



# Wyoming Annual Demand-Side Management Report

January 1, 2015 – December 31, 2015

Issued August 16, 2016



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### List of Abbreviations and Acronyms

CCS	Council of Community Services
CFL	Compact Fluorescent Lighting
DSM	Demand-Side Management
GWh	Gigawatt-hour
HVAC	Heating, ventilation and air conditioning
IRP	Integrated Resource Plan
kWh	Kilowatt hour
LED	Lighting-emitting Diode
PCT	Participant Cost Test
PTRC	Total Resource Cost Test with 10 percent adder
RIM	Ratepayer Impact Measure Test
Schedule 191	Schedule 191 Customer Efficiency Service Charges
TRC	Total Resource Cost Test
UCT	Utility Cost Test
WFS	Wyoming Department of Family Services
WWS	Wyoming Weatherization Services

## EXECUTIVE SUMMARY

Rocky Mountain Power (“Company”) received approval from the Wyoming Public Service Commission (“Commission”) on October 3, 2008, to offer its customers energy efficiency services and incentives through programs targeting residential, agricultural, commercial and industrial customers. In its Order in Docket No. 20000-264-EA-06 (Record No. 10960), the Commission approved a Stipulation between Rocky Mountain Power, Office of Consumer Advocates (“OCA”), Wyoming Industrial Energy Consumers (“WIEC”) and Southwest Energy Efficiency Project (“SWEEP”), and directed the Company to file reports addressing the performance of Wyoming demand-side management (“DSM”) programs through 2012. In keeping with the standard, the Company has completed an annual report for 2015.

This report provides details on program results, activities, expenditures, and Customer Efficiency Service Charge (“Schedule 191”) revenue from January 1, 2015 through December 31, 2015. The Company, on behalf of its customers, invested \$6.8 million in energy efficiency resource acquisition in 2015. The investment yielded approximately 33.8 gigawatt-hours (GWh) in first year energy savings<sup>1</sup> and approximately 4.28 megawatts (at generation) of energy efficiency savings related to capacity reductions.<sup>2</sup> Net benefits based on the projected value of the energy savings<sup>3</sup> over the life of the individual measures are estimated at \$5.1 million.

The energy efficiency portfolio was cost effective based on four of the five standard cost effectiveness tests for the reporting period. The ratepayer impact test was less than 1.0 indicating near-term upward pressure was placed on the price per kilowatt-hour (“kWh”) given a reduction in sales. Table 1 provides the cost effectiveness of the energy efficiency program portfolio from various perspectives.

**Table 1 - Cost Effectiveness for the Energy Efficiency Portfolio**

	<b>Benefit/Cost Ratio</b>	<b>Net Benefits</b>
Total Resource Cost (“PTRC”) Test plus 10 percent <sup>4</sup>	1.47	\$4,211,006
Total Resource Cost Test (“TRC”) <sup>5</sup>	1.34	\$3,021,379
Utility Cost Test (“UCT”) <sup>6</sup>	1.74	\$5,075,817
Participant Cost Test (“PCT”) <sup>7</sup>	3.46	\$18,243,077
Ratepayer Impact Cost Test (“RIM”) <sup>8</sup>	0.51	-\$11,267,001

<sup>1</sup> Reported savings at generation.

<sup>2</sup> See Planning Section for explanation on how the capacity contribution savings values are calculated.

<sup>3</sup> See Table 1 – Utility Cost Net Benefits.

<sup>4</sup> The PTRC is the total resource cost test with an additional 10 percent added to the benefit side of the benefit/cost formula to account for non-quantified environmental and non-energy benefits of conservation resources over supply-side alternatives.

<sup>5</sup> The TRC 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. It’s assumed to be the closest in valuation methodology to how supply-side resources are valued.

<sup>6</sup> The UCT provides a benefit/cost perspective from that of the utility only, comparing the total cost incurred by the utility to the benefit/value of the energy and capacity saved, it contains no customer costs or benefits in calculation.

<sup>7</sup> The PCT provides a comparison of the costs and benefits of the participant to taking the energy efficiency action.

<sup>8</sup> The RIM examines the impact of energy efficiency expenditures on non-participating ratepayers overall. Unlike supply-side investments, energy efficiency programs reduce energy sales. Reduced energy sales lower revenues putting upward pressure on rates as the remaining fixed costs are spread over fewer kilowatt-hours.

Portfolio-level cost effectiveness includes portfolio costs such as the Potential Assessment, the Company's DSM tracking systems and evaluations. Sector-level cost effectiveness, reported in the Residential and Non-Residential sections of this document, includes sector-specific expenditures including incentives, marketing, evaluations, program administrative and development expenditures. Appendix 1 provides 2015 cost effectiveness performance in greater detail.

## REGULATORY HISTORY

During the 2015 reporting period, the Company filed numerous compliance filings, updates and requests with the Commission in support of Company DSM programs. The following is a list of those activities:

- November 17, 2014, in Docket No. 20000-460-ET-14, the Company filed to adjust the Schedule 191 Category 2 Surcharge and issue a one-time refund to customers. The Commission approved the Company's request at the open meeting held January 8, 2015 with an effective date of February 1, 2015. The Commission's final order was issued January 26, 2015.
- November 24, 2014, in Docket No. 20000-461-EA-14, the Company filed to implement a Home Energy Report program. The Commission approved the Company's application at the open meeting held January 8, 2015 with an effective date on the same day. The Commission's final order was issued February 10, 2015.
- December 8, 2014, in Docket No. 20000-462-ET-14, the Company filed to make changes to its Home Energy Savings program. The modifications expanded the program to include new qualifying equipment, retire existing measures, and modify savings and incentives for various existing measures. The Commission approved the application at the open meeting held February 10, 2015, with an effective date of February 16, 2015. The Commission's final order was issued February 12, 2015.
- December 11, 2014, in Docket No. 20000-463-ET-14, the Company filed to add an enhanced small business incentive and new measure for submersible pumps to its *wattsmart* Business program. The Commission approved the request at the open meeting held February 24, 2015 with an effective date of March 1, 2015. The Commission's final order was issued March 2, 2015.
- January 15, 2015, 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 the DSM programs from October 1, 2014 – December 31, 2014.
- February 3, 2015, in Docket No. 20000-383-EA-10, the Company filed its quarterly program status reports with monthly participation levels, energy savings, DSM program cost data and Schedule 191 balances by category.
- April 21, 2015, 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 the DSM programs from January 1, 2015 – March 31, 2015.
- May 4, 2015, in Docket No. 20000-383-EA-10, the quarterly program status reports with monthly participation levels, energy savings, DSM program cost data and Schedule 191 balances by category was filed.

- June 16, 2015, in Docket No. 20000-264-EA-06, the Wyoming 2014 Annual Demand-Side Management Review Report and appendices was filed.
- August 20, 2015, in Docket No. 20000-480-EA-15, the Company filed to adjust the Home Energy Reports evaluation schedule to be consistent with other program evaluation schedules. The Commission approved the request in its order issued October 13, 2015 with an immediate effective date.
- August 25, 2015, 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 the DSM programs from April 1, 2015 – June 30, 2015.
- August 25, 2015, in Docket No. 20000-383-EA-10, the Company filed its quarterly program status reports with monthly participation levels, energy savings, DSM program cost data and Schedule 191 balances by category.
- October 23, 2015, in Docket No. 20000-483-ET-15, the Company filed for approval to add a midstream lighting offering to the *wattsmart* Business program. The Commission approved the Company's request in the open meeting held December 29, 2015 with an effective date of January 1, 2016. The Commission's final order was issued January 25, 2016.
- November 3, 2015, 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 the DSM programs from July 1, 2015 – September 30, 2015.
- November 3, 2015, in Docket No. 20000-383-EA-10, the Company filed its quarterly program status reports with monthly participation levels, energy savings, DSM program cost data and Schedule 191 balances by category.
- November 3, 2015, in Docket No. 20000-264-EA-06, the Company filed with the Commission for informational purposes a 2016 promotional plan to educate the public concerning energy efficiency and to promote its demand-side management programs.
- December 3, 2015, in Docket No. 20000-485-ET-15, the Company filed to suspend the *See ya later, refrigerator* Appliance Recycling Program, administered through Schedule 117. The Commission approved the Company's request at the open meeting held December 29, 2015 with an immediate effective date. The Commission's final order was issued January 21, 2016.



### *Advisory Group & Wyoming Staff Activities*

The Company consulted with the Wyoming DSM Advisory Group and Wyoming Staff throughout 2015, with formal presentations on the following matters:

#### June 4, 2015

- Discussed DSM Organizational Changes;
- Reviewed the 2014 Annual DSM Report;
- Reviewed Program Evaluations;
- Discussed Integrated Resource Plan Selections;
- Discussed Energy Savings Targets;
- Revised Tariff Structure;
- Reviewed possibility of Midstream Lighting Offering;
- Reviewed Benchmarking Tool for Businesses;
- Discussed Wyoming Strategic Plan.

## DSM EXPENDITURES

### *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) – 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) – Schedule 33, 46 and 48T

Table 2, Table 3 and Table 4 shows Schedule 191 balances by category as of December 31, 2015.

Table 2  
Schedule 191 Balance - Category 1 (Residential)

Month	Monthly Program Cost	Monthly Net Accrued Cost*	Rate Recovery	Carrying Charge	Cash Basis Accumulated Balance	Accrual Basis Accumulated Balance
December 2014						\$ (174,672)
January	\$ 105,901	\$ 97,591	\$ (194,170)	\$ (559)	\$ (443,866)	\$ (165,910)
February	\$ 161,461	\$ (40,299)	\$ (152,770)	\$ (615)	\$ (435,790)	\$ (198,133)
March	\$ 192,380	\$ (41,283)	\$ (148,832)	\$ (580)	\$ (392,822)	\$ (196,448)
April	\$ 221,016	\$ (106,842)	\$ (117,299)	\$ (477)	\$ (289,582)	\$ (200,049)
May	\$ 78,583	\$ 52,033	\$ (110,778)	\$ (428)	\$ (322,204)	\$ (180,639)
June	\$ 150,614	\$ 70,999	\$ (109,325)	\$ (422)	\$ (281,337)	\$ (68,773)
July	\$ 149,057	\$ (22,173)	\$ (124,826)	\$ (377)	\$ (257,484)	\$ (67,092)
August	\$ 101,893	\$ 43,812	\$ (122,051)	\$ (375)	\$ (278,016)	\$ (43,812)
September	\$ 92,907	\$ 60,412	\$ (115,372)	\$ (405)	\$ (300,886)	\$ (6,270)
October	\$ 164,512	\$ (56,553)	\$ (100,054)	\$ (376)	\$ (236,805)	\$ 1,258
November	\$ 64,410	\$ 10,873	\$ (115,859)	\$ (368)	\$ (288,622)	\$ (39,686)
December	\$ 183,632	\$ (34,101)	\$ (174,127)	\$ (397)	\$ (279,514)	\$ (64,679)
<b>2015 Totals</b>	<b>\$ 1,666,365</b>	<b>\$ 34,470</b>	<b>\$ (1,585,463)</b>	<b>\$ (5,379)</b>		

\*December 2015 Total Accrual \$ 214,835

**Table 3**  
**Schedule 191 Balance - Category 2 (Small Commercial and Industrial)**

Month	Monthly Program Cost	Monthly Net Accrued Cost*	Rate Recovery	Carrying Charge	Cash Basis Accumulated Balance	Accrual Basis Accumulated Balance
December 2014						\$ (1,354,030)
January	\$ 47,377	\$ 35,038	\$ 74,725	\$ (2,087)	\$ (1,431,749)	\$ (1,198,977)
February	\$ 95,829	\$ 58,715	\$ 717,759	\$ (1,435)	\$ (619,596)	\$ (328,109)
March	\$ 254,812	\$ (159,572)	\$ (132,400)	\$ (782)	\$ (497,967)	\$ (366,052)
April	\$ 264,604	\$ (47,353)	\$ (128,285)	\$ (602)	\$ (362,249)	\$ (277,688)
May	\$ 157,148	\$ 71,824	\$ (126,290)	\$ (486)	\$ (331,878)	\$ (175,492)
June	\$ 221,809	\$ (19,577)	\$ (125,365)	\$ (397)	\$ (235,831)	\$ (99,021)
July	\$ 181,765	\$ (22,426)	\$ (135,493)	\$ (298)	\$ (189,857)	\$ (75,474)
August	\$ 129,855	\$ 61,480	\$ (135,009)	\$ (269)	\$ (195,281)	\$ (19,417)
September	\$ 228,723	\$ (2,946)	\$ (135,024)	\$ (208)	\$ (101,790)	\$ 71,127
October	\$ 143,702	\$ (64,790)	\$ (126,336)	\$ (130)	\$ (84,553)	\$ 23,575
November	\$ 151,164	\$ 30,772	\$ (126,263)	\$ (101)	\$ (59,753)	\$ 79,147
December	\$ 276,315	\$ (10,527)	\$ (138,641)	\$ 13	\$ 77,934	\$ 206,306
<b>2015 Totals</b>	<b>\$ 2,153,103</b>	<b>\$ (69,362)</b>	<b>\$ (516,622)</b>	<b>\$ (6,782)</b>		

\*December 2015 Total Accrual \$ 128,373

**Table 4**  
**Schedule 191 Balance - Category 3 (Large Commercial and Industrial)**

Month	Monthly Program Cost	Monthly Net Accrued Cost*	Rate Recovery	Carrying Charge	Cash Basis Accumulated Balance	Accrual Basis Accumulated Balance
December 2014						\$ (393,007)
January	\$ 132,112	\$ 53,949	\$ (151,278)	\$ (782)	\$ (569,042)	\$ (359,006)
February	\$ 123,749	\$ (17,179)	\$ (148,686)	\$ (814)	\$ (594,794)	\$ (401,936)
March	\$ 174,021	\$ (143,336)	\$ (141,994)	\$ (810)	\$ (563,576)	\$ (514,054)
April	\$ 157,884	\$ (11,670)	\$ (133,876)	\$ (772)	\$ (540,341)	\$ (502,489)
May	\$ 107,293	\$ 34,837	\$ (151,210)	\$ (787)	\$ (585,044)	\$ (512,355)
June	\$ 242,783	\$ (1,889)	\$ (143,109)	\$ (749)	\$ (486,120)	\$ (415,320)
July	\$ 155,443	\$ (3,341)	\$ (136,752)	\$ (667)	\$ (468,096)	\$ (400,638)
August	\$ 103,228	\$ 46,023	\$ (140,298)	\$ (681)	\$ (505,848)	\$ (392,366)
September	\$ 102,550	\$ 196	\$ (147,336)	\$ (740)	\$ (551,373)	\$ (437,696)
October	\$ 144,364	\$ (1,510)	\$ (144,506)	\$ (772)	\$ (552,288)	\$ (440,120)
November	\$ 167,568	\$ 17,621	\$ (142,196)	\$ (755)	\$ (527,671)	\$ (397,882)
December	\$ 668,596	\$ 39,948	\$ (146,393)	\$ (373)	\$ (5,840)	\$ 163,896
<b>2015 Totals</b>	<b>\$ 2,279,591</b>	<b>\$ 13,649</b>	<b>\$ (1,727,635)</b>	<b>\$ (8,702)</b>		

\*December 2015 Total Accrual \$ 169,737

## Column Explanations:

Monthly Program Costs: Monthly expenditures for all energy efficiency program activities.

Monthly Net Accrued Costs: Monthly net change of program costs incurred during the period not yet posted.

Rate Recovery: Revenue collected through Schedule 191.

Carrying Charge: Monthly carrying charge is based on “Cash Basis Accumulated Balance” of the account. The rate is a reciprocal interest charge with the Schedule 300 Customer Deposit Interest Rate. For 2015, the rate was 1.68 percent.

Cash Basis Accumulated Balance: Current balance of the account; a running total of account activities. A negative accumulative balance means cumulative revenue exceeds cumulative expenditures; a positive accumulative balance means cumulative expenditures exceed cumulative revenue.

Accrual Basis Accumulative Balance: Current balance of account including accrued costs.

## PLANNING PROCESS

### *Integrated Resource Plan*

The Company develops a biennial integrated resource plan (“IRP”) as a means of balancing cost, risk, uncertainty, supply reliability/deliverability and long-run public policy goals.<sup>9</sup> The plan presents a framework of future actions to ensure the Company continues to provide reliable and reasonable-cost service with manageable risks to the Company’s customers. Energy efficiency and peak management opportunities are incorporated into the IRP based on their availability, characteristics and costs.

Energy efficiency and peak management resources are divided into four general classes:

- Class 1 DSM (Resources from fully dispatchable or scheduled firm capacity product offerings/programs) – Capacity savings occur as a result of active Company control or advanced scheduling. After customers agree to participate, the timing and persistence of the load reduction is involuntary on their part within the agreed limits and parameters.
- Class 2 DSM (Resources from non-dispatchable, firm energy and capacity product offerings/programs) – Sustainable energy and related capacity savings are achieved through facilitation of technological advancements in equipment, appliances, lighting and structures or repeatable and predictable voluntary actions by customers to manage the energy use at their facility or home, also commonly referred to as energy efficiency resources.
- Class 3 DSM (Resources from price responsive energy and capacity product offerings/programs) – Short-duration energy and capacity savings from actions taken by customers voluntarily based on pricing incentives or signals.
- Class 4 DSM (Resources from non-incented behavioral-based savings achieved through broad energy education and communication efforts) – Energy and/or capacity reduction typically achieved from voluntary actions taken by customers to reduce costs or benefit the environment through education and communication.

Class, 1, 2 and 3 DSM resources are included as resource options in the resource planning process. Class 4 DSM actions are not considered explicitly in the resource planning process, however, the impacts are captured naturally in long-term load growth patterns and forecasts.

As technical support for the IRP, a third-party demand-side resource potential assessment (Potential Assessment) is conducted to estimate the magnitude, timing and cost of energy efficiency and peak management resources.<sup>10</sup> The main focus of the Potential Assessment is on resources with sufficient reliability characteristics that are anticipated to be technically feasible and assumed achievable during the IRP’s 20-year planning horizon. The estimated achievable energy efficiency potential identified in the 2015 Potential Assessment for Wyoming is 1,790

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<sup>9</sup> Information on the Company’s integrated resource planning process can be found at the following address:

<http://www.pacifiCorp.com/es/irp.html>

<sup>10</sup> PacifiCorp Demand-Side Resource Potential Assessment For 2015-2034, <http://www.pacifiCorp.com/es/dsm.html>.

GWh by 2034, or 14 percent of projected baseline loads.<sup>11</sup> By definition this is the energy efficiency potential that may be achievable to acquire during the 20-year planning horizon; prior to screening for cost-effectiveness through the Company's integrated resource planning process.

The achievable technical potential of Class 2 (energy efficiency) resources for Wyoming by sector is shown in Table 5. The 2015 Potential Assessment indicates that approximately 16 percent of the achievable technical potential for the Company, excluding Oregon,<sup>12</sup> is available within its Wyoming service area.<sup>13</sup>

**Table 5**  
**Wyoming Energy Efficiency Achievable Technical Potential by Sector**

Sector	Cumulative GWh in 2034	Percent of Baseline Sales
Residential	247	21%
Commercial	613	30%
Industrial	925	10%
Irrigation	2	10%
Street Lighting	3	28%

Demand-side resources vary in their reliability, load reduction and persistence over time. Based on the significant number of measures and resource options reviewed and evaluated in the Potential Assessment, it is impractical to incorporate each as a stand-alone resource in the IRP. To address this issue, Class 2 DSM measures and Class 1 DSM programs are bundled by cost for modeling against competing supply-side resource options reducing the number of discrete resource options the IRP must consider to a more manageable number.

The evaluation of Class 2 DSM (energy efficiency) resources within the IRP is also informed by state-specific evaluation criteria in the development of supply-curves. While all states generally use commonly accepted cost-effectiveness tests to evaluate DSM resources, some states require variations in calculating or prioritizing the tests:

- Wyoming and California utilize the standard TRC test excluding quantifiable non-energy benefits and the 10% benefit adder Oregon and Washington consider.
- Utah utilizes the UCT as the primary determination of cost effectiveness.
- Idaho, Oregon, and Washington utilize the TRC and consider the inclusion of quantifiable non-energy benefits.
- Oregon and Washington, in addition to considering quantifiable non-energy benefits, apply an additional 10% benefit to account for non-quantifiable externalities, consistent with the Northwest Power Act.

<sup>11</sup> Ibid, Volume 2, page 4-2.

<sup>12</sup> Oregon energy efficiency potential assessments are performed by the Energy Trust of Oregon.

<sup>13</sup> Volume 1, Table 2-1, PacifiCorp Demand-Side Resource Potential Assessment for 2015-2034.

The Company evaluates program implementation cost-effectiveness (both prospectively and retrospectively) under a variety of tests to identify the relative impact and/or value (e.g. near-term rate impact, program value to participants, etc.) to customers and the Company.

### *Estimated Peak Contributions*

The reported capacity reduction of 4.28 MW (at generation) for energy efficiency programs during 2015 represents the estimated MW impact of the energy efficiency portfolio during PacifiCorp's system peak period. An energy-to-capacity conversion factor developed from Class 2 DSM selections in the 2015 IRP is used to translate 2015 energy savings to estimated demand reduction during the system peak. The utilization of this factor in the MW calculation assumes that the energy efficiency resources acquired through the Company's programs have the same average load profile as those energy efficiency resources selected in the 2015 IRP. Utilization of this factor in determining the MW contribution of energy efficiency programs for 2015 is detailed in Table 6 below.

Table 6  
Estimated Peak Contribution

Description	Value
First year energy efficiency program MWh savings acquired during 2015	33,788
Conversion factor: Coincident MW/MWh	0.00013
Estimated coincident peak MW contribution of 2015 Wyoming energy efficiency acquisitions	4.28

## ENERGY EFFICIENCY PROGRAMS

Energy efficiency programs are offered to all major customer sectors: residential, commercial, industrial and agricultural. The overall energy efficiency portfolio included five programs: *Home Energy Savings*, *Home Energy Reports*, *Residential Refrigerator Recycling*, *Low Income Weatherization*, and *Non-Residential Energy Efficiency (wattsmart Business)*. In addition to the energy efficiency programs, the Company invests in outreach and communications to make customers aware of the energy efficiency program services and incentives available, promotes the efficient use of electricity and improves program performance.

The overall portfolio<sup>14</sup> was cost effective from the TRC perspective as were the residential and non-residential sectors as shown in Table 7. However, a reduction in decrement values calculated for the 2015 IRP<sup>15</sup> has made cost effectiveness more challenging. The Company will continue to prudently review the management of its energy efficiency programs and adjust its programs accordingly. Program-level cost effectiveness is discussed in its respective program section.

Table 7  
Portfolio and Sector-level Cost Effectiveness

	Total Portfolio	Residential Programs	Non-Residential Programs
Total Resource Test plus 10 percent	1.47	1.12	1.62
Total Resource Cost Test	1.34	1.01	1.47
Utility Cost Test	1.74	1.13	2.01
Participant Cost Test	3.46	5.04	3.19
Rate Payer Impact	0.51	0.34	0.56

Overall, portfolio savings increased by approximately 92% when compared to 2014 activities, from 16,293,705 kWh to 31,351,300 kWh. Program savings and cost results for 2015 are provided in Table 8.

<sup>14</sup> Portfolio-level costs, such as project management tools (DSM Central, Technical Reference Library), Outreach and Communications, and EM&V, are applied at the portfolio-level for cost effectiveness purposes.

<sup>15</sup> Decrement values represent the value of saved energy for assessing benefits from the PTRC, TRC, UCT, and RIM perspectives at the measure category, program, and/or portfolio level. The values, and methodology used to develop them, are presented in PacifiCorp 2015 Class 2 DSM Decrement Study:

[http://www.pacificorp.com/content/dam/pacificorp/doc/Energy\\_Sources/Demand\\_Side\\_Management/2015/2015\\_Class\\_2\\_DSM\\_Decrement\\_Study.pdf](http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Demand_Side_Management/2015/2015_Class_2_DSM_Decrement_Study.pdf)



Table 8  
Wyoming Results January 1, 2015 – December 31, 2015<sup>16</sup>

Category and Program	kWh/Yr Savings (@ site)	kWh/Yr Savings (@ generator)	Program Expenditures
<b>Category 1 - Residential</b>			
Low Income Weatherization	48,111	52,687	\$ 25,045.11
Refrigerator Recycling	1,006,809	1,102,567	\$ 118,765.64
Home Energy Reporting	3,971,695	4,349,443	\$ 107,726.38
Home Energy Savings	5,183,244	5,676,222	\$ 1,123,582.27
<b>Total Category 1</b>	<b>10,209,859</b>	<b>11,180,919</b>	<b>\$ 1,375,119.40</b>
<b>Category 2 - Agricultural, Commercial &amp; Industrial</b>			
wattsmart Business Agricultural	151,192	165,217	\$ 32,564.13
wattsmart Business Commercial	5,257,961	5,725,972	\$ 1,788,473.03
wattsmart Business Industrial	1,053,356	1,112,460	\$ 321,606.38
<b>Total Category 2</b>	<b>6,462,509</b>	<b>7,003,648</b>	<b>\$ 2,142,643.54</b>
<b>Category 3 - Commercial &amp; Industrial</b>			
wattsmart Business Commercial	3,075,189	3,348,912	\$ 443,198.01
wattsmart Business Industrial	11,603,743	12,254,829	\$ 2,546,996.16
<b>Total Category 3</b>	<b>14,678,932</b>	<b>15,603,741</b>	<b>\$ 2,990,194.17</b>
<b>Total Energy Efficiency (Categories 1, 2 and 3)</b>	<b>31,351,300</b>	<b>33,788,308</b>	<b>\$ 6,507,957.11</b>
Portfolio EM&V, DSM Central and Technical Reference Library - Cat 1			\$ 113,986.09
Portfolio EM&V, DSM Central and Technical Reference Library - Cat 2			\$ 29,703.83
Portfolio EM&V, DSM Central and Technical Reference Library - Cat 3			\$ 48,187.34
Outreach & Communication			\$ 120,575.93
<b>Total Wyoming 2015 Expenditures</b>			<b>\$ 6,820,410.30</b>

The Company, working with its third-party program delivery administrators,<sup>17</sup> collaborates with the following number of retailers, contractors and vendors in the delivery of its energy efficiency programs in Wyoming. Table 9 lists the energy efficiency infrastructure. See Appendix 2 for a complete of Home Energy Savings participating retailers and Appendix 3 for the non-residential energy efficiency alliance.

<sup>16</sup> The values at generation include line losses between the customer site and the generation source. The Company's line losses by sector for 2015 are 9.5 percent for residential, 8.9 percent for commercial, 5.6 percent for industrial and 9.28 percent for irrigation.

<sup>17</sup> See program specific information for backgrounds on third-party administrators.

Table 9  
Energy Efficiency Infrastructure

Sector	Type	No.
Residential	Lighting Retailers	45
	Appliances Retailers	55
	HVAC <sup>18</sup> Trade Allies	9
	Plumbing Trade Allies	3
	Weatherization Trade Allies	11
	Electronic Retailers	56
	Low Income Agencies	2
Commercial and Industrial	Lighting Trade Allies	129
	HVAC Trade Allies	42
	Motors/VFD Trade Allies	56
	Engineering Firms	22

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<sup>18</sup> Heating, ventilation and air conditioning

## RESIDENTIAL PROGRAMS

The residential energy efficiency portfolio was comprised of four programs, *Home Energy Savings*, *Home Energy Reports*, *Refrigerator Recycling* and *Low Income Weatherization*. As shown in Table 10, the residential portfolio was cost effective based on four of the five standard cost effectiveness tests for the 2015 reporting period. The ratepayer impact test was less than 1.0 indicating that there is near term upward pressure placed on the price per kilowatt-hour given a reduction in sales.

Table 10  
Cost Effectiveness for Residential Portfolio

	<b>Benefit/Cost Ratio</b>	<b>Net Benefits</b>
Total Resource Test plus 10 percent	1.12	\$178,161
Total Resource Cost Test	1.01	\$22,364
Utility Cost Test	1.13	\$182,856
Participant Cost Test	5.04	-\$2,960,908
Rate Payer Impact	0.34	\$4,295,600

Residential savings increased by 47% from 2014. The increase was driven by the addition of the Home Energy Reports program in 2015. Individual program performance, program management and program infrastructure is provided on the following pages.

## HOME ENERGY SAVINGS

The *Home Energy Savings* program is designed to provide access to and incentives for more efficient products and services installed or received by customers in new or existing homes, multi-family housing units or manufactured homes for residential customers under Electric Service Schedules 2 or 18. Landlords who own property where the tenant is billed under Electric Service Schedules 2 or 18 also qualify for the program.

*Home Energy Savings* failed the TRC cost test as shown in Table 11 below. The Company is currently reevaluating measure offerings, reducing incentives and moving to an upstream model to reduce administrative costs. See Appendix 1 for details on cost effectiveness.

Table 11  
Cost Effectiveness for Home Energy Savings

	Benefit/Cost Ratio	Net Benefits
Total Resource Cost Test plus 10 percent	1.06	\$79,340
Total Resource Cost Test	0.97	-\$44,607
Utility Cost Test	1.10	\$115,885
Participant Cost Test	0.35	\$3,093,423
Rate Payer Impact	3.91	-\$2,294,389

Program participation by measure category is provided in Table 12.

Table 12  
Eligible Program Measures (Units)<sup>19</sup>

Measure Category	Total kWh/Yr Savings	Total Incentive	Total Quantity
Appliances	38,947	\$ 15,860	398
Building Shell	17,480	\$ 5,528	18,412 (sq ft)
Electronics	73,762	\$ 20,605	413
Energy Kits	689,636	\$ 24,982	1,868
HVAC	64,843	\$ 22,115	92
Lighting	4,296,482	\$ 442,665	233,697
Water Heating	2,094	\$ 975	11
<b>Grand Total</b>	<b>5,183,244</b>	<b>\$ 532,730</b>	<b>236,479</b>

<sup>19</sup> Units are dependent on the type of measure (i.e. insulation is in square feet, appliances by unit count, CFLs are total bulbs count, etc.).

### Program Management

The program manager who is responsible for the program in Wyoming is also responsible for the *Home Energy Savings* program in Idaho and Utah and the *New Homes* program in Utah. For each program and in each state the program manager is responsible for the cost effectiveness of the program, identifying and contracting with the program administrator through a competitive bid process, establishing and monitoring program performance and compliance, and recommending changes in the terms and conditions set out in the tariff.

### Program Administration

The *Home Energy Savings* program is administered by CLEAResult, who is responsible for:

- Retailer and trade ally engagement – CLEAResult identifies, recruits, supports and assists retailers to increase the sale of energy efficient lighting, appliances and electronics. CLEAResult enters into promotion agreements with each lighting manufacturer and retailer for the promotion of discounted CFL and LED bulbs. The agreements include specific retail locations, lighting products receiving incentives and not-to-exceed annual budgets. Weatherization and HVAC trade allies engaged with the program are provided with program materials, training, and regular updates.
- Managing savings acquisition to targets within budget.
- Continual improvement of program operations and customer satisfaction.
- Inspections – CLEAResult recruits and hires inspectors to verify on an on-going basis the installation of measures. A summary of the inspection process is in Appendix 4.
- Incentive processing and call-center operations – CLEAResult receives all requests for incentives, determines whether the applications are completed, works directly with customers when information is incorrect and/or missing from the application and processes the application for payment.
- Program specific customer communication and outreach – A summary of the communication and outreach conducted by CLEAResult on behalf of the Company is outlined in the Communication, Outreach and Education section.

The *Home Energy Savings* program administration contract for all states expired in early 2016. In 2015, the Company initiated a request for proposal and a new contract was established early 2016.

### Infrastructure

In 2015, there were 181 participating (upstream and downstream) retailer and trade ally participants in the program by delivery channel. The list of participating retailers and trade allies by delivery channel and measure is provided in Appendix 2. Some retailers may have participated in more than one delivery type, so the count of unique participating firms is less than the total count by delivery type.

### Program Changes

In February 2015, the program made numerous programmatic changes to appliance, electronics, lighting, HVAC, and building shell measures. These changes were made in response to changing market conditions. Notably, lighting changed from a downstream to upstream model. For an exhaustive list of changes, see Docket # 20000-462-ET-14, Exhibit B.

### Evaluations

A process and impact evaluation was conducted by a third party evaluator in 2015 for program years 2013-2014. A final evaluation has not been published as of the date of this report.

## HOME ENERGY REPORTS

*Home Energy Reports* 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.

In 2015, the program achieved total savings of 3,971,695 kWh (at site). Program cost effectiveness is provided in Table 13.

Table 13  
Cost Effectiveness for Home Energy Reports

	Benefit/Cost Ratio	Net Benefits
PacifiCorp Total Resource Test plus 10%	2.06	\$114,683
Total Resource Cost Test	1.88	\$94,464
Utility Cost Test	1.88	\$94,464
Participant Cost Test <sup>20</sup>	N/A	\$448,020
Rate Payer Impact Cost Test	0.36	-\$353,556

Reports were initially provided to approximately 17,800 customers in January 2015; however this number decreases over time due to customer attrition related to general customer churn (customer move-outs) and customers requesting to be removed from the program. Since inception of the program, only 0.9% of customers have requested to be removed from the program. As of December 2015, 15,400 customers were active recipients of *Home Energy Reports*. In 2015, 152 customers opted out of the program.

All new participants receive mailed monthly reports for the initial three months in order to build program awareness. Following this initial three month period, report frequency is reduced to a bi-monthly schedule for the remainder of the treatment period.

In 2015, reports were sent on a bi-monthly schedule until August 23<sup>rd</sup>. An analysis was performed to determine the impact on savings persistence by reducing the frequency of the reports. It was determined there was no impact to savings. As a result, the Company resumed the reports in January 2016 on a quarterly cadence.

All participating customers may request an electronic version delivered via email and have access to a web portal containing the same information about their usage provided in the report. In addition, all Wyoming customers (including non-participants) have access to the web portal which contains other benefits such as a home energy audit tool, the ability for customers to update their

<sup>20</sup> Participants in *Home Energy Reports* do not incur costs.

home profile (for more accurate comparisons), and suggestions on more ways to save energy around their home.

### Program Management

The program manager who is responsible for the *Home Energy Reports* program in Wyoming is also responsible for the program in Idaho and Utah as well as *Irrigation Load Control* and *Cool Keeper* programs in Utah. For each program and in each state the program manager is responsible for the cost effectiveness of the program, identifying and contracting with the program administrator through a competitive bid process, establishing and monitoring program performance and compliance, and recommending changes in the terms and conditions set in each state's compliance requirements.

### Program Administration

The *Home Energy Reports* program is administered by Opower. Opower's software creates individualized energy reports for utility customers that analyze their energy usage and offers recommendations on how to save energy and money by making small changes to their energy consumption. The Company contracts with Opower to provide energy savings, software services, and printing and delivery of energy reports to customers.

Opower is responsible for the following:

- Selecting Qualifying Customers – Opower conducts an analysis to identify qualifying customers that are then randomly selected into the program's treatment (those who will receive reports) and control groups (for measurement and verification).
- Customer Comparison Analysis – Opower conducts statistical analysis to perform pattern recognition in order to derive actionable insights to selected customers. Opower uses information about customers' homes (e.g., size, heat type, home type) to find similar homes for comparison.
- Energy Report Delivery – By mail or email.
- Web Portal Design and Support – Opower operates and maintains a customer Web portal that participants may visit for additional information about their energy usage and saving opportunities.

### Evaluation

No evaluation activities occurred in 2015.



## REFRIGERATOR RECYCLING

The Refrigerator Recycling program, also known as *See ya later, refrigerator*®, was designed to decrease electricity use through voluntary removal and recycling of inefficient refrigerators and freezers that are a minimum of 10 cubic feet and a maximum of 32 cubic feet in size. The program was available to residential, businesses and appliance retailers. Participants received a \$40 incentive for each qualifying refrigerator or freezer recycled through the program and an energy-saving kit, which included two CFLs, a refrigerator thermometer card, energy-savings educational materials, and information on other efficiency programs relevant to residential, commercial and industrial customers.

Refrigerators and freezers were also collected from retailers for qualifying units to remove them from the secondary market, known as Secondary Market Intervention (“SMI”). The secondary market refers to used units collected by retailers which are then resold. Some large retail chains sell refurbished units to second hand retailers who put them back out in the market. The purpose of SMI was to remove the used, inefficient units from the secondary market. Participating retailers received an incentive of up to \$20 for each qualifying refrigerator or freezer picked up.

The program was not cost effective in 2015 as shown in Table 14. The Company has suspended the program as discussed further in this section.

Table 14  
Cost Effectiveness for Refrigerator Recycling

	Benefit/Cost Ratio	Net Benefits
Total Resource Cost Test plus 10 percent	0.72	-\$33,046
Total Resource Cost Test	0.66	-\$40,838
Utility Cost Test	0.66	-\$40,838
Participant Cost Test <sup>21</sup>	N/A	\$661,755
Rate Payer Impact	0.24	-\$250,257

Program participation by measure is provided in Table 15.

Table 15  
Eligible Program Measures (Units)

Measures	kWh Savings	Total Incentive	# of Units
Refrigerator Recycling	789,870	\$27,280	699
Freezer Recycling	187,856	\$7,880	199
Energy Savings Kit	29,084	\$4,902	807
<b>Total</b>	<b>1,006,810</b>	<b>\$40,062</b>	<b>1,705</b>

<sup>21</sup> Participants in See ya later, refrigerator program incurred no costs.

### Program Management

The program manager responsible for the program in Wyoming was also responsible for the *Refrigerator Recycling* program in Idaho and Utah. For each program and in each state the program manager was responsible for the cost effectiveness of the program, identifying and contracting with the program administrator through a competitive bid process, establishing and monitoring program performance and compliance, and recommending changes in the terms and conditions set out in the tariff.

In Q4 2014, the program manager identified media placement expenditures were not allocated correctly to JACO. Accordingly, JACO issued a credit to the program in 2015 which was allocated to all states based upon the percentage of media expenditures incurred.

### Program Administration

The *Refrigerator Recycling* program was administered by JACO Environmental (“JACO”). JACO was one of the largest recyclers of house-hold appliances in the United States until going out of business in the fourth quarter of 2015. The Company contracted with JACO to provide customer scheduling, pick-up, incentive processing, and marketing services for the *See ya later, refrigerator* program.

JACO also ensured that over 95 percent of the components and materials of the discarded appliance were either recycled for beneficial uses or eliminated in an environmentally responsible way. The remaining 5 percent could then be productively used as “fluff” to facilitate the decomposition of biodegradable landfill material.

JACO was responsible for the following:

- Appliance handling – JACO handled all customer and field service operations for the program, including pick-up of refrigerators and freezers from customers, transporting the units to the de-manufacturing facility and recycling of the appliances.
- Incentive processing and call-center operations – All customer service calls, pick-up scheduling and incentive processing were handled by JACO.
- Program specific customer communication and outreach – Working in close coordination with the Company, JACO handled all the marketing for the program. The program was marketed through bill inserts, customer newsletters and TV, newspaper and online advertising.

As part of the program control process, the Company contracted with third-party inspectors to conduct ongoing oversight of the program’s appliance recycling process, from verification that units being recycled met the program eligibility criteria to verifying they were being recycled and that the program records were accurate. A summary of the inspection process is included in Appendix 4.

### Infrastructure

A refrigerator recycling pick-up crew based in Casper, Wyoming collected participating customer appliances across the state and these units were then transported to a JACO facility in Salt Lake City, Utah for disassembly and recycling.

### Program Changes

On November 19, 2015, the Company was notified by JACO that they entered into a voluntary receivership, but customer pickups would continue. On November 21, the Company was notified pickups were canceled due to complications with transferring the receivership. On November 23, the Company was verbally notified that operations had ceased, and received formal correspondence confirming this November 24. The Company immediately posted this information on the program web site and used another vendor to contact the affected customers to inform them their pickup was canceled. Initial data indicated this impacted 25 Wyoming customers. The Company also learned that JACO's bank accounts had been closed impacting the cashing of checks and customers who were recent participants would experience delays in receiving their checks.

On November 23, 2015, the Company notified Wyoming Staff of the recent developments with JACO, the unavailability of the program offer, and the Company's plan to make a filing requesting approval to suspend the appliance recycling offer and allow time to evaluate the options for this program.

Due to JACO closing its bank account, the Company developed a process to pay these incentives and any bank fees incurred by customers. The process was communicated to affected customers on December 9, 2015.

During December 2015, the Company began an expedited sole source procurement process to contract for remedial or "clean-up" appliance recycling services. This provider would contact customers who had pick-ups scheduled with JACO that were canceled in November and December and, if the customer was still interested, offer the same removal service and incentive. A contract with Appliance Recycling Centers of America was executed December 30, 2015, and customer outreach began in January 2016. On December 3, 2015, the Company filed to suspend the program. The Company will continue to assess the cost-effectiveness of offering the program in 2016 and beyond.

### Evaluations

A process and impact evaluation was conducted by a third party evaluator in 2015. The evaluation was published in 2016 and is available on the Company's website<sup>22</sup>.

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<sup>22</sup> <http://www.pacificorp.com/es/dsm/wyoming.html>

## LOW INCOME WEATHERIZATION

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.

In 2015, the program achieved savings of 48,111 kWh and served 17 homes. The measures installed through the *Low Income Weatherization* program are limited to those that reduce electricity use in participant's homes. Program cost effectiveness is provided in Table 16.

Table 16  
Cost Effectiveness for Low Income Weatherization

	Benefit/Cost Ratio	Net Benefits
Total Resource Cost Test plus 10 percent	1.69	\$17,184
Total Resource Cost Test	1.53	\$13,345
Utility Cost Test	1.53	\$13,345
Participant Cost Test <sup>23</sup>	N/A	\$92,402
Rate Payer Impact Cost Test	0.38	-\$62,706

Total homes treated under the program in 2015, as well as the type and frequency of specific energy efficiency measures installed in each home, is provided in Table 17.

Table 17  
Eligible Program Measures (Units)

<b>Participation – Total # of Completed/Treated Homes</b>	<b>17</b>
<b>Number of Homes Receiving Specific Measures</b>	<b>#</b>
Ceiling Insulation	9
CFLs	17
Duct Insulation	1
Floor Insulation	11
Ground Cover	1
Low Flow Showerheads	6
Replacement Refrigerators	9
Replacement Windows	6
Thermal Doors	6
Wall Insulation	1
Water Pipe Insulation and Sealing	8
Weather-stripping	15

<sup>23</sup> Participants in program incur no costs.

### Program Management

The program manager overseeing program activity in Wyoming was responsible for the *Low Income Weatherization* in California, Idaho, Utah and Washington; energy assistance programs in Wyoming, California, Idaho, Oregon, Utah and Washington; and income eligible bill discount programs in California, Utah and Washington. For each program and in each state the program manager is responsible for the cost effectiveness of the program, partnerships and agreements in place with local agencies that serve income eligible households, establishing and monitoring program performance and compliance, and recommending changes in the terms and conditions set out in the tariff.

### Program Administration

The Company currently has contracts in place with two agencies providing low income weatherization services throughout the state of Wyoming. These include Council of Community Services (“CCS”) and Wyoming Weatherization Services (“WWS”). They 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.

By contract with the Company, CCS and WWS are responsible for the following:

- Income Verification – Agencies determine if participants are income eligible based on WFS guidelines. Household’s interested in obtaining weatherization services apply through the WFS’s Low Income Energy Assistance Program Application. The current income guidelines can be viewed at <http://dfsweb.wyo.gov/economic-assistance/wap>
- Energy Audit – Agencies complete a United States Department of Energy approved audit to determine the cost effective measures to install in the participant’s homes (audit results must indicate a savings to investment ratio of 1.0 or greater).
- Installation of Measures – Agencies install measures listed in Schedule 118.
- Post Inspections – Agencies inspect 100 percent of completed homes and WFS staff randomly inspects 5 - 10 percent for verification of services. See Appendix 4 for verification summary.
- Billing Notification - Agencies are required to submit a billing to Company within 60 days after job completion. A homeowner agreement and invoice form indicating the measures installed and associated cost is submitted on each completed home.

### Evaluation

A process and impact evaluation was completed by a third party evaluator for program years 2011-2013. The evaluation is available on the Company's website. Major findings include:

- Rocky Mountain Power's program exemplifies a utility best practice in that it is coordinated with U.S. Department of Energy, U.S. Department of Health & Human Services and Wyoming Department of Family Services, effectively leveraging each utility dollar spent.
- The program is operating as planned within the design parameter outlined in Schedule No. 118.

## Non-Residential Energy Efficiency Program

The commercial, industrial and agricultural energy efficiency program portfolio was consolidated into a single *Non-Residential Energy Efficiency* program, Schedule 140, effective December 1, 2014. The programs that were consolidated include *FinAnswer Express*, *Energy FinAnswer* and *Self Direction Credit*. These changes were made in an effort to streamline program administration, as well as provide a single customer facing program brand within the marketplace. Further, the consolidation provides customers with a “one-stop-shop” program, alleviating confusion or perceptions of complexity. The consolidated *Non-Residential Energy Efficiency* program is promoted to the Company’s customers as *wattsmart Business*.

The Non-Residential portfolio was cost effective based on four of the five standard cost effectiveness tests for 2015 reporting period, as shown in Table 18 below. Cost effectiveness by Category is provided further in this section.

Table 18  
Cost Effectiveness for Non-Residential Energy Efficiency

	Benefit/Cost Ratio	Net Benefits
Total Resource Cost Test plus 10 percent	1.62	\$4,345,349
Total Resource Cost Test	1.47	\$3,311,518
Utility Cost Test	2.01	\$5,205,465
Participant Cost Test	3.19	\$13,947,477
Rate Payer Impact Cost Test	0.56	-\$7,993,589

Total *wattsmart Business* savings increased 126% when compared to 2014 activities, from 9,351,772 kWh to 21,141,441 kWh. When analyzed from the Category perspective, Category 3 drove the savings increase with a strong participation expansion led by the Oil & Gas segment. Table 19 and Table 20 shows results by Category and measure group level.

Table 19  
Participation by Sector

Sector	kWh/Yr Savings @ Site	Total Incentive	Bill Credits	Total Projects
<b>Category 2</b>				
Agricultural	151,192	19,100	-	10
Commercial	5,257,961	801,697	-	310
Industrial	1,053,356	148,238	-	33
<b>Subtotal Cat 2</b>	<b>6,462,509</b>	<b>969,036</b>	<b>-</b>	<b>353</b>
<b>Category 3</b>				
Commercial	3,075,189	288,376	-	11
Industrial	11,603,743	671,899	1,008,294	40
<b>Subtotal Cat 3</b>	<b>14,678,932</b>	<b>960,275</b>	<b>1,008,294</b>	<b>51</b>
<b>Total</b>	<b>21,141,441</b>	<b>1,929,310</b>	<b>1,008,294</b>	<b>404</b>

Table 20  
Installed Program Measures Participation and Savings<sup>24</sup>

Measure Group	Total kWh/Yr Savings @ Site	Total Incentive	Bill Credit	Projects
<b>Category 2</b>				
Building Shell	24,355	15,524		10
Controls	92,042	5,067		1
Food Service Equipment	69,480	6,770		12
HVAC	341,686	31,615		13
Irrigation	141,127	17,180		9
Lighting	4,542,458	723,782		272
Motors	820,726	106,568		48
Oil & Gas Pumps	237,557	35,634		1
Refrigeration	193,078	26,897		5
<b>Sub-total Category 2</b>	<b>6,462,509</b>	<b>969,036</b>		<b>371</b>
<b>Category 3</b>				
Building Shell	60,800	28,605		3
Compressed Air	310,509	47,926		1
Controls	165,724	19,306		1
HVAC	2,340,517	196,526		14
Lighting	945,237	76,987	80,162	14
Motors	10,541,226	568,274	928,133	29
Oil & Gas Pumps	314,919	22,651		3
<b>Subtotal Category 3</b>	<b>14,678,932</b>	<b>960,275</b>	<b>1,008,294</b>	<b>65</b>
<b>Grand Total</b>	<b>21,141,441</b>	<b>1,929,310</b>	<b>1,008,294</b>	<b>436</b>

<sup>24</sup> The total count of projects is less than the sum of the measure category count because a project can have measures in more than one category.



In addition to running cost effectiveness at the *wattsmart* Business portfolio level, a separate cost effectiveness analysis was run individually for Category 2 and Category 3. As shown in Table 21, Category 2 was not cost effective from the TRC perspective, whereas Category 3 in Table 22 was cost effective. The change in cost effectiveness from 2014 is largely due to the reduction in decrement values calculated for the 2015 IRP<sup>25</sup> and compounded higher costs compared to benefits. While the *wattsmart* Business portfolio is cost effective, the Company strives for each Category to be cost effective on its own. Consequently, the Company has filed to redesign aspects of the program in Docket No. 20000-500-ET-16.

Table 21  
Cost Effectiveness for Non-Residential Category 2

	Benefit/Cost Ratio	Net Benefits
Total Resource Test plus 10 percent	0.95	-\$160,960
Total Resource Cost Test	0.87	-\$470,781
Utility Cost Test	1.45	\$955,566
Participant Cost Test	2.16	\$3,648,178
Rate Payer Impact	0.47	-\$3,475,964

Table 22  
Cost Effectiveness for Non-Residential Category 3

	Benefit/Cost Ratio	Net Benefits
Total Resource Test plus 10 percent	2.30	\$4,506,308
Total Resource Cost Test	2.09	\$3,782,299
Utility Cost Test	2.42	\$4,249,899
Participant Cost Test	4.21	\$10,299,299
Rate Payer Impact	0.62	-\$4,517,625

The *wattsmart* Business program is intended to maximize the efficient utilization of electricity for new and existing non-residential customers through the installation of energy efficiency measures and energy management protocols. Qualifying measures are any measures which, when implemented in an eligible facility, result in verifiable electric energy efficiency improvements.

<sup>25</sup> Decrement values represent the value of saved energy for assessing benefits from the PTRC, TRC, UCT, and RIM perspectives at the measure category, program, and/or portfolio level. The values, and methodology used to develop them, are presented in PacifiCorp 2015 Class 2 DSM Decrement Study:

[http://www.pacificorp.com/content/dam/pacificorp/doc/Energy\\_Sources/Demand\\_Side\\_Management/2015/2015\\_Class\\_2\\_DSM\\_Decrement\\_Study.pdf](http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Demand_Side_Management/2015/2015_Class_2_DSM_Decrement_Study.pdf)

Services offered through the program include:

- **Typical Upgrades:** Provides streamlined incentives for lighting, HVAC, compressed air and other equipment upgrades that increase electrical energy efficiency and exceed code requirements.
- **Custom Analysis:** Offers investment-grade energy analysis studies and recommendations for more complex projects.
- **Energy Management:** Provides expert facility and process analysis to help lower energy costs by optimizing customer's energy use.
- **Energy Project Manager Co-funding:** Available to customers who commit to an annual goal of completing energy projects resulting in a minimum of 1,000,000 kWh per year in energy savings.
- **Small Business Lighting:** Provides enhanced incentives for lighting retrofits installed by approved trade allies at eligible small business customer facilities.

### Program Management

The program manager overseeing the *wattsmart* Business program activity in Wyoming is also responsible for the program in Idaho and Utah. For each state the program manager is responsible for the management of the program administrators, cost effectiveness, identifying and contracting with the program administrators through a competitive bid process, program marketing, achieving and monitoring program performance and compliance, and recommending changes in the terms and conditions of the program.

### Program Administration

The program includes several delivery channels, including Trade Ally, Small Business Enhanced Incentive Offer and Project Manager delivery.

#### *Trade Ally*

In this channel, the program is primarily marketed through local trade allies who receive support from one of two program administrators. The Company contracted with Nexant Inc. ("Nexant") and Cascade Energy ("Cascade") for trade ally coordination, training and application processing services for commercial measures and industrial/agricultural measures, respectively.

Nexant and Cascade are responsible for the following:

- Trade ally engagement – identify, recruit, train, support and assist trade allies to increase sales and installation of energy efficient equipment at qualifying business customer facilities.
- Incentive processing and administrative support – handle incoming inquiries as assigned, process incentive applications, develop and maintain simplified analysis tools and provide program design services, evaluation and regulatory support upon request.
- Direct customer outreach and project facilitation for smaller customer projects.

- Inspections – verify on an on-going basis the installation of measures<sup>26</sup>. A summary of the inspection process is in Appendix 4.

#### *Small Business Enhanced Incentive Offer*

In this channel, the program is primarily marketed through local contractors approved specifically for this offer who receive support from the program administrator, Nexant. Nexant is responsible for the following:

- Management of approved contractors – identify, recruit, contract with, train, support, and assist contractors to increase sales and installation of energy efficient lighting equipment at qualifying small business customer facilities.
- Incentive processing and administrative support – handle incoming inquiries as assigned, process incentive applications, develop and maintain simplified analysis tool and provide program design services, evaluation and regulatory support upon request.
- Inspections – verify on an on-going basis the installation of measures. A summary of the inspection process is in Appendix 4 to this report.

#### *Project Manager*

In this channel, the Company's project managers manage a subset of more complex projects. The project managers work directly with the customer or through the Company's regional business managers<sup>27</sup>. The project manager provides customers with program services and incentives using a pre-contracted group of energy engineering consultants. A current list of these consultants is included in the Infrastructure section below. Project Managers are responsible for the following:

- Single point of contact for large customers to assist with their energy efficiency projects.
- Large customer outreach and education of energy efficiency opportunities.
- Providing custom energy efficiency analysis, quality assurance and verification of savings through a pre-contracted group of engineering firms.
- Managing engineering firms to ensure program compliance, quality of work, and customer satisfaction.
- Managing *wattsmart* business projects through the whole project lifecycle.

The *wattsmart* Business program administration contracts expire in 2016 for all states. As a result, the Company initiated a request for proposal in 2015 and new contracts will be in place by mid-2016.

#### Infrastructure

To help increase and improve the supplier and installation contractor infrastructure for energy-efficient equipment and services, the Company established and developed trade ally networks for

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<sup>26</sup> The Company contracts with firms from the energy engineering consultant list to perform required pre- and post-installation inspections for lighting projects.

<sup>27</sup> Regional business managers are responsible for directly working with Wyoming commercial, industrial and agricultural customers.

lighting, HVAC and motors/VFDs. This work includes identifying and recruiting trade allies, providing program and technical training and providing sales support on an ongoing basis. The current list of the trade allies who have applied and been approved as participating vendors are posted on the Company website and is included as Appendix 3 to this report. In most cases, customers are not required to select a vendor from these lists to receive an incentive.<sup>28</sup>

The total number of participating trade allies is currently 153. The current counts of participating trade allies by technology are in Table 23 below. The current lists of the trade allies that have applied and been approved as participating vendors are posted on the Company website and are included in Appendix 3 to this report. Customers are not required to select a vendor from these lists to receive an incentive.

Table 23  
Participating Trade Allies<sup>29</sup>

Lighting	HVAC	Motors and VFD
129	42	56

For the project manager delivery channel supporting larger customers, a pre-approved, pre-contracted group of engineering firms can be used to perform facility specific energy efficiency analysis, quality assurance and verification. Table 24 lists the engineering firms currently under contract with the Company and providing services in five states.

Table 24  
Engineering Firms

Engineering Firm	Main Office Location
Abacus Resource Management Company	Beaverton, OR
The Brendle Group Inc	Fort Collins, CO
Cascade Energy	Cedar Hills, UT
Compression Engineering Corp	Salt Lake City, UT
Ecova	Portland, OR
EMP2 Inc	Richland, WA
Energy and Resource Solutions Inc	North Andover, MA
Energy Resources Integration LLC	Sausalito, CA
EnerNOC	Walnut Creek, CA
EnSave Inc	Richmond, VT
ETC Group	Salt Lake City, UT
Evergreen Consulting Group	Beaverton, OR
Fazio Engineering	Milton-Freewater, OR
kW Engineering Inc	Oakland, CA
Lincus Inc	Tempe, AZ
Nexant Inc	Salt Lake City, UT
QEI Energy Management Inc	Beaverton, OR

<sup>28</sup> Customers receiving Small Business Lighting incentives are required to use an approved contractor selected from a competitive request for bid process.

<sup>29</sup> Some trade allies may participate in more than one technology so the count of unique participating firms is less than the total count by technology.

Engineering Firm	Main Office Location
Rumsey Engineering	Rexburg, ID
RM Energy Consulting	Pleasant Grove, UT
SBW Consulting Inc	Bellevue, WA
Solarc Architecture & Engineering Inc	Eugene, OR
Triple Point Energy Inc	Bellevue, WA

### Program Changes

Effective March 1, 2015, an enhanced small business incentive and new measure for submersible pumps was added to its *wattsmart* Business program.

### Evaluation

Evaluations for the Energy FinAnswer, FinAnswer Express and Self-Direction were published in 2015. The results of these independent third-party process and impact evaluation of the Company's non-residential programs for program years 2011-2013 can be found on the Company's website. Several key findings from the evaluations include:

- For all programs, the majority of program participants were generally satisfied with the program.
- For the Energy FinAnswer program, the most influential components of the program were financial incentives and economic information. Additionally, near-participants frequently canceled or delayed projects for reasons unrelated to program processes.
- For the FinAnswer Express program, trade allies were generally satisfied the energy efficiency alliance and the program's effect on their business. They actively promoted the program and expressed the desire for continued assistance.
- For the Self-Direction Credit program, the program is a key factor in pushing capital energy efficiency projects.

## COMMUNICATIONS, OUTREACH AND EDUCATION

The Company uses earned media, customer communications, paid media, and program specific media to communicate the value of energy efficiency, provide information regarding low-cost, no-cost energy efficiency measures, and educate customers on the availability of technical assistance, services and incentives. The overall goal is to engage customers in reducing their energy usage through behavioral changes.

*wattsmart* is a multi-faceted campaign with programs aimed at specific customer groups, but all share the common theme: Rocky Mountain Power wants to help you save money and energy.

### *Customer Communications*

As part of the Company's regular communications to its customers, newsletters across all customer classes promote energy efficiency initiatives and case studies on a regular basis. Inserts and outer envelopes featuring energy efficiency messages and programs have also been used on a consistent basis. In 2015, the Company also issued two newsletters focused entirely on seasonal energy efficiency information targeted in the fall and spring.

Table 25 shows the communication source and the frequency of the message.

Table 25  
Communication Source and Frequency

Communication Source	Frequency of Message
Web: <a href="http://rockymountainpower.net/wattsmart">rockymountainpower.net/wattsmart</a> and promotional URL <a href="http://wattsmart.com">wattsmart.com</a> link directly to the energy efficiency landing page. Once there customers can self-select their state for specific programs and incentives.	Messages rotate each month based on the season.
Twitter	Tweets posted on a weekly basis.
Facebook	Information and tips posted three - five times a week. Promoted posts and mobile ads are also utilized where appropriate.
<i>Voices</i> residential newsletter	Newsletters are sent via bill insert and email six times a year; each issue includes energy efficiency tips and incentive program information.
<i>wattsup</i> insert - seasonal change inserts dedicated to energy efficiency	May and October
Home Energy Savings/ <i>wattsmart</i> Starter Kit program inserts	2-3 per year
<i>Energy Connections</i> , <i>Energy Insights</i> - newsletters to businesses and communities	Articles appear in both monthly and quarterly publications.

### Paid Media/ wattsmart Campaign

The overall paid media plan objective is to effectively reach our customers through a multi-media mix that extends both reach and frequency. Tapping into all resources with consistent messaging has been the Company's approach and will continue to be refined.

Key strategies include:

- Implementing an advertising campaign featuring wattsmart energy efficiency messaging.
- Promoting customer conservation (behavioral changes) and increasing participation and savings through the Company's wattsmart DSM programs.
- Motivating Wyoming customers to reduce consumption independently or to do so by participating in the Company's wattsmart DSM programs.
- Educating customers on how these programs can help them save money on their utility bills, reduce energy consumption and keep costs down for all the Company's customers.

New creative was developed in 2014 which included TV, radio, print and digital. We introduced customers to Wattsmart, Wyoming – the right place for savings. In Wattsmart, folks turn off lights and electronics when not in use. They only use efficient appliances and make sure their homes are well insulated. Kids eat all their veggies and everyone gets along while sharing their chores. The payoff for the campaign is – *You may not live in wattsmart, but you can learn to live wattsmart.*

Each of the ads is focused on a different piece of messaging that we want to deliver to customers.

- Incentives
- Weatherization
- Lighting (LED)
- Turning off the lights and unplugging electronics when not in use
- Keeping the thermostat set to 68 degrees in the winter

Table 26 outlines the value each communication channel provides the overall effort and the impressions achieved to date.

**Table 26**  
**Communication Channels**

Communication Channel	Value to Communication Portfolio	Impressions to date
Television	Television has the broadest reach and works as the most effective media channel.	A selection of ads ran at 30 and 15-second spots. <ul style="list-style-type: none"> <li>• 850 placements</li> <li>• 436,100 impressions</li> </ul>
Radio	Given the cost relative to television, radio builds on communications delivered via television while providing for increased frequency of messages.	Rotation of advertisements <ul style="list-style-type: none"> <li>• 750 placements</li> <li>• 198,200 impressions*</li> </ul>

Communication Channel	Value to Communication Portfolio	Impressions to date
Newspaper	Supports broadcast messages and guarantees coverage in areas harder to reach with broadcast.	72 insertions; 617,123 impressions
Digital Display	Online advertising – banner ads	2,641,162 impressions
Internet Search (i.e. Google)		25,110 impressions
Twitter (@RMP_Wyoming)	Awareness regarding energy efficiency tips; Tweets posted on a weekly basis.	847 followers
Facebook <a href="http://www.facebook.com/rockymountainpower.wattsmart">www.facebook.com/rockymountainpower.wattsmart</a>	Awareness regarding energy efficiency tips and a location to share information.	20,158 total fans. Facebook advertising - 478,255 impressions.

\*Radio impressions are not quantified. Impression is estimated.

The total number impressions (plus page views) for the *wattsmart* campaign was 4,395,950.

### *Program Specific*

All energy efficiency program marketing and communications are under the *wattsmart* umbrella to ensure a seamless transition from changing customer behavior to the actions they could take by participating in specific programs. Separate marketing activities administered by and specific to the programs ran in conjunction with the *wattsmart* campaign.

### Home Energy Savings

Information on the *Home Energy Savings* program is communicated to customers, retailers and trade allies through a variety of channels. Using a strategic approach, the Company communicates select program measures during key selling seasons and promotes *wattsmart* Starter Kits to targeted customers throughout the year to achieve savings goals.

In April, the Company promoted specially priced LED bulbs. These efficient bulbs were available for as little as \$1 each at participating stores in Wyoming. The offer was communicated through email, website and social media.

Messaging shifted to cooling as summer approached. The Company started the season by providing educational content on the benefits of evaporative coolers on the website and social media.

In June and July, the Company promoted ductless heat pumps and provided detailed information on the website to educate customers about the benefits of these high-efficiency heating and cooling systems. Customers received information about incentives for ductless heat pumps and insulation through a bill insert, website and social media.





Throughout the year, targeted customer communications were distributed to promote *wattsmart* Starter kits through direct mail, email and Facebook ads.

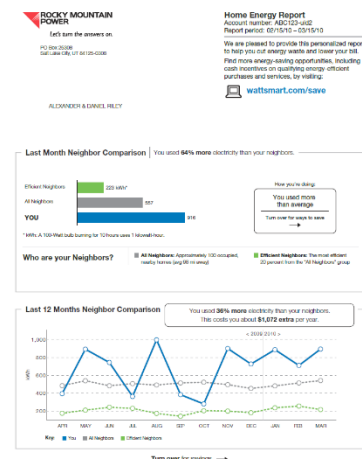
In 2015, program communications delivered approximately 247,699 impressions. A breakdown of estimated impressions by channel is shown in Table 27 below. These estimates do not reflect all of the customer, retailer and trade ally touchpoints.

Table 27  
Communication Channels

Communications Channel	2015 Estimated Impressions
Facebook ads	84,699
Bill inserts	151,000
Direct mail	12,000

### Home Energy Reports

In 2015, the Company introduced Home Energy Reports to Wyoming residential customers. The reports provide information about the household's energy use compared to other similar households, and offers personalized energy-saving tips. Customers can also login to the program website to access tools including a progress tracker, bill comparison, home energy assessment and more.



### Residential Refrigerator Recycling

In 2015, *See ya later, refrigerator*® communications consisted of TV, print and digital advertising, bill inserts and social media.

On November 19, 2015, Rocky Mountain Power received notice that program vendor JACO Environmental was going out of business. The Company posted a notice on the website to let customers know the program was unavailable. Affected customers also received a direct mail letter and an email to let them know about the situation and that Rocky Mountain Power would have replacement incentive checks issued, if necessary.

### wattsmart Business

During 2015, communications reminded customers to inquire about incentives for lighting, HVAC, compressed air, irrigation and other energy efficiency measures. Radio communications encouraged business customers to make energy efficiency upgrades and print ads featured case study examples from program participants which were repurposed in social media. Quarterly

eblasts and digital display and search ads directed viewers to the Company’s website<sup>30</sup>. Targeted direct mail was sent to irrigation customers to encourage irrigation retrofits. This was in addition to customer direct contact by Company project managers and corporate and community managers, trade ally partners, articles in the Company newsletters, Chamber newsletter outreach and content on the Company website and on Facebook.

In June, a bill insert focused on energy savings and incentives for cooling systems was inserted in bills for business customers (excluding irrigation). During the same period, an email on the cooling was sent.

The Company continued to utilize a *wattsmart* “open sign” for businesses and approved vendors to display. Customers were photographed with the open sign and the photos were used in the print advertising, case studies, newsletter articles, and on Facebook.

The program’s breakdown of impressions by media type is shown in Table 28.



Table 28  
Impressions by Media Type

Communications Channel	2015
Radio	171,000
Newspaper	519,876
Bill Insert	14,320
Eblasts	10,840
Digital Display	1,816,966
Digital Search	5,417
Irrigation Direct Mail	477

The Company files quarterly its education and promotional materials used during that timeframe. To review all Company materials, see Docket No. 20000-264-EA-06.

<sup>30</sup> [www.wattsmart.com](http://www.wattsmart.com)

## Evaluations

Evaluations are performed by independent external evaluators to validate energy and demand savings derived from the Company's energy efficiency programs. Industry best practices are adopted by the Company with regards to principles of operation, methodologies, evaluation methods, definitions of terms, and protocols including those outlined in the National Action Plan for Energy Efficiency Program Impact Evaluation and the California Evaluation Framework guides.

A component of the overall evaluation efforts is aimed at the reasonable verification of installations of energy efficient measures and associated documentation through review of documentation, surveys and/or ongoing onsite inspections.

Verification of the potential to achieve savings involves regular inspection and commissioning of equipment. The Company engages in programmatic verification activities, including inspections, quality assurance reviews, and tracking checks and balances as part of routine program implementation and may rely upon these practices in the verification of installation information for the purposes of savings verifications in advance of more formal impact evaluation results. A summary of the inspection process is included in Appendix 4.

Evaluation, measurement and verification tasks are segregated within the Company's organization to ensure they are performed and managed by personnel who have a neutral interest in the benefits associated with anticipated savings.

Information on evaluation activities completed or in progress during 2015 is summarized in the chart below. A summary of the recommendations are provided in Appendix 5. Evaluation reports are available at [www.pacificorp.com/es/dsm/wyoming.html](http://www.pacificorp.com/es/dsm/wyoming.html)

PROGRAM	YEARS EVALUATED	EVALUATOR	STATUS
Low-Income Weatherization	2011-2013	Smith & Lehmann Consulting	Completed
Energy FinAnswer	2011-2013	Navigant	Completed
FinAnswer Express	2011-2013	Navigant	Completed
Self-Direction	2011-2013	Navigant	Completed
Refrigerator and Freezer Recycling	2013-2014	The Cadmus Group	Completed Q2 2016
Home Energy Savings	2013-2014	The Cadmus Group	In Progress
wattsmart Business	2014-2015	The Cadmus Group	In Progress