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Creative Energy Mount Pleasant LP

Certificate of Public Convenience and Necessity Application to
Acquire, Operate and Expand a Thermal Energy System for Cooling
in the Main Alley Development

Decision and Order C-5-20

December 3, 2020

Before:

R. I. Mason, Panel Chair
E. B. Lockhart, Commissioner
T. A. Loski, Commissioner

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APPENDICES

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Executive summary

On March 10, 2020, Creative Energy Mount Pleasant Limited Partnership (CEMP) filed an application with the British Columbia Utilities Commission (BCUC) for a Certificate of Public Convenience and Necessity (CPCN) pursuant to sections 45 and 46 of the *Utilities Commission Act* (UCA) to acquire and operate the existing Mount Pleasant district cooling system (Mount Pleasant DCS or DCS), and to modernize, expand and operate the Mount Pleasant DCS to provide cooling to the Main Alley Development in the Mount Pleasant neighbourhood of Vancouver (Application or Project). CEMP also requests approval of Customer Service Agreements (CSAs), pursuant to sections 58 to 60 of the UCA.

The Main Alley Development consists of five buildings: two existing buildings (Buildings M1 and M3), Building M2 which is under construction, and Buildings M4 and M5 which are in various stages of planning.

The BCUC established a written hearing process for the Application which comprised notice and intervener registration, two rounds of information requests (IRs), one round of Panel IRs, a streamlined review process, and final and reply arguments. The Commercial Energy Consumers Association of British Columbia and FortisBC Alternative Energy Services Inc. registered as interveners in the proceeding.

The Panel finds that CEMP has established the need for thermal cooling services at the Main Alley Development and that CEMP's forecast of peak load capacity and annual cooling energy requirements are reasonable. The need for cooling at the Main Alley Development is further defined by the Owner's requirement that cooling be provided from a source external to the buildings.

The Panel finds that the Mount Pleasant DCS as proposed is the preferred alternative for providing the cooling service at the Main Alley Development. The use of the existing location in Building M3 for the cooling plant is the least expensive and most efficient of the options available to CEMP to meet the needs of the Main Alley Development.

The Panel is satisfied that CEMP has conducted reasonable public consultation in order to identify and address issues or concerns with respect to the first two years of the Project. However, CEMP has not described its future consultation plans, and has not consulted with respect to years three through nine of the Project. The Panel therefore adds a term to the CPCN obligating CEMP to conduct further consultation.

The Panel accepts CEMP's reasons for requiring approval of all phases of the Project as part of this CPCN. However, as a result of the request covering such a long period of time, the Panel must examine closely not merely the specifics of the proposed investments, but the risks associated with changes in circumstance that may occur over this extended period. The Panel is concerned that by approving the entire Project now, CEMP would have the authority to construct and operate future phases based on today's design and planning assumptions, regardless of any changes in circumstance between now and the commencement of each future phase.

To address the risk that CEMP might over-invest in the expansion in Phase 3 for buildings which might be delayed or never built, the Panel adds a term to the CPCN to ensure that the Owner is committed to renovating

and expanding Building M3 and completing Building M5, both significant determinants of the expansion costs, prior to CEMP committing to expanding the cooling plant.

To address the risk that CEMP might over-invest in the expansion in Phase 3 for buildings based on erroneous information from the Owner on forecast demand for cooling, or on unanticipated changes in building efficiency, demand side management technologies and market alternatives for providing cooling which may occur prior to the investments being made, the Panel directs that CEMP provides regular reporting to the BCUC on the costs of the Project and forecast and actual demand for cooling.

To address the risk that CEMP might over-invest in cooling plant capacity notwithstanding the capacity estimates of the Owner, the Panel adds terms to the CPCN to ensure that all upgrades are undertaken in accordance with commitments made by the Owner and the capacity and resiliency requirements resulting from those commitments.

The Panel is satisfied with the capital cost associated with the proposed Mount Pleasant DCS, which is based on an estimate from a third-party engineering firm, and also with the forecast operating costs. The Panel adds a term to the CPCN to ensure that CEMP files its code of conduct and transfer pricing policy with the BCUC at the same time it files its application for rates for cooling service.

The Panel is satisfied that the Project is consistent with BC's energy objectives.

The Panel finds that public convenience and necessity require that the Project proceed, and grants the CPCN to CEMP for the Project, attaching the terms previously described.

The Panel also approves the CSAs as requested, but directs CEMP to remove the reference in the CSAs to the BCUC website and to include wording clearly explaining how customers may review the terms and conditions.

1.0 Introduction

1.1 Background

On March 10, 2020, Creative Energy Mount Pleasant Limited Partnership (CEMP or the Applicant) filed an application with the British Columbia Utilities Commission (BCUC) for a Certificate of Public Convenience and Necessity (CPCN) pursuant to sections 45 and 46 of the *Utilities Commission Act* (UCA) to acquire and operate the existing Mount Pleasant district cooling system (Mount Pleasant DCS or DCS), and to modernize, expand and operate the Mount Pleasant DCS to provide cooling to the Main Alley Development in the Mount Pleasant neighbourhood of Vancouver (Application).¹

CEMP's Application includes the following components (collectively referred to as the Project):

- acquisition and operation of the existing Mount Pleasant DCS to serve the following buildings:
 - Building M1 located at 2015 Main Street, Vancouver; and
 - Building M3 located at 111 East 5th Avenue, Vancouver.
- extension and operation of the Mount Pleasant DCS to serve the following buildings:
 - Building M2 located at 114 East 4th Avenue, Vancouver by 2021;
 - Building M4 located at 110 East 5th Avenue, Vancouver by 2023; and
 - Building M5 located at 2015 Main Street, Vancouver by 2029.
- renovation, expansion and upgrade of the cooling plant located in Building M3 in 2027.²

1.2 The Applicant, Affiliated Parties and the Owner

1.2.1 Creative Energy Mount Pleasant LP

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 separate affiliate of Creative Energy Developments Limited Partnership (Creative Energy Developments), a privately held energy infrastructure business with a focus on district energy system service in urban areas.³

As shown in Figure 1 below, the ownership of CEMP is split into two classes of Units: (i) the Class A (Limited) Units of which 100 are issued and held by Creative Energy Developments; and (ii) the Class A (General) Units of which one is issued and held by CEMP's general partner, Creative Energy Mount Pleasant GP Inc.⁴ The sole shareholder of Creative Energy Mount Pleasant GP Inc. is Creative Energy Developments. As such, CEMP is a wholly owned subsidiary of Creative Energy Developments.⁵

¹ Exhibit B-1, Section 1.1, p. 1.

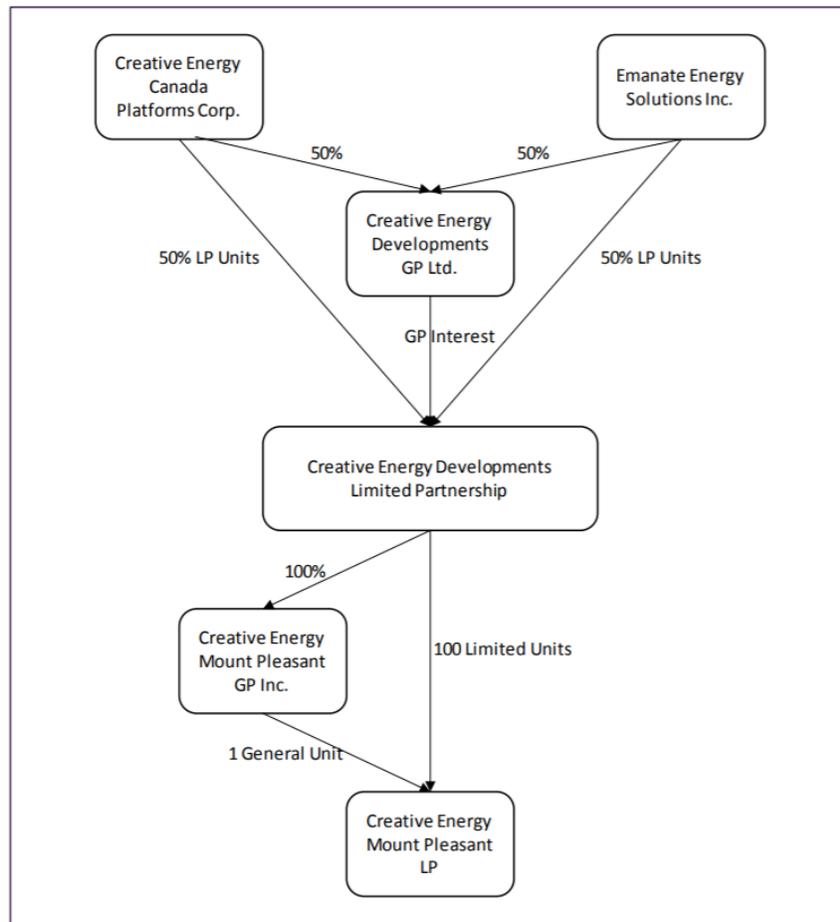
² Exhibit B-1, Section 2.1, p. 6.

³ Exhibit B-1, Section 1.3, p. 3.

⁴ Exhibit B-5, BCUC IR 38.1.

⁵ Exhibit B-5, BCUC IR 38.1.

Figure 1 – Organizational Chart for CEMP⁶



1.2.2 Creative Energy Developments LP

Creative Energy Developments is a limited partnership of Creative Energy Canada Corp. and Emanate Energy Solutions Inc.⁷

Creative Energy Developments was formed to develop, finance and manage urban energy infrastructure projects in North America including in British Columbia (BC). CEMP explains that the plan is for Creative Energy Developments to identify, develop and finance potential project opportunities. For those projects that will proceed forward to construction and/or applications for regulatory approvals as required, a separate wholly owned subsidiary limited partnership or company will be established to pursue the individual project. The intent is that each individual energy project is constructed, owned and operated by a separate wholly owned subsidiary of Creative Energy Developments. CEMP is an example of such a separate wholly owned subsidiary of Creative Energy Developments.⁸

⁶ Exhibit B-5, BCUC IR 38.1.

⁷ Exhibit B-5, BCUC IR 39.1.

⁸ Exhibit B-5, BCUC IR 39.1.

1.2.3 Creative Energy Vancouver Platforms Inc.

At the time of Application, Creative Energy Vancouver Platforms Inc. (CEVP) was a separate entity to CEMP and was affiliated to the Applicant through Creative Energy Canada Corp. Pursuant to completion of transactions approved by the BCUC by Order C-1-20,⁹ CEVP is now a subsidiary of Creative Energy Developments.¹⁰

CEVP will provide ongoing operation, maintenance, administration and regulation of the Mount Pleasant DCS.¹¹

1.2.4 The Developer and Owner

Westbank Projects Corp. has partnered with Mount Pixel Projects Limited Partnership to form the 5th & Main Partnership (Developer). The Developer will construct the Main Alley Development and is the beneficial owner and developer of all of the lands comprising the Main Alley Development.¹²

The entities 111 East 5th Property Inc., 110 East 5th Property Inc., 130 East 4th Property Inc., and 2015 Main Property Inc. (collectively referred to as the Customer) are the registered owners of the various lands that comprise the Main Alley Development, and which hold registered title in trust for the beneficial owner, the 5th & Main Partnership. Each applicable registered owner will enter into a Customer Service Agreement (CSA) for their respective buildings for the provision of space cooling services.¹³

Each of the registered owners, 111 East 5th Property Inc., 110 East 5th Property Inc., 130 East 4th Property Inc., and 2015 Main Property Inc., are owned through the 5th & Main Partnership (collectively referred to as the Owner).¹⁴

In the Decision, the Panel has retained the distinction between the Developer and the Owner as appropriate, recognizing the distinction that the term Owner includes the four registered owners of buildings in the Main Alley Development whereas the term Developer refers solely to the 5th & Main Partnership.

1.3 Approvals Sought

In its Application, CEMP applies for approval from the BCUC to acquire and operate the existing Mount Pleasant DCS, and to modernize, expand and operate the Mount Pleasant DCS to provide cooling to the Main Alley Development in the Mount Pleasant neighbourhood of Vancouver.¹⁵ The estimated total cost of the Project is \$9,134,241, which includes \$419,222 for the purchase of the existing cooling assets.¹⁶

CEMP also requests approval of the CSAs for the M3 Lands and the Non-M3 Lands, pursuant to sections 58 to 60 of the UCA.¹⁷

⁹ Decision and Order C-1-20, Creative Energy Vancouver Platforms Inc. Application for Certificate of Public Convenience and Necessity for the Expo-Beatty Plants and Reorganization, dated March 5, 2020.

¹⁰ Exhibit B-5, BCUC IR 38.1.

¹¹ Exhibit B-3, BUC IR 2.1.1.

¹² Exhibit B-1, Section 1.1, p. 1.

¹³ Exhibit B-1, Section 1.1, p. 1; Section 2.2, p. 8.

¹⁴ Exhibit B-1, Section 1.1, p. 1; Appendix B, p. 1.

¹⁵ Exhibit B-1, Section 1.1, p. 1.

¹⁶ Exhibit B-1, Section 1.2, p. 2.

¹⁷ Exhibit B-1, Section 1.2, p. 2.

1.4 Regulatory Process

By Orders G-73-20 and G-149-20, dated March 31, 2020 and June 10, 2020, respectively, the BCUC established a regulatory timetable for reviewing the Application, which comprised intervenor registration, two rounds of information requests (IRs), with further process to be determined.

On August 10, 2020, the BCUC issued Panel IRs to CEMP and CEMP provided its responses on August 24, 2020.

By Order G-234-20, dated September 14, 2020, the BCUC established a further regulatory timetable, which included a Streamlined Review Process (SRP). By letter dated September 14, 2020,¹⁸ the BCUC established the scope for the SRP. In accordance with the regulatory timetable, CEMP provided a written submission on Scope Item 2.iii in advance of the SRP. The web-based SRP was held on Friday, October 2, 2020.

By Order G-247-20, dated October 2, 2020, the BCUC established a further regulatory timetable, which comprised CEMP and intervenor final arguments and CEMP reply argument.

The Commercial Energy Consumers Association of British Columbia (CEC) and FortisBC Alternative Energy Services Inc. registered as intervenors in the proceeding.

1.5 Legal and Regulatory Framework

1.5.1 Utilities Commission Act

Section 45(1) of the UCA stipulates that except as otherwise provided, after September 11, 1980, a person must not begin the construction or operation of a public utility plant or system, or an extension of either, without first obtaining from the BCUC a certificate that public convenience and necessity require, or will require, the construction or operation of the plant or system.¹⁹

Section 46(3) of the UCA states:

Subject to subsections (3.1) to (3.3), the commission may, by order, issue or refuse to issue the certificate, or may issue a certificate of public convenience and necessity for the construction or operation of a part only of the proposed facility, line, plant, system or extension, or for the partial exercise only of a right or privilege, and may attach to the exercise of the right or privilege granted by the certificate, terms, including conditions about the duration of the right or privilege under this Act as, in its judgment, the public convenience or necessity may require.²⁰

Section 46(3.1) of the UCA stipulates that in deciding whether to issue a CPCN applied for by a public utility other than the authority (as defined in the UCA), the BCUC must consider:²¹

- (a) the applicable of British Columbia's energy objectives,
- (b) the most recent long-term resource plan filed by the public utility under section 44.1, if any, and

¹⁸ Exhibit A-8, Letter dated September 14, 2020.

¹⁹ *Utilities Commission Act* [RSBC 1996] Chapter 473.

²⁰ *Utilities Commission Act* [RSBC 1996] Chapter 473.

²¹ *Utilities Commission Act* [RSBC 1996] Chapter 473.

- (c) the extent to which the application for the certificate is consistent with the applicable requirements under sections 6 and 19 of the *Clean Energy Act*.

Sections 58 to 60 of the UCA pertain to amendment of schedules, discrimination in rates and setting of rates, respectively. These sections require the BCUC to set rates that are not unjust, unreasonable, or unduly discriminatory in respect of services provided by regulated utilities.

1.5.2 CPCN Guidelines

The BCUC's CPCN Guidelines provide general guidance regarding the BCUC's expectation of the information that should be included in a CPCN application while providing the flexibility for an application to reflect the specific circumstances of the applicant, the size and nature of the project and the issues raised by the application.²²

A CPCN application submitted under sections 45 and 46 of the UCA should contain information on the following:

- Applicant;
- Project Need, Alternatives and Justification;
- Consultation;
- Project Description;
- Project Cost Estimate;
- Provincial Government Energy Objectives and Policy Considerations; and
- New Service Areas.²³

1.5.3 TES Guidelines

The BCUC's Thermal Energy Systems Regulatory Framework Guidelines (TES Guidelines) describe the BCUC's regulatory framework for thermal energy systems in BC. The framework provides a scaled approach to the regulation of thermal energy systems (TES), where the regulatory oversight increases as the size and scope of the TES increases. There are four TES categories: Micro TES, Strata Corporation TES, Stream A TES and Stream B TES.²⁴

The TES Guidelines state that a TES which does not meet the requirements of a Micro TES or a Strata Corporation TES, and does not meet the Stream A characteristics as described in section 2.3.1 of the TES Guidelines, is by default considered to be a Stream B TES. In such cases, a CPCN application is to be submitted to the BCUC. CPCN applications for Stream B TES are generally expected to be prepared in accordance with the BCUC's 2015 Certificate of Public Convenience and Necessity Application Guidelines (CPCN Guidelines) as well as section 2.4.2 of the TES Guidelines, which outlines additional filing requirements for Stream B TES.²⁵

²² BCUC 2015 Certificate of Public Convenience and Necessity Application Guidelines (CPCN Guidelines), Final Order G-20-15, dated February 12, 2015, p. 1.

²³ CPCN Guidelines.

²⁴ BCUC Order G-27-15, Appendix A, Thermal Energy Systems Regulatory Framework Guidelines (TES Guidelines), pp. 6–7.

²⁵ TES Guidelines, pp. 18–20.

1.6 Decision Framework

The review of the CPCN is in sections 2 through 8 of this Decision:

- Section 2 addresses the need for the Project and its alternatives,
- Section 3 addresses the consultation for the Project,
- Section 4 addresses the Project description,
- Section 5 addresses the Project's cost,
- Section 6 addresses the Project's consistency with BC's Energy Objectives,
- Section 7 contains the overall CPCN determination, and
- Section 8 contains the reporting requirements associated with the CPCN.

In section 9 of the Decision the Panel addresses other matters arising from the proceeding, and in section 10 the Panel reviews CEMP's request to approve the CSAs.

2.0 Project Need and Alternatives

2.1 Project Need

2.1.1 Overview

The Main Alley Development consists of mainly commercial/light industrial buildings with a technology focus, which CEMP states will require year-round cooling. As previously noted, there are five buildings in the Main Alley Development: two are existing commercial buildings, one of which has a planned expansion; two are new planned commercial buildings; and one is a planned residential tower. The occupancy dates for the new planned buildings range from 2021 through to 2029.²⁶ Table 1 below provides a summary of the Main Alley Development.

Table 1: Summary of Main Alley Development²⁷

| Building | Address | Building Size m ² | Building Status / Plan | Use | Occupancy |
|----------|-------------------------------|------------------------------|------------------------|-------------------------------|----------------|
| M1 | 2015 Main St. | 5,400 | Existing | Commercial / Light Industrial | Current |
| M2 | 114 East 4 th Ave. | 15,979 | Under construction | Commercial / Light Industrial | 2021 |
| M3 | 111 East 5 th Ave. | 7,880 / +8,190 | Existing / Expansion | Commercial / Light Industrial | Current / 2027 |
| M4 | 110 East 5 th Ave. | 19,250 | Development plan | Commercial / Light Industrial | 2023 |
| M5 | 2015 Main St. | 11,519 | Future plan | Residential | 2029 |

²⁶ Exhibit B-1, Section 2.1, p. 6.

²⁷ Exhibit B-1, Section 2.1, p. 6, Table 2.

The Project comprises the following five phases:²⁸

- Initial Acquisition and Operation Phase – Continue service to Buildings M1 and M3 in 2020;
- Phase 1 – Connect Building M2 and upgrade Building M3 cooling plant capacity and reliability in 2021;
- Phase 2 – Connect Building M4 in 2023;
- Phase 3 – Serve renovated and expanded Building M3 and upgrade and modernize Building M3 cooling plant in 2027; and
- Phase 4 – Connect Building M5 in 2029.

The Project phases are discussed in detail in section 4.1 of the Decision.

As noted above in Table 1, Building M2 is under construction. Regarding the status of the other proposed buildings in the Main Alley Development, CEMP identifies that Building M4 currently has a Development Permit submitted with the City of Vancouver. CEMP states that conceptual design has begun on the M5 residential tower with the intention of building a net-zero carbon rental building. CEMP states that the Owner has had initial discussions regarding the concept for Building M5 with the City of Vancouver.²⁹

CEMP identifies that Building M3 was originally a banking data centre that had a large cooling demand. The data centre is no longer in-service, but the existing Mount Pleasant DCS plant, located in Building M3, continues to provide cooling to both Building M1 and Building M3. CEMP identifies that the existing Mount Pleasant DCS plant was designed with substantial redundancy to accommodate the related critical operations for the data centre and that the current cooling demand is below installed capacity. CEMP states that the existing chillers at the existing Mount Pleasant DCS plant have been properly maintained but are nearing end-of-life.³⁰ Figure 2, below, describes the location of the existing Mount Pleasant DCS plant and other existing assets in the context of the Main Alley Development.

²⁸ Exhibit B-1, Section 3.2, p. 14.

²⁹ Exhibit B-3, BCUC IR 12.1.

³⁰ Exhibit B-1, Section 2.1, p. 6.

Figure 2: Existing Mount Pleasant DCS plant and assets and the Main Alley Development³¹



CEMP states that all five buildings in the Main Alley Development require thermal energy (cooling) services³² and the Owner is designing and constructing the Main Alley Development to be served by a centralized TES for cooling.³³ CEMP submits that this centralized approach is supported by a feasibility study,³⁴ prepared by Reshape Infrastructure Strategies (Reshape) titled “Main & 5th Neighbourhood Energy System Feasibility Study Final Report” (Reshape Report). The Reshape Report concluded that a centralized cooling plant will provide both capital and operating cost savings as compared to a distributed approach where each building would be served by its own separate cooling plant.³⁵

The Reshape Report states that Reshape was initially engaged by Westbank Projects Corp. to develop a sustainability strategy for the Main Alley Development, and that one of the solutions identified was the potential for a centralized cooling network. Westbank Projects Corp. selected CEMP as the preferred utility to deliver the

³¹ Exhibit B-1, Section 2.1, p. 7, Figure 1.

³² Exhibit B-1, Section 1.1, p. 1.

³³ Exhibit B-1, Section 2.1, p. 7.

³⁴ Exhibit B-3, BCUC IR 1.5.1, Attachment 5.1.

³⁵ Exhibit B-1, Section 2.1, p. 7.

centralized cooling network. CEMP then engaged Reshape to undertake further due diligence to confirm the feasibility of a centralized cooling system.³⁶

As part of the feasibility analysis, Reshape compared two scenarios for cooling: distributed cooling plants and a centralized cooling plant.³⁷ Reshape recommended implementing the centralized cooling approach, noting it provides both capital and operating cost savings.³⁸

As noted above, the Owner has designed the Main Alley Development to be serviced by a centralized cooling system. In physical terms, this means that the Owner has not allocated any space in the building designs for cooling equipment (except for Building M3, which has an existing cooling system).³⁹

As will be discussed in Section 4.2 of this Decision, CEMP and the Owner have entered into a Construction and Purchase Agreement (CPA), whereby CEMP has agreed to purchase the existing cooling assets and to operate, modernize and expand the system as a TES for cooling to serve the entire Main Alley Development.⁴⁰

Upon CEMP's acquisition of the existing assets, the TES will comprise the thermal generation and distribution equipment and facilities located within the central plant room of Building M3 and the connection to Building M1 through the existing service tunnel. The system will then be modernized and expanded to distribute cooling energy to the other three planned buildings in the Main Alley Development.⁴¹

2.1.2 Load Forecast

CEMP states that compared to heating systems, benchmarking of cooling systems for new buildings in the Lower Mainland is challenging as there is very little available information on the energy performance of cooling systems for recently constructed residential buildings. Further, CEMP states that there is limited information on expected building performance from local authorities having jurisdiction over energy modeling for cooling and no public information from district cooling systems on actual building demands. Accordingly, CEMP states that there is not an established data set for which a range in the load forecast can be extracted.⁴²

The Main Alley Development is largely purposed as commercial office space for digital and technology companies. CEMP states that typically, these uses require quite high levels of cooling compared to typical office uses, and certainly higher than residential uses. CEMP notes that, as an example, the existing Building M3 requires cooling year-round, whereas residential buildings in the Lower Mainland only require cooling in the summer months.⁴³

³⁶ Exhibit B-3, BCUC IR 1.5.1, Attachment 5.1, p. 10.

³⁷ Exhibit B-3, BCUC IR 1.5.1, Attachment 5.1, p. 17.

³⁸ Exhibit B-3, BCUC IR 1.5.1, Attachment 5.1, p. 38.

³⁹ Exhibit B-1, Section 2.1, p. 7; Section 2.3, p. 12.

⁴⁰ Exhibit B-1, Section 2.1, p. 7.

⁴¹ Exhibit B-1, Section 2.1, p. 7.

⁴² Exhibit B-3, BCUC IR 8.1.

⁴³ Exhibit B-3, BCUC IR 8.9.

CEMP provides a comparison of Energy Use Intensities (EUIs) for the Mount Pleasant DCS and the Vancouver House district cooling system⁴⁴ (Vancouver House DCS or South Downtown DCS) in Table 2, below. CEMP identifies that although the uses, design and orientation of the buildings are completely different, the table provides the average EUIs to compare the Mount Pleasant DCS to the EUIs for the South Downtown DCS to illustrate the variety of loads that can be encountered with cooling systems in the Lower Mainland. CEMP states that the Main Alley Development requires more cooling than the South Downtown DCS, all things considered.⁴⁵

Table 2: Energy Use Intensity Comparison⁴⁶

| Average Project Data | Mount Pleasant DCS | South Downtown DCS |
|---|-----------------------|-----------------------|
| Primary Use | Commercial Office | Residential |
| Average Peak Demand EUI (W/m ²) | 54 W/m ² | 30 W/m ² |
| Average Annual Cooling Energy (kWh/m ²) | 38 kWh/m ² | 31 kWh/m ² |

CEMP states that the cooling demand forecast was developed by the Integral Group, which is responsible for building design on behalf of the Owner. CEMP identifies that it has retained Kerr Wood Leidal Associates Ltd. (KWL) to provide ongoing peer review of the peak load and energy demand forecasts based on Integral Group designs.⁴⁷

Total peak load capacity and annual cooling energy requirements for the Mount Pleasant DCS at Project completion are provided in Table 3 below. CEMP states that these estimates are based on generally accepted specific demand and energy factors for similar types of buildings. CEMP submits that these assumptions are appropriate under current planning for the phased investment in the Mount Pleasant DCS capacity. CEMP notes that further refinement to the load forecast will be possible when future building design and specific building use is confirmed.⁴⁸

Table 3: Summary of Peak and Annual Cooling Load⁴⁹

| 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 |

³ The M5 building is residential with lower estimated energy use intensities.

⁴⁴ CEVP Application for CPCN to Acquire and Operate a TES for Cooling at the Vancouver House Development, Decision and Order C-2-20, dated April 1, 2020.

⁴⁵ Exhibit B-3, BCUC IR 8.9.

⁴⁶ Exhibit B-3, BCUC IR 8.9.

⁴⁷ Exhibit B-1, Section 3.1, p. 13.

⁴⁸ Exhibit B-1, Section 3.1, p. 13.

⁴⁹ Exhibit B-1, Section 3.1, p. 13.

CEMP states that more detailed information is available on the design of the building envelope and the anticipated usage of Building M2, which is why its peak cooling (W/m²) value is different than those used for Buildings M1, M3 and M4.⁵⁰ Further, CEMP notes that Building M5 has lower peak cooling value given it is a residential building.⁵¹

2.1.3 Long Term Resource Plan

Section 44.1 of the UCA requires a public utility to file with the BCUC a long-term resource plan (LTRP) in the form and at the times that the BCUC requires.⁵²

As previously noted, 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. At the time of Application, CEMP is not a public utility as defined by the UCA and has not filed a LTRP with the BCUC.

Positions of the Parties

The CEC does not dispute the need for cooling services at the Main Alley Development.

Panel Determination

The Panel finds that CEMP has established the need for thermal cooling services at the Main Alley Development.

The Panel accepts that the emphasis on digital and technology companies in the Main Alley Development will require year-round cooling service, and that residential space requires summer cooling service. Based on the floor area of 60,028 m², and 68,218 m² once Building M3 is expanded, we find CEMP's evidence regarding total peak load capacity and annual cooling energy requirements to be reasonable.

In addition to the amount of cooling required, the Developer designed the Main Alley Development on the assumption that cooling service will be provided from a source external to the buildings, and did not allocate floor space in the buildings for a cooling system. This further defines the need for the service which CEMP is seeking to provide to its customer.

Having established the need for cooling service and the nature of the service requested, the Panel now considers CEMP's alternatives to satisfy this need.

2.2 Description of the Alternatives

CEMP states that the Mount Pleasant DCS is a very specific and localized project, which is Owner-driven and designed to serve an identified cooling load at five specific buildings being developed over time. CEMP states that the Owner is designing and constructing the Main Alley Development to be served by a centralized TES for cooling and through the CPA, the Owner indicates its preference for CEMP to own, design, build and operate the TES.⁵³

⁵⁰ Exhibit B-3, BCUC IR 8.8.

⁵¹ Exhibit B-1, Section 3.1, p. 13, footnote 3.

⁵² *Utilities Commission Act* [RSBC 1996] Chapter 473.

⁵³ Exhibit B-1, Section 2.3, p. 11.

CEMP explains that there are no feasible alternatives to the Project, and therefore it did not include any in the Application. According to CEMP, any “alternative would necessarily be hypothetical and not feasible for CEMP to undertake because CEMP could not pursue it either under the Construction and Purchase Agreement or otherwise.”⁵⁴

If the approach provided for under the CPA between CEMP and the Owner does not proceed, CEMP submits that an alternative approach would be a site-specific distributed approach, where cooling plants are built in each building of the Main Alley Development.⁵⁵

2.2.1 Other Alternatives Identified

During the review of the Application, CEMP identified several other alternatives to the Project.

CEMP identified an alternative where it does not acquire the existing cooling equipment and instead acquires alternate premises and builds a brand-new district cooling system nearby to serve the Main Alley Development. CEMP states that this alternative would forgo the benefit of leveraging the existing cooling plant and on-site cooling equipment in favour of new equipment and new premises, which CEMP submits would be much more expensive. CEMP states that this alternative is hypothetical and not feasible.⁵⁶ During the SRP, CEMP further explained that there is no opportunity to put equipment in a different place at the Main Alley Development because CEMP does not have any space other than what the Owner has assigned for this Project as conceived.⁵⁷

CEMP identified another alternative where the Owner retains its cooling equipment and builds and operates its own cooling equipment to serve the needs of its development. CEMP states that while this alternative might be feasible, it would not involve CEMP and therefore is not an alternative for CEMP. CEMP states that the Owner has determined that the Project is a better option and has entered into the CPA as a result.⁵⁸

2.2.2 Distributed Approach

CEMP states that a distributed approach would require each new building to have its own individual cooling plant, associated cooling tower and related equipment. CEMP states that this alternative would not require any form of regulatory approval by the BCUC.⁵⁹ Under a distributed approach, CEMP would not own the equipment or be involved.⁶⁰

CEMP identifies that in this alternative, the existing Mount Pleasant DCS plant would still require upgrades to ensure system reliability to serve Buildings M1 and M3 but indicates that the excess capacity and plant expansion floor space that currently exists would be wasted.⁶¹

⁵⁴ Exhibit B-5, BCUC IR 2.41.2.

⁵⁵ Exhibit B-1, Section 2.3, p. 11.

⁵⁶ Exhibit B-5, BCUC IR 41.2.

⁵⁷ Transcript Volume 1, p. 74.

⁵⁸ Exhibit B-5, BCUC IR 41.2.

⁵⁹ Exhibit B-1, Section 2.3, pp. 11–12.

⁶⁰ Exhibit B-3, Response to IR 5.2.

⁶¹ Exhibit B-1, Section 2.3, pp. 11–12.

CEMP states that although this alternative would eliminate the distribution piping connection between the buildings, as is needed with a centralized district cooling system, a distributed approach would require a significantly larger footprint in each of Buildings M2, M4, and M5 for the additional equipment. CEMP states that this alternative would be suboptimal in terms of lower economy of scale and efficiency, with a consequent higher cost to serve each building. Further, CEMP states that the new buildings as designed do not include space to accommodate the extra equipment, and the additional capital needed would far exceed the distribution piping connection costs associated with a centralized district cooling system. CEMP states that the cost of operating and maintaining four separate systems as opposed to one district cooling system would be higher overall, both from a capital cost and operating efficiency perspective.⁶²

In the Application, CEMP provides a comparison of the overall indicative rates of the centralized cooling delivered by the Mount Pleasant DCS to the estimated costs associated with a distributed approach, as shown in Table 4 below.⁶³

Table 4: Centralized versus Distributed Cooling of the Main Alley Development

| | Centralized | Distributed | | | |
|-------------------------|-------------|-------------|-----------|-----------|-----------|
| | DCS | M1 & M3 | M2 | M4 | M5 |
| Soft Cost & Contingency | | 25.0% | 25.0% | 25.0% | 25.0% |
| WACC | | 6.63% | 6.63% | 6.63% | 6.63% |
| Depreciation Period | | 20 years | 20 years | 20 years | 20 years |
| Maintenance | | 1.00% | 1.00% | 1.00% | 1.00% |
| Insurance | | 0.12% | 0.12% | 0.12% | 0.12% |
| Capital | | 3,510,000 | 3,000,000 | 2,900,000 | 1,500,000 |
| Total Capital | | 4,387,500 | 3,750,000 | 3,625,000 | 1,875,000 |
| Capital Charge | | 402,156 | 343,723 | 332,266 | 171,862 |
| Maintenance | | 43,875 | 37,500 | 36,250 | 18,750 |
| Insurance | | 5,265 | 4,500 | 4,350 | 2,250 |
| Operators ⁸ | | 300,000 | 66,667 | 66,667 | 66,667 |
| Total Fixed Charge | | 751,296 | 452,390 | 439,532 | 259,528 |
| Subscribed Peak (kW) | | 1,280 | 840 | 1,155 | 390 |
| Load (MWh) | | 890 | 655 | 790 | 240 |
| \$/MWh | | \$48.53 | \$48.53 | \$48.53 | \$48.53 |
| Variable Charge | | 43,189 | 31,785 | 38,336 | 11,646 |
| All-in \$/kW | \$442 | \$621 | \$576 | \$414 | \$695 |
| All-in \$/MWh | \$579 | \$893 | \$739 | \$605 | \$1,130 |

CEMP submits that this offers a reasonable comparison to the higher overall rates that would be expected under a distributed approach.⁶⁴

⁶² Exhibit B-1, Section 2.3, p. 12.

⁶³ Exhibit B-1, Section 3.3.6, p. 21, Table 7.

⁶⁴ Exhibit B-1, Section 3.3.6, p. 21.

Positions of the Parties

The CEC submits that the CPCN approval process anticipates that the BCUC would be reviewing a project for which substantial commitments had not yet been made, such that alternatives to the project would not be constrained.⁶⁵

Panel Determination

The Panel finds that the Mount Pleasant DCS as proposed is the preferred alternative for providing the cooling service at the Main Alley Development.

The CPCN Guidelines require an applicant to provide information regarding the project and the feasible alternatives considered. We agree with the CEC’s observation that the CPCN process contemplates an opportunity to review alternatives to a project. If an applicant only had to establish the merits of its selected design – as a *fait accompli* – the regulator and interveners would not have the opportunity to challenge the applicant as to whether the project is in fact the preferred option, having regard to the “public convenience” as set out in the UCA. The CPCN Guidelines, therefore, require an applicant to provide information about alternatives, including the costs, benefits and associated risks of the project and feasible alternatives.

The Panel has reviewed the alternatives that CEMP submitted during the proceeding as a result of BCUC and intervenor questions. Those alternatives are to some extent shaped by the Owner’s criteria, specifically, for cooling service in a development where four out of the five proposed buildings have no physical space for a cooling system.

The Panel accepts that building an entirely new district cooling system nearby to serve the Main Alley Development, without taking advantage of the existing cooling plant and space available in Building M3, would be more expensive and less efficient than the proposed Mount Pleasant DCS. We also accept that the distributed approach would require substantial reconfiguration of the physical design, to permit the installation of separate cooling plants in each building, making this alternative more expensive and less efficient than the proposed Mount Pleasant DCS.

3.0 Consultation

3.1 First Nations Consultation

CEMP states that the development of the Mount Pleasant DCS does not impose a duty to consult First Nations. Except for two small crossings of City of Vancouver streets, all the Mount Pleasant DCS’s infrastructure is installed on titled land.⁶⁶

3.2 Public Consultation

CEMP states that over 1,400 notifications were distributed via Canada Post to residents and businesses within approximately a 2-block radius of the buildings that will connect to the Mount Pleasant DCS. The notifications

⁶⁵ CEC Final Argument, p. 10.

⁶⁶ Exhibit B-1, Section 3.5, p. 24; Appendix D, Section 2.1, p. 2.

outlined CEMP's intention to apply to the BCUC and provided contact information for the Project team. The notifications also included the date, time and location of a public Open House.⁶⁷

CEVP staff hosted the Open House, the objectives of which were to provide details of the Mount Pleasant DCS, engage and solicit feedback and provide an opportunity to ask questions of CEVP staff. The Open House also allowed attendees to meet members of the Project team and to learn more about CEMP's role as an energy utility provider and its vision for the future.⁶⁸

The Open House took place on November 28, 2019. Display boards were arranged around the room presenting information regarding CEMP's proposal. CEMP described the construction or noise impacts during upgrades to the existing cooling plant in its public consultation materials: "[CEMP] will be adding cooling tower capacity, which will require crane access to the roof of 111 E 5th, otherwise there are no construction or noise impacts associated with [CEMP'S] plans."⁶⁹ It included a Target Timeline in the materials, which shows completion of construction of the existing Mount Pleasant DCS by December 2020.⁷⁰

Upon arrival at the Open House, attendees were encouraged to sign in and review the material displayed, ask questions to the Project team and fill out a comment form prior to departing. A total of four people attended the Open House and four comment forms were completed. CEMP also provided a ten-day comment period following the Open House; however, no comments were submitted.⁷¹

CEMP submits that the cooling system that currently serves two of the existing buildings within the Main Alley Development has been in operation for roughly 35 years with no adverse affects. Further, CEMP does not expect the planned modernization and expansion of the system, which will comprise similar equipment and operating procedures, to have any adverse effects on the physical, biological and social environment. In addition, CEMP states that centralizing the cooling equipment in the Main Alley Development will remove the need for cooling towers in each of the buildings, which it submits will reduce any perceived effects related to noise and water vapour emissions in comparison, however unlikely.⁷²

CEMP states that the Owner is managing construction of the Main Alley Development overall to limit disruptions to surrounding residential and commercial properties, including implementing traffic management plans as required to minimize traffic delays.⁷³

Positions of the Parties

The CEC did not raise any issues regarding the public consultation that CEMP conducted regarding the Mount Pleasant DCS.

⁶⁷ Exhibit B-1, Section 3.5, p. 24.

⁶⁸ Exhibit B-1, Section 3.5, p. 24.

⁶⁹ Exhibit B-1, Appendix D, Appendix C, p. 11.

⁷⁰ Exhibit B-1, Appendix D, Appendix C, p. 12.

⁷¹ Exhibit B-1, Appendix D, Section 2.2, p. 1.

⁷² Exhibit B-1, Section 3.5, p. 23.

⁷³ Exhibit B-1, Section 3.5, p. 23.

Panel Determination

In this section we review the public consultation that CEMP has conducted in order to determine its adequacy. To reach our determination, we consider *who* of the public CEMP should consult with and *what* aspects of the Project CEMP should be consulting about. Finally, this Project is planned to span nine years, and therefore in our view, an additional consideration must be whether there are other members of the public with whom CEMP should consult at a future period during the Project.

The CPCN Guidelines require an applicant to provide an overview of the community, social and environmental setting in which the project will be constructed and operated, and of the public who may be directly impacted by the project. The applicant must describe the information it has provided to the public as well as its public consultation programs, including a statement of what future public consultation is contemplated subsequent to the preparation of the CPCN application. The CPCN Guidelines also require an applicant to identify and provide a preliminary assessment of potential effects of the project on the physical, biological and social environments or on the public, and to describe its proposals for reducing potentially negative effects of a project.

An important element of public consultation in a CPCN is to inform the public who may be directly impacted by the project⁷⁴ in order to identify, and then to address, their issues or concerns. In our view, the public who may be directly impacted by the Project, whether during construction or operation, consists of the businesses and residents living in the vicinity of the Main Alley Development.

As far as the existing Mount Pleasant DCS is concerned, the Panel is satisfied that CEMP has identified appropriate members of the public for the purpose of the CPCN Guidelines. For example, engaging with businesses and residents within the two-block radius of the Main Alley Development is reasonable. In addition, we accept CEMP's observations that (1) the existing cooling system has been in operation for many years with no adverse effects, and (2) the Owner is managing construction of the Main Alley Development to minimize disruption. In our view, these are items that would have caused people to attend the Open House to complain to CEMP, and there is no evidence of that. We are satisfied therefore that CEMP has conducted reasonable public consultation in order to identify and address issues or concerns.

CEMP has, however, only consulted the public with respect to two years of a nine-year schedule, to the end of Phase 1. CEMP has not described its future consultation plans, pertaining to the remaining phases of the Project. There is no certainty that issues will not arise during the remainder of the Project on which CEMP should consult the public. Thus, in our view, a single Open House event, held in November 2019, does not constitute sufficient public consultation for the later phases of the Project. First, the businesses and residents that will comprise the public over the remainder of the Project are expected to grow in number. Three of the proposed buildings, in particular the residential Building M5, are several years from construction or occupation, and therefore it is impossible for CEMP to consult with these future members of the public. Second, CEMP did not provide information during the Open House regarding the remainder of the nine years of planned construction, from 2022 to 2029. In our view, this could have misled the public into believing that the construction of the Mount Pleasant DCS will be complete by 2021, despite the overall nine-year construction schedule. Further, the focus on the existing Mount Pleasant DCS would, in our view, not invite comments or questions from the public regarding the construction aspects of the expansion plans.

⁷⁴ CPCN Guidelines, Appendix A, p. 6.

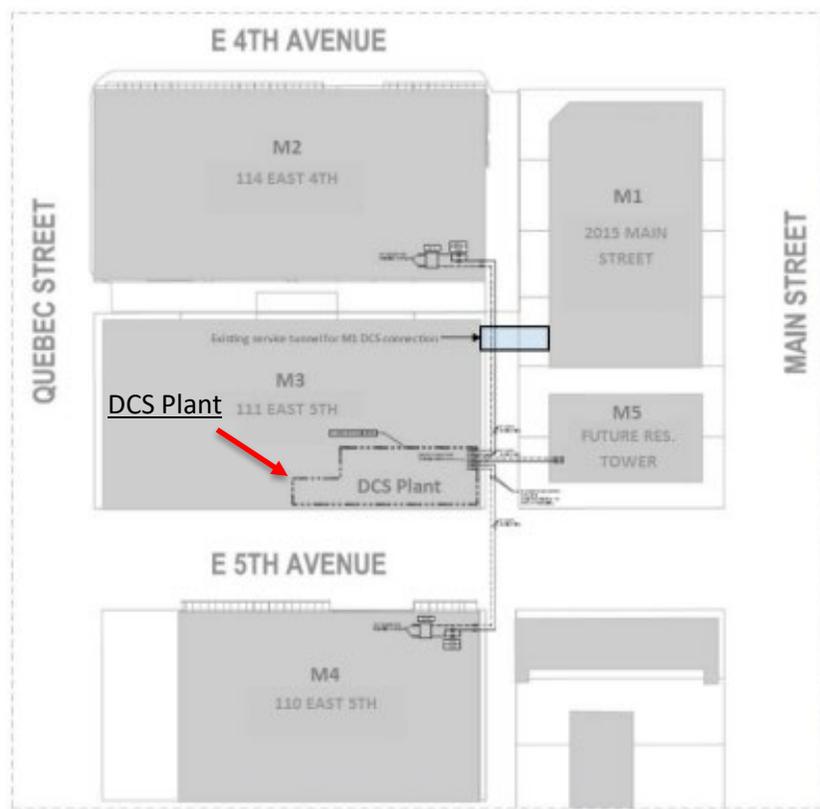
We acknowledge there have been no problems to date regarding the operation of the existing cooling system, as CEMP asserts, and that the planned modernization and expansion of the system is unlikely to have any adverse effects on the physical, biological and social environment. Similarly, the absence of cooling towers in each of the buildings will likely reduce any perceived effects related to noise and water vapour emissions, however unlikely. That said, even if the Owner continues to successfully manage construction to minimize disruption, we cannot foreclose the requirement for ongoing consultation. In our view, therefore, the expansion of the Mount Pleasant DCS, primarily the construction but also the operation, requires further public consultation. Therefore, the Panel adds the following term to the CPCN:

CEMP shall conduct further public consultation regarding the Project prior to Phase 3. CEMP must file with the BCUC, at least 6 months prior to commencing Phase 3, a report regarding its public consultation, outlining issues or concerns raised, if any, and how CEMP addresses, or plans to address, such matters.

4.0 Project Description

The Mount Pleasant DCS, together with the buildings of the Main Alley Development, are shown in Figure 3, below.

Figure 3: The Mount Pleasant DCS and the Main Alley Development⁷⁵



⁷⁵ Exhibit B-1, Section 2.1, p. 8, Figure 2. Arrow added by the BCUC.

4.1 Project Phasing

The Mount Pleasant DCS is forecast to be built in four phases over 9 years, from initial acquisition in 2020 through to commencement of service to Building M5 in 2029, with capital deployed at each phase. CEMP states that under this implementation plan, the existing assets will be operated and maintained while a cost-effective upgrade and replacement construction program is executed. CEMP submits that modern equipment will increase the efficiency, reliability and capacity of the Mount Pleasant DCS.⁷⁶

CEMP states that the construction phases of the Mount Pleasant DCS are designed to match load growth during the development lifecycle and that the Mount Pleasant DCS construction phases will be coordinated with construction of the Main Alley Development so that capital is not deployed before securing the new customer load associated with the new building connections.⁷⁷ CEMP states that it is not building surplus capacity in the hope of serving unknown future loads.⁷⁸

Table 5, below, provides a summary of the Mount Pleasant DCS phased implementation, which includes the target in-service dates for each phase of the Mount Pleasant DCS. CEMP states that the target in-service dates are aligned to the target occupancy dates for each of the buildings. CEMP explains that the trigger for CEMP to begin a next phase of Mount Pleasant DCS construction is not arbitrary nor fixed in time.⁷⁹

Table 5: Mount Pleasant DCS phased implementation⁸⁰

| 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 ⁴ | 790 kW |
| Phase 1 | Connect M2 Upgrade M3 cooling plant capacity and reliability | 2021 | <ul style="list-style-type: none"> DPS ETS Add 400-ton chiller to cooling plant | 3,870 kW | 1,630 kW |
| Phase 2 | Connect M4 | 2023 | <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 |

CEMP states it requires a CPCN for all phases together as it and the Owner each require certainty that regulatory approvals are in place for CEMP to provide cooling service from a district energy system to all buildings of the

⁷⁶ Exhibit B-1, Section 3.2, p. 14.

⁷⁷ Exhibit B-1, Section 3.2, p. 14.

⁷⁸ Exhibit B-8, para 10, p. 2.

⁷⁹ Exhibit B-8, para 11, p. 2.

⁸⁰ Exhibit B-1, Section 3.2, p. 15, Table 4.

Main Alley Development. CEMP states that the Owner requires certainty that CEMP has all approvals required to provide such scope of service so that the Owner can design the Main Alley Development buildings without their own on-site cooling equipment. CEMP notes that the design work for a commercial building typically commences 4 to 5 years before occupancy. CEMP states that it requires regulatory certainty so that it can commit unconditionally to the transactions contemplated by the CPA.⁸¹

4.1.1 Phase 1

In Phase 1, following the initial acquisition of the existing cooling assets, CEMP proposes to procure and install new energy transfer station (ETS) equipment for Building M2 and proposes to extend the distribution piping system (DPS) from Building M3 to connect Building M2. CEMP will also add one new 400-ton chiller in the Mount Pleasant DCS plant.⁸²

Adding the new 400-ton chiller brings the plant capacity to 1,100 tons or 3,870 kW. CEMP identifies that for Phase 1, two of the three chillers are required to serve the total peak demand and one of the original 350-ton chillers will continue to supply complete redundancy. CEMP states that the risk of not providing 100 percent of service is very low.⁸³

4.1.2 Phase 2

In Phase 2, CEMP proposes to procure and install new ETS equipment for Building M4 and proposes to extend the DPS from Building M3 to connect Building M4.⁸⁴

Building M4 is forecast to add 1,155 kW of peak demand, which brings the total peak demand to 2,905 kW. CEMP states that for Phase 2, 90 percent of the peak load can be served with the 400-ton chiller and one of the 350-ton chillers, and as such, states that the risk of not providing 100 percent of service increases from very low to low in this phase. CEMP submits that there are two scenarios for risk mitigation, which depend on how Phase 3 has progressed: i) if there is certainty of increased demand from Phase 3 going ahead, then failure of one of the 350-ton chillers would trigger early replacement with a new 400-ton unit; ii) if there is uncertainty in Phase 3 progressing, emergency repair would take place for the 350-ton chiller. CEMP states that in both of these scenarios, delivering 90 percent of the peak load for an emergency interim period would have minimal impact on the ratepayer.⁸⁵

4.1.3 Phase 3

In Phase 3, CEMP proposes to modernize the majority of the remaining equipment in the central Mount Pleasant DCS plant room in Building M3 to coincide with the planned renovation and expansion of Building M3. During this phase, CEMP proposes to replace the two existing 350-ton chillers with two new 400-ton chillers in the central room plant and install a new ETS to replace the direct delivery system in place currently at Building M3. CEMP will also replace the control system, upgrade the auxiliary systems and add a fourth cooling tower at Building M3.⁸⁶

⁸¹ Exhibit B-5, BCUC IR 40.1.

⁸² Exhibit B-1, Section 3.2.1, p. 14.

⁸³ Exhibit B-3, BCUC IR 11.8.

⁸⁴ Exhibit B-1, Section 3.2.2, p. 14.

⁸⁵ Exhibit B-3, BCUC IR 11.8.

⁸⁶ Exhibit B-1, Section 3.2.3, p. 14.

The expansion of Building M3 is forecast to add 490 kW of peak demand, which brings the total demand to 3,395 kW. CEMP states that for Phase 3, 83 percent of the peak load can be served with two, 400-ton chillers and CEMP submits the risk of not providing 100 percent of service reduces back to very low in Phase 3 due to the reliability of the plant with three new chillers in service. CEMP states that mitigation of this very low risk will include an ongoing service plan with the manufacturer to keep the chillers in optimal condition.⁸⁷

As part of Phase 3, the larger of the three existing cooling towers will be temporarily relocated to the parking lot of Building M3, and a fourth cooling tower will be installed in the parking lot.⁸⁸ This is to allow construction work to proceed on the renovation of Building M3.⁸⁹

CEMP states the relocation work can be done with no service impacts and the loads of Buildings M1, M2 and M3 can continue to be served. Once the cooling towers have been installed in the parking lot, service will be transferred to the temporary cooling towers with no service interruption.⁹⁰ CEMP states the time required to operate the temporarily relocated cooling towers will be 24 months.⁹¹

The detailed renovation plans for Building M3 have not yet been developed by the Owner. CEMP states it has 6 months to plan the relocation of the cooling towers with the Owner once these renovation details are made available.⁹²

CEMP states it does not anticipate filing the relocation plan or any contingency plans with the BCUC unless the BCUC requests CEMP to do so. CEMP submits that, in general, filing information of that nature is additional work for the utility and it is not clear whether there is a benefit.⁹³

4.1.4 Phase 4

In Phase 4, CEMP proposes to procure and install new ETS equipment for Building M5 and proposes to extend the DPS from Building M3 to connect Building M5.⁹⁴

Building M5 is forecast to add 390 kW in demand, which brings the total peak demand to 3,785 kW. CEMP states that for Phase 4, 74 percent of the peak load can be served with two, 400-ton chillers and CEMP submits the risk of not providing 100 percent of service is very low due to the reliability of the plant with three new chillers in service. CEMP states that mitigation of this very low risk will include an ongoing service plan with the manufacturer to keep the chillers in optimal condition.⁹⁵

⁸⁷ Exhibit B-3, BCUC IR 11.8.

⁸⁸ Exhibit B-1, Section 3.2, p. 14; Exhibit B-3, BCUC IR 11.6.

⁸⁹ Exhibit B-1, Section 3.2, p. 14.

⁹⁰ Exhibit B-3, BCUC IR 11.6.

⁹¹ Exhibit B-3, BCUC IR 11.6.

⁹² Exhibit B-3, BCUC 11.6.

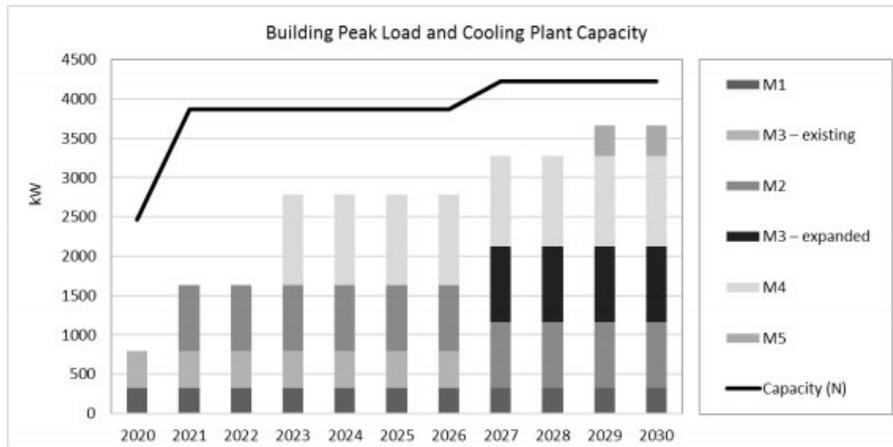
⁹³ Exhibit B-3, BCUC IR 11.7.

⁹⁴ Exhibit B-1, Section 3.2.4, p. 15.

⁹⁵ Exhibit B-3, BCUC IR 11.8.

CEMP identifies that by 2027, all existing chillers will have been replaced with more efficient and reliable capacity to serve load going forward.⁹⁶ Figure 4 below provides the building peak loads together with the plant capacity through all phases of the Project.

Figure 4: Building Peak Load and Cooling Plant Capacity⁹⁷



4.2 Construction and Purchase Agreement

CEMP and the Owner have entered into a CPA, whereby CEMP has agreed to purchase the existing cooling assets that serve the two existing buildings of the Main Alley Development and to operate, modernize and expand the system as a district cooling system to serve the entire Main Alley Development.⁹⁸ The CPA expects that an ancillary Contribution Agreement will be entered into for the payment of a fixed fee for the use of the designated premises housing the cooling plant.⁹⁹

Pursuant to the CPA, the Owner agrees to:¹⁰⁰

1. At its own cost and expense, construct the buildings in the Main Alley Development, which consist of new buildings and the substantial renovation of one or more existing buildings;
2. Sell the existing cooling plant within the M3 building to CEMP;
3. Allow CEMP to construct a district cooling system, at CEMP's cost and expense, to incorporate the cooling plant for the provision of space cooling to the buildings in the Main Alley Development and to expand the DCS to serve the entire Main Alley Development over time, as set out in Schedule F of the CPA; and
4. Connect the buildings in the Main Alley Development to the DCS and enter into 25-year CSAs with CEMP for the provision of space cooling services to each building.

⁹⁶ Exhibit B-1, Section 3.2.4, p. 16.

⁹⁷ Exhibit B-1, Section 3.2.4, p. 16, Figure 3.

⁹⁸ Exhibit B-1, Section 1.1, p. 1.

⁹⁹ Exhibit B-1, Section 2.2, p. 9.

¹⁰⁰ Exhibit B-1, Section 2.2, p. 8.

CEMP states the CPA is structured to mitigate the risk of stranded assets if future buildings of the Main Alley Development are delayed or ultimately do not proceed.¹⁰¹ CEMP notes the following sections of the CPA:¹⁰²

- Section 3.2 of the CPA sets out the process for the Owner, prior to the commencement date for each phase of the Main Alley Development, to submit to CEMP for approval a duly completed Building System Application and in any event no later than 60 days prior to commencing the installation of any Building System.¹⁰³ The Owner shall not commence the installation of any Building System until approved by CEMP, and the Owner will construct each Building System in accordance with the application approved by CEMP.¹⁰⁴
- Section 3.9 of the agreement requires the Owner to keep CEMP informed regarding the progress of construction and installation of each Building System and to provide a written notice of the Owner's target date by which each building will be ready to receive cooling from CEMP. The Owner must also submit to CEMP written confirmation of a satisfactory financing commitment for the respective building.¹⁰⁵
- Section 3.9(h) of the CPA provides that if the Owner, after commencing construction of a building and after providing the above written notice of the Owner's target date for receiving cooling service at the building, then fails to complete the building within 90 days after such target date, the Owner is required to pay to CEMP the applicable rates for cooling service to the building that CEMP is ready and able to provide. The Owner is not required to pay such rates if CEMP is the cause of the delay.¹⁰⁶

Section 3.9(h) of the CPA states:¹⁰⁷

- (h) If the Energy Services Commencement in respect of a Building has not occurred within 90 days after the earlier of:
- (i) if applicable, the Target Date set out in the Completion Notice in respect of such Building; and
 - (ii) the scheduled date for service commencement in respect of such Building as set out in the Key Milestone Dates,

or such other date that is mutually agreed by the Parties in writing (the "**Deadline**"), the Owner will commence paying Creative Energy the rates charged by Creative Energy pursuant to the applicable Customer Service Agreement with effect as of the Deadline as if Creative Energy had commenced providing Energy Services to the Building as of the Deadline. The Owner will pay such rates whether or not it has signed a Customer Service Agreement in respect of the applicable Building by the Deadline. Notwithstanding the foregoing, the Owner will not be required to pay such rates if Creative Energy is the

¹⁰¹ Exhibit B-8, para. 13., p. 3.

¹⁰² Exhibit B-8, para. 13., p. 3.

¹⁰³ "Building System" is defined as "the complete air conditioning and ventilating system and storage equipment to be installed and used for distributing and storing Thermal Energy in a Building"; Exhibit B-1, Appendix B, p. 2.

¹⁰⁴ Exhibit B-8, para. 13., p. 3.

¹⁰⁵ Exhibit B-8, para. 13., p. 3.

¹⁰⁶ Exhibit B-8, para. 13., p. 3.

¹⁰⁷ Exhibit B-1, Appendix B, p. 17.

cause of the delay (in which case Creative Energy will use commercially reasonable efforts to commence providing Energy Services as soon as possible).

CEMP states in the “unlikely scenario”¹⁰⁸ that there are stranded assets, it would be the result of Owner/Customer default of its obligations under the CPA. In this case, either of the following would be entirely appropriate and would serve the same result to make CEMP whole for the DCS cost of service:

- It would be entirely appropriate for the Owner/Customer to bear the costs of any such stranded DCS assets through recovery in rates for cooling service to the completed buildings; and/or
- CEMP would have a claim in damages against the Owner, which at a minimum would include a claim for the recovery of costs incurred on stranded DCS assets. As referred to in the response to BCUC IR 47.3, the Owner does not have any rights of termination in respect of the Construction and Purchase Agreement other than the conditions precedent pursuant to Section 5.3 relating to conditions imposed by the BCUC in relation to this Application. Given that no other termination rights are available to the Owner once all conditions precedent are satisfied or waived, if the Owner decides not to proceed with a building or otherwise refuses to fulfil its obligations to diligently proceed with the Development under the Construction and Purchase Agreement, then the Owner would be in default of the agreement.¹⁰⁹

The CPA requires the Owner to execute and register statutory rights of way (SRW) to allow CEMP to construct, operate, maintain, repair and replace the Mount Pleasant DCS on the Development lands.¹¹⁰ CEMP states that the SRW agreements for each building have been executed by the Owner and CEMP and the parties are awaiting the execution of the SRW agreements by the holders of mortgages.¹¹¹

4.3 Purchase Price

As previously stated, CEMP and the Owner have entered into a CPA, whereby CEMP has agreed to purchase the existing cooling assets that serve the two existing buildings, Buildings M1 and M3, of the Main Alley Development.¹¹² Table 6, below, outlines the major equipment items located in the existing Mount Pleasant DCS plant in Building M3 that are to be purchased by CEMP upon initial acquisition.

¹⁰⁸ Exhibit B-8, para. 21., p. 4.

¹⁰⁹ Exhibit B-8, para. 21., p. 4.

¹¹⁰ Exhibit B-1, Section 2.2, pp. 8-9.

¹¹¹ Exhibit B-3, BCUC IR 30.1.

¹¹² Exhibit B-1, Section 1.1, p. 1.

Table 6: Description of Purchased Assets¹¹³

| ITEM # | DESCRIPTION | MANUFACTURER | COMMENTS |
|--------|--|----------------------------------|---|
| 1 | Centrifugal Water-Cooled Chillers: 2 x 350 Ton + 1 x 150 Ton One of the two 350 Ton chillers is standby | Carrier (Trane Controls Upgrade) | 35 years old and nearing the end of their service life. |
| 2 | Cooling towers: 2 x 350 Ton + 1 x 125 Ton One of the two 350 Ton towers is stand by | Baltimore Aircoil | Cooling Towers were replaced in 2017 |
| 3 | Chilled Water and Condenser circulating pumps for 111 E. 5 th Ave and 2015 Main St (duty/standby) | N/A | 35 Years old, some motors replaced |
| 4 | Water storage tank for cooling tower makeup water | N/A | 35 Years old, good condition |

CEMP identifies that the chillers proposed to be purchased are 18 years past the median life expectancy for this type of equipment,¹¹⁴ however notes that ongoing maintenance¹¹⁵ and low usage is keeping them operational.¹¹⁵ CEMP states that in the initial acquisition and operation phase of the Project, existing customers at Buildings M1 and M3 can be served using one of the two 350-ton chillers, providing an appropriate level of system redundancy given the aging equipment.¹¹⁶

CEMP states that the purchase price is based on “an engineering calculation of the depreciated value of the existing cooling plant assets”.¹¹⁷ The Owner retained FVB Energy Inc. to review the value of the equipment to be purchased, which was provided to CEMP.¹¹⁸ The value of the existing cooling plant assets as provided by FVB Energy Inc. is shown in Table 7 below.¹¹⁹

Table 7: Valuation of Existing Equipment

| Equipment | Estimated Replacement Value | Install Date | Expected Replacement Date | Value in 2020 |
|------------------------------|-----------------------------|--------------|---------------------------|------------------|
| (2) × 350-ton Chiller | (2) × \$350,000 | 1979 | 2024 | (2) × \$31,111 |
| (2) × 300-ton Cooling towers | \$420,000 | 2017 | 2037 | \$357,000 |
| (1) × 125-ton Cooling tower | | 2017 | 2037 | |
| Total: | | | | \$419,222 |

The purchase of the existing assets under the CPA is contingent on CEMP receiving CPCN approval for the acquisition, operation and expansion of the Mount Pleasant DCS by no later than December 6, 2020.¹²⁰

¹¹³ Exhibit B-1, Appendix B, Schedule H. CEMP provided an update that the chillers are 41 years old in Exhibit B-3, BCUC IR 7.4.

¹¹⁴ Exhibit B-3, BCUC IR 7.1.

¹¹⁵ Exhibit B-3, BCUC IR 7.3.

¹¹⁶ Exhibit B-1, Section 3.2, p. 15.

¹¹⁷ Exhibit B-1, Section 2.2, p. 9.

¹¹⁸ Exhibit B-1, Section 2.2, p. 9.

¹¹⁹ Exhibit B-1, Appendix K, p. 1.

¹²⁰ Exhibit B-1, Section 1.1., p. 1; Section 2.2, p. 9.

Panel Discussion

The Panel is satisfied that the purchase price paid by CEMP to the Owner, set out in the CPA, is reasonable on the ground that it was set at fair market value as determined by FVB Energy Inc., an independent party.

4.4 Project Risks

CEMP states that it takes a rigorous, formal approach to risk management, in line with best practices established by the Project Management Institute. CEMP identifies that for each risk, it assesses likelihood and consequences, implements mitigation measures, and monitors and manages risk and outcome on an ongoing and iterative basis. CEMP states that at the early project stages, the risks are broad and fairly generic, and they become detailed and specific as the design planning, procurement and construction of the project evolve. CEMP identifies that as this Project is at the schematic design stage, the risk assessment is at a similar level of definition.¹²¹

In the Application and through the review process, CEMP identified various risks and mitigation strategies associated with the Project, including:

- Project is cancelled from the Developer side (Initial Acquisition and Operation Phase) – CEMP states that this risk has been mitigated in the terms of the CPA with a make-whole provision upon termination.¹²²
- Project is cancelled from the Developer side (Phase 1 to 4) – CEMP states that this risk has been mitigated in the terms of the CPA with variable milestones based on actual construction start dates for each phase so CEMP does not expend any capital prior to the Owner committing to the construction of each phase.¹²³
- Financial risk of evaluating costs for future expansion (Phases 2 to 4) – CEMP states that this risk has been mitigated by setting the contingency provision on the high end of the acceptable range due to the brownfield nature of the project.¹²⁴
- Construction Cost Overrun (All Phases) – CEMP states that this risk has been mitigated by setting the contingency provision on the high end of the acceptable range due to the brownfield nature of the project.¹²⁵
- Construction Delay (Owner caused, All Phases) – CEMP states that this risk has been mitigated in the project phasing such that a delay in any phase will also delay CEMP’s capital expenditure and reduce CEMP exposure.¹²⁶
- Construction Delay (CEMP contractor caused, All Phases) - CEMP states that the risk of poor performance is mitigated by conducting a thorough Request for Proposal (RFP) process that includes a scoring system that puts added emphasis on past performance.¹²⁷

¹²¹ Exhibit B-3, BCUC IR 9.1.

¹²² Exhibit B-3, BCUC IR 9.1.

¹²³ Exhibit B-3, BCUC IR 9.1.

¹²⁴ Exhibit B-3, BCUC IR 9.1.

¹²⁵ Exhibit B-3, BCUC IR 9.1.

¹²⁶ Exhibit B-3, BCUC IR 9.1.

¹²⁷ Exhibit B-3, BCUC IR 9.1.

- Load Timing, Annual Energy Load, Occupancy Risk (All Phases) – CEMP states that risk to CEMP will be mitigated through a fixed charge rate structure and the direct flow-through of variable costs.¹²⁸
- Plant Efficiency (All Phases) – CEMP states that the risk of poor plant efficiency has been mitigated by hiring KWL to design Phase 1 of the plant upgrades, which will include a design concept for cascading the new building to improve changes in temperature and overall efficiency.¹²⁹
- Operations - CEMP considers that the operational and reliability risk of the Mount Pleasant DCS is low. CEMP identifies that CEVP has extensive experience managing TES and that, combined with the reliable technology being implemented, will result in minimal to no risk in operating and maintaining the Mount Pleasant DCS outside of normal practice. CEMP states that new, modern equipment is being phased in to bring the existing plant up to current standards and identifies that the older equipment that will be utilized in the early stages of Project development has been tested and is in good condition. CEMP further states that the older equipment will also be operated with a level of redundancy to ensure reliable delivery of energy to the customers.¹³⁰
- CEMP considers that the risk of public concern with the Mount Pleasant DCS is low. CEMP identifies that the Mount Pleasant DCS is located in a commercial/light industrial neighbourhood and considers that this type of equipment and plant will largely go unnoticed. CEMP identifies that the existing cooling plant and associated assets are in place and are contained within buildings. CEMP considers that the future underground road crossing construction will be the only impact to the surrounding neighbourhood.¹³¹
- Load Forecast - CEMP states that there is very little risk associated with the Mount Pleasant DCS load forecast. CEMP identifies that the entirety of Mount Pleasant DCS's load is currently comprised of one entity, the Owner. The phased aspect of this Project allows [CEMP] to service the customer with the existing Mount Pleasant DCS equipment being purchased and to deploy the new equipment to align with the planned load growth at the time the future buildings are permitted to be built.¹³²

4.5 Overall Panel Review of Project Description

Positions of the Parties

CEMP submits it is not proposing to invest in the Mount Pleasant DCS in advance of need, but rather it is investing according to the most cost-effective schedule to serve the contracted need defined by the Owner, who will be the only customer and ratepayer of the Mount Pleasant DCS. The arrangements by which the Mount Pleasant DCS will be expanded and modernized to meet the needs of the Owner are set out in the CPA between the Owner and CEMP.¹³³

CEMP submits that the CPA is conditional upon obtaining all necessary approvals, including approval from the BCUC, by December 6, 2020. Such approval must allow for the construction and operation of all phases of the Project in accordance with the CPA. CEMP submits it requires the CPCN for all phases so that it can commit

¹²⁸ Exhibit B-3, BCUC IR 9.1.

¹²⁹ Exhibit B-3, BCUC IR 9.1.

¹³⁰ Exhibit B-1, Section 3.4.2, p. 22.

¹³¹ Exhibit B-1, Section 3.4.4, p. 22.

¹³² Exhibit B-1, Section 3.4.3, p. 22.

¹³³ CEMP Final Argument, pp. 2-3.

unconditionally to the Project, and so that the Owner can design the Main Alley buildings to connect to the Mount Pleasant DCS without each building requiring its own in-building cooling equipment.¹³⁴

CEMP submits the risk of it making an imprudent decision with regards to investment in the Mount Pleasant DCS is negligible, if not entirely eliminated, because CEMP would only make its investments based on the Owner's design and specifications. Further, if there were cooling assets deemed to be surplus and CEMP followed the Owner's specifications but the Owner defaulted on its obligations under the CPA, then there would have been no imprudence on CEMP's part and the cost of the cooling assets deemed to be surplus must be recovered in rates set by the BCUC "to be charged to the Owner who is the sole customer of the DCS."¹³⁵

CEMP submits the risk of over-forecasting demand is not applicable in this case, as it is the Owner, "a sophisticated and experienced property developer"¹³⁶ who "has expert engineering and design consultants,"¹³⁷ and not CEMP who has specified the need for cooling and the lack of need for redundancy in the design. CEMP submits that the risk of over-forecasting is small and is borne by the Owner, and that the Owner agrees with this risk allocation "as set forth in the terms of the Construction and Purchase Agreement."¹³⁸

CEMP submits that Westbank Holdings Ltd. ultimately owns 50 percent of CEMP, the other 50 percent being ultimately owned by the InstarAGF Essential Infrastructure Fund, which is independent of Westbank Holdings Ltd. Further, the Owner is ultimately owned by Westbank Holdings Ltd. and by Mount Pixel Projects LP, each of which is independent of each other. CEMP adds that Westbank Holdings Ltd. has no direct involvement in its day-to-day operations, the management teams and directors of Creative Energy Developments and CEMP are independent of Westbank Holdings Ltd. and the Owner, and no individuals related to Westbank Holdings Ltd. or the Owner are employed by Creative Energy Developments or CEMP. Creative Energy Developments and CEMP report to and are governed by their boards of directors, of which Westbank Holdings Ltd. is a part, but Westbank Holdings Ltd. "has no direct agency on any discussions that CEMP or [Creative Energy Developments] are involved in regarding new project developments and commercial negotiations."¹³⁹

CEMP submits that it can claim damages for breach of the CPA in the event the Owner defaults on its obligations under the agreement. CEMP submits that if the BCUC considers there to be a risk that CEMP might not pursue damages from the Owner in default of the CPA, "the hypothetical risk of such a gratuitous benefit to the sole customer of the Mount Pleasant DCS cannot be an impediment to approval of this Application."¹⁴⁰

The CEC submits that it would be appropriate for the BCUC to "to recognize that there could be limited incentive for an Owner/Developer to incorporate significant conservation and efficiency measures when they have an interest in the corporation selling energy."¹⁴¹ The CEC also submits that CEMP reporting to the BCUC regarding the progress of the modernization and expansion of the Mount Pleasant DCS could be useful in verifying costs and developing a database for future reference.¹⁴²

¹³⁴ CEMP Final Argument, p. 7.

¹³⁵ CEMP Final Argument, p. 16.

¹³⁶ CEMP Final Argument, p. 14.

¹³⁷ CEMP Final Argument, p. 14.

¹³⁸ CEMP Final Argument, p. 14.

¹³⁹ CEMP Final Argument, p. 17.

¹⁴⁰ CEMP Final Argument, p. 17.

¹⁴¹ CEC Final Argument, p. 7.

¹⁴² CEC Final Argument, pp. 10–11.

The CEC submits that the Owner should not be deemed the sole determiner of the risk of over-forecasting, as future ratepayers may experience limited alternatives. The CEC notes there could be an appearance of a potential conflict of interest given the Westbank Holdings Ltd. connections between the Owner and CEMP.¹⁴³ The CEC notes a perceived conflict of interest could arise “because the Owner could theoretically have a beneficial interest in protecting itself from the consequences of oversized assets if it believed these could be recovered from ratepayers.”¹⁴⁴ The CEC is concerned with CEMP’s attribution of prudence risk to the Owner, which is beyond the reach of the BCUC.¹⁴⁵

CEMP submits in reply that it and the “sophisticated Owner”¹⁴⁶ have negotiated an agreement that “minimises if not eliminates any chance for surplus DCS capability to be constructed by CEMP in excess of the Owner’s specification for cooling,”¹⁴⁷ and that the BCUC “does not need to regulate decisions in relation to DCS capability to protect the Owner because the Owner is sophisticated and makes those decisions itself.”¹⁴⁸

The CEC submits that the BCUC has broad jurisdiction to assess a variety of considerations in the public interest, and there is no reason why the risk of CEMP not pursuing damages against the Owner for breach of the CPA should not be considered and assessed. The CEC’s view is that if the BCUC finds there is such a risk, then the BCUC could indeed consider it an impediment to approval of the Application.¹⁴⁹

The CEC submits the BCUC may consider the risk to future ratepayers in the event the Owner ceases to retain ownership of one or more buildings contained within the Main Alley Development.¹⁵⁰ CEMP submits in reply that the absence of any analysis by the CEC demonstrates its argument about risk to future ratepayers is unfounded.¹⁵¹

Panel Determination

The Project for which CEMP has applied for a CPCN involves the acquisition of the existing DCS serving two existing buildings and four phases of expansion and modernization between now and 2029, which will serve three additional buildings, only one of which is presently under construction. To grant the CPCN, the Panel must determine whether the Project as proposed by CEMP is necessary and in the public convenience, knowing that fundamental circumstances may change during the life of the Project. Alternatively, the Panel may approve only part of the Project’s proposed facilities. In addition, the Panel has the authority under section 46(3) to attach terms to the CPCN that it considers are required for the public convenience and necessity.

The Panel’s review of the Project includes reviewing the CPA between CEMP and the Owner. The terms of the CPA govern the relationship between CEMP and the Owner in the Owner’s role of seller of the existing Mount Pleasant DCS to CEMP and developer of the new buildings to which the DCS will be connected. These terms include obligating the Owner to compensate CEMP in the event the Owner does not complete future buildings

¹⁴³ CEC Final Argument, p. 10.

¹⁴⁴ CEC Final Argument, p. 11.

¹⁴⁵ CEC Final Argument, p. 11.

¹⁴⁶ CEMP Reply Argument, p. 5.

¹⁴⁷ CEMP Reply Argument, p. 5.

¹⁴⁸ CEMP Reply Argument, p. 5.

¹⁴⁹ CEC Final Argument, p. 12.

¹⁵⁰ CEC Final Argument, p. 12.

¹⁵¹ CEMP Reply Argument, p. 4.

according to agreed target dates. As such, the CPA is an integral part of the Panel's consideration of whether the Project as proposed by CEMP is in the public interest.

CEMP states the Owner requires the certainty of a CPCN for all future phases of the Project so it can plan buildings on the assumption that centralized cooling will be provided, and CEMP itself requires certainty so it commit "unconditionally"¹⁵² to the transactions in the CPA. The Panel accepts these as valid reasons for seeking the approvals requested, but, as a result of the request covering such a long period of time, the Panel must examine closely not merely the specifics of the proposed investments, but the risks associated with changes in circumstance that may occur over this extended period. The Panel is concerned that by approving the entire Project now, CEMP would have the authority to construct and operate future phases based on today's design and planning assumptions, regardless of any changes in circumstance between now and the commencement of each future phase. The Panel would much prefer to consider a CPCN now for the acquisition of the Mount Pleasant DCS assets under the current circumstances, and that the BCUC consider CPCNs for future phases closer to their required dates and under the circumstances prevailing at that time. A lot can change in nine years.

The Panel has three main issues related to the approval of the Project as described by CEMP:

1. Investments by CEMP in building-specific assets for future buildings which may be delayed or never built might become stranded assets;
2. Unnecessarily large investments might be made by CEMP in additional capacity and modernization of the central cooling plant for buildings which may be delayed or never built; and
3. Unnecessarily large investments might be made by CEMP in cooling capacity based on erroneous information from the Owner on forecast demand for cooling, or on unanticipated changes in building efficiency, demand side management technologies and market alternatives for providing cooling which may occur prior to the investments being made.

With respect to Issue 1, CEMP submits there are protections in the CPA to ensure that if the Owner delays or cancels plans for a planned building, and CEMP has invested in assets specific to that planned building, CEMP is not left with stranded assets. Section 3.9(h) of the CPA obliges the Owner under certain circumstances to start paying CEMP rates for cooling service even if the cooling service is not yet being delivered. The intent appears to be that if the Owner commits to taking service by a specified target date, and through no fault of CEMP the Owner does not start taking service by that date, then CEMP is still compensated by the Owner. CEMP further submits that, in the event that the Owner does not perform its obligations under section 3.9(h), the Owner would be in default of the CPA and CEMP would claim damages from the Owner. In either event, these protections described by CEMP protect CEMP itself rather than its ratepayers.

The Panel is satisfied that these protections offered by CEMP are appropriate to protect CEMP in the event the Owner were to delay or cancel a planned building. If the Owner were to delay or cancel a planned building, CEMP would not be providing a regulated cooling service to the building, and, as a result, CEMP's investments in cooling assets specific to that building would not meet the "used and useful" test. The Panel notes that CEMP's

¹⁵² CEMP Final Argument, p. 8.

ratepayers are not at risk in this event, because any investments made by CEMP in building-specific assets for buildings delayed or cancelled would not be allowed to enter rate base.

Issue 2 raises an additional concern, because CEMP's investments in additional capacity and modernization of the central cooling plant (Expansion Costs) benefit both current buildings and future buildings, and such investments cannot easily be separated among buildings when applying a "used and useful" test in the way that the test may be applied to building-specific infrastructure. The expansion and modernization of the cooling plant is scheduled to be done in Phase 3 of the Project, along with the Owner's renovation and expansion of building M3, and the final building in the Main Alley Development, Building M5, is to be added thereafter in Phase 4 of the Project.

To reduce the risk that CEMP over-invests in the Expansion Costs in Phase 3, the Panel adds the following term to the CPCN to ensure that the Owner is committed to renovating and expanding Building M3 and completing Building M5, both significant determinants of the Expansion Costs, prior to CEMP committing to expanding the cooling plant:

CEMP may not proceed with Phase 3 of the Project until it has agreed in writing to a target in-service date for the expansion and renovation of Building M3 and a target in-service date for Building M5 with the Owner pursuant to section 3.9(h) of the CPA and filed that target in-service date with the BCUC.

CEMP may not amend the target dates for Buildings M3 or M5 or agree any other dates with the Owner with regards to Phase 3 and section 3.9(h) without the prior approval of the BCUC.

With respect to Issue 3, the Panel does not consider it problematic for CEMP to base its anticipated level of demand on forecasts provided by the Owner, its customer. Indeed, it is the usual practice of utilities to base their need to provide service on the demand of their customers. The concern for the Panel is to ensure that CEMP and CEMP's ratepayers are not put at undue risk if the actual cooling demand for a future building is significantly different to what was estimated in the Application, especially since so many factors may change between now and when the final building is completed in 2029.

To address this concern, CEMP submits that the Owner is responsible for the cost of surplus capacity through the rates the Owner pays. However, this is only true as long as the Owner remains the only customer of CEMP, in which case any risk the Owner takes on for the cooling estimates of its buildings would not be shared by other customers of CEMP. To address risk more fully, the Panel considers it appropriate that the BCUC monitor the Project for its duration, and includes in section 8.0 below directions with respect to reporting by CEMP on the costs of the Project and forecast and actual demand for cooling.

The CEC raises the point that, in providing its specifications to CEMP, the Owner may have limited incentive to incorporate significant conservation and efficiency measures when they have an interest in the utility selling the energy. The Panel concurs, but considers the Owner's responsibility to meet the building codes in place at the time new buildings are built provides sufficient protection that appropriate conservation and efficiency measures will be taken.

In addition to the issues already addressed, CEMP has submitted that its investments are at negligible risk of being deemed imprudent by the BCUC because CEMP will make its investment decisions based on the Owner's design and specifications. The Panel considers that additional certainty is required, and adds the following terms to the CPCN to ensure that CEMP does indeed make its investment decisions based on the Owner's design and specifications.

CEMP must ensure all upgrades made in Phase 1 related to the connection to new Building M2 are undertaken in accordance with commitments made by the Owner and the capacity and resiliency requirements resulting from that commitment.

CEMP must ensure all upgrades made in Phase 2 related to the connection to new Building M4 are undertaken in accordance with commitments made by the Owner and the capacity and resiliency requirements resulting from that commitment.

CEMP must ensure all upgrades made in Phase 3 related to the expansion of Building M3 are undertaken in accordance with commitments made by the Owner and the capacity and resiliency requirements resulting from that commitment.

CEMP must ensure all upgrades made in Phase 4 related to the connection to new Building M5 are undertaken in accordance with commitments made by the Owner and the capacity and resiliency requirements resulting from that commitment.

The terms of the CPA are an integral part of the Panel's approval of the CPCN. For this reason, the Panel requires that the CPA will not be amended without the BCUC's approval, and adds the following term to the CPCN:

CEMP must file any proposed changes to the CPA for approval by the BCUC.

5.0 Project Cost and Rate Impact

5.1 Capital Cost

CEMP states that the \$9.553 million capital cost estimate, developed by KWL in 2020, is provided at an AACE Class 3 level of accuracy based on the Integral Group's design.¹⁵³ Table 8 provides an overview of capital and development costs per building.

¹⁵³ Exhibit B-1, Section 3.3.1, p. 16.

Table 8: Estimated Capital and Development Costs¹⁵⁴

| | M1 + M3 | M2 + M4 | M3 | M5 | Total |
|--|----------------|------------------|------------------|----------------|------------------|
| Purchase of Assets | 419,222 | | | | 419,222 |
| Energy Center and Owner Supplied Equipment | | 1,086,656 | 3,891,813 | | 4,978,468 |
| DPS and ETS | | 668,525 | | 273,983 | 942,508 |
| Predevelopment | 190,029 | | | | 190,029 |
| CPCN | 50,000 | | | | 50,000 |
| Engineering | | 195,598 | 317,278 | | 512,876 |
| Soft Costs | | 229,353 | 547,009 | 40,733 | 817,095 |
| Internal | 59,687 | 88,576 | 229,860 | 67,092 | 445,216 |
| Contingency | 13,855 | 351,036 | 778,363 | 54,797 | 1,198,050 |
| Total | 732,793 | 2,619,744 | 5,764,322 | 436,605 | 9,553,463 |

The total capital cost excludes \$125,218 of interest during construction and \$286,914 return on equity (ROE) during construction.¹⁵⁵ CEMP states it has calculated both the interest and ROE amounts to reflect the individual amounts of equity and debt contributed to the Project on an actual basis.¹⁵⁶

CEMP states predevelopment activities comprise primarily feasibility studies and design work; soft costs consist of mobilization, demobilization, bonding and insurance costs; and internal costs are estimated at 5 percent of construction and equipment costs per building.¹⁵⁷ A 20 percent contingency is included in the cost estimate. CEMP states that the 5 percent for internal costs and 20 percent contingency are based on the design engineer's experience and are consistent with brownfield sites.¹⁵⁸ CEMP also confirms that potential cost increases for construction phases planned for 2027 and 2029 (Buildings M3 and M5 respectively) were factored into the contingency costs.¹⁵⁹

5.2 Operation and Maintenance Expenses

Operation costs for the Mount Pleasant DCS will include both fuel and non-fuel operating costs. As the Mount Pleasant DCS will utilize only electricity to run the central plant, fuel costs will consist of electricity costs and will be served under British Columbia Hydro and Power Authority's (BC Hydro) Large General Service rates.¹⁶⁰ Non-fuel operating costs will include maintenance, operation, insurance and administrative costs, as well as lease payments for the cooling plant space and municipal access fees in lieu of property taxes.¹⁶¹ During the IR process, CEMP stated municipal access fees are indicative of fees that will likely apply, however CEMP states it will confirm these fees prior to filing a rates application.

¹⁵⁴ Exhibit B-1, Section 3.3.1, p. 17.

¹⁵⁵ Exhibit B-5, BCUC IR 50.1.

¹⁵⁶ Exhibit B-5, BCUC IR 50.2.

¹⁵⁷ Exhibit B-1, Section 3.3.1, p. 16.

¹⁵⁸ Exhibit B-3, BCUC IR 18.6.

¹⁵⁹ Exhibit B-3, BCUC IR 27.1.

¹⁶⁰ Exhibit B-1, Section 3.3.3, p. 18.

¹⁶¹ Exhibit B-1, Section 3.3.2, pp. 17–18.

Maintenance costs are estimated at 1.0 percent of plant in service costs for all assets and are escalated at inflation.¹⁶² Insurance costs consist of business interruption, replacement insurance and general liability insurance.¹⁶³ Municipal access fees are currently set at a rate of 1.25 percent of fixed revenue.¹⁶⁴

At present CEMP does not have any employees, however operation costs are estimated based on a requirement for three full-time operators earning \$100,000 per year.¹⁶⁵ CEMP explains that staffing requirements are determined by the Provincial Safety Manager of Technical Safety BC.¹⁶⁶ CEMP states the Mount Pleasant DCS fits in the category of plants requiring “General Supervision,” which broadly implies a requirement for two full-time operators, on site five days a week.¹⁶⁷ When commissioning and the expansion are underway, CEMP explains it expects slightly higher levels of supervision being required at three operators in total.¹⁶⁸ CEMP states that direct operations and maintenance are expected to require additional personnel to be provided by CEVP’s “Service Line” group. CEMP states that a service agreement for the services may or may not be required, and the form of any agreement has not yet been finalized at this time.¹⁶⁹

Lease payments are based on the cooling plant space requirement of 2,000 square feet at a rate of \$20 per square foot and escalating at inflation.¹⁷⁰ CEMP states it believes that the lease rate is consistent with the market value of other spaces that the Creative Energy family of companies are currently leasing. CEMP notes that CEVP’s lease rates for spaces at the Expo Plant at BC Place Stadium and the Main & Keefer development are approximately \$21 per square foot and \$16 per square foot, respectively.¹⁷¹

Administration and overhead costs will be allocated to the Project based on the BCUC-approved Massachusetts Formula and the assignment ratios between this Project and other applicable projects undertaken by the Creative Energy group of families.¹⁷²

In the 2018-2022 Core Steam System Decision, the BCUC approved the use of a Massachusetts Formula methodology for allocating residual sales, general and administrative expenses that are not directly assignable between the Core Steam System and CEVP’s other regulated TES projects.¹⁷³ The approved formula from the 2019-2020 Revenue Requirements Application (RRA) is based on the arithmetic average of three factors: the average gross book value of capital assets or property, plant and equipment; salaries or direct labour expenses; and operating revenues.¹⁷⁴

¹⁶² Exhibit B-1, Section 3.3.2, p. 17.

¹⁶³ Exhibit B-1, Section 3.3.2, p. 17; Exhibit B-3, BCUC IR 21.2.

¹⁶⁴ Exhibit B-1, Section 3.3.2, p. 18.

¹⁶⁵ Exhibit B-1, Section 3.3.2, p. 17; Exhibit B-3, BCUC IR 20.1.

¹⁶⁶ Exhibit B-5, BCUC IR 48.1.

¹⁶⁷ Exhibit B-3, BCUC IR 20.3.

¹⁶⁸ Exhibit B-3, BCUC IR 20.3.

¹⁶⁹ Exhibit B-5, BCUC IR 53.4.

¹⁷⁰ Exhibit B-1, Section 3.3.2, p. 18.

¹⁷¹ Exhibit B-3, BCUC IR 22.1.

¹⁷² Exhibit B-1, Section 3.3.2, p. 17.

¹⁷³ CEVP 2018-2022 RRA Decision and Order G-205-18, p. 37.

¹⁷⁴ CEVP 2019-2020 RRA, p. 25.

CEMP states CEVP is a separate entity affiliated to CEMP and certain CEVP staff and project managers directly budget and charge time to CEMP, which is not included in CEVP revenue requirements.¹⁷⁵ CEMP explains once the Mount Pleasant DCS is operational, certain residual general and administrative expenses from CEVP used to support the operations at the Mount Pleasant DCS will be allocated in accordance with the BCUC approved Massachusetts formula.¹⁷⁶

CEMP states there is no risk to ratepayers of CEVP's Core Steam system associated with either development of the Mount Pleasant DCS or when the Project is placed into service. The recovery of residual general and administration costs will be fairly allocated to the ratepayers of all projects in the Creative Energy family in accordance with the Massachusetts formula.¹⁷⁷ CEMP further notes that a single Massachusetts Formula is applicable for CEMP and CEVP in order to provide a consistent basis on which to determine allocation ratios across all relevant projects.¹⁷⁸

5.3 Rate Impact

As part of its Application, CEMP provides a summary of costs, revenue requirements and rates, however CEMP states that these are provided as indicative estimates for the purpose of the Application overall and do not reflect a defined proposal or request for approval of a selected rate setting mechanism.¹⁷⁹ Any proposed rates and supporting revenue requirements will be the subject of a future rate application.¹⁸⁰

CEMP explains it will seek to recover its cost for providing service through fixed and variable charges under a levelized rate design. CEMP submits the purpose of the fixed charge will be to fairly recover from each building the cost of service that does not vary with cooling energy consumption.¹⁸¹ The purpose of the variable charge will be to fairly recover from each customer the cost of electricity required to serve thermal cooling energy load. The variable charge would be allocated to each building customer on a flow-through basis based on each building's metered energy consumption.¹⁸²

CEMP submits the indicative levelized rates are stable, smooth and predictable over time and are modelled to fully recover revenue requirements over the duration of the CSA. CEMP further states such rates are expected to be more readily understood and acceptable to the customer as compared to a cost of service rate, which could change dramatically year to year.¹⁸³ CEMP submits that the fixed versus variable components of the rate design are fairly aligned with cost causation principles.¹⁸⁴

CEMP explains that the starting rate of \$399/kW is provided through the goal-seeking function in Microsoft Excel, producing a levelized rate design that escalates on a smooth and predictable basis from the start of 2020 until the end of the CSA in 2050.¹⁸⁵ CEMP submits that initial rate of \$399/kW under the indicative levelized rate

¹⁷⁵ Exhibit B-1, BCUC IR 1.4.

¹⁷⁶ Exhibit B-1, BCUC IR 1.4; Exhibit B-5 BCUC IR 53.2.

¹⁷⁷ Exhibit B-3, BCUC IR 3.3.

¹⁷⁸ Exhibit B-5, BCUC IR 53.2.

¹⁷⁹ Exhibit B-3, BCUC IR 25.2.

¹⁸⁰ Exhibit B-3, BCUC IR 25.2.

¹⁸¹ Exhibit B-1, Section 3.3.5, p. 19.

¹⁸² Exhibit B-1, Section 3.3.5, p. 20.

¹⁸³ Exhibit B-5, BCUC IR 54.3.

¹⁸⁴ Exhibit B-5, BCUC IR 54.3.

¹⁸⁵ Exhibit B-5, BCUC IR 54.1.

design will recover the costs for providing service over 30 years, while assuming a 2 percent cost escalation factor in the fixed charge for inflation.¹⁸⁶

In the scope for the SRP, the BCUC requested that CEMP provide the levelized rates based on the scenarios summarized in Scope Item 2.iii, in order to assess the risks associated with a Project phased over a 9-year period. CEMP was requested to provide the levelized rates based on the following scenarios,

- a) Phases 2, 3 and 4 do not proceed;
- b) Phases 3 and 4 do not proceed; and
- c) Phase 4 does not proceed.¹⁸⁷

In response, CEMP stated that in order to provide an indicative comparison of levelized rates under the requested scenarios, CEMP assumes that the investments required to modernize the Mount Pleasant DCS are advanced to Phase 1 as opposed to be being completed in Phase 3. However in practice, CEMP submits it is more cost effective to complete the modernization at the same time as the M3 expansion.¹⁸⁸ CEMP further clarified that any scenario that does not include the expansion of Building M3 will not result in avoiding the cost of system modernization.¹⁸⁹

Table 9 provides the levelized fixed rates for the scenarios outlined in Scope Item 2.iii, with the addition of the levelized rates at Full Project Build-out. Scenarios a) to c) assume that the modernization of the Mount Pleasant DCS occur in Phase 1, however under the Full Project Build-out scenario, the modernization is assumed to occur in Phase 3.¹⁹⁰:

Table 9: Levelized Rates based on Scenarios Outlined in Exhibit A-8, Scope Item 2.iii and at Full Project Build-out¹⁹¹

| | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| No M4, M3 exp., M5 | \$730 | \$735 | \$741 | \$746 | \$752 | \$758 | \$763 | \$769 | \$775 | \$781 |
| No M3 exp., M5 | \$477 | \$481 | \$484 | \$488 | \$492 | \$495 | \$499 | \$503 | \$506 | \$510 |
| No M5 | \$459 | \$462 | \$466 | \$469 | \$473 | \$476 | \$480 | \$483 | \$487 | \$491 |
| Full Project Build-out | \$405 | \$408 | \$411 | \$414 | \$417 | \$420 | \$424 | \$427 | \$430 | \$433 |

CEMP submits that the analysis is presented to support the BCUC’s understanding of stranded asset risk, serves to highlight the positive economy of scale of the Mount Pleasant DCS, and the relatively low rates that the ratepayers will pay under CEMP’s phased implementation of the entire Mount Pleasant DCS to serve all five buildings of the Main Alley Development.¹⁹²

¹⁸⁶ Exhibit B-3, BCUC IR 25.1.

¹⁸⁷ Exhibit A-8, pp. 1–2.

¹⁸⁸ Exhibit B-8, para. 19,29., pp. 4–5.

¹⁸⁹ Exhibit B-8, para. 29., p. 5.

¹⁹⁰ Exhibit B-8, para. 27. p. 5.; Transcript Volume 1, p. 68.

¹⁹¹ Exhibit B-8, para. 33., p. 8.

¹⁹² Exhibit B-8, para. 35., p. 8.

5.3.1 Benchmark Rates

CEMP’s Application did not include benchmark rates of other cooling thermal energy systems against which the indicative rates for the Mount Pleasant DCS could be compared.¹⁹³ During the first round of IRs, CEMP was requested to compare the indicative rates to those being charged by CEVP for cooling service at the Vancouver House Development. CEMP submitted there was little value in comparing the indicative rates for the Mount Pleasant DCS to the indicative rates for the Vancouver House DCS, given the fact that it was not an option for the Main Alley Development to obtain cooling service from the Vancouver House DCS and given the different characteristics, dependencies and underlying cost drivers of each system.¹⁹⁴

CEMP states the Main Alley Development is largely purposed as commercial office space for digital and technology companies.¹⁹⁵ CEMP explained these uses require high levels of cooling compared to typical office uses, and higher than residential uses.¹⁹⁶ CEMP stated it was not aware of any systems in the Lower Mainland that serve this particular type of use.¹⁹⁷

During the second round of IRs, CEMP provided a high-level comparison of the rates for the Mount Pleasant DCS and the Vancouver House DCS based on indicative estimates as shown in Table 10.

Table 10: Cost and System Comparison between the Mount Pleasant DCS and the Vancouver House DCS: ¹⁹⁸

| Components | Vancouver House DCS | Mount Pleasant DCS |
|---|---------------------|-----------------------|
| Total capital and development costs | \$2,600,000 | \$9,500,000 |
| Annual fixed O&M at project buildout | \$118,000 | \$710,000 |
| Annual fuel (electricity) variable cost | \$60,000 | \$111,000 |
| Annual fixed plus variable cost of service at project build out | \$480,000 | \$1,900,000 |
| Annual Cooling Energy | 2010MWh | 2575MWh |
| Peak Cooling Capacity | 2489kW | 3665kW |
| Projected fixed rate revenues at project build out | \$326,000 (in 2021) | \$1,600,000 (in 2030) |
| Indicative annual levelized fixed rate at project buildout (not including flow-through variable fuel) | \$131/kW (in 2021) | \$430/kW (in 2030) |

CEMP states the differences in operations and maintenance (O&M) costs between the Mount Pleasant DCS and Vancouver House DCS reflect the differences in the capital costs and system size. This is because O&M expenses are estimated or allocated either directly or indirectly as a proportion of capital cost or system size.¹⁹⁹

¹⁹³ Exhibit B-1, Section 3.3.6, p. 20.

¹⁹⁴ Exhibit B-3, BCUC IR 26.1.

¹⁹⁵ Exhibit B-3, BCUC IR 8.9.

¹⁹⁶ Exhibit B-3, BCUC IR 8.9.

¹⁹⁷ Exhibit B-3, BCUC IR 8.9.

¹⁹⁸ Exhibit B-5, BCUC IR 52.1.

¹⁹⁹ Exhibit B-7, BCUC Panel IR 1.3.

CEMP provides the following explanations for the difference in total capital and development costs for the Mount Pleasant DCS compared to the Vancouver House DCS:²⁰⁰

- The number of chillers and cooling towers required;
- The extensive DPS capital costs given that the system crosses street boundaries and is connecting multiple buildings;
- The retrofit of existing buildings and working within fully complete buildings;
- The brownfield development that will serve a relatively high peak demand requirement per unit of floor area for largely commercial and technology focused applications;
- The material contingencies which include additional contingencies to reflect the potential risk associated with a brownfield development and working with an existing building;
- CEMP must work under the constraint that the current plant has never had an outage longer than eight hours.

Positions of the Parties

CEMP submits it is not incumbent on it to justify the variance in capital costs on a \$/kW basis for the Mount Pleasant DCS versus the Vancouver House DCS to obtain approval of the Application. CEMP plans to invest in the DCS plant “according to the most cost-effective phased approach to serve the contracted need specified by the Owner who will be the only customer of the DCS.”²⁰¹ The Owner has determined that the best option to serve its cooling requirements is the approach set out in the Application, and its next-best approach is not cooling from the Vancouver House DCS. Rather, the Owner’s choice was made in part on consideration of the Mount Pleasant DCS option versus a “non-regulated stand-alone option.”²⁰²

CEMP submits that the two district cooling systems are not comparable in terms of stage and timing of development, predominant end-use characteristics and safety requirements for supervision and operators. Further, the actual capital cost of the Vancouver House DCS may be in excess of 20 percent higher than the price paid by CEVP for the assets.²⁰³ CEMP adds that:²⁰⁴

there is no benchmark for cooling service in Vancouver that would put the indicative rates of the Mount Pleasant DCS into comparable context due to the unique characteristics of the Main Alley [D]evelopment's cooling requirements and the opportunity to redevelop the existing cooling assets there.

The CEC submits that Westbank Holdings Ltd. is a significant developer in the City of Vancouver involved in multiple developments that use thermal energy systems, and there could be a risk to future ratepayers if district cooling systems proliferate that are not cost-effective and competitive alternatives are reduced.²⁰⁵

²⁰⁰ Transcript Volume 1, pp. 53–55.

²⁰¹ CEMP Final Argument, p. 12.

²⁰² CEMP Final Argument, pp. 12–13.

²⁰³ CEMP Final Argument, p. 13.

²⁰⁴ Transcript Volume 1, p. 11.

²⁰⁵ CEC Final Argument, p. 10.

CEMP submits in reply that the rates of other independent and unrelated utilities are not identified as factors for consideration in the CPCN Guidelines. Since service from the Vancouver House DCS is not a feasible alternative to the Mount Pleasant DCS for cooling the Main Alley Development, the indicative rate for cooling service supplied by the Vancouver House DCS is not a benchmark for a reasonable rate for cooling to serve the Main Alley Development.²⁰⁶

The CEC acknowledges that there may be significant differences in the two systems, but considers that at a minimum CEMP should have provided a quantitative analysis comparing each system, regardless of disparities.²⁰⁷ CEMP replies that it has fully answered all inquiries from the BCUC and from the CEC by explaining the variance between the indicative rates of Vancouver House DCS and the Mount Pleasant DCS, but that it is not incumbent on CEMP to justify this variance.²⁰⁸

The CEC does not consider that the Owner should be deemed to be the sole determiner of rate fairness, as future ratepayers may experience limited alternatives. Further, the CEC notes the possibility of a potential conflict given the Westbank Holdings Ltd. connections between CEMP and the Owner. The CEC submits the BCUC might request that the Owner and CEMP submit a copy of their codes of conduct and procedures for handling potential conflicts as a condition for CPCN approval.²⁰⁹ CEMP submits in reply that CEMP has already committed to submit a transfer pricing policy and code of conduct to the BCUC.²¹⁰

Panel Determination

The Panel acknowledges that the DCS proposed to serve the Main Alley Development is the preferred alternative to meet the cooling need of the development. But regardless, the Panel is not willing to approve the CPCN without scrutinizing the costs of the proposed DCS to ensure that, as far as it is possible to determine, the costs associated with the proposed investment decisions will yield just and reasonable rates.

CEMP submits it is not incumbent on it to justify the variance in costs between the Mount Pleasant DCS and the Vancouver House DCS, not least because the Vancouver House DCS is not an alternative source of cooling for the Main Alley Development. The Panel disagrees. In the absence of viable alternatives, the Panel uses alternative benchmarks to assess the reasonableness of the proposed costs. Further, the relationship between CEMP and the Owner, with Westbank Holdings Ltd. having indirect holdings in both organizations, makes it even more important for the Panel to scrutinize the costs to ensure decisions are being made by CEMP on a reasonable basis. That the Vancouver House DCS is not an alternative source of cooling for the Main Alley Development is not relevant. The use of the benchmark is to identify differences and to allow the Panel to determine whether those differences are justified, it is not to evaluate the benchmark as an alternative source of cooling.

The difference between the capital cost of the Mount Pleasant DCS and the Vancouver House DCS is considerable—\$9.5 million versus approximately \$3 million,²¹¹ a factor of 3.2 times—considering that the ratio

²⁰⁶ CEMP Reply Argument, p. 4.

²⁰⁷ CEC Final Argument, p. 9.

²⁰⁸ CEMP Reply Argument, p. 5.

²⁰⁹ CEC Final Argument, p. 10.

²¹⁰ CEMP Reply Argument, p. 1.

²¹¹ Exhibit B-7, Panel IR 1.3, p. 6.

between their peak cooling capacities is only 1.5.²¹² The Panel is satisfied that these differences can be explained for the reasons CEMP provides, including the number of chillers required, the need to retrofit existing buildings and working fully within complete buildings.

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.

As for operating costs, the Panel is satisfied with the estimates presented, including the requirement for three full-time operators, lease payments for the cooling plant and the allocation of corporate costs from CEVP to CEMP.

The Panel acknowledges CEMP has provided a levelized rate for cooling service as an indicative rate. However, the Panel takes no position on whether such a levelized rate is an appropriate rate design. This is a matter for a future panel to determine.

The Panel agrees with the CEC that a code of conduct for CEMP is appropriate, but agrees with CEMP that this is more properly between CEMP and CEVP, from whom CEMP takes services such as staffing. For this reason, and to ensure that the code of conduct is filed in sufficient time for the BCUC to consider it in the rates proceeding for CEMP, the Panel adds the following term to the CPCN:

CEMP shall file its code of conduct and transfer pricing policy with the BCUC at the same time as it files its application for rates for cooling service.

6.0 Clean Energy Act and BC Government Energy Objectives

BC’s Energy Objectives are set out in section 2 of the *Clean Energy Act* (CEA). CEMP states that the Mount Pleasant DCS aligns with a limited set of Energy Objectives, as summarised in Table 11 below:

Table 11: Contribution of the Mount Pleasant DCS to BC’s Energy Objectives²¹³

| Provincial Energy Objectives (Section 2 of the CEA) | Contribution of the Mount Pleasant DCS ²¹⁴ |
|--|--|
| (d) to use and foster the development in British Columbia of innovative technologies that support energy conservation and efficiency and the use of clean or renewable resources | The centralized generation of thermal cooling energy delivered through the Mount Pleasant DCS will support the efficient use of electricity. |
| (i) to encourage communities to reduce greenhouse gas emissions and use energy efficiently | Renewable, clean electricity delivered by BC Hydro provides the energy source for the Mount Pleasant DCS and the centralized system is more energy |

²¹² 3,665 kW / 2,489 kW, figures from Table 10.

²¹³ Table prepared by BCUC staff.

²¹⁴ Exhibit B-1, Section 3.5, p. 24.

| Provincial Energy Objectives (Section 2 of the CEA) | Contribution of the Mount Pleasant DCS ²¹⁴ |
|--|---|
| | efficient from a generation perspective as compared to a distributed system put in place for each building. |
| (o) to achieve British Columbia's energy objectives without the use of nuclear power | The Mount Pleasant DCS will not utilize nuclear power. |

CEMP states that the other energy objectives do not apply to the Mount Pleasant DCS and therefore the DCS will not hamper other projects or initiatives undertaken by others from advancing these energy objectives.²¹⁵

Positions of the Parties

The CEC did not comment on the relationship between BC's Energy Objectives and the Mount Pleasant DCS.

Panel Discussion

The Mount Pleasant DCS uses only renewable, clean electricity delivered by BC Hydro. In addition, a centralized system such as the DCS is more energy efficient from a generation perspective than a distributed system. The Panel notes that Energy Objectives other than those listed in Table 11 above are not applicable to this Application. Accordingly, the Panel is satisfied that the Project is consistent with BC's Energy Objectives.

7.0 CPCN Determination

CEMP submits that the need for the Project is established, and that the Project is the most cost-effective option to serve the cooling requirements specified by the Owner. Further, the Project has no adverse impacts to the public, and no concerns have been raised by the public during consultation. CEMP submits it has responded in final argument to the matters requested, and that there is no basis to deny the Owner what it has negotiated for; partial or conditional approval would only serve to frustrate the Owner's plans.²¹⁶

The CEC considers that the evidence presents "something of a dilemma"²¹⁷ for the BCUC. In the CEC's view, CEMP has substantial economic interest at stake with regard to receiving CPCN approval, yet there are public interest issues raised which the BCUC may find appropriate to address. Notwithstanding these issues, the CEC recommends the BCUC approve the CPCN subject to:²¹⁸

- The Applicant submit reports to the BCUC in advance of each stage of implementation with appropriate conservation and efficiency information among such other information requests as the BCUC may have; and
- That CEMP submit to the BCUC its Code of Conduct and approach to dealing with actual or perceived conflicts of interest.

CEMP submits in reply that the concerns raised by the CEC in its final argument are unfounded, that the CEC is unable to identify a reason why the Application should not be approved, and that the CEC recommends the BCUC approve the Application as filed.²¹⁹

²¹⁵ Exhibit B-3, BCUC IR 28.1.

²¹⁶ CEMP Final Argument, pp. 10–11.

²¹⁷ CEC Final Argument, p. 13.

²¹⁸ CEC Final Argument, p. 13.

²¹⁹ CEMP Reply Argument, p. 6.

Panel Determination

The Panel finds that public convenience and necessity require that the Project proceed.

In Sections 2.1, 2.2 and 5 of this Decision, the Panel made the finding that there is a need for cooling in the Main Alley Development, that this need is best served by a district cooling system located in Building M3 of that development, and that the capital cost for the Project is reasonable. Further, the Panel is satisfied with CEMP's consultation with regards to the first two years of the Project schedule, and the consistency of the Project with BC's Energy Objectives.

That said, in Section 4 the Panel expresses concerns about the long-term nature of the Project, and the approvals CEMP has requested up to nine years in advance. As a result, the Panel requires a number of terms be attached to the CPCN to ensure as far as possible that the Project remains in the public interest for its duration.

Accordingly, and for the reasons set out in this Decision, the Panel grants a CPCN to CEMP for the Project, authorizing the:

- **acquisition and operation of the existing Mount Pleasant DCS to serve the following buildings:**
 - **Building M1 located at 2015 Main Street, Vancouver; and**
 - **Building M3 located at 111 East 5th Avenue, Vancouver.**
- **extension and operation of the Mount Pleasant DCS to serve the following buildings:**
 - **Building M2 located at 114 East 4th Avenue, Vancouver by 2021;**
 - **Building M4 located at 110 East 5th Avenue, Vancouver by 2023; and**
 - **Building M5 located at 2015 Main Street, Vancouver by 2029.**
- **renovation, expansion and upgrade of the cooling plant located in Building M3 in 2027.**

attaching the following terms:

- (a) CEMP shall conduct further public consultation regarding the Project prior to Phase 3. CEMP must file with the BCUC, at least 6 months prior to commencing Phase 3, a report regarding its public consultation, outlining issues or concerns raised, if any, and how CEMP addresses, or plans to address, such matters.**
- (b) CEMP may not proceed with Phase 3 of the Project until it has agreed in writing to a target in-service date for the expansion and renovation of Building M3 and a target in-service date for Building M5 with the Owner pursuant to section 3.9(h) of the CPA and filed that target in-service date with the BCUC.**
- (c) CEMP may not amend the target dates for Buildings M3 or M5 or agree any other dates with the Owner with regards to Phase 3 and section 3.9(h) without the prior approval of the BCUC.**
- (d) CEMP must ensure all upgrades made in Phase 1 related to the connection to new Building M2 are undertaken in accordance with commitments made by the Owner and the capacity and resiliency requirements resulting from that commitment.**

- (e) CEMP must ensure all upgrades made in Phase 2 related to the connection to new Building M4 are undertaken in accordance with commitments made by the Owner and the capacity and resiliency requirements resulting from that commitment.
- (f) CEMP must ensure all upgrades made in Phase 3 related to the expansion of Building M3 are undertaken in accordance with commitments made by the Owner and the capacity and resiliency requirements resulting from that commitment.
- (g) CEMP must ensure all upgrades made in Phase 4 related to the connection to new Building M5 are undertaken in accordance with commitments made by the Owner and the capacity and resiliency requirements resulting from that commitment.
- (h) CEMP must file any proposed changes to the CPA for approval by the BCUC.
- (i) CEMP shall file its code of conduct and transfer pricing policy with the BCUC at the same time as it files its application for rates for cooling service.

8.0 Reporting

The Panel requires that CEMP keep the BCUC informed of its progress and spending on the Project, including investments in additional capacity and modernization of the central cooling plant, and the target dates it has agreed with the Owner.

CEMP is directed to file with the BCUC a report every six months starting June 30, 2021 and continuing until the end of the Project. The final Project report is to be filed within 60 days of the Project completion. Each report shall include:

- (a) For each phase of the Project, the current status of implementation, including costs incurred to date, forecast cost remaining to be incurred, and explanations of variances between the CPCN forecast total cost and current or final total cost incurred;
- (b) For each building, the target in-service date filed with the BCUC, the actual or anticipated in-service date with an explanation for any variance
- (c) For each building, the original and current demand forecast, and actual demand of each in-service building; and
- (d) For each building not yet completed, information regarding changes to forecast capacity needs as a result of changes to building codes and standards since the start of the Project.

9.0 Other Matters Arising

The following matters arose during the proceeding, which the Panel wishes to comment on.

9.1 Stream B Regulation

CEMP submits that the Mount Pleasant DCS would be a Stream A TES, exempt from section 45 of the UCA and the requirement to obtain a CPCN, except that it will serve buildings across a road, an alley and a property line. CEMP submits that the crossing of a road, an alley and a property line does not by itself give rise to a need for stringent regulation of the DCS, and that the Panel ought to consider that the level of expenditure proposed in

the Application is less than the expenditure threshold for an exempt Stream A TES and there is only one, sophisticated customer involved.²²⁰

The CEC acknowledges that, but for the site characteristics, the Project might be classified as a Stream A TES, which is exempt from CPCN requirements, regulation of rates and long-term resource planning. Nevertheless, the CEC submits that once the conditions for a CPCN are triggered, it is appropriate for the BCUC to provide “a thorough assessment according to its established guidelines rather than to diminish its review criteria.”²²¹ The CEC adds that the questioning and final regulation should befit the risks the BCUC deems to be involved and should not necessarily be determined by the criteria triggering the CPCN.²²²

CEMP submits in reply that the form and extent of regulation should always be tailored to the extent of need for regulation, adding that the UCA, the foundational principles of the AES Inquiry²²³ and the CPCN Guidelines all validate that where the conditions for requiring a CPCN are triggered, the BCUC should use the least amount of regulation needed to protect the ratepayer. Absent these considerations, CEMP submits that the cost of regulation can outweigh the benefits and regulation can impede competitive markets. CEMP adds that the risks of a Stream A TES are low and do not warrant regulation, and since the Project only differs from a Stream A TES because it crosses a road, an alley and a property line, the question is whether the crossing of the road, alley and property line results in incremental risks to ratepayers or the community, and if so how those risks should be mitigated.²²⁴

Panel Discussion

No party disputes that the Project, as proposed by CEMP, is a Stream B TES according to the BCUC’s TES Guidelines, and is not covered by any exemptions from regulation under the UCA and requires CEMP obtain a CPCN prior to constructing or operating the facility. As the CEC notes, if the conditions for the Stream A exemption are not met, then a TES project is not exempt, and the requirement for a CPCN is triggered.

The Panel agrees with CEMP that, in general terms at least, the extent of regulation should be tailored to the circumstances. The Panel disagrees, however, that just because the Project only differs from a Stream A TES because it crosses a road, an alley and a property line, the question for the Panel is whether the crossing of the road, alley and property line results in incremental risks to ratepayers or the community, and if so how those risks should be mitigated. The test for a CPCN is whether the public convenience and necessity require that the proposed project proceed, and the Panel uses that test in this instance.

Notwithstanding the size of the proposed investment being within the realm of a Stream A TES, public interest issues have arisen in this proceeding regarding future consultation, the risks of stranded assets and the high cost of the Project compared to the Vancouver House DCS. The Panel is satisfied that the degree of scrutiny applied in this proceeding was appropriate to the issues.

²²⁰ CEMP Final Argument, pp. 4–6.

²²¹ CEC Final Argument, p. 4.

²²² CEC Final Argument, p. 4.

²²³ FortisBC Energy Inc., *Inquiry regarding the Offering of Products and Services in Alternative Energy Solutions and Other New Initiatives Report*, dated December 27, 2012.

²²⁴ CEMP Reply Argument, pp. 2–3.

9.2 Long-Term versus Short-Term Perspective

The CEC submits that the BCUC should consider the long-term consequences of approval as well the short-term consequences. Specifically, the CEC submits the BCUC should not confine its considerations of ratepayer impact to the Owner, at present the sole owner, but should consider likely impacts to future ratepayers, as the development could in future have significant commercial occupancy or may be sold to other owners. To the extent that the proposed TES is overly costly, such ratepayers could pay higher than necessary prices.²²⁵

CEMP submits in reply that the CEC's submissions are "fundamentally incorrect in economics and law".²²⁶ In CEMP's view, the CEC is proposing the BCUC should, in effect, regulate the Owner for the purpose of attempting to control rents for lease of commercial real estate. Such rents are not cost based, and will be determined at fair market value, regardless of the cost to the Owner of the space cooling. As such, the Owner appropriately bears the risks and rewards of its decisions in regard to the Main Alley Development, including the specification of cooling requirements to be served by CEMP.²²⁷

Panel Discussion

In this Application, CEMP is proposing to provide cooling service to one customer, the Owner. The Panel recognizes that it is appropriate for CEMP to use the Owner's specifications of cooling need to determine CEMP's need to serve. However, this does not mean the Panel is willing to approve CEMP's proposed investments simply because the Owner states it is willing to pay that price. As CEMP observes, we do not regulate the Owner, and it is the Owner's risk to take if they pay more than they need to for cooling the properties which they wish to lease in a competitive real-estate market. But the BCUC does regulate CEMP, and the Panel reviews the proposed Project's costs to ensure they are appropriate to meet the stated need, and that they will ultimately yield a just and reasonable rate. Even if we could be certain that CEMP would only serve buildings owned by the Owner forever, we would still take this approach.

Further, although the Owner will initially be the only customer of CEMP, the Panel has considered the possibility that CEMP will serve other customers in future, either buildings not presently planned to be served by the Mount Pleasant DCS or buildings currently owned by the Owner which are later sold to other parties. The BCUC's public interest mandate when reviewing a CPCN application is not limited to the customers of the service on the first day of its operation.

9.3 Review of TES Guidelines

The CEC further recommends that the BCUC address the following issues in future regulations and guidelines for Stream A and Stream B TES:²²⁸

- Benchmarks for cooling costs and rates;
- Appropriate measures for optimal conservation and efficiency with regard to buildings and tenants for such buildings; and
- Management of risks where the Development Owner and the Utility share beneficial interests.

²²⁵ CEC Final Argument, pp. 4–5.

²²⁶ CEMP Reply Argument, p. 3.

²²⁷ CEMP Reply Argument, pp. 3–4.

²²⁸ CEC Final Argument, pp. 13–14.

Panel Discussion

With regard to the CEC's recommendations with respect to Stream A and Stream B TES, the Panel recommends the CEC submit them in the BCUC proceeding currently reviewing the TES Guidelines.²²⁹

10.0 Customer Service Agreements (CSAs)

The CSAs are agreements between CEMP and the Customer²³⁰ for the provision of energy services to a building or buildings.²³¹ Pursuant to the CPA, the Owner of the Main Alley Development agrees to connect the buildings in the Main Alley Development to the Mount Pleasant DCS and enter into 25-year CSAs with CEMP for the provision of energy services to each building.²³² The CPA contemplates that CSAs in respect of each building forming part of the Main Alley Development will be entered into by each applicable registered owner, 111 East 5th Property Inc., 110 East 5th Property Inc., 130 East 4th Property Inc., and 2015 Main Property Inc.²³³

As part of its Application, and pursuant to sections 58 to 60 of the UCA, CEMP requests approval of the CSAs for the Non-M3 Lands and the M3 Lands, where the Non-M3 Lands CSA relates to energy services provided to Buildings M1, M2, M4 and M5, and the M3 Lands CSA relates to energy services provided to Building M3.²³⁴

The Non-M3 Lands and M3 Lands CSAs were filed as Schedules C-1 and C-2, respectively, to Appendix B of Exhibit B-1. In response to BCUC IRs, amended CSAs were filed as Attachments 58.1 to Exhibit B-5.²³⁵

10.1 Provisions in the M3 Lands CSA

CEMP states that notwithstanding the Owner's overall intention, as established through the CPA, the Owner raised concerns about potential future adverse impacts to cooling service provided to Building M3 associated with having a district energy utility operating out of the building and serving other buildings. Therefore, the Owner required certain provisions in the CSA relating to the M3 Lands, which CEMP states, the Owner viewed as firm requirements.²³⁶

The following sections outline the terms have been included in the M3 Lands CSA and are applicable to the cooling service provided to the M3 Lands.

10.1.1 Section 21 – Distribution Extension

Section 21 of the M3 Lands CSA states that the Owner of the M3 Building has an approval right in respect of any Distribution Extensions of the Mount Pleasant DCS that CEMP might consider undertaking, which approval will not be unreasonably withheld, delayed or conditioned, provided that under no circumstances shall any such

²²⁹ BCUC *Review of thermal Energy Systems Regulatory Framework Guidelines*.

²³⁰ Defined as a person receiving energy services. Exhibit B-1, Appendix B, Schedule C-1, p. 3.

²³¹ Exhibit B-1, Appendix B, Schedule C-1, p. 3.

²³² Exhibit B-1 Section 2.2, p. 8.

²³³ Exhibit B-1, Section 1.1., p. 1; Section 2.2, p. 9.

²³⁴ Exhibit B-1, p. 2.

²³⁵ Exhibit B-5, BCUC IR 58.1, Attachment 58.1.

²³⁶ Exhibit B-1, Section 2.2, p. 10.

Distribution Extension adversely impact the energy services provided to the development buildings or increase the rates charged by CEMP in respect of such energy services.²³⁷

For the purposes of this condition, CEMP states that “Distribution Extension” means an extension or upgrade of the Mount Pleasant DCS for the provision of energy services to buildings or properties other than those on the Development lands²³⁸. Any such Distribution Extension that the Owner approves shall also be subject to the approval of the BCUC, where such approval is required.²³⁹

CEMP states that expansion of the Mount Pleasant DCS to serve additional buildings beyond those on the Development lands is not contemplated in the CPA, and CEMP has no such plans at this time. CEMP therefore accepted this protection to the Owner as expressly set out in section 21. CEMP states if such an opportunity for expansion does arise in the future, it considers that the requirements of this condition in section 21 will be appropriately observed given the limited scope of the projects intended under the CPA.²⁴⁰

10.1.2 Sections 22 and 23 – End of Term Purchase Option and Transfer of Ownership

Sections 22 and 23 of the M3 Lands CSA relate to an End of Purchase Option and the Transfer of Ownership, respectively. CEMP explains that upon the termination of the CSA for cooling service to the M3 Building, the owner of the M3 Building has the option to purchase the equipment forming part of the Mount Pleasant DCS located within the energy centre located within the M3 Building from CEMP for the fair market value thereof, subject to the approval of the BCUC, and if the owner of the M3 Building exercises this option then CEMP shall transfer the ownership of the cooling assets to the owner.²⁴¹

CEMP states the Owner required the option to purchase, and CEMP accepted the granting of this option in sections 22 and 23 with due regard to ensuring that approval of the BCUC will be required to determine whether the public interest is served at any time in the future as applicable if this option is exercised.²⁴²

10.1.3 Fundamental Terms and Revisions to the CSA

Pursuant to the CPA, sections 21, 22 and 23 of the M3 Lands CSA are defined as the “Fundamental Terms.”²⁴³

Section 5.2 of the CPA sets out in part that if the BCUC requires any revisions to the form of CSAs, such CSAs shall replace the agreement(s) as attached to the CPA. However, this is subject to section 5.3 of the CPA which provides the Owner with the option in its sole and absolute discretion to terminate the CPA with no further obligations if the BCUC requires changes to the Fundamental Terms in the M3 Lands CSA.²⁴⁴

CEMP requests approval, under sections 58–60 of the UCA, of the CSAs between it and the Owner.²⁴⁵ CEMP submits the CSAs for which it requests approval are based on a standard form CSA previously reviewed by the

²³⁷ Exhibit B-1, Section 2.2, p. 10.

²³⁸ As defined in Schedule A of the CPA. Exhibit B-1, Appendix B, Schedule A.

²³⁹ Exhibit B-1, Section 2.2, p. 10.

²⁴⁰ Exhibit B-1, Section 2.2, p. 10.

²⁴¹ Exhibit B-1, Section 2.2, p. 10.

²⁴² Exhibit B-1, Section 2.2, p. 10.

²⁴³ Exhibit B-1, Appendix B, p. 7.

²⁴⁴ Exhibit B-1, Section 2.2, p. 11.

²⁴⁵ Exhibit B-1, p. 2.

BCUC in other proceedings. The M3 Lands CSA contains variances from this standard form, supported by CEMP, which give the Owner approval rights with respect to any proposed extensions and a conditional right to purchase the Mount Pleasant DCS upon termination of the CSA. Any changes to the provisions in the M3 Lands CSA could result in the Owner electing to terminate the CPA.²⁴⁶

Panel Determination

The Panel approves the Non-M3 Lands CSA and also approves the M3 Lands CSA. The Owner has requested two non-standard terms in the M3 Lands CSA, without which the Owner may elect to terminate the CPA. The Panel is satisfied with these two non-standard terms, as the BCUC retains jurisdiction in both instances.

Section 21 of the M3 Lands CSA gives the Owner approval rights with respect to distribution extensions. The Panel is satisfied that this term poses no undue risk to customers or potential customers. If a potential customer is prevented from connecting to CEMP by virtue of the Owner's right under section 21 of the M3 Lands CSA, it may complain to the BCUC, who may order CEMP under sections 28 or 29 of the UCA to provide service notwithstanding Section 21 of the M3 Lands CSA.

Sections 22 and 23 of the M3 Lands CSA gives the Owner the right to purchase the Mount Pleasant DCS assets of CEMP. This right is acknowledged in the M3 Lands CSA as being subject to BCUC approval. A utility must seek BCUC approval under section 52 of the UCA before disposing of its assets, so the Panel is satisfied that sections 22 and 23 of the M3 Lands CSA poses no undue risk to ratepayers.

The Panel notes that page 1 of the amended CSAs, filed as Attachments 58.1 to Exhibit B-5, states that the terms and conditions of customer service are available for public inspection on the website of the BCUC. Given that it is not the BCUC's practice to post terms and conditions of utilities' customer service on its website, **the Panel directs CEMP to remove the reference in the CSAs to the BCUC website and to include wording clearly explaining how customers may review the terms and conditions. CEMP is directed to file the updated CSAs with the BCUC as a compliance filing within 30 days of the date of this order.**

²⁴⁶ CEMP Final Argument, pp. 7–8.

DATED at the City of Vancouver, in the Province of British Columbia, this 3rd day of December 2020.

Original signed by:

R. I. Mason
Panel Chair / Commissioner

Original signed by:

E. B. Lockhart
Commissioner

Original signed by:

T. A. Loski
Commissioner



ORDER NUMBER
C-5-20

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

and

Creative Energy Mount Pleasant Limited Partnership
Application for a Certificate of Public Convenience and Necessity to Acquire, Operate
and Expand a Thermal Energy System for Cooling in the Main Alley Development

BEFORE:

R. I. Mason, Panel Chair
E. B. Lockhart, Commissioner
T. A. Loski, Commissioner

on December 3, 2020

ORDER

WHEREAS:

- A. On March 10, 2020, Creative Energy Mount Pleasant Limited Partnership (CEMP) filed an application with the British Columbia Utilities Commission (BCUC), pursuant to sections 45 and 46 of the *Utilities Commission Act* (UCA), for a Certificate of Public Convenience and Necessity (CPCN) to acquire and operate the existing Mount Pleasant district cooling system (Mount Pleasant DCS), and to expand and operate the Mount Pleasant DCS to provide cooling to the Main Alley Development in the Mount Pleasant neighbourhood of Vancouver (Application);
- B. CEMP's Application includes the following components (together the Project):
- Acquisition and operation of the existing Mount Pleasant DCS to serve the following buildings:
 - Building M1 located at 2015 Main Street, Vancouver; and
 - Building M3 located at 111 East 5th Avenue, Vancouver.
 - Extension and operation of the Mount Pleasant DCS to serve the following buildings:
 - Building M2 located at 114 East 4th Avenue, Vancouver by 2021;
 - Building M4 located at 110 East 5th Avenue, Vancouver by 2023; and
 - Building M5 located at 2015 Main Street, Vancouver by 2029.
 - Renovation, expansion and upgrade of the cooling plant located in Building M3 in 2027.
- C. Specifically, CEMP's Application requests approval of the following:
- (i) A CPCN, pursuant to sections 45 and 46 of the UCA to acquire and operate the existing Mount Pleasant DCS assets at a cost of \$419,222, and to expand and operate the Mount Pleasant DCS to

provide cooling to the Main Alley Development at an estimated capital cost of \$9,134,241, resulting in a total estimated cost of \$9,553,463;

- (ii) The Customer Service Agreement (Non-M3 Lands), pursuant to sections 58 to 60 of the UCA; and
- (iii) The Customer Service Agreement (M3 Lands), pursuant to sections 58 to 60 of the UCA.

- D. Creative Energy Vancouver Platforms Inc., a regulated public utility, is to provide expert services to CEMP for ownership, operation and regulation of the Mount Pleasant DCS;
- E. By Orders G-73-20, G-149-20, G-234-20 and G-247-20, dated March 31, June 10, September 14 and October 2, 2020, respectively, the BCUC established a public hearing process and regulatory timetables for review of the Application, which consisted of public notice, intervener registration, two rounds of BCUC and intervener information requests (IRs), one round of Panel IRs, Streamlined Review Process, and the filing of written and reply arguments; and
- F. The BCUC has considered the Application, evidence and submissions from all parties and finds that public convenience and necessity require that the Project proceed and the following determinations to be warranted.

NOW THEREFORE the BCUC orders as follows:

1. Pursuant to sections 45 and 46 of the UCA, a CPCN is granted to CEMP for the Project, authorizing the following:
 - Acquisition and operation of the existing Mount Pleasant DCS to serve the following buildings:
 - Building M1 located at 2015 Main Street, Vancouver; and
 - Building M3 located at 111 East 5th Avenue, Vancouver.
 - Extension and operation of the Mount Pleasant DCS to serve the following buildings:
 - Building M2 located at 114 East 4th Avenue, Vancouver by 2021;
 - Building M4 located at 110 East 5th Avenue, Vancouver by 2023; and
 - Building M5 located at 2015 Main Street, Vancouver by 2029.
 - Renovation, expansion and upgrade of the cooling plant located in Building M3 in 2027.

subject to the following terms:

- (a) CEMP shall conduct further public consultation regarding the Project prior to Phase 3. CEMP must file with the BCUC, at least 6 months prior to commencing Phase 3, a report regarding its public consultation, outlining issues or concerns raised, if any, and how CEMP addresses, or plans to address, such matters.
- (b) CEMP may not proceed with Phase 3 of the Project until it has agreed in writing a target in-service date for the expansion and renovation of Building M3 and a target in-service date for Building M5 with the Owner pursuant to section 3.9(h) of the Construction and Purchase Agreement (CPA) and filed that target in-service date with the BCUC.
- (c) CEMP may not amend the target dates for Buildings M3 or M5 or agree any other dates with the Owner with regards to Phase 3 and section 3.9(h) without the prior approval of the BCUC.

- (d) CEMP must ensure all upgrades made in Phase 1 related to the connection to new Building M2 are undertaken in accordance with commitments made by the Owner and the capacity and resiliency requirements resulting from that commitment.
 - (e) CEMP must ensure all upgrades made in Phase 2 related to the connection to new Building M4 are undertaken in accordance with commitments made by the Owner and the capacity and resiliency requirements resulting from that commitment.
 - (f) CEMP must ensure all upgrades made in Phase 3 related to the expansion of Building M3 are undertaken in accordance with commitments made by the Owner and the capacity and resiliency requirements resulting from that commitment.
 - (g) CEMP must ensure all upgrades made in Phase 4 related to the connection to new Building M5 are undertaken in accordance with commitments made by the Owner and the capacity and resiliency requirements resulting from that commitment.
 - (h) CEMP must file any proposed changes to the CPA for approval by the BCUC.
 - (i) CEMP shall file its code of conduct and transfer pricing policy with the BCUC at the same time as it files its application for rates for cooling service.
2. CEMP is directed to file with the BCUC a report every six months starting June 30, 2021 and continuing until the end of the Project. The final Project report is to be filed within 60 days of the Project completion. Each report shall include:
- (a) For each phase of the Project, the current status of implementation, including costs incurred to date, forecast cost remaining to be incurred, and explanations of variances between the CPCN forecast total cost and current or final total cost incurred;
 - (b) For each building, the target in-service date filed with the BCUC, the actual or anticipated in-service date with an explanation for any variance;
 - (c) For each building, the original and current demand forecast, and actual demand of each in-service building; and
 - (d) For each building not yet completed, information regarding changes to forecast capacity needs as a result of changes to building codes and standards since the start of the Project.
3. Pursuant to sections 58 to 60 of the UCA and subject to the changes outlined in Directive 5 of this Order, the BCUC approves the Customer Service Agreement (Non-M3 Lands) as filed in Attachment 58.1 to Exhibit B-5;
4. Pursuant to sections 58 to 60 of the UCA and subject to the changes outlined in Directive 5 of this Order, the BCUC approves the Customer Service Agreement (M3 Lands) as filed in Attachment 58.1 to Exhibit B-5; and
5. CEMP is directed to remove the reference in the Customer Service Agreements to the BCUC website and to include wording clearly explaining how customers may review the terms and conditions. CEMP is directed to file the updated Customer Service Agreements with the BCUC as a compliance filing within 30 days of this order.

DATED at the City of Vancouver, in the Province of British Columbia, this 3rd day of December 2020.

BY ORDER

Original signed by:

R. I. Mason
Commissioner

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

and

Creative Energy Mount Pleasant LP
Certificate of Public Convenience and Necessity Application to Acquire,
Operate and Expand a Thermal Energy System for Cooling in the Main Alley Development

EXHIBIT LIST

| Exhibit No. | Description |
|-----------------------------|---|
| <i>COMMISSION DOCUMENTS</i> | |
| A-1 | Letter dated March 13, 2020 – Appointing the Panel for the review of Creative Energy Mount Pleasant LP Application for a Certificate of Public Convenience and Necessity Application to Acquire, Operate and Expand a Thermal Energy System for Cooling in the Main Alley Development |
| A-2 | Letter dated March 31, 2020 – BCUC Order G-73-20 establishing a regulatory timetable with reasons for decision |
| A-3 | Letter dated May 6, 2020 – BCUC Information Request No. 1 to CEMP |
| A-4 | Letter dated June 10, 2020 – BCUC Order G-149-20 establishing an amended regulatory timetable |
| A-5 | Letter dated June 30, 2020 – BCUC IR No. 2 to Creative Energy |
| A-6 | Letter dated August 10, 2020 – Panel Information Request No. 1 to CEMP |
| A-7 | Letter dated September 14, 2020 – BCUC Order G-234-20 establishing a regulatory timetable |
| A-8 | Letter dated September 14, 2020 – BCUC establishing the scope for the Streamlined Review Process |

- A-9 Letter dated September 30, 2020 – BCUC requesting further information from CEMP regarding scope for the SRP
- A-10 Letter dated October 2, 2020 – BCUC Order G-247-20 establishing a further regulatory timetable

APPLICANT DOCUMENTS

- B-1 **CREATIVE ENERGY MOUNT PLEASANT LP (CEMP)** – Letter dated March 10, 2020 Application for a Certificate of Public Convenience and Necessity Application to Acquire, Operate and Expand a Thermal Energy System for Cooling in the Main Alley Development
- B-2 Letter dated April 6, 2020 – CEMP submitting higher resolution file in schedules in Appendix B of the Application
- B-3 Letter dated May 27, 2020 – CEMP submitting response to BCUC Information Request No. 1
- B-4 Letter dated May 27, 2020 – CEMP submitting response to BCUC Information Request No. 1
- B-5 Letter dated July 16, 2020 – CEMP submitting response to BCUC Information Request No. 2
- B-6 Letter dated July 16, 2020 – CEMP submitting response to CEC Information Request No. 2
- B-7 Letter dated August 24, 2020 – CEMP Responses to Panel Information Request No. 1
- B-8 Letter dated September 25, 2020 – CEMP submitting response on scope for Streamlined Review Process
- B-9 Letter dated October 1, 2020 – CEMP submitting response to BCUC regarding further information on scope for SRP

INTERVENER DOCUMENTS

- C1-1 **FORTISBC ALTERNATIVE ENERGY SERVICES INC. (FAES)** – Letter dated April 29, 2020 to request for Intervener Status by Grant Bierlmeier

- C2-1 **COMMERCIAL ENERGY CONSUMERS ASSOCIATION OF BRITISH COLUMBIA (CEC)** – Letter dated April 29, 2020 to request for Intervener Status by Christopher Weafer, Owen Bird

- C2-2 Letter dated May 13, 2020 – CEC submitting Information Request No. 1 to CEMP

- C2-3 Letter dated June 30, 2020 – CEC submitting Information Request No. 2 to CEMP

Glossary of Terms

| Acronym | Description |
|------------------------------|--|
| Application or Project | Creative Energy Mount Pleasant Limited Partnership application to acquire and operate the existing Mount Pleasant district cooling system (Mount Pleasant DCS or DCS), and to modernize, expand and operate the Mount Pleasant DCS to provide cooling to the Main Alley Development in the Mount Pleasant neighbourhood of Vancouver |
| BC Hydro | British Columbia Hydro and Power Authority |
| BCUC | British Columbia Utilities Commission |
| CEA | <i>Clean Energy Act</i> |
| CEC | Commercial Energy Consumers Association of British Columbia |
| CEMP | Creative Energy Mount Pleasant Limited Partnership |
| CEVP | Creative Energy Vancouver Platforms Inc. |
| CPA | Construction and Purchase Agreement |
| CPCN | Certificate of Public Convenience and Necessity |
| CPCN Guidelines | BCUC's 2015 Certificate of Public Convenience and Necessity Application Guidelines |
| Creative Energy Developments | Creative Energy Developments Limited Partnership |
| CSA | Customer Service Agreement |
| Customer | The entities 111 East 5th Property Inc., 110 East 5th Property Inc., 130 East 4th Property Inc., and 2015 Main Property Inc. |
| DCS | district cooling system |
| Developer | Westbank Projects Corp. partnered with Mount Pixel Projects Limited Partnership to form the 5th & Main Partnership |
| DPS | distribution piping system |
| ETS | energy transfer station |
| EUIs | Energy Use Intensities |
| IR | information request |
| KWL | Kerr Wood Leidal Associates Ltd. |
| LTRP | long-term resource plan |
| O&M | operations and maintenance |
| Reshape | Reshape Infrastructure Strategies |

| | |
|----------------|---|
| Reshape Report | Reshape Infrastructure Strategies report titled “Main & 5 th Neighbourhood Energy System Feasibility Study Final Report” |
| ROE | return on equity |
| SRP | Streamlined Review Process |
| TES | Thermal Energy Systems |
| TES Guidelines | Thermal Energy Systems Regulatory Framework Guidelines |
| UCA | <i>Utilities Commission Act</i> |