land planned for 2024. It is anticipated that the land will be fully utilized by the regulated operations and construction of the new regulated plant. As such, there will be no change in the methodology for allocation of property taxes in the 2024 RRA. Please note though that Creative Energy will not be charging any property tax increases related to the valuation of the land changing since 2022. The rezoning occurred in 2023 and the component of property taxes related to the land valuation will be fixed going forward. The only change in property tax included in the revenue requirement will be related to changes in the City of Vancouver rates. The impact on property taxes related to valuation of land will be paid for by the developer.

4.3.2 Summary

Property taxes are paid to the City of Vancouver for the properties located at 720 Beatty Street and 701 Expo Boulevard. The total property tax expense is a function of the value of the property, as assessed annually by BC Assessment, multiplied by various levy rates, which are also set amounts and typically changed annually. Please refer to Table 21 below and Schedule 16 for further detail. There is a small increase in property tax of 3.25 percent mainly due to the increase in the property value of the property at 720 Beatty Street

Table 21: Property Taxes

Item	2023 Pending Approval	2024 Test Year
Total for 720 Beatty Street	909,139	936,393
Reduction for Non-Core TES	(138,000)	(141,000)
Property Tax for 701 Expo Blvd.	46,894	49,239
Total Property Tax Allocated to Core System	818,000	844,600

Variances between forecast and actual property taxes are captured in the Property Tax Deferral Account approved on an ongoing basis as per Order G-310-21.

4.4 Municipal Access Fee

Creative Energy has a thirty-year Municipal Access Agreement (**MAA**) with the City of Vancouver (the **City**) effective September 1, 1999. The current MAA was approved by the BCUC under Order C-13-00. The MAA grants Creative Energy rights to continue to operate, construct and maintain its distribution system in City streets for supply of steam-heat and hot water services. In exchange for the rights under the MAA, Creative Energy pays the City an annual fee. The details of how this annual fee is estimated are found in Appendix C. Also, Table D-10 in Appendix D gives more details on the calculation for 2024 Test Year and Table D-11 in the same appendix for the calculation of the gas adjustment. This process is consistent with the 2022 and 2023 RRAs.

Municipal Access Fees are paid in April of each subsequent year once the figures have been audited. Costs are accrued throughout the year based on the formula described in the MAA agreement. Please

refer to Table 22 below for the Municipal Access Fees, where there is an increase of 6.6 percent in the fee due to the increase of revenue requirement between the two years. Also, refer to Schedule 17 for further detail.

Table 22: Municipal Taxes – Consolidated Core and NEFC

	2023 Pending Approval	2024 Test Year
Total Municipal Access Fee	338,627	360,861

4.5 Income Taxes

To calculate income tax expenses, Creative Energy uses a flow-through or current taxes method. Under this approach the equity portion of the return on rate base, adjusted for permanent and temporary tax differences, and future enacted tax rates (both Federal and Provincial) are used in calculating the total tax expense. More details on income tax calculation are discussed in Appendix C.

It is important to note that on an actual basis, revenues are known, and subsequently used in arriving at the Net Utility Income figure¹⁴. With respect to the forecast, the fundamental purpose of the revenue requirement is to determine the amount of revenue required to deliver utility services, cover all the expenses (including income tax), and provide for the allowed return on equity. Since the revenues are not “given”, but the allowed equity return¹⁵ is, we can use this percentage together with the rate base to calculate what the after-tax equity return would be. Working backwards and adjusting the after-tax equity return for tax differences, we can calculate the before tax income and consequently the income tax expense.

Forecast income tax expense for 2024 is reported in Table 23 based on the income tax pertaining to regulated operations. The effective tax rate during the test period is 27 percent, which is the same as the 2023 RRA. Please refer to Table 21 below and to Schedule 19 for further details. There is a decrease in the Income Tax Expense of 34.66 percent for 2024 Test Year in comparison to the 2023 RRA.

Table 23: Income Taxes- Consolidated Core and NEFC

	2023 Pending Approval	2024 Test Year
Allowed/Proposed Return on Rate Base (After Tax)	2,647,000	3,148,000
Add: Equity Portion of AFUDC		
Less: Financing Costs	(1,367,000)	(1,385,000)
Accounting Income After Tax	1,280,000	1,763,000
Total Additions (Depreciation Expense)	1,256,100	1,307,900
Total Deductions (Capital Cost Allowance)	(1,994,034)	(2,716,806)
Taxable Income/(Loss) for Tax Purposes (After Tax)	542,066	354,094
Tax Gross Up	73.00%	73.00%
Taxable Income/(Loss) for Tax Purposes (Before Tax)	742,556	485,060
Effective Income Tax Rate	27.00%	27.00%
Current Income Tax Expense	200,500	131,000

¹⁴ Utility Revenues less Utility Expenses equal Net Utility Income

¹⁵ The equity return is after tax, and it is expressed as a percentage.

4.6 Depreciation and Amortization Expense

4.6.1 General

Depreciation expense is a function of undepreciated plant balances and applicable depreciation rates. Please refer to Table 24 below and to Schedule 5 for further detail.

Table 24: Depreciation Expense- Consolidated Core and NEFC

	2023 Pending Approval	2023 Projected	2024 Test Year
Opening Accumulated Depreciation	(25,570,151)	(25,652,527)	(26,909,300)
Closing Accumulated Depreciation	(26,858,233)	(26,909,300)	(28,217,205)
Depreciation Expense (rounded) ¹⁶	1,288,100	1,256,800	1,307,900
NEFC Reclass	-	-	-

For each asset class, annual capital additions are tracked separately, and depreciation begins in the year following their addition. Once a particular annual capital addition has reached the end of its useful life, depreciation is no longer applied, and such additions are then taken out of the depreciable asset pool for calculation purposes. Please refer to Table D-12 in Appendix D for the Core Asset Classes and Depreciation Rates.

4.6.2 Depreciation of CIAC

Depreciation of Contribution-in-Aid-of-Construction reduces the overall depreciation expense and effectively lowers the rates. Creative Energy uses the same approach as discussed above when calculating CIAC depreciation. There is only one CIAC class and its depreciation rate is set at 2.5 percent. The depreciation percentage approximates the overall depreciation rate for distribution plant to which the CIAC pertains. Please refer to Table 25 below for a summary and to Schedule 6 for further details.

Table 25: Depreciation Expense of CIAC

	2023 Pending Approval	2024 Test Year
Opening Accumulated Depreciation	(1,296,802)	(1,242,551)
Closing Accumulated Depreciation	(1,242,551)	(1,188,300)

¹⁶ Details of the deprecation methodology at Creative Energy are discussed in Appendix C.

5 Rate Base Return

5.1 Summary

Rate base return represents the return on capital invested to provide regulated utility services. It combines both debt and equity returns based on the capital structure and approved rates. Table 26: Summary of Rate Base Return- Consolidated Core and NEFC6 below summarizes the Rate Base Return as calculated for the 2024 Test Year.

Table 26: Summary of Rate Base Return- Consolidated Core and NEFC

	2024 Test Year
Mid-year Rate Base	\$34,598,242
Cost of Capital	
Equity	10.40%
Debt	7.85%
Rate Base Return	9.10%

[Section 5.2](#) below provides further details on Return on Rate Base.

The forecast Rate Base Return for 2024 Test Year is \$3,148,000, and it is calculated in accordance with the methodology and rates discussed below.

Interest rates increased significantly during 2023 exceeding the 7.5 percent used in the 2023 RRA. The 7.85 percent rate projection for 2024 is based on a weighted average of forward-looking interest rates. Consistent with previous RRA decisions, rates are not set based on current interest rates, but future interest rates that factor in risk.

The Prime rate in Canada is currently 7.20%. With a debt percentage between 50-55%, Creative Energy’s interest rate would be 8.45% (Prime plus 1.25%). Creative Energy can benefit from drawing on BA’s. As of November 2023, when Creative Energy last utilized BA’s, the difference between the Prime loan and a BA was 0.50%. Based on current rates Creative Energy’s interest rate would be between 8.05%-8.55%. It is anticipated that prime rates will decrease in 2024. Therefore, Creative Energy is using a rate lower than the current rate.

Three major Canadian banks have been used for the analysis of future rates. Each bank has forecast different rate changes for 2024, highlight that there is variance and risk. The forecast Prime rates derived from their overnight rate forecasts are in Table 27 below.

Table 27: Forecast Prime Rates for the Major Canadian Banks

	Q1	Q2	Q3	Q4
TD	7.2%	6.7%	6.2%	5.7%
RBC	7.2%	6.95%	6.7%	6.2%
BMO	7.2%	7.2%	6.95%	6.7%
Average	7.2%	6.95%	6.61%	6.2%

The weighted average prime rate forecast is 6.74%. After adding 1.25% to Creative Energy’s credit the forecast rate would be 7.99%. Creative Energy has selected a rate lower than this at 7.85% as Creative Energy will attempt to manage its rate for a portion of its debt using BA’s.

The Mid-year Rate Base comprises the following components:

- Net Mid-year Plant in Service (comprising of gross plant in service, accumulated depreciation and adjusted for the timing of major additions);
- Net Mid-year CIAC (comprising of gross CIAC and accumulated depreciation of CIAC);
- Mid-year Plant Allocated to non-Core TES activities (portion of the plant used to support such activities)
- Mid-Year Deferral Accounts (representing the Company’s funding of activities where there is a timing difference between cost incurrence and its collection in rates)
- Mid-Year Working capital (representing Company’s investment into non-capital assets used in support of regulated operations)

Net Mid-year Plant in Service is the largest component of the Rate Base, and it represents the cumulative undepreciated investment in capital assets. It is Gross Plant in Service (**GPIS**) net of Accumulated Depreciation. GPIS comprises the prior year’s closing balance carried over to the current period, plus capital additions, AFUDC, and capitalized overheads, less plant retirements. Each of these components and their balances are discussed in Table 28 below.

Table 28: Rate Base Summary – Consolidated Core and NEFC

	2023 Pending Approval	2024 Test Year
Gross Plant in Service		
Opening Balance	56,771,020	59,643,137
Closing Balance (estimated)	59,826,898	64,289,506
Average Balance (Mid-Year)	58,298,959	61,966,322
Accumulated Depreciation		
Opening Balance	(25,652,527)	(26,909,300)
Closing Balance (estimated)	(26,908,661)	(28,217,205)
Average Balance (Mid-Year)	(26,280,594)	(27,563,252)
Net Mid-year Plant in Service	32,018,365	34,403,069
Net Mid-year CIAC	(1,269,677)	(1,215,426)
Mid-year Net Plant Allocated to Non-Core TES	(23,461)	(23,461)
Mid-Year Rate Base Deferred Accounts	422,232	422,232
Mid-Year Working Capital	556,381	1,011,827
Mid-year Rate Base	\$31,703,839	\$34,598,242

In the Order G-310-21 2021 RRA Decision, Creative Energy was directed to address the allocation and accounting for land transferred to the developer in its 2022 RRA. Creative Energy has continued to include the land in its rate base since there is no change in the use of the land anticipated for the 2024 Test Year.

5.2 Equity Thickness and Allowed Return on Equity

In accordance with the Decision and Order G-236-23 in Stage 1 of its Generic Cost of Capital (GCOC) Proceeding, the Commission established an updated deemed capital structure and return on equity for FortisBC Energy Inc. (the Benchmark Utility). In its decision, the Commission noted that for all utilities that use a Benchmark Utility, they are directed to establish interim rates effective January 1, 2024 on a refundable and recoverable basis using the revised parameters. The interim rates are to be used pending the BCUC’s final decision in Stage 2 of the GCOC Proceeding.

Accordingly, Creative Energy has updated its equity thickness and return on equity. Creative Energy’s equity thickness is 49 percent and its return on equity is 10.4 percent. The result of this change is an increase in the revenue requirement of \$483,000, which accounts for 3.7% of the total increase in rates. The increase is exceptional and in future years the year-over-year change would not be as pronounced as it is in the current Application. This cost increase further supports the implementation of the revenue deficiency deferral account to smooth the associated increase over a longer period of time.

5.3 Debt Financing

Creative Energy renewed its credit agreement with HSBC Bank Canada and Toronto Dominion Bank in March 2023. By Order G-4-23, the Commission approved the revised terms of the debt financing. Table 29 provides a summary on the Credit Facility.

Table 29: Credit Facility Summary

Tranche 1	Revolving Facility	6,000,000 (limit)	Prime + 1.25% or BA Floating Rate + 2.50% plus standby fee of 0.50% on the unused balance (based on a debt % less than 55%)
Tranche 2	Non-Amortizing Facility	10,000,000	Prime + 1.25% or BA Floating Rate + 2.50%
Tranche 3	Non-Amortizing Facility	11,587,000	Prime + 1.25% or BA Floating Rate + 2.50%

5.4 Capital Additions

The year-over-year increases to Rate Base in 2024 is primarily driven by Capital Additions¹⁷. Projected capital additions are \$1.77 million in 2024.

Capital additions and incremental additions in the 2024 test period are summarized in Table 30. Detailed capital expenditures are laid out in Appendix E.

Table 30: Core System Capital Additions

	2023 Projected	2024 Test Year
Steam Plant	536,854	360,000
Distribution System	2,099,518	1,735,279
Customer Building Services	111,626	160,000
Customer Connections	(13,681)	-
Other	137,800	2,391,089
Total Capital Additions	2,872,117	4,646,368

Appendix C provides elaborated definitions for the different categories of Capital Additions.

The breakdown of costs associated with each category is outlined as follows:

¹⁷ Capital additions are based on the year that costs are transferred from Construction in Progress into Plant in Service. Costs may be spent in a previous year but not added to Rate Base until a subsequent year. Higher than average capital additions in one year could be directly related to lower-than-average capital additions in another year. Rate Base is adjusted each year based on actual capital additions.

- Steam Plant: This cost category is expected to undergo a significant reduction due to decreased anticipated work on the refractory.
- Distribution System: Following a similar trend as the Steam Plant, the anticipated capital work on the Distribution System is expected to decrease after the substantial capital investment incurred in 2023 for the manhole project rebuild.
- Customer Building Services: In contrast to the abovementioned categories, the cost of Customer Building Services is projected to rise by approximately 43 percent in the 2024 Test Year. This increase is attributed to expenses associated with meter upgrades and the reconstruction of pressure reducing valves.
- Customer Connections: No noteworthy changes are anticipated in this cost category.
- Other: The drivers behind the increase in Capital Additions in the "Other" category are detailed in Table 31. Capital expenditure for the Remote Metering project is also discussed in [section 3.4](#). Creative Energy plans to provide further details on Capital Additions in future evidentiary updates as part of the 2024 RRA proceedings.

Table 31: Capital Additions under the Category: Other

Capital Additions: Other	
Ricoh Laserfiche (AP Automation)	50,000
Vena (Reporting and FP&A software)	150,000
Information Technology Capital Costs	648,719
Remote Metering	1,518,370
Office and Other	24,000
Total	2,391,089

Creative Energy does expect the Butterfly extension to be completed and connected in 2024. There is some uncertainty around the timing of when the first delivery of energy will occur, and accordingly, the capital associated with this connection has not been included in the Application.

5.5 Allowance for Funds Used During Construction (AFUDC)

The AFUDC applies where an asset is not part of the rate base, but funds have been invested to finance its construction. The AFUDC recognizes that there are carrying costs arising from such an investment and provides for their future recovery. Capital additions in 2023 do not include AFUDC.

5.6 Accumulated Depreciation

Accumulated Depreciation is a contra asset account that reduces the carrying costs of the underlying asset (such as any plant asset) in recognition of its finite useful life and diminishing economic value with the passage of time. Annual Depreciation expense adds to the Accumulated Depreciation balance whereas plant retirements and net proceeds from disposition reduce it.

The change in Accumulated Depreciation is explained entirely by the change in annual Depreciation expense. Table 31 provides details on the Accumulated Depreciation.

5.7 Contributions in Aid of Construction (CIAC)

A customer may be required to make a financial contribution to extend utility services, a Contribution in Aid of Construction, if the incremental cost of extending the service exceeds forecast incremental revenue over the planned or contracted period of service duration. When required, such contributions protect existing customers from subsidizing the costs of new customer connections.

CIAC reduces the rate base and its net balance decreases over time recognizing the effect of depreciation. Table 32 below details the balances of the Gross CIAC, Accumulated Depreciation and the Net CIAC.

Consistent with the proposed recovery of the System Contribution from NEFC customers over the remaining depreciable life of the NEFC assets, the contribution will be amortized over 22 years. Please refer also to Schedule 6 for further details on CIAC.

Table 32: Contributions in Aid of Construction – Consolidated Core and NEFC

	2023 Pending Approval	2024 Test Year
Gross CIAC		
Opening Balance	(1,781,385)	(1,781,385)
Repayments	-	-
Additions	-	-
NEFC Transfer	-	-
Closing Balance	(1,781,385)	(1,781,385)
Accumulated Depreciation		
Opening Balance	484,583	538,834
Depreciation	21,591	21,591
NEFC Contribution Depreciation	32,660	32,660
Closing Balance	538,834	593,085
Net CIAC		
Opening Balance	(1,296,802)	(1,242,551)
Closing Balance	(1,242,551)	(1,188,300)
Net Mid-Year CIAC	(1,269,677)	(1,215,426)

5.8 Allocation to Non-Regulated Operations

Creative Energy allocates a portion of building and land costs to non-Core TES operations and this allocation lowers the overall regulated rate base and the amount of revenue requirements to be collected through rates. Please refer to Schedule 8 for further details.

5.9 Working Capital

Working Capital¹⁸ represents Creative Energy’s investment in non-capital assets and accounts for the timing differences between payment of current period expenses (cash outlay) and their recovery in revenues. Table 33 below provides a summary for the Working Capital Requirements. Please refer also to Schedules 9 and 10.

Working capital requirements are calculated as forecast expenses multiplied by the applicable Lead/Lag Days, as currently approved by the Commission, plus any pre-paid expenses such as fuel oil inventory. Table D-13 in Appendix D provides more details on the Approved Net Lead Days for the Working Capital.

Table 33: Working Capital Requirements

	2023 Pending Approval	2024 Test Year
Natural Gas & Oil Purchases	-	-
Operation & Maintenance Expense	424,810	484,388
Insurance	97,393	121,976
Other	-	-
Municipal Taxes	(230,000)	(245,102)
Income Tax Expense	(200,500)	(51,292)
Property Taxes	322,425	316,725
Subtotal	414,128	626,695
Oil Inventory	156,528	399,407
Customer Deposits	(14,275)	(14,275)
Work in Process	-	-
Total	556,381	1,011,827

¹⁸ Working capital is the amount of funds required to finance the day-to-day operations of a regulated utility and are included as part of rate base for ratemaking purposes.

6 Deferral Accounts

6.1 Rate Base Deferral Accounts

6.1.1 Current Deferral Accounts

6.1.1.1 After-Tax Regulatory Pension Asset Account

The After-Tax Regulatory Pension Asset Account is equal to the average of the opening balance of the pre-tax pension asset reported on the most recently audited financial statements (December 31, 2022) and an ending balance based on estimated employer contributions for 2024 less approved forecast pension expense for 2024. The average balance is then multiplied by the tax rate. Creative Energy is not currently required to make solvency payments into the pension plan above its current service cost. Creative Energy plans to provide further details on this account in future evidentiary updates as part of the 2024 RRA proceedings.

6.1.2 Proposed Deferral Accounts

6.1.2.1 Revenue Deficiency Deferral Account (RDDA)

Creative Energy is requesting approval of a Revenue Deficiency Deferral Account (RDDA) on an ongoing and permanent basis to manage the non-recurring costs that are being incurred in 2024 to support the resilience of the utility. The requested approval for the RDDA would have an effective date of January 1, 2024.

As described through the Application, Creative Energy is making key strategic investments across several areas of the business that support the long-term sustainability of the Core System. These costs are essential to our operations and include expenditures like Remote Metering ([Section 3](#)) and Information Technology Services ([Section 4.2.4](#)).

While these costs are essential to the operations of the Core System, their benefits are expected to be realized over an extended period time, and the impact that these investments would have on rates should be mitigated through an allocation to future customers of the utility. Accordingly, Creative Energy submits that it is appropriate to defer these costs over a period that extends beyond the current Application (3-5 years).

On the basis that a portion of the cost associated with strategic investments are appropriately borne by future utility customers, Creative Energy is proposing that \$500,000 of expenditures from the current revenue requirement accrue to the RDDA in 2024. By allocating a portion of the overall revenue requirement to the RDDA, Creative Energy will seek to mitigate rate impacts to current customers and limit the expected rate increase to 11.4%.

6.2 Non-Rate Base Deferral Accounts

6.2.1 Introduction

This section summarizes non-rate base deferral accounts in effect or proposed and the forecast balances reported to this point in time for proposed recovery in rates in 2024. Final balances in the non-rate base deferral accounts will be confirmed as part of future evidentiary updates as part of the proceedings of this Application.

There exist seven deferral accounts that are non-rate base deferrals, as follows:

1. Pension Expense Deferral Account (PEDA);
2. Third Party Regulatory Costs Deferral Account (TPRCDA);
3. Water Cost Deferral Account (WCDA);
4. Property Tax Deferral Account (PTDA);
5. Load Forecast Variance Account (LFVA);
6. Refinancing Cost Deferral Account (RCDA); and
7. Steam Distribution Network Study Deferral Account (SDNSDA).

The following two sections discuss the Load Forecast Variance Account and the Steam Distribution Network Study Deferral Account in relation to Creative Energy's Long Term Resource Plan. Further details on the remaining accounts are laid out in Appendix C.

6.2.2 Load Forecast Variance Account

As stated in previous sections such as [section 1.3](#), Creative Energy assumes that the Load Forecast Variance Account (LFVA) is approved on a permanent basis, with an effective date of January 1, 2023. The LFVA effectively neutralizes the financial impacts of load forecast uncertainty and variance on an ongoing basis, whether related to weather or any other external factor that cannot be judged or controlled in advance with a reasonable degree of certainty. This account will thus secure to our customers the benefit of mitigating the impact of load forecast risk, while also easing the administrative and regulatory burden to develop and defend a specific, yet inherently uncertain, forecast level of load for year-to-year test period rate-setting. An extended definition of the LFVA could be found in Appendix C.

Recovery of the expected Ending Balance of this account for fiscal year 2023 is planned to be over the next three years as loads continue to stabilize, after which any variations should mostly reflect normal variations arising from weather, which is expected to result in small variances year over year. In the future we plan to propose and implement a more comprehensive standardized rolling average basis for test-year forecast load setting.

Table 34 below summarizes the expected load variance account balances for the year 2023. Scheule 12A provides further information on the Load Variance Account and other deferral accounts.

Table 34: Load Forecast Variance Account

Load Forecast Variance Account	Opening Balance	Additions/ (Deductions)	Interest/ AFUDC	Net Additions	Amortization	Ending Balance
2023	\$(421,224)	\$730,000	\$(4,217)	\$725,783	\$434,354	\$738,913
2024	\$738,913	-	\$58,005	\$58,005	-	\$796,918

Creative Energy has not amortized the balance of the LFVA in the current Application and will conclude a review of the observed changes in load before including these costs in rates. The balance may be amortized over a period extending beyond the current Application depending on the size of the balance after November and December 2023 results are known.

6.2.3 Steam Distribution Network Study Deferral Account

Creative Energy requested a one-time approval, effective the date of the 2023 RRA Application, of a Steam Distribution Network Study Deferral Account to record the expenses incurred in 2022 to commence study of the steam distribution network and the connected buildings (**Steam Distribution Network Study, or Study**). The Study has been developed to support pre-feasibility screening of options to modernize the steam distribution network and to provide information in support the development of Creative Energy’s Long-Term Resource Plan (**LTRP**) and associated Demand-Side Management (**DSM**) options and programs. Filing of the LTRP is due to the BCUC by end of March 2024.

The Study helps Creative Energy further understand and assess the following areas:

- Technical and economic feasibility of improving the safety, reliability, efficiency, and emissions of the steam distribution network through the modernization of the steam distribution piping with hot water piping, low temperature piping or installation of condensate piping (distribution piping modernization);
- Viability of Remote Metering; and
- Potential DSM opportunities within customer buildings.

The Study also aims at the following as part of its scope:

- Examining the mechanical systems in 25 (12%) of customer buildings to establish a knowledge database that informs potential options and opportunities;
- Compiling an inventory of HVAC systems in customer buildings, encompassing in-building steam requirements, hot water temperature specifications, the presence of cooling equipment, and the availability of sources of waste heat; and
- Conducting an initial screening of options, including the evaluation of outcomes related to system efficiency, greenhouse gas emissions, reliability, resiliency, safety impacts, as well as rate and cost considerations.

Table 35 below shows the Opening and Ending Balances for both fiscal 2023 and 2024.

Table 35: Steam Distribution Network Study Deferral Account

Steam Distribution Network Study Deferral Account	Opening Balance	Ending Balance
2023	\$71,575	\$219,177
2024	\$219,177	\$236,382

Creative Energy anticipates there will be additions in 2024 other than accrued interest but has not forecast them for the purposes of the 2024 Test Year and will update the application through future evidentiary updates as necessary. Estimated balances will be updated as more information becomes available regarding the end balance of this deferral.

Creative Energy has not amortized the balance of the Steam Distribution Network Study Deferral Account in the current Application and submits that the costs may be appropriately amortized over a period extending beyond the current Application.

6.2.4 Forecast Balances for Recovery in 2024 Rates

This section summarizes the forecast balances of the deferral accounts for rate recovery in the 2024 Test Year. Table 36 below provides details on each of the accounts discussed above and their respective Opening and Ending balances expected for fiscal year 2024.

Table 36: Projected Deferral Account Balances

Deferral Account Name	2024 Opening Balance	Interest/ AFUDC	Net Additions	Amortization	Ending Balance
Pension	\$378,707	\$29,729	\$29,729	\$(267,653)	\$140,783
TPRCDA	\$31,509	\$2,473	\$2,473	\$(33,983)	-
Water Cost Deferral Account	\$(5,363)	\$(421)	\$(421)	-	\$(5,784)
Property Tax Deferral Account	\$1,267	\$99	\$99	-	\$1,367
Load Variance Account	\$738,913	\$58,005	\$58,005	-	\$796,918
Financing Fees Deferral Account 2023	\$499,982	\$39,249	\$39,249	\$(249,991)	\$289,239
Steam Distribution Network Study Deferral Account	\$219,177	\$17,205	\$17,205	-	\$236,382
Total Deferred Accounts	\$1,864,193	\$146,339	\$146,339	\$(551,627)	\$1,458,905

Appendix A

Draft Order for Interim Approval of 2024 Rates

Order Number



IN THE MATTER OF
the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

Creative Energy Vancouver Platforms Inc.
2024 Revenue Requirements Application for the Core Thermal Energy System

ORDER

WHEREAS:

- A. On December 15, 2023, Creative Energy Vancouver Platforms Inc. (**Creative Energy**) filed with the British Columbia Utilities Commission (**BCUC**) its 2024 Revenue Requirements Application for the Core Thermal Energy Steam (**Core TES**)(**Application**).
- B. The Application requests, among other things, interim approval effective as of January 1, 2024 to increase the rates for the Core TES by 11.4 percent above the amounts applied for in the 2023 Revenue Requirements Application, as shown in Table 1 of the 2024 Application;
- C. Creative Energy requests the approval in recital B to be made effective on an interim basis, pending a final BCUC decision on the Application; and
- D. The Commission has commenced its review of the Application and is satisfied that the setting of interim rates for 2024 is warranted.

NOW THEREFORE, pursuant to sections 58 to 60 and 90 of the Utilities Commission Act and section 15 of the Administrative Tribunals Act, the BCUC orders as follows:

1. The Core TES rates set out at Appendix B of the Application are approved on an interim and refundable basis, effective January 1, 2024 and subject to further order of the BCUC.
2. The rates approved by this order will remain interim and subject to refund/recovery or adjustment with interest at Creative Energy's cost of debt until further order of the BCUC.
3. Creative Energy is directed to refile with the BCUC the rate schedules reflecting the interim rate changes for endorsement by the BCUC within 10 days of the issuance of this order, in accordance with the terms of this order.

4. Creative Energy must provide all Creative Energy TES customers with notification of the interim rate changes as soon as is practicable.

DATED at the City of Vancouver, in the Province of British Columbia, this _____ day of January 2024.

Appendix B

2024 Interim Tariff Page for Approval

CREATIVE ENERGY VANCOUVER PLATFORMS INC.

15. RATE SCHEDULE

Applicability: The Core steam network and NEFC hot water network served by the Core TES Utility.

Class of Service: Thermal Energy Service.

Thermal Energy Service Rates:

For customers connected to the Core steam network:

\$ 16.93 per thousand pounds (M#) of steam for the first 50 M# of steam per month
\$ 14.33 per M# of steam for the next 150 M# of steam per month
\$ 12.69 per M# of steam for the next 800 M# of steam per month
\$ 10.06 per M# of steam for the remainder per month

For customers connected to the NEFC hot water network, applying a 0.347 MWh/M# conversion factor:

\$ 48.79 per MWh of thermal energy for the first 17 MWh of thermal energy per month
\$ 41.30 per MWh of thermal energy for the first 52 MWh of thermal energy per month
\$ 36.56 per MWh of thermal energy for the first 278 MWh of thermal energy per month
\$ 28.99 per MWh of thermal energy for the remainder per month

Effective January 1, 2024, the rates above include an interim rate increase approved by **Order G-xx-xx**.

Fuel Cost Adjustment Charge (FCAC):

For customers connected to the Core steam distribution network:

FCAC	\$16.95 per M# of steam
Rate Rider - Stabilization Account Amortization	\$0.00 per M# of steam
Total	\$16.95 per M# of steam

FCAC charge effective November 1, 2023, as approved by BCUC Order G-314-23

For customers connected to the NEFC hot water distribution network, applying a 0.347 MWh/M# conversion factor to the approved charges above.

FCAC	\$48.85 per MWh of thermal energy
Rate Rider - Stabilization Account Amortization	\$0.00 per MWh of thermal energy
Total	\$48.85 per MWh of thermal energy

System Contribution Charge:

For customers connected to the NEFC hot water distribution network:

System Contribution Charge \$10.60 per MWh of thermal energy

For the purpose of interim rates effective January 1, 2024, the level of the System Contribution Charge is set equal to the amount determined in accordance with and for approval in Creative Energy's 2023 Rate Structure and Revenue Requirements Application for the Core TES. A permanent rate level will be determined in accordance with the determinations and directives of a future order approving the 2023 Application, which will be subject to a compliance filing and an evidentiary date to be filed in January 2024.

Air Conditioning:

A 15% discount will be given to metered thermal energy used for air conditioning through the months of May, June, July, and August based on the average price, as calculated pursuant to the rates set out above, per unit of thermal energy per month used by the Customer concerned. The 15% discount only applies to Thermal Energy Service Rates and not the FCAC.

Issued by:	Accepted for Filing:
Colin Robb	
Director, Regulatory Affairs	Commission Secretary British Columbia Utilities Commission
Creative Energy Vancouver Platforms Inc. Suite 1, 720 Beatty Street Vancouver, B. C. V6B 2M1	Effective Date: January 1, 2024

Appendix C

Definitions

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(i) Capital Additions

- **Steam Plant:** production of steam; NEFC steam to hot water plant, boiler work, Beatty steam plant electrical, instrumentation or mechanical equipment used in the plant.
- **Distribution System:** Any piping, manhole or auxiliary equipment used in the steam network and NEFC hot water network.
- **Customer Building Services:** Meter replacements, upgrades or pressure reducing station improvement; for example, the installation of a primary and secondary pressure reducing station where previously only a primary station was installed, or installation of an access platform (safety) to a pressure reducing station.
- **Customer Connections:** Costs directly associated with adding new customers, including the pipe section from existing mains to building mechanical room, pressure regulating station, Energy Transfer Station, meter station, equipment insulation, mechanical and electrical install, commissioning, permits, fees, and management.

(ii) Financial Calculations and Considerations

- **Depreciation Methodology:** As per its existing depreciation methodology, Creative Energy uses a “pooled” or asset class depreciation approach, as opposed to depreciating individual assets. Under the asset class approach, all the capital additions to Utility plant are categorized and assigned to a specific asset class with its own specific depreciation rate. This depreciation rate is then applied to the asset class balance to arrive at the total annual depreciation expense for the class. Creative Energy uses a “straight-line” depreciation method for recognizing and recording the annual depreciation expense for each asset class. The depreciation rates are based on an estimated useful life for a “typical asset” in each class. Thus, the rates can either be expressed on a percentage or number-of-years basis. The asset classes and applicable rates are listed in the table below;
- **Electricity Expenses:** Creative Energy takes electricity service from BC Hydro under Large General Service Rate Schedule 1611. Electricity costs for the Test Year use the BC Hydro rates in effect at the time that forecast costs are determined and adjust for inflation. Electricity usage and peak demand are not consistent over time and may not predictably vary with load as other factors also drive electricity costs, such as the use of electric pumps in the summer months. Considering that this balance is not as material as an item such as water costs, for example, we consider that this simplified approach is appropriate and does not sacrifice accuracy to a material amount;
- **Income Tax Calculation:** Income taxes are a function of the return on equity (net income) and the timing difference between accounting depreciation and the tax capital cost allowance (CCA). The incremental income tax expense impact is created by adding the NEFC assets into rate base, which increases the return on equity. In turn, Creative Energy updated the CCA tables used for calculating Core rates to include the undepreciated capital cost (UCC) for the NEFC system and the accounting depreciation for NEFC in the tax calculation;
- **Load Forecast Variance Account:** calculated as the difference between Test-Year Actual Load and Test-year Forecast Load multiplied by the approved average rate for thermal energy service during the test-period in question. This difference constitutes the Revenue Deferral in the LFVA. Revenue Deferral, whether an increase or decrease overall, is applied to the subsequent years revenue requirements in the normal course of administration of such deferral accounts in Creative Energy RRAs, subject to evaluating on a case-by-case basis the overall balance and the proposed timing for recovery in relation to whether any smoothing of the rate impact of the

recovery of the deferral is warranted. As such, the Revenue Variance from the previous year is reported as past of the revenue requirements for this Test Year RRA.

- **Municipal Access Fee:** equals to 1.25 percent of Tariff Revenues plus a flat fee that the City escalates at 2 percent for 2024 plus an historical adjustment of \$0.41 per MMBTU multiplied by 1.25 percent to compensate the City for the component of the rate that at one time included gas costs; and
- **Wages and Benefits:** The only external cost categorization under 'Wages and Benefits' are pension-related costs are the only external cost categorization under 'Wages and Benefits', while wages, overtime and benefits are categorized as generally controllable, although subject to external factors such as labour market trends and inflation, for example;
- **Water Expenses:** Water costs are estimated based on the projection model which takes the historical actual load and compares it to water usage per actual historical bills. The projected load for the current year is applied to the model and an estimate of water usage for next year. This usage is multiplied by an estimated rate for next year. As actual water usage is based on load and City of Vancouver water rates are unknown at the time of submitting the RRA, Creative Energy has an approved deferral account in place to capture the difference between actual and approved water costs. The City of Vancouver charges Creative Energy water and sewer fees together as part of its quarterly water billing. These costs are externally and outside of Creative Energy's control and correlate very closely with steam load;
- **Water Treatment Expenses:** Water treatment costs also vary with load, but the relationship is not as direct as in the case of water costs. Historical actual costs compared to load do not provide evidence of a relationship between load and costs. The estimate is based on a bottom-up budget prepared by the operations team but could be influenced by the balance of inventory remaining at the end of the current year.

(iii) Information Technology Services

- **Information Technology (IT):** Hardware, software, and networking components used to manage and store data, primarily focused on managing the technology infrastructure that supports an organization's business processes and decision-making activities;
- **Information Systems (IS):** Combination of people, processes, and technology used to organize, analyze, and disseminate information in organizations. It encompasses a broader range of topics, including business strategy, management, and the use of technology to meet organizational goals;
- **Cybersecurity (CS):** Protecting technology infrastructure from unauthorized access, theft, and damage. Involves the implementation of measures such as firewalls, encryption, and access controls to prevent cyberattacks and ensure the confidentiality, integrity, and availability of information; and
- **Operational Technology (OT):** Hardware and software components used to manage and control the physical processes and operations of an organization. Includes systems such as industrial control systems (ICS), supervisory control and data acquisition (SCADA) systems, and other technology that is used to monitor and control industrial processes.

(iv) Operations and Maintenance Cost Drivers and Controls

- **Information Technology Services:** includes Information Technology, Information Systems, Cybersecurity and Operational Technology;
- **Special Services (Regulatory, Audit, third-party consultants):** Special services in relation to regulatory costs and audit fees are categorized as external, while outside legal fees and consultants are considered as generally controllable (although the latter might at times depend on the specific driver of work need and any related decisions to manage peak work requirements externally versus internally);
- **Water and Electricity Expenses:** Water fees, water treatment costs and electricity costs are all externally set and vary with load;
- **Maintenance (including parts, supplies, safety and vehicles):** They are considered overall as within management control even though a specific driver of required maintenance may at times be an external event and requirements are influenced by external factors such as technical safety regulations; and
- **Other General & Administration plus Sales Expenses (e.g. insurance, office expenses):** They are categorized as generally controllable in relation to office-related expenses, such as supplies, phones and information technology, as well as directors' fees, sales expense and WCB-related costs, while externally driven amounts relate to insurance, permits and bank charges.

(v) Non-Rate Base Deferral Accounts:

- **Pension Expense Deferral Account (PEDA):** The PEDA is approved by Order G-98-15 on an ongoing basis. The PEDA captures the annual variance between forecast Pension expenses recovered in rates and the pension expense reported in financial statements, with the balance to be amortized over one year at a carrying cost equal to Creative Energy's short-term debt rate. Recorded variances include expenses related to revaluation gains and losses;
- **Third Party Regulatory Costs Deferral Account (TPRCDA):** The TPRCDA is approved by Order G-310-21 on an ongoing basis. The TPRCDA captures the annual variance between forecast and actual third-party costs relating to regulatory filings and proceedings required under the Act, with the balance to be amortized over one year. Recorded variances include quarterly Commission fees, Commissioner and Commission Contractor costs charged to individual proceedings, Intervenor Participant Assistant Cost Awards as well as the costs of external legal services that support Creative Energy's regulatory submissions and proceedings;
- **Water Cost Deferral Account (WCDA):** The WCDA was approved by Order G-345-22 on an ongoing basis. The WCDA captures the annual variance between forecast water costs recovered in rates and actual water costs reported in the financial statements, with the balance amortized over one year at a carrying cost equal to Creative Energy's short-term debt rate;
- **Property Tax Deferral Account (PTDA):** The PTDA was approved by Order G-310-21 on an ongoing basis. The PTDA captures the annual variance between forecast property tax costs recovered in rates and actual property tax costs reported in the financial statements, with the balance to be amortized over one year and attract a carrying cost equal to Creative Energy's approved debt rate;
- **Water Cost Deferral Account (WCDA):** The WCDA was approved by Order G-345-22 on an ongoing basis. The WCDA captures the annual variance between forecast water costs recovered in rates and actual water costs reported in the financial statements, with the balance amortized over one year at a carrying cost equal to Creative Energy's short-term debt rate; and

- **Refinancing Cost Deferral Account (RCDA):** The RCDA records the refinancing costs that Creative Energy is required to pay when debt facilities mature and where facilities are required to renew its debt agreement, but which cannot be forecast at the time of filing an RRA.

Appendix D

Tables

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Table D- 1: Total Core & NEFC O&M by Business Function

Acct. #	Account Name	2023 Application	2023 Projected	2024 TEST YEAR
	Steam Production-Operation			
500	Supervision and Labour	1,742,515	1,788,380	1,913,502
502	Steam Expenses	1,337,389	1,463,425	1,524,109
	Total Steam Production-Operation	3,079,904	3,251,805	3,437,611
	Steam Production-Maintenance			
506	Structures and Improvements	98,789	0	0
512	Steam Production Equipment	0	0	0
	Total Steam Production-Maintenance	98,789	0	0
	Distribution Expenses-Operation			
870	Supervision & Labour	876,770	921,093	919,892
874	Mains & Services	31,159	12,633	26,376
878	Removing & Resetting Meters	0		
880	Other Distribution Operation	0		
933	Transportation	19,227	15,828	12,345
	Total Distribution Expenses-Operation	927,155	949,555	958,612
	Distribution Expenses - Maintenance			
885	Supervision & Labour	0		
886	Structures & Improvements	0		
887	Mains & Services	89,476	91,425	86,891
889	Meters & House Regulators	186,647	231,654	196,798
894	Other Distribution Maintenance	0		
	Total Distribution Expenses-Maintenance	276,123	323,079	283,690
	Customer Accounts Expenses-Operation			
901	Supervision	0		0
902	Meter Reading & Billing Delivery	0		0
903	Customer Records & Collection Exp	0		0
904	Uncollectible Accounts	0		0
	Total Customer Accounts Exp-Operation	0	0	0
	Sales Promotion Expenses-Operation			
910	Sales Expense	173,934	154,533	187,543
911	Advertising			
	Total Sales Promotion Exp - Operation	173,934	154,533	187,543
	Administrative & General - Operation			
915	Directors Fees	47,851	54,129	49,649
920	Admin & General Salaries	1,585,210	1,711,357	2,069,032
921	Office Supplies & Exp	405,384	407,537	758,669
922	Admin & General Exp	14,381	58,108	15,877
923	Special Services	509,714	901,491	343,449
924	Insurance	194,786	234,686	243,953
925	Injuries & Damages-WCB	7,294	10,409	13,024
926	Employee Benefits	191,750	174,400	230,886
930.1	Institutional or Goodwill Advert Exp	0	0	0
930.2	Other Admin. And General Exp	0	0	0
	Total Admin & General-Operation	2,956,370	3,552,116	3,724,538
	Administrative & General - Maintenance			
932	Maintenance of General Plant	32,048	21,207	32,240
	Total Admin & General-Operation	32,048	21,207	32,240
	Regulatory Gross O&M Expense	7,544,324	8,252,295	8,624,234
	O&M Expenses Allocated to Capital %			
	O&M Expenses Allocated to Capital \$			
	O&M Allocated to Affiliate			
	Regulatory Net O&M Expense	7,544,324	8,252,295	8,624,234

Table D- 2: Steam Production Supervision and Labour – Account 500 – Variance

Account 500 Supervision and Labour	Control	2023 Pending Approval to 2024 Test Year	
Wages	Internal	170,504	12.2%
Overtime	Internal	35,077	50.6%
Benefits	Internal	20,085	15.0%
Pension Costs	External	(54,680)	-38.7%
Total		170,987	9.8%
	Internal	225,667	13.0%
	External	(54,680)	-3.1%

Table D- 3: Distribution Supervision and Labour – Account 870 - Variance

Account 870 Supervision and Labour	Control	2023 Pending Approval to 2024 Test Year	
Wages	Internal	40,889	5.7%
Overtime	Internal	11,722	108.2%
Benefits	Internal	10,545	14.3%
Pension	External	(20,035)	-26.6%
Total		43,122	4.9%
	Total	63,157	7.2%
	Internal	(20,035)	-2.3%

Table D- 4: Management Labour and Benefits – Accounts 920 and 926 - Variance

Account 920 Admin & General Salaries	Control	2023 Pending Approval to 2024 Test Year	
Wages	Internal	483,633	30.51%
Account 926 Employee Benefits			
Benefits	Internal	39,842	22.15%
Pension	External	(524)	-4.40%
Subtotal		39,317	20.50%
Total		522,951	29.43%
	Internal	523,475	29.5%
	External	(524)	0.0%

Table D- 5: Historic perspective of Creative Energy’s position in the Information Technology landscape in the last 10 years in comparison to other utilities.

Year	Creative Energy	Comparisons
2013	Using paper-based accounting. An accounting system is implemented on-premises (i.e. services within an organization's physical location or data center) to digitize financials.	Organizations look to move their on-premises (i.e. services within an organization's physical location or data center) ERPs to cloud solutions. ERP start processing data in real-time, and leverage machine learning, IoT. ¹
2015	Managed Service Provider (MSP) is leveraged to host and support IT infrastructure (network and servers). MSP provides no strategic improvements and infrastructure stays stagnant until 2022.	Organizations start leveraging cloud solutions through cloud service providers (Azure, AWS, GCP) and strategically using IoT, cloud computing, risk-based security, and other solutions. ² BC Hydro finishes their Smart Metering program. ³
2022	Due to increasing cost and diminishing benefits a proposal for a	BC Hydro has had their Smart Meter program fully in production for

¹ [The History of ERP | NetSuite](#)

² [Gartner's Top 10 Strategic Technology Trends for 2015](#)

³ [Smart Metering program \(bchydro.com\)](#)

Year	Creative Energy	Comparisons
	<p>new MSP is put forward. Ricoh is selected as the new MSP.</p> <p>A proof-of-concept smart meter is installed and 2023 budget proposed for project to move all Creative Energy customers to smart metering.</p>	seven years.
2022	<p>AP automation solution, Laserfiche, is selected to organize, process, and provide better document management of invoices. Process is still manual, but now in a digital repository.</p> <p>Vena is selected as the Financial Planning tool to provide better visibility, reliability, and accuracy to financial forecasting, budgeting, etc.</p>	<p>Early 2000's sees online Optical Character Recognition (OCR) engines that can recognize text within a digital image being incorporated into ERPs and a shift away from manual data entry.</p> <p>Organizations look to machine learning and applied AI for automating process, improved data observability to improve speed and accuracy of data driven decisions.⁴</p>
2022	No cyber security program is in place.	Survey of regulated entities for Cybersecurity Framework pilot program. ⁵
2022	The move to Microsoft 365 provides modern solutions such as Exchange Online, Teams, and SharePoint.	<p>Organizations use cloud-first approaches to increase efficiency and agility, reduce or optimize costs, and develop innovative ideas, approaches, and methodologies.⁶</p> <p>Organizations implement business process through using low-code development and encouraging citizen developers.⁷</p>
2023	<p>Operations team continues to use Microsoft Access Database originally built in 1999 for maintenance tracking. System is not scalable or provide preventative maintenance, better customer service interactions, or integration with other systems.</p> <p>Smart meter project continues to convert customers consumption tracking from manual to automated tool, but data is manually entered into highly customized accounting system.</p> <p>Foundational systems and standardization are in the process of implementation.</p>	<p>Organizations look to optimize energy production and scheduling, detecting equipment defects early to minimize downtime, and analyze customer energy use data to inform personalized recommendations.⁸</p> <p>Tools such as Computerized Maintenance Management Software (CMMS)⁹ can track operational assets across the company allowing better visibility into preventative maintenance, failure rates, and result in an outcome of a proactive operations and data drive financial decisions and forecasting. Thus, leaning into providing proactive safety and reliability. Early 2000's sees the emergence of web-based CMMS applications.</p>
2023	<p>Ricoh completes infrastructure migration and onboarding project(s). Post-implementation review and assessment of service finds multiple deficiencies in project scoping, runaway costs, cybersecurity and a lack of reliable support, proactive services, communication.</p> <p>Three MSPs are assessed over three months and Nucleus Networks is selected based on their ability to provide: reliable support, proactive management, a history of proven success, transparent communication, and be a trusted partner. Ricoh is replaced in September 2023.</p>	<p>Cybersecurity Framework pilot program is established.</p> <p>ChatGPT goes mainstream and organizations flock to assess how generative AI can be incorporated into their people, processes, and technology.¹⁰</p>

Table D- 6: Special Services – Account 923 – Variance

Account 923 Special Services	Control	2023 Pending Approval to 2024 Test Year	
Audit Fees	External	(6,492)	-7.4%

⁴ [mckinsey-tech-trends-outlook-2022-full-report.pdf](#)
⁵ [Cybersecurity Framework Pilot - BCUC](#)
⁶ [us-future-of-cloud-survey-report.pdf \(deloitte.com\)](#)
⁷ [What Is Citizen Development? The Low-Code/No-Code Revolution Organizations Should Go All In On \(forbes.com\)](#)
⁸ [mckinsey-tech-trends-outlook-2022-full-report.pdf](#)
⁹ [What is a CMMS? Definition, how it works and benefits | IBM](#)
¹⁰ [A Short History Of ChatGPT: How We Got To Where We Are Today \(forbes.com\)](#)

Legal Fees	Internal	12,101	42.2%
Outside Services	Internal	(12,511)	-15.1%
Regulatory	External	885	0.6%
Steam Distribution Network Study	Internal	(140,000)	-100%
Opportunity Assessments and 3 rd Party Engineering	Internal	(20,250)	-100%
Total		(166,266)	-32.6%
	Internal	(5,607)	-2.4%
	External	(160,659)	-59.1%

Table D- 7: Water and Electricity Related Expenses – Account 502 Partial and Account 874 – Variance

Account	Control	2023 Pending Approval to 2024 Test Year	
502 Steam Expenses - Partial			
Water	External	53,435	6.1%
Electricity	External	8,725	8.7%
Water Treatment	External	(32,744)	-24.4%
Subtotal	External	29,416	2.6%
874 Mains and Services			
Electricity	External	9	3.2%
Water Mains	External	(4,792)	-15.5%
NEFC Operating Costs	External	-	-
Subtotal	External	(4,783)	-15.4%
Total		24,633	2.2%
	Internal	-	-
	External	24,633	2.2%

Table D- 8: Maintenance– Multiple Accounts – Variance

Account	Control	2023 Pending Approval to 2024 Test Year	
502 Steam Expenses - Partial	Internal	157,304	70.4%
506 Structures and Improvements	Internal	(98,789)	-100.0%
880 Other Distribution Operation	Internal	-	-
933 Transportation	Internal	(6,854)	-35.6%
887 Mains and Services	Internal	(2,585)	-2.9%
889 Meters & House Regulators	Internal	10,151	5.4%
932 Maintenance of General Plant	Internal	192	0.6%
Total		59,420	9%
	Internal	59,420	9.15%
	External	-	-

Table D- 9: Other General & Administrative – Multiple Accounts - Variance

Account	Control	2023 Pending Approval to 2024 Test Year	
915 Directors Fees	Internal	1,798	3.8%
921 Office Supplies & Expenses	Internal	353,289	87.1%
922 Admin & General Expenses	Internal	(166,266)	-32.6%
924 Insurance	External	49,167	25.2%
925 Injuries & Damages - WCB	Internal	5,199	71.3%
Total		244,682	21%
	Internal	194,388	16%
	External	50,294	4%

Table D- 10: Municipal Taxes – Consolidated Core and NEFC

	2023 Pending Approval	2024 Test Year
Revenue Requirement	13,469,482	14,975,857
Tax Rate	1.25%	1.25%
Municipal Tax on Steam Revenue	168,369	187,198
Prior Year Flat Fee	166,920	170,258
Rate Increase	2%	2%
Escalated Flat Fee	170,258	173,663
Total Municipal Tax	338,627	360,861

Table D- 11: Calculation of the MMBTU gas adjustment:

	2023 Pending Approval	2024 Test Year
Steam M#	1,144,000	1,147,000
Rate to convert M# to MMBTU	1.19	1.19
Gas BTU	1,361,360	1,364,930
Tariff Rate	0.41	0.41
Adjustment	558,158	559,621

Table D- 12: Core Asset Classes and Depreciation Rates

Acct. #	Account Name	Dep. Rate	Acct. #	Account Name	Dep. Rate	Acct. #	Account Name	Dep. Rate
Steam Production Plant			Distribution Plant			General Plant		
311	Structures & Improvements	1.50%	376	Mains	2.00%	390	Structures & Improvements	1.50%
312.1	Boiler Plant Equipment	2.50%	378	Manhole Structures	1.50%	391	Office Furniture & Equipment	5.00%
312.2	Boiler Tanks Equipment	2.50%	380	Services	2.00%	391.1	Office Electronics	20.00%
312.3	Boiler Auxiliary Equipment	5.00%	381	Meters	3.00%	392	Transportation Equipment	15.00%
315	Accessory Electric Equipment	5.00%	382	House Regulators & Meter Instal.	3.00%	393	Stores Equipment	5.00%
316	Other Steam Production Equipment	5.00%	387	Other Distribution Equipment	5.00%	394	Tools & Work Equipment	5.00%
						398	Other General Equipment	5.00%

Table D- 13: Working Capital – Approved Net Lead (Lags) Days

	2023 Pending Approval	2024 Test Year
Natural Gas & Oil Purchases	0.09	0.09
Operation & Maintenance Expense	21.10	21.10
Other	136.88	136.88
Municipal Taxes	(247.91)	(247.91)
Income Tax Expense	(142.91)	(142.91)
Insurance	182.50	182.50
Property Taxes	136.88	136.88

Appendix E

Capital Additions

Table E- 1: Summary Table for Capital Expenditures

	2021 Actual	2022 Actual	2023 Projected	2024 Test Year
Total Capital Additions	786,179	2,306,912	2,872,117	4,646,368
Steam Plant	393,011	501,077	536,854	360,000
Distribution System	11,467	1,114,343	2,099,518	1,735,279
Customer Building Services	67,479	146,221	111,626	160,000
Customer Connections	204,615	496,985	(13,681)	-
Other	109,607	48,286	137,800	2,391,089

Table E- 2: Detailed Capital Expenditures

	2022 Approved	2022 Actual	Variance	2023 Pending Approval	2023 Projected	Variance	2024 Test Year
Steam Production Plant							
Bellows	-	68,836	68,836	-	-	-	-
Main Service Line	-	12,036	12,036	-	-	-	-
Refractory	-	199,029	199,029	-	452,806	452,806	-
Feedwater Pump	-	39,757	39,757	-	74,048	74,048	100,000
Power System	-	180,224	180,224	-	-	-	-
Fan Rebuilds	-	1,195	1,195	-	10,000	10,000	-
Dearator	-	-	-	-	-	-	80,000
Boiler 3	-	-	-	-	-	-	180,000
Miscellaneous Boiler Work	-	-	-	85,000	-	(85,000)	-
Subtotal	-	501,077	501,077	85,000	536,854	451,854	360,000
Steam Distribution System							
MB-1 Manhole Rebuild	1,016,143	-	(1,016,143)	880,050	1,034,477	154,427	-
MB-2 Manhole Rebuild	950,000	-	(950,000)	718,667	801,050	82,383	-
Manhole Reassessment	-	-	-	-	-	-	60,000
MJ1	-	-	-	-	-	-	800,000
MA-9 Manhole Rebuild	-	1,058,981	1,058,981	-	-	-	-
MA-85 Drainage	-	14,496	14,496	-	-	-	-
ML4	-	18,606	18,606	-	-	-	-
MP1	-	19,754	19,754	-	-	-	-
ML10 & ML11	-	2,506	2,506	-	-	-	-
MD-1 Manhole Rebuild	-	-	-	850,000	-	(850,000)	875,279

	2022 Approved	2022 Actual	Variance	2023 Pending Approval	2023 Projected	Variance	2024 Test Year
Insulation Hamilton/Dunsmuir	-	-	-	-	121,386	121,386	-
177 West Pender Line Rebuild	-	-	-	50,000	142,605	92,605	-
Subtotal	1,966,143	1,114,343	-851,800	2,498,717	2,099,518	(399,199)	1,735,279
Building Services							
Meter Upgrades	80,000	75,737	-4,263	95,000	62,160	(32,840)	100,000
Rebuild Pressure Reducing Valves	60,000	55,506	-4,494	75,000	49,466	(25,534)	60,000
Meter Upgrades (NEFC)	-	14,978	14,978	-	-	-	-
Heat Exchanger (NEFC)	-	-	-	55,856	-	(55,856)	-
Subtotal	140,000	146,221	6,221	225,856	111,626	(114,230)	160,000
Customer Connections							
Vancouver Post Office	-	451,378	451,378	-	-	-	-
410 West Georgia	-	4,143	4,143	-	-	-	-
YMCA Burrard	-	41,464	41,464	-	-	-	-
Other Customer Connections	-	-	-	-	(13,681)	(13,681)	-
Subtotal	-	496,985	496,985	-	(13,681)	(13,681)	-
Other (Office Electronics)							
Ricoh Laserfiche (AP Automation)	50,000	-	(50,000)	19,240	-	(19,240)	50,000
Vena (Reporting and FP&A software)	100,000	-	(100,000)	63,680	-	(63,680)	150,000
IT Transition	-	15,958	15,958	-	-	-	-
IT Capital Costs	-	-	-	163,385	-	-	648,719
Remote Metering	-	-	-	-	-	-	1,518,370
Office and Other	-	32,328	32,328	-	137,800	137,800	24,000
Subtotal	150,000	48,286	(101,714)	246,305	137,800	(108,505)	2,391,089
Total	2,256,143	2,306,912	50,769	3,055,878	2,872,117	(183,761)	4,646,368

Appendix F

Management Allocations

Table F- 1: Management Allocations

	2024 Test Year							2023 Pending Approval						
	Time Allocation		CEVP and TES Affiliate in BC					Time Allocation		CEVP and TES Affiliate in BC				
	CEVP and TES Affiliates in BC	CE Ventures and TES Affiliates outside of BC	Assignment of Capital and Expense			Net Expense Assignment to Core TES RRA		CEVP and TES Affiliates in BC	CE Ventures and TES Affiliates outside of BC	Assignment of Capital and Expense			Net Expense Assignment to Core TES RRA	
			Direct Assignment of Capital to CEVP & TES Affiliate in BC	Expensed to CEVP and TES Affiliate in BC	Net Expense to CEVP and TES Affiliate in BC	Direct Assignment	Mass. Form.			Direct Assignment of Capital to CEVP & TES Affiliate in BC	Expensed to CEVP and TES Affiliate in BC	Net Expense to CEVP and TES Affiliate in BC	Direct Assignment	Mass. Form.
Roles Charging Expense to Core System Allocated Via Mass Formula														
Chief Executive Officer	50%	50%	0%	100%	50%	n/a	Yes	50%	50%	0%	100%	50%	n/a	Yes
Chief Financial Officer	50%	50%	0%	100%	50%	n/a	Yes	50%	50%	0%	100%	50%	n/a	Yes
Director, Regulatory Affairs	90%	10%	17%	83%	75%	n/a	Yes	100%	0%	35%	65%	65%	n/a	Yes
Director, Operations	100%	0%	0%	100%	100%	n/a	Yes	100%	0%	0%	100%	100%	n/a	Yes
Director, Finance (Controller)	60%	40%	0%	100%	60%	n/a	Yes	60%	40%	0%	100%	60%	n/a	Yes
Systems Analyst (Senior Accountant)	75%	25%	33%	67%	50%	n/a	Yes	50%	50%	0%	100%	50%	n/a	Yes
Manager, Financial Reporting (Senior Accountant)	50%	50%	0%	100%	50%	n/a	Yes	50%	50%	0%	100%	50%	n/a	Yes
Intermediate Accountant	40%	60%	0%	100%	40%	n/a	Yes	60%	40%	34%	66%	40%	n/a	Yes
Junior Accountant	50%	50%	0%	100%	50%	n/a	Yes	50%	50%	0%	100%	50%	n/a	Yes
Office Coordinator (in 2023 included AP)	50%	50%	0%	100%	50%	n/a	Yes	55%	45%	9%	91%	50%	n/a	Yes
AP Clerk	50%	50%	0%	100%	50%	n/a	Yes	N/A - New Role in 2024						
Systems Engineer	95%	5%	79%	21%	20%	n/a	Yes	100%	0%	20%	80%	80%	n/a	Yes
Senior Manager, Regulatory	90%	10%	17%	83%	75%	n/a	Yes	100%	0%	35%	65%	65%	n/a	Yes

	2024 Test Year							2023 Pending Approval						
	Time Allocation		CEVP and TES Affiliate in BC				Time Allocation		CEVP and TES Affiliate in BC					
	CEVP and TES Affiliates in BC	CE Ventures and TES Affiliates outside of BC	Assignment of Capital and Expense			Net Expense Assignment to Core TES RRA		CEVP and TES Affiliates in BC	CE Ventures and TES Affiliates outside of BC	Assignment of Capital and Expense			Net Expense Assignment to Core TES RRA	
			Direct Assignment of Capital to CEVP & TES Affiliate in BC	Expensed to CEVP and TES Affiliate in BC	Net Expense to CEVP and TES Affiliate in BC	Direct Assignment	Mas. Form.			Direct Assignment of Capital to CEVP & TES Affiliate in BC	Expensed to CEVP and TES Affiliate in BC	Net Expense to CEVP and TES Affiliate in BC	Direct Assignment	Mas. Form.
Senior Manager, IT	90%	10%	0%	100%	90%	n/a	Yes	66%	34%	0%	100%	66%	n/a	Yes
Manager, Enterprise Applications	90%	10%	0%	100%	90%	n/a	Yes	N/A - New Role in 2024						
Security Analyst	90%	10%	0%	100%	90%	n/a	Yes	N/A - New Role in 2024						
Regulatory Analyst	90%	10%	0%	100%	90%	n/a	Yes	N/A - New Role in 2024						
Commercial Manager (Customer Support)	90%	10%	0%	100%	90%	n/a	Yes	N/A - New Role in 2024						
Automation Specialist	80%	20%	81%	19%	15%	n/a	Yes	N/A - New Role in 2024						
VP, HR	15%	85%	0%	100%	15%	n/a	Yes	25%	75%	0%	100%	25%	Yes	n/a
HR Specialist	15%	85%	0%	100%	15%	n/a	Yes	N/A - New Role in 2024						
Roles Charging Expense to Core System Allocated Via Direct Charge														
Director, Development	50%	50%	10%	90%	45%	Yes	n/a	50%	50%	0%	100%	50%	Yes	n/a
Development Engineer	100%	0%	5%	95%	95%	Yes	n/a	90%	10%	0%	100%	90%	Yes	n/a
Director of Engineering (LTRP)	65%	35%	77%	23%	15%	Yes	n/a	60%	40%	37%	63%	38%	Yes	n/a
Project Engineer (Coordinator) (LTRP)	90%	10%	72%	28%	25%	Yes	n/a	70%	30%	49%	51%	36%	Yes	n/a
VP, Development	18%	82%	72%	28%	5%	Yes	n/a	15%	85%	100%	0%	0%	n/a	n/a
Senior Manager, Commercial Development	10%	90%	0%	100%	10%	Yes	n/a	10%	90%	0%	100%	10%	Yes	n/a
Marketing Manager	20%	80%	0%	100%	20%	Yes	n/a	25%	75%	0%	100%	25%	Yes	n/a

	2024 Test Year							2023 Pending Approval						
	Time Allocation		CEVP and TES Affiliate in BC					Time Allocation		CEVP and TES Affiliate in BC				
	CEVP and TES Affiliates in BC	CE Ventures and TES Affiliates outside of BC	Assignment of Capital and Expense			Net Expense Assignment to Core TES RRA		CEVP and TES Affiliates in BC	CE Ventures and TES Affiliates outside of BC	Assignment of Capital and Expense			Net Expense Assignment to Core TES RRA	
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Commercial Analyst	20%	80%	0%	100%	20%	Yes	n/a	N/A - New Role in 2024						
Marketing Associate	20%	80%	0%	100%	20%	Yes	n/a	N/A - New Role in 2024						
Roles Charging Regulated Entity, but Not Expensed to Operations														
Director of Construction	88%	12%	100%	0%	0%	n/a	n/a	80%	20%	100%	0%	0%	n/a	n/a
Director of Projects	80%	20%	100%	0%	0%	n/a	n/a	100%	0%	100%	0%	0%	n/a	n/a
(Senior) Project Manager	100%	0%	100%	0%	0%	n/a	n/a	100%	0%	100%	0%	0%	n/a	n/a
(Senior) Project Manager	100%	0%	90%	10%	10%	n/a	n/a	90%	10%	100%	0%	0%	n/a	n/a
Project Engineer (Manager)	100%	0%	100%	0%	0%	n/a	n/a	95%	5%	100%	0%	0%	n/a	n/a
Project Engineer	100%	0%	100%	0%	0%	n/a	n/a	60%	40%	100%	0%	0%	n/a	n/a
Project Engineer	75%	25%	100%	0%	0%	n/a	n/a	N/A - New Role in 2024						
Engineering Coop Student	100%	0%	100%	0%	0%	n/a	n/a	100%	0%	100%	0%	0%	n/a	n/a
Engineering Coop Student	100%	0%	100%	0%	0%	n/a	n/a	N/A - New Role in 2024						
Project Manager (Engineer)	95%	5%	100%	0%	0%	n/a	n/a	0%	100%	n/a	n/a	n/a	n/a	n/a
Project Manager (Engineer)	100%	0%	100%	0%	0%	n/a	n/a	N/A - New Role in 2024						
Project Accountant	70%	30%	100%	0%	0%	n/a	n/a	39%	61%	100%	0%	0%	n/a	n/a
Development Engineer	75%	25%	100%	0%	0%	n/a	n/a	0%	100%	n/a	n/a	n/a	n/a	n/a
Senior Manager,	10%	90%	100%	0%	0%	n/a	n/a	30%	70%	100%	0%	0%	n/a	n/a

	2024 Test Year							2023 Pending Approval						
	Time Allocation		CEVP and TES Affiliate in BC				Time Allocation		CEVP and TES Affiliate in BC					
	CEVP and TES Affiliates in BC	CE Ventures and TES Affiliates outside of BC	Assignment of Capital and Expense			Net Expense Assignment to Core TES RRA		CEVP and TES Affiliates in BC	CE Ventures and TES Affiliates outside of BC	Assignment of Capital and Expense			Net Expense Assignment to Core TES RRA	
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Corporate Development and FP&A														
SVP, Engineering and Innovation	55%	45%	100%	0%	0%	n/a	n/a	55%	45%	64%	36%	20%	Yes	n/a
Roles Not Anticipated to Charge to Regulated Entity, but included in 2023 Budget														
VP, Legal	5%	95%	n/a	n/a	0%	n/a	n/a	20%	80%	100%	0%	0%	n/a	n/a
Law Clerk	5%	95%	n/a	n/a	0%	n/a	n/a	20%	80%	100%	0%	0%	n/a	n/a