REDACTED
Exhibit 4-CV

17-035-61 Phase 2 REDACTED Vote Solar Exhibit 4-CV 3-3-2020 Volkmann

ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

1407 W. North Temple
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February 6, 2020

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RE: UT Docket No. 17-035-61
Vote Solar 9th Set Data Request (1-7)

Please find enclosed Rocky Mountain Power's Responses to Vote Solar 9th Set Data Requests 9.1-9.7. Also provided are Attachments Vote Solar 9.1-1, 9.2-3, 9.5-2, 9.6, 9.7, 9.8, 9.9 –(1-3). Provided on the enclosed Confidential CD are Confidential Attachments Vote Solar 9.1-2, 9.2 –(1-2), 9.4, and 9.5-1 and Confidential Response to Vote Solar 9.3. Confidential information is provided subject to Public Service Commission of Utah Rule 746-1-602 and 746-1-603.

If you have any questions, please call me at (801) 220-2823.

Sincerely,

___/s/___
Jana Saba
Manager, Regulation

Enclosures
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Vote Solar Data Request 9.1

Please refer to Appendix N of PacifiCorp's 2019 Integrated Resource Plan.

(1) Please provide all LOLE and LOLP analyses conducted in support of the Capacity Contribution Study. Please include supporting reports, documentation, and work papers in excel format with formulas and links intact.

(2) Please describe the solar resource analyzed in Table N.1, indicate why it was selected and whether it is a fixed resource, single-axis tracking, etc.

(3) Please provide all work papers supporting the Capacity Contribution Values presented in Tables N.1-N.5. Please include supporting reports, documentation, and work papers in excel format with formulas and links intact.

Response to Vote Solar Data Request 9.1

(1) Please refer to Attachment Vote Solar 9.1-1 and Confidential Attachment Vote Solar 9.1-2 which provides the work papers supporting PacifiCorp's 2019 Integrated Resource Plan (IRP), specifically Appendix N (Capacity Contribution Study).

(2) The incremental solar capacity contribution described in Table N.1 is based on tracking solar resources in southern Utah and southern Oregon. These locations have existing solar assets and relatively high capacity factors, making them likely sites for future additions.

(3) Please refer to the Company's response to subpart (1) above.

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Vote Solar Data Request 9.2

Please refer to the Company's Quarterly Compliance Filing in Docket No. 19-035-18 on January 10, 2020.

(1) Please provide a fully functional GRID instance reflecting the filing.

(2) Please provide all GRID Input files associated with the provided GRID instance.

(3) Please provide the associated Net Power Cost spreadsheets in excel format with formulas and links intact. If more than one set of Net Power Cost Spreadsheets are provided, please provide a narrative explanation that indicates the scenarios and function of each spreadsheet.

(4) Please provide any other work papers supporting this quarterly compliance filing.

Response to Vote Solar Data Request 9.2

(1) On January 24, 2020, the Company provided access to the Generation and Regulation Initiative Decision Tool (GRID) project associated with PacifiCorp's Q3 2019 January 10, 2020 avoided cost input changes quarterly compliance filing in Docket 19-035-18 via the GRID instance assigned to Briana Kobor (Vote Solar) and Michael Milligan (Milligan Grid Solutions, representing Vote Solar).

(2) Please refer to Confidential Attachment Vote Solar 9.2-1.

(3) Please refer to Confidential Attachment Vote Solar 9.2-2 and Attachment Vote Solar 9.2-3 for the net power costs (NPC) spreadsheets and associated avoided cost calculations. The compliance filing contains studies specific to baseload, solar, and wind resources. The work papers for each resource include:

- the NPC spreadsheet for the first 10 years of the study,
- the NPC spreadsheet for the remainder of the study through the last year of the Integrated Resource Plan (IRP) preferred portfolio study (which is currently 2038).
- the avoided cost study, which combines the GRID results from the NPC spreadsheets with avoided fixed costs associated with deferred resources.

(4) Additional work papers filed in support of the Q3 2019 Avoided Cost compliance filing are publicly available and can be accessed by utilizing the following website link to the Public Service Commission of Utah's (UPSC) website:

https://psc.utah.gov/2019/04/30/docket-no-19-035-18/.

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Vote Solar Data Request 9.2

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Vote Solar Data Request 9.3

Please refer to the Company's spreadsheet response to VS7-2 entitled: "Attach Vote Solar 7.2 CONF" in responding to the below requests.

(1) Referring to the tab entitled "Utilization Factor".

(a) Please explain what the value of 7,954 in cell B7 represents.

(b) Please provide the date and time-of-day for each of the monthly distribution peaks in cells B42-M42.

(2) Referring to the tab entitled "T&D Capacity Additions," please explain why RMP excluded the Energy Gateway transmission projects and provide the CY19-CY24 planned expenditures for:

(a) Gateway Central: Segment C – Oquirrh to Terminal.

(b) Gateway West: Segment D.2.

(c) Gateway South: Segment F.

Confidential Response to Vote Solar Data Request 9.3

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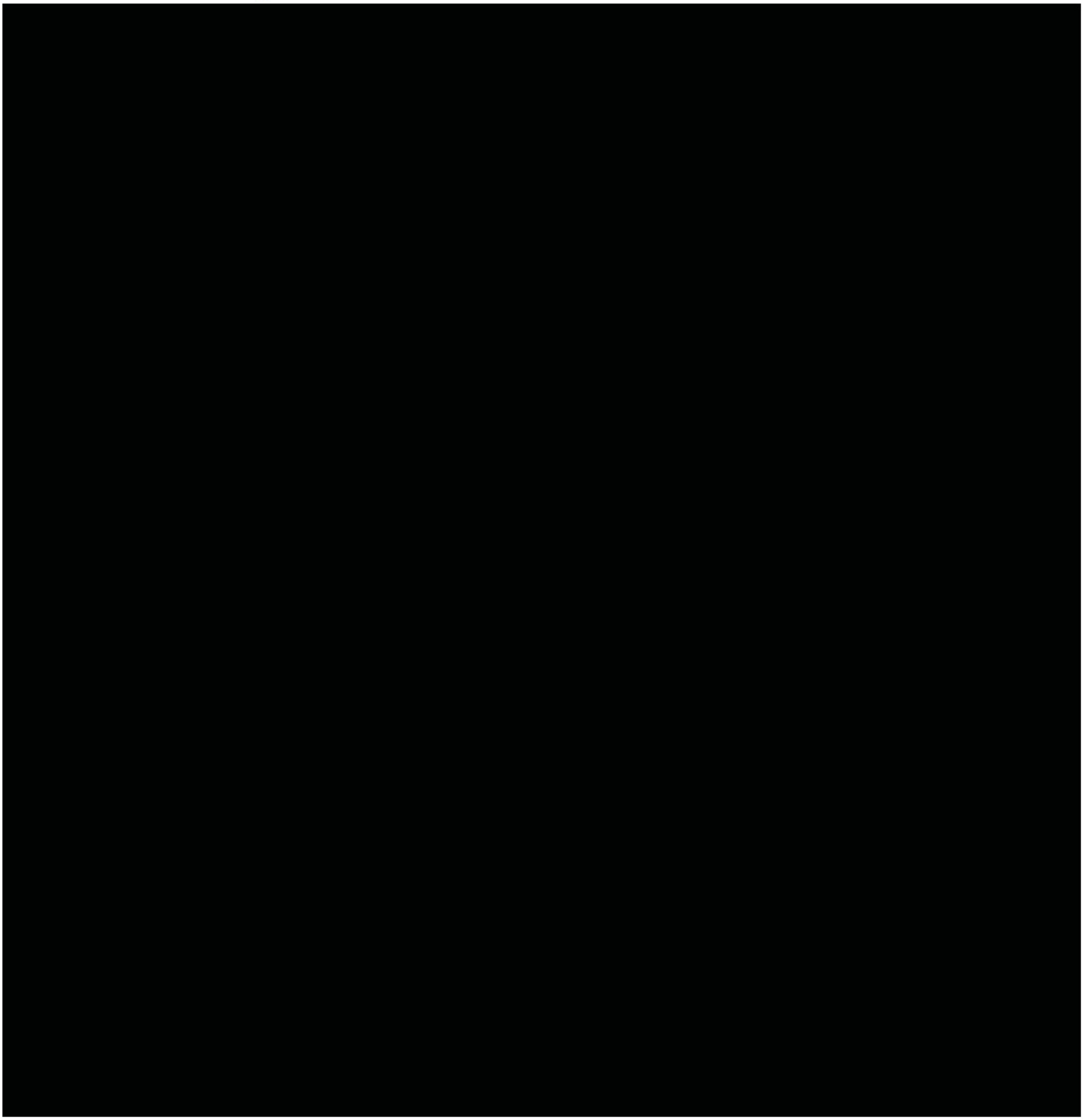
Vote Solar Data Request 9.3



Vote Solar Data Request 9.4

Please refer to the Company's response to VS6.1-14 and Section 6.5.2 on page 25 of RMP's DER Interconnection Policy in responding to the below requests[1].

(1) Please explain how the Company determines the need for dead line checks.

(2) Please provide all analyses, reports, or other documents where the Company has identified the potential need for DER dead line checks or effective grounding on its circuits, and provide an explanation of the methodology used in the analysis.

Response to Vote Solar Data Request 9.4

(1) For photovoltaic-based distributed energy resource (DER) systems, dead line check is required when the total aggregate generation (including the new generation) for a particular circuit exceeds 90 percent of the day-time minimum load for that same circuit. For rotating-based DER systems, dead line check is required when the total aggregate generation (including the new generation) for a particular circuit exceeds 33 percent of the minimum load for that same circuit. The day-time minimum load hours (for photovoltaic-based DER) are between 9am and 6pm. Each private generation (PG) application is reviewed independently and checked against these criteria. The circuit on which the PG request is made is evaluated to determine the day-time minimum loading value at the time of the request. For circuits with Supervisory Control and Data Acquisition (SCADA) data, a circuit load profile is reviewed over the last year to determine a day-time minimum load. For circuits without SCADA data, the most recent peak load data and individual circuit characteristics compared to similar circuits with SCADA are used to assign a minimum day-time load value.

(2) Since Q4 2018, level 2 PG requests have been administered by the PowerClerk software/database. For this response, PowerClerk was queried for those applications that failed the 90 percent minimum day-time loading value criteria for dead line checking. Please refer to Confidential Attachment Vote Solar 9.4 for copies of the applications that have failed the dead line checking criteria since Q4 2018.

Note: the provided documents have been redacted to remove customer specific information.

In section 4.8 of the report, the aggregate generation on the circuit as well as minimum day-time loading are listed. Both the effective grounding criteria and dead line checking criteria are addressed from section 4.8. The Company objects to providing the level 2 review reports that only failed the effective grounding criteria on the grounds that it is overly burdensome because it would require redaction of

[1] https://www.rockymountainpower.net/content/dam/pcorp/documents/en/pp-rmp/customergeneration/Facility_Interconnection_Requirements_for_Distribution.pdf

large number of pages with customer information. The methodology for the analysis is provided in the Company's response to subpart (1) above.

Confidential information is provided subject to the Commission's confidentiality rules under R746-1-602 and R746-1-603.

Vote Solar Data Request 9.5

Please refer to the Company's spreadsheet response to request VS6-17 entitled in part "PAC Value_of_Solar_Model20190718" (hereinafter the "E3 Spreadsheet") in responding to the below requests.

(1) Please provide all reports, working papers, analyses, or other documents associated with the E3 Spreadsheet.

(2) Please describe the relationship between the E3 Spreadsheet and the GRID model.

(3) Please indicate whether and, if so, when the E3 Spreadsheet will be updated to include the July 2019 GRID case.

Response to Vote Solar Data Request 9.5

(1) Please refer to Confidential Attachment Vote Solar 9.5-1 and Attachment Vote Solar 9.5-2 for the work papers associated with file "PAC Value_of_Solar_Model20190718" provided with the Company's response to Vote Solar Data Request 6.17.

(2) File "PAC Value_of_Solar_Model20190718" is populated in accordance with the Public Utility Commission of Oregon (OPUC) orders in Docket UM-1910, specifically Order 19-021. The only element within file ""PAC Value_of_Solar_Model20190718" that relates to the Generation and Regulation Initiative Decision Tool (GRID) is the monthly blending ratios used to determine which market prices are included in the standard qualifying facility (QF) avoided costs for each month. Each time standard QF rates are updated, GRID is used to determine the blending ratios based on the relative impact of incremental Oregon generation on the purchases and sales at markets around PacifiCorp's system.

(3) The OPUC has not specifically identified a timeline for future updates of file "PAC Value_of_Solar_Model20190718". Standard QF rates are typically updated annually, but are also updated following an Integrated Resource Plan (IRP) acknowledgment by OPUC.

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Vote Solar Data Request 9.6

Please provide a copy of the Company's most recent progress report filed pursuant to the Energy Resource and Carbon Emission Reduction Initiative (S.B. 202).

Response to Vote Solar Data Request 9.6

Please refer to Attachment Vote Solar 9.6. This report was filed in Utah Docket No. 19-035-46, which can be accessed in the link below:

https://psc.utah.gov/2019/12/31/docket-no-19-035-46/

Vote Solar Data Request 9.7

Please provide all monthly statistics for the number of pending and completed rooftop solar interconnections under Rate Schedule 136 from the inception of the program through December 2019.

Response to Vote Solar Data Request 9.7

Please refer to Attachment Vote Solar 9.7.

Vote Solar Data Request 9.8

Please refer to the Company's response to request VS4-1 in responding to the below request.

(1) Please provide an updated spreadsheet that includes any additional Schedule 135 and Schedule 136 customers with installation dates occurring after the last dates reflected in Attachment 4.1.

Response to Vote Solar Data Request 9.8

The Company continues to object on the basis that the information is customer-specific information that the Company considers to be commercially sensitive and trade secret. Additionally it violates the Phase I Order requiring discovery to maintain customer privacy. Notwithstanding and without waiving the objection, the Company states as follows:

Please refer to Attachment Vote Solar 9.8.

Note: the Company is unable to provide any information that is not maintained or tracked by the Company.

Vote Solar Data Request 9.9

Please refer to the NEM Distribution Line Loss Study in "Confidential Attachment Vote Solar 6.21-1".

(1) Refer to Table 4 on p.8. It appears the values for Total AC Capacity (kW) for the 60 homes with a 35 degree roof angle are off by a factor of ten. For example, the capacity for East should be 43.8, not 438; the capacity for South East should be 29.2, not 292; etc. If so, please provide a corrected version of Table 4. If not, please explain.

(2) Refer to Table 6 on p. 14. Please provide all data, analysis, reports, and spreadsheets with all formulas and links intact supporting the calculations of the loss expansion factors in each scenario.

(3) It appears the loss expansion factors shown for the CY 2009 Study incorrectly reflect values for MW, not MWh. If so, please provide a corrected version of Table 6. If not, please explain.

(4) It appears footnotes 1 and 2 incorrectly reflect the addition of MWh values and kWh values. If so, please provide a corrected version of Table 6. If not, please explain.

Response to Vote Solar Data Request 9.9

(1) Please refer below for the corrected Table 4:

Roof Angle	Count of Homes	Parameters	East	SouthEast	West	SouthWest	South	Total
25 Degrees	83 Homes	Panel Count:	297	129	655	197	1262	2540
		Total AC Capacity (kW):	71	31	157	47	302	608
		Annual Production(kWH):	110,816	53,980	234,455	80,923	548,115	1,028,289
35 Degrees	60 Homes	Panel Count:	183	122	390	117	989	1801
		Total AC Capacity (kW):	44	29	93	28	237	431
		Annual Production(kWH):	65,364	51,193	134,005	47,954	433,962	732,478
Total	143 Homes	Panel Count:	480	251	1045	314	2251	4341
		Total AC Capacity (kW):	115	60	250	75	539	1039
		Annual Production(kWH):	176,180	105,173	368,460	128,877	982,077	1,760,767

(2) Please refer to Attachment Vote Solar 9.9-1 through Vote Solar 9.9-3.

(3) Please refer below for the corrected Table 6:

Loss Expansion Factors MWH								
Segment	CY2009 Study		Base		Net Zero Metered Load[1]		Net Zero Total Energy Metered[2]	
	Factor	Cumulative	Factor	Cumulative	Factor	Cumulative	Factor	Cumulative
Primary Feeder Lines	1.01342	1.01342	---	---	---	---	---	---
Primary Branch Lines			1.00108	1.00108	1.00273	1.00273	1.00138	1.00138
Line Transformer	1.01863	1.03230	1.01845	1.01955	1.03633	1.03917	1.01795	1.01935
Secondary/Service	1.00646	1.03897	1.00073	1.02030	1.00183	1.04106	1.00090	1.02027

1. Total metered load = import-losses = 926MWH
2. Total metered energy = import+|export|-losses =1876MWH

(4) Please refer to Attachment Vote Solar 9.9-3 for corrected footnote for Table 6.