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## Creative Energy Vancouver Platforms Inc.

### Registration of Extension to South Downtown Heating Thermal Energy System

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#### Decision and Order C-1-21

March 26, 2021

Before:

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

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## Executive summary

On June 25, 2020, Creative Energy Vancouver Platforms Inc. (Creative Energy) filed a Stream B Thermal Energy System (TES) System Extension Registration Form to extend its South Downtown Heating TES to provide heating and domestic hot water services (DHW) to 889 Pacific Street (Building), Vancouver (TES Extension). On October 23, 2020 the BCUC found that Creative Energy required a Certificate of Public Convenience and Necessity (CPCN) for the proposed TES Extension, and Creative Energy submitted further information to augment that contained in the Registration Form.

The TES Extension is designed to connect the Building to the Vancouver House South Downtown Heating TES, which was previously granted a CPCN.

The Panel established a written hearing process that consisted of public notification, intervener registration, BCUC and intervener information requests (IRs), and Creative Energy responses to BCUC and intervener IRs. The Commercial Energy Consumers Association of British Columbia registered as an intervener in the proceeding.

The Panel finds that Creative Energy has established the need for heating and DHW services at the Building and that Creative Energy's forecast of design peak load demand is reasonable. The Panel also finds that connecting to the existing South Downtown Heating TES is the preferred alternative for providing the heating and DHW services at the Building.

Creative Energy has not conducted any general public consultation regarding the TES Extension. However, the Panel recognizes that the steps that Creative Energy has taken in terms of traffic and noise management as well as securing the requisite municipal permits and approvals, address the types of issues that might emerge during public consultation.

The Panel finds that Creative Energy's approach to risk management for the TES Extension is appropriate, and that it has adequately mitigated identified risks. The most significant risk is that the capacity of the South Downtown Heating TES is insufficient to accommodate the additional demand from the new Building and we are satisfied that Creative Energy has adequately addressed this possibility and has developed options to reduce or manage peak demand should the actual peak demand be higher than forecast.

The Panel is satisfied that Creative Energy's cost estimates for the TES Extension are reasonable.

The Panel finds that the TES Extension is consistent with most of BC's energy objectives, but conflicts with the objective to reduce greenhouse gas emissions.

The Panel finds that public convenience and necessity require that the TES Extension proceed and grants the CPCN to Creative Energy for the project.

## 1.0 Introduction

### 1.1 Background

On June 25, 2020, Creative Energy Vancouver Platforms Inc. (Creative Energy) filed with the British Columbia Utilities Commission (BCUC) a Stream B Thermal Energy System (TES) System Extension Registration Form to extend its South Downtown Heating TES to provide heating and domestic hot water (DHW) services to 889 Pacific Street, Vancouver (TES Extension) (Application).<sup>1</sup>

Creative Energy initially submitted that the TES Extension met the criteria set out in the TES Guidelines, that a Certificate of Public Convenience and Necessity (CPCN) for the TES Extension was not required and that no further action or approval of the BCUC was required at that time.<sup>2</sup> However, in Decision and Order G-267-20 dated October 23, 2020, the BCUC found that Creative Energy does require a CPCN for the proposed extension to the South Downtown Heating TES.<sup>3</sup> The BCUC stated that:

The Panel acknowledges that the TES Guidelines say “CPCN not required” for Stream B TES extensions in certain circumstances.<sup>9</sup> However, in the Panel’s view this is an error in the TES Guidelines. The BCUC has granted no class exemption for Stream B TES. The TES Guidelines are correct when they state that Stream B TES “will be regulated similar to other Public Utility systems. An application for a CPCN and a rate approval application are required.”<sup>10</sup>

Section 45(1) of the UCA provides that, after September 11, 1980, a CPCN is required for an extension, and a person “must not begin the construction or operation” of the extension without the CPCN. There are no exemptions for Stream B TES extensions in general, or in this specific instance. Since the UCA and the TES Guidelines are in conflict in this regard, in the event of such a discrepancy, the UCA takes precedence over the TES Guidelines. Therefore, Creative Energy requires a CPCN before constructing or operating the proposed extension.

<sup>9</sup> TES Guidelines, p. 24

<sup>10</sup> TES Guidelines, p. 7

As a result of the BCUC’s decision that Creative Energy requires a CPCN for the TES Extension, Creative Energy submitted consolidated information to support the review and approval of a CPCN for the TES Extension.<sup>4</sup>

The TES to which the TES Extension will connect is itself the subject of a CPCN: by Order C-1-19, dated May 3, 2019, the BCUC granted a CPCN (South Downtown Heating TES CPCN) to Creative Energy to operate a TES that provides heat and DHW to the Vancouver House Development located in the South Downtown area of Vancouver (South Downtown Heating TES).<sup>5</sup>

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<sup>1</sup> Application for Registration of Extension to South Downtown Heating Thermal Energy System (Exhibit B-1).

<sup>2</sup> Exhibit B-1, Cover Letter.

<sup>3</sup> Exhibit A-4, Order G-267-20 with Reasons dated October 23, 2020, pp. 2–3.

<sup>4</sup> Exhibit B-3, Consolidated Information Filing.

<sup>5</sup> Creative Energy Vancouver Platforms Inc., Application for a Certificate and Public Convenience and Necessity for a Neighbourhood Energy System in the Southdown area of Vancouver, Final Order C-1-19 dated May 3, 2019.

## 1.2 The Applicant

Creative Energy is a privately held energy infrastructure business with a focus on district energy service in urban areas. Creative Energy has over 45 years of experience operating a low-cost district energy system in downtown Vancouver.<sup>6</sup>

## 1.3 Approvals Sought

In the Application, Creative Energy seeks approval pursuant to sections 45 and 46 of the *Utilities Commission Act* (UCA) to construct and operate an extension to the South Downtown Heating TES to provide DHW and space heating to the building being constructed at 889 Pacific Street in Vancouver (the Building). The proposed TES Extension consists of approximately 140 metres of distribution piping (105 metres underground and 35 metres within the Building) and an energy transfer station within the below ground parkade of the Building. The TES Extension will connect the existing South Downtown Heating TES (which has the South Downtown Heating TES CPCN) to one specific new customer as requested by that new customer.<sup>7</sup>

Creative Energy is not requesting approval of rates in this Application. It confirms that ratepayers at the Building will be charged the same rates that are approved in the Vancouver House Heating and Cooling Rates Application, also ongoing at the time of this Decision, until 2024, when it will file a new rates application. Creative Energy points out that since the TES Extension is not connecting to the Vancouver House cooling system, only the heating rates determined in that application will apply to the Building's ratepayers.<sup>8</sup>

## 1.4 Regulatory Process

On August 31, 2020, the BCUC established a schedule for issuing BCUC staff questions followed by Creative Energy's responses.

By Order G-267-20, dated October 23, 2020, the BCUC confirmed that a CPCN was required and established a public hearing process and regulatory timetable for review of the Application. This consisted of public notification, intervener registration, BCUC and intervener information requests (IRs), and Creative Energy responses to BCUC and intervener IRs.

By Order G-7-21, dated January 11, 2021, the BCUC established a further regulatory timetable, which consisted of Panel IRs, Creative Energy responses to Panel IRs and submissions on further process.

The Commercial Energy Consumers Association of British Columbia (CEC) is the only registered intervener in this proceeding. The BCUC did not receive any letters of comment.

The BCUC did not receive final arguments from parties in the proceeding. Creative Energy submitted that a "formal written argument phase" was unnecessary,<sup>9</sup> and the CEC did not object to concluding the process as proposed by Creative Energy.<sup>10</sup>

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<sup>6</sup> Creative Energy Vancouver Platforms Inc. Application for a Certificate and Public Convenience and Necessity for a Neighbourhood Energy System in the Southdown area of Vancouver, Final Order C-1-19 dated May 3, 2019, p. 3.

<sup>7</sup> Exhibit B-3, p. 2.

<sup>8</sup> Exhibit B-4, BCUC IR 3.1.1.1.

<sup>9</sup> Exhibit B-7, pp. 1-2.

<sup>10</sup> Exhibit C1-3, p. 1.

## 1.5 Legal and Regulatory Framework

### 1.5.1 Utilities Commission Act

Section 45(1) of the UCA provides 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.<sup>11</sup>

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:<sup>12</sup>

- a) the applicability 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
- 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* (CEA).

### 1.5.2 TES Guidelines

On August 28, 2014, the BCUC issued Order G-127-14 approving the TES Regulatory Framework Guidelines (TES Guidelines). Revisions to the TES Guidelines were approved by Order G-27-15. Section 2.4.5 of the TES Guidelines, which provides guidance on Extensions to Stream B TES, states:

Once a CPCN is granted for a Stream B TES, a new CPCN Application may be required if the TES Provider plans to construct or operate an extension to the TES. An extension is a capital addition to the system of a material dollar amount to provide additional capacity to meet increased demand. If the ratio of the capital costs of the planned extension to the initial capital cost of the TES, plus any previous extensions, exceeds one, a CPCN is required. A CPCN is also required if, as a result of the extension, rates for existing customers will increase by an amount greater than 10 percent. These criteria are summarized in the table below:

EXTENSION COST	CPCN REQUIREMENTS
$\frac{\text{Planned Extension Cost} + \text{Cost of Any Previous Extensions}}{\text{Initial TES Construction Cost}} > 1$ <p style="text-align: center;">OR</p> $\text{Rate Impact as a result of Planned Extension} > 10\%$	CPCN REQUIRED
$\frac{\text{Planned Extension Cost} + \text{Cost of Any Previous Extensions}}{\text{Initial TES Construction Cost}} \leq 1$ <p style="text-align: center;">AND</p> $\text{Rate Impact as a result of Planned Extension} \leq 10\%$	CPCN NOT REQUIRED

In the event that a CPCN is not required, the TES Provider is required to file an application in the form set out in Appendix C. A CPCN or the Stream A Application, as the case may be, must be granted prior to construction or operation of the extension. Please contact the Commission for further information if an extension is considered.<sup>13</sup>

<sup>11</sup> *Utilities Commission Act*, RSBC 1996, c. 473, Section 45(1).

<sup>12</sup> *Utilities Commission Act*, RSBC 1996, c. 473, Section 46(3.1).

<sup>13</sup> TES Guidelines, pp. 23–24.

CPCN applications for Stream B TES are generally expected to be prepared in accordance with the BCUC's 2015 CPCN Guidelines as well as section 2.4.2 of the TES Guidelines, which outlines additional filing requirements for Stream B TES.<sup>14</sup>

### **1.5.3 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.<sup>15</sup>

A CPCN application submitted under sections 45 and 46 of the UCA should contain information on the following:<sup>16</sup>

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

## **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 TES Extension and its alternatives;
- Section 3 addresses the consultation for the project;
- Section 4 addresses the project description;
- Section 5 addresses the project's cost and rate impact;
- 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.

## **2.0 Project Need, Alternatives and Justification**

### **2.1 Project Need**

Grosvenor Americas (Developer) is developing a new residential building at 889 Pacific Street, Vancouver.<sup>17</sup> The Building has a planned floor space of 22,858 m<sup>2</sup> and occupancy is expected in October 2021.<sup>18</sup> Creative Energy

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<sup>14</sup> TES Guidelines, pp. 20–22.

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

<sup>16</sup> CPCN Guidelines, BCUC Order G-20-15, Appendix A.

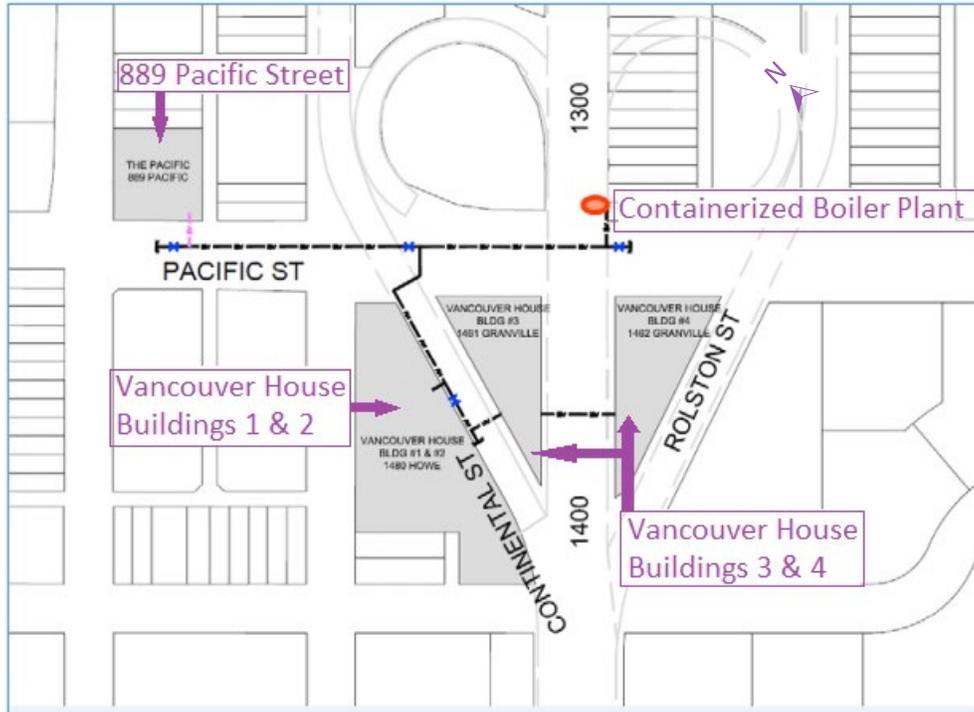
<sup>17</sup> Exhibit B-3, Section 3.1, p. 3.

<sup>18</sup> Exhibit B-2, BCUC staff question 1.1i; Exhibit B-3, Section 3.3.3, p. 6.

states that the Developer has designed the Building to receive heating service from Creative Energy’s South Downtown Heating TES, which is nearby. Creative Energy considers that section 28 of the UCA imposes on it an obligation to serve this new customer.<sup>19</sup>

A schematic of the South Downtown Heating TES, including the containerized boiler plant, distribution piping system, Vancouver House Buildings 1, 2, 3 and 4, and the proposed TES Extension to 889 Pacific Street, is shown in Figure 1, below.

**Figure 1: South Downtown Heating TES Schematic<sup>20</sup>**



By way of justification for the TES Extension, Creative Energy notes that it signed a “Connection Agreement” dated February 21, 2019 with the Developer, pursuant to which it agreed to connect the South Downtown Heating TES to the Building in order to provide energy services.<sup>21</sup>

In the following sections we outline the information from Creative Energy regarding the load forecast for the Building and the resulting demand that this additional load will create for the South Downtown Heating TES.

### **2.1.1 Load Forecast for the TES Extension**

Creative Energy estimates that the demand for space heating is equal to 941 kilowatts (kW) and the demand for DHW is equal to 650 kW, for a total of 1,591 kW.<sup>22</sup> Kerr Wood Leidal Consulting Engineers (KWL), Creative Energy’s design engineer, corroborates these demand estimates.<sup>23</sup>

<sup>19</sup> Exhibit B-3, p. 3, Exhibit B-4, Response to CEC IR 2.1

<sup>20</sup> Exhibit B-1, p. 4, Purple annotations added by BCUC staff.

<sup>21</sup> Exhibit B-5, CEC IR 2.2.

<sup>22</sup> Exhibit B-3, Section 3.3.2, p. 5.

<sup>23</sup> Exhibit B-3, Attachment 2, p. 1.

As noted above, the simple sum of the estimated demand for space heating and DHW is 1,591 kW.<sup>24</sup> However, Creative Energy calculates the total peak design demand of the TES Extension to be 941 kW.<sup>25</sup> Creative Energy explains that:

The total peak design capacity and billing determinants of the system extension is corrected to 941kW. That is, the capacity of the system extension is economically sized to meet the overall demand for space heating only given the diversity of use between space heating and domestic hot water and the required need to serve a system peak for space heating due to weather, independent of hot water demand (which also has storage). This is consistent with the approach to specifying the design capacity and the billing determinants for the TES to serve Buildings 1-4 at the Vancouver House Development, as reviewed during the CPCN Application proceeding for the South Downtown TES and as factored into the interim-approved and proposed final rates to serve those buildings.<sup>26</sup>

### 2.1.2 Resulting Demand at the South Downtown Heating TES Boiler Plant

The energy source of the South Downtown Heating TES is a containerized boiler plant temporarily located between the 600 and 700 blocks of Pacific Street, underneath the Granville Street Bridge (South Downtown Heating TES Boiler Plant).<sup>27</sup> As noted previously, the South Downtown Heating TES currently serves customers in Vancouver House Buildings 1 through 4.

As shown in Table 1 below, the simple sum of the building peak demands (kW) for Vancouver House Buildings 1 through 4 plus the new building at 889 Pacific Street exceeds the capacity of the South Downtown Heating TES Boiler Plant.<sup>28</sup> Creative Energy submits, however, that the capacity of the boiler plant to serve the incremental demand of the TES Extension should be assessed after factoring in an 85 percent diversity factor and thermal losses at three percent. As illustrated in Table 1, applying these factors, the total demand at the South Downtown Heating TES Boiler Plant will be less than the boiler capacity.

**Table 1: Total Demand at the South Downtown TES Boiler Plant After all Five Buildings are Connected<sup>29</sup>**

	Building Peak Demand (kW)	Demand at Plant based on 85% Diversity (kW)	Transmission Losses based on 3% of Building Peak Demand (kW)	Demand at Plant based on 85% diversity and 3% losses (kW)
Vancouver House B1	841	715		
Vancouver House B2	1,230	1,046		
Vancouver House B3	246	209		
Vancouver House B4	231	196		
889 Pacific Street	941	800		
<b>Total</b>	<b>3,489</b>	<b>2,966</b>	<b>105</b>	<b>3,071</b>
Boiler (system) Capacity	3,336			3,336
<b>Excess Capacity</b>	<b>(153)</b>			<b>265</b>

<sup>24</sup> Exhibit B-3, Section 3.3.2, p. 5.

<sup>25</sup> Exhibit B-3, Section 3.3.2, p. 5.

<sup>26</sup> Exhibit B-3, Section 3.3.2, p. 5.

<sup>27</sup> Creative Energy's 2018 Application for a CPCN for a Neighbourhood Energy System in the South Downtown area of Vancouver, Exhibit B-1, p. 19.

<sup>28</sup> Exhibit B-3, Section 3.3.2, p. 5.

<sup>29</sup> Exhibit B-3, Section 3.3.2, p. 5; Exhibit B-4, BCUC IR 1.1.1; Table prepared by BCUC.

## *Diversity Factor*

Creative Energy provided information regarding its selection of an 85 percent diversity factor.

Creative Energy explains that in a district energy network, the diversity factor is the ratio of the sum of the peak energy demands measured at the Energy Transfer Stations to the total measured at the central plant.<sup>30</sup> A diversity factor is a key input to developing a greenfield district energy system, as it helps to right-size generation equipment. Creative Energy states that if equipment were sized for undiversified peaks, the result would be needlessly oversized boilers/chillers/pumps/etc.<sup>31</sup>

Creative Energy confirms that it did not use system diversity calculations in the 2018 South Downtown Heating TES CPCN application. Creative Energy notes that at that time, as the combined building peak demands of Vancouver House Buildings 1 through 4 was well below the boiler system capacity, diversity was not an important factor for the purpose of the 2018 South Downtown Heating TES CPCN application.<sup>32</sup>

Creative Energy states that there are a number of inputs to the determination of the 85 percent diversity factor. It notes that the primary reference is from the recommendations of the American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE), which Creative Energy states is the foremost technical society in the fields of heating, ventilation, air conditioning, and refrigeration. According to Creative Energy, the ASHRAE Handbook, "HVAC Systems and Equipment", recommends assuming a 70 percent diversity factor.<sup>33</sup> Creative Energy explains that the reference to 70 percent is a general guide, which implies that the diversity factor will vary by project parameters, and that the Handbook does not provide more specific guidance.<sup>34</sup>

Creative Energy selected a more conservative diversity factor, 85 percent instead of the 70 percent that the ASHRAE Handbook recommends, because the South Downtown Heating TES is not a large, mature network.<sup>35</sup> Creative Energy submits that an 85 percent diversity factor is conservative, based on the mix of commercial and residential floor area connected to the South Downtown network.<sup>36</sup>

Creative Energy notes that although there are no empirical benchmarks for reference, KWL did confirm that a diversity factor of 85 percent or greater (i.e. a lower factor in percentage terms) is realistic for this situation.<sup>37</sup> Creative Energy provided a letter from KWL, which states, among other things, that for a small to medium size heating system with mixed use architype, a diversity factor of 85 percent is standard practice.<sup>38</sup>

## *Options Should System Diversity be Less Than Expected*

Creative Energy submits that in the unlikely event that system diversity is less than expected, it has a number of options to reduce or manage peak demand.<sup>39</sup>

Creative Energy states that the starting point would be to tune the controls system to spread out the peaks, which can be achieved by adjusting the setbacks at each building so that the 'warming up' of the buildings in the morning occurs at slightly different times, and the domestic hot water tank temperatures can be lifted on a predictive fashion immediately before the morning demand spike. Creative Energy also states that the primary

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<sup>30</sup> Exhibit B-5, CEC IR 6.1.

<sup>31</sup> Exhibit B-5, CEC IR 6.6.

<sup>32</sup> Exhibit B-4, BCUC IR 1.2.

<sup>33</sup> Exhibit B-4, BCUC IR 1.3.

<sup>34</sup> Exhibit B-5, CEC IR 6.2.

<sup>35</sup> Exhibit B-5, CEC IR 6.5.

<sup>36</sup> Exhibit B-3, Section 3.3.2, p. 5.

<sup>37</sup> Exhibit B-4, BCUC IR 1.3.2.

<sup>38</sup> Exhibit B-6, Attachment 1.1, p. 1.

<sup>39</sup> Exhibit B-3, Section 3.3.2, p. 6.

hot water temperatures (in the buried piping) can be increased in the hour before peak demand.<sup>40</sup> It submits that none of these measures would negatively impact service levels of South Downtown Heating TES customers and the generation will still be well within design operating parameters.<sup>41</sup>

Creative Energy submits that the above-mentioned setback adjustments would have no material impact on the South Downtown Heating TES customers' energy consumption and variable energy costs over the course of any year. Creative Energy states that its rationale is that as the peaks are very short in duration (less than an hour), the setbacks would only be adjusted by, perhaps, 30 minutes for one building and notes that the corresponding 'overnight cooldown' could equally be advanced to ensure that the efficiency benefits of the overnight setbacks can be preserved.<sup>42</sup>

Creative Energy also states that the above-mentioned adjustments to the primary hot water temperatures would have no material impact on South Downtown Heating TES system efficiency or Creative Energy's South Downtown Heating TES fuel costs. Creative Energy states that the primary consequence of increasing the system temperature would be increased thermal losses in the distribution system. Creative Energy notes that increasing the temperature of the circulating water by, say, 10 degrees Celsius, for one hour in the handful of peak cold days each year would result in an inconsequential increase in fuel needs over the course of a year and states that a small increase in flow-through fuel costs, if any, to all customers would be more than offset by the fixed-charge reduction as a result of adding the fifth customer.<sup>43</sup>

Lastly, Creative Energy states that the temporary boiler plant is designed to accommodate two additional boilers. However, Creative Energy has determined that the additional capacity is unnecessary at this time because it expects that the current installed capacity of the South Downtown TES Boiler Plant is sufficient to accommodate the additional load of the TES Extension with what Creative Energy views as a conservative assumption regarding diversity.<sup>44</sup> At a high level, it estimates that an additional boiler would cost \$370,000 and need a 16-week lead time.<sup>45</sup>

### **2.1.3 Long Term Resource Plan**

Section 46 (3.1) (b) of the UCA provides that when deciding whether to issue a CPCN, the BCUC must consider the most recent long-term resource plan (LTRP) filed by the public utility under Section 44.1, if any. Section 44.1 of the UCA requires a public utility to file with the BCUC an LTRP in the form and at the times that the BCUC requires.<sup>46</sup> Creative Energy states that there is no LTRP in relation to the South Downtown Heating TES.<sup>47</sup>

Creative Energy filed a LTRP with the BCUC on January 13, 2021.<sup>48</sup> The LTRP relates to the centralized boiler plant located at 720 Beatty Street (Beatty Plant) that Creative Energy owns and operates.<sup>49</sup>

## **2.2 Project Alternatives**

Creative Energy submits that there are no practical alternatives to the TES Extension as designed. It states that the TES Extension has been appropriately sized to meet the heating demand of the Building and the customer connection will have a beneficial rate impact to all customers served by the South Downtown Heating TES.<sup>50</sup>

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<sup>40</sup> Exhibit B-3, Section 3.3.2, p. 6.

<sup>41</sup> Exhibit B-4, BCUC IR 1.9.

<sup>42</sup> Exhibit B-4, BCUC IR 1.7.2.

<sup>43</sup> Exhibit B-4, BCUC IR 1.8.

<sup>44</sup> Exhibit B-3, Section 3.3.2, p. 6.

<sup>45</sup> Exhibit B-4, BCUC IR 1.12.

<sup>46</sup> *Utilities Commission Act*, RSBC 1996, c. 473.

<sup>47</sup> Exhibit B-3, Section 1, p. 2.

<sup>48</sup> Creative Energy Vancouver Platforms Inc. (Creative Energy) - 2021 Long Term Resource Plan (LTRP), Exhibit B-1.

<sup>49</sup> Creative Energy's LTRP p. 1.

<sup>50</sup> Exhibit B-2, BCUC staff question 1.3.

Further, it presumes that the Developer considered stand-alone building scale alternatives to meet the heating demands and concluded that obtaining service from Creative Energy’s South Downtown Heating TES is the most cost-effective option.<sup>51</sup> Finally, Creative Energy states that the Developer has designed the Building to receive service from the South Downtown Heating TES, and the building design now renders any hypothetical alternatives for heating not feasible.<sup>52</sup>

Through the review of the Application, Creative Energy provided additional information and identified that alternatives to providing service to the Building include denying service to the customer or building a new TES in the same general location as the South Downtown Heating TES. In its submission, neither alternative warranted consideration because it has an obligation to serve this new customer pursuant to section 28 of the UCA and because the South Downtown Heating TES is close to the Building and has capacity to serve the new customer.<sup>53</sup>

### *Panel Discussion regarding Project Need and Alternatives*

The Panel is satisfied with the need for the supply of heating to the Building. The Panel notes that the Developer designed the Building on the assumption that heating service would be provided from an external source and that without an operational heating system, residents will be without space heating and DHW.

The Panel also accepts as reasonable Creative Energy’s estimates that the aggregate demand for space heating and DHW of the TES Extension is 1,591 kW and that the design peak demand is 941 kW. In making this finding, the Panel has considered the corroboration provided by Creative Energy’s design engineer KWL.

The Panel is satisfied that the TES Extension is not inconsistent with the LTRP as filed, because the LTRP does not encompass the TES Extension or the South Downtown Heating TES.

The Panel finds that the TES Extension is the preferred alternative for Creative Energy to provide heating to the Building. The Panel accepts that building an entirely new heating system to serve the building would be more expensive than simply installing 140 metres of piping to connect to the South Downtown TES.

## **3.0 Consultation**

Creative Energy states that it did not do any general public consultation in relation to the TES Extension.<sup>54</sup> Indeed, Creative Energy initially registered the TES Extension with the BCUC using a Stream B TES System Extension Registration Form, which includes an attestation that “a Certificate of Public Convenience and Necessity is not required, and that no further action or approval of the Commission is required at this time.”<sup>55</sup>

Creative Energy states that it continues to engage with the Developer, the key stakeholder in the project, as work on the TES Extension proceeds and that it obtained the required permits and approvals from the City of Vancouver to extend the service on Pacific Street.<sup>56</sup> Creative Energy states that in its view, general public consultation, beyond the engagement with the Developer and compliance with the City of Vancouver’s requirements, is not required. Creative Energy states that there is no incremental risk of public concern with the underground TES Extension of the existing system to serve a fifth building nearby.<sup>57</sup>

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<sup>51</sup> Exhibit B-2, BCUC staff question 1.3.

<sup>52</sup> Exhibit B-3, Section 3.1, p. 3.

<sup>53</sup> Exhibit B-4, CEC IR 4.2.

<sup>54</sup> Exhibit B-2, BCUC staff question 4.4.

<sup>55</sup> Exhibit B-1, p. 1.

<sup>56</sup> Exhibit B-3, Section 3.2, p. 4.

<sup>57</sup> Exhibit B-3, Section 3.2, p. 4.

Creative Energy states that traffic was impacted during construction of the distribution piping system on Pacific Street, and it had traffic control persons in place to manage public safety and other possible traffic concerns. In addition, to manage any noise concerns from the steel road plates covering the trench, Creative Energy laid rubber padding under the plates and also welded the plates together to dampen noise and vibration.<sup>58</sup>

Creative Energy also confirmed that it had no indication to date that any Indigenous Communities may be affected by the TES Extension.<sup>59</sup>

*Panel Discussion*

The Panel acknowledges that Creative Energy has not conducted general public consultation; it commenced its interaction with the BCUC in this matter under the misapprehension that it had to register the TES Extension but that a CPCN, and consequently public consultation, were not required. Despite the absence of public consultation we recognize that the steps that Creative Energy has taken in terms of traffic and noise management as well as securing the requisite municipal permits and approvals, address the types of issues that the Panel expects would emerge during public consultation. Therefore, we are satisfied with the level of public consultation.

**4.0 Project Description**

**4.1 Overview**

The TES Extension comprises an Energy Transfer Station (ETS) in parking level P2 at 889 Pacific St, Vancouver, connecting to the South Downtown Heating TES through distribution piping in the 700 and 800 blocks of Pacific Street. The distribution piping system consists of approximately 105 metres of underground piping from existing valves on Pacific Street and approximately 35 metres of piping from the building entry to the ETS.<sup>60</sup>

**4.2 Project Schedule**

Creative Energy provides the construction and connection schedule for the TES Extension in Table 2, below.

**Table 2: Construction and Connection Schedule<sup>61</sup>**

Schedule	Start	Complete
DPS construction and commissioning (100% complete)	July 2, 2020	October 14, 2020
ETS construction (50% complete)	Sept 1, 2020	February 2021
ETS Commissioning	March 2021	March, 2021
Construction Heat	March 2021	October 2021
Occupancy Heat	October 2021	n/a

**4.3 Project Risks**

Creative Energy identified the following risks and mitigation strategies associated with the TES Extension:

- **Construction and Safety:** Creative Energy states that the construction of the distribution piping system began in July 2020 to mitigate a risk of trench wall collapse, which would be higher if the trench

<sup>58</sup> Exhibit B-3, Section 3.2, p. 4.

<sup>59</sup> Exhibit B-5, CEC IR 5.1.

<sup>60</sup> Exhibit B-3, Section 3.2, p. 4.

<sup>61</sup> Exhibit B-3, Section 3.3.3, p. 6.

remained open in the high rainfall fall season. The prime contractor had a safety program to manage the safety of workers in the trench and excavated pits were reviewed and certified by professionals every 10 days.<sup>62</sup>

- **Operations and Reliability:** Creative Energy submits that the operations and reliability risk of the TES Extension is low. The TES Extension will be served by the existing South Downtown Heating TES, which is already in operation. Its experience in operating thermal energy systems will result in minimal to no risk in providing and maintaining service to the TES Extension outside of normal practice.<sup>63</sup>
- **Load:** Creative Energy states that there is no material load risk associated with the TES Extension, which consists of the one building, which is being designed to receive service from the TES and for which a standard Customer Service Agreement (CSA) will be in place with the customer. Creative Energy states that the customer of the TES Extension will ultimately be the Strata Corporation in control of the building Grosvenor is developing at 889 Pacific Street.<sup>64</sup>
- **Cost Recovery:** Creative Energy states that there is no risk of under-recovered costs and/or stranded assets and that, in its view, the TES Extension will have a beneficial rate impact to all customers of the South Downtown Heating TES. It submits that a future rates application will ensure rates are set to support full cost recovery over the term of the CSA. Creative Energy states that the TES Extension will not impact rates or service for any other Creative Energy customers and such customers will not bear any risk as a result of the TES Extension. Creative Energy states that potential cross-subsidization risk will be fully mitigated through existing BCUC approved mechanisms.<sup>65</sup>

### *Panel Discussion of Project Description*

In this discussion, which we intend as our conclusion to the section dealing with Project Description, we focus on the risks involved in the TES Extension. The Panel finds that Creative Energy's approach to risk management for the TES Extension is appropriate, and that it has adequately mitigated identified risks.

The Panel considers that the most significant risk, which we address above in section 2, Project Need, is that the capacity of the South Downtown Heating TES is insufficient to accommodate the demand from the new Building. We accept as reasonable Creative Energy's load forecast and peak demand calculations, which demonstrate that the South Downtown Heating TES has sufficient capacity. Further, we find that Creative Energy has adequately addressed this possibility and has developed options to reduce or manage peak demand should the actual peak demand be higher than forecast.

## **5.0 Project Cost and Rate Impact**

### **5.1 Project Cost**

Creative Energy states the project cost for the TES Extension is \$1,110,000.<sup>66</sup> It confirms the cost estimate reflects actual costs based on work completed to date and the forecast internal management and external regulatory costs.<sup>67</sup> Creative Energy confirms that all forecasted amounts are developed by its Senior Manager, Projects and Construction, as a Class 3 estimate.<sup>68</sup> A summary of the project capital costs is provided in Table 3.

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<sup>62</sup> Exhibit B-3, Section 3.3.4, p. 6.

<sup>63</sup> Exhibit B-3, Section 3.3.4, pp. 6–7.

<sup>64</sup> Exhibit B-3, Section 3.3.4, p. 7.

<sup>65</sup> Exhibit B-3, Section 3.3.4, p. 7.

<sup>66</sup> Exhibit B-3, Section 3.4, p. 7.

<sup>67</sup> Exhibit B-3, Section 3.4, p. 7.

<sup>68</sup> Exhibit B-4, BCUC IR 2.2.1.

**Table 3: Cost Estimate<sup>69</sup>**

<b>Category</b>	<b>\$000s</b>
Engineering	86
Equipment	65
Material	155
Construction	610
Financing	-
CPCN/Legal	30
Internal Management	111
Contingency (5%)	53
Total	1,110

Creative Energy further explains that corporate overhead is included in the line item for Internal Management and that it did not charge interest during construction or allowance for funds using during construction during the project.<sup>70</sup>

## **5.2 Rate Impact**

Creative Energy states the indicative annual rate impact of the TES Extension beginning in 2022 would be a reduction in overall rates for the South Downtown Heating TES of approximately nine percent.<sup>71</sup> Table 4 provides the schedule of forecast costs and indicative rates with and without the TES Extension.

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<sup>69</sup> Exhibit B-3, Section 3.4, p. 7.

<sup>70</sup> Exhibit B-4, BCUC IR 2.3 and 2.4.

<sup>71</sup> Exhibit B-3, Section 3.4, p. 8.

**Table 4: Rate Impact of South Downtown Heating TES With and Without the TES Extension<sup>72</sup>**

<b>No Extension</b>				
	2020	2021	2022	2023
Maintenance	37,539	39,107	39,890	40,687
Operator Cost	25,506	26,010	26,530	27,061
Insurance	9,565	9,965	10,164	10,367
Municipal Access Fee	5,316	7,694	7,994	8,306
Financing Fees	6,101	6,145	5,929	5,713
Lease Payments	-	-	-	-
Regulatory Costs	20,005	-	-	-
Administration	67,132	68,458	69,827	71,224
Depreciation	116,202	125,296	125,296	125,296
Income Tax	44,921	53,457	57,009	60,408
Interest	89,658	92,176	88,934	85,692
Return on equity	136,646	141,301	136,242	131,183
<b>Total Fixed Costs</b>	<b>558,590</b>	<b>569,610</b>	<b>567,815</b>	<b>565,938</b>
<b>Total Fixed Charge Revenue Recovered</b>	<b>315,836</b>	<b>475,048</b>	<b>484,549</b>	<b>494,240</b>
<b>Capacity Billing Determinants</b>	<b>2,230</b>	<b>2,548</b>	<b>2,548</b>	<b>2,548</b>
<b>Fixed Charge Rate - \$/kW</b>	<b>\$141.63</b>	<b>\$186.44</b>	<b>\$190.17</b>	<b>\$193.97</b>

<b>With Extension</b>				
	2020	2021	2022	2023
Maintenance			51,669	52,702
Operator Cost			26,530	27,061
Insurance			13,165	13,429
Municipal Access Fee			10,100	10,494
Financing Fees			7,814	7,534
Lease Payments			-	-
Regulatory Costs			-	-
Administration			69,827	71,224
Depreciation			162,296	162,296
Income Tax			72,776	77,067
Interest			117,213	113,014
Return on equity			179,622	173,069
<b>Total Fixed Costs</b>			<b>711,013</b>	<b>707,889</b>
<b>Total Fixed Charge Revenue Recovered</b>			<b>604,257</b>	<b>616,342</b>
<b>Capacity Billing Determinants</b>			<b>3,489</b>	<b>3,489</b>
<b>Fixed Charge Rate - \$/kW</b>			<b>\$173.19</b>	<b>\$176.65</b>

As illustrated in Table 4, the rate reduction is the net effect of the forecast costs and the peak design capacity billing determinants of the system with and without the TES Extension.<sup>73</sup>

Creative Energy explains variable fuel costs for electricity and natural gas are flow-through charges of the BC Hydro and FortisBC invoices for fuel use.<sup>74</sup> Creative Energy states that because these costs are independent of the extension rate impact, they have not been reflected in the analysis.<sup>75</sup> Creative Energy confirms the TES Extension will have no impact on the variable fuel charges to any other building served by the South Downtown Heating TES, because variable charges to the individual buildings are a flow-through of actual fuel costs based on individual building metered energy consumption. Thus, the variable charges to each building will be independent of each other.<sup>76</sup>

<sup>72</sup> Exhibit B-3, Section 3.4 p. 8.

<sup>73</sup> The 2022 Fixed Charge Rate with the TES Extension is \$173.19 / kW, which is nine percent lower than the rate without the TES Extension.

<sup>74</sup> Exhibit B-1, Rate Impact, p. 3.

<sup>75</sup> Exhibit B-2, BCUC staff question 3.2.

<sup>76</sup> Exhibit B-4, BCUC 5.2.

## Panel Discussion on Project Cost and Rate Impact

The Panel is satisfied that Creative Energy’s cost estimates for the TES Extension are reasonable. We note that senior management developed the capital costs to a Class 3 estimate prior to construction and that Creative Energy has presented all costs yet to be incurred as Class 3 estimates, which is the minimum required by the CPCN Guidelines. In addition, Creative Energy kept costs reasonable by only charging corporate overhead to the project but no interest during construction or allowance for funds used during construction, both of which are allowed under the CPCN Guidelines.

The Panel recognizes that although Creative Energy is not seeking approval of rates in this Application, it has provided indicative estimates for the purpose of the Application. We accept Creative Energy’s analysis that the TES Extension will likely have an overall positive rate impact. To be clear, rates to be charged to the TES Extension customers will be determined in another application, namely the heating rates established in the Vancouver House Heating and Cooling Rates Application. As of the date of this Decision, review of the Vancouver House Heating and Cooling Rates Application has not concluded.

### 6.0 BC Energy Objectives and the *Clean Energy Act*

As previously noted, Sections 46(3.1) (a) and (c) of the UCA stipulate that in deciding whether to issue a CPCN, the BCUC must consider the applicability of BC’s energy objectives and the extent to which the application for the certificate is consistent with the applicable requirements under sections 6 and 19 of the CEA.<sup>77</sup>

#### 6.1 BC Energy Objectives

BC’s Energy Objectives are set out in section 2 of the CEA.

Creative Energy notes that the proposed TES Extension is an extension to the existing South Downtown Heating TES and refers to the BCUC’s Decision and Order C-1-19 where the BCUC considered BC’s energy objectives in its decision to grant the CPCN for the South Downtown Heating TES. Creative Energy submits that the same evidence and conclusions continue to apply and that the TES Extension will support or otherwise not conflict with the applicable BC energy objectives as reviewed in the 2018 South Downtown Heating TES CPCN Application.<sup>78</sup>

Creative Energy provides the following table summarizing the BC energy objectives referenced in the BCUC’s Decision and Order C-1-19.

**Table 5: BC Energy Objectives referenced in BCUC’s Decision and Order C-1-19<sup>79</sup>**

<b>Reference to Provincial Energy Objectives (Section 2 of <i>Clean Energy Act</i>) in the Order C-1-19 Decision</b>
(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
(g) to reduce BC greenhouse gas emissions
(i) to encourage communities to reduce greenhouse gas emissions and use energy efficiently
(k) to encourage economic development and the creation and retention of jobs
(o) to achieve British Columbia’s energy objectives without the use of nuclear power

<sup>77</sup> *Utilities Commission Act*, RSBC 1996, c. 473, Sections 46(3.1) (a) and (c).

<sup>78</sup> Exhibit B-3, Section 2, p. 3.

<sup>79</sup> Exhibit B-3, Section 2, p. 3.

In its decision accompanying Order C-1-19, the BCUC found that Creative Energy’s South Downtown Heating TES was consistent with most of BC’s energy objectives but conflicted with objective (g), which relates to reducing greenhouse gas emissions. In addition, the BCUC did not find that the South Downtown Heating TES advanced BC energy objective (d) or (i) but noted that the South Downtown Heating TES did not conflict with those objectives. Lastly, the BCUC found that BC energy objective (k) related to encouraging the creation and retention of jobs was satisfied and that BC energy objective (o) was satisfied, as the South Downtown Heating TES does not use nuclear power.<sup>80</sup>

## 6.2 Clean Energy Act

Sections 6 and 19 of the CEA concern electricity self-sufficiency and clean or renewable resources.

Creative Energy states that there are no requirements applicable to the TES Extension under sections 6 and 19 of the CEA.<sup>81</sup>

### *Panel Discussion*

The Panel finds that the proposed TES Extension is consistent with most of BC’s energy objectives, but conflicts with objective (g), the reduction of greenhouse gas emissions. The BCUC has previously found that the South Downtown Heating TES meets the energy objectives but conflicts with objective (g), and the proposed TES Extension uses the same generation facilities. Further, to meet the additional demand from the new Building the facilities will consume additional natural gas and will create more greenhouse gas emissions.

## 7.0 CPCN Determination

The Panel finds that public convenience and necessity require that the project to construct the TES Extension proceed. The Panel has found that the Building needs a source of heating and DHW, that the TES Extension proposed by Creative Energy is the best available alternative, and that the capital cost of the project is reasonable.

Accordingly, the Panel grants a CPCN to Creative Energy to:

- Construct and operate the TES Extension by installing approximately 140 metres of distribution piping (105 metres underground and 35 metres within the Building) and an energy transfer station within the below ground parkade of the Building, in order to connect to the TES Extension to the existing South Downtown Heating TES.

## 8.0 Reporting

The Panel directs Creative Energy to provide a Final Report, to be filed within three months of substantial completion of the TES Extension. The Final Report shall include:

1. A complete breakdown of the final costs of the TES Extension;
2. A comparison of these costs to the estimates provided in Exhibit B-3, Section 3.4, p. 7; and
3. An explanation of all material cost variances of more than 10 percent for any of the cost items provided in Exhibit B-3, Section 3.4, p. 7;

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<sup>80</sup> Decision and Order C-1-19, p. 25.

<sup>81</sup> Exhibit B-3, Section 1, p. 2.

The Panel directs Creative Energy to include in its South Downtown Heating TES annual report:

1. The peak demand for each building served by the South Downtown Heating TES;
2. The diversified peak demand of the South Downtown Heating TES; and
3. The diversity factor for the South Downtown Heating TES, including any data and assumptions used to determine the diversity factor.
  - a. If the diversity factor is greater than 85%, a discussion of any additional measures taken to manage the peak demand.

**DATED** at the City of Vancouver, in the Province of British Columbia, this

26<sup>th</sup>

day of March 2021.

*Original signed by:* \_\_\_\_\_

R. I. Mason  
Panel Chair / Commissioner

*Original signed by:* \_\_\_\_\_

E. B. Lockhart  
Commissioner

*Original signed by:* \_\_\_\_\_

B. A. Magnan  
Commissioner



**ORDER NUMBER  
C-1-21**

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

and

Creative Energy Vancouver Platforms Inc.  
Registration of Extension to South Downtown Heating Thermal Energy System

**BEFORE:**

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

on March 26, 2021

**ORDER**

**WHEREAS:**

- A. On June 25, 2020, Creative Energy Vancouver Platforms Inc. (Creative Energy) filed with the British Columbia Utilities Commission (BCUC) a Stream B Thermal Energy System (TES) System Extension Registration Form to extend its South Downtown Heating TES to provide heating and domestic hot water services to 889 Pacific Street, Vancouver (Application);
- B. The TES extension comprises an Energy Transfer Station (ETS) in parking level P2 at 889 Pacific St, Vancouver (Building), connecting to the South Downtown Heating TES through distribution piping in the 700 and 800 blocks of Pacific Street. The distribution piping system consists of approximately 105 metres of underground piping from existing valves on Pacific Street and approximately 35 metres of piping from the building entry to the ETS (TES Extension);
- C. On August 31, 2020, the BCUC established a schedule for issuing BCUC staff questions followed by Creative Energy responses;
- D. By Orders G-267-20 and G-7-21, dated October 23, 2020 and January 11, 2021, respectively, the BCUC confirmed that a Certificate of Public Convenience and Necessity (CPCN) was required and established a public hearing process and regulatory timetable for review of the Application. This consisted of public notification, intervener registration, BCUC and intervener information requests (IRs), Panel IRs and submissions on further process;
- E. The Commercial Energy Consumers Association of British Columbia (CEC) is the only registered intervener in this proceeding. The BCUC did not receive any letters of comment; and

- F. The BCUC has considered the Application, evidence and submissions from all parties and finds that public convenience and necessity require that the TES Extension proceed and the following determinations are warranted.

**NOW THEREFORE** the BCUC orders as follows:

1. Pursuant to sections 45 and 46 of the *Utilities Commission Act*, a CPCN is granted to Creative Energy to construct and operate the TES Extension by installing approximately 140 metres of distribution piping (105 metres underground and 35 metres within the Building) and an energy transfer station within the below ground parkade of the Building, in order to connect to the TES Extension to the existing South Downtown Heating.
2. Creative Energy is directed to provide a Final Report, to be filed within three months of substantial completion of the TES Extension. The report shall include:
  - a) A complete breakdown of the final costs of the TES Extension;
  - b) A comparison of these costs to the estimates provided in Exhibit B-3, Section 3.4, p. 7; and
  - c) An explanation of all material cost variances that exceed 10 percent for any of the cost items provided in Exhibit B-3, Section 3.4, p. 7.
3. Creative Energy is directed to include in its South Downtown Heating TES annual report:
  - a) The peak demand for each building served by the South Downtown Heating TES;
  - b) The diversified peak demand of the South Downtown Heating TES; and
  - c) The diversity factor for the South Downtown Heating TES, including any data and assumptions used to determine the diversity factor.
    - i. If the diversity factor is greater than 85%, a discussion of any additional measures taken to manage the peak demand.

**DATED** at the City of Vancouver, in the Province of British Columbia, this 26<sup>th</sup> day of March 2021.

BY ORDER

*Original signed by:*

R. I. Mason  
Commissioner

Creative Energy Vancouver Platforms Inc.  
Registration of Extension to South Downtown Heating Thermal Energy System

LIST OF ACRONYMS

Application	Registration of Extension to South Downtown Heating Thermal Energy System to provide heating and domestic hot water services to 889 Pacific Street, Vancouver
ASHRAE	American Society of Heating Refrigeration and Air-Conditioning Engineers
Beatty Plant	The centralized boiler plant located at 720 Beatty Street
Building	889 Pacific Street, Vancouver
CEC	The Commercial Energy Consumers Association of British Columbia
CEA	<i>Clean Energy Act</i>
CPCN	Certificate of Public Convenience and Necessity
Creative Energy	Creative Energy Vancouver Platforms Inc.
CSA	Customer Service Agreement
Developer	Grosvenor Americas
DHW	Domestic hot water services
ETS	Energy Transfer Station
IR	Information request
kW	kilowatts
KWL	Kerr Wood Leidal Consulting Engineers
LTRP	Long-term resource plan
South Downtown Heating TES	A TES that provides heat and domestic hot water services to the Vancouver House Development located in the South Downtown area of Vancouver
South Downtown Heating TES Boiler Plant	A containerized boiler plant temporarily located between the 600 and 700 blocks of Pacific Street, underneath the Granville Street Bridge
TES	Thermal Energy System

TES Extension	Stream B Thermal Energy System Extension Registration Form to extend its South Downtown Heating TES to provide heating and domestic hot water services to 889 Pacific Street, Vancouver
TES Guidelines	TES Regulatory Framework Guidelines
UCA	<i>Utilities Commission Act</i>

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

and

Creative Energy Vancouver Platforms Inc.  
Registration of Extension to South Downtown Heating Thermal Energy System

**EXHIBIT LIST**

<b>Exhibit No.</b>	<b>Description</b>
<i>COMMISSION DOCUMENTS</i>	
A-1	L.Letter dated August 17, 2020 – Appointing the Panel for the review of the Creative Energy Registration of Extension to South Downtown Heating Thermal Energy System
A-2	Letter dated August 31, 2020 – BCUC issuing regulatory timetable and proceeding information
A-3	Letter dated September 11, 2020 – BCUC issuing Staff Questions No. 1 to Creative Energy
A-4	Letter dated October 23, 2020 – BCUC Order G-267-20 with Reasons for Decision establishing the regulatory timetable and public notice for the review of the Application
A-5	Letter dated November 12, 2020 – BCUC issuing BCUC IR No. 1 to Creative Energy
A-6	Letter dated January 11, 2021 – BCUC Order G-7-21 establishing a further regulatory timetable
A-7	Letter dated January 11, 2021 – BCUC Panel Information Request No. 1 to Creative Energy
A-8	Letter dated January 27, 2021 – BCUC providing information on proceeding

*APPLICANT DOCUMENTS*

- B-1 **CREATIVE ENERGY VANCOUVER PLATFORMS INC. (CREATIVE ENERGY)** - Registration of Extension to South Downtown Heating Thermal Energy System dated June 25, 2020
- B-2 Letter dated September 28, 2020 – Creative Energy submitting responses to BCUC Staff Questions No.1
- B-3 Letter dated October 30, 2020 – Creative Energy submitting Consolidated Information
- B-4 Letter dated November 26, 2020 - Creative Energy response to BCUC Information Request No. 1
- B-5 Letter dated December 17, 2020 – Creative Energy submitting responses to CEC Information Request No. 1
- B-6 Letter dated January 18, 2021 – Creative Energy Response to Panel Information Request No. 1
- B-7 Letter dated January 19, 2021 – Creative Energy submission on further process

*INTERVENER DOCUMENTS*

- C1-1 **COMMERCIAL ENERGY CONSUMERS ASSOCIATION OF BRITISH COLUMBIA (CEC)** – Letter dated November 18, 2020 request for Intervener Status by C. Weafer, Owen Bird
- C1-2 Letter dated December 3, 2020 - CEC submitting Information Request No. 1 to Creative Energy
- C1-3 Letter dated January 21, 2021 – CEC submission on further process