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Memorandum

To: Utah Public Service Commission

From: Utah Division of Public Utilities

Artie Powell, Director

Doug Wheelwright, Utility Technical Consultant Supervisor

Abdinasir Abdulle, Utility Technical Consultant

Bob Davis, Utility Technical Consultant

Date: December 21, 2020

Re: **Docket No. 20-035-22**, Technical Work Group on Rocky Mountain Power's Reliability Baseline Indices

Recommendation (Approval)

The participants of the Service Quality Work Group ("Group") recommend that the control limits be reset as 107 to 157 minutes for SAIDI and 0.9 to 1.2 events for SAIFI and the baseline notification levels be reset at greater than 157 minutes for SAIDI and greater than 1.2 events for SAIFI. The Group will continue meeting to determine possible metrics and standards for Rocky Mountain Power's ("RMP") electric power quality for the industrial customers.

Background and Discussion

Pursuant to the Public Service Commission's ("Commission or PSC") orders in Docket Nos. 08-035-55, 13-035-01, and 15-035-72 as well as the requirements of Utah Administrative Code R746-313, Electrical Service Reliability ("Reporting Requirements"), RMP filed its January 1 through December 31, 2019, Service Quality Review Report ("2019 Report") on May 1, 2020. On June 1, 2020, the Division of Public Utilities ("Division or DPU") filed its comments in

which it recommended the Commission establish a work group to review RMP's reliability baseline standards and make recommendations. On June 16, 2020, RMP filed reply comments in which it supported the Division's recommendation. On June 23, 2020, the Commission issued an Order directing the Division and RMP to establish a work group led by the Division with the purpose of examining RMP's reliability baseline standards and making recommendations.

In compliance with this Commission Order, the Division and RMP convened the Work Group on August 4, 2020. In addition to the Division and RMP, the Office of Consumer Services ("Office"), Utah Association of Energy Users ("UAE"), Utah Petroleum Association ("UPA"), Utah Mining Association ("UMA"), and Clean Harbors Aragonite Inc., participated in the Work Group. As was directed by the Commission, the Group addressed baselines for the reliability indices. The Group also addressed power quality issues raised by representatives of the large industrial customers.

Baselines for the Reliability Indices

The current method for calculating the reliability performance baseline control zones and the notification levels was established in Docket No. 13-035-01.¹ In this method the baseline control zones are calculated as a five-year-average of the 365-day rolling daily values of underlying SAIDI and SAIFI, plus or minus two standard deviations. The upper limits of the control zones represent the notification levels. The current reliability baselines (2016 baselines) for SAIDI and SAIFI were also established in the same Docket as 137 to 187 minutes for SAIDI, and 1.0 to 1.6 events for SAIFI. These were calculated using SAIDI and SAIFI data from January 2011 to December 2015.

In the last three annual reports (2017, 2018, and 2019), the Division noticed that the SAIDI values were consistently below the control zone throughout the year, indicating an improvement in RMP's service reliability. Consequently, the Division recommended, and the Commission

¹ 13-035-01 – Commission Order issued May 30, 2013

approved, the establishment of a Work Group to review RMP’s reliability baseline standards related to SAIDI and SAIFI.

The Group discussed how the reliability baselines should be adjusted given that the recent values of the reliability indices indicate an improvement in RMP’s service reliability. To facilitate this discussion, RMP provided SAIDI and SAIFI baseline calculations for 2021. This calculation used five year SAIDI and SAIFI data from 2015 to 2019. The results of this calculation showed a control zone of 107 through 157 minutes for SAIDI, and 0.9 to 1.2 events for SAIFI. The upper limits of these control zones serve as the notification levels for SAIDI and SAIFI, respectively.

Therefore, RMP proposed to move the SAIDI and SAIFI baseline control zones and notification levels down from its 2016 values to its 2021 values as shown in the following table.

Table 1. RMP proposed 2021 baseline control zone and notification levels

	Baseline Control Zone		Baseline notification level
	2016	Proposed 2021	
SAIDI	137 to 187 minutes	107 to 157 minutes	Exceeding 157 minutes
SAIFI	1.0 to 1.6 events	0.9 to 1.2 events	Exceeding 1.2 events

The Group reviewed RMP’s SAIDI and SAIFI data and the calculations of the baseline control zone and notification levels. The Group determined that RMP used the Commission-approved method for calculating the SAIDI and SAIFI baseline control zones and notification levels. The Group also determined that the results of the calculations reflect the reliability improvements that RMP made recently. Therefore, the Group recommends the Commission reset the baseline control zones and notification levels for SAIDI and SAIFI as is shown in Table 1 above.

Power Quality and Outage Frequency for Industrial Customers

The representatives of the industrial customers raised some concerns associated with power quality. These concerns revolve around power quality metrics and standards and the impact of sags and swells for the industrial customers. They want the Group to explore the possibility of developing power quality metrics that could be used to monitor RMP's power quality. To facilitate an understanding of the current level of power quality, RMP made a presentation regarding work done in the past in response to a merger commitment. The Group reviewed this work and had extensive discussions about exploring ways to address the power quality concern. Currently, the Group is assembling data to inform future discussions. The Group will continue meeting to determine possible metrics and standards for RMP's electric power quality for the industrial customers.

Conclusion

The Group determined that RPM's service reliability has been improving during the past few years. Consequently, the Group recommends the control limits be reset as 107 to 157 minutes for SAIDI and 0.9 to 1.2 events for SAIFI and the baseline notification levels be reset at greater than 157 minutes for SAIDI and greater than 1.2 events for SAIFI.

The Group also recognized the need for metrics and standards for RMP's reliability and power quality for large industrial customers, and acknowledged the air quality impacts these issues can have. Therefore, the Group will continue meeting to determine possible metrics and standards for RMP's electric power quality for the industrial customers.

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