

3 January 2020

Via E-filing

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

Dear Mr. Wruck:

**Re: British Columbia Utilities Commission (BCUC, Commission)  
Creative Energy Vancouver Platforms Inc. (Creative Energy)  
Application for Interim Heating Rates for the Heating Thermal Energy System (TES) at  
the Vancouver House Development (Application)**

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Creative Energy submits its response to Commercial Energy Consumers Association of British Columbia (CEC) Information Request (IR) No. 1 in the above noted proceeding, in accordance with Order G-264-19.

Sincerely,



Rob Gorter  
Director, Regulatory Affairs and Customer Relations

Enclosure.

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Creative Energy Vancouver Platforms Inc.  
Application for Interim Heating Rates for the  
Thermal Energy System at the Vancouver House Development

## CREATIVE ENERGY RESPONSE TO CEC INFORMATION REQUEST (IR) NO. 1

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**1. Reference: Exhibit B-1, page 3**

Creative Energy will execute individual Customer Service Agreements (CSA) with the Developer of the Vancouver House Development for each of the four buildings and the Developer will assign the CSA for the residential tower to the Strata Corporation at the prescribed time.

The proposed CSA is the same as the CSA that the Commission approved for Creative Energy's North-East False Creek (NEFC) customers, by Order G-42-17. The proposed CSA at Appendix 1 includes the addition of a standard Assignment provision, an identical provision to that provided in the NEFC connection agreement, also approved under Order G-42-17.

- 1.1 Please identify any differences if any between the Customer Service Agreements and the NEFC Customer Service Agreement (other than names and other identifiers).

**RESPONSE:**

As referred to in the preamble reference to this question, the CSA at Appendix 1 of the Application is the same as the CSA that the Commission approved for Creative Energy's Northeast False Creek (NEFC) customers, by Order G-42-17, with the only difference being that the proposed CSA at Appendix 1 of the Application includes the addition of a standard Assignment provision at section 3, an identical provision to that provided in the NEFC connection agreement, also approved under Order G-42-17.

Order G-260-19 approved a CSA on an interim basis that excludes the assignment provision at section 3. As discussed in the response to BCUC IR 18.1, Creative Energy will reconsider its proposal and confirm as part of its future application for final rates whether it will seek any changes to the CSA from that which is currently approved on an interim basis.

- 1.1.1 Please provide a rationale for any and each difference between the Customer Service Agreements.

**RESPONSE:**

As noted in the response to CEC IR 1.1, the only difference is the addition of a standard assignment provision at section 3. An assignment provision was contemplated as appropriate to govern the situation where the customer that owns Buildings 1, 3 and 4 decides to sell those buildings to another and wishes to assign the service contract to the purchaser, but Creative Energy acknowledges that the

provision contemplated by section 3 as currently worded raises some concerns, which Creative Energy will evaluate and address in its future application for final rates.

Please refer to the response to BCUC IR series 18.0.

**2. Reference: Exhibit B-1, page 3**

**3. Background and Current Circumstances**

By Commission Order C-1-19, Creative Energy was granted a CPCN authorizing its final construction and operation of the Heating TES at the Vancouver House Development, which comprises four buildings on three parcels of land, as follows:

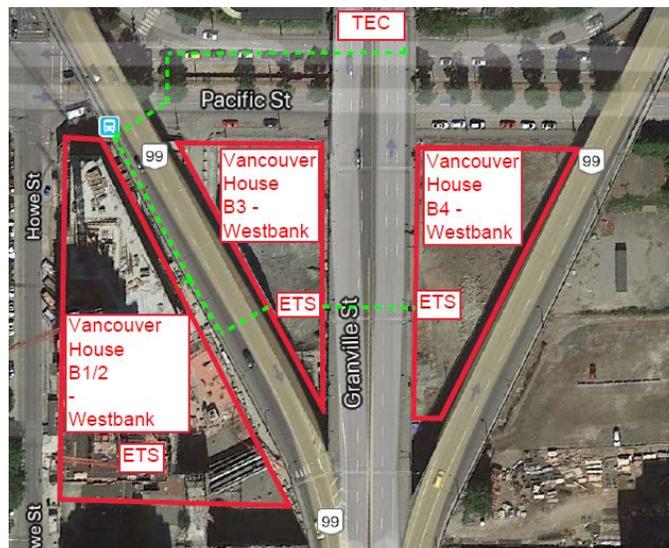
- Buildings 1 and 2 1480 Howe Street;
- Building 3 1461 Granville Street; and
- Building 4 1462 Granville Street.

Buildings 1 and 2 are due to be occupied by November, 2019, upon which heating service to the occupants of these buildings will commence. Buildings 3 and 4 are due to be occupied by February/March 2019 under current construction timelines.

2.1 Please provide a map identifying Buildings 1,2 3 and 4.

**RESPONSE:**

Please refer to the following map.



2.2 Please provide the square footage for each building and the number of units in each.

**RESPONSE:**

Please refer to the tables below, which provide a breakdown of the overall development and a specific breakdown for Building 1, the only mixed-use building.

Building	Floor Area (m2)	Use
Building 1 (1480 Howe St)	11,875	Mixed Use
Building 2 (1480 Howe St)	42,860	100% Residential
Building 3 (1461 Granville St)	4,726	100% Commercial
Building 4 (1462 Granville St)	5,137	100% Commercial

BUILDING 1 (Podium)								
Level	Rental Apartments	Storage	Fitness Center	Retail Grocery Store	Retail Store	Total Gross Floor Area	Balcony Area	Balcony Exclusion Limit
LEVEL 01	159.8	0.0	-	-	193.4	353.2	-	42.4
LEVEL 02	349.4	10.2	78.6	-	1,657.1	2,095.3	41.0	251.4
LEVEL 03	985.7	2.2	-	1,656.7	-	2,644.6	105.3	317.4
LEVEL 04	1,009.5	2.2	-	-	-	1,011.8	121.0	121.4
LEVEL 05	1,009.8	2.2	-	-	-	1,012.0	118.5	121.4
LEVEL 06	1,009.6	2.2	1,597.9	-	-	2,609.8	119.1	313.2
LEVEL 07	775.9	0.0	459.3	-	-	1,235.2	81.6	148.2
LEVEL 08	733.9	0.0	-	-	-	733.9	58.8	88.1
LEVEL 09	225.7	0.0	-	-	-	225.7	22.1	27.1
<b>TOTAL AREAS</b>	<b>6,259.10</b>	<b>19.18</b>	<b>2,135.82</b>	<b>1,656.72</b>	<b>1,850.55</b>	<b>11,921.37</b>	<b>667.30</b>	<b>1,430.56</b>

Building 1 contains 105 residential units and a small number of commercial units. Building 2 contains 492 residential units.

Creative Energy does not have unit counts for Buildings 3 and 4, only floor area information as reported in the following tables.

BUILDING 3							
Level	General Office	Office Balcony	Retail Store	Retail Store Balcony	Exterior Circulation	Amenity	Total Gross Floor Area
LEVEL P3 (not FSR)							-
LEVEL P2 (not FSR)						25.34	-
LEVEL P1 (not FSR)						123.19	-
LEVEL 01	169.26		290.78				460.04
LEVEL 02	9.69		1,080.12				1,089.81
LEVEL 03	1,110.02	17.69					1,127.71
LEVEL 04	1,018.05	13.07					1,031.12
LEVEL 05	668.00	12.54			103.95		784.49
LEVEL 06	231.22	1.92					233.14
<b>TOTAL AREAS</b>	<b>3,206.24</b>	<b>45.22</b>	<b>1,370.90</b>	<b>-</b>	<b>103.95</b>	<b>148.53</b>	<b>4,726.31</b>

BUILDING 4							
Level	General Office	Office Balcony	Retail Store	Retail Store Balcony	Exterior Circulation	Amenity	Total Gross Floor Area
LEVEL P2 (not FSR)							-
LEVEL P1 (not FSR)						58.67	-
LEVEL 01	162.82		311.33				474.2
LEVEL 02	9.6		1,157.74				1,167.3
LEVEL 03	1,262.45	18.64					1,281.1
LEVEL 04	1,157.8	12.47					1,170.3
LEVEL 05	889	9.02			113.11		1,011.1
LEVEL 06	127.72	4.22					131.9
<b>TOTAL AREAS</b>	<b>3,609.39</b>	<b>44.35</b>	<b>1,469.07</b>	<b>-</b>	<b>113.11</b>	<b>58.67</b>	<b>5,235.92</b>

2.3 Please provide identify the space allocated to residential and commercial.

**RESPONSE:**

**Please refer to the response to CEC IR 2.2.**

2.4 Please confirm or otherwise explain that Buildings 1 and 2 are already fully occupied.

**RESPONSE:**

**Creative Energy understands that Buildings 1 and 2 have been granted occupancy permits but Creative Energy does not have information on what percentage of the units are actually occupied at any given time.**

2.4.1 If not confirmed, please update the forecast occupation dates, and identify when full occupation will occur.

**RESPONSE:**

**Please refer to the response to CEC IR 2.4.**

2.5 Are Buildings 3 and 4 due to be occupied by February/March 2020, not 2019 as stated? Or are they already occupied? Please explain.

**RESPONSE:**

**Creative Energy receives periodic updates from the Developer's project managers on the construction timelines for the development and reports out the latest information on that basis. The occupancy dates for buildings 3 and 4 are expected to be April 2020 and June 2020, respectively. The reference to 2019 was an error.**

2.6 Creative Energy's Applications for a CPCN for cooling indicates that Buildings 3 and 4 have an expected occupancy of December 2019. Please explain, and provide an explanation for any delays.

**RESPONSE:**

**Please refer to the response to CEC IR 2.5. The Developer's development construction timelines for those buildings are delayed.**

**3. Reference: Exhibit B-1, page 4**

Order C-1-19 also directs Creative Energy to file a CPCN application in respect of the anticipated move of the temporary containerized boiler plant of the Heating TES to a permanent location by the end of 2023. Creative Energy therefore expects that its heating rates application to be filed in 2020 would be for final rates spanning the four-year period 2020-2023, anticipating that the relocation of the boiler plant to a permanent location will entail some change to the underlying costs supporting those rates, thereby demanding a future rates application for the period beginning 2024. Consequently, and under an expected timing for filing a final heating rates application early in 2020, subject to the occupancy of Buildings 3 and 4, Creative Energy has prepared this Application for interim rates assuming only a one-year test period for 2020.

**4. Heating TES Cost of Service 2020**

The tables that follow present the build-up of the 2020 cost of service and revenue requirements for the Heating TES at the Vancouver House Development, which are the applicable annual inputs to the calculation of interim rates to be effective November 1, 2019. The pending application for final rates will propose rates for the four-year period 2020-2023.

3.1 Please describe the reason for the relocation of the boiler plant.

**RESPONSE:**

**The boiler plant is in a temporary location on City of Vancouver property and under an agreement with the City it must be relocated by the end of 2023. Please see BCUC Order C-1-19.**

3.2 Why was Creative Energy unable to locate the boiler plant in its permanent location at the outset?

**RESPONSE:**

**The existing location is adjacent to the north side of Pacific Boulevard and underneath the Granville Street bridge. This was never conceived of as a permanent location.**

**In partnership with the City of Vancouver, a permanent plant was originally conceived to be at a dedicated location - not in the Vancouver House development - as part of a much broader district energy system in the neighbourhoods of and near to the Vancouver House development. At the time that it was determined that those plans could not proceed, a temporary location was then required and the development phase of the Vancouver House did not allow a permanent plant to be sited within one of the buildings of the development.**

3.3 Could Creative Energy relocate the boiler plant at this time? Please explain why or why not.

**RESPONSE:**

**No. A permanent location has not been arranged for yet and Order C-1-19 directs that Creative Energy file a CPCN at least one year in advance of a planned relocation.**

3.4 Please provide an estimate of the how the relocation of the boiler plant will change the underlying rates, and provide quantification of the expected change.

**RESPONSE:**

**Creative Energy does not have that information and does not have a basis on which to estimate that information at this time.**

3.5 Would Creative Energy expect that a future rates application after 2023 would be for the full remainder of the 30-year term, or does Creative Energy expect to provide multiple rate applications over time? Please explain.

**RESPONSE:**

**Creative Energy has not developed its proposal over what multi-year period it would seek approval of rates for the period beginning 2024. Please refer to the response to BCUC IR 3.5.**

3.6 What, if any, incentives exist for Creative Energy to conduct demand side management activities? Please explain.

**RESPONSE:**

**The South Downtown Heating TES serves four brand new buildings designed and built to meet very high building performance standards – LEED Platinum New Construction Certification standards and green building policies of the City of Vancouver, including its General Policy for Higher Buildings. Creative Energy therefore is of the view that there are no cost-effective DSM opportunities in relation to the customers of this TES.**

**4. Reference: Exhibit B-1, page 4 and 5**

**4. Heating TES Cost of Service 2020**

The tables that follow present the build-up of the 2020 cost of service and revenue requirements for the Heating TES at the Vancouver House Development, which are the applicable annual inputs to the calculation of interim rates to be effective November 1, 2019. The pending application for final rates will propose rates for the four-year period 2020-2023.

**4.1. Capital and Fixed Operating Cost of Service**

**Table 1: Capital and Development Costs**

	<b>Spend-To-Date</b>	<b>Cost-To-Complete</b>	<b>Total Cost</b>
Predevelopment ('Development')	113,161	0	113,161
CPCN ('Development')	153,227	0	153,227
Engineering ('Development')	354,256	15,000	369,256
Boiler Plant	824,804	2,000	826,804
Distribution Piping System	820,563	100,000	920,563
Energy Transfer Station	611,275	51,000	662,275
Internal Management ('Development')	389,960	50,000	439,960
<b>Total</b>	<b>3,267,246</b>	<b>218,000</b>	<b>3,485,246</b>

**Notes to Table 1**

- Selected Model Reference: Forecast Inputs, row 123, Regulatory Model, rows 41, 141 (total costs notionally categorized on a weighted basis to Plant, DPS and ETS as a simplifying model construct)
- Alignment with CPCN evidence: Total cost budget = \$3.39 million (updated Table 12, Response to Confidential BCUC IR 1.27.1.2, including Development costs totaling approximately \$0.96 million as compared to \$1.07 million in Table 1 above). The variance of approximately \$100,000 is explained by road restoration costs assigned by the City of Vancouver, which were not factored into the initial project budget.

As shown in Table 1, capital and development costs are consistent with the indicative evidence reviewed and updated during the CPCN proceeding. The projected costs to complete are known and final total costs are not expected to vary considerably from these estimates. The total of these costs is therefore appropriately included in the cost of service for the determination of interim rates. Creative Energy notes that forecast costs associated with the preparation and Commission review of the pending final rates application have not yet been included for recovery in the total \$3.49 million of capital and development costs set out in Table 1.

4.1 Please elaborate in detail and provide quantification of any potential cross-subsidization that could potentially occur between ratepayers of the steam heat utility and those of Vancouver House.

**RESPONSE:**

**Creative Energy staff capitalize time that is directly devoted to projects under development and directly charge time for work performed on specific in-service projects. Residual General and Administration expenses are allocated between Creative Energy projects, including to the Core Steam**

**System and Vancouver House Heating TES, on the basis of a Commission-approved Massachusetts formula. There is no cross-subsidization in the direct charging of Creative Energy staff time, and the allocation of residual expenses under the approximations inherent in the Massachusetts formula is simple and transparent and deemed acceptable for that purpose.**

- 4.1.1 Please provide the cost breakdown provided in the CPCN evidence (as in Table 1) demonstrating the alignment with the \$3.39 million in the CPCN application and provide reasons for any variances of over 10%.

**RESPONSE:**

**Please refer to the responses to BCUC IRs 3.1, 6.1 and 6.2.**

- 4.2 Please confirm, or otherwise explain, that the costs associated with the preparation and review of the CPCN are represented by the line item 'CPCN'.

**RESPONSE:**

**Confirmed.**

- 4.2.1 If not, please provide the costs associated with the preparation and review of the CPCN and identify when and how they will be included in rates.

**RESPONSE:**

**Not applicable.**

- 4.3 Please provide an estimate of the forecast costs associated with the preparation and review of the interim rates.

**RESPONSE:**

**Please refer to the responses to BCUC IRs 6.22 and 6.23.**

- 4.3.1 Please identify where these are included in the costs.

**RESPONSE:**

**Please refer to the responses to BCUC IRs 6.22 and 6.23.**

5. Reference: Exhibit B-1, page 5

**Table 2: Operations and Maintenance Costs – 2020**

	2020	Assumption
Maintenance	35,550	1% on total project cost in 2019 dollars
Operator Cost	25,500	1/4 of a full-time equivalent operator at \$100K in 2019 dollars
Insurance	5,286	0.11% of Net Book Value of Equipment and 0.25% of Revenues
Municipal Access Fee	6,881	1.25% of Revenue
Lease Payments	0	n/a
Administration	35,039	2.5% of \$1.485 million in allocable Creative Energy administrations costs per recommended application of the Massachusetts formula
<b>Total</b>	<b>108,255</b>	

**Notes to Table 2**

- Selected Model Reference: Project Inputs, row 116; Annual Summary, rows 26-32; Summary Tables Tab
- Alignment with CPCN evidence: Total O&M of \$86,000 (refer to updated Table 22, response to BCUC IR 2.41.1). The key cost variance relates to the application now of the Massachusetts formula to allocate administration costs, which largely explains the increase to the indicative estimate provided during the CPCN filing. Per the response to Confidential BCUC IR 1, series 4, Creative Energy recommended the application of the Massachusetts formula to allocate administration costs, as described therein. Refer also to the CPCN Application, section 5.4, Table 17; response to BCUC IR 1, series 19; response to Confidential BCUC IR 1, series 3

5.1 Please provide the same evidence presented in the CPCN application (as in Table 2) and provide reasons for any variances of over 10%. Please provide the basis for the 1% on total project cost as a maintenance cost.

**RESPONSE:**

**Please refer to the responses to BCUC IRs 3.1, 6.1 and 6.2 in respect of the requested variance explanations.**

**The basis for the maintenance cost assumption is elaborated upon in the responses to BCUC IRs 7.1 through 7.3.**

5.2 Please briefly describe the Massachusetts formula being used for allocation purposes and whether or not it is modified as in Creative Energy’s application for cooling for Vancouver House.

**RESPONSE:**

**The formula is the same as used for the indicative rates provided with the Cooling TES CPCN. Creative Energy is presenting its proposal to use the modified 2-factor formula as part of its 2020 RRA for the Core and NEFC systems. Subject to the Commission’s review and approval in that proceeding Creative Energy would adopt the same approach to determines rates for all of its systems going forward as applicable (e.g. Core, NEFC, South Downtown), as the same formula must necessarily apply to all applicable Creative Energy projects to maintain consistency across the allocation ratios and results.**

5.3 Please provide the basis for the \$1.485 million in allocable administration costs, and the 2.5% calculation according to the Massachusetts formula.

**RESPONSE:**

Please refer to the responses to BCUC IRs 7.5, 7.6, 7.10, 7.11 and 7.12.

6. Reference: Exhibit B-1, page 6

**Table 3: Ratebase and Depreciation**

Total Project Cost (Capital and Development)	3,485,246
Interest During Construction	86,011
Cost of Equity During Construction	119,182
Starting Ratebase 2020	3,690,439
Annual Depreciation Charge	123,015

**Notes to Table 3**

- Selected Model Reference: Project Inputs, row 134; Regulatory Model, row 287, sum of row 180, sum of row 167; Annual Summary, row 110
- Alignment with CPCN evidence: Estimated annual depreciation of \$104,000 (refer to updated Table 22, response to BCUC IR 2.41.1);

6.1 Please provide a reason for the \$20,000 variation from the CPCN evidence.

**RESPONSE:**

The variation is explained by the following:

- the effective depreciation period on project costs was ~34 years in an earlier version of the model, and it is 30 years in the current model; and
- the original model calculated AFUDC based on capital deployed in a time period, not the cumulative capital deployed, which the current model corrects for.

**7. Reference: Exhibit B-1, pages 9 and 10**

**5.1. Capacity Charge**

The capacity charge will recover the capital and fixed operating costs of the Heating TES on a \$/kW basis, determined on the basis of the design peak demand of each building. The capacity charge will recover all costs that do not vary with energy consumption; that is, the cost of service excepting variable fuel costs. In that regard, these costs are considered ‘fixed’ and therefore should not be recovered on a \$/MWh basis.

The level of the capacity charge is set based on total design peak demand. Correspondingly, the billing determinants for the allocation of capital and fixed operating costs to each building are the individual total design peak demand in kW of each building in the Vancouver House Development.

**Table 7: Capacity Charge Billing Determinants**

Building	Total Design Peak Demand
Building 1	841
Building 2	1,230
Building 3	246
Building 4	231
Total	2548

**Notes to Table 7**

- Selected Model Reference: Forecast Inputs, row 57; Energy Demand Tab
- Alignment with CPCN evidence: Application, section 2.1; response to IR 1, series 28

**Table 8: Comparison of Capacity Charge Billing Determinant Approaches**

	Capacity Charge Design Peak Approach		Fixed Charge Floor Space Approach		Implied Peak Demand Intensity
	kW	% Recovery of Capital and Fixed Operating	m2	% Recovery of Capital and Fixed Operating	Peak W/m2/year
Total	2,548	100%	64,598	100%	
Building 1	841	33%	11,875	18%	71
Building 2	1,230	48%	42,860	66%	29
Building 3	246	10%	4,726	7%	52
Building 4	231	9%	5,137	8%	45

- 7.1 Creative Energy examine any other ways of calculating the level of the capacity charge in addition to design peak demand and floor space? If yes, please describe and provide an explanation for why these options were not used.

**RESPONSE:**

**Creative Energy did not evaluate other billing determinants for the fixed charge other than design peak demand in kW and floor space in m<sup>2</sup>. Creative Energy dismissed recovering fixed costs through a \$/MWh variable charge because that approach would not align cost recovery with cost causation. Please refer also to the response to BCUC IR 12.1.**

**8. Reference: Exhibit B-1, page 11**

Individual building customers may seek to assign utility costs to individual occupants or tenants on a floor-area basis, given that facility managers, building operators, owners or tenants may find that utility costs expressed on a unit-area basis are easier to understand and translate into the fees or charges they are assigned. While the individual building customers will be interested in their total monthly and annual costs for overall budgeting purposes, they will be readily able if need be to convert their total bills into a unit cost by building floor area; for example, for the Residential Strata to be able to allocate costs or fees to individual occupants or tenants on the basis of the individual floor area per suite. Any such allocation is outside of the responsibility of Creative Energy.

- 8.1 Please provide a discussion of the jurisdiction and responsibilities of the BCUC with respect to the costs or fees charged to individual occupants or tenants.

**RESPONSE:**

**The BCUC has no jurisdiction or responsibility with respect to the strata fees charged by a strata corporation to strata unit owners. Such fees are governed by the *Strata Property Act*, and the regulations, rules and bylaws thereunder.**

**If paragraph (d) of the definition of public utility in the *Utilities Commission Act* applies, the BCUC has no jurisdiction or responsibility with respect to a landlord's charges to tenants for energy provided to the rental unit. Also see BCUC Order G-177-18.**

**9. Reference: Exhibit B-1, page 12**

Creative Energy has considered two options for a levelized capacity charge, both of which equate the ROE in the underlying cost recovery to the allowed ROE under a full cost of service approach over the 30-year term:

1. \$/kW with annual 2 percent escalation for 30 years (**Levelized Annual Rate**)
2. \$/kW with no escalation – flat rate for 30 years (**Levelized Flat Rate**);

Creative Energy proposes the Levelized Annual Rate approach for the determination of a 2020 interim capacity charge.

In addition to the advantages noted above, a rate that is shown and generally expected to escalate gradually over time will be better understood by customers as opposed to a flat rate shown to persist for 30 years. The Levelized Annual Rate is also a more competitive, lower rate in the initial years of service. Please refer to section 6.3 for a review of benchmark rate comparisons demonstrating the overall competitive level of the proposed interim capacity charge.

- 9.1 Does Creative Energy intend to escalate the Levelized Annual Rate by 2%, or is this indicative, and the rate will be increased by actual inflation? Please explain.

**RESPONSE:**

**Please refer to the response to BCUC IR 7.13.**

- 9.1.1 If the rate will be increased by an actual inflation figure, please explain how and when this will be calculated and factored into rates.

**RESPONSE:**

**Please refer to the response to BCUC IR 7.13.**

- 9.1.2 If the rate will be increased by 2% per year, how does Creative Energy propose to address variations in actual inflation? Will the shareholder assume the risk of inflation higher than 2%? Please explain.

**RESPONSE:**

**A multi-year rate application will be based on a forecast of operating costs and rates will proposed on that basis. Creative Energy has not put forward any variance deferral mechanisms to account for differences between forecast and actual amounts and thus the shareholder would share the risk related to inputs such as inflation for which actual amounts differ from forecast during the period over which rates are set.**

**Creative Energy notes that proposed recovery of electricity and natural gas fuel costs are a flow-through expense to customers on the basis of actual costs and therefore the assumed inflation factor in the model is of no consequence to the determination of the proposed variable charge to recover those costs.**

**Please refer to the responses to BCUC IRs 7.13 and 7.19.**

**10. Reference: Exhibit B-1, pages 13 and 14**

**6.3. Benchmark Rate Comparison**

As reported in Table 10, Creative Energy’s proposed interim rates are competitive and lower cost compared to other district energy utility systems when factoring in the relative energy intensity of the associated buildings served by those utilities. This basis of comparison recognizes that City of Vancouver policy and other building code standards, such as BC Step Code, are pushing building performance to meet stricter standards.

**Table 10: Indicative All-in Benchmark Rates Comparison**

	Benchmark All-in Rate \$/MWh/year	Energy Intensity kWh/m2	Equivalent All-in Rate \$/m2/year	Estimated Annual Cost (75 m2 suite)
Vancouver House Heating - Levelized Annual	119	62	7.39	\$554
Vancouver House Heating - Levelized Flat	135	62	8.34	\$626
Vancouver House Heating - Cost of Service	143	62	8.88	\$666
South East False Creek	113	110	12.37	\$928
River District Energy	96	92	8.83	\$662
Surrey City Energy	115	105	12.03	\$902
Richmond Oval Village	94	100	9.40	\$705

**Notes to Table 10**

- Calculation of benchmark all-in rate \$/MWh/year for Vancouver House equals the total capital and fixed cost recovery in 2020 reported in Table 9 divided by 4,028 MWh plus the \$29/MWh indicative variable charge
- Source of benchmark all-in rates for selected utilities: City of Vancouver – Administrative Report; <https://council.vancouver.ca/20181211/documents/spec1e.pdf>
- Building energy intensity based on internal engineering estimates

10.1 Please discuss the importance of the ‘Energy Intensity’ and its relevance.

**RESPONSE:**

**Please refer to the response to BCUC IR 16.2.**

10.2 Please provide a comparison of Creative Energy’s proposed interim rates to BC Hydro rates for the equivalent heating requirements.

**RESPONSE:**

**The City of Vancouver very recently released in December 2019 its Administrative Report with benchmark all-in rates for selected utilities for 2020, available at the following link:**

<https://council.vancouver.ca/20191203/documents/spec1e.pdf>

Creative Energy provides a corresponding update to Table 10 from the Application as follows below. Creative Energy includes the BC Hydro and FortisBC Energy Inc. benchmark rates from the City of Vancouver assessment as additional rows in the table. Using the energy intensity assumptions for Vancouver House, Creative Energy has simply converted those benchmark rates into equivalent \$/m2/year benchmarks and calculated the annual cost results based on that. These results are illustrative under a very simplifying assumption that there are no incremental capital costs nor fixed operating costs factored into providing the applicable service under the BC Hydro or FortisBC comparators.

Update to Table 10 from the Application:

	Benchmark All-in Rate \$/MWh/yr	Energy Intensity kWh/m2	Equivalent Benchmark All-in Rate \$/m2/yr	Comparative Annual Cost (75 m2 suite)
Vancouver House Heating - Levelized Annual	119	62	7.39	554
Vancouver House Heating - Levelized Flat	135	62	8.34	626
Vancouver House Heating - Cost of Service	143	62	8.88	666
BC Hydro	126	62	7.81	586
FortisBC Energy Inc.	87	62	5.39	405
South East False Creek	117	110	12.81	961
River District Energy	106	92	9.75	731
Surrey City Energy	117	105	12.24	918
Richmond Oval Village	100	100	10.00	750

10.3 Please provide a comparison of Creative Energy’s proposed interim rates to FortisBC natural gas rates for the equivalent heating requirements.

**RESPONSE:**

Please refer to the response to CEC IR 10.2.