

September 3, 2020

VIA ELECTRONIC FILING

Public Service Commission of Utah Heber M. Wells Building, 4th Floor 160 East 300 South Salt Lake City, UT 84114

Attn: Gary Widerburg

Commission Secretary

RE: Advice No. 20-08

Proposed Changes to Schedule 114, Load Management Program

Docket No. 20-035-T07

Enclosed for electronic filing are the proposed tariff sheets associated with Tariff P.S.C.U. No. 50 of PacifiCorp, d.b.a. Rocky Mountain Power (the "Company"), applicable to electric service in the State of Utah. Pursuant to the requirement of Rule R746-405-2(D), the Company states that the proposed tariff sheets do not constitute a violation of state law or Commission rule. The Company respectfully requests an effective date of October 3, 2020 for these changes.

Third Revision of Sheet No. 114.1	Schedule 114	Load Management Program
Third Revision of Sheet No. 114.2	Schedule 114	Load Management Program

The purpose of this filing is to propose a new Demand Side Management ("DSM") Battery Demand Response Program ("Wattsmart Batteries") to be administered through Electric Service Schedule No. 114. Proposed changes to the Schedule 114 tariff sheets are included as Exhibit A.

BATTERY DEMAND RESPONSE OFFERING

Program Overview

The Wattsmart Batteries Program will promote and incentivize the installation of individual batteries for system-wide integration and use for overall grid management. The Company's 2019 Integrated Resource Plan includes nearly 600 MW of battery storage capacity by 2024. Establishing the Wattsmart Batteries Program now will help to ensure the installation of battery equipment behind the meter by customers are being integrated safely along with the Company's systems and provide benefits for both the customer and the grid. Leveraging the batteries from the Wattsmart Batteries Program will create opportunity in the following areas:

Utility Grid Management – The Wattsmart Batteries Program will enable the Company to utilize qualified batteries for utility grid management 24 hours per day 365 days per year, providing year-round value to effectively manage the electric grid. The batteries may be utilized for traditional demand response, frequency reserve, contingency reserve, regulation reserves, regional grid management, backup power and other ancillary benefit in addition to reducing peak load on the electric system. Initial parameters that will be used to dispatch the batteries for grid management are identified in the Dispatch Period section below. As the Program matures, additional dispatch parameters may evolve for continual improvement. Initially, batteries will be used to off-set customers' load, but as the Program evolves and matures, it is the intent to add other capabilities, such as charging batteries during the day with excess solar and exporting the solar energy during peak times, in order to maximize benefits for all parties.

- Load Shaping The Company will help customers optimize batteries in coordination with daily peak and off-peak periods. For example, a customer with solar will charge the battery with any excess generation during the middle of the day, and in turn would utilize the battery to offset energy use during peak periods. Partnering with customers with batteries to manage excess solar during the day and peak periods in the evenings will provide the greatest benefits for customers and the utility grid.
- **Utility Integration of Behind-the-Meter Batteries** The battery storage industry is still in its infancy and there is a lack of standards for utility grid integration from both a safety and operational perspective. This program will help provide battery manufacturer's guidance on how to qualify to participate in a utility grid optimized battery solution.
- Utilization of the Distributed Battery Grid Management Solution (DBGMS) As part of the Sustainable Transportation and Energy Plan (STEP) Soleil battery project, the Company successfully integrated a DBGMS platform into the Company's Energy Management System (EMS). Battery manufacturers who have a product capable of meeting the requirements for utility controlled demand response and who are willing to work with the Company and its partners to integrate into the DBGMS can qualify their batteries for participation in the Wattsmart Batteries Program.

Customer Participation and Eligibility

The Wattsmart Batteries Program will be available to all retail tariff customers taking service under the Company's electric service schedules listed on Schedule 193 – DSM Cost Adjustment. Residential and commercial customers may participate. The Company anticipates that initially, participation will come from residential customers with solar, and will charge the batteries with excess generation.

Customers may participate by installing eligible battery equipment and allowing the Company to utilize the battery for grid management. A minimum commitment term will be required in order to receive an enrollment incentive. The commitment term may evolve depending on program needs, but initially, the required commitment term will be a minimum of 4 years. After the

commitment term, customers will have the opportunity to receive an annual incentive for their continued participation beyond the initial commitment term. Participating customers will also be required to provide information including their name, business (if applicable), install address, and contact information to assist with eligibility/installation verification activities prior to enrolling. If a participating customer chooses to end their participation during their initial commitment period, the Company may require the participating customer to return their enrollment incentive on a prorated basis.

Batteries must meet program participation requirements to qualify for an incentive, including the integration into the Company's DBGMS.

Incentives

Wattsmart Battery incentives will be available to customers with installed batteries capable of communicating with the Company's energy and battery management systems. An up-front enrollment payment incentive will be offered to customers who commit to the minimum term with a newly purchased battery. During the initial commitment term, program participants will also receive an annual bill credit incentive. After the initial commitment term, customers will receive an increased annual bill credit incentive for their continued participation. Customers with pre-existing eligible batteries may also participate in the Wattsmart Batteries Program, but will not be required to commit to a minimum term. Instead, due to free ridership concerns, customers with existing eligible batteries may start off at the increased annual bill credit incentive for as long as they remain enrolled. Customers will receive their enrollment incentive via a cash payment and annual participation incentives as monthly bill credits. Table 1 below provides the maximum incentive levels for the up-front enrollment and annual participation incentives, which will also be the initially offered incentive amounts.

Table 1 – Wattsmart Battery Incentives

Load		Maximum Incentive "up to"		
Management Program	Participating Equipment	Enrollment Incentive ¹	Annual Participation Incentive During Commitment Term ²	Annual Participation Incentive ³
	Residential Batteries	\$150/kW x Annual Commitment Term	\$15/kW	\$50/kW
Wattsmart Batteries	Commercial Batteries	\$150/kW x Annual Commitment Term	\$15/kW	\$50/kW
	Custom	Custom		

¹ Enrollment Incentives will be capped at 70% of battery equipment costs and available for new battery purchases only.

² Annual Participation Incentives will be capped to not exceed monthly bill amounts.

³ Applicable to new batteries after the commitment term or existing batteries where the enrollment incentive and commitment term is not applicable. Annual Participation Incentives will be capped to not exceed monthly bill amounts.

Enrollment incentives will be based on the kW capacity of the enrolled battery, multiplied by the commitment term. For example, if a residential customer enrolls a 6 kW battery with a commitment term of 4 years, their enrollment incentive will be \$3,600 (6kW x \$150 x 4 years). During the commitment period for year 2 – 4, the program participation annual incentive would be \$90 (6kW x \$15). Furthermore, if the same customer continues to participate beyond the 4-year commitment term, their annual participation incentive could be up to \$300 (6kW x \$50) as a \$25 monthly bill credit (\$300 / 12 months). If a customer opts out of participating after their commitment term, their annual participation incentive will be pro-rated. Custom incentives and commitment terms may be considered for customers with custom battery projects or large capacity batteries. Incentive levels will be evaluated annually and may be adjusted based upon factors, such as, battery market changes, federal and state incentive levels, participation numbers and cost-effectiveness.

As an alternative solution for customers who want batteries, but do not have the funds to cover the associated equipment and installation costs, the Company may consider allowing a lease type agreement option, where the Company will work with qualified trade-ally(s) to install and maintain the batteries.

Projected Participation and Costs

The Wattsmart Batteries Program is forecast to achieve approximately 100 MW of battery demand response by 2029. The majority of expenditures in the initial years of the program are anticipated to be customer enrollment incentives. Table 2 below provides a breakdown of estimated program costs by category for 2020 through 2022. Table 3 provides a 10-year outlook of projected participation.

Table 2 – Estimated Program Costs by Category

Cost Category	2020	2021	2022
Program Administration	\$50,000	\$100,000	\$150,000
Software Costs	\$1,040	\$8,840	\$26,000
Marketing	\$50,000	\$50,000	\$50,000
Total Incentives	\$96,000	\$722,400	\$1,604,000
Total Program Costs	\$197,040	\$881,240	\$1,830,000

Table 3 – Estimated 10-Year Program Participation

Year	Estimated Battery Participation - Cumulative	Estimated kW - Cumulative
2020	50	400
2021	200	1,600
2022	700	5,600
2023	1,700	13,600
2024	2,900	23,200
2025	4,400	35,200
2026	6,400	51,200
2027	8,400	67,200
2028	10,400	82,200
2029	12,600	100,800

Quality Assurance and Eligible Equipment

In order for the Company to communicate with installed battery equipment, participating customers must have an internet service provider that maintains a working and reliable internet connection and Wi-Fi network, and any other related equipment or system elements on the premises that may be required by the Company or equipment manufacturer. Battery manufacturers will be eligible to participate as long as they are willing to allow their batteries to be integrated into the Company's DBGMS and meet equipment eligibility. In order to justify the incentives being provided and to maintain cost-effectiveness, the batteries must also be able to provide daily load cycling, frequency response, and parameters identified below.

At the outset of the Wattsmart Batteries Program, eligible equipment may consist of the following:

- Ability to integrate in the DBGMS
- Utility grade batteries with a minimum of 4 kW / 10 kWh
- Minimum of 10 year battery life (warranty)
- Minimum of 7,500 battery cycle life to accommodate for daily load cycling
- Ability to charge/discharge multiple times a day
- Full dispatch control by PacifiCorp to meet the needs of the program
- Proper UL or equivalent safety certifications for residential and commercial applications

As technology evolves and new products become available, it is anticipated more batteries will become eligible through time. The Company will maintain an updated list of eligible batteries and other requirements for participation on the Program website.

Dispatch Period

The Company shall have the right to dispatch the Wattsmart Batteries system based on the following criteria:

- Daily load cycling for peak management.
- Utilized for traditional demand response, frequency reserve, contingency reserve, regulation reserves, regional grid management, backup power and other ancillary needs.
- Dispatch Days: Monday through Sunday, including holidays, year-round.
- Dispatch Duration: Dispatches may be held multiple times per day up to two full duty cycles of the battery.

At the outset of the Program, batteries will be dispatched to off-set customers' load, as discussed in the Load Shaping paragraph above. As the Program evolves and matures however, it is the intent to dispatch the batteries for additional capabilities, such as charging batteries during the day with excess solar and exporting the solar energy during peak times, in order to maximize benefits for all parties.

Events may be called as necessary without advanced notice. When an event is called under the Wattsmart Batteries system, it will not drain batteries below 10 percent capacity to ensure customers retain a minimum level for emergency backup. The DBGMS and integrations into the Company's EMS makes this possible to manage. Additionally, Wattsmart Batteries events will be managed such that it will minimize use of the battery system during or prior to an event that is expected to cause system outages. In the event of a local outage, the battery will be used as backup power for the customer. While there are many factors that influence customer load, including battery size, house size, solar array, time of year, etc., it is estimated that 10 percent capacity will provide 1-8 hours of emergency backup power for an average customer. The Company will continually evaluate this percentage however, and update if necessary to ensure the batteries are available when needed for customers.

Trade Ally Network

The Company will establish and utilize a qualified Trade Ally Network to promote the Wattsmart Batteries Program, educate customers on batteries, and install the battery equipment for customers. Establishing this network will include identifying and recruiting vendors that can comply with any and all participation requirements, providing program and technical training, and providing vendor sales training and support on an ongoing basis. For the first year or two of the program it is anticipated we will qualify and train up to 3 trade allies while the program is ramping up.

Participating vendors will have their information promoted on the Company's website, and will have access to marketing materials and support, ongoing training, and program tools. Participating vendors may also receive periodic vendor performance details to provide feedback and encourage vendors to continually improve. Highly successful vendors may receive additional benefits, including improved visibility and enhanced co-branding with the Company. Examples of performance metrics that may entitle vendors to added benefits are as follows:

- Industry Certification
- Customer satisfaction
- Project Quality Assurance

- Level of Participation
- Program satisfaction

COST-EFFECTIVENESS

The cost-effectiveness analysis for the Wattsmart Batteries Program is attached hereto as Confidential Exhibit B, and was based on the maximum "up to" incentive levels. As avoided costs are considered proprietary on load control programs, the cost-effectiveness results are provided below with a "pass" designation, which equates to a benefit to cost ratio of 1.0 or better. Due to the nature of demand response, and consistent with the cost-effectiveness methodology for other demand response programs, the Participant Cost Test is not applicable. The Wattsmart Batteries Program is expected to be cost-effective under all other scenarios. Enclosed with this filing is the Confidential Information Certificate that the Company desires parties in this docket to execute prior to obtaining access to confidential information.

Table 1 – Wattsmart Batteries Program Level Cost-Effectiveness Results

Benefit/Cost Test	Benefit/Cost Ratio
PacifiCorp Total Resource	
Cost Test (PTRC) +	Pass
Conservation Adder	
Total Resource Cost Test	
(TRC) No Adder	Pass
Utility Cost Test (UCT)	Pass
Rate Impact Test (RIM)	Pass
Participant Cost Test (PCT)	N/A

STAKEHOLDER FEEDBACK

On May 28, 2020, the Company circulated a draft advice letter to DSM Steering Committee members for the proposed Wattsmart Batteries Program, and then met to discuss it June 4, 2020 to educate the Steering Committee on battery technology, review the draft advice filing, and to answer questions related to the proposed Program. Based on the level of interest and questions, the Company continued working with stakeholders, including a second meeting to discuss the Program on August 11, 2020, to answer more questions, further discuss battery technology, and provide a comprehensive overview of the proposed Wattsmart Battery Program. The Company updated its draft advice letter and re-circulated it to Steering Committee members August 19, 2020, in a good faith effort to address some of the questions/concerns raised by stakeholders prior to filing with the Commission. Additional questions and requests were received from multiple Steering Committee members, to which the Company provided responses and updated this Advice Letter to incorporate the additional feedback received.

It is respectfully requested that all formal correspondence and staff requests regarding this matter be addressed to:

By E-mail (preferred): datarequest@pacificorp.com

michael.snow@pacificorp.com

By regular mail: Data Request Response Center

PacifiCorp

825 NE Multnomah Blvd., Suite 2000

Portland, OR 97232

Informal inquiries regarding this matter may be directed to me at (801) 220-4214.

Sincerely,

Michael S. Snow

Manager, Regulatory Affairs

Till & Snow

Enclosures

Exhibit A

Canceling FirstSecond Revision of Sheet No. 114.1



ROCKY MOUNTAIN

ROCKY MOUNTAIN POWER ELECTRIC SERVICE SCHEDULE NO. 114

STATE OF UTAH

Load Management Program

APPLICABLE: This tariff is applicable to eligible Customers who have premises located in designated areas. Customers served by the Company in the state of Utah <u>taking service under the Company's electric service schedules listed on Schedule 193 – DSM Cost Adjustmentunder Schedules 1, 2, 2E, 3, 6, 6A, 6B, 8, 9, 9A, 23, and 31 located within the designated areas are eligible to participate in a Load Management Program (Program).</u>

PURPOSE: To manage electric loads through a Company-dispatched Direct Load Control System (System).

PROGRAM DESCRIPTION: A detailed description of the Program(s) is found on the Company website at www.rockymountainpower.net/DR.

The Company shall have the right to dispatch System(s) according to the following criteria:

	Wattsmart Batteries	Cool Keeper
Dispatch Period	January 1 through December 31	May 1 through September 30
Available Dispatch Hours	12:00am to 11:59pm Moutain Time	2:00pm to 9:00pm Mountain Time
Maximum Dispatch Hours	<u>N/A</u>	100 hours per Program Year
Dispatch Days	Monday through Sunday	Monday through Friday, excluding holidays
Dispatch Duration	Events may be held multiple times per day up to two full battery duty cycles	Events will be limited to four hours per day

- a. Dispatch Period: May 1 through September 30
- b. Available Dispatch Hours: 2:00 PM to 9:00 PM Mountain Time
- c. Maximum Dispatch Hours: 100 hours per Program Year
- d. Dispatch days: Monday through Friday, excluding holidays
- e. Dispatch Duration: Events will be limited to four hours per day

In the event of a system emergency, Rocky Mountain Power may, at its discretion, expand the dispatch criteria beyond the parameters listed. Emergency events may be used to satisfy requirements of the North American Electric Reliability Corporation (NERC) standard BAL-002-WECC-2 for

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Issued by authority of Report and Order of the Public Service Commission of Utah in Advice No. 20-0819-06

FILED: September 3, 2020 March 22, 2019 2020 April 22, 2019

EFFECTIVE: October 3,



P.S.C.U. No. 50

Second Third Revision of Sheet No. 114.1 Canceling FirstSecond Revision of Sheet No. 114.1

Contingency Reserve Obligation (CRO) and may be deployed when the utility is experiencing a qualifying event as defined by the Northwest Power Pool.

CUSTOMER PARTICIPATION: Participating premises are considered Program participants for the duration of the Program(s). Customers may cancel their participation in the Program(s) at any time. The Company or its Program contractors shall have the right to qualify program participants, at their sole discretion based on criteria the Company or Program contractors consider necessary to ensure the effective operation of the Program(s) and utility System. Program details can be viewed on the Company's website at <u>www.rockymountainpower.net/DR</u>.

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Issued by authority of Report and Order of the Public Service Commission of Utah in Advice No. 20-0819-06

FILED: September 3, 2020 March 22, 2019



ELECTRIC SERVICE SCHEDULE NO. 114 - Continued

INCENTIVES:

Table 1 – Cool Keeper

Load Management Program	Participating Equipment	Maximum Incentive "up to"
Cool Vooren	Air Conditioners – Level 1	\$40 annually
Cool Keeper	Air Conditioners – Level 2	\$80 annually

Table 2 – Wattsmart Batteries

		Maximum Incentive "up to"		
Load Management Program	Participating Equipment	Enrollment Incentive ¹	Annual Participation Incentive During Commitment Term ²	Annual Participation Incentive ³
	Residential Batteries	\$150/kW x Annual Commitment Term	<u>\$15/kW</u>	<u>\$50/kW</u>
Wattsmart Batteries	Commercial Batteries	\$150/kW x Annual Commitment Term	<u>\$15/kW</u>	<u>\$50/kW</u>
	<u>Custom</u>		<u>Custom</u>	

^{1.} Enrollment Incentives are capped at 70% of battery equipment costs and available to new battery purchases only.

Program contractors may provide additional consideration, at no additional cost to the Company or its customers, to encourage enrollment in a Program. Such consideration may include but is not limited to gift cards or other efforts used to increase Customer interest in a Program.

ELECTRIC SERVICE REGULATIONS: Service under this Schedule will be in accordance with the terms of the Electric Service Agreement between the Customer and the Company. The Electric Service Regulations of the Company on file with and approved by the Public Service Commission of the State of Utah, including future applicable amendments, will be considered as forming a part of and incorporated in said Agreement.

Issued by authority of Report and Order of the Public Service Commission of Utah in Advice No. 20-0819-06

EFFECTIVE: October 3,

FILED: September 3, 2020 March 22, 2019 2020April 22, 2019

^{2.} Annual Participation Incentives will be capped to not exceed monthly bill amounts.

^{3.} Applicable to new batteries after the commitment term or existing batteries where the enrollment incentive and commitment term is not applicable. Annual Participation Incentives will be capped to not exceed monthly bill amounts.





ROCKY MOUNTAIN POWER

ELECTRIC SERVICE SCHEDULE NO. 114

STATE OF UTAH

Load Management Program

APPLICABLE: This tariff is applicable to eligible Customers who have premises located in designated areas. Customers served by the Company in the state of Utah taking service under the Company's electric service schedules listed on Schedule 193 – DSM Cost Adjustment located within the designated areas are eligible to participate in a Load Management Program (Program).

PURPOSE: To manage electric loads through a Company-dispatched Direct Load Control System (System).

PROGRAM DESCRIPTION: A detailed description of the Program(s) is found on the Company website at www.rockymountainpower.net/DR.

The Company shall have the right to dispatch System(s) according to the following criteria:

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Dispatch Days	Monday through Sunday	Monday through Friday, excluding holidays	
Dispatch Duration	Events may be held multiple times per day up to two full battery duty cycles	Events will be limited to four hours per day	

In the event of a system emergency, Rocky Mountain Power may, at its discretion, expand the dispatch criteria beyond the parameters listed. Emergency events may be used to satisfy requirements of the North American Electric Reliability Corporation (NERC) standard BAL-002-WECC-2 for Contingency Reserve Obligation (CRO) and may be deployed when the utility is experiencing a qualifying event as defined by the Northwest Power Pool.

CUSTOMER PARTICIPATION: Participating premises are considered Program participants for the duration of the Program(s). Customers may cancel their participation in the Program(s) at any time. The Company or its Program contractors shall have the right to qualify program participants, at their sole discretion based on criteria the Company or Program contractors consider necessary to ensure the effective operation of the Program(s) and utility System. Program details can be viewed on the Company's website at www.rockymountainpower.net/DR.

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P.S.C.U. No. 50

ELECTRIC SERVICE SCHEDULE NO. 114 - Continued

INCENTIVES:

Table 1 – Cool Keeper

Load Management Program	Participating Equipment	Maximum Incentive "up to"
C1 V	Air Conditioners – Level 1	\$40 annually
Cool Keeper	Air Conditioners – Level 2	\$80 annually

Table 2 – Wattsmart Batteries

		Maximum Incentive "up to"		
Load Management Program	Participating Equipment	Enrollment Incentive ¹	Annual Participation Incentive During Commitment Term ²	Annual Participation Incentive ³
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- 1. Enrollment Incentives are capped at 70% of battery equipment costs and available to new battery purchases only.
- 2. Annual Participation Incentives will be capped to not exceed monthly bill amounts.
- 3. Applicable to new batteries after the commitment term or existing batteries where the enrollment incentive and commitment term is not applicable. Annual Participation Incentives will be capped to not exceed monthly bill amounts.

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Issued by authority of Report and Order of the Public Service Commission of Utah in Advice No. 20-08

FILED: September 3, 2020 EFFECTIVE: October 3, 2020

CONFIDENTIAL Exhibit B

THIS EXHIBIT IS CONFIDENTIAL IN ITS ENTIRETY AND IS PROVIDED UNDER SEPARATE COVER

CONFIDENTIAL INFORMATION CERTIFICATE

IN DOCKET NO. 20-035-T07

I have reviewed the Public Service Commission of Utah Rule R746-1-603 and/or the Protective Order entered by the Public Service Commission of Utah in Docket No. 20-035-T07 with respect to the review and use of confidential information and agree to comply with the terms and conditions of the rule and/or Protective Order.

Signature	
Name (Type or Print)	
Employer or Firm	
Business Address	
Party Represented	
Date Signed	

CERTIFICATE OF SERVICE

Advice No. 20-08 Docket No. 20-035-T07

I hereby certify that on September 3, 2020, a true and correct copy of the foregoing was served by electronic mail to the following:

Utah Office of Consumer Services

Michele Beck mbeck@utah.gov

Division of Public Utilities

dpudatarequest@utah.gov

Rocky Mountain Power

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michael.snow@pacificorp.com Michael Snow

Katie Savarin

Coordinator, Regulatory Operations