

18 February 2021

Via E-filing

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

Dear Mr. Wruck:

**Re: British Columbia Utilities Commission (BCUC, Commission)
Creative Energy Vancouver Platforms Inc. (Creative Energy)
2021 Long-term Resource Plan (LTRP)
Compliance with Order G-40-21 Directive 6**

Creative Energy writes in reply to Commission Order G-40-21 to provide the additional information requested under Directive 6.

Directive 6

Creative Energy is directed to file the following supplementary information regarding the 2021 Long Term Resource Plan by the date established in the regulatory timetable:

- a. A detailed description of the assumptions and drivers underpinning the load forecast scenarios outlined in Figure 2 and Figure 5 in the Application, including but not limited to:
 - i. The key assumptions and drivers underpinning each of the different forecast scenarios, and an assessment of the relative likelihood of such scenarios materializing based on these assumptions and drivers, and any important caveats;**

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- ii. *Whether the scenarios reflect changes in number of customers, use per customer or both, and an explanation of the assumptions and methodology used to model these changes;*
 - iii. *The low carbon energy demand included in each load forecast over the forecast period;*
 - iv. *A description of the reasons for the changes in slope for the scenarios over the forecast period;*
 - v. *Clarification regarding the assumed resource portfolio(s) to meet each forecast scenario; and*
 - vi. *Rate and cost assumptions for each forecast scenario, and a discussion of the impact of price elasticity on the forecasts.*
- b. *A description of the stakeholder engagement undertaken to inform the development of the Long Term Resource Plan, including a summary of feedback received from current and potential customers.*

Item a. Load Forecast

Overview and Context

Creative Energy offers the following introductory comments to clarify the context into certain aspects of the load forecast scenarios presented in the LTRP and the additional information that follows below.

The growth scenarios shown on Figure 5 of the LTRP are not forecasts of load that Creative Energy must necessarily serve. The 100% growth scenario is a forecast of space heating and hot water demand growth in what could be considered our existing service area; that is, the forecast of space heating and hot water demand growth is of growth in the geographic area of our existing distribution network plus some distance nearby as described in the LTRP.

The 100% growth scenario as presented in the LTRP therefore represents an upper bound of the load growth Creative Energy could serve if such potential customers choose service from Creative Energy over their alternatives for heating service at their buildings. Creative Energy does not expect that 100% of that growth would choose Creative Energy. It could be plausible that Creative Energy could serve in the range of 50% of that growth if Creative Energy is able to offer an attractive nature and quality of service in terms of environmental attributes and cost.

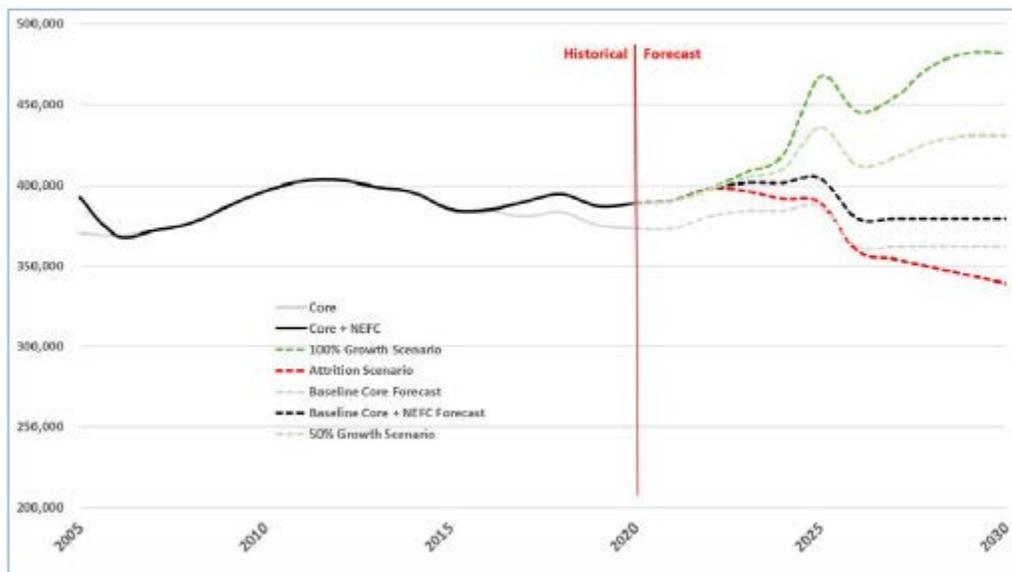
By way of further clarification of this context, we emphasize that Creative Energy is not a monopoly utility service provider. That is not the paradigm here. We operate in a competitive environment and both existing and potential new building customers have other resource options available to them for heating at their buildings.

Thus, the LTRP does not reflect a Creative Energy plan to add resources to serve inevitable load growth. Our plan is to pursue low carbon resource options to attract new customers and retain existing customers who have chosen and could choose other options for their heating needs.

Finally, and by extension, no price elasticity assumptions are reflected in any of the load forecast scenarios and such are not necessary. Price elasticity is not directly applicable based on the means for how the load forecast scenarios were built up, as elaborated below. That is, the nature of the load forecast scenarios is such that there are no demand-side effects of price, cost or rates incorporated into them. Similarly, elasticity is not directly applicable in the load attrition scenario which is indicative of the choice our existing building customers have to separately procure low carbon energy or improve their energy use efficiency, and not reflective in any manner of a forecast demand effect due to rate changes in our current service offering. Creative Energy has observed that the demand for heating by its existing building customers has been relatively price inelastic. Historical demand for steam has varied predictably with weather variation but not price variation. Thus, there were no rates, costs or price elasticity assumptions utilized to develop the Baseline status quo load forecast scenario.

i. LTRP Figure 5 Information

Figure 5: Aggregate Load Forecast Scenarios⁴⁹



The load forecast scenarios were developed in several steps, which are described below.

- a. Creative Energy's billing data was extracted and used to generate a three-year average customer steam demand, the ***Weather Normal Baseline***.
- b. There are a handful of known upcoming customer connections and disconnections. Using energy estimates for these customer buildings and the expected year of connection/disconnection, a forecast was generated of future steam demand, the ***Weather Normal Forecast***.
- c. Using publicly available development information, an inventory of upcoming developments projects was created for downtown Vancouver, and estimates made of their potential steam demand and year of energization. A forecast scenario was generated by overlaying the potential steam demand of these developments with the Weather Normal Forecast, the ***100% Growth Scenario***.

As noted above, the 100% Growth Scenario is not a forecast of load that Creative Energy must necessarily serve; it is a forecast of heating growth in our service area or nearby to our service area that Creative Energy could service if 100% of this heating requirement is served by Creative Energy, which is not considered probable.

Likelihood: Creative Energy is not able to quantify the probability of any scenario, however, it is unlikely that 100% of all new developments in this area of downtown Vancouver will connect to the steam system, as there are a number of building scale alternatives which they may find preferable.

- d. A second forecast scenario was generated by overlaying the potential steam demand of half of these developments with the Weather Normal Forecast, the ***50% Growth Scenario***. The same comments reviewed above regarding how this load growth scenario ought to be viewed continue to apply.

Likelihood: Creative Energy is not able to quantify the probability of any scenario. This scenario is simply a middle-ground between no new connections and 100% of new buildings connect. This scenario is provided to illustrate the scale of load growth that Creative Energy could potentially serve if we offer cost effective low carbon energy.

- e. A third forecast scenario was generated by assuming that no new customers connect, and that the steam system loses load over time. Rather than identify

individual customers, for indicative purposes the attrition was assumed to be 5000MWh per year of customer steam beginning in 2023. In 2023, that equates to about 1.3% of the annual load. This forecast is the **Attrition Scenario**.

Likelihood: Creative Energy is not able to quantify the probability of any scenario, however, given observed load attrition over the last several years, we do find that continued attrition is much more probable than load continuing at current levels.

LTRP Figure 2 Information

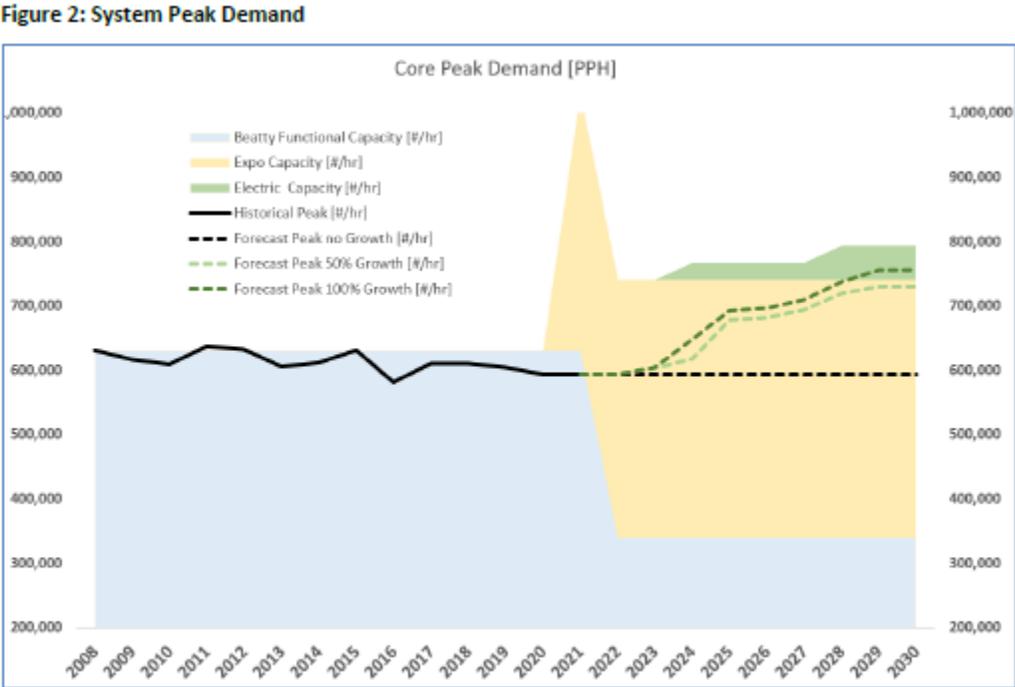


Figure 2 is a representation of the load growth scenarios, overlaid with the status quo generation resources and generation resources which may be available. The blue and yellow shaded areas represent the natural gas capacity available at the Beatty and Expo Plants respectively. For clarity, the brief spike in capacity arises as a result of Expo coming online in parallel to the full capacity available at Beatty Street, before decommissioning of three existing boilers at Beatty. The green shaded area represents the electric boiler capacity, coming online in 2024 and 2028, notionally.

- ii. As described above, the growth forecasts are based on energy estimates of identified developments within the area of downtown Vancouver that could be considered as Creative Energy’s service area, with the exception of the attrition forecast which incorporates a loss of steam demand over time.

The load attrition was not specific to any one customer and could have a variety of causes, including disconnection(s), demand-side measures, on-site generation or demand reduction arising from climate change. For indicative purposes, the attrition was assumed to be 5,000 MWh per year, starting in 2023. This value is about 1.3% of the annual demand and is not connected to any particular building; it was selected rather to illustrate the impact of load attrition, rather than indicate an expected rate of attrition.

- iii. Low carbon demand is inherent in all the growth forecast scenarios, as new developments cannot reasonably connect in the policy environment (as reviewed in the LTRP) in the absence of low carbon energy supply. The numbers in the forecast represent the total energy needed by the buildings and are not broken out into conventional supply and low carbon supply, for example.
- iv. The slope of the lines is the result of the timing of the forecast development projects in downtown Vancouver. There are years where there are significant number of connections assumed or major loads disconnecting from Creative Energy’s network, and years where there is little change, but those variances solely arise from the calculations performed in the exercise of potential load forecasting.
- v. For clarity, the planning horizon of the LTRP begins as at the end of 2024 when all components of the Expo and Beatty Plants Redevelopment Project are expected to be in service. That is the base case in the LTRP from which to plan for future resources.

The forecast potential steam energy loads under the 100% and 50% growth scenarios do not represent load forecasts that Creative Energy will necessarily serve. Future developments in downtown Vancouver that require low carbon energy will have alternative available options to meet their low carbon energy needs, which would include the low carbon energy generated at our steam plant through the planned decarbonization project we describe in the LTRP, but which may also include a within-building scale low carbon energy solution or the provision of low carbon energy services from another utility, for example.

Therefore, in effect, there are two resource portfolios considered in the LTRP, and two load forecast scenarios contemplated in connection with each:

- 1) Base Case – Do nothing
 - a. Baseline load
 - b. Load Attrition

- 2) Decarbonization Project
 - a. Connect 50 percent of forecast low carbon heating growth
 - b. Connect 100 percent forecast low carbon heating growth

The Decarbonization Project reflects our intent to acquire a low carbon resource option to attract new customers (a portion of the heating growth) and to retain existing customers (reduce or avoid attrition). The LTRP establishes the policy imperative that doing nothing is not an option to achieve this outcome. The decision between doing nothing and a decarbonization project is a decision into the load to be served by Creative Energy.

- vi. For the reasons set out in the introductory section and as provided in further detail under Item a.i for example, there were no rate or cost assumptions, nor price elasticity assumptions utilized to develop any of the load forecast scenarios.

Item b. Customer and Stakeholder Engagement

The following discussion reviews the customer and stakeholder engagement planned or undertaken in respect of the component elements of the LTRP.

Boiler Fuel Supply

As reviewed in section 3.1.2 of the LTRP, effective as of November 1, 2019, as accepted by Commission Letter L-22-19, Creative Energy acquires its natural gas (both commodity and delivery) from FortisBC Energy Inc. (“FEI”) under FEI Rate 7 bundled interruptible service. Creative Energy previously acquired its natural gas supply (commodity) from a gas marketer, and gas transportation service from FEI under FEI Rate 22. Owing to the recency of the Commission’s review and approval of the means by which Creative Energy acquires the resource necessary to generate steam production, no customer and stakeholder engagement was required to seek feedback or confirmation into this established component of our resource plan.

Low Carbon Energy Policy

In section 4 of the LTRP. Creative Energy has compiled a comprehensive summary of the key policy drivers that inform our current planning context and action plan. While energy policy is an external factor to our planning we have engaged with key policy makers to be properly informed of the emergence of current imperatives.

Creative Energy has had ongoing informal discussions with the City of Vancouver in recent years about the direction of policy around building emissions. Beyond informal discussions, Creative Energy did attend a workshop on September 16th, 2020, hosted by the City of Vancouver, titled “Zero Emissions Building Retrofit Briefing with District Energy Providers”. In this workshop, City staff working on policy and planning around building emissions presented information to stakeholders including Creative Energy, Corix and FortisBC on broad policy direction.

Demand-Side Management

Creative Energy has set out in sections 7 and 9 of the LTRP that it plans to engage with customers into opportunities for cost-effective DSM. We set out that DSM does not change the carbon intensity of Creative Energy’s steam and that such initiatives should coordinate with and support those of the City of Vancouver that might be designed to improve the energy efficiency of the very same buildings that we serve (i.e., our customers). Thus, the plan component of our LTRP in respect of DSM is to engage with customers and stakeholders in coordination also with the City of Vancouver to develop a more detailed understanding of the available DSM opportunities that Creative Energy can leverage without duplication, and to directly target engagement with customers into any cost-effective options.

Decarbonization Project

Creative Energy continues to develop and assess the project described in Appendix A of the LTRP and we recently commenced a public engagement process to review the project and its benefits with our Core steam customers, other stakeholders and members of the public potentially impacted by the project. This process could not have begun any sooner than as currently planned and executed. We are targeting the filing of an application for a CPCN by the end of March 2021 to request Commission approval of the project, and a public regulatory process established to review that application will involve further customer and stakeholder engagement in due course.

Creative Energy engaged informally on more preliminary scoping of the project with Commission staff and provincial government staff in Fall 2020.

The LTRP sets out the nature of the informal discussions we have had with some of our customers and local developers into low carbon energy opportunities. A comprehensive

report into the results of our current customer and stakeholder engagement process into the Decarbonization Project will be included with the CPCN application for the project.

For further information, please contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to be 'R. Gorter', with a long horizontal line extending to the right.

Rob Gorter
Director, Regulatory Affairs and Customer Relations