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October 24, 2019

VIA ELECTRONIC MAIL

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Our File: 23841/0219

**Attention: Patrick Wruck, Commission Secretary
and Manager, Regulatory Support**

Dear Sirs/Mesdames:

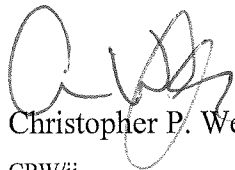
**Re: Creative Energy Vancouver Platforms Inc. - Application for a Certificate of Public
Convenience and Necessity to Acquire and Operate a Thermal Energy System for
Cooling at the Vancouver House Development ~ Project No. 1599035**

We are counsel to the Commercial Energy Consumers Association of British Columbia (the "CEC"). Attached please find the CEC's first set of Information Requests with respect to the above-noted matter.

If you have any questions regarding the foregoing, please do not hesitate to contact the undersigned.

Yours truly,

OWEN BIRD LAW CORPORATION



Christopher P. Weafer

CPW/jj

cc: CEC

cc: Creative Energy Vancouver Platforms Inc.

cc: Registered Interveners

**COMMERCIAL ENERGY CONSUMERS ASSOCIATION
OF BRITISH COLUMBIA (“CEC”)**

INTERVENER INFORMATION REQUEST NO. 1

**Creative Energy Vancouver Platforms Inc. Application for a Certificate of Public
Convenience and Necessity to Acquire and Operate a Thermal Energy System for
Cooling at the Vancouver House Development
Project No. 1599035**

October 24, 2019

1. Reference: Exhibit B-1, page 1

1.1 Application and Project Overview

Creative Energy Vancouver Platforms Inc (**Creative Energy**) submits this application to the British Columbia Utilities Commission (**BCUC, Commission**) for a Certificate of Public Convenience and Necessity (**CPCN**), pursuant to sections 45 and 46 of the *Utilities Commission Act* (the **UCA**), for the acquisition and operation of a district thermal energy system to provide cooling (**District Cooling System**, or **DCS**) to the Vancouver House Development in the South Downtown neighbourhood of Vancouver (the **Vancouver House Development**)(the **Application**). A Draft Order with the requested approval is attached as Appendix 1 to this Application.

Westbank Projects Corp. (the **Developer**), a party affiliated with C  utive Energy, is constructing the Vancouver House Development, which consists of four buildings on three parcels of land, with a total floor area of 64,598 meters squared (**m²**):

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

Three of the buildings in the Vancouver House Development are commercial use (Buildings 1, 3 and 4), while the fourth is a residential tower (Building 2). The thermal generation and distribution equipment and facilities of the DCS are located within the central plant room of Vancouver House Building 2. The DCS will distribute cooling energy via short runs of underground pipes to the other Vancouver House Development buildings. Initially, the Developer will be the only customer of the DCS. The Developer will transfer Vancouver House Building 2 to a Strata Corporation, at which time the DCS will have two customers: the Developer and the Strata Corporation.

The Developer has been responsible for the design and construction of the works associated with the DCS as part of the construction of the Vancouver House Development. Creative Energy and the Developer entered into a Construction and Purchase Agreement¹ (the **Purchase Agreement**), whereby Creative Energy has agreed to purchase the completed DCS and operate the DCS as a utility to provide thermal energy (cooling) services to the Vancouver House Development. Please refer to Appendix 2 for a copy of the Purchase Agreement.

Creative Energy's obligation to purchase the DCS under the Purchase Agreement is contingent on Creative Energy receiving CPCN approval for the acquisition and operation of the DCS.

- 1.1 Please provide examples of Creative Energy's experience with cooling systems.
- 1.2 When did Creative Energy and Westbank determine that Creative Energy should purchase the DCS? Did this occur prior to the design and construction of the works? Please explain and provide evidence to support.
- 1.3 Did Westbank offer the DCS system for sale to other purchasers? Please explain and provide evidence to support.
 - 1.1.1. If yes, please provide the purchase price.
- 1.4 Could Creative Energy operate the DCS without owning the DCS? Please explain why or why not.

2. Reference: Exhibit B-1, page 2

The Purchase Agreement caps the purchase price for the DCS at the Developer's actual cost of constructing the DCS but in any case no more than \$2.2 million + 15 percent, for a total of \$2.53 million². The Developer has assumed the risk of any construction costs over and above the purchase price. The Developer's costs of constructing the DCS are in excess of \$2.53 million. Creative Energy's cost savings on the purchase price will be passed on to the customers in the form of lower rates as compared to if Creative Energy were to not purchase and operate the DCS. As an experienced operator of district thermal energy systems, Creative Energy can operate and maintain the DCS more efficiently than the Developer.

- 2.1 Please provide the rationale for the 15% premium.
- 2.2 Please provide evidence of the construction costs relative to other district cooling systems of similar size and capability.
- 2.3 Please provide a breakdown of the Developer's construction costs.

3. Reference: Exhibit B-1, page 4

customer. The DCS consists of well-established technology and has low operating and maintenance risks, and Creative Energy is able to acquire the DCS for less than its cost of construction.

- 3.1 Please confirm, or otherwise explain, that there is no interconnection to the Steam Distribution network.
- 3.2 Can Creative Energy ensure that the technology is the best technology available at this time? Please explain.
- 3.3 Please provide a list of the various technologies that are available at this time and why they were not selected.

4. Reference: Exhibit B-1, page 5-6 and page 7

Table 1: Creative Energy team supporting the Application

Role	Individual
Application Lead	Krishnan Iyer President & CEO, Creative Energy Krishnan Iyer is an experienced district energy and infrastructure executive with over 20 years of management expertise in leading teams and executing organizational change and growth, including strategy development, structuring, capital sourcing, and governance oversight.
Project Director	Kieran McConnell Vice President, Projects & Engineering, Creative Energy Kieran has 15 years of engineering experience in District Energy Systems, power generation and industrial water and energy management. Playing a key role in the development of the Southeast False Creek Neighbourhood Energy Utility, he was involved in the feasibility, design, construction, and commissioning of this utility. Kieran has a Bachelor of Engineering from McGill University.

Role	Individual
Project Manager	Amin Hassanshahi Senior Manager, Projects & Construction Amin joined Creative Energy in 2008 and manages planning, design, construction, commissioning, inspection and repair of Energy Centers, Distribution Piping Systems, underground structures, and Energy Transfer Stations. Amin oversees and directs the implementation of District Energy projects to ensure timely and cost-effective connection of buildings to thermal energy systems. He is a graduate of BCIT Engineering.
Regulatory Affairs	Rob Gorter, Director, Regulatory Affairs & Customer Relations, Creative Energy Rob is an economist and energy utility professional with considerable regulatory affairs and stakeholder relations experience, including extensive work related to utility revenue requirements and rate design strategy and implementation.
Financial Controls	Michael Lloyd Controller, Creative Energy Michael is a CPA, CA with over 10 years' experience; he began his career working in public practice at a Big 4 accounting firm and has also worked in industry as an Operations Controller for a large construction company.
Operations Director	Lori Parker Operations Director, Creative Energy Lori oversees Plant operations and the Distribution network. Lori's 30 years of varied experience, including as Chief Engineer of a steam plant, has given her the ability to look at the overall operations picture of the team, the customer and Creative Energy. Lori's team will be responsible for day to day operations of the DCS once operational.
Corporate Development	Jeff Mayhew Manager of Corporate Development, Creative Energy Jeff is responsible for financial analysis, project financing, and the structuring of legal agreements for existing and proposed infrastructure assets. His background spans 7 years of experience across private equity and commercial banking. Jeff has a Bachelor of Management in Finance and Economics from UBC and is a CFA Charterholder.

2.5 Name, Title, and Address for Creative Energy Contact

Rob Gorter
 Director, Regulatory Affairs & Customer Relations
 Suite 1, 720 Beatty Street,
 Vancouver, BC V6B 2M1
 Tel: 604.692.2118
 Email: rob@creative.energy

4.1 Please confirm that the positions identified above are compensated by Creative Energy with costs recovered from ratepayers.

4.1.1 If not confirmed, please provide the source of the compensation for the above employees.

- 4.1.2 If confirmed, please explain how Creative Energy intends to allocate costs from the larger utility to the DCS such that the compensation is not subsidized by ratepayers of Creative Energy.
- 4.2 Please list and provide an allocation of space, manpower, and any other costs that are being drawn upon by Creative Energy to purchase the DCS from Westbank.
- 4.3 Please confirm, or otherwise explain, that Creative Energy uses the Massachusetts' Formula for allocating corporate overhead costs between the steam utility and the NEFC Neighbourhood Energy System.
- 4.4 Please provide a complete list of costs that are allocated between Creative Energy steam utility and the NEFC.
 - 4.4.1 Please quantify the costs and provide the proportional allocation rates.
- 4.5 Please provide a complete list of costs that will be allocated between Creative Energy steam utility and the DCS.
 - 4.5.1 Please provide quantification for the costs and the proportional allocation rates.

5. Reference: Exhibit B-1, page 8

3.1 Creative Energy's acquisition and operation of the DCS is in the public interest

On February 12, 2016, Creative Energy entered into a Construction and Purchase Agreement with Howe Street Ventures Ltd. and Howe Street Property Inc., subsidiaries of the Developer. A copy of the Purchase Agreement is attached as Appendix 2 to this Application. Pursuant to the Purchase Agreement, the Developer will build the DCS as part of the construction of the Vancouver House Development.

Creative Energy will leverage its utility and operations expertise and achieve efficiency for all parties concerned through its acquisition and operation of the DCS. Creative Energy is acquiring the DCS for less than the total cost of construction and will pass on this cost saving to the customer(s) in the form of lower rates.

With Commission approval, Creative Energy will purchase the DCS from the Developer upon substantial completion of construction of the DCS and prior to occupancy of Vancouver House. Creative Energy will assume the entirety of the DCS assets on an unencumbered basis. At that stage, Creative Energy will operate the DCS as a public utility to provide cooling services to the four Vancouver House Development buildings.

- 5.1 Please provide the construction status of the DCS at this time.
- 5.2 Please provide the construction status of each building to be served by the DCS at this time.

- 5.3 Please provide the occupancy of each building to be served by the DCS at this time.
- 5.4 Please provide the expected timeframes for occupancy of each building to be served by the DCS, breaking down by customer class (i.e. residential, commercial etc.).

6. Reference: Exhibit B-1, page 8 and 9

Creative Energy is not required to compensate the Developer for any construction costs above the agreed purchase price. The Developer has assumed the risk of any construction costs over and above the purchase price. Creative Energy retained Kerr Wood Leidel to provide third party review of the design and costs of the DCS. Further, as an end user of the DCS, the Developer has an incentive to manage construction costs and avoid overruns. Creative Energy does not expect to receive any contributions, grants, or other funding for the acquisition and operation of the DCS. However, as noted above, the purchase price for the DCS set out in the Purchase Agreement is below the actual construction cost of the DCS.

If this Application is not approved by the Commission, the Developer will continue to own and operate the DCS and, as a result of providing service to the residential strata building would be a new public utility under the UCA. The Developer would need to apply for a CPCN for operation of the DCS, potentially reorganize to separate the utility business from the non-utility business at Vancouver House and seek rate recovery based in part on the higher actual costs of construction. The result would be higher customer costs, in particular to the residential strata upon assignment of the customer service agreement. In addition, overall transaction costs and regulatory costs would increase, diminishing regulatory efficiency overall, which would also therefore not support the public interest.

- 6.1 Please identify which party will assume the risk if the DCS is not constructed according to schedule.

7. Reference: Exhibit B-1, page 9 and 10 and page 12

The Vancouver House Development requires space cooling for occupancy, for both residential and commercial use. Without an operational DCS, occupants of the Vancouver House Development would be without space cooling. The Developer is constructing all four buildings in the Vancouver House Development on similar timelines, and within close proximity to each other, which provides the opportunity for a thermal energy system like the DCS. These developments require cooling for liveability and comfort and the need for the project is clear.

The Vancouver House Development will have a total floor space of 64,598 m². Vancouver House Buildings 1, 3 and 4 are commercial mid-rise buildings, while Building 2 is a residential high rise. The total floor space for each of the buildings is set out in Table 2. As construction of the Vancouver House Development is nearing completion, the floor spaces are known.

Table 2: DCS floor area and completion timing

Building	Floor Area (m²)	Expected Occupancy
Building 1 (1480 Howe Street)	11,875	November 2019
Building 2 (1480 Howe Street)	42,860	November 2019
Building 3 (1461 Granville Street)	4,726	December 2019
Building 4 (1462 Granville Street)	5,137	December 2019
Total	64,598	n/a

Table 4: Peak cooling and annual cooling for the Vancouver House Development

Building	Floor Area (m²)	Peak cooling (kW)	Annual cooling (MWh)
Building 1 (1480 Howe Street)	11,875	322	274
Building 2 (1480 Howe Street)	42,860	1,457	1,300
Building 3 (1461 Granville Street)	4,726	370	237
Building 4 (1462 Granville Street)	5,137	340	199
Total	64,598	2,489	2,010

- 7.1 Please breakdown the floor space by use (residential, commercial etc.).
- 7.2 Please provide the number of units in each building and breakdown by use (residential, commercial).
- 7.3 Please provide a graph depicting the amount of space cooling expected to be used by month by customer use (e.g. residential, commercial).
- 7.4 Please provide a graph depicting the amount of space cooling expected to be used by month by building (e.g. residential, commercial).

- 7.5 Please provide an estimate of the percentage of residential units in Vancouver that have space cooling throughout the building and in the units.

8. Reference: Exhibit B-1, page 12

3.3.4 Load Forecast and Capacity Requirements

Creative Energy retained a third-party engineering consultant, Kerr Wood Leidel Consulting Engineers (Kerr Wood), to conduct a peer review of Integral Group's design in comparison to generally accepted specific demand and energy factors for similar types of buildings. The Load Analysis and Energy Demand Forecast, as designed by Integral Group and confirmed by Kerr Wood, is summarized in this section.

- 8.1 Please provide the report by Kerr Wood Leidel Consulting Engineers.

9. Reference: Exhibit B-1, page 14

3.4 Appropriate Customer Service Agreements will be executed

Creative Energy will be executing CSAs with each of the four buildings of the Vancouver House Development. The CSAs will be substantially the same as the approved Customer Service Agreement for NEFC. Creative Energy attaches the Customer Service Agreement template at Appendix 3.

The NEFC service agreement was subject to several rounds of Commission-led review, as well as public consultation with the Urban Development Institute and other stakeholder groups, prior to approval. Creative Energy is not requesting approval of a CSA as part of this Application. Creative Energy would submit executed Customer Service Agreements in due course as required.

Buildings 1, 3, and 4 will be retained by Westbank. Building 2 is a residential tower that Westbank will transfer to a Strata Corporation following occupancy of the building. Creative Energy's Customer Service Agreement with Westbank for Building 2 will be assigned from Westbank to the Strata Corporation once the Strata Corporation is formed. Creative Energy will bill Westbank and the Strata Corporation solely and directly, and those entities will determine how their costs for cooling energy will be passed through to tenants and strata unit owners.

- 9.1 Does the CSA require mandatory connection to the district cooling system, and/or any other heating or hot water systems? Please explain.

10. Reference: Exhibit B-1, page 7 and page 15

2.3 Financial Capacity to Acquire and Operate the Project

Creative Energy's purchase of the DCS is part of the company's board-approved capital expenditure plan for 2019. Consequently, Creative Energy expects to fund its purchase via cash-on-hand upon approval by the BCUC.

Table 7: Estimated capital and development costs

Component	\$
1. Creative Energy Purchase Price (Note 1)	2,530,000
2. Creative Energy design review, application and commissioning services	46,532
Total	2,576,532

Note 1: comparative cost of Developer Equipment, Materials and Construction equals \$2,773,683.

- 10.1 Please provide the source of the cash-on-hand.
- 10.1.1 If the cash will be provided by the regulated steam heat utility, what interest rate and payment will be provided to the utility and its ratepayers?
- 10.2 Please breakdown the design review, application and commissioning services costs.
- 10.3 Please provide the basis for estimating the costs for the design review, application and commissioning services. Have the design review, application and commissioning services already been paid for, or are they partially complete? What range of uncertainty is in the costs, if any? Please explain.
- 10.4 Have the Creative Energy design review, application and commissioning services activities already been or will be conducted in whole or in part by Creative Energy staff paid for the steam heat utility? Please explain and provide a dollar value apportionment if the costs were or will be partially conducted by Creative Energy staff.
- 10.5 If the design review, application and commissioning services cost have already been paid for by any party, by which party have these activities been compensated?
- 10.6 If the Creative Energy regulated steam utility has already paid or will pay for any activities associated with the capital or development, including design review or other costs, either directly or indirectly through management salaries or other means, please explain how and when these will be reimbursed to the steam utility ratepayers and the accounting processes that will be undertaken.
- 10.7 Please identify and quantify any and all costs paid or to be paid for by steam utility ratepayers and not necessarily reimbursed from the DCS.

11. Reference: Exhibit B-1, page 15

3.6 Required permitting will be in place to operate the DCS

Creative Energy will engage Technical Safety BC in the normal course to receive an operating permit prior to operating the central plant. There are no other federal, provincial, or municipal approvals, permits, licenses, or authorizations, including material conditions required to operate the central plant.

11.1 What are the estimated costs of engaging Technical Safety BC?

11.2 Please explain which party will be responsible for the costs of engaging Technical Safety BC and from whom these costs will be recovered.

12. Reference: Exhibit B-1, page 17 and page 18

4.4 Indicative Revenue Requirements

Table 10 sets out the annual revenue requirement for the DCS at project completion, modelled based on the estimate of costs set out above. Figure 2 illustrates the annual revenue requirements over the contract term.

Table 10: Indicative annual revenue requirement at project completion – 2020

Component	\$	Note
Fuel – Electricity Cost	58,488	BC Hydro Medium General Service Rate 1500 (Effective April 1, 2019) increasing at annual inflation of 2.0%
Maintenance	29,897	1.14% of capital costs with inflation of 2.0% annually
Operator Cost	20,400	20.0% of an FTE at \$100,000 base salary with inflation of 2.0% annually
Insurance	4,200	Owner's insurance of 0.123% of net book value and general liability insurance of 0.25% of revenues with inflation of 2.0% annually
Municipal Access Fee	5,407	1.25% of revenues with inflation of 2.0% annually
Lease Payments	32,640	Plant size of 1,600 square feet at a rate of \$20 per square feet with inflation of 2.0% annually
Administration	25,500	Administrative fees of \$25,000 annually with inflation of 2.0% annually
Depreciation	85,926	Straight line depreciation of all assets in line with customer contract of 30 years
Income Taxes	0	Blended corporate tax rate of 27.0% and CCA deduction rate of 8.0% annually
Interest	59,289	As per deemed corporate structure: debt/rate base of 57.5% and blended interest rate of 4.5%
Return on Equity	102,344	As per deemed corporate structure: equity/rate base of 42.5% and return of equity of 9.5%
Total Revenue Requirement 2020	424,092	

The DCS will utilize only electricity to run the central plant equipment and will be served under BC Hydro Medium General Service rates.

Table 8: Estimated annual electricity costs at project completion

Component	\$
Electricity	58,488

4.5 Indicative Rates

Creative Energy plans to implement a two-part rate structure consisting of a fixed and a variable charge. The variable charge would recover fuel costs and would therefore be adjusted annually, or as needed, to flow-through actual energy costs related to the cost of electricity. The fixed charge would recover the remainder of the annual revenue requirement and would be a charge per square meter of connected floor area, consistent with other thermal energy systems. Each customer would pay the same rate.

- 12.1 Please confirm that the Fuel – Electricity Cost including inflation of 2% is indicative only, and the cost will be the actual cost of the Medium General Service rate rising or falling according to the tariff.

12.1.1 If not confirmed, please explain why not and:

- a) include the reason for using 2019 as a base year and not updating over the 30 course of the contract; and
- b) provide the rationale for the use of 2% for fuel inflation over the course of the contract.

13. Reference: Exhibit B-1, page 17

Table 10: Indicative annual revenue requirement at project completion – 2020

Component	\$	Note
Fuel – Electricity Cost	58,488	BC Hydro Medium General Service Rate 1500 (Effective April 1, 2019) increasing at annual inflation of 2.0%
Maintenance	29,897	1.14% of capital costs with inflation of 2.0% annually
Operator Cost	20,400	20.0% of an FTE at \$100,000 base salary with inflation of 2.0% annually
Insurance	4,200	Owner's insurance of 0.123% of net book value and general liability insurance of 0.25% of revenues with inflation of 2.0% annually
Municipal Access Fee	5,407	1.25% of revenues with inflation of 2.0% annually
Lease Payments	32,640	Plant size of 1,600 square feet at a rate of \$20 per square feet with inflation of 2.0% annually
Administration	25,500	Administrative fees of \$25,000 annually with inflation of 2.0% annually
Depreciation	85,926	Straight line depreciation of all assets in line with customer contract of 30 years
Income Taxes	0	Blended corporate tax rate of 27.0% and CCA deduction rate of 8.0% annually
Interest	59,289	As per deemed corporate structure: debt/rate base of 57.5% and blended interest rate of 4.5%
Return on Equity	102,344	As per deemed corporate structure: equity/rate base of 42.5% and return of equity of 9.5%
Total Revenue Requirement 2020	424,092	

13.1 Please explain why Creative Energy utilized a 2% inflation rate for each of the costs. Will these costs be inflated at actual inflation or 2%?

13.1.1 If actual inflation, please explain how this will be calculated.

13.1.2 If 2%, please explain why 2% is utilized, and if this inflation rate will remain for the duration of the contract regardless of circumstances.

13.1.3 Please confirm there is no inflation applied to fixed asset costs items, or explain otherwise.

14. Reference: Exhibit B-1, pages 16 and 17

4.3 Non-Fuel Operating Costs

Non-fuel operating costs include maintenance costs, operator costs, insurance and administrative costs; and municipal access fees (in lieu of property taxes).

- DCS administration costs are estimated as \$25,000 per annum, escalated at inflation, which includes the costs of billing and customer management.
- The DCS requires a part-time operator, estimated at 20 percent of a full-time equivalent position.
- Maintenance costs are estimated at 1.14 percent of plant in service costs for all assets, escalated at inflation. This assumption is based on Creative Energy's experience that a budget of 1 percent of actual construction costs per year is sufficient and appropriate for both routine and sustained maintenance throughout the service term, including emergency repair if required and if not covered under warranty.
- Owner's insurance costs are estimated as 0.123 percent of net book value, escalated at inflation and general liability insurance is estimated at 0.25 percent of revenues.
- The DCS will pay Municipal Access Fees to the City at a rate of 1.25 percent of revenue as per the Municipal Access Agreement.
- The DCS will be required to be a lease for the space it occupies on the subject site. The plant will occupy a space of 1,600 square feet and will pay a rate of \$20 per square feet. The results plant lease cost is \$32,000 per annum, and will escalate at inflation.

Table 10: Indicative annual revenue requirement at project completion – 2020

Maintenance	29,897	1.14% of capital costs with inflation of 2.0% annually
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14.1 Please explain why Creative Energy added a 14% premium to the 1% of plant in service estimate that Creative Energy has found to be sufficient.

14.1.1 Please provide the evidence to support the 1%.

15. Reference: Exhibit B-1, pages 16 and 17

Table 10: Indicative annual revenue requirement at project completion – 2020

- The DCS requires a part-time operator, estimated at 20 percent of a full-time equivalent position.

Operator Cost	20,400	20.0% of an FTE at \$100,000 base salary with inflation of 2.0% annually
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15.1 Please explain how Creative Energy estimated the time value for the part-time Operator.

15.2 Will the Operator position be provided by the Creative Energy steam heat utility, or will the position be entirely separate and managed outside of the Creative Energy steam utility?

15.2.1 If the position is not entirely separate, and managed outside of the steam utility, what allocation methods will be used to separate out the costs? Please provide details.

16. Reference: Exhibit B-1, page 16 and 17

Table 10: Indicative annual revenue requirement at project completion – 2020

- Owner's insurance costs are estimated as 0.123 percent of net book value, escalated at inflation and general liability insurance is estimated at 0.25 percent of revenues.

Insurance	4,200	Owner's insurance of 0.123% of net book value and general liability insurance of 0.25% of revenues with inflation of 2.0% annually
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16.1 Please provide the basis for the assumptions for insurance.

16.2 Will the Insurance cost be an actual cost or based on the estimate provided as 0.123% of net book value and general liability of 0.25% of revenues with inflation of 2.0% annually?

17. Reference: Exhibit B-1, page 16 and 17

Table 10: Indicative annual revenue requirement at project completion – 2020

Municipal Access Fee	5,407	1.25% of revenues with inflation of 2.0% annually
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- The DCS will pay Municipal Access Fees to the City at a rate of 1.25 percent of revenue as per the Municipal Access Agreement.

17.1 Please provide a copy of the Municipal Access Agreement or identify where it can be found in the Application.

18. Reference: Exhibit B-1, page 17

Table 10: Indicative annual revenue requirement at project completion – 2020

Lease Payments	32,640	Plant size of 1,600 square feet at a rate of \$20 per square feet with inflation of 2.0% annually
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18.1 Is 1600 square feet the exact plant size?

18.1.1 If not, please provide the exact plant size.

18.2 Please confirm that Creative Energy does not require office space for the plant.

18.2.1 If not confirmed, please identify what office space will be required by Creative Energy in order to manage the DCS and where this space will be located.

18.3 Please identify the type of space that is required for the plant, i.e. industrial, warehouse etc.

18.4 Please provide lease rate comparables for the type of space that Creative Energy will be using.

18.5 Please provide lease rates for Creative Energy's other DES in Vancouver or other municipalities.

18.6 Please provide lease rates for Creative Energy's other expected leases in Vancouver such as those in the Expo/Beatty plants.

18.7 Please place, and/or confirm that the Creative Energy Application for CPCN for the Expo and Beatty Plant Project proceeding is on the evidentiary record for this proceeding.

18.8 Are the lease payments established at the above rates for the term of the contract, or can they vary?

18.8.1 If they can vary, please provide any other calculations that Creative Energy will utilize in establishing Lease Payments.

18.9 Please provide a copy of the Lease Agreement stipulating costs or identify where this is provided in the Application.

19. Reference: Exhibit B-1, pages 16 and 17

Table 10: Indicative annual revenue requirement at project completion – 2020

- DCS administration costs are estimated as \$25,000 per annum, escalated at inflation, which includes the costs of billing and customer management.

Administration	25,500	Administrative fees of \$25,000 annually with inflation of 2.0% annually
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19.1 How did Creative Energy arrive at a cost of \$25,000 for billing and customer management?

19.2 Will the Administration position be provided by the Creative Energy steam utility? Or will the position be entirely separate and managed outside of the Creative Energy steam utility? Please explain.

19.2.1 If the position is not entirely separate, and managed outside of the steam utility, what allocation methods will be used to separate out the costs? Please provide details.

20. Reference: Exhibit B-1, page 17

Table 10: Indicative annual revenue requirement at project completion – 2020

Depreciation	85,926	Straight line depreciation of all assets in line with customer contract of 30 years
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20.1 Please explain the rationale for the straight line depreciation of all assets.

20.1.1 How does Creative Energy normally depreciate its assets? Please explain.

20.1.1.1. If the depreciation is different, please explain why?

20.2 Please provide estimates of the assets' expected life.

21. Reference: Exhibit B-1, page 17

Table 10: Indicative annual revenue requirement at project completion – 2020

Income Taxes	0	Blended corporate tax rate of 27.0% and CCA deduction rate of 8.0% annually
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21.1 Please provide estimated income taxes for a typical operating year, such as the year 2025.

22. Reference: Exhibit B-1, page 17

Table 10: Indicative annual revenue requirement at project completion – 2020

Interest	59,289	As per deemed corporate structure: debt/rate base of 57.5% and blended interest rate of 4.5%
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22.1 Please provide the calculations for the interest cost.

23. Reference: Exhibit B-1, page 17

Table 10: Indicative annual revenue requirement at project completion – 2020

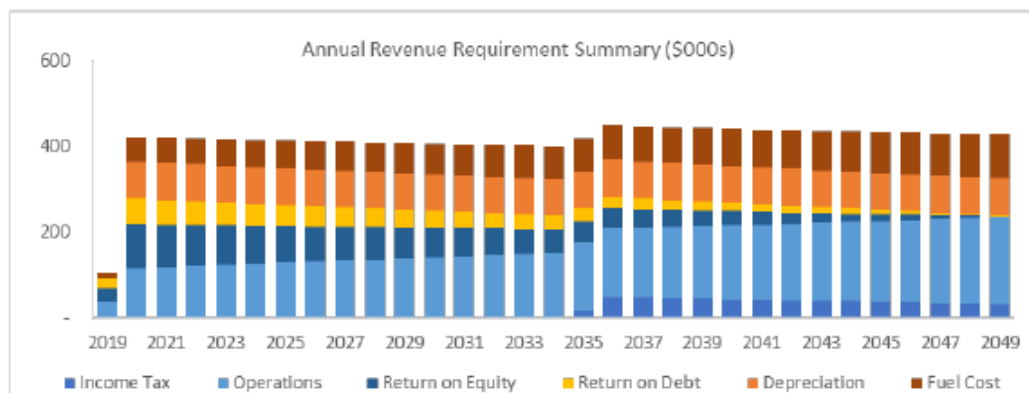
Return on Equity	102,344	As per deemed corporate structure: equity/rate base of 42.5% and return of equity of 9.5%
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23.1 Please provide the calculations for the Return on Equity.

23.2 Please confirm that the DCS will not experience any competition for district cooling.

24. Reference: Exhibit B-1, page 18

Figure 2: Indicative annual revenue requirements



4.5 Indicative Rates

Creative Energy plans to implement a two-part rate structure consisting of a fixed and a variable charge. The variable charge would recover fuel costs and would therefore be adjusted annually, or as needed, to flow-through actual energy costs related to the cost of electricity. The fixed charge would recover the remainder of the annual revenue requirement and would be a charge per square meter of connected floor area, consistent with other thermal energy systems. Each customer would pay the same rate.

24.1 Please confirm that commercial and residential customers will be charged the same per square meter rate.

24.2 Please clarify that a charge per square meter would not necessarily reflect the amount of cooling used by the individual customer, if some customers require more cooling than others.

25. Reference: Exhibit B-1, page 18 and 19

Figure 3 illustrates an indicative fixed charge assuming a levelized rate structure, a structure that would support stable, predictable and competitive rates. Creative Energy estimates that under a levelized fixed charge the revenue to cost ratio would be approximately 95 percent in the initial years of the term of customer service and approximately 120 percent at the end of the 30-year term, which would therefore require a revenue deficiency deferral balance to be carried forward for recovery over the initial years of the contract term. Figure 4 illustrates the indicative variable charge over the 30-year contract term.

The indicative fixed and variable charges illustrated in Figures 3 and 4 are in the same range as the Stream A rates that Creative Energy has contracted for with customers for cooling services at its Kensington Gardens TES.

Figure 3: Indicative levelized fixed rate

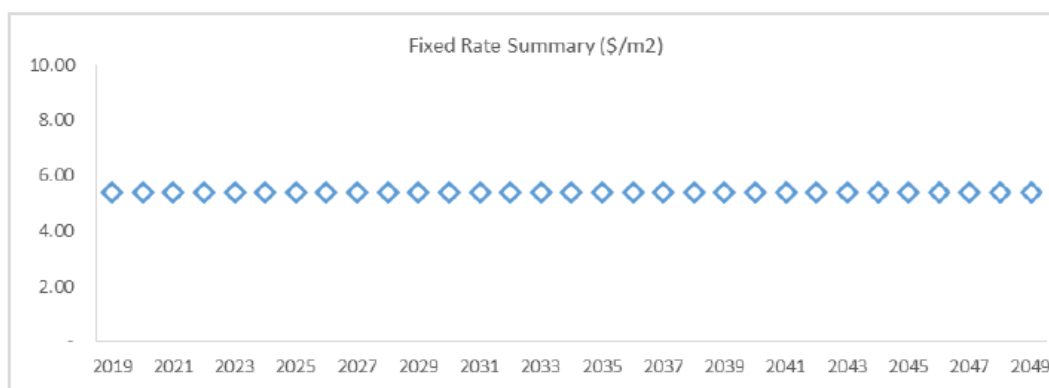
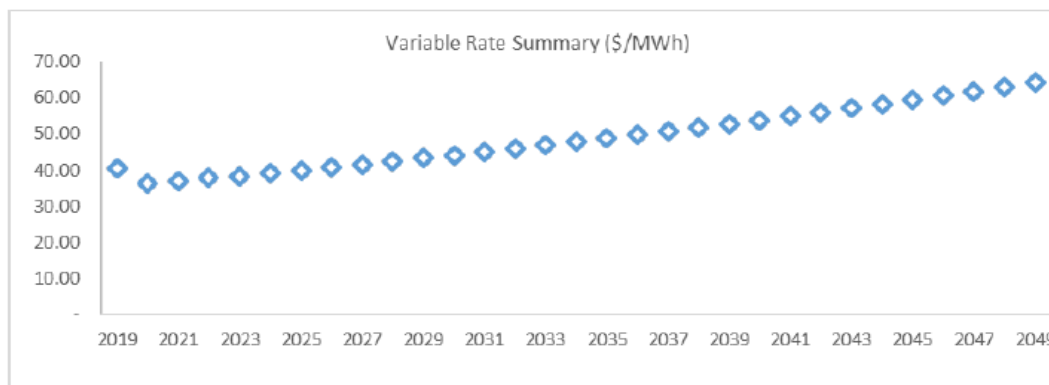


Figure 4: Indicative variable rates



25.1 Please provide the rates for Kensington Gardens.

26. Reference: Exhibit B-1, page 20

5.2 Operations

The operations and reliability risk of the DCS is low.

Creative Energy has extensive experience managing thermal energy systems. Creative Energy's experience in operating thermal energy systems of this nature, along with the reliable technology being implemented will result in minimal to no risk in operating and maintaining the DCS outside of normal practice. In addition, the proposed system is entirely self-contained within the development, and therefore poses no risk from additional operational complexity that may arise from an extension of the system.

Furthermore, Creative Energy has previously purchased and operated a DCS from the developer of the Kensington Gardens project, which was approved by the BCUC as a Steam A application. While Creative Energy has primarily operated thermal energy systems that supply heating energy in the past, the company also possesses expertise in cooling systems as well, operating the DCS at of Kensington Gardens. Thus, Creative Energy has a good understanding of the issues associated with operating a DCS that it has not designed and has various operating procedures in place to ensure a reliable delivery of service.

- 26.1 Is the technology the same as that utilized by Kensington Gardens? Please explain.
- 26.2 Did Creative Energy utilize information from Kensington Gardens when establishing its expected operating costs, or did Creative Energy utilize information from thermal energy systems? Please explain.
- 26.3 Please briefly discuss the differences in operating issues and management requirements that arise from thermal heating and cooling systems.

27. Reference: Exhibit B-1, page 20

5.3 Load

There is very little load risk associated with the DCS. The entirety of DCS load is comprised of two customers: Westbank and the Strata Corporation. The majority of load will be in place when Creative Energy purchases the DCS, as Vancouver House Buildings 1 and 2 will be complete. The remainder of the load, Vancouver House Buildings 3 and 4, will come online shortly after and Creative Energy will only acquire the DCS once the cooling plant is proven to serve all 4 buildings as designed.

The design of the DCS was properly sized to the load requirements, with recognition of the lumpy nature of the investment in the central plant chillers. The DCS peak capacity of 3,165kW exceeds the estimated new production requirement (the diversified peak cooling requirement) of 2,438kW, ensuring that the DCS can meet the expected load requirements.

- 27.1 Please provide the schedule for when Creative Energy intends to purchase the DCS.

- 27.2 Please provide a graph showing the anticipated load development over time, broken out by customer class.
- 27.3 Please provide the scheduled occupancy rates over time broken out by customer class and square footage.
- 27.4 Please identify which party will assume the risk if occupancy rates are lower and/or later than expected.
- 27.4.1 Please quantify the risks if the occupancy is reduced by 10%, 20% and 50% of anticipated over the next 5 years. Please break-out by customer class.
- 27.4.2 Please quantify the reduction in risk that Creative Energy could achieve by purchasing the DCS once the load was established at:
- a) 50% capacity;
 - b) 75% capacity;
 - c) 90% capacity; and
 - d) 100% capacity.

28. Reference: Exhibit B-1, page 21

6 Provincial Government Energy Objectives and Policy Considerations

The DCS aligns with a number of provincial government objectives under the *Clean Energy Act* as summarized in Table 11 below.

Table 11: DCS support for British Columbia's Energy Objectives

Energy Objectives (Section 2 of <i>Clean Energy Act</i>)	Contribution of DCS Project
(a) to achieve electricity self-sufficiency	N/a
(b) to take demand-side measures and to conserve energy, including the objective of the authority reducing its expected increase in demand for electricity by the year 2020 by at least 66%	N/a
(c) to generate at least 93% of the electricity in British Columbia from clean or renewable resources and to build the infrastructure necessary to transmit that electricity	N/a
(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	This project will support one or more innovative low carbon energy sources.
(e) to ensure the authority's ratepayers receive the benefits of the heritage assets and to ensure the benefits of the heritage contract under the <i>BC Hydro Public Power Legacy and Heritage Contract Act</i> continue to accrue to the authority's ratepayers	N/a
(f) to ensure the authority's rates remain among the most competitive of rates charged by public utilities in North America	N/a
(g) to reduce BC greenhouse gas emissions	The project will reduce GHG emissions upwards of 4,000 tonnes per year at full build-out relative to business-as-usual.
(h) to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia	N/a
(i) to encourage communities to reduce greenhouse gas emissions and use energy efficiently	- District energy systems promote energy efficiency. - The DCS uses electricity only

- 28.1 Please describe the one or more low carbon energy sources that are being utilized in the Project, and why they may be considered innovative.
- 28.2 Please describe the 'Business As Usual' case for GHG emissions related to cooling, and how the 4,000 tonnes per year were calculated.
- 28.3 Please explain how District energy systems such as Creative Energy's proposal promotes energy efficiency relative to other options for cooling.
- 28.4 Please describe the incentives at work for promoting energy efficiency, particularly in light of the proposed standard rate based on square footage and not on use.
- 28.5 Please describe how DSM activities will be incorporated into the District cooling system.

29. Reference: Exhibit B-1, page 23

The Project will only directly impact the occupants of the Vancouver House Development. Westbank, as the initial sole customer of the DCS, is fully aware of the DCS and does not require further information. All potential purchasers of units in the residential tower (Vancouver House Building 1 and 2) were provided with information about the DCS as part of the disclosure statement for the development. An extract of the relevant portion is copied for reference below. Future members of the Strata Corporation were also informed about the DCS during the marketing of units in the residential tower and thus were able to purchase on an informed basis.

It is intended that the Development will be designed to accommodate a connection to a district energy utility (the "District Energy Utility"), for the provision of domestic hot water, heating and cooling to the Development by way of community energy plants and systems operated by a utility provider (the "Utility Provider"). The Utility Provider may be Creative Energy Vancouver Platforms Inc., a utility regulated by the British Columbia Utilities Commission and an entity that is related to the Developer. A District Energy Utility Charge may be registered on title to the Lands to secure the obligation of the Strata Corporation to connect to the District Energy Utility in the future. If the Development is connected to the District Energy Utility prior to its completion, the Developer will enter into or cause the Nominee to enter into and cause the Strata Corporation to assume or to cause the Strata Corporation to enter into a service agreement (the "District Energy Utility Service Agreement"), which may also include the owners of the Rental Parcel, the Remainder Lands and the Granville Lands and the Utility Provider, for the provision of such utilities to Development, the Rental Component, the Commercial Component, the Building 3 Component and the Building 4 Component by the Utility Provider. Rates and service agreements will be regulated by the British Columbia Utilities Commission.

The Developer's disclosure statements to potential purchasers in Vancouver House Building 2 indicated that the Vancouver House Development was intended to accommodate a connection to a district energy utility for cooling services. The disclosure statement also indicated that the Developer would enter into and cause the Strata Corporation to assume a service agreement for the district energy utility.

- 29.1 Is the current DCS part of, or associated with a larger District Energy Utility that will provide either domestic hot water and/or heating, or does Creative Energy expect to pursue these separately? Please explain and provide details as to the current status of the District Energy Utility.
- 29.2 Does Creative Energy intend to have Commission review of the District Energy Utility? Please explain.
- 29.2.1 If yes, when will this review occur?
- 29.2.2 If no, why not.
- 29.3 Will Creative Energy maintain cost separation between the DCS and utility and various aspects of the District Energy Utility? Please explain why or why not.
- 29.4 How will Creative Energy ensure that there is no cross-subsidization between any aspects of the District Energy Utility, and the steam utility? Please provide details.

30. Reference: Appendix 3 Cover and page 1

Appendix 3
Customer Service Agreement template

CUSTOMER SERVICE AGREEMENT

CREATIVE ENERGY VANCOUVER PLATFORMS INC.

NEIGHBOURHOOD ENERGY SYSTEM

THERMAL ENERGY SERVICE

CIVIC ADDRESS: ♦

LEGALLY DESCRIBED AS:

♦

TERMS & CONDITIONS OF CUSTOMER SERVICE

- 30.1 Creative Energy describes the Customer Service Agreement as a Template; please explain why Creative Energy does not provide a more developed Customer Service Agreement at this time.
- 30.2 Please explain whether or not the Customer Service Agreement will incorporate all aspects of cooling, heating and hot water, or if the Customer Service Agreement will address cooling discretely, and please provide a rationale.