

18 January 2021

Via E-filing

Ms. Marija Tresoglavic  
Acting Commission Secretary  
BC Utilities Commission  
Suite 410, 900 Howe Street  
Vancouver, BC V6Z 2N3

Dear Ms. Tresoglavic:

**Re: British Columbia Utilities Commission (BCUC, Commission)  
Creative Energy Vancouver Platforms Inc. (Creative Energy)  
Registration of Extension to South Downtown Heating Thermal Energy System (TES)**

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Creative Energy writes to provide its response to Commission Panel Information Request (IR) No. 1 into the above noted matter, in accordance with Order G-7-21.

For further information, please contact the undersigned.

Yours sincerely,



Rob Gorter  
Director, Regulatory Affairs and Customer Relations

Enclosure.

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Creative Energy Vancouver Platforms Inc.  
Stream B Extension to South Downtown Heating Thermal Energy System

**CREATIVE ENERGY RESPONSE TO PANEL INFORMATION REQUEST NO. 1**

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**1.0 Reference: PROJECT DESCRIPTION**  
**Exhibit B-2, Staff Question 1.5; Exhibit B-3, p. 5; Exhibit B-4, IR 1.3.2, 1.13**  
**TES Specifics**

In response to British Columbia Utilities Commission (BCUC) Information Request (IR) 1.3.2, Creative Energy Vancouver Platforms (CEVP) states:

Further, no empirical benchmarks are available for reference; however, the design engineer, KWL, did confirm that a diversity factor of 85% or greater (i.e. a lower factor in percentage terms) is realistic for this situation.

1.1 Please provide, in writing, confirmation from the Kerr Wood Leidal (KWL) design engineer, that a diversity factor of 85% or greater (i.e. a lower factor in percentage terms) is appropriate for application for the South Downtown Heating Thermal Energy System (TES) once all 5 buildings are connected.

**RESPONSE:**

**Please refer to the attached letter from KWL.**

In response to BCUC IR 1.13, CEVP provides the following annual peak and annual demand data for its South Downtown Heating TES, including the proposed extension to 889 Pacific Street (TES Extension):

Building	Annual Peak (kW)			Annual Peak (kW, with 85% Diversity Factor)			Annual Demand (MWh)			Capacity (kW)
	Space Heating	DHW	Total	Space Heating	DHW	Total	Space Heating	DHW	Total	
Vancouver House Building 1	841	497	1338	715	422	1137	397	95	967	3366
Vancouver House Building 2	1230	966	2196	1046	821	1867	1426	340	1587	
Vancouver House Building 3	246	0	246	209	0	209	403	0	178	
Vancouver House Building 4	231	0	231	196	0	196	449	0	167	
889 Pacific Street	941	800	1741	800	680	1480	1506	914	1258	
<b>TOTAL:</b>	<b>3489</b>	<b>2263</b>	<b>5752</b>	<b>2966</b>	<b>1924</b>	<b>4889</b>	<b>4181</b>	<b>1349</b>	<b>4156</b>	

In Exhibit B-3, CEVP's Consolidated Information Filing, CEVP provides information regarding the TES Extension. On page 5 of Exhibit B-3, CEVP states:

The total of the estimated demand to serve the space heating and domestic hot water

load at 889 Pacific Street is 1,591 kW and forecast annual energy consumption equals approximately 2,400 MWh. [*Emphasis added*]

Further on page 5 of the Exhibit B-3, CEVP states:

The total of the estimated demand at 889 Pacific Street – 1,591 kW – is the simple sum of the estimated demand for space heating equal to 941kW and the estimated demand for domestic hot water equal to 650kW. [*Emphasis added*]

In response to BCUC staff question 1.5 in Exhibit B-2, CEVP states:

Total forecast energy sales (MWh) before the proposed TES Extension are 4,028 MWh, as per the Updated Table 15 in the CPCN Application proceeding, and as referenced on page 12 of the Order C-1-19. [*Emphasis added*]

- 1.2 Please explain why the annual peak (kW) for the district hot water (DHW) for 889 Pacific Street is stated as 800 kW in the table above versus 650 kW in Exhibit B-3. Please identify which value is correct.

**RESPONSE:**

**We confirm that annual peak load of DHW for 889 Pacific Streets is 650 KW as stated in the “Design Review Memo” document at Attachment 2 to the Consolidated Information Filing (Exhibit B-3). The value of 800 KW was incorrectly transcribed in the DHW column for Annual Peak kW.**

**The revised table provided in the response to BCUC IR 1.2.1 also corrects for an underlying formula error in the reported total energy MWh column.**

- 1.2.1 If not 800 kW, please provide an updated table in the same format as the table above with the corrected value.

**RESPONSE:**

**Please refer to the updated table below. The shaded cells in the table reflect corrected values.**

Building	Annual Peak (kW)			Annual Peak (kW, with 85% Diversity Factor)			Annual Demand (MWh)			Capacity (kW)
	Space Heating	DHW	Total	Space Heating	DHW	Total	Space Heating	DHW	Total	
Vancouver House Building 1	841	497	1338	715	422	1137	397	95	492	3366
Vancouver House Building 2	1230	966	2196	1046	821	1867	1426	340	1766	
Vancouver House Building 3	246	0	246	209	0	209	403	0	403	
Vancouver House Building 4	231	0	231	196	0	196	449	0	449	
889 Pacific Street	941	650	1591	800	553	1353	1506	914	2420	
<b>TOTAL:</b>	<b>3489</b>	<b>2113</b>	<b>5602</b>	<b>2966</b>	<b>1796</b>	<b>4762</b>	<b>4181</b>	<b>1349</b>	<b>5530</b>	

1.3 Please confirm whether the annual demand values (MWh) shown in the above table for space heating, DHW, and the total amount for each of the 5 buildings are correct.

**RESPONSE:**

As shown in the revised table, the annual demand values (MWh) for space heating and DHW for each building are correct and the total across all buildings for MWh for space heating and DHW are correct.

Creative Energy also now confirms that the MWh figures for each of space heating and DHW as presented in the above table are correct and are referenced to values reported in KWL’s peer reviews of system design for each building. The response to Staff Question 1.5 (Exhibit B-2) contemplated that the reference to the values provided in BCUC IR 1.28.3 in the CPCN proceeding (as provided in the preamble to Staff Question 1.5) may have been reported in error but we have since confirmed the reference back to the KWL peer reviews as provided by a former staff member during the CPCN proceeding.

Please note that the reference to 4,028 MWh, as referred to in preamble to this IR, is correct as reported in the CPCN proceeding based on building floor area and indicative EUIs. There is no materiality to the difference between the peer review estimates and the CPCN values because energy costs were modelled on an indicative basis for presentation in the CPCN and will be recovered in a variable charge on a flow-through basis.

1.3.1 If confirmed, please explain and reconcile the following:

- i. Please explain how the total annual demand value (MWh) for each of the 5 buildings in the table above are calculated given the stated values for space heating and DHW (for example, please explain why the total annual demand for Vancouver House Building 1 is 967 MWh when the total space heating annual demand is 397 MWh and the total DHW annual demand is 95 MWh, etc.).

- ii. Please explain how the total forecast energy sales (MWh) before the proposed TES Extension of 4,028 MWh, as stated in Exhibit B-2, correlates to the total annual demand (MWh) values identified in the table above for Vancouver House Buildings 1, 2, 3 and 4 (967 MWh, 1587 MWh, 178 MWh, 167 MWh, respectively).
- iii. Please explain why the total annual demand (MWh) for 889 Pacific Street is stated as 1,258 MWh in the table above versus 2,400 MWh in Exhibit B-3. Please identify which value is correct.

**RESPONSE:**

**Please refer to the preceding responses to BCUC IRs 1.2 and 1.3 which reconcile the differences.**

- 1.3.2 If not confirmed, please provide an updated table in the same format as the table above with corrected values. Where data is different from previous submissions noted in the preamble from Exhibit B-2 and Exhibit B-3, please provide reasons for the differences.

**RESPONSE:**

**Please refer to the preceding responses to BCUC IRs 1.2 and 1.3, which reconcile the differences.**

**As a final note to one of the overall matters being reviewed in the context here, and as reviewed in other information responses in this and other proceedings also, the capacity of the system is intentionally and economically sized to meet total diversified space heating peak requirements not including DHW (i.e., 3,366 kW compared to 2,966 kW in the table above). It is very unlikely that the actual peak space heating plus DHW demand in kW will exceed plant capacity at any point in time and there are number of cost-effective options (as compared to building further excess plant capacity) to reduce or manage peak demand so as to not risk any service interruption in such case. Refer for example to the response to Staff Question 1.6 at Exhibit B-2 in this proceeding.**