CREATIVENERGY

1 December 2021

Via E-filing

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

Dear Mr. Wruck:

Re: British Columbia Utilities Commission (BCUC, Commission)
Creative Energy Vancouver Platforms Inc. (Creative Energy)
Application for Rates for the Core Steam system and Northeast False Creek (NEFC) service areas: Part 2 – Consolidated 2022 Revenue Requirements for Unified Rates

On November 1, 2021, Creative Energy filed for approval with the Commission our Application for Rates for the Core Steam system and Northeast False Creek (**NEFC**) service areas – Part 1 – Rate Structure (**Application Part 1**). Creative Energy now files further application – Part 2 – Consolidated 2022 Revenue Requirements for Unified Rates (**Application Part 2**). Financial schedules are attached electronically.

This Application Part 2 reflects Creative Energy's commitment to respond fully and promptly to the Directive 2.a in Order G-339-21, dated November 19, 2021, to deliver this filing on December 1, 2021 in accordance with the BCUC's Timing and Guidelines for Filing of Information (per BCUC Letter L-18-09 dated March 24, 2009). We also appreciate that this filing, and our responses to other applicable directives filed concurrently on today's date, will then support the regulatory process steps and participant submissions scheduled in early December, 2021[1] to support a Commission determination into the interim rates to be made effective January 1, 2022.

Creative Energy is compelled to both acknowledge the Commission concern and to seek to ensure a common understanding also that we are aware of the guidelines governing expected filing dates and do seek to meet such expectations, or to otherwise provide an explanation.

We do wish to seek to temper any remaining Commission concern, in respect of both the timing and content of our Application Parts 1 and 2 with the intent overall to place the Application today for interim

[1] The Application Part 1 was provided to Core and NEFC customers on November 22, 2021, for their review and feedback. As of this filing Creative Energy has not received any feedback from customers on the Application Part 1.

rates approvals in the proper context as it may assist.

Commission staff contacted Creative Energy in mid-October 2021 to inquire whether the Commission's delayed issuance of the 2021 Core RRA Decision[2] may raise any concern as to the timing of the filing of the 2022 Core RRA. We reviewed with Commission staff at that time that our expectation was to be able to target filing of the Core RRA by mid-December recognizing the contingent effect of the delay in finalizing supporting financial schedules in support of RRA project planning and development. We noted that Creative Energy's billing is monthly and we therefore expected that the Commission would then have over 30 days to review an interim rates proposal prior to the planned billing in early February for service provided during January, if that was considered reasonable. In a related matter we contacted Commission staff to provide an update that the outcome of the comprehensive review of the NEFC rate design was a proposal to consolidate the Core and NEFC cost of service, with the outcome therefore that only the rate structure component of the filing could be filed by November 1, 2021 and not a NEFC standalone revenue requirements application that was initially contemplated. Creative Energy was remiss to not have been more explicit as to these attendant effects also in the cover letter to its Application Part 1 following our discussions with Commission staff.

We believe that the Application (consisting of Parts 1 and 2) is complete in support of all requested approvals, but specifically also in regard to the request for approval effective January 1, 2022, on an interim basis of the unified thermal energy rates set out in Appendix B.

Further to the specific content of Application Part 2 we would aim to file by December 17, 2021, further detail on the specifics of the 2022 capital additions (similar to that which was included in the 2021 RRA at Appendix D) as well as variance explanations as between 2021 Approved and 2021 Projected additions (similar to that which was filed in response to the Panel request for further information at Exhibit A-2 in the 2021 Core RRA proceeding). Also as contemplated within the Application Part 2, we will be able to file an evidentiary update into the year-end balances of the non-rate base deferral accounts after we close the books for 2021, by February 11 or otherwise after that date in response to information requests in the proceeding to be established to review the Application.

As one final matter, the Commission directed Creative Energy in its Order G-310-21 Decision at page 44 to file a proposal for recovery of the COVID-19 deferral account in its next RRA. Creative Energy confirms that its intent is to be responsive to this directive and to propose a recovery mechanism for the COVID-19 deferral account balance, but to do so as a supplementary filing by December 17, 2021, for interim approval of a rate mechanism effective February 1, 2022. Our considered position at that this time is that the matter requires further review prior to bringing forward a proposal.

For further information, please contact the undersigned.

Sincerely,

Rob Gorter
Director, Regulatory Affairs and Customer Relations

[2] The Order G-310-21 Decision into the 2021 RRA was issued on October 29, 2021, and a Creative Energy compliance filing in relation to it was filed 30 days later on November 29, 2021 as directed.

Creative Energy Vancouver Platforms Inc.

Application for Rates for the Core Steam System and Northeast False Creek Service Areas

Part 2 - Consolidated 2022 Revenue Requirements for Unified Rates

December 1, 2021

Table of Contents

List of Tables

Appendices

1 Overview

1.1 Summary

This Application Part 2 – Consolidated 2022 Revenue Requirements (**Application Part 2**) presents the consolidated cost of service of the Core Steam system and NEFC system, further to the rate design proposals filed November 1, 2021 in the Application Part 1 – Rate Structure (**Application Part 1**).

Creative Energy Vancouver Platforms Inc. (**Creative Energy**) 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 200 buildings in downtown Vancouver (the **Core Steam** system). The Core Steam system also supplies thermal energy to Creative Energy's steam to hot water conversion plants and distribution system in Northeast False Creek (**NEFC** system) which serves four buildings in the NEFC neighbourhood of Vancouver.

In this Application Part 2 we present the unified rates for thermal energy service to the Core and NEFC customers on an equivalent dollar per thousand pounds of steam (**$/M#**) basis for comparison purposes, recognizing however that in respect of the proposed rate structure in the Application Part 1 Creative Energy seeks specific approval of rates under a single rate schedule for the Core Steam system, to include the following components:

- Thermal energy rates under the existing declining block tariff structure expressed in dollars per thousand pounds of steam ($/M#), if the customer is connected to the steam distribution network and their thermal energy consumption is metered as such; and

- Thermal energy rates under the existing declining block tariff structure expressed in dollars per megawatt hours of thermal energy ($/MWh), if the customer is connected to the hot water distribution network and their thermal energy consumption is metered as such;

On a consolidated basis, the increase in thermal energy rates as expressed on an equivalent $/M# steam rate basis represents an overall increase in the total 2021 average rate for thermal energy service of 6.3% as shown in Table 3, which is comprised of a 3% overall increase related to the Core Steam system cost of service, including amortization of deferrals, and a 3% overall increase associated with the consolidation of the NEFC cost of service into unified thermal energy rates for the system as a whole.

To support the presentation of the consolidated revenue requirements in this Application Part 2, we report separately the key revenue requirement components of the Core Steam system and the NEFC system in Tables 1 and 2, and further report the detailed O&M components of each system separately in section 2.1 of this Application Part 2. While the cost of service and revenue requirements of the Core and NEFC will be consolidated, and the impacts of doing so, additive, the separate reporting for the Core and NEFC is presented one last time in this RRA to facilitate a ready and useful comparison to recent RRAs where the forecast revenue requirements were presented separately. Thus, for example, the Massachusetts formula inputs reviewed in section 2.1.1 are reported separately for the Core and NEFC systems. The cost allocation ratios for the Core and NEFC under consolidation would be the sum of the respective ratios and the overall consolidated cost allocation would be unchanged.

Table 1 below presents a summary of the consolidated revenue requirements of the Core and NEFC for the 2022 Test Year, noting the separate reporting of specific components where applicable. Table 2 highlights the key cost-drivers, which factors and cost variances are elaborated upon and explained in section 2 of this Application Part 2.

Creative Energy's rates for thermal energy are exceedingly competitive in the industry, which reflects our embedded advantage of a significant economy of scale in thermal energy production and delivery. Our proposed thermal energy rates remain very low within that context alone. For example, please refer to the City of Vancouver annual comparison of its Neighbourhood Energy Utility rates to other energy providers, including Creative Energy.[1]

Our proposed thermal energy rates also remain very low notably upon the prospective removal of the inherent subsidy of Core Steam system rates that has persisted to date absent any fair allocation of the NEFC cost service to the Core Steam system in relation to the Core Steam tariff revenues that are collected from the NEFC.

In addition, the business context underpinning the 2022 RRA reflects a priority objective to promote and ensure the attraction and retention of the complement of staff necessary to deliver the nature and quality of service that our customers, stakeholders and regulators demand.

The cost-effectiveness of our service reflects the conviction of a small team of committed staff that strive to ensure the continued safe and reliable delivery of steam services, particularly as we transition to building the resiliency of the utility for the future in response to the imperative for low carbon climate action. It may also be regarded that the staff complement and payroll has continued to lag as we seek to meet the emergent needs of all our stakeholders to maintain safe and reliable service, to continue to provide and maintain timely and effective regulatory compliance, and to support the planning and project imperatives for climate action and long-term resource planning. The proposed thermal energy rates reflect these drivers directly.

[1] https://council.vancouver.ca/20201201/documents/spec1e.pdf

Table 1: Consolidated Revenue Requirements –Summary

Revenue Requirements Summary	2020	2021	2021	2022
Cost or Rate Component	**Actual***	**Approved**	**Projected**	**Application**
O&M - Total	5,081,024	5,439,641	5,441,487	6,120,321
Wages and Benefits (Steam, Distribution & Management)	2,969,031	3,361,878	3,246,511	3,619,436
Water-related and Electricity Expenses	983,021	929,937	1,005,231	976,073
Maintenance and related functional Operations	525,542	535,862	509,524	553,132
Special Services (Regulatory, Audit, Legal, Consultant)	291,630	298,966	357,838	339,792
Other General & Administration & Sales Expense	311,800	312,998	322,383	399,331
NEFC O&M	N/A	N/A	N/A	232,556
Municipal Access Fee	274,167	287,137	287,137	299,847
NEFC Municipal Access Fee	N/A	N/A	N/A	8,940
Property Taxes**	716,400	729,600	729,600	821,265
Income Taxes	140,344	294,500	369,287	255,800
NEFC Income Taxes	N/A	N/A	N/A	24,800
Depreciation	976,890	967,090	976,190	996,940
NEFC Depreciation	N/A	N/A	N/A	185,918
Interest Expense (deemed)***	486,051	617,000	612,825	640,000
Return on Equity	379,449	1,080,000	998,443	1,120,000
NEFC Interest Expense	N/A	N/A	N/A	95,410
NEFC Return on Equity	N/A	N/A	N/A	167,590
Total Return on Rate Base	865,500	1,697,000	1,611,267	2,023,000
Subtotal	8,054,326	9,414,968	9,414,968	10,736,831
Approved amortization of deferral accounts in steam rate	210,835	84,964	84,964	138,074
Revenue	8,265,161	9,499,932	9,499,932	10,874,905
Rate Summary				
Steam Load M#	1,034,467	971,259	971,259	972,400
Average Steam Rate $/M#	7.99	9.78	9.78	11.18
Average Steam Rate % increase	n/a	22.4%	n/a	14.3%
Rate of Return Summary				
Rate Base	25,771,516	26,763,585	26,581,272	31,899,204
Debt	14,818,622	15,389,061	15,284,231	18,342,042
Equity	10,952,894	11,374,524	11,297,041	13,557,162
Debt %	57.5%	57.5%	57.5%	57.5%
Equity %	42.5%	42.5%	42.5%	42.5%
Weighted Average Cost of Debt (estimated)	3.3%	4.0%	3.0%	4.0%
ROE	3.5%	9.5%	8.8%	9.5%
Total Return on Rate Base	3.36%	6.34%	5.48%	6.34%
* 2020 Actuals do not include the impact of the COVID-19 deferral which Creative Energy accrued for in its 2020 actual results.				
** Projected 2021 property taxes are adjusted to the approved balance due to there being a deferral account.				
*** 2021 Projected interest expense includes deferred financing fees of $156K that were not approved for recovery in 2021 rates.				

Table 2: Consolidated Revenue Requirements- Summary of Component Rate Increase and Variance from 2021 Approved to 2022 Test Year

2022 Rate Increase Components		**2022 Test Year to 2021 Approved**	
Core Cost Component	**General Category of Cost Control**	**Explanatory Variance of Overall Steam Rate Increase: 2021 to 2022**	
O&M		448,124	4.7%
Wages and Benefits (Steam, Distribution & Management)	Internal	204,171	2.1%
	External	53,388	0.6%
Water-related expenses (Fees, treatment, electric service)	Internal	-	0.0%
	External	46,136	0.5%
Maintenance (including parts, supplies, safety and vehicles)	Internal	17,270	0.2%
	External	-	0.0%
Special Services (Regulatory, Audit, third-party consultants)	Internal	34,442	0.4%
	External	6,383	0.1%
Other General & Administration (e.g. insurance, office expenses)	Internal	61,191	0.6%
	External	25,142	0.3%
Municipal Access Fee	External	12,710	0.1%
Property Taxes	External	91,665	1.0%
Income Taxes	External	(38,700)	-0.4%
Depreciation	External	29,850	0.3%
Interest Expense	External	23,000	0.2%
Return on Equity	External	40,000	0.4%
Summary			
Amortization of deferral accounts		53,110	0.6%
RRA Internal control related		317,074	3.3%
RRA External control related		289,574	3.0%
Load M#		1,141	-0.1%
Total Core-related Steam Rate Increase 2022			6.8%
NEFC Cost Component	O&M	232,556	2.4%
	Municipal Access Fee	8,940	0.1%
	Income Taxes	24,800	0.3%
	Depreciation	185,918	2.0%
	Interest Expense	95,410	1.0%
	Return on Equity	167,590	1.8%
Total NEFC-related Steam Rate Increase 2022		715,214	7.5%
Total Steam Rate Impact			14.3%

1.2 Load Forecast

Under consolidation of the Core and NEFC revenue requirements and unification of the thermal energy rates for service, the thermal energy load forecast 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. All costs will be recovered through the volume of thermal energy sold to customers.

Due to the ongoing uncertainty and impacts of the COVID-19 pandemic on our customer load, Creative Energy proposes to carry-forward for rate-setting purposes the load forecast approved through the Commission's Order G-310-21 Decision into Creative Energy's 2021 RRA, which load forecast was reflective of a 15 percent reduction to incorporate the expected impacts of the COVID-19 pandemic on customer demand in 2021.

Thus, the proposed load forecast for 2022 rate-setting (that is, to determine the percentage rate change to put forward for approval on a consolidated basis) is set equal to an equivalent steam load forecast of 972,400M#. This total is equal to the steam load forecast of 971,259M# that underpinned the approved 2021 steam rates, adjusted for the forecast additional load of new customer connections at 349 W. Georgia St. and 410 W. Georgia St, which forecast in 2022 totals 1,141 M#. The forecast thereby also includes the thermal energy load of NEFC customers on an indicative M# basis.

In summary, under the present circumstances and ongoing uncertainty of economic impact due to COVID-19, Creative Energy has no evidentiary basis to reasonably adjust the load forecast into 2022, and the approved mechanism of the COVID-19 Deferral Account appropriately functions as a load variance deferral while in effect, subject to known customer additions. To the extent that the economic impact of the pandemic moderates in 2022, actual 2022 load that is greater than forecast 2022 load will serve to offset the balance in the COVID-19 Deferral Account, subject to ongoing recovery of the balance through an approved rate mechanism (to be proposed later in December as reviewed in the cover letter to this filing).

We note in this context also that on an ongoing basis the load variance deferral mechanism of the COVID-19 Deferral Account will support the determination of average rate increases on an equivalent M# basis going forward. That is, the load forecast variance deferral mechanism will capture any variance in NEFC load or variance in the assumed conversion factor of NEFC hot water MWH load to steam M# load for rate-setting purposes. At such time that it appears reasonable to close the COVID-19 Deferral Account, Creative Energy would intend to propose to maintain a load forecast variance account on a go-forward basis.

1.3 Total Thermal Energy Rates

Total unified rates for thermal energy are comprised of thermal energy service tariff rates (i.e., that recover 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 the table below on an equivalent $/M# basis for comparison purposes.

With respect to natural gas fuel cost charges, Creative Energy obtains its natural gas requirements from FortisBC Energy Inc. (**FEI**) for both commodity and delivery under FEI's Rate 7. Creative Energy recovers its fuel costs from customers on a flow-through basis through a Fuel Cost Adjustment Charge (**FCAC**) approved by the Commission on a forecast basis for the Gas Year commencing November each year.

By Order G-329-21 the Commission recently approved a FCAC equal to $15.40/M#, effective November 1, 2021 for the November 2021 - October 2022 Gas Year.

The net average bill impact to customers of the forecast changes in thermal rates and fuel charges is shown in Table 3.

Table 3: Summary of Average Rate Impacts

		Incremental Average $/M# Impact	**%**	**Cumulative Average $/M#**	**%**
Tariff	2021	9.78		9.78	
Add	2022 COS	0.67	6.8%	10.45	6.8%
	NEFC Consolidation	0.73	7.5%	11.18	14.3%
Total Tariff	2022	1.40	14.3%	11.18	14.3%
Fuel Cost Charge	2020/21 Gas year	12.50		12.50	
	2021/22 Gas year	2.90	23.2%	15.40	23.2%
Total Tariff + Fuel	2021	22.28		22.28	
Add	2022 COS	0.67	3.0%	22.95	3.0%
	NEFC Consolidation	0.73	3.3%	23.68	6.3%
	Fuel Cost Charge	2.90	13.0%	26.58	19.3%
Total Tariff + Fuel	2022	4.30	19.3%	26.58	19.3%

1.4 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 is provided in Appendix A to this Application while Appendix B provides the corresponding tariff page for approval.

Creative Energy requests the following approvals:

1. Interim approval, effective January 1, 2022 and pursuant to sections 58 to 60 and 90 of the *Utilities Commission Act* (**the Act**) and section 15 of the *Administrative Tribunals Act* the unified thermal energy rates under consolidated cost of service and the System Contribution Charge set forth in Appendix B;

2. Permanent approval, effective January 1, 2022 and pursuant to sections 58 to 60 of the Act the unified thermal energy rates and System Contribution Charge that result from our 2022 consolidated revenue requirement proposals and subject to final balances in non-rate base deferral accounts to be confirmed in a future evidentiary update for 2022;

3. Approval of a 2022 load forecast of an equivalent basis of 972,400 thousand pound of steam (**M#)** for the purpose of determining the average rate increase in the 2022 RRA test period and for other rate-making purposes as required (for example, forecasting the fuel charge ($/M#) for the Gas Year beginning November each year, and implementing the load variance component of the approved COVID-19 Deferral Account in applicable months).
4. Approval of the following non-rate base deferral accounts:

    - A Water Cost Deferral Account (**WCDA**) on an ongoing basis to record variances between total annual actual versus forecast water costs for the 2021 Test Year. Please refer to section 3.2.1

    - A Refinancing Cost Deferral Account (**RCDA**) on an ongoing basis to record the cost to refinance Creative Energy Vancouver's debt facilities in 2021 and in future years, as applicable. Please refer to section 3.2.2.

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 2022.

2 Consolidated Core and NEFC Revenue Requirements

2.1 Operations and Maintenance Budgeting

Operations and Maintenance budgets (and Capital budgets) are prepared by the management team and then approved by the Board. In general, and consistent with past practice as reviewed in the 2019-2020 and 2021 Core RRAs, prior year actuals and year-end projected amounts are used as a benchmark to identify the activities that need to be budgeted-for given that the majority of 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.

2.1.1 Massachusetts Formula O&M Allocations

Net residual General and Administrative O&M expenses are allocated based on the Massachusetts formula approved under Order G-227-20. The approved Massachusetts Formula derives the percentage ratio allocation of applicable costs to each regulated Creative Energy utility based on the simple average of each of the following three factors for each regulated affiliate utility: 1) Gross property, plant and equipment; 2) Direct labor expenses; and 3) Gross revenues.

All salaries and benefits that are not directly assigned as an expense or capitalized to projects are included in the category of General and Administrative costs for allocation.

Please refer to the table below for the applicable ratios used in support of the allocations to the Core for the 2021 Test Year. As reviewed in section 1, for this Application only we report the Massachusetts formula inputs separately for the Core and NEFC systems for comparison purposes. The cost allocation ratios for the Core and NEFC under consolidation would be the sum of the respective ratios and the overall consolidated cost allocation would be unchanged.

Table 4: 2021 Massachusetts Formula Ratios

	Core	NEFC	Main & Keefer	Kensing-ton	SODO Heating	SODO Cooling	Pen-drell	Horse-shoe B	Mt.Plea-sant	Total
Factor ($)										
Capital	51.3M	5.4M	847K	1.87M	4.0M	2.7M	1.3M	3.1M	1.3M	72.0M
Revenues	10.2M	1.8M	148K	613K	691K	372K	203K	343K	670K	15.0M
Plant & Dist. Labour	2.4M	40K	12K	55K	30K	24K	18K	30K	242K	2.8M
Ratio										
Capital	71%	8%	1%	3%	5%	4%	2%	4%	2%	100%
Revenues	68%	12%	1%	4%	5%	2%	1%	2%	4%	100%
Plant & Distribution Labour	84%	1%	0%	2%	1%	1%	1%	1%	9%	100%
Combined Ratio	74.3%	7.1%	1.0%	2.9%	3.7%	2.4%	1.3%	2.6%	4.9%	100%

2.1.2 Summary of O&M by Business Function

Please refer to Table 5 below and to Schedule 15 for a summary of total O&M by business function in accordance with the established BCUC accounts.

Table 5: Total Core & NEFC O&M by Business Function

$		2019	2020	2021	2022	2022
Acct. #	Account Name	Actual	Actual	Approved	Projected	Test Year
Steam Production-Operation						
500	Supervision and Labour	1,539,228	1,506,768	1,568,932	1,521,591	1,599,122
502	Steam Expenses	1,043,394	1,129,774	1,082,392	1,160,889	1,133,295
	Total	**2,582,622**	**2,636,542**	**2,651,324**	**2,682,481**	**2,732,417**
Steam Production-Maintenance						
506	Structures and Improvements	**95,978**	**30,855**	**43,399**	**85,231**	**86,936**
Distribution – Operation						
870	Supervision & Labour	592,563	715,176	727,253	744,088	765,162
	NEFC Supervision & Labour					40,181
874	Mains & Services	20,801	25,028	21,739	20,402	22,784
	NEFC Mains & Services					43,828
880	Other Distribution Operation	0	0	0	0	0
933	Transportation	23,481	18,246	20,061	23,034	21,632
	Total	**636,845**	**758,451**	**769,053**	**787,524**	**893,587**
Distribution Expenses - Maintenance						
887	Mains & Services	73,552	64,209	85,373	63,717	76,397
889	Meters & House Regulators	165,320	207,781	185,000	130,181	157,877
	Total	**238,872**	**271,990**	**270,373**	**193,898**	**234,274**
Sales Promotion Expenses-Operation						
910	Sales Expense	**14,178**	**51,838**	**27,851**	**19,547**	**36,880**
Administrative & General - Operation						
915	Directors Fees	1,463	0	30,464	25,753	44,574
	NEFC Directors Fees					4,239
920	Admin & General Salaries	531,316	643,851	934,636	881,462	1,095,268
	NEFC Admin & General Salaries					82,663
921	Office Supplies & Expenses	113,093	106,037	98,960	115,856	138,243
	NEFC Office Supplies & Expenses					13,146
922	Admin & General Expenses	9,856	1,212	2,415	2,323	3,714
	NEFC Admin & General Expenses					353
923	Special Services	505,821	291,630	298,966	357,838	339,792
	NEFC Special Services					18,048
924	Insurance	136,898	149,468	149,089	154,790	170,419
	NEFC Insurance					14,371
925	Injuries & Damages-WCB	7,206	3,245	4,220	4,113	5,501
	NEFC Injuries & Damages-WCB					523
926	Employee Benefits	96,053	103,236	131,057	99,369	159,884
	NEFC Employee Benefits					15,204
	Total	1,401,706	1,298,679	1,649,806	1,641,505	2,105,943
Administrative & General - Maintenance						
932	Maintenance of General Plant	22,172	32,670	27,835	31,302	30,285
Gross O&M Expense		4,992,371	5,081,024	5,439,641	5,441,487	6,120,321
O&M Expenses Allocated to Capital $						
Net O&M Expense		4,992,371	5,081,024	5,439,641	5,441,487	6,120,321

As reviewed in both the 2019-2020 and 2021 Core RRAs, this summary is not ideal for identifying cost drivers and explaining test period variances; for example, given that the costs associated with labour and benefits are applicable across business function and that the implementation of overall maintenance activities is effectively pooled across business function and may vary within the year based on priority or emergent need. In addition, certain costs are within the internal control of management while others are driven by external fees, charges and levies, or weather, for example, and that categorization of cost control may vary across the detailed buildup of costs within each BCUC account, where applicable.

2.1.3 Consolidation of the NEFC Cost of Service – O&M

The following table reports the basis for and forecast incremental NEFC O&M as consolidated into the 2022 RRA.

Table 6: Total Core & NEFC O&M by Business Function

NEFC O&M	2019 Actual	2020 Actual	2021 Approved	2021 Projected	2022 Test Year
506 Structures and Improvements					
870 Supervision and Labour	38,454	51,691	39,537	49,298	40,181
874 Mains & Services	(29,390)	3,000	19,630	42,969	43,828
887 Mains & Services					
889 Meters & House Regulators					
915 Directors Fees	171	0	411	2,587	4,239
920 Admin & General Salaries	64,216	65,180	68,994	80,517	82,663
921 Office Supplies & Exp	13,184	10,735	9,730	11,639	13,146
922 Admin & General Exp	1,149	123	260	233	353
923 Special Services	20,452	14,324	11,904	20,631	18,048
924 Insurance	6,113	4,352	10,412	11,609	14,371
925 Injuries & Damages WCB	840	329	897	413	523
926 Employee Benefits	8,923	10,451	7,988	8,978	15,204
932 Maintenance of General Plant					
Total	124,112	160,185	169,763	228,875	232,556

NEFC supervision and labour expense is estimated using the same methodology as the Core system, as described above. Consistent with the basis of 2021 Approved rates, a 0.33 headcount was allocated to the NEFC system.

Mains and services operating costs include materials and supplies, mechanical and electrical equipment servicing and repairs, water treatment costs, parts replacements, rental equipment, permits and other general repairs and maintenance. As the NEFC system is still relatively new Creative Energy considers the projected costs incurred during the most recent year to be the best estimate of mains and services costs for the test period. Costs for 2022 have been estimated by taking 2021 projected costs and adding 2 percent inflation.

Accounts 915-926 are allocated via the Commission approved Massachusetts Formula. The allocation percentage to NEFC for the 2022 RRA is 7.1 percent.

2.1.4 Core Steam System O&M - Summary by Cost Driver and Control

Further to the introduction presented in section 1, this section and the individual O&M component review that follows reports the Core Steam system components separately to facilitate a ready and useful comparison to information presented in recent RRAs. Specifically, the summary presented in this section reports Core O&M costs according to the following five categories of cost drivers. The variance explanations that follow elaborate on these costs as grouped.

1. Wages and Benefits (Steam, Distribution and Management)
2. Water-related (primarily, and Electricity Expenses)
3. Maintenance and some related Operation (e.g. parts, supplies, safety, vehicles)
4. Special Services (Regulatory, Audit, Legal, Third-party consultants); and
5. Other General and Administrative plus Sales Expense.

Consistent with the presentation in both the 2019-2020 and 2021 Core RRAs, the intent of these groupings is both to offer clarity on the cost of service across Creative Energy's business and to present the specific costs driving the requested rate increases in the 2022 test period. To assist this discussion, cost drivers are grouped according to a qualitative assessment of where management is generally able to exercise budgeting control and decision-making and where operating costs are commonly understood to be within the scope of management control, as compared to where costs are more largely determined outside Creative Energy (e.g., rates applicable to Creative Energy's water, electricity and natural gas consumption). Although we add caution to the level of precision, we consider it to be helpful presentation approach overall for providing insight and understanding of the drivers for the variances between the 2021 Approved and the 2022 Test Year.

For additional clarity, in the summary tables that follow the categorization of costs reflects the following:

- The only external cost categorization under 'Wages and Benefits' are pension-related costs, while wages, overtime and benefits are categorized as generally controllable;

- Water fees, water treatment costs and electricity costs are all externally set and vary with load;

- Maintenance costs are considered overall as under management control even though a specific driver of required maintenance may at times be an external event;

- Special services in relation to regulatory costs and audit fees are categorized as external and outside legal fees and consultants are considered as generally controllable (although the latter might possibly be debatable year over year depending on the specific driver of work need and any related decisions to manage peak work requirements externally versus internally); and

- General and Administration Costs 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.

Please refer to Table 7 for an overall summary of costs in accordance with this approach.

Table 7: Total Core O&M by Cost Driver and Control

	Category of Cost Control	2019 Actual	2020 Actual	2021 Approved	2021 Projected	2022 Test Year
O&M	Total	4,992,371	5,207,083	5,046,795	5,441,487	5,887,765
	Not external	3,317,644	3,532,355	3,537,392	3,853,947	4,257,257
	External	1,674,727	1,674,727	1,509,403	1,587,540	1,630,508
Wages and Benefits	Total	2,759,160	2,973,871	2,969,031	3,246,511	3,619,436
	Not external	2,539,484	2,754,195	2,754,195	3,072,584	3,361,156
	External	219,676	219,676	214,837	173,926	258,280
Water-related and Electricity Expenses	Total	915,416	915,416	929,937	1,005,231	976,073
	Not external	-	-	-	-	-
	External	915,416	915,416	929,937	1,005,231	976,073
Maintenance (including parts, supplies, safety and vehicles)	Total	529,281	529,281	535,862	509,524	553,132
	Not external	529,281	529,281	535,862	509,524	553,132
	External	-	-	-	-	-
Special Services (Regulatory, Audit, third-party consultants)	Total	505,821	505,821	298,966	357,838	339,792
	Not external	118,202	118,202	95,944	121,741	130,387
	External	387,620	387,620	203,022	236,097	209,405
Other General & Administration, Sales Exp (e.g. insurance, office expenses)	Total	282,693	282,693	312,998	322,383	399,331
	Not external	130,678	130,678	151,391	150,098	212,582
	External	152,015	152,015	161,608	172,285	186,750
Pension revaluation		(446,200)	n/a	n/a	n/a	n/a

Pension revaluation is shown separately to not skew the underlying trends in Wages and Benefits, but to ensure that the totals for O&M match other references as applicable.

The detail in the following sections provides variance explanations related to the category specific detail summarized above.

2.1.5 Wages and Benefits

2.1.5.1 Summary

The Core system is supported by Steam 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. Employees perform various functions across day-to-day operations and just one employee is responsible for administrative functions directly. Managing to budget is the responsibility of the entire management team.

Table 8: Summary of Total Wages and Benefits

	2019 Actual	2020 Actual	2021 Approved	2021 Projected	2022 Test Year
500 Supervision and Labour	1,539,228	1,506,768	1,568,932	1,521,591	1,599,122
870 Supervision and Labour	592,563	715,176	727,253	744,088	765,162
920 Admin & General Salaries	531,316	643,851	934,636	881,462	1,095,268
926 Employee Benefits	96,053	103,236	131,057	99,369	159,884
Total	2,759,160	2,969,031	3,361,878	3,246,511	3,619,436

Attracting and retaining talent is critical to serving the customers and to the commercial success of Creative Energy. 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 skill sets that are not widely available. In addition, there are specific risks associated with the size of Creative Energy. Given a small number of employees each with multiple skill sets and responsibilities, a loss of key employees can have a significant impact on the business.

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 employee to their individual level of responsibility. The compensation program 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 the collective agreement.

2.1.5.2 Steam Production Supervision and Labour – Account 500

Compared to the 2021 Approved levels, steam production labour costs for the 2021 Test Year are planned to increase approximately 2 percent overall, details of which are shown below.

Table 9: Steam Production Supervision and Labour – Account 500 - Summary

500 Supervision and Labour	2019 Actual	2020 Actual	2021 Approved	2021 Projected	2022 Test Year
Wages	1,226,794	1,204,201	1,259,835	1,241,308	1,288,563
Overtime	31,595	45,351	46,108	41,471	41,869
Benefits	142,937	134,396	145,143	136,824	139,555
Pension Costs (footnote 4)	137,901	122,821	117,846	101,988	129,136
Total	1,539,228	1,506,768	1,568,932	1,521,591	1,599,122

Table 10: Steam Production Supervision and Labour – Account 500 - Variance

500 Supervision and Labour		**2021 Approved to 2022 Test Year**	
Wages	Not external	28,728	2.28%
Overtime	Not external	(4,239)	-9%
Benefits	Not external	(5,588)	-4%
Pension Costs	External	11,289	10%
Total		30,189	2%
	Not external	18,900	1%
	External	11,289	1%

Wages have increased approximately 2% primarily due to union wage increases prescribed in the collective bargaining agreement.

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.

Forecast 2022 overtime expense was calculated using a 3-year weighted average of actual costs (2021 being 9 months actuals and 3 months projected) adjusted for 2 percent inflation. As a means to take more recent outcomes into account we weighted 2021 and 2020 values at 40 percent each and weighted 2019 values at 20 percent. These weighting factors are not intended to suggest a specific precision but are considered reasonable overall to support the forecast of overtime expense. This is the approach that was used in support of 2021 RRA as approved by Order G-310-21.

Benefits are estimated based on projected rates for categories such as CPP, EI, WCB, employer health tax and extended health.

Pension costs have increased from the 2021 Approved cost. The contribution rate used in 2022 is consistent with 2021 at 9.1%. The increase primarily relates to one non-union role that was not budgeted to be in the pension plan in the 2021 Approved cost. This individual will participate in a new RRSP matching program that Creative Energy will implement in 2022. The expense for the defined contribution is 5% of that employee's annual compensation, which is lower than the 9.1% used for members of the defined benefit program. The existing defined benefit plan with the 9.1% contribution rate will continue for all unionized staff and staff that are already in the defined benefit plan. Calculations for both the defined benefit and RRSP matching programs are based on the expectation that all plant staff will enroll in the program. Variances in pension costs are captured in the approved Pension Expense Deferral Account. Please note that 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. Contribution rate does not refer to the percentage of employees enrolled in the plan.

2.1.5.3 Distribution Supervision and Labour – Account 870

The Distribution team directly charges time to the energy systems it supports. The Distribution team supports the Core system and the NEFC system, and also the Main & Keefer, South Downtown, Kensington Gardens, Mount Pleasant, Horseshoe Bay and Pendrell thermal energy systems. In 2022, the Distribution team is not anticipated to support any new systems that were not already considered in 2021.

Compared to 2021 Approved, Distribution team labour costs for the 2022 Test Year are planned to increase by approximately 5 percent. The budgeted headcount to support the Core system is approximately equal to the 2021 Approved headcount of 6.3 and therefore the increase is not driven by the forecast of direct allocation of time. Approximately 1.8 percent of this increase relates to union approved annual wage increases in absolute terms. The remainder of the increase relates mainly to two factors. First, one of the new employees included in the 2021 Approved cost was hired at a salary that was higher than the 2021 budgeted amount. This is updated for the actual salary in the 2022 Test Year. Second, overtime is estimated in the same manner as Plant labour costs, using the three-year weighted average of 2019 through 2021 costs (20/40/40 plus 2 percent inflation) for the reasons discussed above. 2021 projected overtime is tracking to be higher than previous years increasing the cost from 2021 Approved.

Also, in accord with the discussion of Plant labour costs, benefits in this category of costs are estimated based on projected rates for categories such as CPP, EI, WCB, employer health tax and extended health.

Pension costs have also increased at the same rate as Service wages from the 2021 Approved. The contribution rate of 9.1% is consistent year over year. All Service employees are part of the union and are, therefore, budgeted at the 9.1% contribution rate.

Table 11: Distribution Supervision and Labour – Account 870 - Summary

870 Supervision and Labour	2019 Actual	2020 Actual	2021 Approved	2021 Projected	2022 Test Year
Wages	463,145	563,560	577,191	595,335	603,942
Overtime	18,615	17,582	18,431	30,476	23,405
Benefits	56,475	66,676	68,360	67,494	71,254
Pension	54,327	67,358	63,270	50,782	66,561
Total	592,563	715,176	727,253	744,088	765,162

Table 12: Distribution Supervision and Labour – Account 870 - Variance

870 Supervision and Labour		2021 Approved to 2022 Forecast	
Wages	Not external	26,751	5%
Overtime	Not external	4,974	27%
Benefits	Not external	2,894	4%
Pension	External	3,290	5%
Total		37,909	5%
	Not external	34,619	5%
	External	3,290	0.5%

2.1.5.4 Management Labour and Benefits – Accounts 920 and 926

Administration and General Salaries are planned to increase for the 2022 test period by 18 percent over 2021 Approved.

Table 13: Management Labour and Benefits – Accounts 920 and 926 - Summary

920 Admin & General Salaries	2019 Actual	2020 Actual	2021 Approved	2021 Projected	2022 Test Year
Wages	531,316	643,851	934,636	881,462	1,095,268
926 Employee Benefits					
Benefits	68,605	78,578	107,281	78,213	97,300
Pension	27,448	24,658	23,776	21,156	62,584
Subtotal Total	96,053	103,236	131,057	99,369	159,884
Total	627,369	747,087	1,065,693	980,831	1,255,153

Table 14: Management Labour and Benefits – Accounts 920 and 926 - Variance

920 Admin & General Salaries		2021 Approved to 2022 Forecast	
Wages	Not external	160,633	17%
926 Employee Benefits			
Benefits	Not external	(9,981)	-9%
Pension	External	38,808	163%
Subtotal		28,827	22%
Total		189,460	18%
	Internal	150,652	14%
	External	38,808	4%

The increase in 2022 from the 2021 Approved level relates primarily to continued focus on building the complement of staff and resource allocation 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 Steam and NEFC systems with particular response to the imperative for climate action and decarbonization.

Of the increase in wages approximately $70,000 relates to new roles that will allocate part of their time to the Core energy system. Specifically, our resourcing priorities for 2022 reflect the increasing need to build the regulatory team. A regulatory advisor/manager role is budgeted for 2022, which comprises the majority of the forecast increase. The increase also is driven by general salary increases (approximately $40,000) and shifts in the estimated allocations from the 2021 Approved (approximately $50,000). The shift in allocations relates primarily to the Systems Engineer role that included only a partial year in the budgeted expense for the 2021 RRA and only 50 percent of time allocated to operations. In the 2022 RRA this role will allocate 100 percent to operations (subject to the Massachusetts formula) and is budgeted for the full year.

Benefits are estimated based on projected rates for categories such as CPP, EI, WCB, employer health tax and extended health.

Pension costs are expected to be higher than 2021 Approved due to a RRSP matching plan that will be added in 2022. While the defined benefit pension plan was discontinued for new members of the management team in 2018, there are still four members of the management and admin team under that plan. For these employees, pension costs are budgeted at the contribution rate of 9.1% of their compensation. The 2022 Test Year budgets for all remaining employees to enter into the RRSP matching plan at a rate of 5% of their total compensation.

2.1.6 Water and Electricity Expenses

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

1. Feed water as an input in steam production; and

2. Water cooling applied to Distribution system condensate within the Beatty steam plant so that it can safely be discharged into the City of Vancouver's storm and sewer network.

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 inputted and steam produced.

Electricity costs are included in this cost category to reflect that the entirety of these costs are broadly driven by factors and external rates outside of management control.

Table 15: Water and Electricity Related Expenses – Account 502 Partial and Account 874 – Summary

	2019 Actual	2020 Actual	2021 Approved	2021 Projected	2022 Test Year
502 Steam Expenses - Partial					
Water	711,140	743,623	712,192	750,857	709,689
Electricity	102,640	110,659	94,009	94,036	100,865
Water Treatment	80,836	103,711	101,996	139,937	142,736
Subtotal	894,615	957,993	908,198	984,830	953,290
874 Mains and Services					
Electricity	292	266	286	292	292
Water Mains	20,509	24,762	21,454	20,110	22,492
Subtotal	20,801	25,028	21,739	20,402	22,784
Total	915,416	983,021	929,937	1,005,231	976,073

Table 16: Water and Electricity Related Expenses – Account 502 Partial and Account 874 – Variance

		2021 Approved to 2022 Forecast	
502 Steam Expenses - Partial			
Water	External	(2,503)	0%
Electricity	External	6,856	7%
Water Treatment	External	40,740	40%
Subtotal	External	45,092	5%
874 Mains and Services			
Electricity	External	6	2%
Water Mains	External	1,038	5%
Subtotal	External	1,044	5%
Total		46,136	5%
	Not external	-	-
	External	46,136	5%

2.1.6.1 Water Expenses

Projected water costs in the 2022 test period are approximately equal to the amount approved in for 2021. 2021 actual water costs were lower than what was budgeted in the 2021 RRA (1 percent compared to 8.5 percent). In 2022, we are projecting an increase of 5.3 percent from 2021 actual. This is based on the average increase for the years 2020 and 2021 (9.7 percent in 2020 and 1.0 percent in 2021). When adding the 2022 projected increase to 1 percent it is lower than the 8.5 percent increase projected for 2021.

The City of Vancouver charges Creative Energy water and sewer fees together as part of its quarterly water billing. These costs are externally set outside of Creative Energy's control and correlate very closely with steam load.

Table 17: Applicable City of Vancouver Water Rates

	Rate per unit			
Period	2018	2019	2020	2021
High season (June 1 – September 30)	$3.57	$3.92	$4.297	$4.339
Low season (All remaining months)	$2.85	$3.13	$3.428	$3.462
Annual rate of increase (both periods)		9.7%	9.7%	1.0%

For the purpose of estimating overall 2022 water costs, historical data from 2018-2021 is used to project the volume of water required for each M# of steam sold. Water consumption has been projected using the average ratio of pounds of steam sold for every pound of water consumed. The projected volume of water was multiplied by the 2021 City of Vancouver water rates plus the noted 5.3 percent rate increase.

For the reasons discussed in section 3.2.1 Creative requests approval of the Water Cost Deferral Account on an ongoing basis.

2.1.6.2 Water Treatment

Water treatment costs also vary with load, but the relationship is not as direct as water costs. Due to other factors, historical actual costs compared to load do not provide evidence of a relationship between load and costs.

Water treatment costs in 2017 and 2018 were significantly higher than the actual cost from 2015 and 2016. Costs decreased significantly in 2019 and 2020. While this movement was partially due to load, a Softener System Upgrade capital project was implemented during 2018 that resulted in more accurate metering of water and salt brine, improving efficiencies for the regeneration cycle. Also, by replacing resin the softener cycle was extended. Plant staff was also focusing on the accuracy of steam metering within the plant, which has led to a more efficient use of chemicals.

In 2021, actual and projected water treatment costs have increased from the 2019 and 2020 actuals. The reason for the increase during 2021 is likely due to two factors. First, in 2021, Creative Energy automated the process of adding chemicals, which required the purchase of a bulk amount of chemicals to start the automated tote storage bins. Second, Creative Energy had to regenerate softeners more often as Metro Vancouver Water Treatment made changes to their supply of domestic water to the area. Metro Vancouver increased the hardness of the water supply, which has resulted in more frequent regeneration cycles, more water usage in the plant and the use of more salt. For the 2022 RRA, Creative Energy has used the projected 2021 costs plus 2 percent inflation. This is the best estimate for these costs going forward. It is possible that part of the bulk purchase of chemicals could remain at the end of 2021. Creative Energy will update this estimate if necessary if the inventory count yields a material difference (we could do so in response to information requests, for example). The current estimate is approximately a middle ground that still shows savings due to the Softener System Upgrade, but higher than the costs from 2019 and 2020.

2.1.6.3 Electricity

Creative Energy takes electricity service from BC Hydro under Large General Service Rate Schedule 1611. Electricity costs for the 2022 Test Year uses the BC Hydro rates in effect at the time that forecast costs are determined. The estimate of 2022 electricity costs uses an estimate of historical peak demand by month to forecast demand charges and an estimate of the ratio of electricity consumption to steam production to forecast energy charges.

2.1.7 Maintenance – Multiple Accounts

This general category of Maintenance includes some related operations cost components to simplify the overall summary.

Forecast 2022 maintenance costs exceed 2021 Approved amounts by approximately 3 percent. Maintenance budgets are pooled across business function overall and they may vary within the year based on priority or emergent need, as indicated by the variation in spend within and across account category of expense.

The evident longer-term trend of increasing maintenance costs relates to a requirement for more inspections of ageing equipment and more expensive work to maintain that equipment, noting that the amount of equipment to be maintained is generally stable.

Creative Energy is not budgeting to capitalize any costs related to the plant in 2022 due to the redevelopment of the plant occurring in the next two years. Should there be any major unplanned expenditure required during the 2022 Test Year that would normally be capitalized, Creative Energy would seek to recover those costs in a supplementary filing. Although we have not at this time proposed a deferral account mechanism as such, Creative Energy will seek the Commission’s review and determination in the proceeding to review this Application as to whether such an account ought to be established to record any such unplanned expenses.

The budget is prepared by plant and distribution management team based on expected spending needs in 2022. It is relatively consistent with the level of spending in 2019 and the amount approved in 2021 with inflation.

Table 18: Maintenance and related functional operation – Multiple Accounts – Detailed Summary

	2019 Actual	2020 Actual	2021 Approved	2021 Projected	2022 Test Year
502 Steam Expenses – Maint. & related	148,779	171,780	174,194	176,060	180,006
506 Structures and Improvements	95,978	30,855	43,399	85,231	86,936
880 Other Distribution Operation	-	-	-	-	-
933 Transportation	23,481	18,246	20,061	23,034	21,632
887 Mains and Services	73,552	64,209	85,373	63,717	76,397
889 Meters & House Regulators	165,320	207,781	185,000	130,181	157,877
932 Maintenance of General Plant	22,171	32,670	27,835	31,302	30,285
Total	529,281	525,542	535,862	509,524	553,132

Table 19: Maintenance and related functional operation – Multiple Accounts – Variance

		2021 Approved to 2022 Test Year	
502 Steam Expenses - Partial	Not external	5,811	3%
506 Structures and Improvements	Not external	43,537	100%
880 Other Distribution Operation	Not external	-	
933 Transportation	Not external	1,571	8%
887 Mains and Services	Not external	(8,976)	-11%
889 Meters & House Regulators	Not external	(27,123)	-15%
932 Maintenance of General Plant	Not external	2,450	9%
Total	Not external	17,270	3%

2.1.8 Special Services

2.1.8.1 Summary

The following two tables provide an overall summary to the category discussion that follows below.

Table 20: Special Services – Account 923 – Summary

923 Special Services	2019 Actual	2020 Actual	2021 Approved	2021 Projected	2022 Test Year
Audit Fees	57,230	40,824	53,022	83,617	59,405
Legal Fees	6,141	35,342	14,202	19,243	44,357
Outside Services	112,061	65,325	81,742	102,498	86,030
Regulatory	330,389	150,139	150,000	152,480	150,000
Total	505,821	291,630	298,966	357,838	339,792

Table 21: Special Services – Account 923 – Variance

923 Special Services		2021 Approved to 2022 Test Year	
Audit Fees	External	6,383	12%
Legal Fees	Not external	30,155	212%
Outside Services	Not external	4,288	5%
Regulatory	External	-	0%
Total		40,826	14%
	Not external	34,442	36%
	External	6,383	3%

2.1.8.2 Regulatory

Projected regulatory costs in 2021 are tracking reasonably close to forecast. Further detail into total actual 2021 regulatory costs can be provided at the earliest in early February 2022; in an evidentiary update or in response to an information request as applicable.

Creative Energy continues to forecast regulatory costs in the amount $150,000 for 2022, which high-level estimate is based indicatively on the expected filings and efforts reported in the table below.

Consistent with the fact the level of activity and absolute costs are difficult to forecast, Creative Energy will continue to apply differences between forecast and actual 2021 amounts to the Third-Party Regulatory Costs Deferral Account as approved.

Table 22: Forecast 2022 Regulatory Expenses

	2022 Total Test Year
Quarterly Fees	25,000
Core and NEFC Rates Application 2022	75,000
Application for approval of low carbon rate(s)	25,000
Long-term Resource Plan response and/or Other misc.	25,000
Total Regulatory	150,000

2.1.8.3 Outside Services

Outside Services have historically related to consulting costs for government advisory services, reviewing customer and business development opportunities, and funding sources and external costs for preparing the tax return.

To estimate these costs Creative Energy has used the most recent three-year weighted average calculation (20/40/40 + 2 percent inflation) as a base estimate. Note that 2019 costs used in this calculation were normalized to remove costs that are not anticipated to reoccur in 2022. An additional $30,000 was added to this amount in the 2022 Test Year budget due to a heightened focus on opportunity assessments for new connections. Notably, the 2022 forecast is close to the 2021 Approved amount and less than 2021 Projected amount.

2.1.8.4 Audit Fees

Creative Energy expects an increase in 2022 audit fees from 2021 approved audit fees. Creative Energy used the most recent three-year weighted average approach (20/40/40 + 2 percent inflation) as the basis of the forecast and corroborated this forecast with the base fee quote from its auditor, which was within a reasonable range of the three-year weighted average.

2.1.8.5 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 within period priorities. An average forecast of legal fees has been determined using the most recent three-year weighted average approach (20/40/40 + 2 percent inflation) and to this base average cost we have added $30,000 to account specifically for a planned negotiation of a new union agreement during 2022.

2.1.9 Other General & Administrative and Sales Expense

2.1.9.1 Other General & Administrative – Multiple Accounts

Other General and Administrative Cost comprise a relatively small percentage of Creative Energy's cost of service.

Table 31: Other General & Administrative – Multiple Accounts – Summary

	2019 Actual	2020 Actual	2021 Approved	2021 Projected	2022 Test Year
915 Directors Fees	1,463	0	30,464	25,753	44,574
921 Office Supplies & Expenses	113,093	106,037	98,960	115,856	138,243
922 Admin & General Expenses	9,856	1,212	2,415	2,323	3,714
924 Insurance	136,898	149,468	149,089	154,790	170,419
925 Injuries & Damages - WCB	7,206	3,245	4,220	4,113	5,501
Total	268,506	259,963	285,147	302,835	362,451

Table 32: Other General & Administrative – Multiple Accounts - Variance

		2021 Approved to 2022 Test Year	
915 Directors Fees	Not external	14,110	46%
921 Office Supplies & Expenses	Not external	39,284	40%
922 Admin & General Expenses	Not external	1,300	54%
924 Insurance	External	21,330	14%
925 Injuries & Damages - WCB	Not external	1,281	30%
Total		77,304	27%

Director fees are budgeted in the 2022 RRA based on actual contracted amounts. Creative Energy added two new third-party directors in 2021 for a total of three paid directors. The total cost of directors is $120,000 with 50% being allocated to operations and subject to the Massachusetts formula allocation. 2022 costs align with actuals from 2015 and 2016 when Creative Energy had a board that included third party directors.

Office supplies, which include Information Technology costs, are partially forecast based on prior actual costs using the 2019-2021 with weights of 20%, 40% and 40% plus 2 percent inflation and partially based on management judgment. The component requiring management judgment is Information Technology costs. Creative Energy is significantly upgrading its IT support and systems in 2022 as the current supplier can no longer provide the level of support required. The change will improve data and cyber security and provide Creative Energy with 24/7 support to minimize employee downtime. Creative Energy continues to allocate 25 percent of its IT costs to its development entity with 75 percent allocated to operations.

Insurance expense has increased from 2021 Approved. Creative Energy renews its insurance in July for a period of one year. The budget for 2022 Test Year is based on the actual contracted insurance premiums for January to June 2022 with an increase in July equal to the increase experienced in 2021 for July to December 2022.

2.1.9.2 Sales Expense – Account 910

The Sales Expense account records costs related to conferences and professional development. Historically actual costs in this category have included advertising and promotion, and sponsorship for conferences such as relating to the International District Energy Association. A most recent three-year weighted average of 2019-2021 (20/40/40 plus 2%) has been used for the 2022 estimate.

Table 33: Sales Expense - Summary & Variance

	2019 Actual	2020 Actual	2021 Approved	2021 Projected	2022 Test Year	Control	2021 Approved to 2022 Test Year
910 Sales Expense	14,178	51,838	27,851	19,547	36,880	Not ext.	9,029, 32%

2.2 Municipal Taxes (City of Vancouver 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 Commission under Order C-13-00 on June 12, 2000. The MAA grants the Company 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, the Company pays to the City an annual fee equal to 1.25 percent of Tariff Revenues (not including the transfer to NEFC) plus a flat fee that the City escalates at 2 percent for 2022 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. This process is consistent with the 2021 RRA. Please refer to the summary table below and Schedule 17 for further detail.

Table 23: Municipal Taxes – Consolidated Core and NEFC (2022)

	2019 Actual	2020 Actual	2021 Projected	2022 Test Year
Annual Steam Revenues	8,360,505	8,625,886	9,355,974	10,874,905
MMBTU Gas Adjustment	533,535	472,420	523,199	474,434
Adjusted Annual Steam Revenues	8,894,040	9,098,306	9,879,173	11,349,339
Tax Rate	1.25%	1.25%	1.25%	1.25%
Municipal Tax on Steam Revenue	111,176	113,729	123,490	141,867
Prior Year Flat Fee	154,208	157,292	160,438	163,647
Rate Increase	2%	2%	2%	2%
Escalated Flat Fee	157,292	160,438	163,647	166,920
Total Municipal Tax	268,468	274,167	287,137	308,787

Table 24: Calculation of the MMBTU gas adjustment:

	2021	2022
Steam M#	1,072,349	972,400
Rate to convert M# to MMBTU	1.19	1.19
Gas BTU	1,276,095	1,157,155
Tariff Rate	0.41	0.41
Adjustment	523,199	474,434

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

2.3 Property Taxes

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 the summary table below and Schedule 16 for further detail.

Table 25: Property Taxes

Item	2019 Actual	2020 Actual	2021 Approved	2021 Projected	2022 Test Year
Total for 720 Beatty Street	784,714	763,290	778,530	894,271	920,709
Reduction for Non-Regulated	(148,000)	(80,000)	(82,000)	(140,780)	(146,335)
Add Property Tax for 701 Expo Blvd.	45,068	33,083	33,083	45,974	46,894
Total	681,800	716,400	729,600	799,420	821,265

There are two classes of assessed value as well as applicable levy rates. The two classes are 1) Utility and 2) Business and Other Utility. The levies pertaining to the Utility class have higher rates.

The 2022 Test Year is based on the actual assessments from 2021. Rates from 2021 are also used in the forecast with an increase of 2% for inflation. Actual rates and assessed values are not yet known. As the 2022 assessment and rates are not yet available, the 2022 Test Year estimates the cost by maintaining the assessed value at the 2021 values and increasing the rates by 2%. Rates set by the City of Vancouver are difficult to predict as they increase in some years and decrease in others.

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

2.3.1 Allocation to Non-Regulated Operations

Historically Creative Energy has allocated a portion of the total property tax to its non-regulated operations (**NRO**); thus, reducing the amount of its regulated revenue requirement and benefiting steam customers through lower rates.

Creative Energy's NRO include leasing of surplus office space to tenants and parking rentals on land not used in utility operation. To calculate the appropriate amount to be allocated to NRO, Creative Energy applies the levy rates to the total assessed value of the land and building and a portion is then allocated to the NRO using building and land square footage as an allocation base. Consistent with the 2021 RRA, office space not currently being rented to tenants and as approved in the 2020 rates, Creative Energy has not included an allocation to NRO for office space in 2022. The NRO allocation relates specifically to parking. The Company believes that this approach to allocation continues to be fair and reasonable and should be applied for the 2022 Test Year.

Consistent with the 2021 Approved RRA, Creative Energy has allocated out a portion of property taxes related to office staff that are not specifically working on the Core energy system consistent with the discussion if not determination in the Order G-310-21 2021 RRA decision.

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. An alternative configuration of the redevelopment is being finalized and will be brought forward in the near-term for Commission approval as per the directives in Order C-1-20. Subject to that pending application and Commission review, Creative Energy will update the allocation of property tax costs as required to reflect any change in the use of the land and building during 2022.

2.4 Income Taxes

Forecast income tax expense for 2022 is reported in the following table based on the income tax pertaining to regulated operations. The effective tax rate during the test period is 27 percent. Please refer to the summary table below and to Schedule 19.

For the purpose of calculating income tax expense, 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.

It is important to note that on an actual basis, revenues are known, and subsequently used in arriving at the Net Utility Income figure[2]. With respect to the forecast, the fundamental purpose of the revenue requirement is to determine the amount of revenues required to deliver utility services, cover all the expenses (including income tax) and provide for the allowed return on

[2] Utility Revenues less Utility Expenses equal Net Utility Income

equity. Since the revenues are not "given", but the allowed equity return[3] 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.

Table 26: Income Taxes – Consolidated Core and NEFC (2022)

	2022 Test Year
Allowed/Proposed Return on Rate Base (After Tax)	2,023,000
Add: Equity Portion of AFUDC	N/A
Less: Financing Costs	(735,000)
Accounting Income After Tax	1,288,000
Total Additions (Depreciation Expense)	1,234,400
Total Deductions (Capital Cost Allowance)	(1,763,820)
Taxable Income/(Loss) for Tax Purposes (After Tax)	758,580
Tax Gross Up	73%
Taxable Income/(Loss) for Tax Purposes (Before Tax)	1,039,151
Effective Income Tax Rate	27%
Current Income Tax Expense	280,600

As noted, the calculation in the table above is consolidated and includes both Core and NEFC. 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 increased 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 into the tax calculation.

2.5 Depreciation and Amortization Expense

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

Table 27: Depreciation Expense – Consolidated Core and NEFC (2022)

	2019 Actual	2020 Actual	2021 Projected	2022 Test Year
Opening Accumulated Depreciation	(20,565,064)	(21,541,763)	(22,550,106)	(24,302,540)
Closing Accumulated Depreciation	(21,541,763)	(22,550,106)	(23,535,763)	(25,536,933)
Depreciation Expense	976,700	1,008,300	985,700	1,234,400

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

[3] The equity return is after tax and it is expressed as a percentage.

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.

Table 28: 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%

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.

NEFC capital costs were added into the Plant in Service for the Core system. The balances added, the depreciation rates and the depreciation expense are reported in the following table.

Table 29: NEFC Asset Classes and Depreciation Rates

Category of Capital Asset	Balance Transferred	Depreciation Rate	Depreciation Expense
312 – Plant Equipment	3,184,026	5%	159,201
376 – Mains	2,199,053	2%	43,981
382 - Meters	31,306	3%	939
Total			204,121

2.5.1 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 deprecation rate for distribution plant to which the CIAC pertains. Please refer to Schedule 6. There are no new additions to CIAC included in 2021.

A customer contribution of $400,000 was added as a reduction to Core rate base from NEFC customers. On the NEFC side, it is recorded as a deferral balance that will be paid for over a period of 22 years by NEFC customers via a rate rider. For Core rate setting purposes, the balance is amortized over 22 years and results in a reduction in the revenue requirement of approximately $18,000 in reduced depreciation expense and a savings in 2022 return on rate base of approximately $25,000. Please refer to Schedule 6.

2.6 Rate Base Return

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 30 below summarizes the Rate Base Return as calculated for the 2021 Test Period:

Table 30: Summary of Rate Base Return – Consolidated Core and NEFC (2022)

	2022 Test Year
Mid-year Rate Base	31,899,204
Cost of Capital	
Equity	9.50%
Long term Debt	4.30%
Short Term Debt	3.50%
Return on Rate Base	6.34%

The forecast Rate Base Return for 2022 is $2,023,000, and it is calculated in accordance with the methodology and rates discussed below.

Regarding the consolidation with NEFC, rate base is primarily impacted by the addition of $5,414,385 in plant in service, offset by $766,777 opening accumulated depreciation and a $400,000 customer contribution. In addition, there is a $35,000 capital addition for 2022 for NEFC added to rate base. The additional costs added for the consolidation of the NEFC system create an immaterial impact ($2,340) on the working capital component of the rate base calculation.

2.6.1 Equity Thickness and Allowed Return on Equity

The Commission's Generic Cost of Capital Stage 2 Decision, issued under Order G-47-14 and dated March 25, 2014, set an equity thickness for Creative Energy of 42.5 percent and a Return on Equity (**ROE**) at 9.5 percent. By Order G-82-15, the Commission accepted that the deemed equity thickness and ROE for Creative Energy rate setting should continue to be based on an equity thickness of 42.5 percent and an equity risk premium of 75 basis points for regulated thermal energy systems. The Commission's decision established the equity thickness as appropriate given the business risks faced by the Company and that the allowed ROE provides the Company with a reasonable opportunity to earn a fair return on its equity investment.

2.6.2 Debt Financing

Creative Energy renewed its debt financing in September 2021 with HSBC and TD. Rates are consistent with the prior HSBC/TD facility. Creative Energy has the option of drawing on banker's acceptances or allowing the loans to float based on the prime interest rate. Principal payments on Tranche 3 are made on a quarterly basis. Loan balances/limits as at December 31, 2021 and current interest rates on these loans are provided in Table 31. The fuel loan was fully repaid in 2021. The balance of the Fuel Cost Stabilization Account is now funded by the revolving demand loan.

Table 31: Credit Facility Summary

Tranche 1	Revolving Demand	5,000,000 (limit)	Prime + 1.00% or BA Floating Rate + 2.25% plus standby fee of 0.45% on the unused balance (based on a debt % between 55- 60%)
Tranche 2	Non-revolving	10,000,000	Prime + 1.00% or BA Floating Rate + 2.25%
Tranche 3	Non-revolving	12,509,000	Prime + 1.00% or BA Floating Rate + 2.25%

Creative Energy has maintained a forecast of 4 percent cost of debt as approved in the 2021 RRA based on the fact that long-term interest rates are expected to be higher than the current rate. Consistent with the 2021 RRA decision, rates are not set based on current interest rates, but future interest rates that factor in risk.

2.7 Rate Base and Capital Additions

2.7.1 Summary

Before consolidating NEFC, mid-Year Rate Base for the Core is forecast to be approximately $27.7M million for the 2022 Test Period as reported in the table below. After consolidation of the NEFC, consolidated mid-Year Rate Base is projected as $31.9M. Please also refer to Schedule 2.

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, includes an addition of $400K as a contribution from NEFC customers as part of the rate redesign)
- Mid-year Plant Allocated to NRO (portion of the plant used to support Company's NRO)
- 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 is discussed below in respect of the 2022 test period.

Table 32: Rate Base Summary – Consolidated Core and NEFC (2022)

	2019 Actual	2020 Actual	2021 Projected	2022 Test Year
Gross Plant in Service				
Opening Balance	45,368,846	47,562,164	48,278,960	55,635,152
Closing Balance (estimated)	47,562,164	48,278,960	50,220,767	57,926,295
Average Balance (Mid-Year)	46,465,505	47,920,562	49,249,864	56,780,724
Accumulated Depreciation				
Opening Balance	(20,565,064)	(21,541,763)	(22,550,106)	(24,302,540)
Closing Balance (estimated)	(21,541,763)	(22,550,106)	(23,535,763)	(25,536,933)
Average Balance (Mid-Year)	(21,053,413)	(22,045,934)	(23,042,934)	(24,919,736)
Net Mid-year Plant in Service	25,412,092	25,874,628	26,206,929	31,860,987
Net Mid-year CIAC	(904,578)	(873,168)	(866,758)	(1,250,633)
Mid-year Net Plant Allocated to NRO	(25,579)	(24,873)	(24,167)	(23,461)
Mid-Year Rate Base Deferred Accounts	362,670	(268,202	745,257	745,257
Mid-Year Working Capital	516,918	526,728	520,011	567,053
Mid-year Rate Base	25,361,522	25,771,516	26,581,272	31,899,204

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 rate base for 2022 at this time. Please refer to the related discussion in section 2.3.1.

2.7.2 Capital Additions

The year-over-year increases to Rate Base in 2022 (not including the consolidation of NEFC assets) is primarily driven by capital additions. Projected capital additions are $2.3 million in 2022.

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.

2022 capital additions are focused on replacing infrastructure of the ageing Distribution system. Due to the redevelopment, Creative Energy has not planned any capital expenditures at the plant for 2022 but is instead focusing on the Distribution system.

The majority of capital expenditures ($1.96 million) relates to two manhole rebuilds planned for 2022. Additionally, Creative Energy plans to spend $150,000 on improvements to its accounting IT systems. Part of this is a carryover from the 2021 approved costs as the AP automation project was not completed in 2021.

Historical capital additions and incremental additions in the 2022 test period are summarized in Table 33. Further detail into forecast capital additions and variance explanations between 2021 Approved and 2021 Projected will be presented in a subsequent evidentiary update.

Table 33: Core System Capital Additions

	2019 Actual	2020 Actual	2021 Projected	2022 Test Year
Total Capital Additions	2,193,318	716,796	1,941,807	2,256,143
Steam Plant			335,058	0
Distribution System			806,787	1,966,143
Customer Building Services			148,053	140,000
Customer Connections			604,671	0
Other			47,239	150,000

The scope of each category is as follows:

- Steam Plant
    - Beatty steam plant electrical, instrumentation or mechanical equipment used in the production of steam; during 2022, no capital additions are planned at the plant;
- Distribution System
    - Any piping, manhole or auxiliary equipment used in the steam distribution piping network; during 2022, this includes rebuilding and insulating manholes;
- 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; in 2022, this is specifically meter and PRV replacements; and
- Customer Connections
    - Costs directly associated with adding a new customer, including the pipe section from existing steam mains to building mechanical room, pressure regulating station, Energy Transfer Station, meter station, equipment insulation, mechanical and electrical install, commissioning, permits, fees, and management; in 2022 Creative Energy has no known customer connections being added to plant in service as its existing customer connections are expected to be in service by the end of 2021.
- Other
    - In 2022, this relates initiatives that Creative Energy's finance team is planning for implementing Accounts Payable automation, document management and financial reporting software.

As reviewed in the 2021 RRA Creative Energy commenced a Distribution system project to improve the operational efficiency of the steam system by using condensate return from the NEFC. This project may be added to rate base in 2022 if it is in service by the end of the year. It is not included in the request for approval of interim rates due to uncertainty regarding when the asset will be in service. In lieu of adding it into rate base, Creative Energy will record AFUDC on this project during 2022.

2.7.3 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 2022 do not include AFUDC.

2.7.4 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.

2.7.5 Contributions in Aid of Construction

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 rate base and its net balance decreases over time recognizing the effect of depreciation. The change in the Mid-year CIAC in 2021 is driven by the annual CIAC depreciation. Creative Energy included a $50,000 contribution for CIAC in 2021 related to 410 W Georgia. Creative Energy has included a contribution of $400,000 from NEFC customers as part of the NEFC rate redesign in 2022. Consistent with the proposed recovery of the System Contribution from NEFC customers over the remaining useful life of the NEFC assets, the contribution will be amortized over 22 years. Please refer also to Schedule 6.

Table 34: Contributions in Aid of Construction – Consolidated Core and NEFC (2022)

	2019 Actual	2020 Actual	2021 Projected	2022 Test Year
Gross CIAC				
Opening Balance	(1,256,385)	(1,256,385)	(1,256,385)	(1,306,385)
Repayments				
Additions			(50,000)	(400,000)
Addition of NEFC Contribution				
Closing Balance	(1,256,385)	(1,256,385)	(1,306,385)	(1,705,385)
Accumulated Depreciation				
Opening Balance	336,102	367,512	398,922	430,332
Depreciation	31,410	31,410	31,410	32,660
NEFC Contribution Depreciation				18,182
Closing Balance	367,512	398,922	430,332	481,174
Net CIAC				
Opening Balance	(920,283)	(888,873)	(857,463)	(1,276,053)
Closing Balance	(888,873)	(857,463)	(876,053)	(1,225,212)
Net Mid-Year CIAC	(904,578)	(873,168)	(866,758)	(1,250,633)

2.7.6 Allocation to Non-Regulated Operations

Creative Energy allocates a portion of building and land costs to NRO 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.

2.7.7 Rate Base Deferral Accounts

Consistent with the 2021 RRA, Creative Energy has one rate base deferral account – the After-Tax Regulatory Pension Asset Account. This deferral 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, 2020) and an ending balance based on estimated employer contributions for 2021 less approved forecast pension expense for 2022. 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. As such, the ending balance and average balance is estimated to be equal to opening balance.

Table 35: Rate Base Deferral

	Forecast 2022
December 31 Pension Asset (pre-tax) reported on audited financial Statements plus 2020 Solvency payments ($9,700 per month) (Opening Asset)	1,020,900
Employer Contributions 2022	243,965
Approved Forecast Pension Expense 2022	(243,965)
Additions to Asset	N/A
Closing Asset	1,020,900
Average of Closing Actual and Forecast	1,020,900
Tax Rate	27%
After-tax Mid-year Balance	745,257

2.7.8 Working Capital

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.

Working capital represents Creative Energy's investment in non-capital assets and accounts for timing differences between payment of current period expenses (cash outlay) and their recovery in revenues. Please refer also to Schedules 9 and 10.

Table 36: Working Capital Requirements

	2019 Actual	2020 Actual	2021 Projected	2022 Test Year
Natural Gas & Oil Purchases	-	-	-	-
Operation & Maintenance Expense	280,651	305,799	305,576	343,910
Insurance	68,449	74,544	77,395	85,210
Other	-	-	-	-
Municipal Taxes	(182,347)	(186,218)	(195,027)	(209,732)
Income Tax Expense	(109,788)	(114,134)	(115,309)	(109,867)
Property Taxes	255,675	268,650	299,783	307,974
Subtotal	312,639	348,641	372,417	417,495
Oil Inventory	218,554	192,362	159,904	159,904
Customer Deposits	(14,275)	(14,275)	(12,311)	(10,346)
Work in Process	-	-	-	-
Total	516,918	526,728	520,011	567,053

Working capital requirements for 2022 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 37: Working Capital – Approved Net Lead (Lags) Days

	2019 Actual	2020 Actual	2021 Projected	2022 Test Year
Natural Gas & Oil Purchases	0.09	0.09	0.09	0.09
Operation & Maintenance Expense	21.10	21.10	21.10	21.10
Other	136.88	136.88	136.88	136.88
Municipal Taxes	(247.91)	(247.91)	(247.91)	(247.91)
Income Tax Expense	(142.91)	(142.91)	(142.91)	(142.91)
Insurance	182.50	182.50	182.50	182.50
Property Taxes	136.88	136.88	136.88	136.88

3 Non-Rate Base Deferrals

This section summarizes three Commission approved and two proposed non-rate base deferral accounts with balances reported to this point in time proposed for recovery in rates in 2022. Creative Energy has an approved Core COVID-19 Deferral Account, the balance and recovery of which will be the subject of a supplemental filing later in December for interim approval of a rate mechanism effective February 1, 2022.

3.1 Approved Non-Rate Base Deferral Accounts

3.1.1 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.

3.1.2 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 at a carrying cost equal to 3.5 percent. 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.

3.1.1 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.

3.2 Proposed Non-Rate Base Deferral Accounts

3.2.1 Water Cost Deferral Account (WCDA)

The WCDA was approved by Order G-310-21 for the 2021 Test Year. 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.

Creative Energy now seeks approval of the WCDA on an ongoing basis. Prior RRA proceedings have focused on the relative accuracy of a predictive model of water costs but the importance of maintaining a WCDA relates to controlling for load variance as a significant driver of such costs. The variance in water costs is also connected with the load impact of COVID-19 and the balance of this deferral would therefore be determined as part of net balance COVID-19 Deferral Account for recovery in accordance with the approved mechanism of the COVID-19 Deferral Account to record revenue loss net of avoided water costs.

Creative Energy believes that approval of the WCDA on an ongoing basis will continue to mitigate a significant risk that a public utility should not have to bear, that being a variance from budgeted amounts for an expense that can vary significantly due to factors outside of Creative Energy's control, primarily water use volumes as driven by thermal energy load and water rates as set by the City of Vancouver which are also variable and unpredictable at the time of filing RRAs. The WCDA will control for some volume risk as it will track total annual forecast versus actual water expenses. The incentives for Creative Energy management to control controllable costs are not reduced by the proposed WCDA as these costs are not controllable by management. Approval of the WCDA will also support a consistent approach under the approved mechanism of the COVID-19 Deferral Account to record revenue loss net of avoided water costs due to the impacts of COVID-19 on customer steam load.

3.2.2 Refinancing Cost Deferral Account (RCDA)

Creative Energy requests approval of a Refinancing Cost Deferral Account (**RCDA**) on an ongoing basis to record in 2021 and in future years, as applicable, the refinancing costs that it is required to pay when debt facilities mature. Creative Energy Vancouver renewed its existing facility with HSBC/TD on September 15, 2021 at a cost of $126,621. Costs include both fees charged by HSBC and TD and legal costs from the lender's legal counsel. It does not include any legal fees from Creative Energy's counsel nor any fees related to the Creative Energy Developments LP. The addition to Core based on the 2022 capital asset balances used in the Massachusetts formula calculation would be 85.8% or $108,641 for Core and NEFC. This is forecast to be a recurring Creative Energy Vancouver cost in years where facilities are required to renew its debt agreement. The timeline for the next renewal is September 2023. Creative Energy has not currently included this deferral account on the schedules of this filing but can update the schedules in a compliance filing as applicable.

3.3 Forecast 2020 Balances for Recovery in 2021 Rates

Table 38: Projected Deferral Account Balances

Deferred Account Name	2022 Opening Balance	Additions/ (Deductions)	Interest/ AFUDC	Amortization	Ending Balance
PEDA 2020	(2,462)	N/A	(86)	2,548	-
TPRCDA 2020	35,962	N/A	1,259	(37,221)	-
Water Cost Deferral Account	35,745	-	1,251	(36,145)	-
Property Tax Deferral Account	64,982	-	2,274	(67,256)	-
Pension 2021 – to be determined at year end and amortized over 3 years	TBD	TBD	TBD	TBD	TBD
TPRCDA 2021 – to be determined at year end	TBD	TBD	TBD	TBD	TBD
Total	134,226	TBD	4,698	(138,074)	TBD

Appendix A

Draft Order for Interim Approval of 2022 Rates

Order Number

●

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

and

Creative Energy Vancouver Platforms Inc.
Application for 2022 Rates on a Unified Basis for the Core Steam system and Northeast False Creek (NEFC) system

ORDER

WHEREAS:

A. On November 1, 2021, Creative Energy Vancouver Platforms Inc. (**Creative Energy**) filed with the British Columbia Utilities Commission (**BCUC**) an Application for Rates for the Core Steam system and Northeast False Creek (**NEFC**) service areas – Part 1 – Rate Structure (**Application Part 1**). The Application Part 1 proposes a rate structure to consolidate the cost of service and unify the rates of Creative Energy's NEFC system with the cost of service and rates of Creative Energy's Core Steam system;

B. On December 1, 2021, Creative Energy filed with the British Columbia Utilities Commission (**BCUC**) further application – Part 2 – Consolidated 2022 Revenue Requirements for Unified Rates (**Application Part 2**). The Application Part 2 presents the consolidated cost of service and forecast revenue requirements of the Core Steam system and NEFC system, further to the rate structure proposals filed in the Application Part 1;

C. Creative Energy requests, among other things, approval of rates under a single rate schedule for the Core Steam system, including the connected NEFC system, to include the following components:

  - Thermal energy rates under the existing declining block tariff structure expressed in dollars per thousand pounds of steam ($/M#), if the customer is connected to the steam distribution network and their thermal energy consumption is metered as such;

  - Thermal energy rates under the existing declining block tariff structure expressed in dollars per megawatt hours of thermal energy ($/MWh), if the customer is connected to the hot water distribution network and their thermal energy consumption is metered as such;

D. Creative Energy also requests approval of a System Contribution Charge to recover the net balance in the NEFC Revenue Deficiency Deferral Account as at the end of 2021 plus a System Contribution determined as the difference between the net present value of the incremental forecast cost to serve the NEFC building customers over the period 2022-2043 less the net present value of the incremental benefit to the Core Steam system of the extension to serve NEFC building over the same period;

E. On the basis of the rate structure proposed in its Application Part 1, Creative Energy requests interim approval of 1) rates for thermal energy service equivalent to a 14.3 percent increase over approved 2021 Core Steam service rates, effective as of January 1, 2022, and 2) to charge the System Contribution Charge for customers connected to the hot water distribution network;

F. Creative Energy requests the approval in recitals C, D and E to be made effective on an interim basis, pending a final BCUC decision on the Application; and

G. The Commission has commenced its review of the Application and is satisfied that the setting of interim rates effective January 1, 2022 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 thermal energy service rates and the System Contribution Charge set out at Appendix B of the Application Part 2 are approved on an interim and refundable basis, effective January 1, 2022, 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 weighted average 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 Core System 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 2022.

Appendix B

2022 Interim Tariff Page for Approval

CREATIVE ENERGY VANCOUVER PLATFORMS INC.

15. RATE SCHEDULE

Applicability: The Vancouver Core (Core) and Northeast False Creek (NEFC) areas serviced by the Utility.

Class of Service: Thermal Energy Service.

Thermal Energy Service Rates:

For customers connected to the steam distribution network:

$ 15.04 per thousand pounds (M#) of steam for the first 50 M# of steam per month
$ 12.73 per M# of steam for the next 150 M# of steam per month
$ 11.27 per M# of steam for the next 800 M# of steam per month
$ 8.94 per M# of steam for the remainder per month

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

$ 43.35 per MWh of thermal energy for the first 17 MWh of thermal energy per month
$ 36.39 per MWh of thermal energy for the first 52 MWh of thermal energy per month
$ 32.48 per MWh of thermal energy for the first 278 MWh of thermal energy per month
$ 25.76 per MWh of thermal energy for the remainder per month

Rate Increase: Effective January 1, 2022, the rates above include an interim rate increase of 14.3% before rounding, approved by Order G-xx-xx.

Fuel Cost Adjustment Charge (FCAC):

For customers connected to the steam distribution network

FCAC	$15.40 per M# of steam
Rate Rider - Stabilization Account Amortization	$0.00 per M# of steam
Total	$15.40 per M# of steam

FCAC charge effective November 1, 2021, as approved by BCUC Order G-329-21
Rate Rider charge ffective March 1, 2021, as approved by BCUC Order G-84-21

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

FCAC	$44.38 per MWh of thermal energy
Rate Rider - Stabilization Account Amortization	$0.00 per MWh of thermal energy
Total	$44.38 per MWh of thermal energy

System Contribution Charge:

For customers connected to the hot water distribution network

System Contribution Charge	$9.50 per MWh of thermal energy

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.