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June 11, 2020

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RE: UT Docket No. 17-035-61
Vote Solar 13th Set Data Request (1-3)

Please find enclosed Rocky Mountain Power's Responses to Vote Solar 13th Set Data Requests 13.1-13.3.

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 13.1

Please refer to RMP's Direct Testimonies filed on February 3, 2020, specifically the Direct Testimony of Robert M. Meredith.

1. Mr. Meredith states at lines 132–34 that "using registers for exported and delivered energy instead of relying upon profile data to bill customers is less administratively burdensome for the Company".

   (1) Please explain the difference between register and profile data.

   (2) Please explain the difference between register data based on the type of meter.

   (3) Is profile data collected/created for all customers?

   (4) Will profile data be collected/created for CG customers regardless of the interval that exports and deliveries are netted?

2. Mr. Meredith states at lines 136–38 that "the Company has automated much of the process for billing Schedule 136 customers based upon 15-minute intervals".

   (1) Please describe in detail what automation was done for billing Schedule 136 customers based upon 15-minute intervals.

   (2) Can the automation done for billing based upon 15-minute intervals be adjusted to do billing based upon hourly intervals?

   (3) Has the Company automated the billing process for Schedule 1, 2, 2E and/or 3 customers?

3. Mr. Meredith states at lines 134–36 that "without netting, the Company's meters will simply record energy delivered and energy exported in the on- and off-peak time periods and send those registers to the Company's billing system to calculate a bill for the customer".

   (1) What types of meters can perform the described task of recording energy in these periods and sending the registers to the Company?

   (2) Can the meters record energy for other periods different from those described above? For example, can the meters record energy in hourly periods and send those registers to the Company's billing system to calculate a bill for the customer?

4. Mr. Meredith states at lines 136–39 that "[w]hile the Company has automated much of the process for billing Schedule 136 customers based upon 15 minute intervals,

there still is some backend manual work that is required to accurately bill customers".

(1) Is there manual work required to accurately bill Schedule 1, 2, 2E, and 3 customers?

(2) Is it possible that, under real-time netting, there will be manual work required to accurately bill customers?

5. Mr. Meredith states at lines 140–42 that "[m]ost of the time, there are no issues with this [15 minute interval] data, but when there are, Company employees must resolve them".

(1) How often does RMP have issues with meter or profile data for Schedule 1, 2, 2E, and 3 customers? Please state the number of instances per year for 2018 and 2019.

(2) Is it possible that, under real-time netting, there will be issues that arise with register or profile data that will require resolution by Company employees?

Response to Vote Solar Data Request 13.1

1. Please refer to the Company's responses to subparts (1) through (4) below:

(1) Registers are the values that the meter tallies up and records. This might include total kilowatt-hours (kWh) or maximum kilowatts (kW) over a period. The Company's meters themselves cannot directly net delivered and exported energy across 15-minute intervals. The calculation netting each 15-minute delivered and received interval is recorded and are performed outside of the meter in a different software program.

(2) The Company objects to this request because it is vague and ambiguous. Subject to and without waiving any objections, the Company responds that different meters do not produce different register data..

(3) No.

(4) Not necessarily. When advanced metering infrastructure (AMI) is deployed, the Company anticipates installing AMI meters on all new customer generators. These AMI meters would record profile information for either hour or 15-minute intervals.

2. Please refer to the Company's responses to subparts (1) through (3) below:

(1) Billing for Schedule 136 has been automated, because 15-minute interval reads for delivered and exported energy are netted by a software system.

(2) Yes.

(3) Yes.

3. Please refer to the Company's responses to subparts (1) and (2) below:

   (1) Any of the Company's standard meters capable of measuring bi-directional energy flows and measuring during different time of use periods have this functionality.

   (2) Yes. A meter can be programmed to measure energy over different time of use periods.

4. Please refer to the Company's responses to subparts (1) and (2) below:

   (1) Yes.

   (2) There is always the possibility of manual work with any bill, but the likelihood of requiring manual intervention with relying on registers instead of profile netting is much less.

5. Please refer to the Company's responses to subparts (1) and (2) below:

   (1) The Company does not have the requested information.

   (2) Please refer to the Company's response to subpart 4. (2) above.

Vote Solar Data Request 13.2

Please refer to the RMP's Direct Testimonies filed on February 3, 2020, specifically work paper RMP Wrkprs RMM2 CompEnrgTotalExprts15MnNettedExprts 2-3-2020.

1. Please confirm that the column labelled "NMW" on the "Bill" tab contains amounts, in kWh, of delivered energy that has been netted with exports on a 15-minute basis and summed over each month in 2019 for each Schedule 136 customer.

2. Please confirm that the column labelled "NMR" on the "Bill" tab contains amounts, in kWh, of exported energy that has been netted with deliveries on a 15-minute basis and summed over each month in 2019 for each Schedule 136 customer.

3. Please confirm that the column labelled "KWH-U-T" on the "Bill" tab contains amounts, in kWh, of delivered energy that has not been netted with exports but is based on meter register data for each month in 2019 for each Schedule 136 customer.

4. Please confirm that the column labelled "KWH-DEDUCT-T" on the "Bill" tab contains amounts, in kWh, of exported energy that has not been netted with deliveries but is based on meter register data for each month in 2019 for each Schedule 136 customer.

5. Please confirm that if the quantity of deliveries (or exports) in an interval is netted, and then this amount is "un-netted" or separated into gross amounts of deliveries and exports, that the increase in the quantity of deliveries and the increase in the quantity of exports in this interval must be equal. For example, if in a given 15-minute interval, the about of net deliveries is 10 kWh, and then this amount is separated into gross deliveries and exports and it is found that the gross amount of deliveries is 15 kWh, then it must be the case that the gross amount of exports in this interval is 5 kWh.

6. A review of the data in the columns labelled NMV, NMR, KWH-U-T, and KWH-DEDCUT-T on the "Bill" tab shows that the relationship described in VS13-2.5 has been violated for 82.6% of the observations, and that in over 17% of these cases the discrepancy is greater than 4 kWh. Please confirm that discrepancies of this type and magnitude are found in the netting analysis contained in RMP Wrkprs RMM2 CompEnrgTotalExprts15MnNettedExprts 2-3-2020.

Response to Vote Solar Data Request 13.2

1. Confirmed. The column labelled "NMV" on the "Bill" tab represents the net delivered kilowatt-hour (kWh) by the Company to the customer derived from the interval meter reading based on the customer's invoice in 2019 for each Schedule 136 customer.

2. Confirmed. The column labelled "NMR" on the "Bill" tab represents the net exported kWh by the customer to the Company derived from the interval meter reading based on the customer's invoice in 2019 for each Schedule 136 customer.

3. Confirmed. The column labelled "KWH-U-T" on the "Bill" tab represents the delivered kWh by the Company to the customer from the meter register based on the customer's invoice in 2019 for each Schedule 136 customer.

4. Confirmed. The column labelled "KWH-DEDUCT-T" on the "Bill" tab represents the exported kWh by the customer to the Company from the meter register based on the customer's invoice in 2019 for each Schedule 136 customer.

5. Confirmed. For a particular interval period, this will be the case.

6. While the relationship described in Vote Solar data request 13.5 is accurate for an individual interval period, this will not be the case for all observations in the RMP Wrkprs RMM2 CompEnrgTotalExprts15MnNettedExprts 2-3-2020 workpaper, primarily because the time period over which usages are calculated using meter registers and the period of the profile that is netted on a 15 minute interval period may be slightly different. For example, meter registers may have been read for the period between 10:00AM October 4th through 11:00AM November 1st for usage and exports over that timeframe, while the profile data where 15 minute netting occurs for the bill is 12:00AM October 4th through 12:00AM November 1st.

Vote Solar Data Request 13.3

Please refer to RMP's Responses to Vote Solar 11th Set Data Requests dated April 17, 20, and 22, respectively, including all attachments associated with each response.

1. Please refer to the File "UT Res DG_SamplingPlansProceduresSelections_201405" provided in Attach Vote Solar 11.7-1.

   (1) What unit(s) of observation (e.g., day, hour, 15-minute interval) is the required precision of +/- 10% with a 95% confidence level designed to meet?

   (2) Please confirm whether the sampling unit and supporting information for the Original 36 population is designed for a sample of 62 customers, not the 36 customers in the actual files.

   (3) Please provide the sampling plan and associated documentation corresponding to the sample of 36.

2. Please refer to the file "UT CG_LoadResearchAnalysis_draft 201806" in Attach Vote Solar 11.7-2.

   (1) What unit(s) of observation (e.g., day, hour, 15-minute interval) is the required precision of +/- 10% with a 95% confidence level designed to meet?

   (2) Is there a final version of this document? If so, please provide the final or most up-to-date version.

3. Please refer to the file "Sample Frame 14-035-114" in Attach Vote Solar 11.7-3.

   (1) Were the disconnected customers in operation at the time of sample design and/or implementation?

4. Please refer to the file "Sample Frame_Com_17-035-61" in Attach Vote Solar 11.7-4.

   (1) Please confirm whether this file only includes the Schedule 135 commercial sampling frame.

   (2) Please provide the Schedule 135 residential sampling frame.

   (3) Were the disconnected customers in operation at the time of sample design and/or implementation?

5. Please refer to the file "B210GEN418" in Attach Vote Solar 11.7-4.

(1) What population do the 30,578 observations represent?

6. Please refer to the file "Exhibit RMP__(DJM-1) workpaper.xlsx" in Attach Vote Solar 11.6-1.

   (1) On the sheet "EIM 15MM", what does the field PRC represent, and how it is derived?

   (2) On the sheet "Time Period Examination", do the export averages include weekends and holidays?

   (3) Does the table "Average Real-Time EIM Scalar for PACE LMP ($/MWh)"include weekends and holidays?

Response to Vote Solar Data Request 13.3

1. Please refer to the Company's responses to subparts (1) through (3) below:

   (1) Monthly delivered energy (kilowatt-hours (kWh)).

   (2) Yes. The sample was designed at the ±10 percent precision at the 95 percent confidence level which called for 45 sites. The Company supplemented the sample design to include 62 sites.

   (3) Please refer to the Company's response to subpart 1.(2) above. The 36 customers are the subset of the original sample of 62, which had solar photovoltaic (PV) systems and who agreed to have a production meters installed. Please refer to the Company's response to Vote Solar Data Request 11.7, specifically Attachment Vote Solar 11.7-1, file "UT Res DG_SamplingPlansProceduresSelections_201405" file for the sampling plan.

2. Please refer to the Company's responses to subparts (1) and (2) below:

   (1) Nameplate capacity (kilowatts (kW)).

   (2) Please refer to the Company's response to Vote Solar Data Request 5.2 for the most up-to-date version.

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

   (1) Disconnected customers were active when the sample was developed and implemented.

4. Please refer to the Company's responses to subparts (1) through (3) below:

(1) The file only includes customers in the commercial Schedule 135 sampling frame.

(2) Please refer to the Company's response to Vote Solar Data Request 11.7, specifically Attachment Vote Solar 11.7-4, file "Sample Frame_Res_17-035-61.xlsx".

(3) Disconnected customers were active when the sample was developed and implemented.

5. Please refer to the Company's response to subpart (1) below:

(1) The 30,578 observations represent all records in the file the Company used to develop the residential sample. This includes some records that were excluded from the residential sample frame because they either did not belong to a Schedule 135/Schedule 136 rate schedule or their nameplate capacity was missing.

6. Please refer to the Company's responses to subparts (1) through (3) below:

(1) "PRC" stands for Price, and is the locational marginal price for the PacifiCorp East Energy Imbalance Market Load Aggregation Point, which is listed in the referenced file under column "NODE" as "ELAP_PACE-APND". The load aggregation point is a weighted average of all load nodes in the specified region.

For additional details on the calculation of prices, please refer to the California Independent System Operator's (CAISO) Tariff, Appendix C: Locational Marginal Price (LMP), which is publicly available and can be accessed by utilizing the following website link:

http://caiso.com/Documents/AppendixC-LocationalMarginalPrice-asof-Aug1-2019.pdf

(2) Yes.

(3) Yes.