

February 3, 2023

***VIA ELECTRONIC FILING***

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

Attn: Gary Widerburg  
 Commission Secretary

RE: Advice No. 23-02  
 Proposed Changes to Schedule 111, Residential Energy Efficiency Program  
 Docket No. 23-035-T04

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 March 6, 2023 for these changes.

First Revision of Sheet No. 140.2	Schedule 111	Residential Energy Efficiency
First Revision of Sheet No. 140.3	Schedule 111	Residential Energy Efficiency
First Revision of Sheet No. 140.4	Schedule 111	Residential Energy Efficiency
Second Revision of Sheet No. 140.5	Schedule 111	Residential Energy Efficiency

The purpose of this filing is to propose changes to the Residential Energy Efficiency Program (“Program”) administered through Electric Service Schedule No. 111. These tariff changes, attached hereto as Exhibit A, align with targets illustrated in the table below, filed in the Demand Side Management (DSM) November 1<sup>st</sup> Deferred Account and Forecast Report on November 1, 2022, in Docket No. 22-035-37.

**2023 Budget and Savings Forecast**

***	2023 MWh Savings Forecast	2023 Budget Forecast
Wattsmart Homes	54,112	\$19,500,000

**DESCRIPTION OF CHANGES**

Proposed adjustments are listed below, with further explanation provided in subsequent sections. Note that the sections below only include offerings with proposed changes, and any current offerings that remain unchanged are omitted from the tables and sections below.

1. Remove lighting offerings for Light Emitting Diodes (LED) and fixtures from Schedule 111;
2. Revise tariff language and incentive offerings for various measures; and
3. Change the incentive structure for New Construction from a deemed value to a site-specific pay for performance model.

**Provisions of Service**

It is proposed to revise language in the provisions of service section of Schedule 111 to update contact information, expand the method for incentive delivery to Program participants, and to broaden the type of ducted system necessary for customers to be eligible for electric cooling incentives. The broadened ducted system language will allow for growth and expansion of offerings to rural and undeserved communities.

**Table 1 – Lighting Incentives**

- **LEDs** – On July 1, 2021, the Company posted a 45-day notice to discontinue offerings for LED bulbs and fixtures due to the market transformation and adoption of LED technology. This action was discussed with the DSM Steering Committee during a meeting held June 30, 2021. The discontinuation became effective August 15, 2021. It is proposed to remove Table 1 from Schedule 111 in its entirety to align with the retirement of LED offerings. Note that by removing Table 1 from Schedule 111, all subsequent table numbers will be adjusted accordingly.

**Table 2 (will shift to be Table 1) – Appliance Incentives**

- **WiFi Smart Plug** – The current maximum and offered incentive for smart plugs is \$10. It is proposed to decrease the maximum and offered incentive amounts to \$5 to align with actual product costs in the market.

**Maximum and Offered Incentives for Appliances**

Equipment Type	Current Maximum/Offered Incentive	Proposed Maximum/Offered Incentive
WiFi Smart Plug	\$10	\$5

**Table 4 (will shift to be Table 3) – HVAC Incentives**

- **Evaporative Coolers** – It is proposed to decrease the maximum incentive amount for this offering from \$200 to \$150 to maintain cost effectiveness for this measure. Currently offered incentive amounts this offering will remain unchanged.
- **Heat Pumps** – The Company currently offers incentives for dual fuel heat pump conversions based on efficiency requirements ranging from \$1,400 - \$1,800 for units with 80-90 AFUE, 8.5-12 HSPF, and 14-18 SEER. It is proposed to discontinue the current dual fuel heat pump conversion offering of \$1,400 for units with 90 AFUE/8.5 HSPF/14 SEER due to a lack of participation. The other current dual fuel offerings will remain intact. It is further proposed to decrease the maximum incentive amount for all Heat Pumps in Schedule 140 from \$4,000 to \$2,500 to more accurately reflect the market.
- **Engine Block Heater Control** – The current offered incentive for this measure is \$100. It is proposed to increase the offered incentive to \$125 to increase participation. It is further proposed to decrease the maximum incentive in Schedule 111 for this offering from \$150 to \$125 to maintain cost effectiveness.

**Maximum “up to” Incentives for HVAC**

Equipment Type	Current Maximum “up to” Incentive	Proposed Maximum “up to” Incentive
Evaporative Cooler	\$200	\$150
Heat Pump	\$4,000	\$2,500
Engine Block Heater Control	\$150	\$125

**Offered Incentives for HVAC**

Equipment Type	Efficiency Requirement	Current Offered Incentive	Proposed Offered Incentive
Dual Fuel Heat Pump Conversion	90 AFUE/8.5 HSPF/14 SEER	\$1,400	\$0
Engine Block Heater Control	--	\$100	\$125

**Table 5 (will shift to be Table 4) – New Construction Incentives**

- Whole Home** – The current Whole Home offering uses the Home Energy Rating System (HERS) and deemed energy savings values to apply deemed incentives for participants based on ranges of HERS scores. It is proposed to shift away from the current HERS structure and instead offer incentives through a site-specific pay for performance model. This new structure will allow builders to receive incentives for modeled energy savings and enable the Program to capture all energy savings built above code as opposed to a deemed value. For example, when a newly constructed home is complete, a HERS rater will rate the home and then enter the energy related information into industry standard software to compare the home to a code-compliant home to determine the amount of energy savings the new home is above code. The incentive amount will be determined based on the amount of energy savings above code.
- Whole Home Standalone** – In addition to the current HERS offering under Whole Homes, this measure also offers a \$25 incentive for homes that install any standalone measures and achieve a 3.1 Energy Star certification, or a \$50 incentive for homes that install any standalone measures and achieve a HERS rating of less than or equal to 62. While the Whole Homes measure is shifting away from the HERS structure, these two incentive offerings will remain for customers who choose to only install standalone measures in lieu of the new pay for performance model. For sake of clarity, a separate line item in Schedule 140 will be created to account for these two offerings, and will continue to be offered at their current amounts as reflected in the tables below.
- Heat Pumps** – It is proposed to increase the maximum incentive for heat pumps to \$2,250 and add an additional tiered offering for dual fuel heat pumps with an increased efficiency requirement of HSPF  $\geq$  10, SEER  $\geq$  18, and AFUE  $\geq$  90. This additional offering aligns with the Consortium for Energy Efficiency’s Tier 3 efficiency standards as well as the High Efficiency Electric Home Rebate Act and Inflation Reduction Act rebates and tax credits. The initially offered incentive for this new tier will be set at \$1,250 and \$2,250 for Climate Zones 3 and 5-6, respectively.

**Maximum “up to” Incentives for New Construction**

Measure Type	Current Maximum “up to” Incentive	Proposed Maximum “up to” Incentive
Whole Home	\$1,000	\$0.50/kWh up to \$2,000 per home
Whole Home Standalone	N/A	\$50
Heat Pump	\$2,000	\$2,250

**Offered Incentives for New Construction**

Measure Type	Efficiency Requirement		Current Offered Incentive		Proposed Offered Incentive	
			Electrically Heated	Electrically Cooled	Electrically Heated	Electrically Cooled
Whole Home	HERS 56-62		\$350	\$175	\$0	\$0
	HERS 49-55		\$600	\$300	\$0	\$0
	HERS ≤ 48		\$1,000	\$500	\$0	\$0
	kWh above Code		\$0		\$0.35/kWh up to \$2,000 per home	
Whole Home Standalone	Standalone + Energy Star 3.1		\$25		No Change	
	Standalone + HERS ≤ 62		\$50		No Change	
Heat Pump	Dual Fuel with Gas Backup	HSPF ≥ 10	\$0		\$1,250 Climate Zone 3	
		SEER ≥ 18 AFUE ≥ 90			\$2,250 Climate Zones 5-6	

**Table 7 (will shift to be Table 6) – Custom Multifamily Program Incentives**

- **Low Income and Market Rate** – It is proposed to increase the maximum and offered incentives for low income and market rate property types to stimulate the market and increase participation due to the higher incremental costs associated with building retrofits and new construction projects.

**Maximum “up to” Incentives for Custom Multifamily**

Multifamily Property Type	Category	Current Maximum “up to” Incentive	Proposed Maximum “up to” Incentive
Low Income	Properties where the majority of households earn less than 80% of Area Median Income	\$0.40/kWh up to 100% of total project costs	\$0.47/kWh up to 100% of total project costs
Market Rate	Properties where the majority of households earn more than 80% of Area Median Income	\$0.35/kWh up to 70% of total project costs	\$0.39/kWh up to 70% of total project costs

**Offered Incentives for Custom Multifamily**

Measure Category	Current Offered Incentive		Proposed Offered Incentive	
	Low Income	Market Rate	Low Income	Market Rate
HVAC	\$0.36	\$0.30	\$0.47	\$0.39
Windows	\$0.36	\$0.30	\$0.47	\$0.39
Lighting	\$0.12	\$0.10	\$0.13	\$0.11
Appliances	\$0.21	\$0.175	\$0.23	\$0.20
Building Shell	\$0.21	\$0.175	\$0.27	\$0.23
Domestic Hot Water	\$0.21	\$0.175	\$0.23	\$0.20
Heat Pump Water Heater	\$0.36	\$0.30	\$0.47	\$0.39
New Construction	\$0.24	\$0.20	\$0.28	\$0.23

### COST-EFFECTIVENESS

The cost effectiveness analysis for the Wattsmart Homes Program, attached hereto as Exhibit B, was based on the maximum “up to” incentive levels. The table below, pulled from Exhibit B, presents the expected cost effectiveness of the Program for 2023 assuming the proposed changes in this filing. Additional details and inputs are included in Exhibit B. Sensitivity analyses are also included as Exhibits C and D. The Program is expected to remain cost effective from the Utility Cost Test perspective under all scenarios.

Cost Effectiveness Test	Levelized \$/kWh	NPV Costs	NPV Benefits	Net Benefits	Benefit/Cost Ratio
Utility Cost Test (UCT)	0.0527	\$25,993,312	\$33,048,512	\$7,055,200	1.27
Total Resource Cost Test (TRC) No Adder	0.1249	\$61,547,061	\$33,048,512	-\$28,498,549	0.54
Total Resource Cost Test (PTRC) + Conservation Adder	0.1249	\$61,547,061	\$36,353,363	-\$25,193,698	0.59
Participant Cost Test (PCT)		\$62,362,156	\$86,085,852	\$23,723,697	1.38
Rate Impact Test (RIM)		\$92,009,568	\$33,048,512	-\$58,961,056	0.36
Lifecycle Revenue Impacts (\$/kWh)					\$0.0002386

### STAKEHOLDER COLLABORATION

On October 27, 2022, the Company discussed these proposed changes with the DSM Steering Committee. On January 17, 2023, the Company circulated a draft of this advice letter to Steering Committee members for initial review and comment prior to submitting to the Commission for approval.

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

By E-mail (preferred): [datarequest@pacificorp.com](mailto:datarequest@pacificorp.com)  
[michael.snow@pacificorp.com](mailto: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

Enclosures

cc: Division of Public Utilities  
Office of Consumer Services

# **Exhibit A**

**ELECTRIC SERVICE SCHEDULE NO. 111 - Continued**

**PROVISIONS OF SERVICE:**

1. Qualifying Equipment or Services, incentive amounts, application forms and detailed participation procedures will be listed on the program web site, accessible through the Company's web site at [www.rockymountainpower.net](http://www.rockymountainpower.net) or by calling ~~1-888-221-7070+800-942-0266~~. Incentives and Qualifying Equipment and Services are also listed in the tables below.
2. Incentive delivery may vary by technology, and may include any or all of the following: post purchase mail-in, point of purchase buy down, retailer mark-down, mail-by request, direct install or pre-purchase offer and approval.
3. Incentives may be offered year round or for selected time periods.
4. Incentive offer availability, incentive levels and Qualifying Equipment or Services may be changed by the Program Administrator after consultation with the Company to reflect changing codes and standards, sales volumes, measure costs, quality assurance data or to enhance program cost effectiveness.
5. Incentives and qualifications are subject to Public Service Commission of Utah approval. "Up to" incentive levels may change with a minimum 45 days' notice, which will be prominently displayed on the program website and will be communicated at least once to retailers and trade allies who have participated in the program within one year preceding the date of the change.
6. "Subject to change with 45 days' notice" language will be included on all web pages containing an incentive offer.
7. Customers have 180 days after the date of purchase or installation to submit a complete post purchase application and request an incentive.
8. Except for manufacturer's buy-downs, incentives paid directly to participants will be ~~in the form of a check issued~~ within 45 days of Program Administrator's receipt of a complete and approved incentive application. Incentives available for customers will only be paid to customers or verified property owners, landlords, property management companies, pre-approved Utah Department of Workforce Services, Housing & Community Development Division's (HCDD) Weatherization Assistance Program (WAP) contractors, or homeowner associations as third party entities responsible for project. WAP contractors are only eligible to receive incentive payments for insulation, windows, and duct sealing/insulation measures. WAP contractors can only receive incentives for WAP-approved projects.
9. Manufacturers, retailers, contractors, and dealers who provide or market program services will be required to sign and abide by the terms of participation agreements.
10. Equipment and services receiving an incentive under this program are not eligible for equipment purchase incentives under other Company programs. Equipment and services receiving an equipment purchase incentive under other Company programs are not eligible for incentives under this program.

(Continued)

**ELECTRIC SERVICE SCHEDULE NO. 111 - Continued**

11. Company and/or Program Administrator will employ a variety of quality assurance techniques during the delivery of the program. They may differ by equipment or service type and may include, but are not limited to, pre and post installation site inspections, phone surveys, retailer invoice reconciliations, confirmation of customer and equipment eligibility, and confirmation of incentives received through other utility programs.
12. Company may verify or evaluate the energy savings of installed equipment or services. Verification or evaluation may include, but are not limited to, telephone survey, site visit, billing analysis, and pre- and post-installation of monitoring equipment as necessary to quantify actual energy savings.
13. Customers with both electric heat and electric cooling are only eligible for electric heat incentives where both apply.
14. Measures that do not distinguish between electric heat and electric cooling apply to customers with either.
15. For measures that do not have a self-install specific incentive, equipment may be self-installed or installed by a qualified Trade Ally, per program requirements, to be eligible for an incentive.
16. Measures that do not distinguish between single/multi-family and manufactured homes apply to all three.
17. Customer's applying for electric heat incentives must have a permanently installed all-electric heat system serving at least 80% of the home's conditioned floor area and used as the primary heat source of the residence.
18. Customer's applying for electric cooling incentives must have a permanently installed ducted ~~central air conditioner or heat pump system~~ that ~~serves cools~~ at least 80% of the home's conditioned floor area.
19. Non-lighting incentives are capped at up to 70 percent of qualifying equipment costs. Qualifying equipment costs are subject to Company approval.

**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 Utah Public Service Commission, including future applicable amendments, will be considered as forming a part of and incorporated in said Agreement.

**Table 1—Lighting Incentives**

<b>Measure</b>	<b>Equipment Type</b>	<b>Minimum Efficiency Requirement</b>	<b>Customer/Mid Market Incentive "up to"</b>
<b>LED</b>	<del>LED-General Purpose</del>	<del>ENERGY STAR Qualified</del>	<del>\$3/lamp</del>
	<del>LED-Specialty</del>	<del>ENERGY STAR Qualified</del>	<del>\$3/lamp</del>
	<del>LED-Fixtures</del>	<del>ENERGY STAR Qualified</del>	<del>\$3/fixture</del>

**Notes for Table 1:**

- ~~1. Lamp incentives may not exceed 70% of the total lamp cost.~~
- ~~2. Fixtures must be hardwired and incentive may not exceed 50% of fixture cost. Torchiere and portable fixtures do not qualify.~~

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**FILED:** ~~February 3, 2023~~ ~~January 13, 2021~~  
March 6, 2023 January 1, 2021

**EFFECTIVE:**

**ELECTRIC SERVICE SCHEDULE NO. 111 - Continued**
**Table 12 – Appliance Incentives**

Equipment Type	Customer/Mid-Market Incentive “up to”
Room Air Conditioner	\$20
Heat Pump Water Heater	\$700
Low Flow Showerhead	\$31
Low Flow Aerator	\$5
Thermostatic Shower Restrict Valve	\$30
WiFi Smart Plug	<del>\$540</del>
WiFi Smart Light Switch	\$10
Smart Home Energy Management System Bundle	\$275
Lighting Occupancy Sensor	\$10
Room Air Cleaner	\$50
Heat Pump Clothes Dryer	\$300
Clothes Washer	\$25
Refrigerator	\$25
Freezer	\$25
Dishwasher	\$20

**Table 23 – Building Envelope Incentives**

Measure Type	Customer/Mid-Market Incentive “up to”
Windows	\$3/square foot
Infiltration Control (Air Sealing)	\$0.30/square foot

**Table 34 – HVAC Incentives**

Measure Type	Customer/Mid-Market Incentive “up to”
Evaporative Cooler	<del>\$150200</del>
Central Air Conditioner	\$400
Heat Pump	<del>\$2,5004,000</del>
Duct Sealing	\$450
Whole House Ventilation Fan	\$125
Rooftop Heat Tape Timer	\$100
Smart Thermostat	\$100
Engine Block Heater Control	<del>\$125450</del>
Bathroom Exhaust Fan	\$50

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~~2023~~ ~~January 1, 2021~~
**EFFECTIVE:** March 6,

P.S.C.U. No. 51

**Second~~First~~ Revision of Sheet No. 111.5**  
**Canceling ~~First Revision of Original~~ Sheet No. 111.5**

### ELECTRIC SERVICE SCHEDULE NO. 111 – Continued

**Table ~~45~~ – New Construction Incentives**

Measure Type	Customer/Mid-Market Incentive “up to”
Smart Thermostat	\$50
Central Air Conditioner	\$350
Whole Home	<del>0.50/kWh up to \$2,000 per home</del> \$1,000
Heat Pump Water Heater	\$800
Heat Pump	<del>2,250</del> \$2,000

**Notes for Table ~~45~~:**

1. Qualifying equipment receiving incentives within this table may not receive equipment purchase and installation incentives within other tables in this Schedule.
2. Customers that receive an incentive for the Whole Home offering may not receive an incentive for stand-alone offerings that impact the HERS Index.

**Table ~~56~~ – Insulation Incentives**

Measure Type	Customer/Mid-Market Incentive “up to”
Insulation	\$0.65/square foot

**Table ~~67~~ – Custom Multifamily Program**

Multifamily Property Type	Category	Incentive “up to”
Low Income	Properties where the majority of households earn less than 80% of Area Median Income.	\$0. <del>4740</del> /kWh up to 100% of total project costs
Market Rate	Properties where the majority of households earn more than 80% of Area Median Income	\$0. <del>3935</del> /kWh up to 70% of total project costs

**Notes for Table ~~67~~:**

1. Qualifying equipment receiving incentives within this table may not receive equipment purchase and installation incentives within other tables in this Schedule.
2. Outside lighting and common areas billed under non-residential rate schedules are eligible to receive incentives within this table, but may not receive additional equipment purchase and installation incentives within other Company offered programs.

Issued by authority of Report and Order of the Public Service Commission of Utah in Advice No. ~~23-0221-04~~

**FILED:** ~~February 3, 2023~~ ~~May 4, 2021~~  
 2021-4, 2021

**EFFECTIVE:** ~~March 6, 2023~~ June

**ELECTRIC SERVICE SCHEDULE NO. 111 - Continued****PROVISIONS OF SERVICE:**

1. Qualifying Equipment or Services, incentive amounts, application forms and detailed participation procedures will be listed on the program web site, accessible through the Company's web site at [www.rockymountainpower.net](http://www.rockymountainpower.net) or by calling 1-888-221-7070. Incentives and Qualifying Equipment and Services are also listed in the tables below.
2. Incentive delivery may vary by technology, and may include any or all of the following: post purchase mail-in, point of purchase buy down, retailer mark-down, mail-by request, direct install or pre-purchase offer and approval.
3. Incentives may be offered year round or for selected time periods.
4. Incentive offer availability, incentive levels and Qualifying Equipment or Services may be changed by the Program Administrator after consultation with the Company to reflect changing codes and standards, sales volumes, measure costs, quality assurance data or to enhance program cost effectiveness.
5. Incentives and qualifications are subject to Public Service Commission of Utah approval. "Up to" incentive levels may change with a minimum 45 days' notice, which will be prominently displayed on the program website and will be communicated at least once to retailers and trade allies who have participated in the program within one year preceding the date of the change.
6. "Subject to change with 45 days' notice" language will be included on all web pages containing an incentive offer.
7. Customers have 180 days after the date of purchase or installation to submit a complete post purchase application and request an incentive.
8. Except for manufacturer's buy-downs, incentives paid directly to participants will be within 45 days of Program Administrator's receipt of a complete and approved incentive application. Incentives available for customers will only be paid to customers or verified property owners, landlords, property management companies, pre-approved Utah Department of Workforce Services, Housing & Community Development Division's (HCDD) Weatherization Assistance Program (WAP) contractors, or homeowner associations as third party entities responsible for project. WAP contractors are only eligible to receive incentive payments for insulation, windows, and duct sealing/insulation measures. WAP contractors can only receive incentives for WAP-approved projects.
9. Manufacturers, retailers, contractors, and dealers who provide or market program services will be required to sign and abide by the terms of participation agreements.
10. Equipment and services receiving an incentive under this program are not eligible for equipment purchase incentives under other Company programs. Equipment and services receiving an equipment purchase incentive under other Company programs are not eligible for incentives under this program.

(Continued)

**ELECTRIC SERVICE SCHEDULE NO. 111 - Continued**

11. Company and/or Program Administrator will employ a variety of quality assurance techniques during the delivery of the program. They may differ by equipment or service type and may include, but are not limited to, pre and post installation site inspections, phone surveys, retailer invoice reconciliations, confirmation of customer and equipment eligibility, and confirmation of incentives received through other utility programs.
12. Company may verify or evaluate the energy savings of installed equipment or services. Verification or evaluation may include, but are not limited to, telephone survey, site visit, billing analysis, and pre- and post-installation of monitoring equipment as necessary to quantify actual energy savings.
13. Customers with both electric heat and electric cooling are only eligible for electric heat incentives where both apply.
14. Measures that do not distinguish between electric heat and electric cooling apply to customers with either.
15. For measures that do not have a self-install specific incentive, equipment may be self-installed or installed by a qualified Trade Ally, per program requirements, to be eligible for an incentive.
16. Measures that do not distinguish between single/multi-family and manufactured homes apply to all three.
17. Customer's applying for electric heat incentives must have a permanently installed all-electric heat system serving at least 80% of the home's conditioned floor area and used as the primary heat source of the residence.
18. Customer's applying for electric cooling incentives must have a permanently installed ducted system that serves at least 80% of the home's conditioned floor area.
19. Non-lighting incentives are capped at up to 70 percent of qualifying equipment costs. Qualifying equipment costs are subject to Company approval.

**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 Utah Public Service Commission, including future applicable amendments, will be considered as forming a part of and incorporated in said Agreement.

(Continued)

**ELECTRIC SERVICE SCHEDULE NO. 111 - Continued**
**Table 1 – Appliance Incentives**

<b>Equipment Type</b>	<b>Customer/Mid-Market Incentive “up to”</b>
Room Air Conditioner	\$20
Heat Pump Water Heater	\$700
Low Flow Showerhead	\$31
Low Flow Aerator	\$5
Thermostatic Shower Restrict Valve	\$30
WiFi Smart Plug	\$5
WiFi Smart Light Switch	\$10
Smart Home Energy Management System Bundle	\$275
Lighting Occupancy Sensor	\$10
Room Air Cleaner	\$50
Heat Pump Clothes Dryer	\$300
Clothes Washer	\$25
Refrigerator	\$25
Freezer	\$25
Dishwasher	\$20

**Table 2 – Building Envelope Incentives**

<b>Measure Type</b>	<b>Customer/Mid-Market Incentive “up to”</b>
Windows	\$3/square foot
Infiltration Control (Air Sealing)	\$0.30/square foot

**Table 3 – HVAC Incentives**

<b>Measure Type</b>	<b>Customer/Mid-Market Incentive “up to”</b>
Evaporative Cooler	\$150
Central Air Conditioner	\$400
Heat Pump	\$2,500
Duct Sealing	\$450
Whole House Ventilation Fan	\$125
Rooftop Heat Tape Timer	\$100
Smart Thermostat	\$100
Engine Block Heater Control	\$125
Bathroom Exhaust Fan	\$50

(continued)

Issued by authority of Report and Order of the Public Service Commission of Utah in Docket No. 23-035-T04

**FILED:** February 3, 2023

**EFFECTIVE:** March 6, 2023

**ELECTRIC SERVICE SCHEDULE NO. 111 – Continued**
**Table 4 – New Construction Incentives**

<b>Measure Type</b>	<b>Customer/Mid-Market Incentive “up to”</b>
Smart Thermostat	\$50
Central Air Conditioner	\$350
Whole Home	0.50/kWh up to \$2,000 per home
Heat Pump Water Heater	\$800
Heat Pump	2,250

**Notes for Table 4:**

1. Qualifying equipment receiving incentives within this table may not receive equipment purchase and installation incentives within other tables in this Schedule.
2. Customers that receive an incentive for the Whole Home offering may not receive an incentive for stand-alone offerings that impact the HERS Index.

**Table 5 – Insulation Incentives**

<b>Measure Type</b>	<b>Customer/Mid-Market Incentive “up to”</b>
Insulation	\$0.65/square foot

**Table 6 – Custom Multifamily Program**

<b>Multifamily Property Type</b>	<b>Category</b>	<b>Incentive “up to”</b>
Low Income	Properties where the majority of households earn less than 80% of Area Median Income.	\$0.47/kWh up to 100% of total project costs
Market Rate	Properties where the majority of households earn more than 80% of Area Median Income	\$0.39/kWh up to 70% of total project costs

**Notes for Table 6:**

1. Qualifying equipment receiving incentives within this table may not receive equipment purchase and installation incentives within other tables in this Schedule.
2. Outside lighting and common areas billed under non-residential rate schedules are eligible to receive incentives within this table, but may not receive additional equipment purchase and installation incentives within other Company offered programs.

## **Exhibit B**



## MEMORANDUM

To: Jillian Fredrickson, Rocky Mountain Power  
From: Dimitry Burdjalov and Andy Hudson, Applied Energy Group  
CC: Clay Monroe, Rocky Mountain Power  
Date: December 22, 2022  
Re: Utah Wattsmart Homes Program Cost-Effectiveness Analysis, Expected Case Participation – PY2023

AEG estimated the cost-effectiveness of Rocky Mountain Power's Wattsmart Homes Program in the state of Utah using expected participation rates based on Program Year (PY) 2023 costs and savings estimates developed by implementers, checked by AEG, and confirmed by Rocky Mountain Power. This memo provides cost-effectiveness results at the program level for the base (expected participation) case. The program passes the Utility Cost Test (UCT) and the Participant Cost Test (PCT) under these conditions.

This memo provides analysis inputs and results in the following tables:

- Table 1: Cost-Effectiveness Analysis Inputs
- Table 2: Annual Program Costs by Program Year, Nominal - PY2023
- Table 3: Annual Savings in kWh by Program Year - PY2023
- Table 4: Benefit/Cost Ratios by Program Year - PY2022-2023
- Table 5: Wattsmart Homes Program Cost-Effectiveness Results, PY2023
- Table 6: Wattsmart Homes Measure Category Level Cost-Effectiveness Results, PY2023



The following assumptions were utilized in the analysis:

- **Avoided Costs:** Hourly values provided by Rocky Mountain Power based on the 2021 Integrated Resource Plan (IRP) Preferred Portfolio, converted into annual values using Utah load shapes from the same IRP.
- **Modeling Inputs:** measure savings, costs, measure lives, incentive levels, program delivery, and portfolio costs were based on estimates developed by implementers, developed or reviewed by AEG, or provided by Rocky Mountain Power.
- **Other Economic Assumptions:** Discount rate, line loss, retail rate, and inflation rate values were provided by Rocky Mountain Power and are presented in Table 1 below.

The following tables summarize cost-effectiveness assumptions and results for the Utah Wattsmart Homes Program. The cost-effectiveness analysis inputs are shown in Table 2 and Table 3 below. Tables 4 and 5 present the cost-effectiveness results of the Wattsmart Homes program for 2023. All results are presented in 2023 dollars.<sup>1</sup> Table 6 presents results at the measure category level for 2023.

*Table 1: Cost-Effectiveness Analysis Inputs*

Parameter	PY2023
Discount Rate	6.92%
Residential Line Loss	6.36%
Residential Energy Rate (\$/kWh)	\$0.1068
Inflation Rate <sup>2</sup>	2.28%

*Table 2: Annual Program Costs by Program Year, Nominal - PY2023*

Program Year	Program Delivery	Utility Admin	Incentives	Total Utility Costs	Gross Customer Costs
2023	\$5,679,715	\$244,000	\$20,069,597	\$25,993,312	\$62,362,156

*Table 3: Annual Savings in kWh by Program Year - PY2023*

Program Year	Gross kWh Savings at Site	Realization Rate	Adjusted Gross kWh Savings at Site	Net to Gross Ratio	Net kWh Savings at Site	Measure Life
2023	52,118,827	99.58%	51,898,799	89%	46,145,174	18

<sup>1</sup> To align with annual budget expectations, cost-effectiveness inputs are presented in nominal dollars.

<sup>2</sup> Future rates determined using a 2.28% annual escalator.



Table 4: Benefit/Cost Ratios by Program Year - PY2022-2023

Program Year	UCT	TRC	PTRC	PCT	RIM
2023	1.27	0.54	0.59	1.38	0.36

Table 5: Wattsmart Homes Program Cost-Effectiveness Results, PY2023

Cost-Effectiveness Test	Levelized \$/kWh	NPV Costs	NPV Benefits	Net Benefits	Benefit/Cost Ratio
Utility Cost Test (UCT)	0.0527	\$25,993,312	\$33,048,512	\$7,055,200	1.27
Total Resource Cost Test (TRC) No Adder	0.1249	\$61,547,061	\$33,048,512	-\$28,498,549	0.54
Total Resource Cost Test (PTRC) + Conservation Adder	0.1249	\$61,547,061	\$36,353,363	-\$25,193,698	0.59
Participant Cost Test (PCT)		\$62,362,156	\$86,085,852	\$23,723,697	1.38
Rate Impact Test (RIM)		\$92,009,568	\$33,048,512	-\$58,961,056	0.36
Lifecycle Revenue Impacts (\$/kWh)					\$0.0002386

Table 6: Wattsmart Homes Measure Category Level Cost-Effectiveness Results, PY2023

Program	Measure Category	Utility Benefits (\$)	Utility Costs (\$)	Utility Cost Test	TRC Benefits (\$)	TRC Costs (\$)	TRC Test	P-TRC Benefits (\$)	P-TRC Costs (\$)	P-TRC Test	Participant PV Benefits (\$)	Participant PV Costs (\$)	PCT Test	Ratepayer PV Benefits (\$)	Ratepayer PV Costs (\$)	RIM Test
Wattsmart Homes	Appliances	\$1,695,176	\$1,319,254	1.28	\$1,695,176	\$3,799,122	0.45	\$1,864,693	\$3,799,122	0.49	\$4,460,347	\$3,079,264	1.45	\$1,695,176	\$5,253,056	0.32
Wattsmart Homes	Building Shell	\$912,659	\$569,022	1.60	\$912,659	\$7,840,099	0.12	\$1,003,925	\$7,840,099	0.13	\$2,150,430	\$7,977,090	0.27	\$912,659	\$2,230,283	0.41
Wattsmart Homes	HVAC	\$14,702,715	\$13,002,553	1.13	\$14,702,715	\$32,153,864	0.46	\$16,172,986	\$32,153,864	0.50	\$38,715,431	\$32,992,684	1.17	\$14,702,715	\$42,174,556	0.35
Wattsmart Homes	New Homes	\$12,191,038	\$8,481,973	1.44	\$12,191,038	\$14,827,087	0.82	\$13,410,141	\$14,827,087	0.90	\$31,556,555	\$15,604,739	2.02	\$12,191,038	\$32,852,889	0.37
Wattsmart Homes	Water Heating	\$985,101	\$1,033,241	0.95	\$985,101	\$1,956,972	0.50	\$1,083,611	\$1,956,972	0.55	\$3,051,063	\$1,885,359	1.62	\$985,101	\$3,179,285	0.31
Wattsmart Homes	Lighting	\$2,561,823	\$1,587,269	1.61	\$2,561,823	\$969,917	2.64	\$2,818,006	\$969,917	2.91	\$6,152,026	\$823,020	7.47	\$2,561,823	\$6,319,499	0.41

# **Exhibit C**



## MEMORANDUM

To: Jillian Fredrickson, Rocky Mountain Power  
From: Dimitry Burdjalov and Andy Hudson, Applied Energy Group  
CC: Clay Monroe, Rocky Mountain Power  
Date: December 22, 2022  
Re: Utah Wattsmart Homes Program Cost-Effectiveness Analysis, High Case Participation – PY2023

AEG estimated the cost-effectiveness of Rocky Mountain Power's Wattsmart Homes Program in the state of Utah using expected participation rates based on Program Year (PY) 2023 costs and savings estimates developed by implementers, checked by AEG, and confirmed by Rocky Mountain Power. This memo provides cost-effectiveness results at the program level for the high (+10% participation) case. The program passes the Utility Cost Test (UCT) and the Participant Cost Test (PCT) under these conditions.

This memo provides analysis inputs and results in the following tables:

- Table 1: Cost-Effectiveness Analysis Inputs
- Table 2: Annual Program Costs by Program Year, Nominal - PY2023
- Table 3: Annual Savings in kWh by Program Year - PY2023
- Table 4: Benefit/Cost Ratios by Program Year - PY2022-2023
- Table 5: Wattsmart Homes Program Cost-Effectiveness Results, PY2023
- Table 6: Wattsmart Homes Measure Category Level Cost-Effectiveness Results, PY2023



The following assumptions were utilized in the analysis:

- **Avoided Costs:** Hourly values provided by Rocky Mountain Power based on the 2021 Integrated Resource Plan (IRP) Preferred Portfolio, converted into annual values using Utah load shapes from the same IRP.
- **Modeling Inputs:** measure savings, costs, measure lives, incentive levels, program delivery, and portfolio costs were based on estimates developed by implementers, developed or reviewed by AEG, or provided by Rocky Mountain Power.
- **Other Economic Assumptions:** Discount rate, line loss, retail rate, and inflation rate values were provided by Rocky Mountain Power and are presented in Table 1 below.

The following tables summarize cost-effectiveness assumptions and results for the Utah Wattsmart Homes Program. The cost-effectiveness analysis inputs are shown in Table 2 and Table 3 below. Tables 4 and 5 present the cost-effectiveness results of the Wattsmart Homes program for 2023. All results are presented in 2023 dollars.<sup>1</sup> Table 6 presents results at the measure category level for 2023.

*Table 1: Cost-Effectiveness Analysis Inputs*

Parameter	PY2023
Discount Rate	6.92%
Residential Line Loss	6.36%
Residential Energy Rate (\$/kWh)	\$0.1068
Inflation Rate <sup>2</sup>	2.28%

*Table 2: Annual Program Costs by Program Year, Nominal - PY2023*

Program Year	Program Delivery	Utility Admin	Incentives	Total Utility Costs	Gross Customer Costs
2023	\$5,679,715	\$244,000	\$22,076,556	\$28,000,272	\$68,598,371

*Table 3: Annual Savings in kWh by Program Year - PY2023*

Program Year	Gross kWh Savings at Site	Realization Rate	Adjusted Gross kWh Savings at Site	Net to Gross Ratio	Net kWh Savings at Site	Measure Life
2023	57,330,710	99.58%	57,088,679	89%	50,759,691	18

<sup>1</sup> To align with annual budget expectations, cost-effectiveness inputs are presented in nominal dollars.

<sup>2</sup> Future rates determined using a 2.28% annual escalator.



Table 4: Benefit/Cost Ratios by Program Year - PY2022-2023

Program Year	UCT	TRC	PTRC	PCT	RIM
2023	1.30	0.54	0.60	1.38	0.36

Table 5: Wattsmart Homes Program Cost-Effectiveness Results, PY2023

Cost-Effectiveness Test	Levelized \$/kWh	NPV Costs	NPV Benefits	Net Benefits	Benefit/Cost Ratio
Utility Cost Test (UCT)	0.0527	\$28,000,272	\$36,353,363	\$8,353,091	1.30
Total Resource Cost Test (TRC) No Adder	0.1249	\$67,109,395	\$36,353,363	-\$30,756,032	0.54
Total Resource Cost Test (PTRC) + Conservation Adder	0.1249	\$67,109,395	\$39,988,699	-\$27,120,696	0.60
Participant Cost Test (PCT)		\$68,598,371	\$94,694,438	\$26,096,066	1.38
Rate Impact Test (RIM)		\$100,618,153	\$36,353,363	-\$64,264,790	0.36
Lifecycle Revenue Impacts (\$/kWh)					\$0.0002386

Table 6: Wattsmart Homes Measure Category Level Cost-Effectiveness Results, PY2023

Program	Measure Category	Utility Benefits (\$)	Utility Costs (\$)	Utility Cost Test	TRC Benefits (\$)	TRC Costs (\$)	TRC Test	P-TRC Benefits (\$)	P-TRC Costs (\$)	P-TRC Test	Participant PV Benefits (\$)	Participant PV Costs (\$)	PCT Test	Ratepayer PV Benefits (\$)	Ratepayer PV Costs (\$)	RIM Test
Wattsmart Homes	Appliances	\$1,864,693	\$1,371,909	1.36	\$1,864,693	\$4,099,763	0.45	\$2,051,163	\$4,099,763	0.50	\$4,906,382	\$3,387,190	1.45	\$1,864,693	\$5,646,436	0.33
Wattsmart Homes	Building Shell	\$1,003,925	\$617,938	1.62	\$1,003,925	\$8,616,123	0.12	\$1,104,317	\$8,616,123	0.13	\$2,365,473	\$8,774,799	0.27	\$1,003,925	\$2,396,409	0.42
Wattsmart Homes	HVAC	\$16,172,986	\$13,956,896	1.16	\$16,172,986	\$35,023,338	0.46	\$17,790,285	\$35,023,338	0.51	\$42,586,974	\$36,291,952	1.17	\$16,172,986	\$45,091,756	0.36
Wattsmart Homes	New Homes	\$13,410,141	\$9,200,537	1.46	\$13,410,141	\$16,180,163	0.83	\$14,751,156	\$16,180,163	0.91	\$34,712,210	\$17,165,213	2.02	\$13,410,141	\$35,289,981	0.38
Wattsmart Homes	Water Heating	\$1,083,611	\$1,123,743	0.96	\$1,083,611	\$2,139,847	0.51	\$1,191,973	\$2,139,847	0.56	\$3,356,169	\$2,073,895	1.62	\$1,083,611	\$3,393,890	0.32
Wattsmart Homes	Lighting	\$2,818,006	\$1,729,249	1.63	\$2,818,006	\$1,050,161	2.68	\$3,099,806	\$1,050,161	2.95	\$6,767,229	\$905,322	7.47	\$2,818,006	\$6,792,722	0.41

## **Exhibit D**



## MEMORANDUM

To: Jillian Fredrickson, Rocky Mountain Power  
From: Dimitry Burdjalov and Andy Hudson, Applied Energy Group  
CC: Clay Monroe, Rocky Mountain Power  
Date: December 22, 2022  
Re: Utah Wattsmart Homes Program Cost-Effectiveness Analysis, Low Case Participation – PY2023

AEG estimated the cost-effectiveness of Rocky Mountain Power's Wattsmart Homes Program in the state of Utah using expected participation rates based on Program Year (PY) 2023 costs and savings estimates developed by implementers, checked by AEG, and confirmed by Rocky Mountain Power. This memo provides cost-effectiveness results at the program level for the Low (-10% participation) case. The program passes the Utility Cost Test (UCT) and the Participant Cost Test (PCT) under these conditions.

This memo provides analysis inputs and results in the following tables:

- Table 1: Cost-Effectiveness Analysis Inputs
- Table 2: Annual Program Costs by Program Year, Nominal - PY2023
- Table 3: Annual Savings in kWh by Program Year - PY2023
- Table 4: Benefit/Cost Ratios by Program Year - PY2022-2023
- Table 5: Wattsmart Homes Program Cost-Effectiveness Results, PY2023
- Table 6: Wattsmart Homes Measure Category Level Cost-Effectiveness Results, PY2023



The following assumptions were utilized in the analysis:

- **Avoided Costs:** Hourly values provided by Rocky Mountain Power based on the 2021 Integrated Resource Plan (IRP) Preferred Portfolio, converted into annual values using Utah load shapes from the same IRP.
- **Modeling Inputs:** measure savings, costs, measure lives, incentive levels, program delivery, and portfolio costs were based on estimates developed by implementers, developed or reviewed by AEG, or provided by Rocky Mountain Power.
- **Other Economic Assumptions:** Discount rate, line loss, retail rate, and inflation rate values were provided by Rocky Mountain Power and are presented in Table 1 below.

The following tables summarize cost-effectiveness assumptions and results for the Utah Wattsmart Homes Program. The cost-effectiveness analysis inputs are shown in Table 2 and Table 3 below. Tables 4 and 5 present the cost-effectiveness results of the Wattsmart Homes program for 2023. All results are presented in 2023 dollars.<sup>1</sup> Table 6 presents results at the measure category level for 2023.

*Table 1: Cost-Effectiveness Analysis Inputs*

Parameter	PY2023
Discount Rate	6.92%
Residential Line Loss	6.36%
Residential Energy Rate (\$/kWh)	\$0.1068
Inflation Rate <sup>2</sup>	2.28%

*Table 2: Annual Program Costs by Program Year, Nominal - PY2023*

Program Year	Program Delivery	Utility Admin	Incentives	Total Utility Costs	Gross Customer Costs
2023	\$5,679,715	\$244,000	\$18,062,637	\$23,986,352	\$56,125,940

*Table 3: Annual Savings in kWh by Program Year - PY2023*

Program Year	Gross kWh Savings at Site	Realization Rate	Adjusted Gross kWh Savings at Site	Net to Gross Ratio	Net kWh Savings at Site	Measure Life
2023	46,906,945	99.58%	46,708,919	89%	41,530,656	18

<sup>1</sup> To align with annual budget expectations, cost-effectiveness inputs are presented in nominal dollars.

<sup>2</sup> Future rates determined using a 2.28% annual escalator.



Table 4: Benefit/Cost Ratios by Program Year - PY2022-2023

Program Year	UCT	TRC	PTRC	PCT	RIM
2023	1.24	0.53	0.58	1.38	0.36

Table 5: Wattsmart Homes Program Cost-Effectiveness Results, PY2023

Cost-Effectiveness Test	Levelized \$/kWh	NPV Costs	NPV Benefits	Net Benefits	Benefit/Cost Ratio
Utility Cost Test (UCT)	0.0527	\$23,986,352	\$29,743,661	\$5,757,308	1.24
Total Resource Cost Test (TRC) No Adder	0.1249	\$55,984,726	\$29,743,661	-\$26,241,065	0.53
Total Resource Cost Test (PTRC) + Conservation Adder	0.1249	\$55,984,726	\$32,718,027	-\$23,266,699	0.58
Participant Cost Test (PCT)		\$56,125,940	\$77,477,267	\$21,351,327	1.38
Rate Impact Test (RIM)		\$83,400,983	\$29,743,661	-\$53,657,322	0.36
Lifecycle Revenue Impacts (\$/kWh)					\$0.0002386

Table 6: Wattsmart Homes Measure Category Level Cost-Effectiveness Results, PY2023

Program	Measure Category	Utility Benefits (\$)	Utility Costs (\$)	Utility Cost Test	TRC Benefits (\$)	TRC Costs (\$)	TRC Test	P-TRC Benefits (\$)	P-TRC Costs (\$)	P-TRC Test	Participant PV Benefits (\$)	Participant PV Costs (\$)	PCT Test	Ratepayer PV Benefits (\$)	Ratepayer PV Costs (\$)	RIM Test
Wattsmart Homes	Appliances	\$1,525,658	\$1,266,599	1.20	\$1,525,658	\$3,498,480	0.44	\$1,678,224	\$3,498,480	0.48	\$4,014,312	\$2,771,337	1.45	\$1,525,658	\$4,859,676	0.31
Wattsmart Homes	Building Shell	\$821,393	\$520,105	1.58	\$821,393	\$7,064,074	0.12	\$903,532	\$7,064,074	0.13	\$1,935,387	\$7,179,381	0.27	\$821,393	\$2,064,157	0.40
Wattsmart Homes	HVAC	\$13,232,443	\$12,048,210	1.10	\$13,232,443	\$29,284,390	0.45	\$14,555,688	\$29,284,390	0.50	\$34,843,888	\$29,693,415	1.17	\$13,232,443	\$39,257,356	0.34
Wattsmart Homes	New Homes	\$10,971,934	\$7,763,409	1.41	\$10,971,934	\$13,474,012	0.81	\$12,069,127	\$13,474,012	0.90	\$28,400,899	\$14,044,265	2.02	\$10,971,934	\$30,415,798	0.36
Wattsmart Homes	Water Heating	\$886,591	\$942,740	0.94	\$886,591	\$1,774,097	0.50	\$975,250	\$1,774,097	0.55	\$2,745,957	\$1,696,823	1.62	\$886,591	\$2,964,681	0.30
Wattsmart Homes	Lighting	\$2,305,641	\$1,445,289	1.60	\$2,305,641	\$889,672	2.59	\$2,536,205	\$889,672	2.85	\$5,536,824	\$740,718	7.47	\$2,305,641	\$5,846,276	0.39

**CERTIFICATE OF SERVICE**

Docket No. 23-035-T04

I hereby certify that on February 3, 2023, 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](mailto:mbeck@utah.gov)  
[ocs@utah.gov](mailto:ocs@utah.gov)

**Division of Public Utilities**

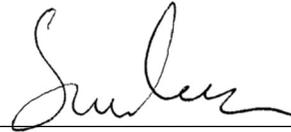
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Santiago Gutierrez  
Coordinator, Regulatory Operations