



2021 WYOMING Energy Efficiency Annual Report

Issued July 15, 2022

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[pacificorp.com/environment/demand-side-management](https://www.pacificorp.com/environment/demand-side-management)

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EXECUTIVE SUMMARY

Rocky Mountain Power is a multi-jurisdictional electric utility providing retail service to customers in Utah, Idaho, and Wyoming. Rocky Mountain Power, a division of PacifiCorp, serves approximately 142,847 customers in Wyoming. Rocky Mountain Power acquires energy efficiency and peak reduction resources as cost-effective alternatives to the acquisition of supply-side resources. These resources assist in efficiently addressing load growth and contribute to the ability to meet system peak requirements.

PacifiCorp develops an integrated resource plan (IRP)¹ as a means of balancing cost, risk, uncertainty, supply reliability/deliverability and long-run public policy goals. The IRP presents a framework of future actions to ensure that Rocky Mountain Power continues to provide reliable, reasonably priced service to customer. Energy Efficiency and peak management opportunities are incorporated into the IRP based on their availability, characteristics, and costs.²

Rocky Mountain Power employs external implementers to administer its programs.³ Evaluations for each program are performed by independent external evaluators to validate energy and demand savings derived from Rocky Mountain Power's energy efficiency programs.⁴

Rocky Mountain Power utilizes earned media, customer communications, education, and outreach, advertising as well as program specific marketing to communicate the value of energy efficiency, provide information regarding low-cost, no-cost energy efficiency measures and to educate customer on the availability of programs, services, and incentives.⁵

This report provides details on program results, activities, and expenditures of the Customer Efficiency Tariff Rider ("Schedule 191") as of the reporting period from January 1, 2021, through December 31, 2021. Rocky Mountain Power on behalf of its customers, invested \$7.5 million in energy efficiency resource acquisitions during the reporting period. The investment yielded approximately 45.5 megawatt hours ("MWh") at generator in first-year energy savings. Net benefits based on the projected value of the energy savings over the life of the individual measures is estimated at \$12.3 million.⁶

¹ Information on PacifiCorp's IRP can be found at <https://www.pacificorp.com/energy/integrated-resource-plan.html>.

² Information on Rocky Mountain's planning document can be found at [https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/Rocky Mountain Power Planning Process.pdf](https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/Rocky_Mountain_Power_Planning_Process.pdf)

³ Information on program administration can be found at <https://www.pacificorp.com/environment/demand-side-management.html> under the "Program Administration" section.

⁴ Information on program evaluations can be found at <https://www.pacificorp.com/environment/demand-side-management.html> under the "Reports and program evaluations by state" section.

⁵ Information on communications and outreach can be found at <https://www.pacificorp.com/environment/demand-side-management.html> under the "Communications and Outreach" section.

⁶ See cost effectiveness Appendix A.

The energy efficiency portfolio was cost effective based on the Utility Cost Test (UCT), which is the primary cost benefit test observed in Wyoming. Cost effectiveness results are provided in Table 6 and Appendix A.

In 2021, Rocky Mountain Power's DSM portfolio included the following energy efficiency programs:

- Wattsmart Homes
- Home Energy Reports
- Low Income Weatherization
- Wattsmart Business

REGULATORY ACTIVITIES

During the 2021 reporting period, the Company filed compliance and/or informational reports, updates, notices, and requests with the Commission in support of Company DSM programs. The following is a list of those activities:

- On February 12, 2021, in Docket No. 20000-264-EA-06, the Company filed education and promotional materials that were used to educate the public concerning energy efficiency and promote DSM program from October 1, 2020 – December 31, 2020.
- On February 12, 2021, in Docket No. 20000-383-EA-10, the Company filed its quarterly program status report with monthly participation levels, energy savings, DSM program cost data and Schedule 191 balances by category.
- On March 26, 2021, the Company posted a notice on its website to make modifications to the Wattsmart Business program. Key modifications included the implementation of the redesigned small business enhanced offering. These modifications went into effect May 1, 2021.
- On May 12, 2021, in Docket No. 20000-264-EA-06, the Company filed education and promotional materials that were used to educate the public concerning energy efficiency and promote DSM program from January 1, 2021 – March 31, 2021.
- On May 12, 2021, in Docket No. 20000-383-EA-10, the Company filed its quarterly program status report with monthly participation levels, energy savings, DSM program cost data and Schedule 191 balances by category.
- On July 7, 2021, in Docket No. 20000-264-EA-06, the Company filed its Annual DSM Report for the 2020 calendar year.
- On July 21, 2021, the Company posted a notice on its website to make modifications to the Wattsmart Business and Wattsmart Homes programs as well as updates to the 2021-2023 DSM Plan program offerings. Key modifications included adjustments to lighting, motors, HVAC, building envelope, office equipment, food service equipment, mid-market,

appliance, and new construction incentive offerings. These modifications went into effect August 23, 2021.

- On August 16, 2021, in Docket No. 20000-264-EA-06, the Company filed education and promotional materials that were used to educate the public concerning energy efficiency and promote DSM program from April 1, 2021 – June 30, 2021.
- On August 16, 2021, in Docket No. 20000-383-EA-10, the Company filed its quarterly program status report with monthly participation levels, energy savings, DSM program cost data and Schedule 191 balances by category.
- On November 15, 2021, in Docket No. 20000-264-EA-06, the Company filed education and promotional materials that were used to educate the public concerning energy efficiency and promote DSM program from July 1, 2021 – September 30, 2021.
- On November 15, 2020, in Docket No. 20000-383-EA-10, the Company filed its quarterly program status report with monthly participation levels, energy savings, DSM program cost data and Schedule 191 balances by category.
- On December 13, 2021, in Docket No. 20000-264-EA-06, the Company filed its 2022 promotional plan to educate the public concerning energy efficiency and to promote its DSM programs.

CUSTOMER EFFICIENCY SERVICE CHARGE

In Docket No. 20000-264-EA-06 (Record No. 10960), the Commission approved the recovery of energy efficiency expenditures through Schedule 191. This charge appears as a line item on customer bills. The Company books eligible DSM energy efficiency expenditures as incurred to the balancing account for the appropriate customer category. The unique surcharges for each customer classification are defined below:

- Category 1 (Residential) – Schedules 2 and 18
- Category 2 (Small Commercial and Industrial) – Schedules 25, 28, 40, 210 and all lighting schedules
- Category 3 (Large Commercial and Industrial) – Schedules 33, 46 and 48T

In Docket No. 20000-526-EA-17 (Record No. 14847), the Commission approved the Category 3 balancing account to be capitalized and amortized. Schedule 191 balances by category are available in the Company's ongoing quarterly reports submitted in Docket No. 20000-383-EA-10 (Record No. 12686).

PORTFOLIO OF PROGRAMS

ENERGY EFFICIENCY PROGRAMS

WATTSMART HOMES

Program Description

The Wattsmart Homes program is designed to provide access to and incentives for more efficient products and services installed or received by residential customers in the following housing types:

- New Construction Homes
- Single Family Existing Homes
- Multi-family Housing Units
- Manufactured Homes

The program applies to residential customers under Electrical Service Schedules 2 or 18. Landlords who own rental property where the tenant is billed under Electric Service Schedules 2 or 18 also qualify.

The Wattsmart Homes program passed the UCT cost test with a benefit cost ratio of 1.72 for 2021.

Program Performance and Major Achievements in 2021

- The Wattsmart Homes program achieved gross savings of 4,348,917 kWh at site.
- Disbursed \$329,014 million in incentives.
- The Wattsmart Homes program reduced incentives for LED fixtures and added incentives for interior lighting occupancy sensors and smart light switches.
- The Wattsmart Homes program added incentives for appliances, including dishwashers, heat pump clothes dryers, engine block heater controls, smart plugs, smart home energy management systems, and rooftop heat tape controllers.
- The Wattsmart Homes program reintroduced weatherization incentives for windows and air sealing.
- The Wattsmart Homes program made changes to HVAC incentives, including discontinued incentives for ECMs on existing gas furnaces, incentive level changes for ductless heat pumps and smart thermostats, added incentives for dual fuel heat pumps and line voltage thermostats.
- The Wattsmart Homes program moved from performance path to prescriptive path and added standalone incentives for dual fuel heat pumps for new homes.

Additional information on the program administration can be found on the Company's website under the Program administration section:

<https://www.pacificorp.com/environment/demand-side-management.html>

Direct Link to Wattsmart Homes program administration:

https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/wyoming/Wyoming_Program_Administration_Wattsmart_Homes.pdf

HOME ENERGY REPORTS PROGRAM

Program Description

The *Home Energy Reports* program is a behavioral program designed to decrease participant energy usage by providing comparative energy usage data for similar homes located in the same geographical area. Additionally, the report provides the participant with information on how to decrease their energy usage. Equipped with this information, participants can modify behavior and/or make structural equipment, lighting, or appliance modifications to reduce their overall electric energy consumption.

The Home Energy Reports program passed the UCT with a cost benefit ratio of 13.77 for 2021. The UCT results went up significantly in 2021 due to the avoided costs increasing in the 2021 IRP. Single-family cooling load profiles increased significantly and account for 100% of the Home Energy Reporting load profile. The avoided costs are the incremental cost to an electric utility of electric energy and capacity. When the Company does not have to generate the power, meaning it is purchased from another facility, generated by solar, wind, or hydro the costs are avoided that would have incurred by producing the energy in a plant.

Program Performance and Major Achievements in 2021

- The program achieved gross savings of 7,008,010 kWh at site.
- Reports were initially provided to approximately 52,000 customers in 2021.
- Enhancements to reports were made during 2021 including:
 - More individual recommendations to save energy
 - Greater insights on how customers are using energy by appliance type
 - Home characteristics include on report with easy access to update home profile
 - Monthly usage history included on reports
- Online portal is continually improving to provide greater insights for all residential customers.
- In 2021, only 0.29% of customers (165 customers) have requested to be removed from the program.

Additional information on the program administration can be found on the Company's website under the Program administration section:

<https://www.pacificorp.com/environment/demand-side-management.html>

Direct Link to Home Energy Reports program administration:

https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/wyoming/Wyoming_Program_Administration_Home_Energy_Reports.pdf

LOW INCOME WEATHERIZATION

Program Description

The *Low-Income Weatherization* program is designed to leverage funds with state and federal grants so that the energy efficiency improvements provided can be delivered to income eligible households at no cost.

The Company contracts with two agencies to provide low-income weatherization services throughout the state of Wyoming. These include Council of Community Services (“CCS”) and Wyoming Weatherization Services (“WWS”). The agencies subcontract with the Wyoming Department of Family Services (“WFS”) to provide low-income weatherization services with grants WFS received from state and federal government sources. Company funding of 50 percent of the cost of approved measures is leveraged by the agencies with these government grants so that the services are at no cost to participating households.

The Low-Income Weatherization program passed the UCT with a cost benefit ratio of 9.24 for 2021. The results for Low-Income Weatherization in 2021 are significantly higher for the same reasons reason noted in the Home Energy Reports Program above.

Program Performance and Major Achievements in 2021

- In 2021, the program achieved gross savings of 26,973 kWh at site.
- Number of homes served 9

Additional information on the program administration can be found on the Company’s website under the Program administration section:

<https://www.pacificorp.com/environment/demand-side-management.html>

Direct Link to Low Income Weatherization program administration:

https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/wyoming/Wyoming_Program_Administration_Low_Income.pdf

WATTSMART BUSINESS PROGRAM

WATTSMART BUSINESS

Program Description

The commercial, industrial, and agricultural energy efficiency program portfolio is offered through a single Non-Residential Energy Efficiency program called Wattsmart Business.

Wattsmart Business is designed to influence new and existing non-residential customers to increase the efficiency of electric energy usage both through the installation of efficient equipment as well as adoption of improved energy management protocols. Qualifying measures include those which produce verifiable electric energy efficiency improvements compared to an established baseline.

Wattsmart Business offerings include:

- Typical Upgrades
- Midstream/LED Instant incentives
- Custom Analysis
- Energy Management
- Energy Project Manager Co-funding

The Wattsmart Business program passed the UCT with a cost benefit ratio of 2.06. The Wattsmart Business program did not see a large jump from avoided costs in 2021. This is due to their load profile being spread out in multiple commercial, industrial, and agricultural measures in comparison with Residential programs, that are largely driven by the single-family cooling load profile. The majority of Wattsmart Business load is lighting which shows only a slight increase over prior year with regards to avoided costs. The next largest contributor to Wattsmart Business is HVAC, which is Categorized as HVAC Aux profile, which has also only slightly increased over prior years.

Program Performance and Major Achievements in 2021

- In 2021, the program achieved gross savings of 10,099,140 kWh at site.
- Distributed incentives of \$1,108,188.
- Advanced Rooftop Control (ARC) HVAC measures continued to be popular in 2021. New ARC measures were added in 2020 to align with new Rooftop Units additions and Demand Controlled Ventilation-only ARC variations more closely.
- Participating Wattsmart Business vendors continued receiving quarterly vendor scorecards to provide timely feedback on their performance with customers and submittals and encourage vendors to step up their training and level of service to earn “Premium” status. The enhanced status entitles qualifying vendors to improved search engine visibility on Wattsmart Business web pages and enhanced co-branding opportunities with the Rocky Mountain Power logo. The number of premium vendors in 2021 was five.
- The RMP managed accounts team continued engaging with municipal water and wastewater customers through the Strategic Energy Management (SEM) delivery model. These efforts on multi-year projects are expected to yield significant additional savings in future years.

- Global supply chain challenges began affecting large industrial customers in 2021. Equipment planned for energy efficiency projects and facility upgrades continues to be delayed, resulting in delays in kWh savings entering the program.

Additional information on the program administration can be found on the Company's website under the Program administration section:

<https://www.pacificorp.com/environment/demand-side-management.html>

Direct Link to Wattsmart Business program administration:

https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/wyoming/Wyoming_Program_Administration_NonResidential.pdf

EXPENDITURES

TOTAL ENERGY EFFICIENCY PORTFOLIO SAVINGS AND EXPENDITURES

Table 1
Program Results for January 1, 2021– December 31, 2021⁷

Category and Program	kWh/Yr Savings (@ site)	kWh/Yr Savings (@ generator)	Program Expenditures
Category 1 - Residential			
Low Income Weatherization	26,973	29,743	\$ 5,009
Home Energy Reporting	7,008,010	7,727,733	\$ 119,477
Wattsmart Homes	4,348,917	4,783,809	\$ 1,202,322
Total Category 1	11,383,900	12,541,285	\$ 1,326,808
Category 2 - Commercial, Industrial & Irrigation			
Wattsmart Business	10,099,140	10,705,911	\$ 2,447,585
Total Category 2	10,099,140	10,705,911	\$ 2,447,585
Category 3 - Commercial & Industrial			
Wattsmart Business	20,182,437	22,222,972	\$ 3,349,576
Total Category 3	20,182,437	22,222,972	\$ 3,349,576
Total Energy Efficiency (Categories 1, 2 and 3)	41,665,477	45,470,169	\$ 7,123,970
Portfolio EM&V, DSM Central, Measure Library and Potential Study - Cat 1			\$ 58,319
Portfolio EM&V, DSM Central, Measure Library and Potential Study - Cat 2			\$ 50,986
Portfolio EM&V, DSM Central, Measure Library and Potential Study - Cat 3			\$ 107,708
Outreach & Communication - Cat 1			\$ 190,973
Outreach & Communication - Cat 2			\$ 20,258
Outreach & Communication - Cat 3			\$ 6,214

⁷ The energy efficiency reported savings are gross, ex-ante. The values at generation include line losses between the customer site and the generation source.

Category and Program	kWh/Yr Savings (@ site)	kWh/Yr Savings (@ generator)	Program Expenditures
Total Wyoming Expenditures			\$ 7,558,427

2021 GROSS SAVINGS

Table 2
Wattsmart Homes Savings by Measure Category

Measure Category	Total kWh (at Site)	Total Incentive	Total Measure Quantity
Appliances	2,923	\$ 1,050	21
Building Shell	18,232	\$ 5,541	16,927 sq ft
Energy Kits	60,575	\$ 2,350	394
HVAC	1,740,277	\$ 211,814	1,420
Lighting	2,450,251	\$ 101,561	133,735
Water Heating	4,232	\$ 2,000	3
Transportation	72,427	\$ 4,699	47
Grand Total	4,348,917	\$ 329,014	

Table 3
Low Income Weatherization Homes Served and Measures Installed

Measure Type	Installed
Weather Strip	1
Insulation	3
LED Bulbs	9
Refrigerators	4
Total Number of Homes Served	9
Total kWh Savings @ Site	26,973

Table 4
Wattsmart Business Savings by Sector

Sector	Total kWh (at Site)	Total Incentive
Commercial	10,195,193	\$ 1,149,118
Industrial	19,979,140	\$ 1,462,368
Irrigation	107,244	\$ 17,475
Grand Total	30,281,577	\$ 2,628,961

Table 5
Wattsmart Business Savings by Measure Category

Measure Category	Total kWh (at Site)	Total Incentive	Total Projects
Additional Measures	215,913	\$ 23,287	2
Building Shell	222,029	\$ 6,871	3
Energy Management	2,661,643	\$ 53,233	6
HVAC	3,590,041	\$ 454,728	76
Irrigation	266,226	\$ 36,215	14
Lighting	4,888,872	\$ 548,446	836
Motors	4,000,943	\$ 578,600	59
Oil & Gas	13,710,651	\$ 318,490	43
Refrigeration	371,613	\$ 35,505	6
Vendor Promotion	-	\$ 300	3
Compressed Air	59,606	\$ 11,091	1
Food Service Equipment	10,977	\$ 739	2
Direct Install	282,419	\$ 77,337	20
Appliances	644	\$ 100	1
Energy Proj Mgr Co-Fund	-	\$ 484,020	4
Grand Total	30,281,577	\$ 2,628,961	1,076

COST EFFECTIVENESS

TOTAL COST EFFECTIVENESS RESULTS BY PORTFOLIO AND PROGRAM

Program cost effectiveness is performed using a Company specific modeling tool, created by a third-party consultant. The tool is designed to incorporate PacifiCorp data and values such as avoided costs, and generally follows the methodology specified in California's Standard Practice Manual. The analysis assesses the costs and benefits of DSM resource programs from different stakeholder perspectives, including participants and non-participants, based on four tests described in the Standard Practice Manual (TRC, UCT, PCT and RIM) as well as an additional fifth test, PTRC.

Each of the cost effectiveness tests for Rocky Mountain Power's programs is outlined below. The primary cost/benefit test observed in Wyoming is the UCT.

- PacifiCorp Total Resource Test (PTRC) is the total resource cost test with an additional 10% added to the net benefit side of the benefit/cost formula to account for non-quantified environmental and non-energy benefits of conservation resources over supply side alternatives.
- Total Resource Cost (TRC) Test considers the benefits and costs from the perspective of all utility customers, comparing the total costs and benefits from both the utility and utility customer perspectives.

- Utility Cost (UCT) Test also called the program administrator cost test, provides a benefit to cost perspective from the utility only. The test compares the total utility cost incurred to the benefit/value of the energy and capacity saved and contains no customer costs or benefits in calculation of the ratio.
- Participant Cost Test (PCT) compares the portion of the resource paid directly by participants to the savings realized by the participants.
- Ratepayer Impact Cost Test (RIM) examines the impact of energy efficiency expenditures on non-participating ratepayers overall. Unlike supply-side investments, energy efficiency programs reduce energy sales. Reduced sales typically lower revenue requirements while putting near-term upward pressure on the rates remaining fixed costs are spread over fewer kilowatt-hours.

Table 6
2021 Cost Effectiveness Results by Program⁸

Program	Benefit/Cost Test				
	PTRC	TRC	UCT	PCT	RIM
Energy Efficiency Portfolio	1.63	1.48	2.08	3.72	0.54
Non-Residential Energy Efficiency Portfolio	1.44	1.31	2.06	3.17	0.51
Residential Energy Efficiency Portfolio	3.89	3.54	2.83	36.35 ⁹	0.77
Low Income Weatherization	10.16	9.24	9.24	18.74 ¹⁰	0.90
Home Energy Reporting	15.14	13.77	13.77	n/a ¹¹	1.90
Wattsmart Homes	2.42	2.20	1.72	29.69 ¹²	0.52
Wattsmart Business	1.44	1.31	2.06	3.17	0.51

Portfolio-level cost effectiveness includes portfolio costs, such as the Potential Assessment and DSM system database. Sector-level cost effectiveness includes sector-specific evaluation, measurement, and verification expenditures.

⁸ Additional cost effectiveness detail is provided in Appendix A.

⁹ The PCT in the Residential Energy Efficiency portfolio is going to be inflated due to low participant costs for this program with high participant benefits due to the increase in the avoided costs of the load profiles. Specifically single-family cooling, which accounts for 77% of the load profile in Wyoming. Meaning that the bill savings (benefits to customers) are greater than the cost to the customer. The PCT is calculated benefits/cost = ratio.

¹⁰ The PCT in the Low-Income Weatherization portfolio is going to be inflated due to low participant costs for this program with high participant benefits due to the increase in the avoided costs of the load profiles. Specifically single-family cooling, which accounts for 100% of the load profile. Meaning that the bill savings (benefits to customer) are greater than cost to the customer. The PCT is calculated benefits/cost = ratio.

¹¹ Since there are no participant costs in this program n/a is listed for the Participant Cost Test.

¹² The PCT in the Wattsmart Home portfolio is going to be inflated due to the low participant costs for this program with high participant benefits due to the increase in the avoided costs of the load profiles. Specifically single-family cooling, which accounts for 40% of the load profile. Meaning that the bill savings (benefits to customer) are greater than the cost to customer. The PCT is calculated benefits/cost = ratio.

