

November 20, 2018

E-Filed

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British Columbia Utilities Commission  
Sixth Floor, 900 Howe Street  
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Attention: Mr. Patrick Wruck, BCUC Secretary

**Re: Creative Energy Vancouver Platforms Inc. ("Creative Energy")  
Application to the British Columbia Utilities Commission ("BCUC") for a CPCN and  
Approval of Corporate Reorganisation ("Application")  
Project No. 1598962**

Dear Sir:

On behalf of Creative Energy, we enclose Creative Energy's final argument for filing in accordance with the regulatory timetable established by BCUC Order No. G-219-18.

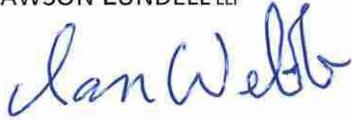
Creative Energy has the following submissions regarding further process at this time.

Firstly, Creative Energy is still requesting the BCUC Panel's final order on the Application by the end of 2018. We appreciate the Panel's efforts to establish a timetable that enables the Panel to do so. The timetable for arguments provides for all arguments and reply argument to be submitted by December 10, 2018, providing the Panel with three weeks, over the holiday season, for its deliberations. There is the possibility that the Panel might have further questions as the Panel deliberates. If the Panel does have further questions, we would prefer that the Panel has the opportunity to get answers rather than make its decision in the context of unanswered questions. Accordingly, we propose that if the Panel has further questions these could be answered in an oral argument phase. The format of the oral argument phase would not be for counsels to read their filed written arguments; rather, the format would be for counsels to answer the Panel's questions about their written arguments. If this proposal pleases the Panel, we could be available for such oral argument anytime convenient to the Panel during the weeks of December 10<sup>th</sup> and December 17<sup>th</sup>.

Secondly, assuming the Panel grants the requested Order approving the Application, the next urgent matter will be to obtain Lieutenant Governor in Council ("LGIC") consent to the amalgamation step of the Proposed Reorganization. As discussed in the Application and in Exhibit B-10, LGIC consent is required for Creative Energy to proceed with the amalgamation step of the Proposed Reorganization, and the LGIC will decide whether to grant consent in consideration of a Commission report on the matter. Accordingly, assuming the Panel grants the requested Order approving the Application, we would request that the Panel issue its report to the LGIC regarding the amalgamation step at the Panel's earliest convenience.

Yours very truly,

LAWSON LUNDELL LLP



Ian Webb

Encl.

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**BRITISH COLUMBIA UTILITIES COMMISSION**

**Creative Energy Vancouver Platforms Inc.  
Application for a Certificate of Public Convenience  
and Necessity for Beatty-Expo Plants and Reorganization  
Project No. 1598915**

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**Creative Energy Vancouver Platforms Inc.  
Final Argument**

**November 20, 2018**

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## 1. Introduction

### 1.1. The Creative Energy Plant

1. In the 1960s, Vancouver faced the problems of pollution and inefficiencies involved in heating buildings through individual boiler plants using fuel oil and coal. A visionary group of local engineers and entrepreneurs looked at ways to minimize the smoke, ash and heat being pumped into the air by the individual boilers. Their solution was a new community/district energy heating company with a centralized boiler plant located in a pre-existing building at 720 Beatty Street.
2. Creative Energy Vancouver Platforms Inc. ("**Creative Energy**", then called Central Heat Distribution Limited) used efficient gas boilers to produce steam for distribution to individual buildings through a network of underground pipes. This provided customers with the lowest cost thermal energy in Vancouver, and allowed them to remove the individual boilers, fuel oil, coal and stacks from their buildings.
3. Creative Energy has grown its underground pipe network to extend over 14 kilometers and serve over 200 buildings, with a total floor area of about 45 million square feet, in Vancouver's downtown core. The long-term customers of Creative Energy include BC Place Stadium, Roger's Arena, Vancouver Public Library, Queen Elizabeth Theatre and retail, office, commercial and residential buildings.
4. Over the more than 50 years of steam plant operations, the plant has been properly maintained and has provided highly reliable service to the customers; however, some of the major equipment is now at or past its design life of 50 years. The plant is the only source of steam generating capacity for Creative Energy customers, and it does not have N+1 redundancy such that the sudden loss of a boiler during periods of peak heating demand would require service curtailment.<sup>1</sup> In the absence of redundancy, proactive replacement of ageing equipment is particularly important, given there would be considerable complexity and lead time required to deal with a catastrophic failure of

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<sup>1</sup> See the response to BCUC IR 2.89.3.

equipment. It is obviously important to avoid curtailing heat to customers during a period of peak heating demand (*i.e.*, when it is very cold outside).

5. The building enclosing the steam generating plant and related equipment predates the steam plant. The building was originally built in 1949 to house the printing presses of the Vancouver Press. The previous owner of the building made additions to the structure in or around 1953 and 1957. Creative Energy first occupied the building in 1968, and made additions to the structure in 1990 and 1994.
6. The building stretches along a north-south axis, with the sole loading point for major equipment at the south end. The steam equipment was generally installed along this axis, starting in the north end of the building for the first boilers and proceeding south as further boilers were installed over the three decades of growth. Importantly, the result is that the oldest boilers are at the north end of the building, inaccessible from the loading doors at the south end.<sup>2</sup>
7. Moreover, Read Jones Christoffersen Ltd. has conducted a structural seismic assessment of the building and advises that the seismic resistance of the building is poor.<sup>3</sup> The building was constructed before there were standards for seismic resistance. The only structural components above the ground level with seismic resistance are the concrete walls around the stairwell in the south of the building and the steel braces in the 1994 expansion. The existing concrete walls above grade are relatively small, and have reinforcement details which are known to exhibit poor performance during earthquakes. As we all know, there is significant risk that the Lower Mainland will be impacted by a major seismic event. Further, the following hazardous materials are

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<sup>2</sup> Application, page 19, Figure 3.

<sup>3</sup> Read Jones Christoffersen's report is provided in Appendix E of the Application.

present from the original construction: asbestos, lead, silica, mercury, polychlorinated biphenyls (PCBs) and ozone depleting substances.<sup>4</sup>

8. The plant includes several pieces of major equipment, including six natural gas / no. 2 fuel oil fired boilers, deaerators, a generator and feedpumps producing 225 psig steam. The plant equipment has been properly maintained, evidenced in part by the high record of reliable service over many years. The plant's condition is no less than ought to be expected for plant of this age. Several pieces of major equipment have exceeded their design life. Three of the six boilers (Boilers #1 to #3) are at or have exceeded their design life, and Boiler #4 is only five years from exceeding its design life.<sup>5</sup> The newest of the boilers (Boiler #6) is 27 years old, built in 1991. Creative Energy avoids operating Boilers #1 and #2 at any more than 50 percent of their nameplate capacity because doing so has caused cracks to develop in the tubes and a higher maintenance requirement. The four oldest boilers provide 69 percent of the plant's annual steam generation.<sup>6</sup>
9. The boilers are less efficient than modern equipment, and do not have the Continuous Emissions Monitoring instrumentation of modern boilers. Boiler #6 is the only boiler with low nitrogen oxides (**NO<sub>x</sub>**) burners. Boiler #6 uses Flue Gas Recirculation to meet the boiler's NO<sub>x</sub> specifications. Boilers #4 and #6 are the only boilers with Burner Management Systems. Metro Vancouver currently permits the plant to emit NO<sub>x</sub> at 80 ppm; whereas Metro Vancouver's current general standard is significantly lower at 30 ppm.<sup>7</sup> The existing economizer, which was installed by a third party under an ESCO-type arrangement 20 years ago, is also reaching the end of its expected life and showing

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<sup>4</sup> Pinchin Ltd.'s Hazardous Materials Assessment Report is provided in Appendix F of the Application.

<sup>5</sup> Application, page 20, Table 2.

<sup>6</sup> *Ibid.*

<sup>7</sup> Application, section 6.4.

degradation in availability and performance as well as increasing maintenance requirements.<sup>8</sup>

10. Fuel oil is stored in four underground single-wall steel storage tanks that were installed in 1968. The tanks are considered sound; however, they are 50 years old and contain thousands of gallons of fuel oil. This presents significant risks.
11. Creative Energy also owns office space over the existing steam plant with approximately 8,600 square feet of leasable space. A portion of this office building is used for Creative Energy's own office space. The rest is currently leased to third parties. The costs and revenues from these non-regulated uses of the building are excluded from steam rates. The office space occupied by Creative Energy has limitations, including end of life mechanical and HVAC systems, and does not conform to current codes and standards for accessibility.<sup>9</sup>
12. In summary, the plant equipment has been properly maintained over its life, but several pieces of major equipment have exceeded their design life. Steam service to customers relies heavily on equipment that has exceeded or is about to exceed its design life and the plant does not have N+1 redundancy. There are also significant risks of service interruption posed by a failure of the older equipment given the lead time for replacement and the layout of the plant with the oldest equipment at the north end of the building, inaccessible from the loading doors at the south end. There are also significant risks posed by catastrophic failure of the building enclosing the plant which has poor seismic and fire resistance reflecting the standards of the time period in which it was originally constructed.
13. In order to maintain steam service reliability to customers for years to come, the plant and building enclosing it require significant re-investment as does the office space.

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<sup>8</sup> See the response to BCUC IRs 1.3.2 and 1.3.2.1.

<sup>9</sup> Application, section 7.

## 1.2. The Opportunity

14. Creative Energy has been exploring options for refurbishing or replacing the end-of-life components of the steam plant, as well as options to reduce seismic risks, for a number of years.
15. In the course of exploring options for refurbishing or replacing the end-of-life components of the steam plant and developing the vacant land portion of 720 Beatty Street, Creative Energy and its shareholders within the Westbank group identified a unique opportunity to upgrade the steam plant and office space as part of a larger redevelopment of the site and adjacent area, without interrupting steam service and at lower cost to customers than the alternatives. The opportunity is to first build a smaller off-site plant that will be operational and serve steam customers during the summer and shoulder seasons while the existing plant undergoes renovation work (collectively, the “**Proposed Project**”), all in coordination with redevelopment by others of the space above and adjacent to the existing plant.
16. The Proposed Project has been in development since mid-2016. Creative Energy’s parent company (“**Creative Energy Canada**”) has already incurred \$1.45 million to identify and confirm means to unlock the development potential of the property without impacting steam service to customers and to develop the framework and agreements needed for the Proposed Project to proceed. This was no small achievement. The Developer (Westbank) has also incurred considerable internal and external costs including those to confirm the concept, negotiate agreements, advance design work, and prepare rezoning materials. The utility, Creative Energy, is not responsible for these costs.
17. The Proposed Project includes the use of space (under a statutory right of way agreement with the B.C. Pavilion Corporation (“**Pavco**”)) at the base of BC Place Stadium across the street from the existing steam plant to build a new plant (the “**Expo Plant**”)

that will be approximately half the size of the existing plant at Beatty Street (the “**Beatty Plant**”).

18. The new Expo Plant will have two new boilers with high-efficiency and low-NO<sub>x</sub> equipment, and will be interconnected with the existing Beatty Plant and steam distribution network headers at the Beatty site.
19. When the Expo Plant is commissioned and operating, it will be possible to temporarily shut down the Beatty Plant during the low-demand summer and shoulder seasons, and renovate it without interrupting steam service to customers. As part of the renovation, the oldest boilers at the Beatty Plant will be demolished as will the existing office space. Older ancillary equipment such as the fuel oil tanks will be replaced. The renovated Beatty Plant will be smaller than the existing plant, and will have space and ancillary equipment to accommodate some expanded generating capacity in the future.
20. When the Proposed Project is complete, Creative Energy will have two smaller interconnected plants built to modern standards for fire and seismic resistance, with hazardous materials abated and removed, and with improved efficiency, which will enhance long-term service reliability for customers, reduce natural gas costs and GHG emissions, and improve local air quality.
21. The Proposed Project to construct the Expo Plant and renovate the Beatty Plant is planned to be coordinated with redevelopment by a developer within the Westbank group (the “**Developer**”) of the space above and adjacent to the existing Beatty Plant site which is surplus to the requirements of the utility. The Developer plans to redevelop this surplus space with an office tower, retail space and enhanced and beautified public areas including a public plaza between Beatty Street and BC Place Stadium. For greater certainty, the Proposed Project does not include the Developer’s project. The two projects are separate, though the design and construction of each project will be closely coordinated with the other. The Developer’s project will also be coordinated with the removal of the adjacent Georgia Street viaducts by the City of Vancouver.

22. The City of Vancouver supports the Proposed Project and has provided a letter of support that is included with the Application in Appendix J.
23. The Developer will pay for more than two-thirds of the direct capital cost of the Proposed Project. The Developer will also bear costs indirectly related to the new Beatty Plant, including costs to demolish and remove some equipment, relocate other equipment, additional civil costs and protection measures for construction activities around the plant, a new enclosure surrounding the plant, the cost of constructing the new office space, and the cost of temporary office space during the redevelopment. Piggy backing on the Developer's project enables Creative Energy to move forward with a very cost-effective and very low-risk solution for providing safe and reliable steam service to customers for years to come.
24. The Proposed Project will remedy all of the major issues with the ageing equipment, building and office space, and significantly increase plant efficiency, reducing natural gas consumption and carbon taxes. The incremental impact to customer bills is conservatively forecast to be only 3.8% in 2023 relative to a business-as-usual baseline that assumes no capital investment beyond the sustaining capital forecast in Creative Energy's most recent Revenue Requirements Application.
25. Importantly, the bill impact over the long term is significantly lower than that of any viable alternative.

## **2. Approvals Sought from the BCUC in this Application**

26. Section 2 of the Application provides a detailed list of the approvals requested from the BCUC. A draft final order is provided in Appendix O to the Application. Nothing has changed since the Application was filed, and the requested BCUC approvals remain as specified in the Application and draft final order provided.
27. The following table identifies the section in this Final Argument where each of the five approvals sought from the BCUC is addressed.

Approval Sought (Application Section 2)	Addressed in this Final Argument
1	Section 3
2	Section 3.4.1
3	Section 3.5
4	Section 4
5	Section 5

28. The approvals requested in the Application should be considered as a whole in the sense that no one approval is needed in the absence of all the others. For example, without the requested CPCN for the construction and operation of the Proposed Project, including the Expo Plant, interconnection facilities and Beatty Plant renovation, there would be no need for acceptance of the *UCA* s. 44.2 expenditure schedule, nor approval of the regulatory deferral account to record the undepreciated net book value of assets to be retired as part of the Proposed Project, the PavCo service agreement or the Proposed Reorganization steps. Similarly, without the requested BCUC approval of the Proposed Reorganization steps, the Proposed Project cannot proceed and there would be no need for the requested CPCN or the other approvals.
29. In short, if the requested orders are not granted without material variation from what has been applied for, the parties to the Trust and Development Agreement<sup>10</sup> would need to 'go back to the drawing board' and reconsider their options. This would delay the replacement of aging equipment, reduction in fuel costs and GHG emissions, and reduction in seismic risks.

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<sup>10</sup> The Trust and Development Agreement is a central document for the Proposed Project. It specifies all of the terms regarding allocation of costs and risks of the project. A copy of the agreement is provided as Exhibit B-1-2.

30. The Application is organized according to the major approvals sought from the BCUC:

Application Part	Major Approval Topic
Part 1	CPCN <ul style="list-style-type: none"> <li>• Assessment of existing utility assets (ss. 6 and 7)</li> <li>• Load forecast and resource balance (s. 8)</li> <li>• Project drivers (s.9)</li> <li>• Project description – Expo and Beatty Plants (s. 10)</li> <li>• Project risk management (s. 11)</li> <li>• Creative Energy project cost, economic analysis (NPV), rate and bill impacts (ss. 12, 13 and 15)</li> <li>• Retired asset value (s. 13.4)</li> <li>• Project alternatives (s. 14)</li> <li>• Other CPCN Guidelines considerations (ss. 16, 17 and 18)</li> </ul>
Part 2	PavCo Service Agreement (s. 18.5)
Part 3	Corporate reorganization (ss. 19 and 20)

31. This final argument is organized in the same manner as set out in the table above.

### 3. CPCN for Proposed Project

#### 3.1. Project Drivers

32. At the heart of the Proposed Project is the need to replace the end-of-life boilers; however, it is important not to lose sight of the fact that replacing the end-of-life boilers is not the only objective of the Proposed Project. In addition to major equipment at end-of-life, there are long-standing issues with the plant and the building that need to be addressed. The opportunity is to address the multiple drivers in a coordinated manner as part of one project.<sup>11</sup>

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<sup>11</sup> The Project is not intended to address load growth. Section 8 of the Application provides Creative Energy's forecast Load / Resource Balance, and the assumptions therein.

33. The multiple drivers for the Propose Project are set out and explained in detail in Section 9 of the Application, and summarised below.

1) Maintain Reliable Service to the Customers for the Long-Term

Creative Energy's customers, including hospitals, office buildings, residential buildings, hotels, and entertainment venues, rely on Creative Energy for thermal energy for space heating, domestic hot water heating and other purposes such as heat for make-up air units, laundry facilities and sterilization equipment. It is imperative that Creative Energy provides continuous and reliable thermal energy service to meet the load for years to come.

2) Improve Safety

The building structure housing the plant has poor seismic resistance, and does not conform to modern standards for seismic and fire resistance. There are hazardous materials embedded in the plant from the original construction materials. The major item is the presence of asbestos in almost all of the pipe insulation and the boiler refractory and insulation. Several major components of the plant are 50 years old, and do not have modern safety devices such as automatic fail-safes.

3) Improve Efficiency

One of the largest expenses associated with operating the plant is the cost of fuel (primarily natural gas, and secondarily fuel oil). Fuel efficiency will be significantly improved through the upgrades included in the Proposed Project. The Proposed Project also includes the opportunity to reduce Creative Energy's water demand on local reservoirs by up to about 7% or 8,000,000 liters per year at no incremental cost to Creative Energy (relative to the cost of water supply from the City of Vancouver).

#### 4) Improve Emissions

Two of the boilers to be replaced (Boilers #1 and #2) have no modern burner management or Low-NOx burners. The new boilers will all be equipped with Low-NOx burners and have integrated state of the art burner management systems. The Proposed Project is expected to reduce NOx emissions to meet Metro Vancouver's current standard of 30ppm. The flues of both plants will also be significantly higher than the current flues, improving local dispersion of emissions. The fuel efficiency improvement noted above will also result in lower GHG emissions and improved local air quality.

#### 5) Improve Staff Work Spaces and Accessibility

The current offices are dated, have poor ventilation, minimal access to daylight, are not handicap accessible, and have poor ergonomics. The current facilities (change room, lunch room and washrooms) for plant and distribution staff are dated, have poor ventilation, minimal access to daylight, are not handicap accessible, and have poor ergonomics. The new office space and facilities will address these issues.

34. The opportunity of proceeding with the Proposed Project now addresses all of these multiple needs simultaneously and is better for customers and the public than the alternative of continuing to rely on the existing plant and in-situ equipment replacements and upgrades.

### **3.2. Components of the Proposed Project**

35. The components of the Proposed Project are detailed in Section 10 of the Application, pages 35 to 55. Rather than repeat those 20 pages here, we refer the reader to that section of the Application for the details. In summary, Creative Energy will receive the following assets:

- the renovated Beatty Plant, including the New Plant and Ancillary Equipment (as defined in the Trust and Development Agreement) and associated statutory rights of way, airspace parcel and parking,
  - the Expo Plant including the interconnection, enclosures and associated statutory right of way, and
  - new office space including associated airspace parcel.
36. Creative Energy will also receive the benefit of the New Plant Premises (as defined in the Trust and Development Agreement) and remediation of any hazardous materials which will be at the Developer's cost.
37. The construction of the components of the Proposed Project is sequenced to ensure there is no interruption of steam service to the customers, as follows.
- The first phase is the construction of the Expo Plant including the interconnection to connect it to the Beatty Plant and steam distribution system headers at Beatty. Shortly after BCUC approval of this Application (assuming approval is granted), Creative Energy will commence detailed design work and place the fabrication & delivery orders for the boiler and feedwater packages for the Expo Plant.<sup>12</sup> Actual construction at the Expo Plant is expected to commence in March 2019 and be completed by January 2020. The Expo Plant will have 400,000 pounds per hour of steam generating capacity which is more than sufficient to meet the summer peak load of approximately 100,000 to 120,000 pounds per hour.
  - The Creative Energy team will move to temporary office space in January 2020.
  - Completion of the Expo Plant will allow the Beatty Plant to be shut down from April to October of 2020, during the low demand months. The Expo Plant will have more than sufficient capacity to meet the summer peak load. The Beatty Plant will only be

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<sup>12</sup> See the responses to BCUC IR 2.104 series.

shut down with the approval of Creative Energy, and it will not be shut down unless the Expo Plant is in service. Shutting down the Beatty Plant during the summer and shoulder season will allow work to be completed on cold equipment at Beatty, significantly reducing costs and risks. During this first shutdown of the Beatty Plant, the building housing the steam plant will be removed; Boilers #1, #2 and #4 will be abated and demolished; the FortisBC Energy gas service will be disconnected and relocated; and the feedwater pumps will be relocated.

- The Beatty Plant will be restarted in October 2020, and the interconnected Beatty and Expo Plants will provide steam service to the customers during the high demand winter period.
- The Beatty Plant will be shut down a second time from April to October of 2021, again during the low demand months, at which time the BC Hydro service will be disconnected and relocated, a temporary water service will be installed, and a temporary flue will be installed.
- The Beatty Plant will be restarted in October 2021 again for the interconnected plants to provide steam service to the customers during the high demand winter period.
- The Beatty Plant will be shut down a third time from April to October of 2022, again during the low demand months, at which time the flues will be extended to the top of the Developer's office tower, temporary flues will be removed and permanent water service will be reinstated.
- The Beatty Plant will be restarted on a final basis in October 2022.
- The Developer's project is expected to be completed in 2023, at which time Creative Energy will move into office space in the Developer's tower. Tenant improvements will be the responsibility of the Developer and will be included in the space returned to Creative Energy.

38. The BCUC's IR No. 2 indicates that there is interest in and misunderstanding of the status of the Developer's application to the City of Vancouver for rezoning approval, and whether the status of such rezoning has any impact to the above project schedule. Indeed, BCUC staff indicate that they have searched for details on the City of Vancouver's website for current and approved rezoning applications. For clarity, the City's website does not reflect the status of the Developer's rezoning application. Creative Energy also notes that the report from the independent appraiser (the "Appraiser") retained by the BCUC (Exhibit A-15) contains incorrect statements on the status of the Developer's rezoning application. The status of the Developer's rezoning application is explained in the response to BCUC IR 2.126.1, and summarised as follows.

- The Developer submitted a rezoning letter of enquiry to the City of Vancouver in February 2018. A letter of enquiry is used to obtain early advice about a proposal before submitting a formal rezoning application. The Developer's project is particularly complex because of the existing steam manifolds and headers that run through 720 Beatty Street, the evolving plans of the City for removing the Georgia Street viaducts, and the constraints posed by the view cone.
- The Developer submitted a formal application to the City of Vancouver in May 2018. City staff had indicated that all of the setback issues had been resolved; however, shortly after an intake meeting following the May 2018 submission, the City raised new setback issues arising from their parallel review of the road geometries around the site as a result of the viaduct removal.
- The Developer's architects had to find creative solutions to these new set back issues. At the beginning of November 2018, the Developer met with City staff to discuss proposed solutions. The Developer has addressed the new issues raised by the City and is in the process of submitting a revised package.
- Most City departments have now seen the proposal multiple times and the City supports the Proposed Project and has provided a letter of support for it that is

included with the Application in Appendix J, so the turnaround time for the revised submission should be shorter than the normal process.

39. Exhibit A-19, BCUC IR No. 1 to Grover Elliot asked the Appraiser what would be a reasonably expected timeframe for approval of the Creative Energy rezoning application, once submitted. Creative Energy submits that the rezoning applications referenced by the Appraiser in the Appraiser's Exhibit A-20 response are not "like" projects nor are they necessarily rezonings submitted by experienced applicants. All of the projects referenced by the Appraiser are residential projects or mixed-use projects that have a small amount of retail with residential on top; none of them are office use. Importantly, the City and the Vancouver Economic Commission are encouraging office space development, and the Developer's project contains office space and no residential uses.
40. There is a much better precedent for the timeframe for rezoning approval that, for some unknown reason, the Appraiser did not mention – an office building project at 400 West Georgia Street that is being undertaken by Westbank (the same developer as the Developer referenced in this Application). Westbank submitted a rezoning application for the 400 West Georgia project. As shown on the City rezoning website,<sup>13</sup> that rezoning application was made at the end of April 2017 and received approval from City Council in February 2018, about 9.5 months from application to approval. Westbank has almost completed the excavation for that project, which started construction precisely one year after the initial rezoning application.
41. The City has already seen several iterations of the Developer's project proposed for 720 Beatty Street and 701 Expo Boulevard, and the Developer is expecting the remainder of the review process to be streamlined. The Developer has considerable experience and demonstrated track record with the City's rezoning process and with the delivery of complex projects.

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<sup>13</sup> <https://rezoning.vancouver.ca/applications/400wgeorgia/index.htm>.

42. For greater certainty, rezoning approval for 720 Beatty and 701 Expo is not required to begin the Proposed Project. The rezoning is needed for construction at 720 Beatty and 701 Expo, and the Developer would not commence construction (other than preliminary site prep) of the Beatty Plant prior to such rezoning approval. Construction at Beatty is scheduled to commence in spring of 2020 (roughly 18 months from now). The Developer is confident that rezoning enactment will be provided well in advance of that date.
43. Construction of the Expo Plant (at BC Place Stadium) does not require rezoning, and will commence prior to rezoning of the Beatty property.
44. Moreover, rezoning approval is not needed to move forward with the Proposed Reorganization, which will be completed shortly after BCUC approval and LGIC consent to the amalgamation step is provided.

### **3.3. Risks Associated with the Proposed Project**

45. The IRs submitted to Creative Energy in this proceeding suggest that there is a degree of misunderstanding as between the existence of a risk in relation to the Proposed Project, the extent to which measures will be in place to eliminate / mitigate the risk, and the extent to which customers are expected to bear any residual risk.
46. There are numerous risks associated with the Proposed Project; however, the terms of the Trust and Development Agreement<sup>14</sup> substantially eliminate / mitigate the risks for Creative Energy's customers. Importantly, pursuant to the Trust and Development Agreement Creative Energy's customers will be exposed to far lower risks than they would be for any alternative to the Proposed Project. Moreover, the Proposed Project will significantly reduce risks to customers over the long-term.

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<sup>14</sup> The Trust and Development Agreement is a central document for the Proposed Project. It specifies all of the terms regarding allocation of costs and risks of the project. A copy of the agreement is provided as Exhibit B-1-2.

47. The response to BCUC IR 2.104.10 addresses the roles and responsibilities of the parties that will be involved with designing and constructing Proposed Project. With respect to the design and construction of the new plants, this is a once-in-50-years project in the history of Creative Energy. Creative Energy has experienced project managers with successful records of project execution. Creative Energy does not have all of the skills and people internally that will be required to execute a project of this scale and complexity; nor should it given the infrequent nature of projects of this scale for the utility.
48. In regards to design, as owner and operator Creative Energy establishes the requirements and specifications of the utility infrastructure in both the schematic and detailed design phases. Creative Energy has already engaged experienced consultants for schematic design and will also secure experienced parties for detailed design. WSP has done the schematic design of the Expo Plant and Creative Energy may decide to rely on WSP to take on the full engineering role for both plants upon CPCN approval. WSP is one of the leading engineering consultancies in Canada, with a long track record of successful industrial energy projects. Recent examples include the Carillon generating station rehabilitation and retrofit, and the Cliff St boiler plant replacement (Ottawa). Ultimately, Creative Energy must be satisfied the design meets the utility's requirements and specifications. Given the Developer is responsible for all costs, the Developer can also request an additional external peer review (at its cost) of the detailed design and budgets.
49. In regards to construction, Creative Energy will engage a large construction firm with experience in constructing large, complex projects to act as General Contractor ("GC"). This is also of interest to the Developer and this is already reflected in the current project budget. The Developer also has an interest in ensuring close coordination of all elements in Creative Energy's scope and in the Developer's scope with respect to the utility infrastructure.

50. To date, the Developer has been working with Ellis Don to prepare pre-construction materials for the Beatty Plant. It is likely that Ellis Don will act as the GC for both the Beatty and Expo Plants. Ellis Don is a world-leading construction company that completes in excess of \$3.5 billion of construction annually. Many of those projects are larger and more complex than this project. Comparable projects are Parq Vancouver, Rogers Centre (Toronto), Surrey Memorial Hospital Critical Care centre and the YVR Core program.
51. Creative Energy's role in the construction process will be that of a Construction Manager, interfacing between the GC and the Project Committee (a committee composed of Creative Energy and the Developer, as outlined in the Trust and Development Agreement).<sup>15</sup>
52. The Developer will bear all risks associated with the Proposed Project, except that Creative Energy's customers will be exposed to low risks associated with:
- *Steam service reliability*
    - The Proposed Project includes shutting down the Beatty Plant three times during the summers of 2020, 2021 and 2022. There is a non-zero risk that the Beatty Plant might not be restarted in October as planned.
    - This risk is highest for the first Beatty Plant shutdown in 2020 because the work to be undertaken during that shutdown is fairly complex. The risk will be managed with proper coordination of the work. Moreover, a contingency plan will be in place to bring in temporary steam generation capacity if necessary.
    - The work to be undertaken during the second and third shutdowns of Beatty is minor (primarily involving extending the flues as the office tower gets taller) such that the risk that the Beatty Plant might not be restarted following these

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<sup>15</sup> See the response to BCUC IR 2.104.10.

shutdowns is very minor. The risk is further mitigated by the contingency plan described above.

- Importantly, the Developer bears all of the financial burden of this risk including the costs of implementing the contingency plan to bring in temporary steam generation, if needed.
- *Cost overruns*
    - The actual cost of the Proposed Project might exceed the current estimated cost. The Developer bears all of the risk of actual costs be in excess of the estimated costs, except that Creative Energy will be responsible for “costs arising from any schedule delays caused by or in the control of Creative Energy” as provided in section 17(f) of Schedule F to the Trust and Development Agreement. Please see paragraph 69, below, for an explanation. This is a low risk that is mitigated through proper planning and scheduling for the project, an experienced and competent team, and also through contract terms with the contractors who are going to build the project.
    - If Creative Energy is responsible for any such cost increase, the recovery of such amount from ratepayers would need to be approved by the BCUC, further reducing the residual risk to ratepayers.

53. Importantly, the low residual risks to customers associated with the Propose Project are far lower than the risks customers would bear under any alternative to the Proposed Project. Moreover, the Proposed Project will significantly reduce risks to customers over the long-term (i.e., upgrading to overall newer and more efficient equipment in two interconnected plants built to modern standards and enclosed in modern structures will reduce the risk of future service interruptions and also reduce exposure to fuel cost increases and carbon taxes).

54. For greater certainty, under the Proposed Project Creative Energy's customers will not bear any risk in relation to the following matters:

- risks associated with the Proposed Reorganization (e.g., any tax consequences in connection to the Proposed Reorganization and transfer of surplus property);<sup>16</sup>
- risks associated with Creative Energy retaining legal title as bare trustee of 720 Beatty and 701 Expo during the Developer's project;<sup>17</sup>
- project cost overruns due to higher costs for materials, labour, tariffs on imported materials, exchange rate fluctuations, etc.;<sup>18</sup>
- risks associated with delayed or unsuccessful securing of rights for the Interconnection piping;<sup>19</sup>
- failure to complete the Expo Plant project.<sup>20</sup>

### **3.4. Project Cost, Indicative Bill Impact and Sensitivities**

#### **3.4.1. Cost to Creative Energy**

55. The total direct capital cost of the Proposed Project is estimated to be \$53.1 million, which includes estimated capital costs of \$48.9 million plus an allowance of \$4.2 million

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<sup>16</sup> See the response to BCUC IR 1.59.3.

<sup>17</sup> See the responses to BCUC IRs 2.132.1 through 2.132.4; and 2.133.10.2 through 2.133.12.1.4.

<sup>18</sup> Pursuant to the Trust and Development Agreement, Creative Energy does not bear these costs.

<sup>19</sup> See the responses to BCUC IRs 2.140.3 and 2.140.3.1.

<sup>20</sup> The Developer is ultimately responsible for the completion of the Expo Plant, with Creative Energy maintaining the level of oversight required to ensure the as-built plant meets the design intent. If the Expo Plant project is not completed for any reason, Creative Energy will not be required to pay the \$9 million installment payment to the Developer. Moreover, if the Expo Plant project is not completed, the Beatty Plant will not be shut down and no work will be done on the Beatty Plant leaving the existing steam plant unchanged. Creative Energy's customers might not receive the benefits of the Proposed Project, but they will otherwise be unaffected if the Expo Plant is not completed for any reason.

for financing costs during construction.<sup>21</sup> A detailed forecast of the total direct project costs, by cost category and sub-category, is provided in Appendix B of this Application, which is a copy of Schedule D of the Trust and Development Agreement.

56. Creative Energy will not be responsible for the full capital cost of the Proposed Project. Creative Energy's cost for the Proposed Project consists of the following:

- (1) Payment to the Developer of \$15 million in two installments: \$9 million when the Expo Plant is completed and \$6 million when the renovated Beatty Plant is completed.<sup>22</sup>
- (2) An additional payment or payments to the Developer if (and only if) Creative Energy increases net generating capacity at the Beatty Plant within the first 20 years following completion of the Proposed Project. This secondary payment of up to \$5.25 million (\$70,000 / MW of incremental generating capacity added) was negotiated to reflect the substantial cost of the Proposed Project being subsidized by the Developer, the constraints on rates for existing customers, and the excess space and capacity of ancillary equipment that will be available to install additional generating capacity in future. Any plan to expand generating capacity in the future would be to serve load growth, and would be subject to review by the BCUC. In the meantime, existing ratepayers bear no cost for upgraded space and equipment that is available for future expansion of generating capacity.
- (3) Costs arising from certain Creative Energy "Design Amendments" or "Change Orders", if any. As provided in section 17(g) of Schedule F to the Trust and

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<sup>21</sup> The allowance for construction costs is based on Creative Energy's weighted average cost of capital (WACC). These costs will in fact be financed by the Developer and the cost of financing to the Developer will likely be higher than Creative Energy's WACC given the constraints on the Developer's financing in the Trust and Development Agreement.

<sup>22</sup> During construction, Creative Energy's portion of project costs will be funded via a no-interest loan from the Developer or an affiliate of the Developer.

Development Agreement, costs associated with design changes made by Creative Energy pursuant to written change order could relate to, for example, Creative Energy submitting a written request for a change to the scope of equipment (e.g., expand capacity of equipment beyond that specified in the detailed designs) or design of the structure that will house the renovated Beatty Plant or the new office space that will be returned to Creative Energy by the Developer.<sup>23</sup> It is important to note that Creative Energy will not be responsible for increased costs associated with design changes by Creative Energy that are considered nondiscretionary (e.g., that are to accommodate changes in prudent utility practices, arise as a result of reasons of health and safety, or are required by any Governmental Authority). Such costs are the responsibility of the Developer.<sup>24</sup>

57. Creative Energy will not be responsible for any financing costs during construction and no financing costs during construction will be capitalized or recovered in rates when the plants are in service. Creative Energy also will not be responsible for any of the costs the Developer will incur indirectly related to the Proposed Project.
58. As noted in paragraph 56, item (1), above, Creative Energy's expected cost for the Proposed Project is only \$15 million (of total estimated direct capital cost of \$53.1 million). Nothing has changed since the Application was filed and the intention remains that rate base will increase by only \$15 million as a result of the Proposed Project. Creative Energy will make the \$15 million payment in two installments: \$9 million when the Expo Plant is in service and \$6 million when the Beatty Plant is in service, and these amounts will be added to rate base respectively. Creative Energy will finance the payments based on the BCUC-allowed debt-to-equity ratio, equity thickness, and debt

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<sup>23</sup> Please see sections 9 to 12 of Schedule F of the Trust and Development Agreement.

<sup>24</sup> Please see section 17(g)(iii) of Schedule F of the Trust and Development Agreement.

room of the company at the time of each payment, in the same manner as other capital spending.

59. The contributed surplus shown in the response to Panel IR 1.1 will not be included in rate base, nor in the equity calculations nor will it have any impact on the allowed debt-to-equity ratio of the utility.
60. The allocation of costs (and risks) in the Trust and Development Agreement was negotiated among the parties in the context of:
- the magnitude of the additional costs the Developer will incur as a result of redeveloping the surplus property around utility infrastructure, based on preliminary design work;
  - the development constraints from the City, including use restrictions, and height restrictions, setback requirements and constraints related to the removal of the viaducts, which would limit available density;
  - other encumbrances on the site such as utility infrastructure (steam distribution network headers, back-up fuel tanks, flues, etc.) that would remain on site and third party commitments related to use of the property;
  - the synergies in developing the regulated and non-regulated land as a whole;
  - the existing non-utility uses of the regulated land; and
  - the value of the upgraded plant to Creative Energy customers.<sup>25</sup>
61. Creative Energy's overriding goal in the negotiations was to secure the best project alternative while minimizing risks and costs to ratepayers. Creative Energy conducted analysis of alternatives for addressing the needs of the utility. Most alternatives were

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<sup>25</sup> See the response to BCUC IR 1.33.1.

discarded because they were deemed not feasible in terms of economics, constructability and/or risk. The Alternative outlined in the Application and in section 3.6.2, below, was identified as the bare minimum Creative Energy would need to do to address the end of life equipment, including required upgrades to the plant. As noted in the Application, the Alternative is higher risk and would not address all of Creative Energy's needs (e.g., new office space). However, the cost of the Alternative was used as an absolute ceiling in the negotiations with the Developer. Creative Energy and Emanate Energy also established conditions to protect the utility from the risks of the Developer's project, including schedule controls, constraints on financing, and indemnities. Transfer of cost risk was also established as a key requirement for Creative Energy given the size of the utility, aggregate cost of the Proposed Project, and competitive constraints on utility rates.

62. As a prospective new shareholder and given the existing shareholder's interest in both the utility and the surplus property, Emanate Energy was involved with negotiations related to the Trust and Development Agreement including settling Creative Energy's initial and secondary payments toward the capital cost of the Proposed Project. Emanate Energy had consent rights over the final Trust and Development Agreement.
63. Given the above considerations, the Developer indicated that it would not subsidise all of the costs of upgrading the utility infrastructure. The Developer had limits on what it could offer in terms of subsidy.
64. Creative Energy analysed the rate and bill impacts of a range of potential costs to the utility, and also conducted analysis of all benefits and follow on effects of the upgraded plant for ratepayers. The Trust and Development Agreement parties ultimately agreed to the initial payment by Creative Energy of only \$15 million with the Developer subsidising all remaining costs and taking cost risk.

65. The \$15 million cost to Creative Energy is fixed in the Trust and Development Agreement. The Developer's cost is neither fixed nor is it the \$38.1 million difference between the \$52.1 million project cost estimate and the \$15 million payment from Creative Energy. The estimated \$38.1 million in extra costs to the Developer does not include additional costs that will be borne by the Developer directly. Some of these additional costs to the Developer that are not part of the \$38.1 million estimate include:
- \$2.5 million inducement paid by the Developer to PavCo in connection with securing the SRW for the Expo Plant.
  - The costs to demolish and remove the existing Creative Energy building and retired equipment, which may include additional soil remediation costs, and to construct a new enclosure for the new Beatty Plant. The cost the new plant enclosure alone is estimated at \$4.12 million.
  - The cost to relocate ancillary infrastructure within the Beatty Street site.
  - The cost to construct and improve the new office space that will be returned to Creative Energy. The estimated cost of new office space is \$1.37 million.<sup>26</sup>
66. The additional costs noted in paragraph 56, items (2) and (3), above, will only be incurred if Creative Energy makes a considered decision to add discretionary scope to the project or to add net generating capacity at the Beatty Plant in the future on the basis of need (e.g., load growth) and cost-effectiveness (adding net generating capacity at the Beatty Plant is better for customers than the available alternatives), and with BCUC approval as required.
67. The basis for the secondary payment of \$70,000 / MW of incremental generating capacity (payable only if Creative Energy increases net generating capacity at the Beatty Plant within the first 20 years following completion of the Proposed Project) is provided

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<sup>26</sup> See the response to BCUC IR 1.33.6.

in the responses to BCUC IRs 1.38.4 through 1.38.9. The Developer accepted the contingent, future secondary payment approach in lieu of a higher initial payment as part of its total consideration for undertaking the Proposed Project. The actual amount of the secondary contribution payment is a negotiated amount. There were several considerations for Creative Energy in agreeing to the amount, as described in the response to BCUC IR 1.38.4.

68. Creative Energy views this contingent secondary payment of \$70,000 / MW of incremental generating capacity as reasonable given the value of the Beatty Plant upgrades being subsidized by the Developer. The Developer will install additional space and ancillary equipment within the Developer's office tower project at the Developer's cost to accommodate generating capacity growth in the future. Such costs are not borne by current ratepayers. Finally, the secondary payment in the event of future expansion of generating capacity at the Beatty Plant has no bearing on the cost of generating capacity elsewhere, and Creative Energy is not precluded from adding capacity elsewhere if it is more cost effective to do so than adding capacity in the Beatty Plant.
69. In addition to Creative Energy's obligations to pay the amounts listed above, Creative Energy will also be responsible for "costs arising from any schedule delays caused by or in the control of Creative Energy", if any, as provided in section 17(f) of Schedule F to the Trust and Development Agreement. The purpose and potential scope of this obligation is explained in detail in the responses to BCUC IRs 2.106.1 and 2.106.2. Creative Energy's role in the delivery of the Proposed Project is primarily to provide design approvals (and approve change orders) and act as Construction Manager. The scope of opportunities for Creative Energy to cause project delays is limited. Costs arising from a schedule delay caused by or in the control of Creative Energy could arise, for example, where Creative Energy is required to provide an approval (such as approve a written change order from the Developer), Creative Energy's approval is unreasonably delayed (that is, Creative Energy has no reasonable reason for the delay) and that unreasonable delay in granting approval causes a project delay and increased costs to

the Developer. Creative Energy would be responsible for such incremental costs. Incremental costs associated with a reasonable delay (that is, a delay with a reasonable excuse) would not be captured. This is a typical contract mechanism for providing an incentive for the party reviewing and approving requests to remain diligent in responding to such requests to keep the overall project on schedule. As noted in the response to BCUC IR 1.51.6, Creative Energy has planned and budgeted for sufficient resources to be dedicated to the project in order to have the capacity to meet these obligations. These resources are part of the total cost of the project to the Developer. For these reasons, the most likely scenario is that Creative Energy will not be responsible for any such additional costs.

70. It is important not to lose sight of the fact that Creative Energy does not have any present expectation to incur costs under the provisions summarised in paragraph 56, items (2) and (3), and paragraph 69, above. Creative Energy does not presently expect to incur such costs, and is not presently seeking BCUC approval to recover such (non-existent) costs in rates. These matters are raised in this Application because:
- Creative Energy proposes that the BCUC include a condition on its CPCN approval that Creative Energy's rate base shall increase by \$15 million as a result of the Proposed Project, and that condition needs to further provide Creative Energy with the opportunity to apply for recovery of these (and only these) contingent additional costs. This 'carve-out' from the condition on the CPCN is to enable Creative Energy to apply for recovery of such costs. In other words, to avoid establishing a prohibition on Creative Energy making such application.<sup>27</sup>
  - Creative Energy is also seeking *UCA*, s. 44.2 acceptance of additional capital expenditures of up to \$5.25 million that will only be payable by Creative Energy if it expands generating capacity at the Beatty Plant within the first 20 years after completion of the Proposed Project. As discussed, this secondary payment to the

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<sup>27</sup> See the Application, section 2, requested Order #1.

Developer would be in the amount of \$70,000 / MW of new net generating capacity installed within the Beatty Plant during the 20-year period. Any expansion of generating capacity at the Beatty Plant would be to serve load growth and would also be subject to BCUC approval as needed.<sup>28</sup>

### 3.4.2. Rate Base Impact

71. BCUC Panel IR No. 1 (Exhibit A-24) sought clarification from Creative Energy of the amount that is expected to be added to rate base for regulatory accounting purposes as a result of the Proposed Project. Creative Energy's response to Panel IR No. 1 confirms that nothing has changed since the Application was filed and the intention remains that rate base will increase by only \$15 million as a result of the Proposed Project. Creative Energy will make the \$15 million payment in two installments: \$9 million when the Expo Plant is in service and \$6 million when the Beatty Plant is in service, and these amounts will be added to rate base respectively. There will be a difference between Creative Energy's Property, Plant and Equipment ("PPE") for the purposes of reporting in accordance with Accounting Standards for Private Enterprises ("ASPE") and the PPE for ratemaking and BCUC reporting purposes (i.e., for calculating rate base, depreciation expense and allowed return). The full cost of the Proposed Project will be recorded for ASPE accounting purposes, and for regulatory purposes, given only \$15 million of the cost of construction of the asset will go into rate base, the difference between the total project cost and the \$15 million will be recorded as contributed surplus. This contributed surplus will not be included in the rate base, nor in the equity calculations nor will it have any impact on the allowed debt-to-equity ratio of the utility.
72. Different PPE for ASPE accounting versus the accounting for ratemaking purposes is not new for Creative Energy. For example, for many years the parking lot land at the south end of 720 Beatty Street has been part of Creative Energy's PPE (at original cost) in its

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<sup>28</sup> See the Application, section 2, requested Order #2.

ASPE reporting and has been deducted for rate base and ratemaking purposes, as described in the response to BCUC Panel IR 1.3.

### **3.4.3. Indicative Bill Impacts and NPV of Proposed Project**

73. Section 13.2 of the Application provides Creative Energy's projection of indicative and cumulative rate and bill impacts of the Proposed Project in 2023 over a projected business as usual baseline to assist with understanding the costs and benefits of the project to customers. The year 2023 is used because it is the anticipated year of completion of the project. The cumulative Steam Tariff impact in 2023 is estimated to be +15.6% and the impact to the Fuel Adjustment charge is estimated to be -4.2%, resulting in a net bill impact of only +3.8% relative to the business as usual baseline, which assumes no further capital spending beyond historical levels of sustaining capital. The incremental Steam Tariff impact (relative to the baseline) is calculated to decline after 2023.
74. The Steam Tariff impact differs from the net bill impact because the customer bill is made up of:
- the Steam Tariff - covering non-fuel operating costs, capital related costs, property taxes and return for Creative Energy, plus
  - the Fuel Adjustment - a pass through charge to the customer to cover the cost of fuel (primarily natural gas), transportation charges for the fuel and any taxes related to the purchase of the fuel that are not included in the Steam Tariff.
75. The forecast reduction in Fuel Adjustment charges as a result of higher system efficiency with the new boilers, integrated system dispatch and other efficiency improvements offset the forecast increase to the Steam Tariff, resulting in the estimated overall bill impact to customers of 3.8%.
76. In addition to calculating indicative bill impact in 2023, Creative Energy also calculated the net present value (NPV) of the Proposed Project's costs and benefits, relative to a

status-quo baseline which assumes the existing plant operates indefinitely with no increase in sustaining capital and no replacement of end-of-life equipment. This NPV calculation reflected only the \$15 million payment, savings from reduced natural gas consumption, changes in non-fuel operating costs, and a reduction in near-term sustaining capital from the Proposed Project. As a result, it is a conservative estimate of the NPV of the Proposed Project to ratepayers. The analysis demonstrates that even before considering the avoided cost from the Proposed Project of likely future replacements and upgrades, the NPV of the Proposed Project will be much lower as a result of fuel cost and other net savings. The NPV analysis is summarized in Section 13.5 of the Application. The results of the analysis were updated slightly in the IR process, and the analysis was presented with a range of discount rates and analysis periods. Using a 30 year analysis period and a discount rate of 5.78%, the net present value impact of the Proposed Project is \$4.0 million.<sup>29</sup>

#### **3.4.4. Bill Impact Sensitivities**

77. The accuracy of the indicative rate and bill impact projections were tested by numerous IRs. But to be clear, Creative Energy is not requesting any approval of a rate increase in this Application. The cumulative rate and bill impact projections provided are indicative only. They are provided to assist with understanding the costs and benefits of the project to customers, and are not intended to calculate final rates.
78. The baseline used for estimating the indicative incremental rate and bill impacts in 2023 has been calculated using the assumptions stated on pages 65 to 70 of the Application. The baseline used to calculate the indicative rate and bill impacts is not a viable long-term path for Creative Energy as it includes no major capital renewal costs. As a result, the indicative incremental rate and bill impacts of the Proposed Project are exaggerated since major equipment and plant upgrades will still be required in the absence of the Proposed Project.

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<sup>29</sup> See the response to BCUC IR 1.37.5.

79. Section 15 of the Application provides sensitivity analysis for various scenarios in terms of (i) the 2023 rate and bill impacts presented in Section 13.2 (relative to the baseline assumptions), and (ii) the 30 year net present value of the Proposed Project from Section 13.5.
80. The sensitivity analysis does not include scenarios that only change the commodity cost of natural gas. At the time of filing the Application, the impact of possible changes in future carbon taxes was thought to dwarf the impact of changes in commodity fuel costs, so the analysis focused on changes in carbon taxes which have the same impact in that they impact the total cost of fuel. Since then, the failure of the natural gas pipeline near Prince George has required Creative Energy to rely on fuel oil during natural gas service interruptions, the result of which is a very large increase in Creative Energy's fuel costs. If the Proposed Project had been in place now, the improved plant efficiency would be saving customers a great deal on their fuel adjustment charges.

### **3.5. Retired Assets**

81. Section 13.4 of the Application describes that the equipment removal and replacement included in the Proposed Project will result in the retirement of some assets with remaining net book value. The estimated value of retired steam plant assets is \$2.8 million as set out in Table 9 of the Application. The vast majority (about \$2.3 million of this estimated amount) is in:
- (1) Structures & Improvements, which have remaining net book value but will be retired as part of replacing the building that has poor seismic and fire resistance and operability issues, and
  - (2) Boiler Plant Equipment, which is ancillary equipment associated with the boilers that are being decommissioned and replaced (Boilers #1, #2 and #4) as part of the Proposed Project. Boilers #1 and #2 themselves will be fully depreciated by the time they are decommissioned, and Boiler #4 will be just short of fully depreciated.
82. The \$2.8 million figure is an estimate at this time because Creative Energy will not be in a position to determine the final amount and timing of retirements in several categories

until detailed project design has been completed and construction timelines are confirmed. Creative Energy will submit detailed accounting and a proposal for the treatment of these costs as part of a future application to the BCUC. In this Application, Creative Energy is only seeking approval to establish a regulatory deferral account to carry forward the undepreciated net book value of the assets retired as part of the Proposed Project to enable recovery of such value in future rates.

83. BCUC IRs 1.39.1 and 2.113.1 through 2.113.1.2 to Creative Energy asked for Creative Energy's rationale for why the undepreciated net book value of assets that will be retired as part of the Proposed Project should be recoverable in future rates. The responses to those IRs are lengthy and will not be repeated in their entirety here. We refer the reader to those IR responses for the full details, and provide the following summary of the key points:
- It is common for utilities to invest in new assets when their existing assets require replacement. It is prudent to do so proactively, instead of waiting for catastrophic failure of equipment to force reinvestment on an emergency basis, particularly if service to customers or worker or public safety could be impacted by failure of such equipment.
  - If the retirement and replacement of an asset is beneficial to customers (in this case the assets are being replaced to maintain long-term reliability, improve safety and improve efficiency), the BCUC has allowed utilities to recover the remaining undepreciated book value (less any salvage value) in rates.
  - The FortisBC Energy Utilities ("FEU") 2012-2013 Revenue Requirements Application identified a total asset retirement loss balance of approximately \$149 million with the asset categories, Mains, Services, Regulator and Meter Installation, and Meters accounting for the majority of the losses. The FEU submitted that these losses (which represent unrecovered depreciation) should be fully recovered from ratepayers. The FEU noted that recovery of such losses is consistent with the BCUC's

Uniform System of Accounts, and past BCUC determinations, as well as accepted practice in other jurisdictions. The Commercial Energy Consumers Association of British Columbia (the “CEC”) submitted in that proceeding that the asset losses represent costs for assets which customers have used (or were to use) for an expected life and therefore the amounts are recoverable from customers. The BCUC in its Order No. G-44-12 Decision regarding that application determined (at pp. 86-87) that “the particular asset losses at issue in this Application should be recovered from ratepayers.” The BCUC went on to determine that utilities are not entitled to fully recover their investment of plant in-service capital from ratepayers irrespective of management decisions made after those assets were placed into service. A utility has a responsibility to ratepayers for asset management beyond making prudent asset purchases – e.g., ongoing maintenance and repair in order to achieve their prudently intended value in use, and that “...failure to prudently maintain and/or use assets appropriately could affect such assets’ useful lives, and in such cases, the utility should bear responsibility.” The BCUC also noted in that Decision (at p. 88) that a number of factors had resulted in the FEU asset losses and there was no evidence of asset misuse by the FEU. There is no suggestion in this current proceeding that Creative Energy has failed to prudently maintain and/or use assets appropriately. Creative Energy is not retiring assets that have failed prematurely due to inadequate maintenance or otherwise. These retirements are part of a larger project to address risks to service (and safety risks to workers and the public) while reducing GHG emissions, O&M costs and fuel costs, all at considerably less cost and risk to ratepayers by leveraging the Developer’s project rather than dealing with these replacements on Creative Energy’s own when individual assets reach the end of their accounting life and/or a catastrophic failure occurs.

- The Proposed Project provides cost-effective upgrades. Boilers #1 and #2 are fully depreciated. It would not be cost effective to replace Boilers #1 and #2 without at the same time replacing the ancillary equipment for these boilers (e.g., controls, burners, feedpumps, etc.) and the structures and improvements that should be

replaced even though they might not be fully depreciated. It would not be cost effective or prudent from a safety perspective (and probably not even feasible) to undertake the scope of work necessary to replace Boilers #1 and #2 while retaining the structure housing the plant simply because the structure has remaining book value. It would not be prudent from a safety perspective to undertake the scope of work necessary to replace Boilers #1 and #2 while retaining equipment that contains asbestos simply because it has some remaining book value.

- It is also common for utilities to upgrade facilities that are exposed to seismic risks, particularly where failure of the facility could have high consequences, and as part of the seismic upgrade project to also take the opportunity to upgrade equipment approaching end-of-life. BC Hydro has a multi-year and multi-billion dollar program to address seismic risks.<sup>30</sup> Creative Energy's response to BCUC IR 2.113.1 refers to two recent upgrade projects by BC Hydro which involved recovery of the remaining net book value of existing assets from ratepayers: the John Hart Generating Station Replacement Project (approved by the BCUC in February 2013) and the Ruskin Dam and Powerhouse Upgrade Project (approved by the BCUC in March 2012). In the case of the Ruskin Project, there was an issue in the BCUC proceeding whether BC Hydro should replace every component of the powerhouse as part of the seismic upgrade of the dam, or maintain the units and refurbish them as needed to extend their operating lives. The BCUC determined (at p. 31 of the Order No. C-5-12 Decision) that there are substantial safety, reliability, environmental, and financial risks associated with the existing condition of the powerhouse, including both the superstructure and equipment, and that these risks are deemed sufficiently worthy to explore alternative solutions and they need to be addressed in a timely and deliberately planned manner. The BCUC considered that refurbishment and deferral of replacement on an as-needed basis would not be sufficient to satisfy these risks. The BCUC approved the proposed powerhouse work. BC Hydro stated in its

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<sup>30</sup> See the response to BCUC IR 2.113.1.

application that \$10.5 million net book value expense relating to those assets that will be retired as part of this project will be expensed to the Amortization and Depreciation account and recovered in rates. Creative Energy could find no IRs from the Commission or intervenors related to this treatment and no determination in the Decision that rejected the recovery of the remaining net book value of existing assets. There is no difference in principle between Creative Energy's proposal and BC Hydro's.

- If the structure housing the Creative Energy steam plant collapses in a seismic event, the consequences could include harm to workers and the public, , the loss of equipment that is still used and useful, and extended outage of steam service to over 200 customers, which include a hospital, major venues, and retail, office, commercial and residential buildings. It is not realistic or prudent to employ an asset investment strategy that (i) delays significant upgrade or replacement projects that deal with such issues until the last impacted asset is 100% depreciated, and (ii) requires projects to be designed in a manner that retains all equipment that is not fully depreciated even that equipment which contains hazardous materials from the original construction or has poor seismic resistance because the Building Code at the time of original construction did not have seismic standards. Other utilities do not do so, and there is no reason why Creative Energy should operate or be treated differently.
84. Creative Energy is seeking to establish a regulatory deferral account to ensure Creative Energy is able to recover the remaining net book value of costs incurred in some cases decades ago when there were no standards for seismic resistance and the danger of asbestos was not known. Creative Energy is only seeking approval in principal (by way of approval to establish a regulatory account) to recover these assets losses in rates and, in a future application when the value is known, to amortize the recovery in a manner that minimizes rate impacts. While Creative Energy has provided a realistic estimate of the remaining net book value, Creative Energy considers that a decision on how long to amortize this amount should be made when it is finalized, which will depend on the

detailed design and detailed schedule of the Proposed Project. The requested regulatory account is not intended for any purpose other than to transfer historical costs between accounts to enable Creative Energy to recover the net book value in the future.

### **3.6. Alternatives to the Proposed Project**

85. Section 14 of the Application provides Creative Energy's assessment of feasible alternatives to the Propose Project. The criteria used by Creative Energy for assessing the feasibility of alternatives include the following:

- Maintain or improve reliability of the system
- Improve office and work spaces for Creative Energy staff
- Improve efficiency of the system
- Economic and first-cost considerations
- Ability to be constructed while maintaining steam service reliability

86. In addition to the Proposed Project, Creative Energy considered the following two options:

- 1) Construct a New Plant in a Different Location. Construct an entirely new plant in a new location and retire the existing Beatty Plant.
- 2) In-situ Equipment Replacement. Maintain the existing Beatty Plant with renovations to address the immediate needs, replace Boilers #1 and #2, bring the building up to standards for seismic and fire resistance, abate hazardous materials, and replace other equipment when needed.

#### **3.6.1. Construct a New Plant in a Different Location option**

87. The Construct a New Plant in a Different Location option would involve acquiring a new piece of property within reach of the existing steam distribution system headers at

720 Beatty Street, with access to the required gas, electric and water utilities, and constructing a new plant on the property. Although the Construct a New Plant in a Different Location option would address the needs of the utility without putting service to customers at materially increased risk, improve plant efficiency and reduce emissions,<sup>31</sup> the Construct a New Plant in a Different Location alternative would have the following major draw backs:<sup>32</sup>

- This option would be considerably more complex, costly and risky than the Proposed Project. There would be higher project costs, and higher risks associated with costs and schedule, and with volatile market value of land.
- Creative Energy would need to find another site close to 720 Beatty Street because the new plant would need to interconnect with the steam distribution system headers that would remain at 720 Beatty Street. A site for a new plant has not been identified either by Creative Energy or by the BCUC's Appraiser.
- Given that Creative Energy would need to buy and sell land in close proximity, there would be no reason to expect nor is there evidence that the differential between buy and sell prices would be anywhere near sufficient to cover the costs of a new steam plant (low-end estimate is at least \$65+ million not including the cost of land<sup>33</sup>) plus capital gains on the sale of the site, plus cost of temporary or new office space, plus costs of decommissioning of the existing steam plant and building. Setting aside risks for a moment, for the New Plant in a Different Location alternative to have a financial outcome comparable to the Proposed Project, the sale price for 720 Beatty and 701 Expo would have to be

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<sup>31</sup> See the response to BCUC IR 2.115.8. The environmental and social impacts of the Construct a New Plant in a Different Location alternative are described in the response to BCUC IR 2.129.1.

<sup>32</sup> See the response to BCUC IR 2.120.1.

<sup>33</sup> See the response to BCUC IR 1.47.4. The first table provides a lower-bound estimate of the cost of a new plant, which totals to \$74.6+ million. Excluding the assumed \$9.7 million lower-bound estimate of the cost of a site would reduce this value to \$64.9+ million.

well in excess of \$65 million more than the cost of acquiring equivalent land nearby for the new plant, assuming that such land is even available. Given that these would need to be comparable properties (industrial scale steam plant is a permitted use, sufficient size for the steam plant, etc.) in the same area, it is all but inconceivable that the buy/sell spread could be sufficient to make this a feasible options (before considering the risks).

- Another major uncertainty in the feasibility of New Plant New Location option is the cost of the interconnection to connect the new plant to the steam distribution network at Beatty. This would be a very large pipeline (in excess of 300 MW), and the viability and cost of this interconnection cannot be confirmed without a target site for the new plant.
- BCUC IR 2.120.1 asked Creative Energy if the Appraiser's opinion regarding the value of 720 Beatty Street and 701 Expo Boulevard as vacant land makes the New Plant New Location option viable. The Appraiser's opinion does not change anything because the Appraiser did not comment on the availability or cost of a nearby property to build a new steam plant. The Appraiser only commented on the value of 720 Beatty and 701 Expo. The viability of this option does not depend on the value of 720 Beatty and 701 Expo alone; its viability requires an available site and a large difference between that value (after capital gains taxes) and the cost to acquire the new site, which as submitted above is all but inconceivable.
- In theory, it might be possible for Creative Energy to find a partner or partners to co-develop a new site with other uses to offset prohibitive land costs; however, there would be challenges with such an approach because Creative Energy's use

would be for an operating industrial scale steam plant which would constrain other uses.<sup>34</sup>

- If a site for a new plant could be identified, Creative Energy would need to acquire it (or acquire an option to purchase it) for the time period required for regulatory hearings. There would be carrying costs for acquiring and holding a new site through the regulatory and development processes. The sales price for the current property would be affected by the considerable and uncertain time to develop a new plant at a new site prior to decommissioning the existing plant. An issue would be whether ratepayers bear the risk of market volatility in real estate values (both for the existing site and replacement site) during the period of several years it would take to obtain regulatory approvals, build the new plant, decommission the old plant and dispose of the 720 Beatty and 701 Expo properties. This lengthy process would also prolong the period in which customers are exposed to supply risks from aging equipment and seismic events. And any failure of existing equipment in the interim would increase the net book value to be retired after the completion of the new plant.
- This option would require Creative Energy to retire all existing steam equipment at 720 Beatty Street that is not yet at end of life. Based on the BCUC's IRs 1.39.1 and 2.113.1 to Creative Energy, it would appear that there might be a question as to whether Creative Energy could recover in rates the net book value associated with such retirements.
- In Creative Energy's view, the high costs and risks for the New Plant in a Different Location option render it clearly unacceptable. Accordingly, the option was discarded on the basis of a simplified analysis which did not account for significant unquantified costs. Additional refinements to the analysis would require more detailed work (and more cost), which would only add costs to the

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<sup>34</sup> Consider the challenges BC Hydro has faced to co-develop a site for a substation in Vancouver's West End.

option and further confirm its unacceptability. Creative Energy does not believe such further analysis would be a prudent use of resources.

88. In regards to the report of the Appraiser as to the value of 720 Beatty Street and 701 Expo Boulevard as vacant land, Creative Energy rejects the entirely theoretical opinion of the Appraiser because it is based on a limited and questionable set of comparables; uses an effective date well beyond the period in which Creative Energy and Developer conducted detailed work on the Proposed Project and negotiated definitive agreements; and does not reflect the specific facts of these properties (in particular location attributes, contaminated soil risks, development uncertainty, and actual physical and legal encumbrances even as “vacant” land. Creative Energy also notes there would be significant tax consequences to a sale of the property that have not been considered by the Appraiser.
89. Creative Energy also submits that the Appraiser did not provide any credible opinion on the market value of the surplus assuming continued use of site for steam plant, which is addressed in section 3.6.3, below. The Appraiser’s opinion for the second scenario utilized a theoretical (and inflated) value for vacant land and adjusted this only by the above-ground area that would be occupied by the steam plant.<sup>35</sup> The Appraiser made no further adjustments for the added costs and risks to the Developer of securing the surplus property, or the possible ongoing impacts of an operating steam plant on the value of the surplus property above the plant. In their report, the Appraiser indicates: “The preferred method to value a development site is development analysis, which determines land value as the residual found by deducting development costs and entrepreneurial profit from the value of an optimal development scheme. We have limited information on the optimal development for the site and have not been provided with any cost estimates.” (Exhibit A-15, page 52). In fact there was

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<sup>35</sup> Further it did not reflect the latest area estimates for the Beatty Plant, nor did it reflect the total office space currently owned by Creative Energy (8,600 sf). Creative Energy notes that there are non-regulated activities in the so-called “regulated” portion of the property, the costs and revenues of which have always been excluded from steam rates.

considerable evidence on the record regarding the “optimal development scheme” which Creative Energy and the Developer prepared over a two year period and also on some of the incremental costs to developing the surplus property. Not all incremental costs (and risks) were quantified, but the Appraiser made no attempt to use any of the evidence of costs in their opinion.

90. The Trust and Development Agreement is a central element of the Proposed Project and is referenced extensively in the Application and included as an appendix. In responses to IRs, the Appraiser concedes that they did not consider the Trust and Development Agreement in opining on fair market value. In fact, the Appraiser appeared to have no knowledge of the Trust and Development Agreement (Exhibit A-22, Appraiser’s response to Creative Energy IR 7.1).
91. The Attachment to this Final Argument provides Creative Energy’s more detailed submissions in regards to the Appraiser’s report.

### **3.6.2. In-situ Equipment Replacement option**

92. The only feasible alternative to the Proposed Project is an in-situ equipment replacement strategy (the “**Alternative**”) for the oldest boilers. The Alternative would fulfill most of the project drivers identified in Section 9 of the Application, except that new office space would have to be acquired likely off-site and construction of the Alternative would present higher risks of service interruption to customers because demolition and construction would have to be undertaken on and around the operating steam plant. Setting aside the higher risk of service interruption during construction, the problem with the Alternative is that it has significantly higher costs and rate impacts for customers, even without quantifying all potential costs for delivering a comparable scope as the Proposed Project and even with some delay and/or phasing of the Alternative.
93. As explained in section 1.1 of this final argument, the existing building stretches along a north-south axis, with the sole loading point for major equipment at the south end. The

steam equipment was generally installed along this axis, starting in the north end of the building for the first boilers and proceeding south as further boilers were installed over the three decades of growth. The result is that the oldest boilers are at the north end of the building, inaccessible from the loading doors at the south end. It would not be possible to replace Boilers #1 and #2 in place without deconstructing significant parts of the building housing the plant. Accordingly, the best option for an in-situ upgrade is to expand the existing building, install a new boiler in the expanded space, and then decommission and remove Boilers #1 and #2. Given the significance of such reconstruction, this would also be the best time to make seismic upgrades to the structure, and to replace the 50-year-old fuel oil tanks and other old ancillary equipment in the plant. Boilers #3 and #4 are more easily accessed and could be replaced in subsequent years.

94. The Alternative is very conservatively estimated at \$34.4 million (a capital cost estimate of \$32.5 million plus a \$1.9 million allowance for financing costs during construction) as shown in Table 11 of the Application. The cost of the Alternative does not include any costs for improvements to the office space or any costs for temporary office space that would be required during construction, nor does it include any upgrade of the existing flues. Although the Alternative would address most of the needs of the utility, improve plant efficiency and reduce emissions,<sup>36</sup> the major drawbacks of the Alternative are its higher costs and risks:

- The \$34.4 million capital cost is more than double the amount of Creative Energy's portion of the total cost of the Proposed Project. That estimate does not reflect all of the possible costs of the Alternative (e.g., the cost of having to radiate contaminated soils) or the full scope of the Proposed Project.

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<sup>36</sup> The benefits of the Proposed Project versus the Alternative are summarized in the response to BCUC IR 2.118.1. The environmental and social impacts of the Alternative are described in the response to BCUC IR 2.129.1.

- For the Proposed Project, the Developer bears the capital cost escalation risk; whereas for the Alternative Creative Energy would bear all risks.
- For the Proposed Project, work will be done on and around the Beatty Plant when it is not operating (which is made possible by the Expo Plant) significantly reducing the cost of the work and reducing the risk of service interruption; whereas for the Alternative work would be done on and around the Beatty Plant while it is operating increasing costs and risks.<sup>37</sup>
- For the Proposed Project, the Developer is responsible to ensure that there is no interruption of steam service to customers and bears the financial burden of the measures necessary to ensure no service interruption, including the cost of implementing contingency plans, if needed; whereas for the Alternative Creative Energy would bear all risks.
- The Alternative would not result in any property tax savings as there is no office tower development to share the property tax liability for existing land, and would likely result in higher property tax costs since Creative Energy would expand the plant footprint and some property tax costs would likely be transferred from non-utility uses to utility uses.
- The Alternative would have less natural gas cost savings than the Proposed Project, as it would add less new, more efficient boiler capacity.

95. The cost impact of the Alternative relative to the Proposed Project depends on the timing of the Alternative. Creative Energy considers that it would be possible to continue to operate the existing plant for a few more years and defer the Alternative, which would reduce the present-value impact as the capital cost is pushed out in future (assuming that capital costs do not escalate more than inflation); however, deferring the

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<sup>37</sup> See the response to BCUC IR 2.117.1.

Alternative also reduces the benefits of improved boiler efficiency and extends the period of risk to service interruptions from aging equipment or seismic events.

96. The table included in the response to BCUC IR 1.46.5 shows the net present value of the Alternative if it was completed in 2020 (the proposed timing of Expo Plant completion), 2025, 2030, and 2035, using the methodology described in Section 13.5 of the Application. The analysis can also be considered a proxy for phasing of individual elements within the Alternative. This analysis can be compared against the net present value of the Proposed Project stated in the response to BCUC IR 1.37.5. The analysis does not take into account increased operating costs or increased sustaining capital expenditures that would be expected in the scenarios where completion of the Alternative is deferred, nor does it account for cost impacts of taking higher risks by deferring replacement of end-of-life equipment.
97. Under all scenarios, the net present value of the Proposed Project is much lower than the net present value of the Alternative.
98. The net present value of the Proposed Project is even lower than the net present value of the Alternative in the scenario where the Alternative is deferred for 15 years to a 2035 completion date (requiring customers to bear the increasing risk of service interruption over that period, including due to catastrophic equipment failure). Given the large difference in net present value, the Alternative is worse for customers whether initiated on the same schedule as the Expo Plant or deferred for up to 15 years.

### **3.6.3. Is there another option?**

99. By letter dated August 22, 2018 (Exhibit A-6), the BCUC Panel indicated that “an independent, third-party assessment of the land value is needed for the fulsome review of the Application and completeness of the evidentiary record”. To that end, the Panel engaged an independent appraiser to conduct a valuation and provide an opinion for the record. The Appraiser was asked to opine on the fair market value of the subject lands under two scenarios: (i) highest and best use (essentially vacant land), and (ii)

highest and best use assuming continued use of the site for steam plant as proposed in the Application. The Appraiser was also asked to opine on the fair market value of the “air rights associated with the property”.

100. The Panel did not indicate what the Appraiser’s opinion might be relevant to in this proceeding. It is not clear to us how the above valuations were intended to be used in this proceeding, nor what issues these valuations might be relevant to.
101. It is not possible to sell “air rights” related to the subject property. There are no “air rights” independent of a development below, and the Appraiser did not provide any opinion on fair market value of “air rights” (refer to page 78 of the Appraiser’s report).
102. In order to apply for air space parcel approval, there must be a space that can be surveyed (e.g., construction of the exterior walls of a building must be complete),<sup>38</sup> which requires redevelopment of the plant itself in order to develop an office tower above.
103. Accordingly, there is no alternative where Creative Energy continues to operate the steam plant at Beatty in its current state and disposes of “air rights”. The only way Creative Energy’s parent company (Creative Energy Canada) and the Developer could conceive of to keep the operating steam plant at Beatty and develop the surplus property is the approach contained within the Trust and Development Agreement. That is, to transfer the beneficial interest in the surplus property to a developer while Creative Energy retains legal title as bare trustee, construct a building (with the Expo Plant and construction carefully sequenced to minimise the risk of steam service interruption), apply for subdivision approval once the building is largely built, and then return air space parcels to Creative Energy for the utility plant and new office space. Creative Energy Canada and the Developer spent several years with the assistance of a

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<sup>38</sup> See the response to BCUC IR 2.111.2.

team of experts assessing ways to develop the surplus property while meeting the needs of the utility, and Creative Energy Canada spent more than \$1.45 million doing so.

104. The only approach that has been identified to keep the operating steam plant at Beatty and develop the surplus property is the approach contained within the Trust and Development Agreement.

105. BCUC IR 2.116.2 asked Creative Energy whether it has approached other developers to discuss the Proposed Project or any other alternative. Hypothetically, Creative Energy could approach other developers to see if anyone would agree to an arrangement substantially like the Trust and Development Agreement but on terms that are more favourable to Creative Energy than those specified in the Trust and Development Agreement. However, Creative Energy is not in the business of marketing and developing property; Creative Energy is a public utility focused on operating its plant to provide safe and reliable service in accordance with its public utility obligations.

Furthermore,

- this hypothetical approach of going to other developers would require Creative Energy to misappropriate Creative Energy Canada's and the Developer's investment of time and resources (more than \$1.45 million) to produce the intellectual property used to develop the approach of the Trust and Development Agreement and the Proposed Project;
- this approach would also require Creative Energy to subdivide 720 Beatty Street to remove the parking lot area that has already been determined to be surplus to the utility needs and is 'unregulated'; and
- Creative Energy is not aware of any other developer that would have the same understanding and acceptance of the needs of the utility or willingness to undertake development around and over an operating steam plant with public utility obligations. It is inconceivable that a third party developer would agree to

the requirements the Trust and Development Agreement imposes on the Developer, which including but are not limited to:<sup>39</sup>

- assumption of risks (costs of construction, hazardous materials remediation, construction schedule);
- indemnification for tax consequence (including capital gains on surplus property) and other risks associated with the Proposed Reorganization, and steam service interruption (and the costs of contingency plans for maintaining steam service);
- requirement to build the Expo Plant, and to work around the Beatty Plant and only shut down the Beatty Plant during summer and subject to Creative Energy's approval;
- requirement to design the developer's project around the steam plant, distribution headers and need for exhaust flues at Beatty; and
- significant constraints on financing.<sup>40</sup>

106. Creative Energy submits that it is inconceivable that an arm's length third party developer would agree to something like the Trust and Development Agreement, but on terms that are more favourable to Creative Energy than those specified in the Trust and Development Agreement. In any event, the idea of shopping the Trust and Development Agreement to other developers is completely hypothetical because moving forward with that would require Creative Energy to misappropriate the intellectual property and investment of its parent company Creative Energy Canada and the Developer, which Creative Energy would not and could not do.

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<sup>39</sup> Please see the response to BCUC IR 2.116.2.

<sup>40</sup> See the response to BCUC IR 2.107.9.

107. Creative Energy submits that spending time and resources to pursue the option of working with an arm's length third party developer would only result in additional costs (that would have to be paid for by ratepayers) and delays to the Proposed Project with no benefit to ratepayers. Creative Energy considers that there is no other cost-effective scenario to piggy back refurbishment of the steam plant on the development of the surplus property while protecting customers from the risks.
108. Accordingly, the Proposed Project and the Alternative are the two viable approaches to refurbishing the Beatty Plant, and the best solution is reflected in the Proposed Project.

### **3.7. British Columbia's Energy Objectives and Socio-Economic Impact**

109. Pursuant to subsection 46(3.1) of the *UCA*, in deciding whether to issue a CPCN applied for by a public utility other than BC Hydro, the Commission must consider
- (a) the applicable of British Columbia's energy objectives,
  - (b) the most recent long-term resource plan filed by the utility under section 44.1, if any, and
  - (c) the extent to which the application for the CPCN is consistent with the applicable requirements under section 6 and 19 of the *Clean Energy Act*.
110. Section 17.1 of the Application reviews how the Proposed Project aligns to British Columbia's energy objectives. It also explains why Creative Energy's most-recent long-term resource plan which was filed with the Commission on June 9, 2017, and sections 6 and 19 of the *Clean Energy Act* are not applicable to this Application.
111. Section 17.2 of the Application reviews the significant public interest benefits enabled by the Proposed Project above and beyond the direct benefits of providing significantly more efficient, safe and reliable steam service to customers over the long-term at a very cost-effective price:

- Improved local air quality as a result of new high efficiency and low-NO<sub>x</sub> equipment at the Expo Plant, decommissioning of the oldest boilers at the Beatty Plant, and through the extension of the flues at both the Expo and Beatty Plants well beyond the public realm (aligned with the BC Place spires and extending past the roof of the office tower development).
- Beautification of Expo Boulevard on both sides as a result of the enhanced façade treatment of the new Expo Plant on the east side of Expo Boulevard and the office tower development on the west side, beautifying this important street in need of a transformation.
- Creation of a large public plaza between Beatty Street and BC Place which will allow for improved pedestrian access out of BC Place Stadium towards Georgia Street after the viaducts are removed.
- Creation of a significant amount of retail space which will also allow for BC Place to increase their retail presence along the concourse that can thrive throughout the year, not only on game days.

112. Figure 11 of the Application depicts some of the socio-economic public interest benefits enabled by the Proposed Project. Please compare Figure 11 to Figure 2 of the Application. Importantly, the Alternative option would not provide these socio-economic public interest benefits.<sup>41</sup>

#### **4. PavCo Service Agreement**

113. As part of the Expo Plant project, the Creative Energy service connection to BC Place Stadium will be moved to a new energy transfer station within BC Place. This new service connection made it necessary to enter into a new Steam Service Contract with PavCo so as to delineate the new equipment.

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<sup>41</sup> See the response to BCUC IR 2.129.1.

114. The Application seeks approval of the new Steam Service Contract with PavCo, which is substantially the same as Creative Energy’s standard steam contract, and the rates, and terms and conditions for such service are contained in the Steam Tariff. The only differences between the PavCo Steam Service Contract and the standard steam contract are set out in Table 15 of the Application. A copy of the proposed new Steam Service Contract with PavCo is included in Appendix L of the Application.

## 5. Corporate Reorganization

### 5.1. Overview

115. The Application also seeks approval from the BCUC of certain corporate reorganization steps involving Creative Energy, Westbank, Emanate Energy and Creative Energy Developments LP, as set out in Section 19 of the Application.

116. Given the Commission’s familiarity with a recent application for approval of corporate reorganization steps in relation to Cal-Gas Inc. resulting in Order No. G-182-17 dated December 13, 2017, the current Application presents the steps in the Proposed Reorganization generally using the same format as the Cal-Gas Inc. application to facilitate the Commission’s review. Further, Creative Energy proposes and requests a form of Order for the Proposed Reorganization that is similar to the Commission’s recent Order No. G-182-17 approving the Cal-Gas reorganization. The requested form of Order is provided in Appendix O of the Application.

117. The Proposed Reorganization has the following two main objectives:

- (1) Separate the interest in Creative Energy’s **“Trust Property”** (the lands, spaces and improvements located on or forming part of the Lands<sup>42</sup> that are not the

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<sup>42</sup> The **“Lands”** refers to the property located at 720 Beatty Street and 701 Expo Boulevard, Vancouver, British Columbia. The Parcel Identifiers of the Lands are specified in Schedule A of the Trust and Development Agreement. A portion of the Lands at 720 Beatty Street (a parking lot to the south of the Beatty Plant with an area of 12,511 square feet) has not been in rate base for over 35 years and in Order G-66-14 the Commission approved the disposition of this surplus land, subject to a subdivision of the lot at 720 Beatty Street. This subdivision was postponed pending discussions regarding the Proposed Project.

“Utility Assets”), including all development rights associated with Trust Property, from the interest in Creative Energy’s “Utility Assets” (the premises that house the utility plant and office premises on the Lands, ancillary equipment on the Lands and rights of way, the new Beatty Plant, the New Office Space and all other utility assets including the distribution system and existing Stream A utilities owned by Creative Energy). This separation is required to facilitate the Proposed Project and the Developer’s office tower project.

(2) Facilitate Emanate Energy acquiring an indirect 50% equity interest in the Creative Energy utility including only the Utility Assets. The acquisition by Emanate Energy is proposed to be completed as part of the Proposed Reorganization, but it is otherwise independent of the reorganization steps to facilitate the projects.

118. In addition to the two main objectives summarised above, the Proposed Reorganization also involves steps in aid of certain allowable treatments under the *Income Tax Act*.
119. The steps in the Proposed Reorganization are planned to occur in immediate succession shortly after approval and LGIC consent to amalgamation in the order set out in the slides attached to the Application as Appendix M. Certain steps of the Proposed Reorganization require BCUC approval while others do not. Those that require BCUC approval and the nature of the approval required are set out in section 19.2 of the Application. All of the steps, including those that do not require BCUC approval are set out in Appendix M for completeness. The left side of each slide in Appendix M reports the purpose(s) of each step of the reorganization.
120. Assuming the BCUC grants the requested approval of the Proposed Reorganization and LGIC consent is provided for the amalgamation, once all reorganization steps are completed,

- The Developer will own and hold all of the rights to the Trust Property for the purpose of developing its office tower project, subject to the terms of the Trust and Development Agreement.
- The Creative Energy utility (Creative Energy (2018)) will own the Utility Assets and will be a subsidiary of Creative Energy Developments LP.
- Emanate Energy will have an indirect 50% equity interest in the Creative Energy utility including only the Utility Assets (and not the Trust Property) through Creative Energy Developments LP.
- Creative Energy's current shareholder, Creative Energy Canada, will hold the other indirect 50% interest in the Creative Energy utility including only the Utility Assets though through Creative Energy Developments LP.

121. The Proposed Reorganization *enables* the parties to proceed with the Proposed Project (subject to obtaining CPCN approval) and the Developer's project, but completion of the Proposed Reorganization by itself will not result in any material change to the Creative Energy utility business, nor will it detrimentally affect utility service or rates to customers or the Commission's ability to regulate the Creative Energy utility business in the public interest.

122. The BCUC has approved applications related to utility corporate reorganizations and/or acquisition of a reviewable interest in a public utility so long as the change will not detrimentally affect the utility and the users of the service of the public utility. Section 20 of the Application provides the evidence confirming that the Proposed Reorganization will not have a detrimental effect on ratepayers or on the authority of the Commission to regulate the utility effectively and in the public interest.

## **5.2. Amalgamation of Creative Energy and Newco**

123. The third step of the Proposed Reorganization involves the amalgamation of a public utility. Specifically, Creative Energy will amalgamate with Newco to form Creative

Energy (2018), and Creative Energy Canada will acquire all of the issued and outstanding shares of Creative Energy (2018). Newco is a shell company with no significant assets, liabilities or operations. The amalgamation is the second of two steps in order to increase the tax cost of the land held by Creative Energy in accordance with section 88(1)(d) of the *Income Tax Act*.

124. If the land cost is not increased as proposed, on any future sale of the property any gain on sale would be based on historical cost and most of the original purchase price of the shares of Central Heat Distribution Ltd. would not offset the gain, resulting in double tax to the Developer. Accordingly, these steps are a critical component of the Proposed Reorganization as a whole, which enables Creative Energy and the Developer to proceed with the Proposed Project.
125. The mechanism to step up the tax cost of the land is as follows: (1) Creative Canada incorporates Newco, (2) Creative Canada transfers all of its shares of Creative Energy to Newco pursuant to subsection 85(1) of the *Income Tax Act* in exchange for common shares of Newco, (3) Creative Energy and Newco vertically amalgamate resulting in Creative Canada receiving common shares of Amalco (Creative Energy (2018)) on amalgamation, (4) Amalco will designate, on its first T2 Corporation Income Tax return, to increase the cost of the land. This is a completely normal, allowable treatment under the *Income Tax Act*.
126. Pursuant to subsections 53(1) and (3) of the *UCA*, the proposed amalgamation of Creative Energy and Newco requires the consent of the LGIC. Pursuant to subsections 53(4) and (5) of the *UCA* the process for obtaining such consent begins with an application to the BCUC (that step was fulfilled by this Application). The BCUC is to inquire into the application for LGIC consent to amalgamate (that step was fulfilled by this proceeding) and, if the BCUC is of the opinion that the amalgamation would be beneficial in the public interest, the BCUC is to submit a report and findings to the LGIC.

127. Our October 3, 2018 submission to the BCUC in this proceeding (Exhibit B-10) contains our initial submissions regarding the public interest benefits of the amalgamation. The BCUC decided not to proceed with its report to the LGIC in October as a matter of due process. Substantively, our October 3, 2018 submission is still applicable to the matter. Additionally, BCUC IR No. 2 asked Creative Energy about the public interest benefits of the amalgamation step only, and also of the Developer's project and of the Proposed Reorganization as a whole. These matters are addressed in the following subsections.

**5.2.1. Public interest benefits associated solely with the amalgamation step**

128. It is difficult to assign benefits to an amalgamation step in isolation from other reorganization steps occurring in immediate succession, and in isolation from the decisions and actions that will be enabled by the reorganization as a whole. As the Applicants in the matter of the Cal-Gas Reorganization stated, "...it is difficult to assign specific benefit to any one step [of the reorganization] (given that it is an all-or-nothing proposition and none of the benefits will be realized if the Application is not approved as a whole)...".<sup>43</sup>
129. The benefits of an amalgamation are those improvements that the amalgamation *enables* the amalgamated organisation to implement. For example, an amalgamation of two operating companies might *enable* the amalgamated organisation to improve its overall administrative efficiency. In the case of the Proposed Reorganization involving Creative Energy, the amalgamation is not of two operating companies and the amalgamation is not for the purpose of streamlining consolidated operations. The amalgamation is the second of two necessary steps in order to enable Creative Energy to increase the tax cost of the land it holds in accordance with the *Income Tax Act*. If the tax cost of the land is not increased as proposed, on any future sale of the property any gain on sale would be based on historical cost and most of the original purchase price of the shares of Central Heat Distribution Ltd. would not offset the gain resulting in double

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<sup>43</sup> See section 2.3, page 5 of the BCUC's October 24, 2017 report to the Attorney General regarding the amalgamation involving Cal-Gas, which is attached to Exhibit B-10 in this proceeding.

tax to the Developer, which would impact the viability of the project for the Developer. The amalgamation approach is the most efficient approach for increasing the tax cost of the land. Any alternative approach would be designed to produce the same outcome. An alternative approach was considered that involves winding-up Creative Energy and distributing the assets to the parent company; however, such approach would be more complex and less efficient than amalgamation. Accordingly, in addition to the public interest benefits of the Proposed Project and the Developer's project, the public interest benefits associated with the amalgamation step *only* are as follows:

- Enables the tax cost of the land held by Creative Energy to be increased in accordance with section 88(1)(d) of the *Income Tax Act*, avoiding double tax to the Developer in the event of any future sale of the property. The *Income Tax Act* provides for this treatment because it is not in the public interest to subject a person to double tax.
- Avoids the alternative approach to increasing the tax cost of the land, which would involve the more complex and costly winding-up of Creative Energy and distribution of its assets to the parent company. Avoidance of wasted effort is always beneficial in the public interest.

### **5.2.2. Public interests benefits associated solely with the Developer's project**

130. The public interest benefits associated solely with the Developer's project include the following:<sup>44</sup>

- Improved local air quality as a result of the extension of the flues at the Beatty Plant well beyond the public realm (past the roof of the Developer's office tower development), which is part of the Developer's project.

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<sup>44</sup> See Section 17.2 of the Application.

- Beautification of Expo Boulevard on both sides as a result of the enhanced façade treatment of the new Expo Plant on the east side of Expo Boulevard and the office tower development on the west side, beautifying this important street in need of a transformation.
- Creation of a large public plaza between Beatty Street and BC Place Stadium which will allow for improved pedestrian access out of BC Place towards Georgia Street, and which will be especially important when the viaducts are removed and this site becomes a gateway into downtown Vancouver.
- Improvement of the site to best use, including a significant amount of additional office space in downtown Vancouver.
- Creation of a significant amount of retail space which will also allow for BC Place to increase their retail presence along the concourse that can thrive throughout the year, not only on game days.

131. The public will benefit greatly from the transformation of this site and surrounding area relative to the current state.<sup>45</sup>

### **5.2.3. Public interest benefits associated with the Proposed Reorganization as a whole**

132. The public interest benefits enabled by the Proposed Reorganization as a whole consist of the following:

- The public interest benefits of the Proposed Project as set out in the Application and summarised in section 3 above;
- The public interest benefits of the Developer's project as set out in the Application (section 17.2) and section 5.2.2 above;

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<sup>45</sup> See Figure 11 of the Application, and compared to Figure 2.

- The public interest benefits of the amalgamation step only as set out in section 5.2.1, above; and
- The public interest benefits of Emanate Energy's acquisition of an indirect 50% equity interest in the Creative Energy utility as set out in the response to BCUC IR 1.59.16 and in section 5.3 below.

133. Additionally, the Proposed Reorganization itself will have no impact on the level of services to ratepayers, rates, or the authority of the Commission to regulate the utility.

### **5.3. Emanate Energy**

134. The final steps of the Proposed Reorganization involve the acquisition by Emanate Energy of an indirect 50% equity interest in the amalgamated Creative Energy (2018). This investment will be indirect, through Creative Energy Developments GP and LP, which hold other interests beyond Creative Energy (2018).

135. Emanate Energy is a wholly-owned subsidiary of the InstarAGF Essential Infrastructure Fund (the "**Fund**") managed by InstarAGF Asset Management Inc. ("**InstarAGF**"). Emanate Energy is incorporated in Ontario. InstarAGF has a wealth of experience investing in and directing infrastructure businesses, including power generation, district energy, and renewable energy assets. The Fund has \$740 million in aggregate equity commitments from investors in Canada, Europe, the United Kingdom and United States. The Fund is well capitalised and focused on helping urban communities and governments to renew, build and modernize the critical infrastructure underpinning the economy while generating stable income and building long-term value for investors. The Fund's investments in Western Canada presently include: Okanagan Wind, a 30-megawatt wind power facility; and an interest in Steel Reef Infrastructure Corp., a midstream energy services company.

136. With the introduction of Emanate Energy as indirect shareholder, Creative Energy (2018) will have two ultimate shareholders and is expected to benefit from additional

expertise, diversity of perspectives, access to capital, and an increase in accountability to two independent shareholders.<sup>46</sup>

137. For greater certainty, the acquisition by Emanate Energy does not facilitate and is not needed for either the Proposed Project or the Developer's project.<sup>47</sup> There is no connection between Emanate Energy's acquisition and the Developer's project. Emanate Energy does not and will not have any investment in the Developer's project. For the negotiations of the Trust and Development Agreement, the interests of Emanate Energy and Creative Energy are aligned, and Emanate Energy had consent rights to the final terms of the Trust and Development Agreement.
138. The acquisition by Emanate Energy is proposed to be completed as part of the Proposed Reorganization, but it is otherwise independent of the reorganization steps to facilitate the Proposed Project and the Developer's project.

## **6. Conclusions**

139. It took Creative Energy's parent company Creative Energy Canada and the Developer more than two years of analysis (and more than \$1.45 million) to identify and develop the framework and approach of the Trust and Development Agreement for unlocking the development potential of the surplus property at 720 Beatty Street while protecting Creative Energy's customers from risks. These costs have not been recovered from Creative Energy's customers.
140. By piggy-backing on the Developer's project, Creative Energy is now able to move forward with the most cost-effective solution to the significant risks Creative Energy and its customers are facing in relation to end-of-life equipment and the sub-standard building and office space. There is no other option where Creative Energy can deliver comparable benefits to customers and the public at lower cost or lower risk.

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<sup>46</sup> See the response to BCUC IR 1.59.16.

<sup>47</sup> See the response to BCUC IR 1.60.3.1.

141. When the Proposed Reorganization, the Proposed Project and the Developer's project are all completed,
- Creative Energy will have two interconnected steam plants that conform to modern seismic and fire resistance standards, have significantly increased efficiency, and enhance long-term service reliability with improved redundancy for customers, and new administrative office space, all for less than one third of the cost of these improvements.
  - Public areas will be significantly enhanced and beautified with an enhanced facade on the new Expo Plant, and a large public plaza between Beatty Street and BC Place, which will be especially important once the viaducts on Georgia Street are lowered and this site becomes a gateway into downtown Vancouver.
  - Local air quality will be improved as a result of new high efficiency and low NO<sub>x</sub> emissions equipment, and through the increased height of the stacks at both steam plants.
  - Natural gas consumption will be reduced by 20,600 MWh (74,200 GJ) per year and GHG emissions will be reduced by 3,700 tonnes per year.
  - NO<sub>x</sub> emissions will be reduced to meet the current Metro Vancouver standard of 30ppm.
  - Emanate Energy will have an indirect 50% equity interest in Creative Energy, and the existing shareholder will hold the other indirect 50% interest.
142. Creative Energy is of the view that the BCUC should consider and apply the criteria specified in the *Utilities Commission Act* to determine whether the Proposed Project is in the public convenience and necessity. Part of this consideration ought to be whether there is a better (more cost-effective) option that meets the criteria of being able to be constructed while maintaining steam service and without undue risks to customers.

Creative Energy has demonstrated that the Proposed Project is considerably more attractive than any other viable option. The cost of the Proposed Project to Creative Energy and its ratepayers is less than one-third of the actual cost of the project. The risks to customers are low, and lower than they are under any other option. Moreover, the Proposed Project significantly reduces risks to customers over the long term.

**All of which is respectfully submitted this 20<sup>th</sup> day of November 2018.**

By:   
Ian D. Webb

**Counsel for Creative Energy Vancouver Platforms Inc.**

## Attachment – Detailed Argument in regards to Report of the Appraiser

### Procedural Overview

1. By letter dated August 22, 2018 (Exhibit A-6), the Commission Panel indicated it “is of the view that an independent, third-party assessment of the land value is needed for the fulsome review of the Application and completeness of the evidentiary record.” The Panel stated it had engaged Mr. Larry Dybvig of Grover, Elliott & Co. Ltd. (the “**Appraiser**”) to conduct a valuation and provide an expert report to the Panel. The Panel asked Creative Energy to provide confirmation of the portions of the land that is considered “regulated” and “non-regulated.” And the Panel also invited all parties in the proceeding to provide written comments regarding the draft Terms of Reference for the appraisal set out in Appendix A of Exhibit A-6.
2. By letter dated August 24, 2018 (Exhibit B-3) Creative Energy provided corrections regarding the portions of the land that may be considered “regulated” and “non-regulated”. Creative Energy further provided the following comments regarding the draft terms of reference:

“Creative Energy expects that it will be challenging for the appraiser to answer the questions posed by the Commission. The lands in question have major encumbrances that limiting [sic] the development options for the site, make development challenging, and therefore it will be challenging to assess the fair market value of these lands.”
3. Creative Energy’s letter further suggested the Commission instruct the Appraiser to take into consideration a number of specific issues, in particular specific encumbrances that would remain even if the steam plant was removed from the site, and also issues associated with developing around an operating steam plant if it was not removed.
4. By letter on August 24, 2018 (Exhibit C3-3), the CEC recommended additional requests be included in the Terms of Reference for the land valuation proposed by the Commission.

There was no opportunity for reply by Creative Energy to the CEC recommendations, some of which Creative Energy does not understand.

5. By letter dated August 30, 2018 (attached to Exhibit A-8), the Appraiser provided a response to comments on the Terms of Reference submitted by Creative Energy and CEC. The Appraiser stated that based on its understanding of the BCUC requirements, the terms of reference as proposed were adequate to meet those requirements.
6. By letter dated September 19, 2018 (Exhibit A-9), the Commission indicated it had determined it was appropriate for the appraisal to be conducted in accordance with the terms of reference as set out in Attachment A to that letter, which remained substantially unchanged from the terms of reference provided in Exhibit A-6 except for corrections to the parcel areas and allocations between the “regulated” and “non-regulated” areas.
7. By letter dated September 13, 2018 (Exhibit B-7) Creative Energy then provided additional materials to assist the Appraiser.
8. On October 12, the Commission posted the **“Appraiser’s Report”** (Exhibit A-15). According to the cover letter from the Appraiser, the Appraiser’s Report was completed on September 27, 2018 and was intended to reflect a value of the subject properties as at September 19, 2018.
9. By Order G-194-18 dated October 12, 2018, the Commission established a further regulatory timetable for the review of the Application which included among other things a timeline for Information Requests from Creative Energy and Intervenors to the Appraiser (October 25, 2018) and responses from the Appraiser to those IRs (November 8, 2018).
10. On October 25, 2018 Creative Energy, the CEC and the BCUC submitted IRs to the Appraiser (Exhibits B-15, C3-10, and A-19, respectively). The Appraiser provided responses to these IRs on November 14, 2018 (six days after the deadline) which can be found in Exhibits A-22, A-21, and A-20, respectively.

**Comments on Final Terms of Reference**

11. The Commission did not alter its final terms of reference based on comments from Creative Energy or CEC, except to update the areas of the subject properties and correct the split between “regulated” and “non-regulated” as provided by Creative Energy. Instead, the Commission relied on the submission from the Appraiser that there was neither the time nor the budget to allow the investigations suggested by Creative Energy and CEC, and further that the draft terms of reference were adequate to meet the requirements of the Commission.
12. The Panel did not indicate how the Appraiser’s opinion might be relevant in this proceeding. It is also not clear to us how the various valuations were intended to be used in this proceeding, nor what issues these valuations might be relevant to. It is also not clear the Appraiser understood the information the Commission wanted for this proceeding.
13. In Creative Energy’s view the terms of reference either were not adequate to obtain a reasonable appraisal of the fair market value of the surplus property around and above the operating steam plant at Beatty Street, or the Appraiser did not understand or fulfill the terms of reference as provided by the Commission. Moreover, the Appraiser failed to provide any additional information during Information Requests that may have been of value in interpreting and applying the results of the theoretical appraisal to the facts of this proceeding, despite providing those responses six days after the Commission’s deadline.
14. The Appraiser was asked to opine on the fair market value of the subject lands as of the effective date (set as September 19, 2018) under two scenarios:
  - (i) highest and best use (essentially vacant land), and

(ii) highest and best use, assuming continued use of site for steam plant as proposed in the Creative Energy Vancouver Platforms Inc. application for a Certificate of Public Convenience and Necessity filed with the BC Utilities Commission on June 29, 2018. [emphasis added]

15. The Appraiser was also asked to determine the fair market value of the “air rights associated with the property”.
16. The first scenario of highest and best use is entirely theoretical given the land is not vacant as of the effective date (and could not be made vacant for many years as discussed below). And even as vacant land, the land will still have legal and physical encumbrances. The value of vacant land is used as a starting point for the valuation in the second scenario of highest and best use. Unfortunately, there is no evidence the Appraiser considered the actual facts of the redevelopment as proposed by Creative Energy in this proceeding.
17. With respect to the market value of air rights associated with the property, Creative Energy notes that it is not possible to sell “air rights” related to the subject property. In order to apply for air space parcel approval, there must be a space that can be surveyed (e.g., construction of the exterior walls of a building must be complete).<sup>48</sup> And there are no “air rights” over the existing plant independent of a redevelopment of the steam plant to support the development above. In any event, the Appraiser also did not provide any opinion on fair market value of “air rights” (refer to page 78 of the Appraiser’s Report).
18. It is also not clear the relevance of the effective date of the requested appraisal given Creative Energy and the Developer have been studying the options for this complex project for over two years and the definitive agreements and Application were completed several months before the effective date.

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<sup>48</sup> See the response to BCUC IR 2.111.2.

19. The remainder of this section of the argument will address the conclusions and relevance of the Appraiser's Report.

### **Value of Vacant Land**

20. The highest and best use of the subject lands (720 Beatty Street and 701 Expo Avenue) as vacant land is entirely hypothetical as the land is not vacant as of the effective date of the Appraiser's Report, and could not actually be made vacant for a significant and uncertain number of years.
21. In theory, the value of vacant land could be relevant to the evaluation of the Construct a New Plant in a Different Location alternative. However, as noted in the main body of this argument, it is not the absolute value of the subject lands that is relevant to the evaluation of this alternative, but the relative value of the subject land and new site. Further, the evaluation would need to consider tax impacts (a new site would need to be acquired from the after-tax proceeds from the current site) and the costs of moving the plant. There is no actual site that has been identified for a new gas plant (making this alternative theoretical) and an actual site would be required to confirm both relative value and the costs of a new plant, in particular the cost of a significant new steam interconnection. The Appraiser's Report does not comment on any of these additional issues that would be relevant to this alternative.
22. There would also be considerable time required for Creative Energy to find and acquire an alternate site (and confirm the land cost differential); complete detailed engineering (to confirm overall viability); secure all regulatory approvals (City and BCUC); construct the plant and interconnection; and to demolish and vacate the existing site. This timeline for developing a new plant is also relevant to assessing the relative value of the subject lands and a new site.
23. The Appraiser also uses the theoretical value of vacant land as a basis to assess the second scenario of highest and best highest and best use, assuming continued use of site

for steam plant. Creative Energy will address the specific adjustments made by the Appraiser to the value of vacant land in the next section.

24. In additions to questions about the appropriate effective date for a valuation that may be of relevance to this proceeding, Creative Energy rejects the conclusions of the Appraiser with respect to value of the subject lands (as vacant) as of the effective date.
25. The Appraiser cites nine comparables that traded over a two-year period between July 2016 and July 2018. Three of these comparables are not even in the downtown core. Two of the three from outside the downtown core happen to be among the highest values in the report. The range between the lowest and highest comparable is from \$164 to \$375 per buildable square foot (bsf). With the comparables outside the downtown core removed, the range is from \$164 to \$345 per bsf. The highest value is approximately 2.3 times the lowest value in the comparables, a significant spread in comparables over a short period of time. Creative Energy notes the Appraiser also provided no details on what other properties may have traded during that period of time but were rejected as not being “comparable.”
26. Factors cited by the Appraiser to explain value differences include location, visual exposure, lot configuration and zoning (Exhibit A-15, Page 73); however, in the end the Appraiser selected a median value from the small number of comparables with a large range of values (\$305 per bsf, rounded to \$300) with no further adjustments for site-specific differences or encumbrances of the subject lands. Of the sites that are actually located on the downtown peninsula, all sites except one are located within the core commercial area of downtown, near Waterfront Station and/or Burrard Street (Exhibit A-15, map on p. 72). Creative Energy also notes that the largest property in the list of comparables is less than one half the size of the combined size of the subject properties.
27. When asked to discuss specific differences between the subject lands and the various comparables provided, the Appraiser declined to provide any additional commentary or analysis (Exhibit A-22).

28. Creative Energy submits that the property at 400 West Georgia – which was included in the Appraiser’s data set – is the most reasonable benchmark for the subject lands, and the large divergence between the value of the 400 West Georgia site and the Appraiser’s estimated value of the subject lands is illustrative of the problems with the estimate of value provided by the Appraiser.
29. The 400 West Georgia property was actually acquired by Westbank (the Developer in this proceeding). It is closer to the subject lands than any other site the Appraiser looked at (only three blocks away) and, like the subject lands, it fronts Georgia Street. The sale closed in August 2017 for \$165/bsf. The Appraiser states the sale was negotiated in April 2016 and suggests “significant upward adjustment is required to account for the improvement in market conditions since April 2016”<sup>49</sup>. The Appraiser does not propose any actual adjustment, but the Appraiser’s proposed value for the subject lands of \$300/bsf is 80% higher than the cost of the property at 400 West Georgia. The only explanation the Appraiser provides for the large divergence between the estimated value of the subject lands and the transaction at 400 West Georgia is “the improvement in market conditions since April 2016.”
30. According to regression analysis included in the Appraiser’s own report, the date of the sale explains only 5.61% of the variation in values, and that number is based on a very weak correlation (R2 of 0.0561). This suggests very little correlation between the date of sale and value within the sample used. When asked to elaborate on the implied escalation of over 80% in the value of 400 Georgia since the sale closed, the Appraiser declined to provide any further comment.
31. The Appraiser also declined to comment on any other factors that would justify a higher value for the subject lands compared to 400 West Georgia (as would be required for the Appraiser’s valuation to be accurate). Creative Energy submits that, even if 720 Beatty Street was available as vacant land with no unique risks or encumbrances, there are many

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<sup>49</sup> Exhibit A-15, p. 75. Creative Energy notes that for all other sites included in the Appraiser’s analysis, the Appraiser did not provide information on when the sales were negotiated, only closing dates.

reasons that the property at 400 West Georgia would be more valuable, not less valuable, than the subject lands. In particular, 400 West Georgia is closer to the office core and more connected to major transit options. Creative Energy also notes that the Developer was given more than a year to close the sale of 400 West Georgia. This was a significant benefit to the Developer as it would have given the Developer time to seek comfort from the City on development entitlements and expedited rezoning and DP process. As well, the Appraiser failed to note that the vendor in that sale provided favorable financing terms to facilitate the sale (vendor take back mortgage), which is on title. Both the time to close and favourable financing would have the effect of increasing the value of 400 West Georgia to the Developer at the time the sale was negotiated, all things being equal.

32. In sum, 400 West Georgia has a more favorable location than 720 Beatty Street, and the purchaser of that site benefited from favorable sale conditions. Both of these factors suggest a lower valuation for 720 Beatty Street, but the Appraiser instead estimated the value of 720 Beatty Street at 80% higher than the value of 400 West Georgia. The only justification offered by the Appraiser was the “improvement in market conditions”, but the Appraiser’s own evidence shows that the date of sale (over the timeframe in question) explains a very small amount of the variation in values. Based on the above, Creative Energy submits that the Appraiser has not provided reasonable justification for their purported value of 720 Beatty.
33. Regardless of the comparable selected, there is also no evidence the Appraiser seriously considered any site-specific factors related to the subject lands beyond lengthy comments on possible development rights, which are still hypothetical pending a rezoning approval by the City.
34. In addition to qualitative differences related to the location of the subject lands, there is no formal consideration of the effect of contamination risk or actual physical and legal encumbrances on the potential value of the subject properties.

35. For example, the Appraiser assumed no contamination risk, which Creative Energy understands was necessary given uncertainty over the level of contamination and qualifications of the Appraiser. But this is still a significant qualification to the Appraiser's conclusions, particularly given the specific facts of this site. And the Appraiser provided no meaningful information on the significance of this uncertainty / risk for the valuation.
36. When asked whether a Limited Environmental Stage 2 Preliminary Site Investigation would in his experience be sufficient to alleviate the concerns of a purchaser about possible contamination on a site with past industrial uses and four 50-year old underground fuel storage tanks containing thousands of gallons of fuel, the Appraiser stated:
- “The response of the marketplace with respect to the value of properties with exceedances can be complex. Providing a simple answer to this hypothetical question might be misleading; anything further than that would go beyond our terms of reference.” (Exhibit A-22, Creative Energy IR 5.2)
37. Creative Energy's question did not ask for an opinion on the impact of confirmed exceedances on the value of a property. The question was whether in the Appraiser's experience a purchaser would be satisfied with a Limited Environmental Stage 2 Preliminary Site Investigation, which is all that is available for this site as of the effective date of the Appraiser's Report. Further the question is not hypothetical at all. These are the facts regarding the past and current use of the subject properties, and the level of investigation that has been conducted regarding contamination. In Creative Energy's submission, it would be more accurate to characterize the Appraiser's Report as hypothetical and misleading given it makes no allowance for these realities. None of the comparables employed by the Appraiser had comparable risks, in particular large underground fuel oil tanks in place for a period of 50 years.
38. Similarly, it is not evident the Appraiser understood or considered any of the physical and legal encumbrances to the subject lands even with the steam generating plant removed.

The Appraiser's Report states that an accepted definition of highest and best use (Scenario 1) is "the reasonably probable use of a property, that is physically possible, legally permissible, financially feasible and maximally productive, and that results in the highest value" (Exhibit A-15, Page 45). Creative Energy asked the Appraiser how the "physically possible" criterion was applied in this scenario given the fact that even if the steam plant itself was removed, there would still be a need to exclude and protect the steam distribution headers and piping on the site, provide for steam supply piping to the headers from a new off-site steam plant, and ensure that there is no interruption to steam service to the customers even if the steam plant were removed entirely (Exhibit A-22, Creative Energy IR 6.1). In Creative Energy's view these are relevant physical limitations even as "vacant" land. There is simply no realistic scenario where the current steam headers and manifolds could be removed from the site even if the steam generation plant is removed. In response to that question, the Appraiser simply referred Creative Energy back to page 48 of the Appraiser's Report. Page 48 is a discussion of assumptions in the value of land "as improved" (i.e., if the plant was retained, not removed).

39. The steam piping infrastructure through this site poses significant challenges, quite independent of the plant itself, which is also evidenced in the significant challenges the Developer has had in dealing with the City's setback requirements for a new building, which will actually require exposing and working around portions of the existing steam headers outside the building and within the setbacks. There is no evidence the Appraiser understood or considered these in his definition of "physically possible."
40. There is also no evidence the Appraiser considered other legal encumbrances that need to be address even if the steam plant were removed, including the BC Place ingress and egress requirements, among others.

### Value of Surplus Property Under Proposed Development

41. Creative Energy submits that the Appraiser has not properly accounted for the costs that will be incurred to access the development potential of the subject lands as proposed in Creative Energy's Application. The Appraiser's evidence illustrates that the Appraiser does not understand the nature of the Proposed Project, did not read documentation provided to the Appraiser about the Proposed Project, and has not provided the information the Commission requested.
42. After calculating a hypothetical value for vacant land, the only adjustment made by the Appraiser to account for continuing steam plant operations on the site was to deduct the above-grade area that would continue to be occupied by Creative Energy after the development. Those deductions did not reflect the expected above-grade area of Creative Energy's plant, nor did they account for the fact that Creative Energy already owns excess office space within the "regulated" property that is used for non-utility purposes (and is excluded from steam rates).
43. But more importantly, this approach indicates that in the Appraiser's view, the only impact of the presence of the steam plant is to slightly reduce the developable area available for other uses – that the steam plant is simply a volume which will be subtracted from the final development.
44. The facts in this proceeding are that there are real and significant costs to developing the surplus property as proposed by Creative Energy. Building a new office tower above and around an operating steam plant, without interrupting service to customers, is a complex endeavor that imposes many costs on the Developer compared to developing a vacant site. The Developer has incurred significant time, cost and risk to determine a viable strategy to secure the surplus development rights. There is no evidence in the proceeding of a more viable or cost-effective path for the Developer to secure the surplus development rights, and the Developer has every incentive to minimize its costs to secure the development rights.

45. The nature of the Trust and Development Agreement is that nearly all of these costs are transferred to the Developer. Additionally, many of the risks associated with these costs (e.g. cost overruns) are also transferred to the developer. These costs and risks include:
- a. Cost of new satellite steam plant at BC Place Stadium and interconnection (which is a pre-condition of development of 720 Beatty by the Developer), including Developer's additional inducement paid to PavCo to host the plant;
  - b. Cost and schedule impacts of deeper excavation required to build around the Beatty Plant footprint;
  - c. Cost of demolishing and removing existing Creative Energy infrastructure (e.g., three industrial-scale boilers, existing flue, existing oil tanks, existing building, etc.);
  - d. Cost of temporary office space provided to Creative Energy throughout construction;
  - e. Cost of developing and outfitting the new Creative Energy office space;
  - f. Risk of cost escalation for all aspects of the utility infrastructure;
  - g. Constraints on developer financing (significant covenants in favour of Creative Energy during the development process);
  - h. Indemnities provided by the Developer to Creative Energy in regards to the public utility's obligations to serve steam customers;
  - i. Cost of building the new steam plant enclosure and replacing or relocating existing steam infrastructure within and outside the plant as a condition of development (including added vibration control);

- j. Added cost and schedule impacts from building around an operating steam plant (including protection of plant during construction and schedule constraints on shutdowns of plant to allow extension of flues or other infrastructure upgrades);
  - k. Cost of building below-grade space occupied by Creative Energy and foregone revenue for the below-ground space (e.g., storage, leased parking revenues, etc.);
  - l. Area occupied by the shaft for Creative Energy's flue stacks which run through the building core (5,242 sq ft across all floors), affecting design and possibly developable area;
  - m. Ingress and egress requirements for BC Place Stadium;
  - n. Risk that steam plant operations (noise, vibration) impact the value of office space within the development;
  - o. Risk that final development rights granted by the City of Vancouver are not commensurate with the Developer's requested development rights.
  - p. Tax consequences of developing the surplus property (including any capital gains that may arise from the difference in the current book value of surplus land and value of land following redevelopment).
46. Creative Energy has quantified certain direct costs to the Developer, including the cost of the Expo Plant (including a separate inducement paid by the Developer to PavCo to host the plant) as well as the direct costs of certain infrastructure at 720 Beatty Street. These direct costs (which are still an estimate and the Developer is at risk for actual costs) are estimated at \$55.6 million (including a conservative estimate of financing costs to the Developer during the construction period, as well as the \$2.5 million inducement to PavCo).

47. Creative Energy has not attempted to cost all of the remaining items and risks, some of which are difficult to quantify (such as value of risks assumed by the Developer or constrains on financing). Nonetheless these are real and unique to the proposed development. For example, the cost of building the new plant enclosure and new office space that will be returned to Creative Energy by the Developer is conservatively estimated at \$4 million (20,400 sf of enclosed above and below ground space @ construction cost of \$200 / sf). The cost of temporary office space for 3 years is estimated at \$230,000.
48. Based on responses of the Appraiser to IRs, it is not clear to Creative Energy whether the Appraiser understands these costs and risks, or whether the Appraiser considered them relevant to the residual value of the surplus property. Creative Energy submits they are unique and relevant costs to any valuation of the surplus development rights.
49. The Trust and Development Agreement is a central element of the Proposed Project and outlines both the approach to securing the surplus property, as well as the significant costs and risks incurred by the Developer during the development process. In response to Creative Energy IR 7.1 (Exhibit A-22), the Appraiser indicated they had “not read any Trust and Development Agreement”, despite the Appraiser stating in response to Creative Energy IR 3.1 (Exhibit A-22) that the Appraiser’s analysis relied on Exhibit B-1, which includes the Trust and Development Agreement and references that document repeatedly. It is troubling that the Appraiser did not review the Trust and Development Agreement, appears to have no knowledge of the Trust and Development Agreement, and made no attempt to qualify their opinion based on the actual facts in this proceeding.
50. In their report, the Appraiser indicates: “The preferred method to value a development site is development analysis, which determines land value as the residual found by deducting development costs and entrepreneurial profit from the value of an optimal development scheme. We have limited information on the optimal development for the site and have not been provided with any cost estimates.” (Exhibit A-15, page 52). In fact, there was considerable evidence on the record regarding the “optimal development scheme” which Creative Energy and the Developer prepared over a two-year period and also on some (but

not all) of the incremental costs to developing the surplus property compared to a normal development.

## Conclusions

51. In conclusion, the Appraiser's Report contains a major qualification:

"This report considers the land only, and makes various assumptions in its valuation, as set out herein. The development potential of each of the subject sites is uncertain and will not become clear until a development application is submitted and processed by the City of Vancouver. As such, our analyses, opinions, and conclusions are preliminary; they can be refined once a development application has been processed." (Page 1)

52. Creative Energy submits the development rights are only one consideration. There are equally important if not more significant qualifications including the lack of adjustments for location (proximity to transit, office core, etc.), actual site conditions (e.g., contamination risk), constraints on development potential beyond city approvals (e.g., sub-grade infrastructure), and the costs and risks imposed on the Developer within the Trust and Development Agreement. Most if not all of these costs and risks are independent of the development potential and would constrain the value of the surplus under all ranges of development potential. And evidence of these considerations, costs and risks has been made available as part of this proceeding.

53. Creative Energy rejects the Appraiser's valuation of vacant land as both theoretical and unsubstantiated. Further, Creative Energy sees no evidence of any meaningful consideration by the Appraiser of the actual facts of the Proposed Project, in particular the incremental costs of redevelopment and the significant costs and risks transferred to the Developer via the Trust and Development Agreement.

54. Creative Energy submits the Appraiser's Report requires significant adjustments and qualifications which make it of almost no use in this proceeding.