



bcuc
British Columbia
Utilities Commission

Suite 410, 900 Howe Street
Vancouver, BC Canada V6Z 2N3
bcuc.com

P: 604.660.4700
TF: 1.800.663.1385
F: 604.660.1102

Creative Energy Mount Pleasant Limited Partnership

Application for Rates for the Mount Pleasant District Cooling System

Decision and Order G-242-22

August 22, 2022

Before:

A. K. Fung, QC, Panel Chair
E. B. Lockhart, Commissioner
T. A. Loski, Commissioner

TABLE OF CONTENTS

Page no.

Executive Summary	i
1.0 Introduction	1
1.1 Background and Application	1
1.2 Approvals Sought	3
1.3 Regulatory Process	4
1.4 Legislative and Regulatory Framework	5
1.5 Decision Framework.....	5
2.0 Proposed Rate Design	6
2.1 Levelized Fixed Capacity Charge.....	6
2.1.1 Billing Determinants	7
2.1.2 Phased Implementation	10
2.1.3 Levelization Period.....	11
2.1.4 Revenue Deficiency Deferral Account	15
2.2 Variable Charge	16
3.0 Revenue Requirements and Rates	19
3.1 Capital and Development Costs	19
3.2 Depreciation	20
3.3 Operations and Maintenance.....	22
3.3.1 Corporate Overhead	23
3.3.2 Operators.....	25
3.3.3 Maintenance	26
3.3.4 Insurance	26
3.4 Cost of Capital	27
3.5 Regulatory Cost Variance Deferral Account.....	28
4.0 Other Issues Arising	29
4.1 Water/Chemical Costs.....	29

4.2	Direction on Next Revenue Requirements Application	31
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5.0	Summary of Directives	31
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BCUC ORDER G-242-22

APPENDICES

APPENDIX A	Glossary
APPENDIX B	Exhibit List

Executive Summary

On February 1, 2021, Creative Energy Mount Pleasant Limited Partnership (CEMP) applied to the British Columbia Utilities Commission (BCUC) for approval of rates for its provision of cooling service to the development at Main Street and East Fifth Avenue in Vancouver, BC (Main Alley Development) (Mount Pleasant District Cooling System [DCS]) that will be completed in four phases (Application). On October 14, 2021, CEMP reported that due to supply chain delays it expected to have Phase 1 of the Mount Pleasant DCS completed by April 2022, following which it would file an Evidentiary Update.

The BCUC established a regulatory timetable for review of the Application, which included public notification, two rounds of BCUC and Intervener information requests, and final and reply arguments. One party registered as an intervener in the proceeding: Commercial Energy Consumers Association of British Columbia.

The Panel finds that the rate design that CEMP has proposed for the Mount Pleasant DCS is reasonable and approves both the rate-setting mechanism and the rates, subject to the directives and determinations in this decision dealing with the phased implementation and levelization of the fixed capacity charge.

During the proceeding, CEMP noted that Phase 1 has been essentially split in two, whereby not all of the Phase 1 assets are going into service in the current rate-setting period, effective from February 1, 2021 to December 31, 2023. The Panel approves CEMP to recover in rates the cost of the assets entering service in the Current Rate-Setting Period, specifically, costs to connect building M2 and the cost to replace the existing 350-ton chiller with the new 325-ton chiller.

The levelized fixed capacity charge, expressed in \$/kilowatt, is designed to recover all costs of the Mount Pleasant DCS that do not vary with energy consumption. It will be invoiced in accordance with the design peak capacity of each building, which fairly and reasonably aligns with the cost causation rate-setting principle. The Panel directs CEMP to re-calculate the levelized fixed capacity charge based on the Phase 1 actual costs to connect building M2 and the chiller replacement going into service during the Current Rate-Setting Period in a compliance filing within 15 days of the Participant Assistance/Cost Award order for this proceeding.

The Panel finds that a 25-year levelization period for the fixed capacity charge for the Mount Pleasant DCS is reasonable. This is also the duration of the Customer Service Agreements and the depreciation period for the capital assets. Having approved a levelized fixed capacity charge, the Panel also approves a Revenue Deficiency Deferral Account (RDDA) for the Mount Pleasant DCS, bearing interest at CEMP's weighted average cost of capital, to capture annual revenue deficiencies or surpluses resulting from the difference between the annual revenue at the approved levelized fixed capacity charge and the approved annual forecast cost of service, except for electricity and water costs. The RDDA will remain in effect for the 25-year levelization period for the fixed capacity charge. CEMP is directed to provide the calculation and annual balance of the RDDA as part of its Annual Report.

The proposed variable charge, which will recover water and electricity costs on a flow-through basis, is reasonable.

In addition, the Panel approves a Regulatory Cost Variance Deferral Account to record the difference between the forecast regulatory costs and the final actual regulatory costs for the Mount Pleasant DCS.

The Panel considers the revenue requirements, including the forecast capital and development costs and related depreciation expense, operations and maintenance costs and cost of capital to be reasonable, subject to the directives and determinations in the decision.

1.0 Introduction

On February 1, 2021, Creative Energy Mount Pleasant Limited Partnership (CEMP or Creative Energy) applied to the British Columbia Utilities Commission (BCUC) pursuant to sections 58 to 60 and 90 of *the Utilities Commission Act* (UCA) for approval of rates for its provision of cooling service to the development at Main Street and East Fifth Avenue in Vancouver, BC (Main Alley Development) (Mount Pleasant District Cooling System [DCS]), on an interim basis, effective February 1, 2021 through to December 31, 2023 (Current Rate-Setting Period) (Application).

CEMP seeks to recover the cost of service for the Mount Pleasant DCS through a rate design consisting of:¹

- A levelized fixed capacity charge (\$/kilowatt [kW]) to recover fixed capital and operating costs that do not vary with energy consumption; and
- A variable charge (\$/megawatt hour [MWh]) to recover actual electricity and water input costs on a flow-through basis per unit of actual energy consumption.

The proposed levelized fixed capacity charge is determined on the basis of the actual and forecast costs to complete all four phases of the Mount Pleasant DCS and is designed to recover the cost of service over a 33-year levelization period, and therefore CEMP also requested approval to establish a rate-smoothing Revenue Deficiency Deferral Account (RDDA).² The RDDA will enable CEMP to recover, in later years, the forecast revenue deficiency during the initial years of service.³

In this decision, the Panel addresses the key issues raised during the proceeding, provides an overview of the relevant evidence, considers CEMP's proposals, and outlines the reasons for the Panel's determinations.

1.1 Background and Application

CEMP was formed for the purpose of acquiring, operating and expanding the Mount Pleasant DCS to serve the cooling demand of the Main Alley Development. CEMP is a wholly owned subsidiary of Creative Energy Developments Limited Partnership (CEDLP), a privately held energy infrastructure business with a focus on district energy system service in urban areas throughout Vancouver. Staff of Creative Energy Vancouver Platforms Inc. (CEVP), also a subsidiary of CEDLP, provide services to CEMP, and the cost of those services is allocated either directly or in accordance with the BCUC-approved Massachusetts Formula, as discussed further in subsection 3.3.1.⁴

By Order C-5-20 dated December 3, 2020, the BCUC granted a Certificate of Public Convenience and Necessity (CPCN) to CEMP authorizing it to acquire and operate the existing Mount Pleasant DCS, including specific extensions, renovations, expansions and upgrades that will be completed in phases in order to service the

¹ Exhibit B-1, Section 3, p. 14.

² Exhibit B-1, Section 1, p. 1; Section 1.2, p. 4.

³ Exhibit B-1, Section 1.2, pp. 4–5.

⁴ Exhibit B-7, BCUC IR 1.1; CEMP Application for a CPCN to Acquire, Operate and Expand a Thermal Energy System for Cooling in the Main Alley Development (CPCN Proceeding), Exhibit B-1, Section 1.3, p. 3; Exhibit B-5, BCUC IR 38.1.

Main Alley Development. The BCUC also approved the related Customer Service Agreements (CSA) which will be executed with the registered owner of each of the buildings when service is commenced.⁵

The Main Alley Development will consist of five buildings: two are existing commercial/light industrial-use buildings (M1 and M3), one of which has a planned expansion (M3); two are planned commercial/light industrial-use buildings (M2 and M4); and one is a planned residential tower (M5). The occupancy dates for the planned buildings range from 2021 through to 2029.⁶

The Mount Pleasant DCS is forecast to be built in four phases and upon full build-out, will serve all five buildings of the Main Alley Development. The construction phases of the Mount Pleasant DCS are being coordinated with construction of the Main Alley Development to match planned building occupancy and load growth. At the time of filing its Application, CEMP expected that the timing of the phased implementation of the Mount Pleasant DCS would be as follows:⁷

Table 1: Summary of the Phased Implementation of the Mount Pleasant DCS⁸

Phase	Description	Targeted Service Commencement	Essential Components	Total Capacity	Cumulative Peak Load Served
Initial Acquisition and Operation	Continue service to M1 & M3	September 1, 2020	<ul style="list-style-type: none"> Two existing 350-ton chillers Remove existing 150-ton chiller 	2,460 kW ²	790 kW
Phase 1	Connect M2 Upgrade M3 cooling plant capacity and reliability	2021	<ul style="list-style-type: none"> DPS⁹ ETS¹⁰ Add 400-ton chiller to cooling plant 	3,870 kW	1,630 kW
Phase 2	Connect M4	2024	<ul style="list-style-type: none"> DPS ETS 	3,870 kW	2,785 kW
Phase 3	Serve renovated and expanded M3 Upgrade & modernize M3 cooling plant	2027	<ul style="list-style-type: none"> Replace two 350-ton chillers with two 400-ton chillers Replace control system, add cooling tower, equip with modern ETS 	4,220 kW	3,275 kW
Phase 4	Connect M5	2029	<ul style="list-style-type: none"> DPS ETS 	4,220 kW	3,665 kW

⁵ CPCN Proceeding, Exhibit B-1, Section 2.2, p. 11; Order C-5-20 and accompanying Decision dated December 3, 2020 for the CPCN Proceeding (CPCN Decision).

⁶ Exhibit B-1, Section 1.1, Table, 1, p. 2.

⁷ Exhibit B-1, Section 1.1, pp. 2–3.

⁸ Exhibit B-1, Section 1.1, Table 2, pp. 3–4.

⁹ Distribution piping system.

¹⁰ Energy transfer station.

Building M3 has an existing cooling plant in place that currently services both existing buildings (M1 and M3) and comprises the assets that, effective February 1, 2021, CEMP acquired pursuant to a Construction and Purchase Agreement with the following individual partnerships: 2015 Main Partnership (building M1 and M5), 130 East 4th Partnership (building M2), 111 East 5th Partnership (building M3), and a co-ownership between 2000 Main Holdings Inc. and Allied Main Alley (building M4) Limited Partnership.¹¹

On February 18, 2021, the Panel, among other things, approved the proposed levelized fixed capacity charge and variable charge for the Current Rate-Setting Period on an interim and refundable/recoverable basis, effective February 1, 2021, as well as the establishment of the RDDA as proposed.¹²

1.2 Approvals Sought

CEMP summarizes the approvals sought in its Final Argument as follows:¹³

1. Permanent approval of the following rate structure:
 - a. A levelized fixed capacity charge to recover capital and fixed operating costs that do not vary with energy consumption based on the peak design capacity (\$/kW) of each building; and
 - b. A variable charge to recover actual electricity and water input costs on a flow-through basis per unit of actual energy consumption (\$/MWh).
2. Permanent approval of a levelized fixed capacity charge for the Current Rate-Setting Period based on:
 - a. A 33-year levelization period with service and load growth corresponding to the timing of the phased completion of the Mount Pleasant DCS and the Main Alley Development;
 - b. Actual capital costs of the initial acquisition and operation phase of the Mount Pleasant DCS corresponding to service commencement on February 1, 2021;
 - c. Forecast capital costs of Phase 1 and Phase 2 assets in service January 1, 2024. This is subject to the Panel's determinations on the Phase 1 assets that enter service during the Current Rate-Setting Period, which is further discussed in subsection 2.1.2¹⁴;
 - d. Forecast capital costs of Phases 3 and 4 assets in service as scheduled; and
 - e. A forecast annual cost of service for the Current Rate-Setting Period as set out in the Application, with the applicable updates reviewed in this Final Argument as arising during the review proceeding, including in respect of the updated timing of Phase 1 assets in service.
3. Permanent approval of the Regulatory Cost Variance Deferral Account (RCVDA) to record the difference between the forecast and actual regulatory costs for the Mount Pleasant DCS.

¹¹ Exhibit B-7, BCUC IR 1.2; CPCN Proceeding, Exhibit B-1, Appendix 2.

¹² Exhibit A-2, Order G-46-21.

¹³ CEMP Final Argument, Section 1.1, p. 2.

¹⁴ CEMP Final Argument, Section 1.1, Footnote 1, p. 1.

In addition to the above approvals sought, the Panel will address whether permanent approval of the RDDA is warranted to record annual revenue deficiencies or surpluses resulting from the difference between forecast annual revenue at the approved rates and the approved annual cost of service for the Mount Pleasant DCS.

1.3 Regulatory Process

CEMP filed its Application on February 1, 2021, and at the time of filing, it expected that Phase 1 of the Mount Pleasant DCS would be in service by September 2021 and proposed to file an evidentiary update to reflect the actual Phase 1 capital costs (Evidentiary Update) in support of its request for permanent rates for the Current Rate-Setting Period.¹⁵

On October 14, 2021, CEMP reported that due to supply chain delays it expected to have Phase 1 of the Mount Pleasant DCS completed by April 2022, following which the Evidentiary Update would be filed.¹⁶

CEMP responded to the Panel's request for comments on the impact of the supply chain delays on various aspects of the Application, and on the proposed regulatory process. CEMP stated that it may be appropriate for the BCUC to commence review of the Application prior to CEMP filing its Evidentiary Update, and in absence of the actual Phase 1 capital costs. CEMP also noted that in the alternative, it did not have any concerns with the review of the Application remaining adjourned until the Evidentiary Update is filed.¹⁷

The BCUC established a public written hearing process and a regulatory timetable, which included intervenor registration and one round of BCUC and intervenor information requests (IRs) with further process to be determined. As part of the same order, CEMP was directed to file a status update (Status Update) with the BCUC on March 1, 2022, to include the expected filing date for the Evidentiary Update.¹⁸

CEMP filed its Status Update as directed and proposed to adjust the timing of Phase 1 delivery to occur together with the scheduled completion of Phase 2, which is planned to go into service at the start of 2024 to support the occupancy of building M4 in 2024. CEMP noted that the adjusted timing provides a cost-effective solution that integrates the work to complete Phase 1 and Phase 2 and does not impact service delivery to buildings M1, M2 or M3, which are currently being served by the Mount Pleasant DCS.¹⁹

The Panel established the remainder of the regulatory timetable, which included a second round of BCUC and Intervenor IRs, along with final and reply arguments.²⁰ The Panel subsequently amended the regulatory timetable to request submissions as part of the parties' final arguments on matters relating to charging for the supply of electricity to CEMP, further discussed in subsection 2.2.²¹

One party registered and actively participated as an intervenor in the proceeding: the Commercial Energy Consumers Association of British Columbia (the CEC). The BCUC did not receive any letters of comment.

¹⁵ Exhibit B-1, Section 1, p. 1.

¹⁶ Exhibit B-2, pp. 1–2.

¹⁷ Exhibit B-3, pp. 2–3.

¹⁸ Exhibit A-4, Order G-352-21.

¹⁹ Exhibit B-9, p. 2.

²⁰ Exhibit A-7, Order G-76-22.

²¹ Exhibit A-9, Order G-131-22.

1.4 Legislative and Regulatory Framework

The BCUC's Thermal Energy System (TES) Regulatory Framework Guidelines (TES Guidelines)²² provide a scaled approach to the regulation of thermal energy services, where the regulatory oversight increases with the size and scope of the TES. CEMP's Mount Pleasant DCS is classified as a Stream B TES for which the approval of rates is governed by sections 59 to 61 of the UCA.²³

The TES Guidelines state that applicants (Stream B TES utilities) are required to consider the following rate-setting principles:²⁴

1. Provide an equitable balance of risk and cost (such as forecast load and cost risk) between the utility and the ratepayer or generation of ratepayers;
2. Use the fewest deferral mechanisms possible;
3. Restrict the ability of the utility to pass controllable costs onto ratepayers;
4. Use the least amount of regulatory oversight to protect the ratepayer (minimize the regulatory burden and costs on the utility, ratepayers and the BCUC); and
5. Avoid rate shock (more than 10 percent change in rates per annum is generally considered "Rate Shock").

In addition, the Panel reviews the proposed depreciation rates pursuant to section 56 of the UCA.

1.5 Decision Framework

In this decision, the Panel reviews the relevant evidence, considers the positions of the parties, discusses the issues arising in the course of the proceeding and outlines the reasons for its determinations. The decision is structured to specifically address the following items:

- Section 2.0 addresses the proposed rate design and billing determinants, including the variable charge,²⁵ the levelized fixed capacity charge,²⁶ the levelization period and the RDDA to smooth rates over that period;
- Section 3.0 discusses the reasonableness of the proposed revenue requirements, including the request for the RCVDA and the components of the forecast cost of service for the Mount Pleasant DCS;
- Section 4.0 addresses other key issues, including the higher chemical costs for water treatment that arose in 2021 during the commissioning of the Mount Pleasant DCS, and filing timelines for CEMP's next revenue requirements application (RRA); and
- Section 5.0 provides a summary of the Panel's directives arising from this decision.

²² BCUC TES Guidelines, Appendix A to Order G-27-15, p. 17.

²³ UCA, RSBC 1996, c. 473.

²⁴ TES Guidelines, p. 17.

²⁵ The variable charge will recover on a flow-through basis the actual electricity and water costs for the Mount Pleasant DCS.

²⁶ The levelized fixed capacity charge will recover the capital and fixed operating costs of the Mount Pleasant DCS.

2.0 Proposed Rate Design

CEMP seeks to recover the cost of service for the Mount Pleasant DCS through a proposed rate structure consisting of:²⁷

- A levelized fixed capacity charge (\$/kW) to recover fixed capital and operating costs that do not vary with energy consumption; and
- A variable charge (\$/MWh) to recover actual electricity and water input costs on a flow-through basis per unit of actual energy consumption.

CEMP states that the rate design is identical to that recently approved by Order G-222-21 and accompanying decision for CEVP Application for Heating Rates for the Heating TES and Cooling Rates for the DCS at the Vancouver House Development (VHD) (VHD Decision) and that it placed considerable weight on the determinations and directives within the VHD Decision.²⁸ CEMP adds that the cost drivers for the cost of service for each of the VHD DCS and the Mount Pleasant DCS are the same, namely:²⁹

- (i) A central plant and energy transfer and piping system sized to meet the peak design requirements of the buildings being served, which inform the kW billing determinants for recovery of fixed costs; and
- (j) Fuel costs that vary directly with energy consumption and which are recovered on a flow through basis from each building based on their proportional energy use.

CEMP acknowledges that there are differences between the VHD DCS and the Mount Pleasant DCS with respect to the specific capacity, number, and type of buildings. However, it also states that there are no differences that would necessitate a change to the design of the billing determinants for cost causation and recovery purposes.³⁰

The following subsections review the proposed components and structure of the levelized fixed capacity charge and variable charge.

2.1 Levelized Fixed Capacity Charge

The levelized fixed capacity charge is designed to recover all costs of the Mount Pleasant DCS that do not vary with energy consumption³¹ on a \$/kW basis and is invoiced in accordance with the design peak capacity of each building.³² CEMP considers that a levelized fixed capacity charge fairly and reasonably aligns with the cost causation rate-setting principles where rates are set to recover costs in a manner consistent with the factors that cause those costs and that this structure supports stable and predictable rates.³³

The Panel reviews the reasonableness of the following key features of the levelized fixed capacity charge in the subsections below: (i) the proposed billing determinants; (ii) the proposed levelization period; and (iii) the RDDA to smooth the fixed capacity charge over the levelization period.

²⁷ Exhibit B-1, Section 1.2, p. 4, Section 3, p. 14.

²⁸ Exhibit B-1, Section 3, p. 14; Exhibit B-7, BCUC IR 13.4.2, 13.5.1, 13.7 and 15.2.

²⁹ Exhibit B-11, BCUC IR 33.1.1.

³⁰ Exhibit B-11, BCUC IR 33.1.1.

³¹ These are the capital and fixed operating costs (i.e. the cost of service apart from electricity and water costs). Exhibit B-1, Section 3.1, p. 15.

³² Exhibit B-1, Section 3.1, p. 15.

³³ Exhibit B-1, Section 3.1, p. 15; Exhibit B-7, BCUC IR 13.5.

2.1.1 Billing Determinants

CEMP proposes the following billing determinants for its fixed capacity charge, which are the total design peak capacities for each building:

Table 2: Proposed Fixed Capacity Charge Billing Determinants³⁴

Building	Design Peak Capacity kW at DCS project completion
M1	320
M2	840
M3 ⁶	960
M4	1,155
M5	390
Total Billing Determinants	3,665

The design peak capacities provided in the Application align with the peak capacity and annual cooling load provided during the CPCN Proceeding, which CEMP stated were based on generally accepted demand and energy factors for similar types of buildings.³⁵ The peak capacity and annual cooling loads provided during the CPCN Proceeding were as follows:

Table 3: Summary of Peak and Annual Cooling Load provided in the CPCN Proceeding³⁶

Building	Floor Area m ²	Peak Cooling W/m ²	Peak Capacity kW	Annual Cooling kWh/m ²	Annual Cooling MWh
M1	5,400	60	320	41	220
M3 – existing	7,880	60	470	41	330
M2	15,979	53	840	41	655
M4	19,250	60	1155	41	790
M3 – expanded	16,070	60	960	41	670
M5 ³	11,519	34	390	21	240

As illustrated in Table 3 above, peak capacity (kW) is the result of the building floor area (metre squared or m²) multiplied by the peak cooling energy use intensity (EUI) (W/m²). During the CPCN Proceeding, CEMP stated that instead of using a peak cooling EUI of 60 W/m² for existing buildings M1 and M3 as shown above, it could reasonably use 75 W/m² based on a review completed by engineering firm Kerr Wood Leidal (KWL) as a means to confirm final peak capacity requirements for the purpose of defining the fixed capacity charge billing determinants.³⁷

CEMP explains that there is greater uncertainty in the peak capacity requirements of existing buildings M1 and M3 as compared to new buildings and that either peak cooling EUI, 60 W/m² or 75 W/m², could be reasonably

³⁴ Exhibit B-1, Table 7, p. 15.

³⁵ CPCN Proceeding, Exhibit B-1, p. 13.

³⁶ CPCN Proceeding, Exhibit B-1, Table 3, p. 13.

³⁷ CPCN Proceeding, Exhibit B-3, BCUC IR 8.7.

used to determine peak capacity requirements because both come from reputable sources.³⁸ CEMP states that using a peak cooling EUI of 75 W/m² is conservative from an engineering perspective to ensure the plant has capacity, while 60 W/m² is conservative from a financial perspective. Given that CEMP proposes billing determinants for its fixed capacity charge that are equal to the design peak capacity for each building, CEMP states that the fixed portion of the rates would increase for the existing buildings if a peak cooling EUI of 75 W/m² was used to determine the peak capacity requirements and that it decided to use 60 W/m² in the Application to keep the rates lower. To further support its use of the lower peak cooling EUI to determine peak capacity requirements and billing determinants for existing buildings M1 and M3, CEMP states that based on its operational experience to-date, the demand for these buildings has been lower than expected.³⁹

CEMP proposes to provide a further analysis and assessment of the actual peak capacity demands of buildings M1 and M3 as part of its RRA for the next rate-setting period effective January 1, 2024.⁴⁰

Evaluation of Alternative Billing Determinants

CEMP evaluated the proposed fixed capacity billing determinants (i.e. design peak capacity (\$/kW) basis), as presented in Table 2 above, against an alternative floor space (i.e. \$/m²) approach, and concluded that the design peak capacity was equivalent or superior to the floor space approach with respect to each of the eight Bonbright criteria.⁴¹ CEMP also provided the following summary of the percentage recovery of the capital and fixed operating costs using each of the design peak capacity and floor space approach:⁴²

Table 4: Percentage Recovery using each of the Design Peak Capacity and Floor Space Approach⁴³

Building	Design Peak Capacity Approach		Floor Space Approach	
	kW	% Recovery of Capital and Fixed Operating Costs	m2	% Recovery of Capital and Fixed Operating Costs
M1	320	9%	5,400	8%
M2	840	23%	15,979	23%
M3	960	26%	16,070	24%
M4	1,155	32%	19,250	28%
M5	390	11%	11,519	17%
Total	3,665	100%	68,218	100%

Under a floor space approach, CEMP notes that building M5, the residential building, would be allocated a greater proportion of fixed cost recovery than would be fair as compared to a design peak capacity approach. Residential buildings like building M5 have lower estimated demand and energy use intensities per unit of floor area, making them more efficient as compared to commercial buildings. CEMP adds that using a floor space approach as the basis for a fixed capacity charge does not reflect these differences in energy capacity because it does not reflect the more efficient demand intensities of the residential building. Consequently, the floor space

³⁸ Exhibit B-7, IR 17.2; Exhibit B-11, BCUC IR 34.4.

³⁹ Exhibit B-11, BCUC IR 34.4.

⁴⁰ Exhibit B-7, BCUC IR 17.2.

⁴¹ Exhibit B-7, BCUC IR 15.1.

⁴² Exhibit B-7, BCUC IR 18.4.

⁴³ Exhibit B-7, BCUC IR 18.4.

approach results in an unfairly high allocation of the fixed costs to serve the residential building (i.e. building M5).⁴⁴

Position of the Parties

The CEC agrees that the design peak capacity of each building is the more direct and better indicator of cost causation for the Mount Pleasant DCS and is the reasonable and preferred billing determinant for the fixed capacity charge.⁴⁵

Panel Determination

The Panel determination here addresses two aspects of the billing determinant: first, whether design peak capacity or floor space is the preferable basis for assessing the billing determinant, and second, the peaking cooling EUI to be used for each building.

The Panel finds that assessing a billing determinant on the basis of design peak capacity, rather than floor space, is appropriate. This type of rate design has been approved in similar proceedings, such as the VHD Decision, where the BCUC thoroughly examined the proposal. The cooling system at VHD is comparable to the Mount Pleasant DCS because both service commercial and residential customers are thermal energy systems. In the VHD Decision, the BCUC accepted “Creative Energy’s submission that a building that is designed more efficiently and therefore has a lower design peak demand should pay a relatively lower capacity charge bill than a less efficiently-designed building of equal size with a higher design peak demand.”⁴⁶ Moreover, the BCUC concluded that the “Capacity Charge, based on design peak demand as the billing determinant, more closely reflects the principle of cost causation than the floor space alternative.”⁴⁷

Whereas the Panel is satisfied that it is appropriate to use design peak capacity rather than floor space to assess the billing determinant for each building, there is uncertainty as to which peak cooling EUI CEMP should use to assess the billing determinant for existing buildings M1 and M3 (i.e. a peak cooling EUI of 60 W/m² or 75 W/m²). The Panel has no concerns regarding CEMP’s proposed design peak capacity and billing determinants for buildings M2, M4 and M5. As CEMP notes, the higher number, 75 W/m², is conservative from an engineering perspective to ensure the plant has capacity, while 60 W/m² is conservative from a financial perspective. Both values were referred to during the CPCN proceeding as peak cooling EUI’s for buildings M1 and M3 provided by engineering firm, KWL (75 W/m²) and specified by CEMP (60 W/m²). Although CEMP notes that it could reasonably use either peak cooling EUI (60 W/m² or 75 W/m²) to determine the design peak capacities and billing determinants for buildings M1 and M3 because they both come from reputable sources, the Panel recognizes that further analysis will be useful to determine whether 60 W/m² continues to be reasonable beyond the Current Rate-Setting Period. **Therefore, the Panel directs CEMP to file in its next RRA the results of its further analysis and assessment of actual building demand data for M1 and M3 and whether CEMP**

⁴⁴ Exhibit B-7, BCUC IR 18.4; Exhibit B-11, BCUC IR 35.1.

⁴⁵ CEC Final Argument, para. 28, p. 5.

⁴⁶ VHD Decision accompanying Order G-222-21, p. 42.

⁴⁷ VHD Decision accompanying Order G-222-21, p. 43.

proposes any changes to the billing determinants for buildings M1 and M3 on the basis of that further analysis and assessment.

For the Current Rate-Setting Period, and based on the most current information, the Panel approves the use of a peak cooling EUI of 60 W/m² to determine peak capacity requirements and billing determinants for existing buildings M1 and M3.

The Panel approves the fixed capacity charge, as proposed by CEMP for the Mount Pleasant DCS, subject to the directives and determinations in this decision dealing with the phased implementation and the levelization of the fixed capacity charge.

2.1.2 Phased Implementation

CEMP proposes to build the Mount Pleasant DCS in four phases through to commencement of service to building M5 in 2029, as outlined above in Table 1. The levelized fixed capacity charge is set on the basis of actual capital costs of those assets that entered service during the Current Rate-Setting Period and forecast costs of those assets expected to enter service in a future rate-setting period. CEMP states that the rate-setting periods are structured to align with the phased completion of the Mount Pleasant DCS and have been designed to serve the peak demand capacity of each building as it comes online.⁴⁸

At the time of filing its Application, CEMP planned to have the Phase 1 capital assets in service by September 2021.⁴⁹ However, during the proceeding, CEMP proposed to adjust the timing of Phase 1 delivery because of external factors that delayed the procurement and delivery of equipment. This would allow for the completion of the Phase 1 plant upgrades at the same time as Phase 2.⁵⁰ CEMP clarifies that the updated plan to complete Phase 1 and Phase 2 together will be cost-effective and will not impact service delivery to buildings M1, M2⁵¹ or M3, which are currently being served by the Mount Pleasant DCS.⁵² CEMP advises that the only area where it is expecting increased costs is in controls and electronics. However, it is working to secure pricing through a master service agreement to mitigate this risk.⁵³

As a result of the adjusted timing, CEMP proposes the following:⁵⁴

- Factor the following Phase 1 assets that have entered or are expected to enter service during the Current Rate-Setting Period into permanent rates through a compliance filing:⁵⁵
 - The energy transfer station and distribution piping to connect Building M2, which was placed into service July 8, 2021 (approximately \$385,000 of Phase 1 capital),⁵⁶ and

⁴⁸ Exhibit B-1, Section 2.1, Table 3, p. 8; Exhibit B-7, BCUC IR 13.6; Exhibit B-7, BCUC IR 19.2 and 20.4.

⁴⁹ Exhibit B-1, Section 1, p. 1; Exhibit B-2, p. 1.

⁵⁰ Exhibit B-8, CEC IR 1.3; Exhibit B-9, p. 2.

⁵¹ Building M2 commenced taking service on July 8, 2021 (Exhibit B-11, BCUC IR 27.1).

⁵² Exhibit B-9, p. 2.

⁵³ Exhibit B-11, BCUC IR 27.9.

⁵⁴ Exhibit B-11, BCUC IR 27.2 and 27.6.

⁵⁵ CEMP Final Argument, Section 2.2, para. 28, p. 6, Section 4.2, para. 54, p. 11, footnote 19.

⁵⁶ Exhibit B-10, p. 1; Exhibit B-11, BCUC IR 27.1.

- A new 325-ton chiller that is expected to be placed into service by June 30, 2022. CEMP states that the new chiller will replace one of the existing 350-ton chillers which is in the worst condition, but will remain in place for redundancy;⁵⁷
- Factor the Phase 1 pumping improvements, heat exchanger installation, and associated piping reconfiguration of building M2 with Phase 2 of the project. These assets are forecast to go into service at the beginning of the next rate-setting period, January 1, 2024, the same time as the Phase 2 assets to connect building M4.⁵⁸

Positions of the Parties

The CEC is amenable to the BCUC setting permanent rates for the Current Rate-Setting Period based on the actual capital costs of the initial acquisition and operation phase, as well as the Phase 1 assets entering service in July 2021 and June 2022, with the forecast capital costs for the remainder of Phase 1, as well as Phases 2 through 4 assets going in service as scheduled.⁵⁹

Panel Determination

The Panel notes that due to the change in how Phase 1 is to be implemented, not all of the Phase 1 assets are going into service in the Current Rate-Setting Period. Therefore, costs related to Phase 1 pumping improvements, heat exchanger installation, and associated piping reconfiguration of building M2 will be deferred to the beginning of the next rate-setting period. However, with respect to those assets which have already been or are expected to be in service within this Current Rate-Setting Period, the Panel is satisfied that it is reasonable for CEMP to recover those capital costs in permanent rates. **Accordingly, the Panel approves CEMP to recover in rates the cost of the assets entering service in the Current Rate-Setting Period, specifically, costs to connect building M2 and the cost to replace the existing 350-ton chiller with the new 325-ton chiller.**

The Panel recognizes that CEMP has forecast in its rates model that all Phase 1 assets will go into service in the next rate-setting period (i.e. January 1, 2024); however, several Phase 1 assets entered service during the Current Rate-Setting Period. **Therefore, the Panel directs CEMP to re-calculate the levelized fixed capacity charge based on the Phase 1 actual costs to connect building M2 and the chiller replacement going into service during the Current Rate-Setting Period, as approved above, in a compliance filing within 15 days of the date of the Participant Assistance/Cost Award (PACA) order for this proceeding.** Please refer to the Panel Determination in subsection 3.5 for rationale on the timing of the compliance filing.

2.1.3 Levelization Period

CEMP proposes a fixed capacity charge that is determined on the basis of a 33-year levelization period, which it states provides for smooth, predictable and stable rate increases for customers over time because capital is

⁵⁷ Exhibit B-11, BCUC IR 27.2, 27.5 and 29.1.

⁵⁸ Exhibit B-11, BCUC IR 27.2.

⁵⁹ CEC Final Argument, para. 19, p. 4.

placed into service at each phase of construction of the Mount Pleasant DCS. CEMP adds that the 33-year levelization period extends over the life of the CSAs, from the year the first CSA commences for building M1 in 2021 through to 2053, which is the end of the 25-year term of the last CSA for building M5.⁶⁰

CEMP states that the length of the 33-year levelization period is reasonably set to span the duration of the CSAs of all buildings to be served by the Mount Pleasant DCS, which is considered fair to all building customers that will connect over time, recognizing that initial rates under-recover the cost of service.⁶¹

CEMP modelled the forecast revenues and determination of its levelized fixed capacity charge for the Current Rate-Setting Period to correspond to the CSA term for each of the buildings of the Main Alley Development, with revenues commencing when a given CSA commences and continuing for the 25-year term of that CSA.⁶² It states that the modelled rates fairly recover the cost of service over the terms of the CSAs. However, CEMP adds that the modelled rates do not reflect service to those buildings after the respective CSA term has ended.⁶³

CEMP provided the following graph illustrating an annual fixed capacity charge over a 33-year period under various alternative scenarios, including: (i) a full cost of service approach; (ii) the proposed rate design with a 33-year levelization period; and (iii) levelized rates using a shorter levelization period (i.e. 25-, 20-, 15-, and 10-year) followed by cost-of-service rates.

Figure 1: Fixed Capacity Charge under Various Levelization Scenarios⁶⁴



Based on these results, CEMP considers that rate stability and predictability are superior under the proposed 33-year levelization period.⁶⁵ It adds that a cost-of-service rate design would likely reduce regulatory efficiency because it would require more frequent rate-setting applications and proceedings. For energy systems that are phased in over time and have a fixed customer base, CEMP states that all else being equal, cost-of-service rates

⁶⁰ Exhibit B-1, Section 1.2, p. 4; Exhibit B-7, BCUC IR 20.2; CEMP Final Argument, Section 3.1, para. 35, p. 8.

⁶¹ CEMP Final Argument, Section 3.1, para. 35.

⁶² Exhibit B-1, Section 1.2, p. 4.

⁶³ Exhibit B-8, CEC IR 27.3.

⁶⁴ Exhibit B-7, BCUC IR 21.2, Attachment 21.2.

⁶⁵ Exhibit B-7, BCUC IR 21.2 and 21.2.1.

typically begin relatively high, due to the upfront capital investment and low customer base, and decline as load is added, economy of scale is achieved, and as rate base reduces with depreciation. Further, cost-of-service rates do not increase over time in a steady and predictable fashion and are sub-optimal with respect to Bonbright principles for customer understanding and acceptance, and rate stability.⁶⁶ CEMP adds that a shorter levelization period followed by cost-of-service rates reduces rate stability in the later years and may disproportionately benefit the first customers that connect given that their rates are lower than the cost of service in earlier years.⁶⁷

CEMP also explains that the significant increase in the levelized fixed capacity charge commencing approximately in 2046 (or year 26 in Figure 1) “relates to the effect of lower billing determinants coincident with the expiry of the applicable building customers CSAs and the assumption in the model that the CSAs are not renewed.”⁶⁸ CEMP acknowledges that future rate-setting periods will allow for further refinement of forecast costs, which can address any changes to CSAs and connected load, noting that renewal of a CSA will require a future RRA to maintain a fair allocation of the cost to serve.⁶⁹

In response to IRs, CEMP stated that separate rate structures and a single 25-year levelization period for each building would not be practical or cost-effective to establish or administer.⁷⁰ On the other hand, CEMP states that “a recommendation rather for a single 25-year levelization period and a single levelized fixed charge applicable to all customers connected to the Mount Pleasant DCS could be practical and cost effective to establish and administer over time.”⁷¹ It adds that a 25-year levelization period “may be simpler to understand than a 33-year levelization period and may lower utility risk, but may reduce rate stability during years 26-33 and may reduce overall fairness in cost recovery among the connected customers”.⁷²

Positions of the Parties

The CEC is generally supportive of the rate design principles of a levelized fixed capacity charge to smooth rates for capital costs.⁷³ The CEC agrees that the principle of levelization is valid and can be important in ensuring smooth rates over time and potentially avoiding intergenerational inequity.⁷⁴ However, it submits that the proposed 33-year levelization period is artificial and that the levelization period should have some sort of economic basis and/or reflect the actual CSA term.⁷⁵ The CEC submits that a separate 25-year levelization period for each building would be preferable because this is consistent with the contractual economic life of the Mount Pleasant DCS, as well as the actual term of each CSA, and will coincide with the conclusion of the first CSA rather than the last.⁷⁶

⁶⁶ Exhibit B-7, BCUC IR 20.1.

⁶⁷ Exhibit B-11, BCUC IR 37.7.

⁶⁸ Exhibit B-8, CEC IR 27.2.

⁶⁹ Exhibit B-11, BCUC IR 29.8 and 37.7.

⁷⁰ Exhibit B-12, CEC IR 30.1.1.

⁷¹ CEMP Reply Argument, para. 12, p. 4.

⁷² CEMP Reply Argument, Section 2, para. 12 and 13, p. 3.

⁷³ CEC Final Argument, para. 25, p. 5.

⁷⁴ CEC Final Argument, para. 35, p. 7.

⁷⁵ CEC Final Argument, para. 36 and 37, p. 7.

⁷⁶ CEC Final Argument, para. 51, 52 and 56, pp. 9–10.

In response to the CEC, CEMP submits that the 33-year levelization period aligns with the negotiated 25-year contract terms for each building's CSA.⁷⁷ CEMP acknowledges that both a 33-year and 25-year levelization period result in a rate model that achieves a fair allocation and recovery of costs over the CSA terms of all buildings.⁷⁸

CEMP states that "complexity and uncertainty would be introduced to the rate-setting exercise to ensure that costs are fairly allocated and fully recovered over time from all customers under five separate levelized charges that would each need to be amended as the Mount Pleasant DCS is built out over time." It adds that this "approach would overall diminish the merits of the proposed rate design in regard to accepted rate design principles."⁷⁹

Panel Determination

Three options were examined during the proceeding: (i) a 33-year levelization period; (ii) separate levelization periods for each of the five buildings at the Main Alley Development; and (iii) a 25-year levelization period.

CEMP proposes a 33-year levelization period in order to span the duration of the CSAs for the five buildings at the Main Alley Development and to cover the phased implementation of the entire Mount Pleasant DCS. In spite of that rationale, however, the Panel believes that this could be confusing for customers because of the mismatch with the 25-year term of each CSA. In fact, the CSA for four of the five buildings will expire before the end of the proposed 33-year levelization period and CEMP confirms that it has modelled rates to reflect the assumption that the CSAs for these buildings are not renewed. In the Panel's view, a 33-year levelization period modelled under an assumption where the building CSAs are not renewed may create rate instability in future years if one or more of the CSAs are renewed since the rates in the remainder of the levelization period would then need to be changed to reflect this renewal.

The second option is five separate 25-year levelization periods; in other words, one for each of the five buildings in the Main Alley Development. While this would be transparent, the Panel accepts that this would simply not be practical and cost-effective to establish and administer the rate impacts related to five separate levelization periods for five buildings within the same system.

The third option is a 25-year levelization period, applicable for the entire Mount Pleasant DCS. In this scenario, a levelization period that ends before the CSA of a particular building could mean that the remainder of the term of that CSA is subject to cost-of-service rates. The downside to this proposal is that CSA terms of the later-connected buildings will continue beyond the levelization period, with the result that customers in those buildings may be exposed to rate instability.

The Panel shares CEMP's concern regarding the complexity and uncertainty that having five separate levelized charges would introduce to the rate-setting exercise. In the Panel's view, therefore, having one levelization period applicable to the entire Mount Pleasant DCS is preferable compared to a separate period for each building. The issue then becomes the appropriate duration of the levelization period. Both CEMP and the CEC

⁷⁷ CEMP Reply Argument, Section 2, para. 7, p. 3.

⁷⁸ CEMP Reply Argument, Section 2, para. 8, p. 3.

⁷⁹ CEMP Reply Argument, Section 2, para. 11, p. 3.

agree that the levelization period should be based on the term of the CSAs. The Panel recognizes that regardless of the length of the levelization period, a mismatch is inevitable because of the staggered terms of the CSAs.

Of the two levelization periods under consideration (33 versus 25 years), CEMP acknowledges that a 25-year levelization period may be simpler to understand than a 33-year levelization period and may lower utility risk, but may reduce rate stability during years 26 to 33. There is rate instability in each case, either because the CSAs have expired and the modelled rates assume those customers no longer receive service (the 33-year levelization period) or because the CSAs outlive the levelization period and customers revert to cost-of-service rates (the 25-year levelization period).

The Panel finds that the 25-year levelization period for determining the fixed capacity charge is reasonable for the Mount Pleasant DCS. It matches the term of the first CSA, which makes it easier for customers to understand than the alternative of a 33-year levelization period, which exceeds the term of the CSAs. In addition, a 25-year levelization period more closely matches when the balance of the proposed RDDA (see discussion to follow) is forecast to get to zero. Moreover, the matter will be revisited in future CEMP RRAs.

2.1.4 Revenue Deficiency Deferral Account

CEMP proposes an RDDA as a rate smoothing mechanism that enables the fixed capacity charge to recover the cost of service over the levelization period.⁸⁰ As previously discussed, under a levelized rate structure, the rates are forecast to recover less than the cost of service during the initial years of service and these forecast revenue deficiencies will be added to the RDDA, and ultimately recovered in later years as the levelized rate increases over time.⁸¹ The amounts to be recorded in the RDDA for the Mount Pleasant DCS will be the BCUC-approved forecast annual revenue deficiencies or surpluses resulting from the difference between approved forecast annual revenue at the approved rates and the approved forecast cost of service.⁸² CEMP proposes that the balance in the RDDA attracts interest at CEMP's weighted average cost of capital (WACC) until the balance is brought to zero in the last year of the proposed 33-year levelization period.⁸³

CEMP states that alignment of the future rate-setting periods with the phased implementation of the Mount Pleasant DCS allows for periodic review of the cost-of-service inputs upon which the proposed levelized fixed capacity charge will be established. It states that it will propose levelized fixed capacity charges for each future rate-setting period that target a zero RDDA balance over the remaining term of the 33-year levelization period.⁸⁴ CEMP adds that, consistent with the rates model filed, the RDDA balance reaches a zero balance in year 2053 (year 33). However, this is not before the RDDA reaches a zero balance and begins to carry a negative balance in year 2044 to compensate for the staggered expiry of each building's applicable CSA and the assumption that once the CSA expires, it is not renewed and the applicable building no longer receives service.⁸⁵ Given the staggered timing of the CSAs and under the assumption they are not renewed, CEMP has modelled the forecast

⁸⁰ Exhibit B-1, Section 1.2, p. 4, Section 5, p. 18.

⁸¹ Exhibit B-1, Section 1.2, p. 4.

⁸² Exhibit B-7, BCUC IR 22.4.

⁸³ Exhibit B-1, Section 1.2, p. 4; Exhibit B-7, BCUC IR 22.1.

⁸⁴ Exhibit B-7, BCUC IR 19.4.

⁸⁵ Exhibit B-10, Attachment – "Revised Rates Model - 2022.03.21" (March 2022 Revised Rates Model), line 451, Cell AE451.

revenues such that revenues are reduced commencing in 2046 through to 2053 (years 26 to 33) by the subscribed capacity for each building as the applicable CSA expires.⁸⁶

Positions of the Parties

The CEC is in favour of the proposed rate design and recognizes that an RDDA is necessary in the context of a levelized fixed capacity charge. It recommends that the BCUC approve such a deferral account.⁸⁷

Panel Determination

CEMP sought interim approval in the Application for an RDDA, attracting interest at CEMP's WACC, to record revenue shortfalls during the initial years of service to be recovered through levelized rate increases over time. The Panel approved the RDDA in Order G-46-21, effective February 1, 2021. However, no reasons were outlined in the order nor was the carrying cost identified. The Panel now outlines its reasons for approval, and addresses the cost components to be included, the term, and the carrying cost for the RDDA.

The Panel finds that an RDDA for the Mount Pleasant DCS is appropriate; indeed, this is the only mechanism to achieve a levelized rate structure and is consistent with previous decisions on thermal energy service projects.⁸⁸ The RDDA will capture the BCUC-approved forecast annual revenue deficiencies or surpluses resulting from the difference between approved forecast annual revenue at the approved rates and the approved forecast cost of service. The Panel accepts that the RDDA is an appropriate mechanism for ensuring that rates increase in a predictable and consistent manner, while minimizing rate volatility and reasonably matching cost recovery with cost causation at the same time.

Having approved a 25-year levelization period for the fixed capacity charge, the Panel finds the challenge posed by a negative balance in the RDDA (in years 29 to 33) for a 33-year levelization period to be moot.

Finally, the Panel notes that CEMP should be able to earn a return on the cost of capital it is using to construct the Mount Pleasant DCS. **Therefore, the Panel approves CEMP to continue to use the RDDA, effective February 1, 2021, for the Mount Pleasant DCS, bearing a return equivalent to CEMP's WACC.**

The Panel approves the RDDA for the Mount Pleasant DCS to capture annual revenue deficiencies or surpluses resulting from the difference between the annual revenue at the approved levelized fixed capacity charge and the approved annual forecast cost of service, except for electricity and water costs. The RDDA will remain in effect for the 25-year levelization period for the fixed capacity charge. CEMP is directed to provide the calculation and annual balance of the RDDA as part of its Annual Report.

2.2 Variable Charge

CEMP proposes to recover the actual electricity and water costs of the Mount Pleasant DCS on a flow-through basis through the variable charge. The variable charge will be calculated each month equal to the total monthly

⁸⁶ Exhibit B-8, CEC IR 27.2; Exhibit B-10, Attachment – "Revised Rates Model - 2022.03.21" (March 2022 Revised Rates Model); Exhibit B-11, BCUC IR 37.1 and 38.2.

⁸⁷ CEC Final Argument, para. 64–65, p. 10.

⁸⁸ VHD Decision accompanying Order G-222-21, Section 4.1, pp. 56–57; Corix Multi-Utility Services Inc., Neighbourhood Utility Service at UniverCity Burnaby CPCN Decision dated May 6, 2011, Section 6.2.5, p. 49.

electricity and water costs of the Mount Pleasant DCS divided by the total metered energy supplied by the Mount Pleasant DCS to the building customers during the month (\$/MWh).⁸⁹ CEMP states that the electricity and water consumption of the Mount Pleasant DCS will be separately metered, and the monthly energy consumption of each building will be directly metered.⁹⁰

The electricity costs will be determined each month based on the British Columbia Hydro and Power Authority (BC Hydro) costs. Water costs, which are invoiced every four months by the City of Vancouver, will be allocated in equal monthly installments for each customer over the subsequent four months following receipt of the invoice.⁹¹

The underlying electricity and water rates are externally set, and total electricity and water costs vary directly with energy consumption which is outside of CEMP's management and control. CEMP submits that the recovery mechanism represents a fair, transparent, understandable and administratively simple means to flow through the actual electricity and water costs that avoids the need for a deferral mechanism or other burdensome regulatory processes.⁹²

CEMP states that a specific dollar amount is not specified in the tariff precisely because the variable charge is a flow-through charge based on actual electricity and water costs, and that this structure provides an efficient price signal to customers.⁹³

CEMP explains that although the electricity and water consumption for the Mount Pleasant DCS will be separately metered,⁹⁴ the electricity and water meters are not yet in service and will be operational for a later phase of the project. It adds that the electricity and water meter will be a submeter and CEMP will pay the Owner⁹⁵ [111 East 5th Partnership (building M3)] for its share of electricity and water and then it will recover these costs through the variable charge. CEMP explains that there is presently only one customer, and this customer is paying the electricity and water bills directly.⁹⁶ As a result, there have been no electricity and water costs for the Mount Pleasant DCS, and no electricity or water costs have been charged to the building customers.⁹⁷

In response to the Panel's request for submissions on whether the Owner will fall under the UCA's definition of a public utility (and thus be subject to BCUC regulation) when it begins charging CEMP for electricity under the proposed electricity billing process, the Owner acknowledges that this will be the case if it supplies electricity to CEMP for compensation. The Owner submits that it does not anticipate charging CEMP for electricity until

⁸⁹ Exhibit B-1, Section 1.2, Appendix B, p. 5.

⁹⁰ Exhibit B-7, BCUC IR 16.6 and 16.7.

⁹¹ Exhibit B-1, Section 3.2, pp. 15–16; Exhibit B-7, BCUC IR 16.10.

⁹² Exhibit B-1, Section 3.2, p. 16; Exhibit B-7, BCUC IR 16.1 and 16.12; CEMP Final Argument, Section 3, para. 32, p. 7.

⁹³ Exhibit B-7, BCUC IR 13.6 and 16.2.

⁹⁴ Exhibit B-7, BCUC IR 16.6.

⁹⁵ The Owner refers to 111 East 5th Partnership (building M3), which beneficially owns the land and the building known as M3 located at 111 East 5th Avenue, Vancouver, BC. The M3 building houses the Mount Pleasant DCS. The DCS currently serves M1, M2 and M3. In the future, the Mount Pleasant DCS will also serve M4 and M5. The ownership structure of M1-M3 and M5 is the same. (CEMP Final Argument, Appendix A-1, p. 1).

⁹⁶ Exhibit B-11, BCUC IR 32.1, 32.2 and 32.3.

⁹⁷ Exhibit B-11, BCUC IR 32.5 and 32.7.

construction of building M4 is complete, which is expected in February 2024. Prior to completion of building M4, the Owner intends to renovate building M3 and is considering electrical upgrades as part of that process, noting that it is currently in the preliminary design stage of the renovation process. The Owner submits that its preference is to find an alternative arrangement whereby it does not sell electricity to CEMP. It is evaluating options to achieve that goal. However, it cannot state at this time whether it will ultimately fall under the definition of a public utility in respect to CEMP. The Owner confirms that if it eventually supplies electricity to CEMP for compensation as currently proposed, it will seek an exemption pursuant to section 88(3) of the UCA before charging CEMP for the electricity.⁹⁸

Positions of the Parties

The CEC is in favour of the variable charge rate design and agrees that it is readily understood and transparent to the customer.⁹⁹ The CEC also acknowledges that CEMP does not have insight into the end-use customer opportunities for reducing energy consumption but states that it would be supportive of end-use customers being given an opportunity to manage their electricity consumption and take advantage of DSM opportunities to reduce bills.¹⁰⁰

In regard to the possibility that the Owner might fall under the definition of public utility, the CEC submits that the preferred approach would be for the Owner to find an alternative arrangement whereby it does not resell electricity to CEMP.¹⁰¹

Panel Determination

In this section, the Panel addresses two issues regarding the proposed variable charge. First, the Panel assesses the reasonableness of the proposed variable charge. Second, the Panel considers the implications of the Owner reselling electricity to CEMP for the Mount Pleasant DCS and thereby becoming a public utility.

In the Panel's view, the proposed variable charge, which will recover water and electricity costs on a flow-through basis, is reasonable. Moreover, this charge is transparent and understandable to customers. As the BCUC noted when it approved a similar proposed variable charge for the VHD, "the correlation between the billing determinant for the Variable Charge – energy consumption in MWh – and the fact that the Variable Charge will recover only those costs that vary with energy consumption provides a compelling argument in support of the Variable Charge component of the proposed rate design."¹⁰² **Therefore, the Panel approves the variable charge, as proposed for the Mount Pleasant DCS.**

As for the issue related to the potential of the Owner becoming a public utility through reselling electricity to CEMP, that possibility remains theoretical until at least 2024. Specifically, if the Owner provides electricity to CEMP for compensation, the Owner will need to comply with the UCA as a public utility or obtain an exemption under the UCA. CEMP also has the option to have the Mount Pleasant DCS separately metered by BC Hydro. The Panel considers it important that the BCUC remain informed about this matter and therefore **directs CEMP to**

⁹⁸ CEMP Final Argument, Appendix A-1, p. 2.

⁹⁹ CEC Final Argument, p. 10, para. 62 and 63.

¹⁰⁰ CEC Final Argument, p. 10, para. 60.

¹⁰¹ CEC Final Argument, pp. 19, 20–21, para. 137, 140 and 145.

¹⁰² VHD Decision accompanying Order G-222-21, p. 42.

provide an update on the status of the Owner with respect to any resale of electricity to CEMP in its next RRA and in any event before the Owner begins selling electricity to CEMP.

3.0 Revenue Requirements and Rates

The Panel now turns to a review of the overall revenue requirement for the Mount Pleasant DCS for the Current Rate-Setting Period. Specifically, the Panel examines CEMP's proposed capital and development costs in subsection 3.1 below. Due to the somewhat unique aspect of the project (i.e. five buildings being phased in over several years), the Panel will also address the related asset depreciation issues.

During the proceeding, several aspects of the operations and maintenance (O&M) costs were canvassed, and the Panel will review those costs in subsection 3.3. Lastly, the Panel will review the cost of capital that CEMP will record, to reflect its cost for the assets in the Mount Pleasant DCS, as well as CEMP's request for a regulatory cost variance deferral account.

3.1 Capital and Development Costs

Total forecast capital and development costs of the Mount Pleasant DCS provided at the time of filing the Application are summarized in Table 5 below:

Table 5: Summary of Estimated Capital and Development Costs¹⁰³

	Initial Acquisition and Operation	Phase 1	Phase 2	Phase 3	Phase 4	Total
Purchase of Assets	419,222					419,222
Energy Center		1,086,656		3,891,813		4,978,468
DPS and ETS		322,850	345,675		273,983	942,508
Predevelopment	177,455					177,455
CPCN	22,141					22,141
Engineering		195,598		317,278		512,876
Soft Costs		229,354		547,009	40,733	817,096
Internal	77,976	88,576		229,860	67,092	463,504
Contingency		281,901	69,135	778,363	54,797	1,184,196
Total – Rate Application	696,784	2,204,935	414,810	5,764,322	436,605	9,517,457
Total – CPCN proceeding	732,793		2,619,744	5,764,322	436,605	9,553,463

CEMP identifies that the cost to acquire the existing cooling system assets is the agreed-to amount set out in the Construction and Purchase Agreement based on the value of the depreciated assets.¹⁰⁴ CEMP states that the capital costs associated with the cooling plant (Energy Centre), DPS and ETS at each applicable phase of Mount Pleasant DCS development are estimated to an Association for the Advancement of Cost Engineering International (AACE International) Class 3 level of accuracy.¹⁰⁵ Actual capital and development costs for the initial acquisition and operation phase of the project, as reported in the above table, are approximately \$36,000 lower than that forecast in the CPCN proceeding. In response to IRs, CEMP clarified that the rates model does

¹⁰³ Exhibit B-1, Table 3, p. 8.

¹⁰⁴ CEMP cites Schedule K of Appendix B of Exhibit B-1 in the CPCN proceeding for a report on this valuation as accepted by both CEMP and the Owner.

¹⁰⁵ Exhibit B-1, p. 8.

not reflect this difference and proposes to make this update in a final compliance filing following the Panel's decision on this Application.¹⁰⁶

During the proceeding, CEMP provided an update that it is changing the size of its new chillers from 400-ton to 325-ton. However, CEMP states that the difference in price is negligible.¹⁰⁷

CEMP provides the following information with respect to the cost categories included in Table 5:¹⁰⁸

- Predevelopment activities comprise primarily feasibility studies and design work.
- Forecast engineering costs are an estimate of engineering and construction costs calculated as a percentage of hard costs.
- Soft costs consist of mobilization, demobilization, bonding, and insurance costs.
- Internal costs are estimated as a percentage of applicable construction and equipment costs.
- Contingency is 20 percent based on the project team/design engineer's assessment of risk relating to construction costs.

Positions of the Parties

The CEC did not make any submissions regarding the forecast capital and development costs of the Mount Pleasant DCS.

Panel Determination

The Panel notes that the total forecast capital and development costs are almost the same as those presented in the CPCN application for the Mount Pleasant DCS, and which the BCUC approved in the following terms:

The Panel is also satisfied with the capital cost associated with the proposed Mount Pleasant DCS. The capital cost of \$9.553 million for the entire Project was prepared by KWL, a third-party, based on the design by Integral Group, another third-party. The contingency of 20 percent is reasonable, being based on an engineer's experience in brown-field sites such as the Main Alley Development.¹⁰⁹

Accordingly, the Panel accepts CEMP's forecast capital and development costs, noting the slight decrease of approximately \$36,000, and directs CEMP to adjust the forecast and development costs and provide a reconciliation in a compliance filing within 15 days of the date of the PACA order for this proceeding. Please refer to the Panel Determination in subsection 3.5 for rationale on the timing of the compliance filing.

3.2 Depreciation

Upon its initial filing of the Application, CEMP proposed to depreciate each phase of capital and development costs on a straight-line basis over 25 years based on the year it enters service.¹¹⁰ Through the course of the

¹⁰⁶ Exhibit B-11, BCUC IR 30.2.

¹⁰⁷ Exhibit B-11, BCUC IR 27.2.

¹⁰⁸ Exhibit B-1, p. 8.

¹⁰⁹ Mount Pleasant CPCN, p. 39.

¹¹⁰ Exhibit B-1, Section 2.4, p. 12.

proceeding, CEMP clarified that for rate-setting purposes, it proposes to commence depreciation in the fiscal year following an asset addition being placed into service.¹¹¹

The depreciation period of 25 years approximates the economic life of the assets based on the weighted average depreciation in years for all components of the capital and development costs.¹¹² It is also equivalent to the contract term of each customer's CSA.¹¹³

The Panel explored alternative methods for depreciation in this proceeding, including:¹¹⁴

- a. Depreciate by line item over the expected useful life as outlined in Table 6 of the Application.
- b. Depreciate based on the applicable depreciation period for each individual asset class.
- c. Depreciate all assets over the remaining life of the project (e.g. through to 2053).

CEMP submits each alternative depreciation method produces modest differences in rates given the overall rate smoothing under a proposed 33-year levelization period.¹¹⁵ CEMP states the proposed 25-year average period for the straight-line depreciation of all assets is simple and reasonable, and is consistent with the approach approved for CEMP's VHD Heating TES and DCS.¹¹⁶

CEMP submits that amortization for the Core Steam and Northeast False Creek (NEFC) systems commences in the year after an asset is transferred into rate base.¹¹⁷ For CEMP, on the other hand, amortization is modelled to commence when the transfer is made into rate base similar to the VHD Heating TES and DCS. The transfer into rate base occurs in the year that the asset becomes used and useful. CEMP submits that starting depreciation in the year after an asset is transferred to rate base mitigates the risk of over or under recovery of actual expenses as a result of differences between the forecast and actual in-service date of the capital asset.¹¹⁸

CEMP states that the accounting treatment for recording depreciation for financial reporting purposes will follow and be consistent with the regulatory approach for rate-setting purposes.¹¹⁹

Positions of the Parties

The CEC does not object to a 25-year depreciation period because it matches the CSA term for the economic life. The CEC considers CEMP's proposed method of depreciation to be reasonable.¹²⁰

Panel Determination

The Panel directs CEMP to depreciate the capital and development costs of an asset on a straight-line basis over 25 years starting in the fiscal year following when the asset is placed into service. The Panel agrees with

¹¹¹ CEMP Final Argument, Section 4.1, pp. 10–11.

¹¹² Exhibit B-1, Section 2.4, p. 12; Exhibit B-8, CEC IR 4.1.

¹¹³ Exhibit B-1, Section 1.2, p. 4.

¹¹⁴ Exhibit B-7, BCUC IR 10.7.

¹¹⁵ Exhibit B-7, BCUC IR 10.7.1; Exhibit B-11, BCUC IR 30.3.

¹¹⁶ Exhibit B-7, BCUC IR 10.2.

¹¹⁷ Exhibit B-7, BCUC IR 10.3.1.

¹¹⁸ Exhibit B-11, BCUC IR 30.1.1.

¹¹⁹ CEMP Final Argument, p. 10.

¹²⁰ The CEC Final Argument, para. 70 and 72, pp. 11 and 12..

CEMP that a 25-year depreciation period is reasonable based on the duration of the CSAs. As seen with the changes to the capital plan associated with Phase 1, certain assets may be in-service at times that do not align with the completion of any particular phase of the project. The Panel views depreciation based on the in-service date of individual assets, instead of the in-service date of each phase of the project, best matches the recovery of costs related to the individual assets with the benefit and use of those assets. The Panel also finds that the commencement of depreciation in the year following the in-service date of the asset to be reasonable and consistent with CEVP's practice of amortizing assets in its Core Steam and NEFC systems and VHD Heating TES and DCS. Furthermore, the Panel accepts that starting depreciation in the year after an asset is transferred to rate base mitigates the risk of over or under recovery of actual expenses as a result of differences between the forecast and actual in-service date of the associated capital asset.

3.3 Operations and Maintenance

CEMP provides the following summary of the forecasting methodology for the O&M costs for the Mount Pleasant DCS for 2021:¹²¹

Table 6: O&M Costs

Component	2021	Assumption
Maintenance	0	1% of Capital - N/A for 2021 given capital budget for existing plant and new plant
Operators	275,000	3x Operators @ \$100K per FTE, pro-rated for 11 months of service in 2021
Lease	36,667	2,000 sq.ft x \$20/sq.ft per Contribution Agreement, pro-rated for 11 months of service in 2021
Property Tax	0	N/A - responsibility of landlord
Municipal Access Fees	5,821	1.25% of Fixed and Variable Revenue
Insurance	9,135	0.29% of plant-in-service, and 2-Years of Projected EBITDA
Financing Fees	2,432	0.30% of Deemed Debt
Corporate Overhead	75,709	3-Factor Massachusetts formula allocation based on 2021 allocable overhead
Regulatory Costs	25,000	Third-party costs and external legal support to rates application preparation and review process

The Panel considers that overall, the O&M costs are reasonable. The Panel has reviewed the lease, property tax, municipal access fee, financing fees, and regulatory costs and are satisfied that the revenue requirements are reasonable for these five categories. The CEC agreed these estimates were reasonable.¹²² The Panel does have some comments regarding certain costs, namely corporate overhead, operator, maintenance and insurance, each of which is discussed below.

¹²¹ Exhibit B-1, Section 2.4, Table 5, p. 12.

¹²² CEC Final Argument, para. 86–87, 95, 99, 106–107 and 118–119, pp. 14–17.

3.3.1 Corporate Overhead

Corporate overhead costs are allocated from CEVP to CEMP using the Massachusetts Formula.¹²³ Beginning in 2020, the BCUC approved CEVP to use a three-factor Massachusetts Formula for allocating sales, general and administrative expenses based on the following factors: the average gross book value of capital assets or property, plant and equipment; salaries or direct labour expenses; and operating revenues.¹²⁴

CEMP filed its Inter-Affiliate Conduct and Transfer Pricing Policy (IAC/TPP) as Appendix E to the Application and explains that the IAC/TPP was being reviewed as a component of CEVP's 2021 RRA for its Core Steam System (2021 Core RRA).¹²⁵ CEMP is not seeking approval of the IAC/TPP in this proceeding.¹²⁶ One of the terms of the CPCN, to acquire, operate and expand the Mount Pleasant DCS, required CEMP to file its code of conduct and transfer pricing policy with the BCUC when it applied for rates for cooling service.¹²⁷

Subsequent to filing the Application, the BCUC issued its Decision on CEVP's 2021 Core RRA in which it did not approve the proposed IAC/TPP.¹²⁸ In its decision, the BCUC established overarching principles that a code of conduct and transfer pricing policy must adhere to, and found that the proposed IAC/TPP failed to adhere to these principles.¹²⁹ The BCUC stated, however, that it was satisfied that CEVP's current practices of cost allocation between its BCUC-regulated TES affiliates adhered to the established principles and noted its prior approval provided in 2020 to use the three-factor Massachusetts Formula to allocate indirect costs from CEVP to all BCUC-regulated TES affiliates, such as CEMP. The BCUC encouraged CEVP to file a revised IAC/TPP for review and approval at such time as certain organizational changes are complete.¹³⁰

CEMP provides forecast corporate overhead costs for the Current Rate-Setting Period. CEMP states that it developed the forecast costs using an estimate of 0.79 percent of capital based on the proportion of allocated costs at the time of filing. CEMP states that this percentage allocator is a modelling construct to allow for the forecast over time based on the single year input of the starting point allocation amount. CEMP states that the 0.79 percent of capital is based on first determining the forecast allocation using the Massachusetts formula and allocable overhead at the time of the Application, and then structuring the input for future years as the percentage ratio of capital.¹³¹

CEMP acknowledges that the forecast annual corporate overhead amounts provided in the Application differ from amounts provided in both the 2021 Core RRA and CEVP's 2022 Rate Design and RRA for its Core Steam system and NEFC service areas (2022 Core and NEFC RRA). It explains, however, that these calculations are part

¹²³ Exhibit B-7, BCUC IR 7.1, 7.3.

¹²⁴ CEVP 2019–2020 RRA for the Core Steam System and NEFC Service Areas, Decision and accompanying Order G-227-20 dated September 2, 2020, p. 25.

¹²⁵ Exhibit B-1, p. 10.

¹²⁶ Exhibit B-7, IR 5.1.

¹²⁷ Directive 1(i) of Order C-5-20.

¹²⁸ G-349-21, p. 18.

¹²⁹ G-349-21, p. 7.

¹³⁰ G-349-21, p. 17. In 2020, the BCUC granted approval to CEVP to use a three-factor Massachusetts Formula by Decision and Order G-227-20 dated September 2, 2020, p. 25.

¹³¹ Exhibit B-7, BCUC IR 7.5.

of a different process and are not meant to match.¹³² CEMP provided the following table, which demonstrates the differences between the forecast corporate overhead costs provided in the Application and those provided in the 2021 Core RRA and 2022 Core and NEFC RRA:

Table 7: Corporate Overhead Costs provided in Application compared to Core RRAs¹³³

	2021	2022	2023*	Total
Per CEMP rates	\$75,710	\$77,224	\$78,768	\$231,702
Per Core RRA from Mass. Formula	\$59,606	\$95,895	\$97,813	\$253,314
Difference	\$16,104	\$(18,671)	\$(19,045)	\$21,612

***Added 2 percent to 2023 from 2022 Mass formula**

CEMP states that it is open to adjusting its corporate overhead costs to align with those submitted in the 2021 RRA and 2022 Core and NEFC RRA in a final compliance filing. In the alternative, CEMP states that the amount could be reset in 2024 when better information is available regarding actual overhead costs and the most recent information regarding the Massachusetts formula allocators.¹³⁴

Positions of the Parties

The CEC recommends that the BCUC use the best information available at this time and adjust the corporate overhead rate for rate-setting purposes.¹³⁵

Panel Determination

While The Panel recognizes that the difference between what CEMP submitted in the Application compared to the 2021 Core RRA and the 2022 Core and NEFC RRA is not material over a 3-year period, using costs consistent with the two previously mentioned RRAs avoids unnecessary confusion and is the best estimate for the Current Rate-Setting Period.

The Panel directs CEMP to adjust the 2021, 2022 and 2023 corporate overhead costs to align with those submitted in the 2021 Core RRA and the 2022 Core and NEFC RRA in a compliance filing within 15 days of the date of the PACA order for this proceeding. Please refer to the Panel Determination in subsection 3.5 for rationale on the timing of the compliance filing. **The Panel also directs CEMP to prorate the 2021 corporate overhead, as necessary, to reflect service commencement on February 1, 2021.**

The Panel acknowledges that CEMP has complied with the directive in the CPCN for the Mount Pleasant DCS by filing the IAC/TPP as part of this Application, notwithstanding the BCUC denied approval of it in CEVP's 2021 Core RRA Decision.

¹³² Exhibit B-11, BCUC IR 31.4.

¹³³ Exhibit B-11, BCUC IR 31.1.1.1.

¹³⁴ Exhibit B-11, BCUC IR 31.1.1.1; CEMP Final Argument, p. 12.

¹³⁵ CEC Final Argument, p. 17.

3.3.2 Operators

In its Application, CEMP originally forecast operator costs based on three full-time equivalents (FTE) at \$100,000 per year in compliance with the “General Supervision” requirements as outlined by Technical Safety BC (TSBC).¹³⁶ However, due to the change in scope for Phase 1 and specifically the purchase of a smaller chiller, the required number of FTEs was reduced from three to two through all phases of the project as required by TSBC.¹³⁷ The new 325-ton chiller is below the minimum size that would necessitate an operator on site in accordance with the TSBC requirements. All future chillers will be the same type as the new 325-ton chiller and operators will not be required 24-hours a day, seven days a week. CEMP states that two FTEs will be the maximum required through all phases of the project. Based on the current chillers in service, CEMP accepts that the number of operators could be reduced to one FTE for the Current Rate-Setting Period and it is amenable to updating the proposed rates to reflect this change in a compliance filing following the Panel’s decision.¹³⁸ CEMP also revised the annual operator cost to \$115,000 based on a combination of the 2021 actual operator costs (approximately \$117,000) and 2022 budget operator costs (approximately \$123,000), inclusive of overtime.¹³⁹ CEMP adds that these operator costs will increase each year. CEMP acknowledges that the 2021 forecast used in the Rate Model was not prorated for 11 months.¹⁴⁰

CEMP explains that the operators are employees of CEVP who perform tasks that are directly assigned across all CEDLP projects, including CEMP, and the costs are directly allocated from CEVP.¹⁴¹

CEMP accepts that rates for the Current Rate-Setting Period 2021–2023 could be based on varying the assumption of operators from two FTEs to one FTE, while maintaining the levelized forecast in future years based on the two operator FTEs ultimately expected.¹⁴²

Positions of the Parties

The CEC submits that the forecast cost of \$115,000 annually per operator is acceptable. However, the CEC considers it appropriate to reduce the number of operators to one FTE during the Current Rate-Setting Period.¹⁴³

Panel Determination

The Panel accepts CEMP’s forecast for one operator at a cost of \$115,000 annually for the Current Rate-Setting Period, subject to inflation. The Panel notes that CEMP has not prorated the 2021 operator costs based on the February 1, 2021 in-service date of the Mount Pleasant DCS.¹⁴⁴ **The Panel directs CEMP to prorate the operator costs for 2021 based on 11 months of service.**

¹³⁶ Exhibit B-1, Section 2.2, p. 9.

¹³⁷ Exhibit B-11, BCUC IR 29.1.

¹³⁸ Exhibit B-11, BCUC IR 29.7.1.

¹³⁹ Exhibit B-11, BCUC IR 29.4.

¹⁴⁰ Exhibit B-11, BCUC IR 29.6.

¹⁴¹ Exhibit B-7, BCUC IR 7.3 and 8.9.

¹⁴² CEMP Final Argument, para. 55, p. 11.

¹⁴³ CEC Final Argument, para. 91 and 93, p. 14.

¹⁴⁴ Exhibit B-11, BCUC IR 29.6.

3.3.3 Maintenance

CEMP forecasts an annual maintenance cost of one percent of actual construction costs for both routine and sustained annual maintenance based on historic actual maintenance costs from CEVP's Core Steam system.¹⁴⁵ Sufficient years of data are not yet available for maintenance costs of CEVP's newer energy systems, such as Kingston, Pendrell and VHD Heating TES and DCS.¹⁴⁶ Due to the uncertainty around emergency repair costs, CEMP has not factored emergency repair costs into the forecast and will apply for recovery of these costs at that time, as applicable and only if necessary. CEMP will apply for recovery of emergency maintenance costs exceeding the estimate for recurring maintenance cost should they occur in the future.¹⁴⁷

In response to IRs, CEMP clarified that the 2021 maintenance cost forecast of \$nil is not accurate as maintenance costs are not expected to be \$nil in any given year and states that 2021 actual maintenance costs were \$32,353.¹⁴⁸

Positions of the Parties

The CEC recommends that the BCUC accept the CEMP maintenance estimates as valid.¹⁴⁹

In reply, CEMP submits that the BCUC has latitude in setting permanent rates for the Current Rate-Setting Period and to accept the one-time higher actual maintenance costs that arose in 2021 during the commissioning of the system.¹⁵⁰

Panel Determination

The Panel recognizes that 2021 is the first year CEMP has operated the Mount Pleasant DCS since acquiring it. The Panel is persuaded that in this instance, the use of the actual costs is warranted because of the time required to commission and stabilize operations of the Mount Pleasant DCS in its first year of service. **Therefore, the Panel approves the inclusion of the 2021 actual maintenance costs rather than forecast costs for the purposes of setting rates in the Current Rate-Setting Period for the Mount Pleasant DCS.**

3.3.4 Insurance

The Mount Pleasant DCS is covered under CEVP's general liability; umbrella; director and officers; and errors and omissions policies, which are allocated as part of the corporate overhead costs.¹⁵¹ CEMP also includes insurance costs for business interruption and replacement insurance. CEMP forecasts business interruption insurance based on two-years of projected earnings before interest, taxes, depreciation, and amortization (EBITDA) and replacement insurance based on the accumulated construction costs of the Mount Pleasant DCS, each at the rate of 0.29 percent and escalated with inflation.¹⁵²

¹⁴⁵ Exhibit B-1, Section 2.2, p. 9; Exhibit B-7, BCUC IR 8.2.

¹⁴⁶ Exhibit B-7, BCUC IR 8.2.

¹⁴⁷ Exhibit B-1, Section 2.2, p. 9.

¹⁴⁸ Exhibit B-7, BCUC IR 8.3 and 8.4.

¹⁴⁹ CEC Final Argument, para. 87, p. 14.

¹⁵⁰ CEMP Reply Argument, Section 3.5, para. 22, p. 5.

¹⁵¹ Exhibit B-1, Section 2.2, p. 10.

¹⁵² Ibid

Positions of the Parties

The CEC questions whether the insurance cost forecast has been counted in both the corporate overhead allocation, as well as in O&M for the remaining years and recommends that the BCUC request CEMP to clarify this costing prior to approval.¹⁵³

CEMP confirmed that forecast insurance costs are not double counted, adding that the Mount Pleasant DCS assets are insured directly and separately for property insurance and business interruption insurance, while insurance coverage for general liability; umbrella; director and officers; and errors and omissions policies are included in general and administration costs, which are allocated through the approved Massachusetts formula.¹⁵⁴

Panel Determination

The Panel is satisfied that CEMP is not double counting its insurance costs, notwithstanding it allocates some of its coverage under general and administration costs, and records separately the specific costs for the Mount Pleasant DCS. The Panel finds CEMP's forecast insurance costs to be reasonable.

3.4 Cost of Capital

CEMP proposes a deemed capital structure of 57.5 percent debt and 42.5 percent equity with a return on equity (ROE) of 9.5 percent.¹⁵⁵ CEMP submits that this is consistent with the BCUC's directions as set by Order G-47-14 in the Generic Cost of Capital Stage 2 Decision of a default equity thickness of 42.5 percent and an equity risk premium of 75 basis points (bps) above the benchmark [FortisBC Energy Inc. (FEI)] ROE, for regulated TES, such as the Mount Pleasant DCS.¹⁵⁶

CEMP provided a risk matrix comparing the Mount Pleasant DCS to other small-sized TES and FEI.¹⁵⁷ CEMP states that it is not applying for a risk premium greater than the amounts already approved by the BCUC for other TES projects.¹⁵⁸

When it filed the Application, CEMP estimated that an overall cost of debt of 4.0 percent was reasonable and consistent with the current average debt rate in effect under rate approvals for CEVP's Core Steam system.¹⁵⁹ In response to IRs, CEMP updated the overall cost of debt to 4.5 percent based on the average indicative swap rates, not including the cost of additional standby fees for unused operating line, for the Current Rate-Setting Period.¹⁶⁰ CEMP explains that its debt facilities are provided by CEDLP and the financing agreements for CEVP and CEDLP have the same interest rates.¹⁶¹

Positions of the Parties

¹⁵³ The CEC Final Argument, p. 15.

¹⁵⁴ CEMP Reply Argument, Section 3.1, para. 15–17, p. 5.

¹⁵⁵ Exhibit B-1, Section 2.4, p. 13.

¹⁵⁶ *Ibid.*; Order G-47-14.

¹⁵⁷ Exhibit B-1, Appendix D.

¹⁵⁸ Exhibit B-1, Section 2.4, p. 13.

¹⁵⁹ Exhibit B-1, Section 2.4, p. 13.

¹⁶⁰ Exhibit B-7, BCUC IR 12.1.1.

¹⁶¹ Exhibit B-7, BCUC IR 12.2.

The CEC agrees that a forecast cost of debt based on the three-year rate-setting period is reasonable, and recognizing that interest rates have increased over recent months, recommends that BCUC approve the updated cost of 4.5 percent.¹⁶² The CEC made no submissions on the proposed deemed capital structure or ROE.

Panel Determination

The Panel considered three issues related to the cost of capital:

- a. Is the proposed capital structure reasonable for the purpose of setting rates?
- b. Is the proposed ROE reasonable for the purpose of setting rates?
- c. Is the cost of debt reasonable for the purpose of setting rates?

The Panel approves CEMP's proposed deemed capital structure of 57.5 percent debt and 42.5 percent equity and an equity risk premium of 75 bps over the benchmark ROE. This is consistent with other Stream B TES utilities regulated by the BCUC, with similar risk profiles, and there is no evidence on which to do otherwise. The Panel notes that there is an ongoing Generic Cost of Capital proceeding which is a more appropriate forum to review the capital structure and cost of capital.

The Panel approves CEMP's proposed 4.5 percent cost of debt for the Current Rate-Setting Period. The Panel acknowledges that this is inconsistent with the 4.0 percent cost of debt approved for CEVP's 2021 RRA for the Core Steam system and CEVP VHD Decision. However, the current financial market reflects an increasing interest rate trend which directly impacts the borrowing costs for CEMP. Based on this, the Panel views the increased cost of debt calculated on the average indicative swap rates over the three-year rate-setting period to be reasonable.

3.5 Regulatory Cost Variance Deferral Account

CEMP is seeking approval for a RCVDA to record the difference between the forecast and actual regulatory costs for each rate-setting period and that such account should attract interest based on the weighted average cost of debt (WACD). Future RRAs will also be required as project phases are completed.¹⁶³ CEMP notes that regulatory costs generally comprise BCUC fees, intervenor participant assistance costs, and third-party regulatory and legal costs necessary to support the applications and regulatory review process.¹⁶⁴ CEMP states that regulatory expenses are difficult to forecast and are overall, not within CEMP's control.¹⁶⁵ Further, CEMP adds that a deferral account for regulatory cost variances is consistent with most utilities regulated by the BCUC, including CEVP in respect of its Core Steam system and NEFC service areas.¹⁶⁶

CEMP proposes to amortize any variances in the RCVDA based on five percent of a customer's total bill until the variance balance is cleared.¹⁶⁷ However, CEMP notes that in the VHD Decision, released after it filed the Application, the BCUC approved CEVP to amortize the balance of its regulatory cost variance deferral account

¹⁶² CEC Final Argument, para. 76–77, p. 12.

¹⁶³ Exhibit B-1, Section 1.2, p. 5; Exhibit B-7, BCUC IR 23.7; CEMP Final Argument, p. 13.

¹⁶⁴ Exhibit B-1, Section 1.2, p. 5; Exhibit B-7, BCUC IR 23.8.

¹⁶⁵ Ibid.

¹⁶⁶ Ibid.

¹⁶⁷ Exhibit B-1, p. 5.

over the initial rate-setting period for the VHD Heating TES and DCS. Further, in the VHD Decision Compliance Filing dated November 12, 2021, the BCUC accepted amortization of the recovery for CEMP's regulatory cost variance deferral accounts on a \$/kW basis in relation to the fixed charge billing determinants for simplicity and rate stability. Based on this, CEMP amended its proposed recovery mechanism of the RCVDA for the Mount Pleasant DCS such that it is the same as that accepted by the BCUC for the VHD Heating TES and DCS. CEMP proposes to set forth the charge as determined in a compliance filing that would follow the decision on this Application.¹⁶⁸

Positions of the Parties

The CEC recommends that the BCUC approve the RCVDA and charges as submitted by CEMP.¹⁶⁹

Panel Determination

The Panel recognizes that the use of a deferral account for regulatory costs is not unusual given the inherent uncertainty related to those costs, which are generally beyond the utility's control. A deferral mechanism eliminates the risk of variances in regulatory costs to which a utility and its customers are otherwise exposed. The Panel agrees that amortizing variances over the rate-setting period provides a simplified approach, which promotes rate stability for customers. The Panel also finds the interest rate based on WACD to be reasonable.

Accordingly, the Panel approves the RCVDA, attracting interest at CEMP's WACD, to record the difference between the forecast regulatory costs and the final actual regulatory costs when so determined. The account is to be amortized within the Current Rate-Setting Period through a \$/kW charge to each building customer in relation to the fixed charge billing determinants of the Mount Pleasant DCS. The Panel recognizes that the regulatory costs will include intervenor participant assistance costs, which will be adjudicated following the date of this decision. **Accordingly, CEMP is directed to include the calculation and \$/kW charge for the amortization of the RCVDA in a compliance filing within 15 days of the date of the PACA order for this proceeding.**

CEMP is directed to provide details of the annual additions to the RCVDA as part of its Annual Report.

4.0 Other Issues Arising

In this section, the Panel addresses the higher chemical costs that arose in 2021 during the commissioning of the Mount Pleasant DCS and the filing timelines for CEMP's next RRA.

4.1 Water/Chemical Costs

CEMP's evidence was ambiguous with respect to the treatment of water chemical costs; whether these should be treated as a fixed component of the capacity charge or a flow-through component of the variable charge. Although the amount is not material, the Panel believes that some discussion is required.

¹⁶⁸ Order G-222-21 VHD Decision Compliance Filing dated November 12, 2021; Exhibit B-7, BCUC IR 23.1.

¹⁶⁹ The CEC Final Argument, p. 19.

In the Application, CEMP explains that the variable charge consists of electricity and water costs and that water costs are those costs invoiced by the City of Vancouver.¹⁷⁰ CEMP forecasts water/chemical costs (as a single line item in its rates model) to be approximately \$1,436, \$2,550 and \$3,572 for 2021, 2022 and 2023, respectively.¹⁷¹ In response to IRs, however, CEMP provided actual 2021 water/chemical costs of \$18,604, noting the variance is due to chemical purchases being higher during commissioning. It states that the higher costs relate to the initial acquisition and operation that took place in February 2021 and when building M2 was connected in July 2021.¹⁷² CEMP points out that the costs for water treatment chemicals are not recovered on a flow-through basis unlike forecast water costs, which are indicative only because actual water costs are recovered through the variable charge.¹⁷³

CEMP submits that the BCUC has latitude in setting permanent rates for the Current Rate-Setting Period and to accept the one-time higher water/chemical costs that arose in 2021 during the commissioning of the system outside of a stable cost-of-service forecast for years 2022–2023 of the rate-setting period.¹⁷⁴

Positions of the Parties

The CEC reviewed the water/chemical costs, including the 2021 actuals, and is satisfied with CEMP's forecast of water/chemical costs.¹⁷⁵

Panel Determination

The Panel acknowledges that the evidence is not clear whether CEMP considers these costs as fixed or variable. For example, in the rates model, CEMP presents water and chemical costs within the same line item, which suggests treatment as the indicative variable charge. However, in the Application, CEMP indicates that the variable charge comprises electricity and water costs, the latter as invoiced by the City of Vancouver. CEMP explains that the large variance in 2021 between forecast and actual water/chemical costs is because of higher costs during commissioning.

The Panel is aware that the forecast of water treatment costs has also been raised in the 2022 Core and NEFC RRA, with respect to the Core Steam system. CEMP stated in that proceeding that there are multiple factors that can impact water treatment costs and that it is continuing to monitor the Core Steam system to understand the influencing factors. CEMP also added that it considers use of average historical costs to be the most reasonable approach to forecast water treatment costs at this time.¹⁷⁶

Thus, the evidence suggests that it is difficult to forecast the cost of water treatment chemicals, and that CEMP's corporate affiliates are working to better understand this. With respect to the Mount Pleasant DCS, CEMP notes that it is working with a new system and asserts that the considerable variance in 2021 between forecast and actual costs is a one-time occurrence. In these circumstances, **The Panel approves CEMP's use of the 2021 actual cost (\$18,604) instead of the forecast (\$1,436). In addition, for the purpose of the Current Rate-Setting Period, the Panel approves the treatment of water chemical costs as part of the variable charge. Further, the**

¹⁷⁰ Exhibit B-1, p. 16.

¹⁷¹ Exhibit B-10, Attachment – "Revised Rates Model - 2022.03.21" (March 2022 Revised Rates Model), Excel line 349.

¹⁷² Exhibit B-1, Section 1, p. 1; Exhibit B-11, BCUC IR 27.1.

¹⁷³ Exhibit B-7, BCUC IR 8.4; Exhibit B-8, CEC IR 20.3.

¹⁷⁴ CEMP Reply Argument, Section 3.5, para. 22, p. 5.

¹⁷⁵ CEC Final Argument, para. 124, p. 18.

¹⁷⁶ 2022 Core and NEFC RRA proceeding, Exhibit B-14, BCUC IR 81.3.

Panel directs CEMP to review the issue of whether water/chemical costs should continue to be recorded as part of the variable water charge rather than as a fixed charge in its RRA for the next rate-setting period.

4.2 Direction on Next Revenue Requirements Application

CEMP filed the Application February 1, 2021, requesting interim rates effective the same date as filing, with a proposal to file an Evidentiary Update to reflect the required approval of permanent rates when actual capital costs of Phase 1 were known in September 2021. This timeline was subsequently further delayed in October 2021 due to supply chain issues.¹⁷⁷ Despite the delay in Phase 1 completion, the BCUC commenced regulatory review of the Application. CEMP states that it anticipates filing its next RRA for a three-year rate-setting period commencing January 1, 2024, at which time the remaining Phase 1 assets and Phase 2 assets are expected to be placed into service.¹⁷⁸

Panel Determination

The Panel observes that it is now more than halfway through the Current Rate-Setting Period and with consideration to the phased implementation of the Mount Pleasant DCS, the Panel has concerns regarding the timing of the review for the next RRA. Accordingly, **the Panel directs CEMP to file its next RRA for the rate-setting period commencing January 1, 2024 by June 30, 2023.**

5.0 Summary of Directives

This summary is provided for the convenience of readers. In the event of any difference between the directions in this summary and those in the body of the decision, the wording in the decision shall prevail.

#	Directive	Page
1	Therefore, the Panel directs CEMP to file in its next RRA the results of its further analysis and assessment of actual building demand data for M1 and M3 and whether CEMP proposes any changes to the billing determinants for buildings M1 and M3 on the basis of that further analysis and assessment.	9
2	For the Current Rate-Setting Period, and based on the most current information, the Panel approves the use of a peak cooling EUI of 60 W/m2 to determine peak capacity requirements and billing determinants for existing buildings M1 and M3.	9
3	The Panel approves the fixed capacity charge, as proposed by CEMP for the Mount Pleasant DCS, subject to the directives and determinations in this decision dealing with the phased implementation and the levelization of the fixed capacity charge.	10
4	Accordingly, the Panel approves CEMP to recover in rates the cost of the assets entering service in the Current Rate-Setting Period, specifically, costs to connect building M2 and the cost to replace the existing 350-ton chiller with the new 325-ton chiller.	11

¹⁷⁷ Exhibit B-1, Cover letter, Section 1, p. 1.

¹⁷⁸ Exhibit B-1, Section 1.3, p. 6; Exhibit B-10, p. 1.

5	Therefore, the Panel directs CEMP to re-calculate the levelized fixed capacity charge based on the Phase 1 actual costs to connect building M2 and the chiller replacement going into service during the Current Rate-Setting Period, as approved above, in a compliance filing within 15 days of the date of the Participant Assistance/Cost Award (PACA) order for this proceeding.	11
6	The Panel finds that the 25-year levelization period for determining the fixed capacity charge is reasonable for the Mount Pleasant DCS.	15
7	Therefore, the Panel approves CEMP to continue to use the RDDA, effective February 1, 2021, for the Mount Pleasant DCS, bearing a return equivalent to CEMP's WACC.	16
8	The Panel approves the RDDA for the Mount Pleasant DCS to capture annual revenue deficiencies or surpluses resulting from the difference between the annual revenue at the approved levelized fixed capacity charge and the approved annual forecast cost of service, except for electricity and water costs. The RDDA will remain in effect for the 25-year levelization period for the fixed capacity charge.	16
9	CEMP is directed to provide the calculation and annual balance of the RDDA as part of its Annual Report.	16
10	Therefore, the Panel approves the variable charge, as proposed for the Mount Pleasant DCS.	18
11	[The Panel] directs CEMP to provide an update on the status of the Owner with respect to any resale of electricity to CEMP in its next RRA and in any event before the Owner begins selling electricity to CEMP.	18
12	Accordingly, the Panel accepts CEMP's forecast capital and development costs, noting the slight decrease of approximately \$36,000, and directs CEMP to adjust the forecast and development costs and provide a reconciliation in a compliance filing within 15 days of the date of the PACA order for this proceeding.	20
13	The Panel directs CEMP to depreciate the capital and development costs of an asset on a straight-line basis over 25 years starting in the fiscal year following when the asset is placed into service.	21
14	The Panel directs CEMP to adjust the 2021, 2022 and 2023 corporate overhead costs to align with those submitted in the 2021 Core RRA and the 2022 Core and NEFC RRA in a compliance filing within 15 days of the date of the PACA order for this proceeding.	24
15	The Panel also directs CEMP to prorate the 2021 corporate overhead, as necessary, to reflect service commencement on February 1, 2021.	24
16	The Panel accepts CEMP's forecast for one operator at a cost of \$115,000 annually for the Current Rate-Setting Period, subject to inflation.	25
17	The Panel directs CEMP to prorate the operator costs for 2021 based on 11 months of service.	25
18	Therefore, the Panel approves the inclusion of the 2021 actual maintenance costs rather than forecast costs for the purposes of setting rates in the Current Rate-Setting Period for the Mount Pleasant DCS.	26
19	The Panel approves CEMP's proposed deemed capital structure of 57.5 percent debt and 42.5 percent equity and an equity risk premium of 75 bps over the benchmark ROE.	24
20	The Panel approves CEMP's proposed 4.5 percent cost of debt for the Current Rate-Setting Period.	27

21	Accordingly, the Panel approves the RCVDA, attracting interest at CEMP's WACD, to record the difference between the forecast regulatory costs and the final actual regulatory costs when so determined. The account is to be amortized within the Current Rate-Setting Period through a \$/kW charge to each building customer in relation to the fixed charge billing determinants of the Mount Pleasant DCS.	28
22	Accordingly, CEMP is directed to include the calculation and \$/kW charge for the amortization of the RCVDA in a compliance filing within 15 days of the date of the PACA order for this proceeding.	29
23	CEMP is directed to provide details of the annual additions to the RCVDA as part of its Annual Report.	29
24	The Panel approves CEMP's use of the 2021 actual cost (\$18,604) instead of the forecast (\$1,436). In addition, for the purpose of the Current Rate-Setting Period, the Panel approves the treatment of water chemical costs as part of the variable charge.	30
25	Further, the Panel directs CEMP to review the issue of whether water/chemical costs should continue to be recorded as part of the variable water charge rather than as a fixed charge in its RRA for the next rate-setting period.	30
26	[T]he Panel directs CEMP to file its next RRA for the rate-setting period commencing January 1, 2024 by June 30, 2023.	30

DATED at the City of Vancouver, in the Province of British Columbia, this 22nd day of August 2022.

Original signed by:

A. K. Fung, QC
Panel Chair / Commissioner

Original signed by:

E. B. Lockhart
Commissioner

Original signed by:

T. A. Loski
Commissioner



bcuc
British Columbia
Utilities Commission

Suite 410, 900 Howe Street
Vancouver, BC Canada V6Z 2N3
bcuc.com

P: 604.660.4700
TF: 1.800.663.1385
F: 604.660.1102

**ORDER NUMBER
G-242-22**

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

and

Creative Energy Mount Pleasant Limited Partnership
Application for Rates for the Mount Pleasant District Cooling System

BEFORE:

A. K. Fung, QC, Panel Chair
T. A. Loski, Commissioner
E. B. Lockhart, Commissioner

on August 22, 2022

ORDER

WHEREAS:

- A. On February 1, 2021, Creative Energy Mount Pleasant Limited Partnership (CEMP) filed an application with the British Columbia Utilities Commission (BCUC) pursuant to sections 58 to 60 and 90 of the *Utilities Commission Act* (UCA) and section 15 of the *Administrative Tribunals Act* for approval on an interim and refundable basis of rates for a three-year period, effective February 1, 2021 to December 31, 2023 (Current Rate-Setting Period) for its provision of cooling service to the Main Alley Development, amongst other things (Application);
- B. By Order C-5-20 dated December 3, 2020, the BCUC granted a Certificate of Public Convenience and Necessity to CEMP authorizing it to acquire and operate the existing Mount Pleasant District Cooling System (DCS), including specific extensions, renovations, expansions and upgrades that will be completed in phases. The BCUC also approved the related Customer Service Agreements;
- C. CEMP requests the following interim approvals in the Application:
- A levelized fixed capacity charge [\$/kilowatt (kW)] for the Current Rate-Setting Period to recover capital and fixed operating costs (Capacity Charge);
 - A variable charge [\$/megawatt-hour] to recover the actual water and electricity costs on a flow-through basis (Variable Charge);
 - The establishment of a Revenue Deficiency Deferral Account (RDDA) attracting interest at CEMP's weighted average cost of capital to record revenue shortfalls during the initial years of service to be recovered through levelized rate increases over time. CEMP proposes that the levelization of rates extends over a period of 33 years, which represents the life of the Customer Service Agreements from 2021 to 2053; and

- The establishment of a Regulatory Costs Variance Deferral Account (RCVDA) to record the difference between forecast and actual regulatory costs;
- D. By Order G-46-21 dated February 18, 2021, the BCUC approved, among other things, the establishment of an RDDA, as well as the Capacity Charge and Variable Charge on an interim and refundable/recoverable basis, effective February 1, 2021;
- E. By Orders G-352-21, G-76-22 and G-131-22 the BCUC established the regulatory timetable to review the Application, which included, among other things, notice of Application, dates for intervenor registration, BCUC and intervenor information requests (IR) No. 1 and 2, CEMP's responses to IRs, and written final and reply arguments;
- F. As part of a status update filed on March 1, 2022, CEMP revised its approvals sought requesting final determinations on the following:
- Permanent approval of the rate structure for the proposed Capacity Charge and Variable Charge;
 - Permanent approval of the proposed Variable Charge; and
 - Permanent approval of the proposed RCVDA;
- G. The Commercial Energy Consumers Association of British Columbia registered as an intervenor in the proceeding to review the Application; and
- H. The BCUC has considered the Application, evidence and submissions of the parties and makes the following determinations.

NOW THEREFORE pursuant to sections 56 and 58 to 61 of the UCA and for the reasons provided in the decision issued concurrently with this order, the BCUC orders as follows:

1. CEMP is approved to charge the Capacity Charge for the Current Rate-Setting Period on a permanent basis effective February 1, 2021, as set out in Attachment 1 to Exhibit B-9 and the updated rates model in Exhibit B-10, and subject to the directives and determinations outlined in this order and the decision issued concurrently.
2. CEMP is approved to charge the Variable Charge for the Current Rate-Setting Period on a permanent basis effective February 1, 2021, as set out in Attachment 1 to Exhibit B-9 and the updated rates model in Exhibit B-10, and subject to the directives and determinations outlined in this order and the decision issued concurrently.
3. CEMP is approved to continue use of the RDDA, effective February 1, 2021, over a 25-year levelization period to record the annual difference between the annual revenue at the approved Capacity Charge and the approved annual forecast cost of service, excluding water and electricity costs, with the balance earning a return equivalent to CEMP's weighted average cost of capital.
4. CEMP is approved to establish a RCVDA for the Mount Pleasant DCS, accruing interest at CEMP's weighted average cost of debt, to record the variance between the forecast and final actual regulatory costs.

5. CEMP is approved to amortize the balance of the RCVDA on a \$/kW basis within the rate-setting period commencing February 1, 2021 and ending December 31, 2023 (Current Rate-Setting Period).
6. CEMP is directed to depreciate the capital and development costs for the Mount Pleasant DCS on a straight-line basis over 25 years starting in the fiscal year following when the asset is placed into service.
7. CEMP is approved to use a deemed capital structure of 57.5 percent debt and 42.5 percent equity, including an equity risk premium of 75 basis points above the BCUC's current benchmark utility, FortisBC Energy Inc.
8. CEMP is approved to use debt-financing costs of 4.5 percent for the Current Rate-Setting Period.
9. CEMP is directed to re-calculate its revenue requirements and rates for the provision of cooling service for the Current Rate-Setting Period, subject to the adjustments resulting from the directives and determinations contained in this order and the decision issued concurrently, and to file a revised rate model and permanent rates sheets with the BCUC for endorsement within 15 days of the date of the Participant Assistance/Cost Award order for this proceeding.
10. CEMP is directed to collect from or refund to customers the difference between the interim and permanent rates for the Mount Pleasant DCS at the average prime rate of CEMP's principal bank for its most recent year.
11. CEMP must inform its customers of the Mount Pleasant DCS of the permanent rates by way of written notice to be included with their next customer invoice after CEMP's compliance filing for the Mount Pleasant DCS has been accepted by the BCUC.
12. CEMP is directed to file its next rates application for the rate-setting period commencing January 1, 2024, by June 30, 2023.
13. CEMP is directed to comply with all other directives and determinations outlined in the decision issued concurrently with this order.

DATED at the City of Vancouver, in the Province of British Columbia, this 22nd day of August 2022.

BY ORDER

Original signed by:

A. K. Fung, QC
Commissioner

Glossary of Terms

Acronym	Description
AACE	Advancement of Cost Engineering International
Application	Application for Rates for the Mount Pleasant District Cooling System, filed February 1, 2021
BCUC	British Columbia Utilities Commission
The CEC	Commercial Energy Consumers Association of British Columbia
CEDLP	Creative Energy Developments Limited Partnership
CEMP	Creative Energy Mount Pleasant Limited Partnership
CEVP	Creative Energy Vancouver Platforms Inc.
2021 Core RRA	CEVP 2021 RRA for its Core Steam System
2022 Core and NEFC RRA	CEVP 2022 Rate Design and RRA for its Core Steam System and NEFC service areas
CPCN	Certificate of Public Convenience and Necessity
CPCN Proceeding	CEMP Application for a CPCN to Acquire, Operate and Expand a TES for Cooling in the Main Alley Development
Creative Energy	Creative Energy Mount Pleasant Limited Partnership
CSA	Customer Service Agreement
Current Rate-Setting Period	February 1, 2021 through to December 31, 2023
DCS	District Cooling System
DPS	Distribution piping system
EBITDA	Earnings before interest, taxes, depreciation and amortization
Energy Center	Cooling plant
ETS	Energy transfer station
EUI	Energy use intensity
Evidentiary Update	Evidentiary update to reflect the actual Phase 1 capital costs
FEI	FortisBC Energy Inc.
FTE	Full-time equivalent
GCOC	Generic cost of capital
IAC/TPP	Inter-Affiliate Conduct and Transfer Pricing Policy
IR	Information request
kW	Kilowatt
KWL	Kerr Wood Leidal
m ²	Metre squared
M1	2015 Main Street; commercial/light use building

Acronym	Description
M2	114 East 4 th Avenue; commercial/light use building
M3	111 East 5 th Avenue (existing and expanded); commercial/light use building
M4	110 East 5 th Avenue; commercial/light use building
M5	2015 Main Street; residential building
Main Alley Development	Development at Main Street and East Fifth Avenue in Vancouver, BC
MWh	Megawatt hour
NEFC	Northeast False Creek
O&M	Operations and maintenance
PACA	Participant Assistance/Cost Award
RCVDA	Regulatory Cost Variance Deferral Account
RDDA	Revenue Deficiency Deferral Account
RRA	Revenue Requirements Application or rates application
Status Update	Status update to be filed March 1, 2021 and to include the expected filing date for the Evidentiary Update
TES	Thermal Energy System
TES Guidelines	The BCUC's TES Regulatory Framework Guidelines
TSBC	Technical Safety BC
UCA	<i>Utilities Commission Act</i>
VHD	Vancouver House Development
VHD Decision	Order G-222-21 and accompanying decision for CEVP's Application for Heating Rates for the Heating TES and Cooling Rates for the DCS at the VHD
W	Watt
WACC	Weighted average cost of capital
WACD	Weighted average cost of debt

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

and

Creative Energy Mount Pleasant Limited Partnership
Application for Rates for the Mount Pleasant District Cooling System

EXHIBIT LIST

Exhibit No.	Description
<i>COMMISSION DOCUMENTS</i>	
A-1	Letter dated February 5, 2021 – Appointing the Panel for the review of the Creative Energy Application for Rates for the Mount Pleasant District Cooling System
A-2	Letter dated February 18, 2021 – BCUC Order G-46-21 issuing interim approvals
A-3	Letter dated November 10, 2021 - BCUC requesting comments from CEMP
A-4	Letter dated December 2, 2021 – BCUC Order G-352-21 establishing a regulatory timetable
A-5	Letter dated January 31, 2022 – BCUC Information Request No. 1 to CEMP
A-6	Letter dated February 18, 2022 – BCUC response to Creative Energy extension request
A-7	Letter dated March 14, 2022 – BCUC Order G-76-22 establishing a regulatory timetable and Reasons for Decision
A-8	Letter dated April 1, 2022 – BCUC Information Request No. 2 to CEMP
A-9	Letter dated May 13, 2022 – BCUC Order G-131-22 establishing an amended regulatory timetable with BCUC request for submissions
A-10	Letter dated May 24, 2022 – BCUC response to extension request

Exhibit No.	Description
<i>APPLICANT DOCUMENTS</i>	
B-1	CREATIVE ENERGY MOUNT PLEASANT LIMITED PARTNERSHIP (CREATIVE ENERGY) - Application for Rates for the Mount Pleasant District Cooling System dated February 1, 2021
B-2	Letter dated October 14, 2021 – Creative Energy submission regarding Evidentiary Update timing
B-3	Letter dated November 22, 2021 – Creative Energy response to BCUC request
B-4	Letter dated January 7, 2022 – Creative Energy submitting Updated Rates Model compliance with G-352-21 Directive 7
B-5	Letter dated January 7, 2022 – Creative Energy submitting compliance with G-352-21 Directives 3, 4, 5 and 6 Notification
B-6	Letter dated February 17, 2022 – Creative Energy submitting extension request to file responses to Information Request No. 1
B-7	Letter dated February 25, 2022 – Creative Energy submitting response to BCUC Information Request No. 1
B-8	Letter dated February 25 2022 – Creative Energy submitting response to CEC Information Request No. 1
B-9	Letter dated March 1, 2022 – Creative Energy submitting Evidentiary Update
B-10	Letter dated March 21, 2022 – Creative Energy submitting revised Rates Model in compliance with G-76-22
B-11	Letter dated May 2, 2022 – Creative Energy submitting responses to BCUC Information Request No. 2
B-12	Letter dated May 2, 2022 – Creative Energy submitting responses to CEC Information Request No. 2
B-13	Letter dated May 24, 2022 – Creative Energy submitting extension request to file Written Final Argument

Exhibit No.	Description
<i>INTERVENER DOCUMENTS</i>	
C1-1	COMMERCIAL ENERGY CONSUMERS ASSOCIATION OF BRITISH COLUMBIA (CEC) – Letter dated January 6, 2022 submitting request to intervene by Chris Weafer
C1-2	Letter dated February 7, 2022 – CEC submitting Information Request No. 1 to CEMP
C1-3	Letter dated March 31, 2022 – CEC submitting Information Request No. 2 to CEMP