Exh. BGM-4
Docket UE-170717
Witness: Bradley G. Mullins

BEFORE THE

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of	)	DOCKET UE-170717
	)	
PACIFIC POWER & LIGHT COMPANY,	)	
	)	
2016 Power Cost Adjustment Mechanism.	)	
	)	

EXHIBIT BGM-4

RESPONSES TO DATA REQUESTS

Boise Data Request 001

Please provide copies of all data requests submitted to you in this proceeding and your corresponding responses to those data requests. This is an ongoing request.

Response to Boise Data Request 001

Please refer to Attachment Boise 001-1 and Confidential Attachment Boise 001-2.

Going forward, Boise White Paper, LLC., (Boise) will be copied on all data responses.

Confidential information is provided subject to the terms and conditions of the confidentiality agreement between PacifiCorp and Boise White Paper, LLC.

PREPARER: Kaley McNay

SPONSOR: TBD

Boise Data Request 002

Refer to the Direct Testimony of Michael G. Wilding, Exh. MGW-1T at 12:13-18:

(a) Please provide each Bridger Coal Company budget issued between January 2014 to the present.

(b) Please provide actual operating results for Bridger Coal Company for calendar years 2015 and 2016.

(c) Has the Company identified any other costs included in actual adjusted net power costs associated with the Joy Longwall abandonment, and the unsuccessful recovery efforts, other than the following, total-Company amounts: i) abandonment loss of $12.5 million; and ii) direct recovery expenses of $7.6 million? If yes, please describe all such amounts.

(d) Please provide or identify work papers supporting the calculation of the $12.5 million abandonment loss and the $7.6 million of direct recovery expenses referenced in subpart (c), directly above.

Response to Boise Data Request 002

(a) Please refer to Confidential Attachment Boise 002–1, which provides the Bridger Coal Company (BCC) 10-Year Business Plans for 2014, 2015, and 2016.

(b) Please refer to Confidential Attachment Boise 002–2, which provides the BCC operating results for calendar years 2015 and 2016.

(c) Through the date of abandonment, no material additional costs were included in actual adjusted net power costs (NPC). Note: 99.65 percent of Jim Bridger costs are included in the Actual NPC on a West Control Area basis.

(d) Please refer to Confidential Attachment Boise 002–3, which provides the calculation of the referenced data. Note: 99.65 percent of Jim Bridger costs are included in Actual NPC.

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PREPARER: David Webb

SPONSOR: Michael Wilding

Boise Data Request 003

Please confirm that Exh. MGW-3 depicts, albeit not to scale, the 14th Right Longwall panel of the Bridger Underground Coal Mine. If the Company does not confirm, please explain the key in the bottom right corner of the graphic depiction.

Response to Boise Data Request 003

Yes. Please refer to the direct testimony of Company witness, Michael G. Wilding, specifically Exhibit No. MGW-3, which does depict the 14th Right Longwall panel of the Bridger Underground Coal Mine not to scale (vertical scale exaggerated).

PREPARER: David Webb

SPONSOR: Michael Wilding

Boise Data Request 004

Refer to the Direct Testimony of Michael G. Wilding, Exh. MGW-1T at 13:13-16:13, and Exh. MGW-3:

(a) Please provide any correspondence or reports in the Company's possession between the Company and the Mine Safety and Health Administration (MSHA) concerning the incident leading to, and encompassing, the abandonment of the Joy Longwall, including any MSHA communications associated with root-cause analyses, or similar engineering reports, relating to 14th Right Longwall panel incidents in late December 2015.

(b) Please state the gross book value, depreciation reserves and allowance for deferred income taxes associated with the Joy Longwall, immediately prior the Company abandoning it.

(c) Please state the total amount of abandonment losses and depreciation expense associated with the Joy Longwall reflected in net power costs in this matter.

(d) Please provide an explanation for the depreciation methodology used with respect to the Joy Longwall.

(e) Please provide any internal memoranda discussing the incident leading to, and encompassing, the abandonment of the Joy Longwall.

(f) Please provide any root-cause analyses, or similar engineering reports, which discuss the incident leading to, and encompassing, the abandonment of the Joy Longwall.

(g) Please identify the precise date that the Joy Longwall became stuck.

(h) Please identify the precise date that the Company decided to abandon the Joy Longwall.

(i) Please provide operating logs and foreman reports for the Joy Longwall over the period June 1, 2015 through December 31, 2016.

(j) Please identify the precise date that the Joy Longwall was transferred to the Bridger Coal Company.

(k) Please state the transfer price associated with the transfer of the Joy Longwall to Bridger Coal Company.

(l) Please state the gross book value, depreciation reserves and allowance for deferred income taxes of the Joy Longwall, immediately prior to being transferred to Bridger Coal Company.

(m) Please provide all correspondence and filings with the Wyoming Office of Mine Inspections & Safety sent or received between July 1, 2015 to July 1, 2017, discussing the Joy Longwall incidents that occurred in late December 2015, and the ensuing recovery efforts.

(n) Is the Company in possession of any independent, third-party reports which document the root cause of the incidents that occurred in the 14th Right Longwall panel in late December 2015, in contrast to the incidents encountered in the ensuing recovery effort? If yes, please provide a copy of all such reports.

(o) Was the 14th Right Longwall panel the first, and only panel, where the Joy Longwall was used? If no, please identify all areas in the mine where the Joy Longwall was used.

(p) Please provide copies of all operating policies and procedures in place concerning longwall mining operations in the Bridger Underground Coal Mine.

(q) Did the production at the underground mine decline as a result of the failure of 14th Right Longwall panel? If yes, please provide the Company's best estimate of the total cost in dollars, dollars per ton, and dollars per MMBtu associated with the reduced production.

(r) Please provide the economic analysis, and any supporting documentation, that the Company performed to justify transferring the Joy Longwall to Bridger Coal Company.

(s) Please identify when the Company originally acquired the DBT Longwall, which was used at the Bridger Underground Coal Mine prior to the Joy Longwall.

(t) Please identify the precise date that the DBT Longwall was taken out of service and replaced with the Joy Longwall.

(u) Does the Company agree that the primary reason for transferring the Joy Longwall to the Bridger Underground Coal Mine was to improve the Company's ability mine areas of the mine with the lowest seam heights? If no, please explain.

(v) Please identify and provide any geological assessments the Company made in connection with its strategy of using the Joy Longwall to mine areas of the Bridger Underground Coal Mine with low seam height.

(w) Please provide all geological reports that were prepared for the area including and encompassing the 14th Right Longwall panel over the period January 1, 2015 through June 1, 2017, in addition to those that were prepared in assessing the geological viability of using the Joy Longwall.

(x) When assessing the viability of using the Joy Longwall in areas of the mine with low seam height, did the Company consider that the Joy Longwall would encounter circumstances where the seam height was too low, requiring the Joy Longwall to mine into the roof or the floor of the coal seam? If yes, please provide any documentation describing how the Company intended to address such circumstances.

(y) Please identify each instance, over the period September 1, 2015 to December 31, 2015, where in the course of operating the Joy Longwall the seam height became too narrow, and the shearer operator was required to mine into the roof or the floor.

(z) When confronted with conditions where the seam height became too low for the Joy Longwall, whose responsibility was it to decide whether to mine into the roof or the floor of the coal seam?

(aa) Did the Company have any formal, or informal policies, for addressing whether to mine into the roof or the floor of the coal seam when confronted with conditions where the seam height became too low for the Joy Longwall? If yes, please provide or describe all such policies.

(bb) Before making the decision to mine into the roof or floor of the coal seam, was the Joy Longwall foreman required to consult with a geologist?

(cc) Please explain why the Joy Longwall foreman had elected to mine into the floor of the coal seam rather than the roof of the coal seam when the shearer became immobilized in late December 2015?

(dd) Please provide any formal policies and procedures that the Company developed as a direct result of the failure of the Joy Longwall that occurred in December 2015.

Response to Boise Data Request 004

(a) Please refer to Confidential Attachment Boise 004-1, which provides correspondence between the Company and the Mine Safety and Health Administration (MSHA), relating to the abandonment of the Joy Longwall.

(b) The gross book value of the Joy Longwall prior to the abandonment was $17,753,950, on the books of Bridger Coal Company (BCC), excluding construction work in progress (CWIP), materials and supplies, and deferred Longwall costs. PacifiCorp's two-thirds share of this amount is $11,835,967. The accumulated depreciation was $1,310,951 on BCC books, resulting in $873,967 for PacifiCorp's two-thirds share. The PacifiCorp two-thirds share of the allowance for deferred income taxes prior to the abandonment was $2,658,071 (two-thirds of the BCC deferred income taxes of $3,987,106).

(c) The abandonment loss is $18.8 million, of which PacifiCorp's two-thirds share is $12.5 million. Depreciation applicable to the Joy Longwall, recorded by BCC for 2016 was $26,612, of which PacifiCorp's two-thirds share is $17,742. This amount is relatively low due to the limited "number of cycles" realized in 2016. Please refer to the Company's response to subpart (d) below, which provides an explanation of the dependency of depreciation expense on "cycles". These amounts were included in the delivered cost of coal, a portion of which was included in fuel costs at the Jim Bridger plant in 2016, based on actual coal consumed at the weighted average price of coal in the stockpile. Note: 99.65 percent of Jim Bridger costs are included in the Actual Net Power Costs on a West Control Area basis. Therefore, compute the amount of abandonment loss and depreciation expense reflected in the filing by taking the above amounts multiplied by 99.65 percent.

Note: A portion of the BCC depreciation booked on the Joy Longwall includes an amount allocable to the refurbishment of the Longwall equipment, the transportation / freight costs borne by BCC, as well as sales taxes on the transaction, which were not part of the net book value (NBV) of the assets sold.

(d) The Joy Longwall Mining System consists of several major components assembled into a single mining system working simultaneously to extract coal on a continuous basis. At the time of acquisition it was anticipated that all major components would have the same useful service life, thus the Joy Longwall System was placed in property, plant and equipment investment records as one asset or system.

Calculation of depreciation expense is based upon the "number of cycles" the system advances during a monthly reporting period. With each pass of the shearing machine (which extracts coal from the work face), the longwall system advances to maintain proper operating distance from the receding coal face. These system advances are known as cycles. The longwall shields / supports are designed to perform a specific number of cycle advances.

(e) PacifiCorp objects to this request to the extent it requests information protected by the attorney-client privilege or attorney work product doctrine. Without waiving these objections, PacifiCorp responds as follows:

Please refer to the Company's response to subpart (a) above and subpart (f) below.

(f) PacifiCorp objects to the extent it requests information protected by the attorney-client privilege or attorney work product doctrine. Without waiving these objections, PacifiCorp responds as follows:

Please refer to the Company's response to WUTC Data Request 3, specifically Confidential Attachment WUTC 3. In addition, please refer to the Company's response to WUTC Data Request 6, specifically Confidential Attachment WUTC 6-2 which provides Confidential Exhibit RMP__(DMR-5R) to the Rebuttal Testimony of Company witness, Dana M. Ralston in Wyoming Docket 20000-514-EA-17. The above referenced confidential attachment and the confidential exhibit provide documents outlining the chronology of and engineering reviews relating to the Joy Longwall recovery effort and the final report of investigation.

(g) The Joy Longwall lost advancement capabilities over a period of time, between December 23, 2015 and December 31, 2015. Please refer to the Company's response to subpart (f) above.

(h) The Company decided to abandon the Joy Longwall on October 7, 2016.

(i) Please refer to Confidential Attachment Boise 004-2, which provides the Joy Longwall operating logs for the time period requested.

(j) The Joy Longwall was transferred to BCC in multiple shipments and was placed in-service on September 1, 2015. It was then invoiced to BCC following required approval of the affiliate transaction by certain regulatory bodies.

(k) The Joy longwall was transferred to BCC for $16,776,509, which consisted of the market value of the equipment of $13,303,700, plus reimbursement of $2,986,980 for the cost of rebuilding the equipment, and $485,829 for transportation of the equipment to BCC. PacifiCorp's two-thirds share of the amounts recorded on BCC books would be as follows:

PacifiCorp Share of Total Transferred	$11,184,339
Consisting of:	
a. Market value	$ 8,869,133
b. Reimbursement for cost of rebuilding	$ 1,991,320
c. Transportation	$ 323,886

Note: The amounts shown do not include sales taxes paid by BCC on the transaction.

(l) The gross book value of the Joy Longwall on PacifiCorp's books prior to the transfer to BCC was $34,828,774, with accumulated depreciation reserves of $(12,668,485), for a net book value of $22,160,289. The allowance for deferred income taxes was $7,786,837 (Total PacifiCorp).

(m) The Wyoming Office of Mine Inspections and Safety (OMIS) performed a site visit during this time frame, but no written correspondence occurred and no filings were made.

(n) Please refer to the Company's response to subpart (f); specifically Confidential Exhibit RMP__(DMR-5R) Appendix A (Wyoming Docket 20000-514-EA-17), which includes a report entitled "Golder Engineering Review", which is an independent third-party account of the incident.

(o) Yes, the Joy longwall was only used in the 14th Right panel.

(p) Please refer to Confidential Attachment Boise 004-3 for the longwall operating policies and procedures.

(q) The Company objects to this request as overly broad and not reasonably calculated to lead to the discovery of admissible evidence. Without waiving these objections, the Company responds as follows:

No. The reduced production at the underground mine was not directly related to the Joy longwall issues. BCC's volume reduction compared to the base period was driven by lower generation levels at the Jim Bridger plant (resulting from lower power market prices, lower natural gas prices, and renewable generation impacts during 2016). The combination of coal delivered to the plant from BCC and Black Butte met plant generation requirements. Production decreases at the BCC underground mine were partially offset by increases at the BCC surface mine in 2016.

Therefore, the Company did not prepare a hypothetical analysis of what costs might have been, had the Joy longwall been operational. An analysis such as this would be dependent on numerous speculative operational and cost assumptions, while the realities of the market in 2016 dictated that those volumes of coal were not required at the Jim Bridger plant.

However, the Company did conduct an analysis of the 2016 coal costs at the Jim Bridger plant, which quantified the cost impact of volume reductions in the plant's coal requirements compared to the base period. That amount is $19.4 million, please refer to Confidential Attachment Boise 004-4, which provides the analysis. A major driver of the increase in the coal fuel expense at the Jim Bridger plant was a generation volume decrease of 2,111 gigawatt-

hours (GWh) (21 percent), which resulted in a decrease in tons delivered of 29 percent, compared to the base period.

(r) Please refer to Confidential Attachment Boise 004-5, which provides the BCC Capital Appropriation Document (CAD), which includes the economic analysis and supporting documentation relating to the BCC purchase of the Joy longwall.

An assessment was completed by JoyGlobal in April 2014, and concluded that the Joy longwall could operate effectively at the Bridger mine (Confidential Attachment Boise 004-5, file "JoyGlobal E-Mail"). Mine operating costs assuming use of the Joy longwall at BCC were developed in October 2014, and a cost comparison versus continuing to operate the DBT longwall was completed in Q2 2015.

(s) The DBT longwall (in use prior to the purchase of the Joy longwall) was originally placed-in-service in March 2007.

(t) The DBT longwall was temporarily idled starting July 27, 2015 after completing the 13th Right panel, but was not taken out of service, and is currently operating in the 17th Right panel.

(u) Yes, the Joy longwall system was purchased for the purpose of improving the quality of the coal mined in the Western reserves. Please refer to Confidential Attachment Boise 004-5.

Note: the Joy longwall system was sold by PacifiCorp to BCC after fair market valuation (FMV) was established by independent appraisers and pre-approval of the transaction was received from the Public Utility Commission of Oregon (OPUC) and submittal of an advice letter to the California Public Utilities Commission (CPUC). The transaction was subject to review and approval by Idaho Power Company (IPC) and the Idaho Public Utilities Commission (IPUC). Additionally, the Company completed an affiliate transaction document prior to completing the Joy longwall sales transaction between PacifiCorp and BCC.

(v) Please refer to Confidential Attachment Boise 004-5 and Confidential Attachment Boise 004-6 ("14th Right Longwall Panel - Geologic Report" dated August 2015). Confidential Attachment Boise 004-5 discusses the geologic challenges in the Western mine district and the expected benefits of utilizing the Joy longwall versus the DBT longwall in that area. On page 5 of Confidential Attachment Boise 004-5, the plan assumed utilizing the Joy longwall to extract coal from the remainder of the western district and the first panel mined (6th Left) in the eastern district because the Joy longwall has a

lower minimum cutting height relative to the DBT longwall. Page 8 visually portrays a significantly higher ash coal product being mined by the DBT longwall relative to the Joy longwall on page 9. This is evident by the amount of red in the top left quadrant of Figure 2 on page 8 versus the amount of green in the top left quadrant of Figure 3 on page 9. The color red designates an ash content of greater than 15.0 percent. The color green designates an ash content of less the 12.5 percent.

(w) Please refer to the Confidential Attachment Boise 004-5, and Confidential Attachment Boise 004-6 (the geologic report discusses coal seam characteristics, roof/floor lithology, overburden/abutment stress, groundwater, longwall face geology/stability and coal quality), and the Company's response to subpart (v) above. Note: the Company requested JoyGlobal complete an evaluation to assess the viability of utilizing the Joy longwall at the Bridger mine. Key issues evaluated by JoyGlobal included the floor pressure associated with the shields and the tip-to-face spacing (distance between the end of the shield and the coal face or block) differential between the Joy and DBT longwalls. Relative to floor pressure, the Jackson floor pressure at yield is expected to provide the true operating pressure. The floor pressure at yield based on the projected average mining height for each longwall in the 14th Right longwall panel is 108 inches or 1,020 pounds per square inch (psi) for the Joy longwall and 132 inches or 1,023 psi for the DBT longwall. The data was extracted from pages 34 and 36 in Confidential Attachment Boise 004-5. Relative to the tip-to-face differential between the Joy and DBT longwall shields, the Joy shields have a tip-to- face distance of 18.7 inches and the DBT shields have a tip-to-face distance of 20.5 inches. In addition to the lower minimum cutting height benefit provided by the Joy longwall, the Joy longwall provides slight operational benefits with regard to floor pressure and tip-to-face distances relative to the DBT longwall.

(x) Please refer to the Confidential Attachment Boise 004-5 and Confidential Attachment Boise 004-6.

(y) Dates in which the shearer operator mined into the roof or floor between September 1, 2015 and December 31, 2015 are noted below:

December 14, 2015 - coal seam thinned to around six feet. A face profile indicated the coal thinned to 6.7 feet at shield 20.

December 15, 2015 - the coal thickness at shield 40 was around 6.5 feet.

December 16, 2015 - No coal thickness data was reported in the profile document but from 0.5 to 2.0 feet of roof was being taken between the headgate and shield 60.

December 17, 2015 - coal thickness was above 7.2 feet across the face.

December 23, 2015 - No coal thickness data was reported in the profile document however, from one foot to five feet of top was being taken / lost from the headgate to shield 80.

Note: seam thickness is not the only reason shearer operators may be forced to mine into the roof or floor. Fluctuations in seam structure such as rolls in the roof or floor may also cause the roof or floor to be cut. If the seam is thick but abruptly changes from flat to an incline, mining floor rock can be necessary. In some instances, top rock is lost if belts go down or the longwall breaks down for mechanical reasons. Idle periods may cause abutment pressures to break up the top rock and cause it to fall into the pan.

(z) BCC longwall shearer operators constantly monitor geologic face conditions including; seam thickness, roof and floor conditions and structural features (rapid changes in face elevation). Shearer operators relay data to the Longwall Face Boss. In areas of critical concern with reduced seam thickness, instability of the roof strata and/or rapid changes in seam elevation, Longwall Face Bosses consult with Longwall Shift Foreman and Mine Manager to devise a strategy to mitigate the situation.

(aa) Yes. Due to past experience with mining the soft claystone floor (in both continuous miner and longwall sections), mining horizons are selected to minimize exposing the claystone. Longwall panel geologic reports are prepared for each longwall panel prior to the extraction of that panel. These geologic reports show detailed projected geologic conditions including: seam thickness, roof and floor lithology, structural features and coal quality. Longwall reports are used as a guide to longwall crews to facilitate effective longwall production. Please refer to Confidential Attachment Boise 004-6 to view the report.

(bb) No. Geologic staff routinely visit the longwall to collect and evaluate geologic and geotechnical face conditions and coal quality data. Face conditions are relayed to longwall crew and management. Critical evaluation points include; coal seam thickness trends, proximity of mining to the floor strata contact, areas of intercepted groundwater, general condition of the roof (thickness and rock type of out-of-seam dilution mined), caving areas (roof rock failing or flushing) and structural trends.

During routine operations, geologic staff inspect the longwall face and communicate to longwall personnel coal quality estimations and advise longwall crews of upcoming geologic conditions.

Longwall management monitors longwall face conditions during retreat to select the mining interval to achieve effective operations. Selection of the mining horizon is a dynamic process with a primary concern of the controlling the roof horizon – caving process. Mining of 14th Right at cross cut 18 included a multitude of factors converging at the same time. The following factors influenced the selection of the mining horizon:

- Coal seam thickness thinned at mid-face less than operational limitations.
- A complex structural roll was intercepted in the face that caused the seam to change elevation in two aspects: (1) parallel to the face, and (2) perpendicular to the face.
- The hard sandstone floor thinned in the area of the structural roll.

Factors listed above affected the selection of the mining horizon. Shearer operators were unable to effectively control the mining horizon due to the rapid changes in seam elevation. Mining the seam roll inflection points exposed the soft claystone floor. Exposing the soft claystone floor caused the shields to settle / sink into the floor resulting the roof to cave / flush (flushing occurs in the longwall gob caved strata behind the longwall that is in direct contact with the longwall face). Pulverized gob material pours in and inundates the face when the shields are advanced. In an effort to control the flushing, longwall crews, including the section foreman, elected to mine the floor, advancing the shields to control the roof. Under normal conditions, adequate thickness of hard sandstone floor, this practice has been used in the past to control the roof failure. In this circumstance, thinning of the hard sandstone floor exposed an abnormal amount of claystone floor which exacerbated the situation.

(cc) Please refer to the Company's response to subpart (bb) above.

(dd) The Company enhanced or instituted the following policies and procedures to mitigate longwall mining risks:

- The Company provided on-site geologic training to all employees. The training document is included as Confidential Attachment Boise 004-7.
- The Company is continuing to develop the longwall panel geologic report. Please refer to Confidential Attachment Boise 004-8. Additionally, a second, less detailed report is prepared and reviewed with every employee working in the longwall section prior to coal extraction. The report is

included as Confidential Attachment Boise 004-9.

- A shift turnover communications and operating procedure is in place that requires the crew terminating their shift to provide written documentation to the on-coming crew discussing geological and mechanical conditions on the face. Please refer to Confidential Attachment Boise 004-3 ("Longwall Standards CONF") for the longwall procedures/standards.

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PREPARER: Brad Davis

SPONSOR: Michael Wilding

Boise Data Request 002

Were the Joy Longwall assets, which were abandoned in the deferral period, included in the rate base in the Company's most recent rate case, Docket No. UE-152253. If yes, please state the total amount of rate base related to the Joy Longwall assets included in that matter.

Response to Boise Data Request 002

The Joy Longwall assets abandoned in the deferral period were not included in rate base in the Company's most recent rate case, Docket UE-152253.

PREPARER: David Webb

SPONSOR: To Be Determined

Boise Data Request 003

Please provide copies of the face profile documents that were provided in response to WIEC Data Request 3.4, Confidential Attachment WIEC 3.4 -1, in Docket No. 20000-514-EA-17 before the Wyoming Public Service Commission.

Response to Boise Data Request 003

Please refer to Confidential Attachment Boise 003.

Confidential information is provided subject to the terms and conditions of the protective order filed on October 26, 2017, and may only be viewed by qualified persons under that order.

PREPARER: Kaley McNay

SPONSOR: To Be Determined

Boise Data Request 004

Does the Company communicate with other mine operators in order to develop best practices surrounding geology, ground control and mine planning at the Bridger Underground Mine? If yes, please identify the other mine operators and describe the types communications that occur.

Response to Boise Data Request 004

Bridger Coal Company (BCC) considers site-specific geology, ground control, and mine planning information to be proprietary data. However, it is not uncommon to discuss general practices and procedures with industry colleagues and consultants.

Further, BCC researched other underground coal mines with weak geologic strata to supplement procedures and practices at its underground mine. However, BCC's underground mine geology is unique compared to other mine operators in the area because BCC operates the only operating underground coal mine in the State of Wyoming and in the Fort Union Formation in the Western United States.

PREPARER: David Webb

SPONSOR: To Be Determined

Boise Data Request 005

Reference the Geological Report of 14th Longwall Panel (e.g., WIEC Exh. No 301.6 in Docket No. 20000-514-EA-17 before the Wyoming Public Service Commission):

(a) How did the Company determine where to locate the surface drilling holes, when preparing the referenced report?; and

(b) After the initial surface drilling cores were obtained, did the Company conduct any supplemental drilling to obtain a better understanding of potentially problematic areas of the 14th Right Longwall Panel?

Response to Boise Data Request 005

Please note that "WIEC Exh. No 301.6 in Docket No. 20000-514-EA-17" is the same document provided in the Company's response to Boise Informal Data Request 004 in this proceeding, specifically Confidential Attachment Boise 004-6 which provided a copy of the "14th Right Longwall Panel – Geologic Report" dated August 2015.

(a) Please refer to the Company's response subpart (b) below.

(b) Yes. Based on initial regional exploration consistent with industry standards (one half to quarter mile spacing) and development mining geologic mapping, Bridger Coal Company supplemented data by strategically locating exploration drill sites to provide supplemental geologic data including; coal seam thickness, coal quality, lithologic characteristics (roof, coal seam, floor), geotechnical and structural elevation trends. Depending on the supplemental drilling results, additional exploration drilling was implemented to further refine critical areas of concern.

PREPARER: David Webb

SPONSOR: To Be Determined

WIEC Data Request 3.1

Reference the Company's Response to Confidential Attachment WIEC 1.7 -2, specifically the Bridger Coal Company results of operations for calendar year 2016:

(a) Please identify the line items where the longwall abandonment losses of $12.5 million have been included, as well as the monthly amounts included in results in connection with the abandonment losses.

(b) Please identify the line items in the referenced report where the costs associated with the longwall recovery efforts of $7.6 million have been included, as well as the monthly amounts associated with those efforts.

Response to WIEC Data Request 3.1

(a) The $12.5 million loss related to the Joy Longwall abandonment was reflected as a one-time impairment entry in September 2016 on the books of PacifiCorp. That entry was reversed in October 2016, and was then reflected on the books of Bridger Coal Company (BCC) in October 2016. As such, it was not included in mine operating costs, but was included in the cost of coal delivered to the Jim Bridger plant, and was recorded as a fuel consumed expense in the same month. BCC then billed the impairment loss to PacifiCorp via a separate invoice. Consequently, this loss is not reflected on the referenced attachment.

(b) Please refer to the Company's response to WIEC Data Request 2.4; specifically Confidential Attachment WIEC 2.4 -1, which shows the monthly amounts in connection with the recovery efforts. The line item categories shown in column A (e.g. Management, Operating Supplies, Outside Services, etc.) of that spreadsheet correspond to the category descriptions in column A of Confidential Attachment WIEC 1.7 -2 (for the underground mine portion of that report, which begins on row 132).

Respondent: Brad Davis

Witness: To be determined

WIEC Data Request 3.2

Reference the Company's response to WIEC Data Request 2.4:

(a) Please describe the mining activities that were occurring the Bridger Underground Mine in the period between January 1, 2016, when the Joy Longwall became immobilized, and August 2016, the date the DBT longwall resumed coal production.

(b) Please confirm that the Company has conducted no analysis of the increased cost of coal at the Jim Bridger Power plant resulting from having no active longwall system in place for the majority of 2016. If confirmed, please explain why the Company did not believe that such an analysis should have been performed.

Response to WIEC Data Request 3.2

(a) Please refer to the file, "Joy Longwall Recovery Chronology CONF," provided with the Company's response to WIEC Data Request 1.6; specifically Confidential Attachment WIEC 1.6 -2, which provides a description of the Bridger underground mine activities during the requested timeframe.

(b) The Company has conducted an analysis of the 2016 coal costs at the Jim Bridger plant, which quantified the cost impact of volume reductions in the plant's coal requirements compared to the base period. That amount is $8.4 million, as referenced in the Direct Testimony of Company witness, Michael G. Wilding (page 14, line 16 through 23, and page 15 line 12 through 16). Please refer to Confidential Attachment WIEC 3.2, which provides the analysis. A major driver of the increase in the coal fuel expense at the Jim Bridger plant was a generation volume decrease of 1,398 gigawatt-hours (GWh) (15 percent), which resulted in a decrease in tons delivered of 25 percent, compared to the base period.

Bridger Coal's volume reduction was driven by these lower generation levels at the Jim Bridger plant (resulting from lower power market prices, lower natural gas prices, and renewable generation impacts during 2016), and was only partially related to the longwall production issues.

The Jim Bridger plant ending coal inventory level decreased by 324,568 tons, compared to the base period. The combination of coal delivered to the plant from Bridger Coal Company (BCC) and Black Butte met plant generation requirements. Production decreases at the underground mine were partially offset by increases at the surface mine in 2016. The Company did not prepare a hypothetical analysis of what costs might have been, had the Joy Longwall been operational, as that event did not occur in isolation nor independently from these other changes in the economy, which impacted mine production levels. An analysis such as this would be dependent on numerous speculative operational and cost assumptions, while the realities of the market in 2016 dictated that those volumes of coal were not required at the Jim Bridger plant.

Confidential information is provided subject to the terms and conditions of the protective agreement in this proceeding.

Respondent: Brad Davis

Witness: To be determined

WIEC Data Request 3.3

Reference Confidential Attachment WIEC Data Request 2.5-1:

(a) Please identify the location in the 14th right longwall, using the location reference numbers identified in the report, where the longwall shield tipped and the shearer became immobilized.

(b) Please identify the ash content of the hard floor material in the area where the Joy Longwall shield tipped and the shearer became immobilized.

(c) Please identify the ash content of the roof material in the area where the Joy Longwall shield tipped and the shearer became immobilized.

Response to WIEC Data Request 3.3

(a) The longwall was abandoned in the 14 Right longwall panel, by cross-cut 17 at station 21+50' at the headgate and 21+44' at the tailgate.

(b) The ash content of the floor material ranges between 90 percent and 95 percent ash. The immediate lithology below the coal seam is composed of a relatively hard sandstone layer.

(c) The main lithologic units immediately above the coal seam are composed of claystone, siltstone and sandstone which have a typical ash of 85 percent to 90 percent. There is often a little carbonaceous mudstone and bone immediately overlying the coal seam. Carbonaceous mudstone and bone have ash values that range between 29 percent and 73 percent.

Respondent: Brad Davis

Witness: To be determined

WIEC Data Request 3.5

Reference the Company's response to WIEC Data Request 2.5 (h):

(a) Please identify each date that the geologic staff visited the face over the period September 1, 2015 through January 30, 2016.

(b) Please provide all communications from geologic staff to longwall personal discussing coal quality estimations and advising longwall crews of upcoming geologic conditions over the period September 1, 2015 through January 30, 2016.

(c) Please provide all communications from longwall management detailing the mining horizon selected for the 14th Right longwall panel over the period August 1, 2016 through January 30, 2016.

Response to WIEC Data Request 3.5

(a) Dates that the geologic staff visited the face from September 1, 2015 through January 30, 2016:

9/3/2015	9/29/2015	10/27/2015	11/19/2015	12/15/2015
9/8/2015	10/13/2015	10/29/2015	11/20/2015	12/17/2015
9/11/2015	10/15/2015	11/3/2015	12/4/2015	1/8/2016
9/15/2015	10/20/2015	11/6/2015	12/9/2015	1/14/2016
9/24/2015	10/22/2015	11/13/2015	12/10/2015	1/29/2016

(b) Please refer to Confidential Attachment WIEC 3.5. The file entitled "Longwall Crew-Geologist Communications" contains documented instances when the mine geologist discussed the shearer operator's mining horizon and recommended operational changes to improve coal quality. As identified in the Company's response to subpart (a) above, geologic staff routinely visit the longwall to collect and evaluate geologic and geotechnical face conditions and coal quality. Commonly, face conditions are verbally discussed with longwall crew and management personnel.

(c) At the beginning of each shift, longwall crews verbally discuss mine safety, section conditions, operating considerations and work assignments specific to each attendee. Additionally, management employees meet daily and verbally discuss mine safety, coal delivery targets including coal quality and operational concerns and opportunities. These meetings provide management employees an opportunity to discuss issues, examine alternatives, share ideas and implement effective solutions to complex mining conditions.

Confidential information is provided subject to the terms and conditions of the protective agreement in this proceeding.

Respondent: Brad Davis

Witness: To be determined

WIEC Data Request 3.12

Reference the Company's Response to WIEC Data Request 2.5, 1st Supplemental, subpart (e): For each of the referenced events, please identify whether claystone was exposed in the floor as a result of mining out of the coal seam.

Response to WIEC Data Request 3.12

On December 14, 2015, approximately 0.25 to 0.50 feet or the hard sandstone floor was cut but the paleosol or claystone material was not exposed.

On December 15, 2015 and December 16, 2015, the transition zone between the hard sandstone floor and the claystone was exposed.

On December 17, 2015, only the hard sandstone floor was visible, no claystone was exposed.

On or about December 23, 2015, geologic conditions became more complex and the longwall intercepted a mid-face roll in the thinning coal seam exposing the claystone material.

Respondent: Brad Davis

Witness: To be determined

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20000-514-EA-17 / Rocky Mountain Power
October 30, 2017
WIEC Data Request 5.6

WIEC Data Request 5.6

Re: Rebuttal Testimony of Dana M. Ralston at p. 10, l. 15 – p. 11, l. 2. Please admit that after December 23, 2015, no geological observations of the face were made until January 8, 2016. If your response is anything other than an unqualified admission, please explain your response in detail.

Response to WIEC Data Request 5.6

The Company objects to this request on the basis that it is overly broad and unduly vague because the term "geological observations" may have different definitions to different parties. Geological observations are frequently made by operational personnel such as longwall foremen and crews in the normal course of mining activities. Geological observations were made by operational personnel during the period December 23, 2015 to January 8, 2016. However, assuming the request construes a "geological observation" as an observation by only a geologist, then as stated previously, no geologist was in the underground mine to make observations during the period December 23, 2015 to January 8, 2016.

Respondent: Brad Davis

Witness: Dana Ralston

20000-514-EA-17 / Rocky Mountain Power
October 30, 2017
WIEC Data Request 5.7

WIEC Data Request 5.7

Re: Rebuttal Testimony of Dana M. Ralston at p. 10, l. 15 – p. 11, l. 2. Does the Company have any geological documentation to prove that the claystone material was not continuously exposed over the period December 23, 2015 through December 28, 2015, the approximate date that the longwall lost advancement capabilities. If yes, please provide all such documentation.

Response to WIEC Data Request 5.7

The Company objects to this request on the basis that it is overly broad and because the term "geological documentation" is unduly vague. Without waiving these objections, the Company responds as follows:

The Company does not have any documentation for the period December 23, 2015 through December 28, 2015 to prove or disprove that the claystone material was exposed during that timeframe.

Respondent: Brad Davis

Witness: Dana Ralston

20000-514-EA-17 / Rocky Mountain Power
October 30, 2017
WIEC Data Request 5.11

WIEC Data Request 5.11

Reference the Company's Response to WIEC Data Request 2.5, 1st Supplemental, Subpart J, Confidential Attachment WIEC 2.5 -2, Document titled, "Longwall Standards":

(a) Please admit that the policies and procedures identified in the referenced attachment were developed following the Joy Longwall failure. If your response is anything other than an unqualified admission, please explain your response in detail.

(b) The referenced document is an undated word document. Has the Company prepared any formal memorandums that were distributed to employees and documenting these policies? If yes, please provide all such documents.

Response to WIEC Data Request 5.11

(a) The Company objects to this request on the basis that it assumes facts not in evidence because the "Longwall Standards" document does not contain all policies and procedures applicable to the Bridger Coal underground mine. Without waiving these objections, the Company responds as follows:

The Company does not agree that all of the policies and procedures were developed following the Joy longwall failure, given that enhancements of existing processes and procedures occurred as stated in the Company's 1st Supplemental response to WIEC Data Request 2.5, subpart (j).

Confidential Attachment WIEC 2.3 –5 "Longwall Standards", which is an undated operational document, provides longwall crews guidance dealing with communication and documentation during certain events including shift changes, changing mine face conditions, floor or ceiling conditions, etc. These standards are not a complete and exhaustive set of policies, procedures and standards and may be superseded or overridden by other policies.

In addition, Dana Ralston's rebuttal testimony, page 12 lines 8 -22 to page 13 lines 1 - 11 states the role of the geologist in the scenario in question is to collect data and update geologic models. Geologists are not longwall operations personnel and do not have the expertise of longwall equipment and its use.

Further, should the longwall stop mining while investigation of unusual circumstances occurs, it is operation management's decision to determine when the mine should continue, which in some cases may be sooner than a geologist could visit the mine due to changes in roof, floor, or face conditions.

Lastly, during certain difficult mining circumstances, staff can be limited to key operators and individuals specially trained for those situations that would exclude other personnel, such as geologists, for safety reasons.

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October 30, 2017
WIEC Data Request 5.11

(b) Yes. The Company provided Confidential Attachment WIEC 2.5 –2 and Confidential Attachment 2.5 –3 to longwall employees in a training session on January 4, 2017. Please refer to Confidential Attachment 5.11 –1, "Attendance Roll."

Respondent: Brad Davis

Witness: Dana Ralston