

CREATIVEENERGY

29 March 2019

Via Email

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

Dear Mr. Wruck:

**Re: British Columbia Utilities Commission (BCUC, Commission)
Creative Energy Vancouver Platforms Inc. (Creative Energy)
Application for a Fuel Cost Adjustment Charge (FCAC) Rate Rider (Application)**

Please find attached Creative Energy's response to BCUC Information Request No. 1, in accordance with Order G-52-19 in the above noted proceeding.

For further information, please contact the undersigned.

Yours sincerely,



Rob Gorter
Director, Regulatory Affairs and Customer Relations

Enclosure

Cc: Registered Intervenors

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Creative Energy Vancouver Platforms Inc.
Application for Fuel Cost Adjustment Charge (FCAC) Rate Rider

CREATIVE ENERGY RESPONSE TO BCUC INFORMATION REQUEST NO. 1

A. APPLICATION BASIS

**1.0 Reference: APPLICATION
Exhibit B-1, Application, p. 4**

On page 4 of Exhibit B-1, Creative Energy Vancouver Platforms Inc. (CEV) submits:

Creative Energy applies to the Commission for approval of a FCAC Rate Rider of \$4.80/M#, effective March 1, 2019. The forecast balance of the FCSA at the end of February 2019 is approximately \$8.7 million, which amounts to 37 percent of Creative Energy's rolling 12-month fuel costs totaling approximately \$23.3 million. The proposed Rate Rider has been calculated on the basis of an 18-month amortization of the current balance in the FCSA, and is therefore targeted to reduce the exceedance in the FCSA to 5 percent of a rolling 12-month total of fuel costs over a period of 18 months, on a forecast basis.

1.1 Based on the proposed rate, is CEV able to finance its remaining liquidity requirement? Please discuss.

RESPONSE:

The balance in the FCSA represents costs that Creative Energy has already incurred to provide steam service to customers. The Application proposes recovery of the excess balance in the FCSA over an 18-month period by rate rider, and Creative Energy has already arranged for its shareholder and existing lender to finance its shorter-term liquidity requirements. That is, these extraordinary costs are being financed by a shareholder loan and an additional loan from our existing lender until such time that the excess balance in the FCSA is recovered from customers. Creative Energy also has an operating line of credit with \$4.5 million available.

The loans with the shareholder and the lender are both governed by the existing General Security Agreement (GSA) that Creative Energy has with its lender. Both the shareholder loan and the loan with the lender incorporate the same level of security as set out in the GSA.

The implication to the shareholder related to the short-term financing of fuel costs is the opportunity cost of capital devoted to the short-term loan in comparison to other uses or investments of such capital. The expected bill impacts to customers of the proposed FCAC Rate Rider are as discussed in the Application and also in the response to BCUC IR 2.2, for example. The recovery from customers of the excess balance in the FCSA includes carrying costs on the mid-year balance, as approved under

Commission Order G-167-17. The costs of financing will therefore be recovered from customers given that these carrying costs are included in the calculation of the rate rider. The updates to the rate rider calculation provided in the response to BCUC IR 3.1 reflect this.

- 1.1.1 If the proposed rate increase is insufficient to provide financial relief, how will CEV finance this shortterm liquidity requirement (for example, further operating loan, shareholder funding)? Please discuss.

RESPONSE:

Please refer to the response to BCUC IR 1.1.

- 1.1.1.1 What implications does this have on CEV's customers and shareholder(s)? Please discuss.

RESPONSE:

Please refer to the response to BCUC IR 1.1.

- 1.1.1.2 Does CEV intend to include this cost of additional financing in its rates at a later date? Please discuss.

RESPONSE:

Please refer to the response to BCUC IR 1.1.

- 1.2 Please provide the maximum FCSA balance CEV can sustain given the current cash flow requirements needed to maintain operations.

RESPONSE:

Creative Energy is not able identify a maximum FCSA balance per se, but notes that the general concern overall relates to the timing of recovery of the excess balance in the FCSA, amounts that quite simply will not clear without a rate increase put in place. Please refer to the response to BCUC IRs 2.3 and 3.1, for example. The Commission has considered one-year amortization periods to be reasonable under normal circumstance (refer to Commission Letter L-05-01 for example). Clearly though, the circumstances over the winter of 2018/2019 have not been normal and with a balanced consideration Creative Energy is seeking to amortize the excess amount in the FCSA over 18 months.

- 1.3 Please confirm the operating line of credit available to CEV and provide details of any further amounts and sources that could potentially be raised.

RESPONSE:

Please refer to the response to BCUC IR 1.1.

1.4 Has CEV considered other alternative rates or mechanisms apart from what has been submitted in the Application? Please provide financial analysis on the alternative options CEV has explored.

RESPONSE:

Please refer to the responses to BCUC IRs 2.3 and 3.1.

1.4.1 Has CEV considered financing its short term liquidity requirements through shareholder funding? Please discuss.

RESPONSE:

Please refer to the response to BCUC IR 1.1.

1.4.2 Please discuss the viability of CEV taking out an operating loan to fund its short term liquidity requirements.

RESPONSE:

Please refer to the response to BCUC IR 1.1.

1.4.3 Please provide detail on CEV owned assets and whether these assets could be used as security on a short-term loan.

RESPONSE:

Please refer to the response to BCUC IR 1.1.

1.4.3.1 Has any financing been sought on these assets? Please explain.

RESPONSE:

Yes. Please refer to the response to BCUC IR 1.1.

1.5 Please discuss the potential impact on CEV and its customers if the proposed rate change is not approved.

RESPONSE:

Creative Energy does not envision a scenario where the Commission would not approve the recovery of fuel costs from customers. The Commission has approved the recovery of Creative Energy's forecast fuel costs on a flow-through basis to customers under a Commission-approved FCAC, with a

mechanism in place to record variances between forecast and approved fuel costs in the FCSA and to recover any excess balances in the FCSA through a FCAC Rate Rider when required.

As discussed in the response to BCUC IR 2.3, there are limited options for recovering fuel costs from customers. In Creative Energy's view therefore, the subject of approval is not whether a Rate Rider should be established, but what the level of the Rate Rider ought to be, subject to the mechanism and recovery period used to set it, and the contemplated quarterly review going forward to adjust the level if necessary.

1.5.1 What options does CEV have available in this event? Please discuss.

RESPONSE:

Please refer to the response to BCUC IR 1.5.

1.6 What level of working capital is required for CEV's operations and why? Please provide any financial analysis to support the response.

RESPONSE:

Creative Energy's operational working capital is funded by its \$4.5 million operating line. This amount allows Creative Energy to manage its normal business operations over the entire year, and specifically allows Creative Energy to manage the seasonality difference between its cost of service and revenue recovery, the latter being more heavily weighted to the winter period.

1.6.1 How does this compare to the operating cash flows available? Please explain.

RESPONSE:

Operating cash flows generated from the business are approximately \$2 million per year and are predominantly directed toward maintenance capital to properly maintain our assets.

**2.0 Reference: CUSTOMER IMPACT
Exhibit B-1, Application, p. 7**

On Page 7 of the Application, CEV submits the table below:

Table 6: Customer Bill Impact versus Cost Recovery Amortization

Rate Rider \$/M#	\$21.00	\$7.80	\$4.80	\$2.80
Amortization Period (months)	6	12	18	24
Average Bill Impact – All customers	92%	35%	21%	12%

2.1 Please provide the assumptions and the equations for the calculation of the figures in Table 6.

RESPONSE:

Please refer to the calculation spreadsheet at Attachment 2.1 – Bill Impact Calculation.

2.2 Given that CEV is requesting an average customer billing increase of approximately 21 percent, please discuss how CEV has minimized the impact of rate shock in addition to considering alternative amortization periods? Please elaborate.

RESPONSE:

Creative Energy acknowledges that the significant increase in fuel costs outside of Creative Energy's control will result in bill impacts to customers during the proposed 18-month amortization period to recover these costs. However, in the overall context of the extraordinary and unforeseen increase in fuel costs this winter, the impact to customers under the proposed amortization period are moderate in comparison to a much shorter duration recovery period that would more closely match cost recovery to cost causation. Even under a 6-month amortization period the expected increase to customer bills would be greater than 90 percent.

Creative Energy has described in the Application that the proposed FCAC Rate Rider is necessary to recover costs from all its customers that were able to continue to receive service over the recent period of very high fuel costs. The proposal reflects a balanced consideration of the bill impact to customers and the intergenerational equity issue and additional carrying costs that arise from a material delay in the recovery of costs already incurred to deliver service. The evaluation of customer bill impacts is inextricably linked to the period of cost recovery. While an 18-month amortization period does not effectively match cost recovery to the period in which the fuel costs were caused and incurred, it does reflect the balance Creative Energy has sought in its proposal between bill impacts to customers and intergenerational equity concerns and the additional carrying costs that would arise from further prolonged recovery.

Please refer also to the response to BCUC IR 2.3.

2.2.1 Has CEV communicated the proposed rate increase with its customers? Please provide any feedback CEV has received.

RESPONSE:

Creative Energy first notified its customers of the Enbridge pipeline explosion and its effect on market prices in a communication about the increase to the FCAC to \$13.75/M# in October, 2018.

Creative Energy similarly plans to explain its proposal, the circumstances that warrant it, and the interim approval of the FCAC Rate Rider in a communication to its customers when it issues invoices for March, 2019 consumption.

2.3 What further options does CEV have to offset the proposed increase to the FCAC rate? What are the potential implications of doing so? Please elaborate.

RESPONSE:

In response to the pressure on its fuel costs related to high gas commodity prices due to the pipeline explosion, Creative Energy received Commission approval to increase its FCAC to \$13.75/M# effective October 18, 2018, in accordance with Order G-213-18. The Commission also directed Creative Energy to file a quarterly report that includes review of the FCSA balance, the appropriate amortization of the FCSA and any request to change the FCAC. This is important context for consideration of the options discussed below, in part because the FCAC of \$13.75/M# is expected to recover current fuel costs and also contribute to a reduction in the FCSA balance.

As the Commission has observed in its IR 3.5 below, Creative Energy has calculated its proposed and alternative FCAC Rate Riders based on the projected deferral account balance over different amortization periods. The calculation of Creative Energy's proposed FCAC Rate Rider assumes the FCAC of 13.75/M# remains constant over the amortization period, with only the level of the Rate Rider computed to amortize the excess balance in the FCSA over 18 months. Without a rate rider in place the FCSA will not "self-clear" within a reasonable time period assuming only the existing \$13.75/M# FCAC remains in effect, as set out on page 7 of the Application. This is also highlighted in Table 1 in the response to BCUC IR 3.1, reflecting current updates.

An alternative option relates only to the mechanism for computing the FCAC Rate Rider. The alternative is to target the level of the Rate Rider to recover only the excess balance in the FCSA as at the end of March 2019 and to not include projected changes in the FCSA beyond that date, leaving subsequent changes in the FCSA and FCAC to future quarterly reviews. This would result in a higher required initial Rate Rider. The consequent effect is that both the Rate Rider and the FCAC of 13.75/M# may need to be adjusted over time, changes to the former to recover the current excess balance over the targeted recovery period and changes to the latter in response to updates to the approved forecast of fuel costs. In this case, if there was no rate rider in place than the excess balance in the FCSA attributed to the present circumstances would not be recovered at all. This is highlighted in Table 2 in the response to BCUC IR 3.1.

As compared to the alternative option, the advantage of Creative Energy's proposed mechanism is rate stability, in that only one part of the overall rate structure is required to change over time as necessary to target amortization over 18 months, and therefore would also favour the practicality and customer understanding of the rate overall.

In summary, there are limited options to offset the proposed recovery of fuel costs from customers other than putting in place a FCAC Rate Rider at a level that balances bill impacts with the length of recovery period. The recovery of fuel costs from customers is established in the Commission's approval of Creative Energy's rates and the mechanism to record and recover balances in the FCSA is reputable and now under the Commission's purview, as described in the Background section of the Application.

B. FUEL COST ADJUSTMENT CHARGE AND FUEL COST STABILIZATION ACCOUNT

3.0 Reference: FUEL COST ADJUSTMENT CHARGE (FCAC) RATE RIDER AND AMORITIZATION PERIOD Exhibit B-1, Application, p. 7; Rate Rider calculation.xlsx; CEV 2016-2017 Revenue Requirements Application and Rate Design for NEFC Hot Water Service Decision, p.30

On page 7 of Exhibit B-1, CEV states “a Rate Rider of \$4.80/M#, effective March 1, 2019, is calculated on the basis of forecast load and natural gas prices to reduce the balance in the FCSA to 5 percent of a rolling 12 months of fuel costs in 18 months, by the end of August 2020.”

On page 30 of the BCUC’s 2016-2017 Revenue Requirement Application Decision, the panel directed the following:

5. Starting January 1, 2017, any positive or negative variances between forecast Fuel Costs and actual Fuel Costs (including any variance between the forecast and actual Base Cost volume), are to be captured in the FCSA.
 7. Where the balance in the FCSA exceeds plus/minus 5 percent of the most recently approved 12 month forecast total Fuel Cost any amount in excess of this is to be distributed through the FCAC rate rider with an amortization period of two years.
- 3.1 Please provide an updated FCSA account balance and FCAC Rate Rider based on the latest recorded fuel costs and forecasted fuel costs. Please provide the supporting calculations in a working excel model.

RESPONSE:

Please refer to the summary tables below, which present the calculation of the Rate Rider based on the two mechanisms discussed in the response to BCUC IR 2.3 above.

Please also refer to the supporting inputs and calculations at Attachment 3.1 - Rate Rider Calculation Updated. All calculations are based on the most recent Commission approved 12-month fuel cost forecast of \$15,566,129, and also reflect the following updates:

- **Updated forward curve of monthly Sumas natural gas prices as at March 26, 2019 (Please refer to the response to BCUC IR 3.2, which highlights a generally higher forecast of prices overall compared to at the time of the Application);**
- **Updated actual costs for February and projected costs March, reflecting in part the costs of fuel oil associated with back-up system operation February 27 – March 5. (Please refer to the response to BCUC IR 4.1).**
- **Updated monthly M# to GJ conversion factors for Steam Plant GJ consumption based on the average of computed values over the last three years (Please refer to the corresponding worksheet in Attachment 3.1);**
- **Added interest on the mid-year balance in the FCSA in 2019 and 2020, at a cost of debt equal to 4.25 percent; and**
- **Added associated incremental third-party regulatory costs for recovery, presently estimated at \$25,000.**

Please note that the final commodity price for March billing purposes will be updated in early April upon final accounting and may have some effect on the results below. The calculation model filed with the Application used the forward price for March at the time, equal to \$12.99/GJ. The final price for billing is expected to be lower. The model presently assumes \$10/GJ for March billing as a plug

value based on the judgement of Creative Energy’s gas marketer.

With these updates, Attachment 3.1 cannot be specifically compared to the rate rider calculation filed with the Application. However, the results in Table 1 are indicative of Creative Energy’s proposed Rate Rider assuming the updates above and the general increases to the underlying cost inputs. For comparison purposes, under the updated and refined calculation model, a rate rider of \$4.80/M# would be projected to recover the excess balance in the FCSA in approximately 20 months under the proposed approach, given the higher costs.

Table 1: Rate Rider Recovery of Current + Projected FCSA Excess Balance – Proposed method

Approved 12-month Fuel Cost Forecast - 2018	\$15,566,129			
Amortization Period (months)	6	12	18	24
Current + Projected FCSA – no Rate Rider (\$ million)	10.5	10.3	9.4	7.8
Current + Projected FCSA as % of Forecast Fuel Cost – no Rate Rider	68%	66%	60%	50%
Rate Rider \$/M# (5% balance end of Period)	24.13	8.72	5.49	3.13

Table 2: Rate Rider Recovery of Current FCSA Excess Balance – Alternative method

Approved 12-month Fuel Cost Forecast - 2018	\$15,566,129			
Amortization Period (months)	6	12	18	24
Current FCSA – no Rate Rider (\$ million)	11.1	11.1	11.6	11.6
Current FCSA as % of Forecast Fuel Cost – no Rate Rider (\$ million)	71%	71%	74%	74%
Rate Rider \$/M# (5% balance end of Period)	25.49	9.48	6.90	4.80

As a sensitivity, if the Commission-approved 12-month fuel forecast were to equal \$14 million, which is roughly equal to the 12-month forecast of fuel costs as of April 1, 2019 and about 10 percent lower than \$15,566,129, the calculated rate riders are estimated to be about 1% higher.

3.2 Please provide a comparison of forward curves used to determine the forecast gas commodity prices used in the Application and the latest available forecast gas commodity prices.

RESPONSE:

Please refer to the following table for an update as of March 26, 2019. Please note that the forecast of commodity prices extends through February 2022 in the updated calculation model to project a forecast 12-month fuel cost at the end of the analysis period for illustrative purposes.

Sumas CAD/GJ	Application	Update	Difference
Mar-19	12.99		
Apr-19	3.72	3.58	(0.14)
May-19	3.11	2.98	(0.13)
Jun-19	3.15	3.19	0.04
Jul-19	3.63	4.22	0.59
Aug-19	3.64	4.12	0.48
Sep-19	3.63	3.86	0.23
Oct-19	3.89	3.50	(0.39)

Sumas CAD/GJ	Application	Update	Difference
Nov-19	4.38	4.56	0.18
Dec-19	5.27	5.54	0.27
Jan-20	5.19	5.34	0.15
Feb-20	4.55	4.74	0.19
Mar-20	4.03	3.95	(0.08)
Apr-20	2.49	2.83	0.34
May-20	2.07	2.37	0.30
Jun-20	2.11	2.38	0.27
Jul-20	2.73	2.98	0.25
Aug-20	2.74	2.99	0.25
Sep-20	2.71	2.97	0.26
Oct-20	2.63	2.93	0.30
Nov-20	3.36	3.57	0.21
Dec-20	3.86	4.08	0.22
Jan-21	3.99	4.23	0.24
Feb-21	4.60	3.89	(0.71)
Mar-21	4.05	3.25	(0.80)
Apr-21	2.64	2.28	(0.36)
May-21	3.07	2.14	(0.93)
Jun-21		2.18	
Jul-21		2.46	
Aug-21		2.47	
Sep-21		2.46	
Oct-21		2.54	
Nov-21		3.32	
Dec-21		3.98	
Jan-22		4.08	
Feb-22		3.77	

3.2.1 Please explain what impact, if any, the latest available forecast gas commodity prices would have on calculating the proposed rate.

RESPONSE:

In general, the updated and generally higher commodity price forecast over the modelled amortization periods will increase the rate rider calculated on the basis of the current plus projected FCSA balance.

Creative Energy notes that there are many variables underpinning the calculation of the FCAC Rate Rider, including: forecast versus actual load; contracted rates, rate schedules and potential rate increases; as well as forecast versus actual natural gas commodity prices and exchange rates. For this reason, and as discussed in the responses to BCUC IRs 5.1 and 5.4, Creative Energy is supportive of a quarterly review of the FCAC and Rate Rider to maintain target recovery of the excess balance in the FCSA over 18 months.

- 3.2.2 Please explain how CEV derived the Commodity Rate Forward Curve that makes up the basis of the gas commodity cost forecast.

RESPONSE:

Creative Energy did not derive the Commodity Rate Forward Curve. This curve of forecast commodity prices is for gas at Sumas and is provided by Creative Energy's gas marketer, Cascadia Energy Ltd (Cascadia). The underlying assumptions and conversion of this commodity price forecast into CDN\$/GJ is set out in the calculation spreadsheet attached to the Application and in Attachment 3.1 - Rate Rider Calculation Updated.

- 3.3 Please provide a step-by-step explanation of how the FCAC Rate Rider of \$4.80/M# proposed in the Application was calculated.

RESPONSE:

The sequence of steps used to calculate the FCAC Rate Rider of \$4.80/M# is as follows:

- 1. Shape the most recent Commission-approved load forecast by month, using the average observed monthly seasonality factors for Creative Energy load over the last 20 years;**
- 2. Forecast fuel costs based on forecast commodity prices and current rates and fees for gas supply and transportation, supplemented by actual costs where applicable;**
- 3. Calculate the recovery of fuel costs under the approved FCAC of \$13.75/M# currently in effect;**
- 4. Model the recovery of fuel costs under an assumed FCAC Rate Rider input in \$/M#;**
- 5. Calculate the monthly FCSA balance, net of the recovery of fuel costs through the FCAC and through the FCAC Rate Rider input;**
- 6. Calculate the monthly FCSA balance as a percentage of a 12-month forecast of fuel costs; and**
- 7. Calculate, using a 'Goal Seek' function, the level of the FCAC Rate Rider that would reduce the monthly FCSA balance to 5 percent of the 12-month forecast of fuel costs by the end of the amortization period. The Rate Rider of \$4.80/M# was the result of a goal seek targeting recovery of the excess balance in the FCSA over 18 months, using the inputs and forecast costs at the time the Application was prepared.**

- 3.4 Please confirm, or explain otherwise, that the proposed rate is based on the approved methodology from the 2016-2017 Revenue Requirements Application Decision.

RESPONSE:

In general, the proposed Rate Rider is based on the approved methodology and consistent with the underlying methodology to forecast fuel costs generally, with one main exception. The proposed Rate Rider is not based on the most recently approved annual fuel cost forecast, which is the amount of

\$15,566,129 set out in Order G-213-18 approving the current FCAC equal to \$13.75/M#.

Please refer to the response to BCUC IRs 3.5 and 3.5.1 for further discussion. The response to BCUC IR 3.5.1 provides an update to the original filing based on the most recently approved annual fuel cost forecast. However, please refer to the response to BCUC IR 3.1 and Attachment 3.1 for the most up to date results using the most recently approved annual fuel cost forecast.

3.5 Please confirm, or explain otherwise, that CEV calculated the proposed rate based on the projected deferral account balance and the historical 12-month rolling fuel cost.

RESPONSE:

Creative Energy can confirm this to the extent the Commission intends the meaning of the word "historical" to describe the 12-month forecast of fuel costs that immediately precedes the end of the assumed amortization period.

That is, the Rate Rider calculated in the Application is based on the projected deferral account balance at the end of August 2020 assuming the proposed Rate Rider is in place over the 18-month amortization period (i.e. the proposed Rate Rider is effective March 1, 2019 through August 31, 2020). Under the Rate Rider calculated in the Application, the balance in the FCSA at the end of August 2020 is equal to 5 percent of the preceding 12-month forecast of fuel costs in the 12-month period spanning September 2019 through August 2020.

3.5.1 Please compare the proposed rate versus a rate based on the current deferral account balance, the approved 12-month forecast total fuel cost, and an amortization period of 6, 12, 18 and 24 months.

RESPONSE:

For comparison purposes, all else equal in the Rate Rider calculation spreadsheet attached to the Application, the following table reports the effect on the proposed Rate Rider from basing the rate rider on the current deferral account balance only and targeting the calculation to reduce that balance to 5 percent of the most recently approved annual fuel cost forecast of \$15,566,129.

Amortization Period (months)	6	12	18	24
Rate Rider \$/M# - Application, p. 7	\$21.00	\$7.80	\$4.80	\$2.80
Rate Rider \$/M# - Application, unrounded	\$20.76	\$7.79	\$4.81	\$2.79
Rate Rider \$/M# - Updated, all else equal	\$18.02	\$7.21	\$5.94	\$4.21

Please refer to the response to BCUC IR 3.1 and Attachment 3.1 for the most up to date results using the most recently approved annual fuel cost forecast.

4.0 Reference: FEBRUARY FUEL COSTS
Exhibit B-1, Application, p. 7; Rate Rider calculation.xlsx;
CEV Application for a Certificate of Public Convenience and Necessity for
Beatty-Expo Plants and Reorganization, p. 13

In the Rate Rider Calculation workbook attached to the Application, CEV submits that the Fuel Cost Deferral Balance grew \$6 million in February 2019 for a total balance of \$8.7 million. Further, CEV estimates that it paid more than \$30/GJ on at least 7 days (February 9-13 and 27-28). BCUC staff note that the total cost for these days is in excess of \$4 million or approximately 48 percent of the commodity costs for February and 17 percent of the 12-month rolling fuel cost.

On page 13 of Appendix A of CEV's Application for a Certificate of Public Convenience and Necessity for Beatty-Expo Plants and Reorganization, CEV submits that "diesel or no.2 fuel oil is used as the back-up fuel for firing of the boilers."

4.1 Please discuss the market conditions that contributed to the upward pressure on prices for February 2019. Please provide additional details for the 7 days identified in the preamble.

RESPONSE:

The following weekly news summary, prepared by the U.S. Energy Information Agency, dated March 14, 2019, provides a useful overview of the natural gas commodity market pressures in the region, with particular discussion of factors relating directly to the time periods noted in the preamble to this IR (source: <https://www.eia.gov/naturalgas/weekly/>). For reference, Creative Energy has inserted CDN \$/GJ equivalent figures in square brackets assuming a US/CDN exchange rate of 1.3.

Natural gas spot prices at the Sumas trading point on the Canada-Washington border averaged \$161.33 per million British thermal units (MMBtu)[~\$200/GJ] on Friday, March 1, the highest daily spot price recorded by Natural Gas Intelligence anywhere in the United States in at least five years. The price spike comes amid supply constraints and unseasonably cold temperatures, which drove up demand.

Limited supply deliverability coincided with unusually high demand when part of the polar vortex moved into the Northwest and Midwest during the beginning of March. Temperatures in Washington averaged 33 degrees Fahrenheit (°F) from March 1–4, 10°F lower than normal. These temperatures led to high heating demand in the Pacific Northwest and in the regions from which the Pacific Northwest imports its natural gas (the Rockies and Western Canada). Combined with supply constraints, the widespread cold weather led to the \$161.33/MMBtu spot price going into the weekend.

Last October's explosion on Westcoast Energy's BC Pipeline—which transports natural gas through British Columbia, Canada, and into the United States at Sumas—has led to reduced flows and higher prices at Sumas all winter. From November—the beginning of the winter storage season—to the end of February, Genscape data shows daily flows through Sumas onto the BC Pipeline averaged about 610 million cubic feet per day (MMcf/d), compared to 940 MMcf/d during the same period a year ago. Sumas prices averaged \$10.56 per million British thermal units (MMBtu) [~\$13/GJ] during that time period compared to \$2.62/MMBtu [~\$3.2/GJ] a year earlier.

Inspections related to the October explosion were scheduled to reduce Canadian export capacity on the BC Pipeline February 27 through March 6. The inspections ended early, on Saturday, March 2; however, prices were set on Friday with the expectation that capacity

reductions would last through March 6. After the maintenance ended early and temperatures warmed somewhat, Sumas prices fell to \$15.63/MMBtu [~\$19.2/GJ] on Monday, March 4.

The winter supply shortfall has been met with withdrawals from the Jackson Prairie natural gas storage facility in southwest Washington and by changes in regional pipeline flows to bring additional natural gas into Washington and Oregon. However, starting in the first half of February, compression problems at the Jackson Prairie facility reduced the rate at which natural gas could be withdrawn from the storage facility. Normally, as the total amount of natural gas in a storage cavern decreases, the maximum rate of withdrawal also goes down. The compression problems at Jackson Prairie have exacerbated this decline in the withdrawal rate; the facility's maximum withdrawal rate was reduced from 690 MMcf/d to 460 MMcf/d as of February 9, and it may decrease further as inventory levels draw down. As of February 9, working gas inventories were at about 10 billion cubic feet (Bcf), compared with from 22 Bcf at the end of October and 15 Bcf at the beginning of last February. Maintenance on the Jackson Prairie compressor was completed by March 7, after the March 1 price spike at Sumas.

Several other price spikes occurred at Sumas this winter with similar underlying drivers. The Sumas spot price rose to \$69.25/MMBtu [~\$85/GJ] on November 15 as maintenance further reduced flows on the BC Pipeline to Sumas, and mid-February saw prices rise to more than \$40.00/MMBtu [~\$49/GJ] with cold temperatures and the beginning of the compressor issues at the Jackson Prairie facility.

As described above and in our Application, the ongoing impacts in the market from the Enbridge pipeline explosion were exacerbated by compression issues at the Jackson Prairie storage facility, starting around February 9 when notification of these problems were issued by the operator of that facility. The impact persisted through February 13, with prices for Canadian gas at Sumas in the range of CDN\$62/GJ during that period.

On February 25, in anticipation of the effect of limited supply deliverability coinciding with the persistence of the polar vortex into the region, FortisBC Energy Inc. (FEI) issued a 'Hold to Authorize' for the Lower Mainland and Interior, to be effective February 27. A Hold to Authorize is a restriction imposed in response to a supply constraint to limit unauthorized gas overruns within a narrow 5 percent band. Given the FEI Hold to Authorize restriction and the expectation of very high natural gas prices, as advised by Cascadia, Creative Energy switched to its back-up fuel supply on February 27 through to March 5 (refer also to Creative Energy's response to BCUC IR 4.3). Prices for Canadian gas at Sumas were high, in the range of CDN \$25-\$50/GJ between February 27 and March 1, climbing to approximately CDN \$200/GJ on March 2, 3 and 4.

4.2 Please confirm, or explain otherwise, that CEV is a transportation service customer under Rate Schedule 22 of FortisBC Energy Inc. (FEI) and receives gas from Cascadia Energy Ltd (Cascadia).

RESPONSE:

Confirmed.

- 4.2.1 Please provide a brief discussion on why the contracting strategy identified in 4.2 above was chosen.

RESPONSE:

Creative Energy's fuel supply portfolio consists of the following components:

- 1. natural gas supply through Cascadia;**
- 2. natural gas transportation service from FEI under Rate 22; and**
- 3. the on-site fuel oil backup system and fuel oil storage tanks.**

Our portfolio provides a firm physical supply of gas under a low risk of curtailment with the ability to rely on the backup fuel oil system if and when needed.

With respect to gas supply, Cascadia provides a secure, firm supply of gas. Since 2011, in accordance with Commission Letter L-78-11, Creative Energy has filed an Annual Contracting Plan (ACP) with the Commission for its review and acceptance in advance of the winter heating season. These plans discuss demand requirements, supply resources, risk factors and may also request specific approval of a hedging strategy in advance of the winter heating season to reduce price volatility risk. Creative Energy has sought Commission approval of hedging strategies in its ACPs to manage exposure to potential short-term price spikes; however, the Commission has indicated reluctance to accept the proposed hedging with the result that the strategy has not been pursued. For example,

- in its 2017/2018 ACP, Creative Energy proposed a price risk management strategy for the gas year beginning November 1, 2017. The Commission in its Letter L-30-17 dated November 8, 2017 and Letter L-33-17 dated December 21, 2017 indicated that the ACP provided insufficient information in respect of the price risk management measures proposed. While Creative Energy did not agree with that view, there was not sufficient time for Creative Energy to provide additional information that might have been acceptable to the Commission in time to implement a price risk management strategy for natural gas purchases in the 2017/18 winter; and**
- in its 2018/2019 ACP, Creative Energy proposed to hedge up to 30 percent of its gas supply for the gas year beginning November 1, 2018. While the Commission did accept the strategy on October 11, 2018 by Letter L-26-18, this approval came two days after the Enbridge pipeline explosion, and Creative Energy was not able to implement an effective hedging strategy when the market was already in turmoil. Even without the pipeline incident, the timing of the Commission acceptance would have been problematic due to its proximity so close to the start of the gas year.**

With respect to gas transportation, Creative Energy receives a firm plus interruptible transportation service from FEI under Rate 22. This service provides value to Creative Energy and its customers as it allows Creative Energy to obtain lower transportation rates with a low risk of curtailment. Creative Energy consider the low risk of curtailment as acceptable and economic because we have the on-site backup fuel oil system.

During the period between October 10-13, 2018, in response to a Force Majeure declaration, FEI curtailed both its firm service customers on Rate 5 and its interruptible service customers on Rate 22. As a Rate 22 customer, Creative Energy had its natural gas transportation service curtailed on October 9, 2018. On October 10, Creative Energy was able to completely switch to its fuel oil backup system, utilizing a small amount of natural gas during the change over. On October 11, our system was fully operational on fuel oil and no natural gas was available. On October 12 and 13, Creative Energy was

only authorized by FEI to use its firm supply of 2,200 GJ of natural gas.

Outside of the curtailments during this event, Creative Energy had not been curtailed in the past 10 years due to capacity issues on the FEI system. Creative Energy is also not aware of any curtailments of other interruptible customers in the past 10 years other than periodic curtailment or load management in a couple areas of the Fraser Valley due to capacity issues there in high demand periods.

While the current contracting strategy has allowed Creative Energy to maintain secure and reliable service for its customers, the strategy has not recently included any hedging and as a result Creative Energy has been subject to short-term market price fluctuations including the market turmoil this winter.

Creative Energy is analyzing the possible benefits and value to customers of receiving bundled service (commodity and delivery) from FEI beginning November 1, 2019, under either Rate 5 (firm) or Rate 7 (interruptible). Creative Energy expects to be able to report to the Commission on the results of its review soon, noting that FEI requires notice by June 1, 2019 for planning purposes.

- 4.2.2 Please discuss how, under CEV's current procurement strategy, CEV manages its gas supply when there is a physical supply constraint on the gas system, such as during February 2019.

RESPONSE:

Creative Energy relies on its gas marketer to obtain physical supply of gas on a firm basis as it has been contracted to do.

If gas supply is physically constrained by FEI, as recently occurred, Creative Energy is able to meet the load demands of our current customer base with our backup fuel oil system. Creative Energy has on-site fuel oil storage, and fuel oil can be procured on short notice at the market price in effect at the time. Creative Energy also notes that its Municipal Access Agreement with the City of Vancouver places limits on our ability to switch to the backup system as follows:

6.4 Permitted Fuels

The Company will not use any fuel other than natural gas or electricity as a primary fuel for generating the hot and cold used in the Total System without the prior written approval of Council. The Company may use oil, liquid gas or propane for the purpose of operating the Company's standby equipment, or any other fuel approved from time to time by the City Engineer.

The backup system has the capability to meet peak load and is able to run continuously and indefinitely. The plant can be switched from gas to the backup system on relatively short notice - a typical two-hour notice of curtailment by FEI provides Creative Energy sufficient time to switch over to the back up fuel oil system. Creative Energy regularly 'combustion tunes' its boilers on fuel oil to ensure the fuel oil system is available when required.

- 4.2.2.1 Please discuss the appropriateness of this strategy given CEV's customer base includes residential customers.

RESPONSE:

Please refer to the response to BCUC IR 4.2.2.

- 4.3 Please discuss CEV's gas contracting strategy for February 2019 and the options it considered to minimize fuel costs and supply risk. Please provide specific details on the 7 days identified in the preamble.

RESPONSE:

Creative Energy's general contracting strategy for February 2019 is as described above in the responses to BCUC IRs 4.2.1 and 4.2.2 above. Creative Energy was able to continue to secure the gas commodity and delivery to meet the service needs of our customers during this period.

With respect to the February 9-13 period, the major influences on prices during this period were the compression problems at the Jackson Prairie storage facility and the unexpected shift of the polar vortex into the region in early February. This contrasts with the January period during which prices were moderating following the immediate effects of the Enbridge pipeline explosion and temperatures that were relatively warmer than normal. As shown in Table 1 of the Application, for example, the average price for January consumption was about \$5/GJ, in comparison to approximately \$8/GJ and \$16/GJ in December and November, respectively.

Daily gas nominations by our gas marketer are provided one day in advance of consumption. Gas nominations for Saturday, Sunday and Monday are made on the preceding Friday. Thus, the gas nominations on Friday, February 8 for consumption on Saturday, February 9 through Monday, February 11 could not have predicted nor accounted for the market price effect of the compression problems at Jackson Prairie, public notice of which was issued on February 9. Creative Energy monitored the market and ordered fuel oil with a plan to partially switch its generation to its backup system on February 13 in order to manage the fuel cost impact to customers. On February 13, Creative Energy met about 50 percent of customer demand with its backup system, deciding at that time to also maintain natural gas generation during a period of such high demand due to the very cold weather.

With respect to the February 27-28 period, the Application included a forecast of natural gas costs for those days. However, in response to the expected economic constraint in the market related to the predicted very high prices at the end of February, Creative Energy was able to provide value to its customers through a timely and seamless switch to its backup system. Please refer also to the response to BCUC IR 4.1.

- 4.4 Please discuss if CEV considered using its backup supply resource of diesel/fuel oil to serve all or some of CEV's customer demand during this time period. Why or why not?

RESPONSE:

Please refer to the responses to BCUC IRs 4.1 and 4.3.

- 4.4.1 Please discuss the physical capabilities and limitations of CEV's backup diesel/fuel oil system. As a part of this discussion please provide the operating capacity of the backup system, lead time for start-up of backup system vs the notice of curtailment and price signals from market, duration in which the backup system can run, and average fuel costs.

RESPONSE:

Please refer to the response to BCUC IR 4.2.2.

- 4.4.2 Please provide an estimate of fuel oil and diesel prices (\$/GJ) for February 2019. Please provide any assumptions used to the estimate prices, including conversion factors (e.g. USD to CAD or Litres to GJ).

RESPONSE:

The average fuel oil cost (in Canadian dollars) during the 7 days of continuous backup operation between February 27 and March 5 was \$0.9695/liter, with overall utilization between 8,000 – 11,000 liters per hour. The average all-in per unit cost of fuel oil including taxes and fees equalled \$1.17/liter as shown in Attachment 3.1.

The energy content of the fuel oil is 38.88 MJ/L, and the estimated \$/GJ cost is equal to \$24.95/GJ (= 0.9695 / 38.88 * 1000). As highlighted in the response to IR 4.1, this cost compares to market prices for natural gas during this period in the range of \$200/GJ, with potentially even higher costs during the Hold to Authorize if unauthorized use outside of the 5 percent threshold was to have occurred and been penalized.

- 4.5 Please confirm, or explain otherwise, that CEV has had its natural gas supply curtailed by FEI on some days since the October 9, 2018 Enbridge pipeline explosion.

RESPONSE:

Please refer to the response to BCUC IR 4.2.1.

- 4.5.1 If confirmed, please provide the dates and volume of gas curtailed for each day.

RESPONSE:

Please refer to the response to BCUC IR 4.2.1.

- 4.5.2 If confirmed, please discuss CEV's operating procedure during times of curtailment. How does CEV minimize the supply risk and the financial impact during this time period?

RESPONSE:

Please refer to the response to BCUC IR 4.2.2.

**5.0 Reference: FUTURE APPLICATIONS
Exhibit B-1, Application, p. 8**

On page 8 of the Exhibit B-1, CEV states that "while on a forecast basis the proposed rate rider will return the current balance in the FCSA to an acceptable level in 18 months, additional measure could be warranted if high gas prices persist and there are further and significant additions to the FCSA."

- 5.1 Please discuss what "additional measures" CE may consider.

RESPONSE:

Creative Energy will consider entering into fixed price contracts with its gas marketer to meet its gas supply requirements during April through October of the current gas year, subject to an evaluation of the market fundamentals that are expected to persist during this period. Market fundamentals will be impacted by factors that include: the timing for when the Enbridge pipeline will be back to full operation, expected in October-November 2019; whether the Jackson Prairie storage facility will be completely refilled in advance on the 2019/2020 gas year; and the planned reduction in capacity on the T-south pipeline for maintenance over the summer period to levels below historical summer load in recent years. Creative Energy will notify the Commission of any actions taken.

Under the expectation that Creative Energy's proposed Rate Rider is approved, it could still come forward with a future FCAC rate change application if unforeseen market impacts cause a further and significant addition to the FCSA outside of the approved 5 percent threshold and/or if amortization over the proposed 18-month period could not otherwise be achieved. Such an application could be made through the contemplated quarterly review of fuel costs in accordance with Order G-213-18 and as discussed in the Application on page 8.

- 5.2 Please explain the circumstances and gas price changes that would need to occur before CEV submits an additional filing.

RESPONSE:

Please refer to the response to BCUC IR 5.1.

- 5.3 If the proposed rate is approved, please discuss the regulatory process CEV envisions at the end of 18 month amortization period? For example, will CEV file an updated FCAC or FCAC Rate Rider application if the balance falls below 5 percent of the 12-month total fuel costs?

RESPONSE:

Creative Energy expects that the FCAC and the Rate Rider will be reviewed and adjusted as necessary in the normal course of the contemplated quarterly reviews such that:

- 1. The level of the Rate Rider will reduce the excess balance of the FCSA to 5 percent of the approved 12-month forecast of fuel costs by the end of the 18-month amortization period; and**
- 2. The approved FCAC going forward at the end of the 18-month amortization period will recover fuel costs on an approved forecast basis while maintaining the FCSA within the 5 percent threshold, also subject to quarterly review.**

- 5.4 Would CEV be amenable to adjusting the FCAC mechanism in its next FCAC application, to bring the management of this account into alignment with the BCUC's guidelines for gas cost rate setting, established by Letter L-5-01 dated February 5, 2001, and further modified by Letter L-40-11 dated May 19, 2011? Why or why not?

RESPONSE:

The Commission's guidelines for gas cost rate setting are reasonable and Creative Energy would be amenable to its FCAC and FCSA mechanisms being adjusted to accord with them. If Creative Energy assesses that taking bundled service from FEI beginning in November 2019 is in the best interests of its customers, then this may be a consideration in respect of any possible changes to its FCAC mechanism for practical purposes going forward.