# Utah Energy Efficiency and Peak Reduction Annual Report

January 1, 2016 – December 31, 2016

Issued May 15, 2017

ROCKY MOUNTAIN POWER

*Let's turn the answers on.*

1912–2012 100 Years

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# TABLE OF CONTENTS

List of Abbreviations and Acronyms ..... 4
Executive Summary ..... 5
Regulatory Activities ..... 9
DSM Expenditures ..... 12
Planning Process ..... 13
Peak Reduction Programs ..... 16
Irrigation Load Control ..... 17
Cool Keeper ..... 19
Energy Efficiency Programs ..... 21
Residential Programs ..... 23
Home Energy Savings ..... 24
Refrigerator Recycling ..... 27
New Homes ..... 29
Home Energy Reports ..... 33
Low Income Weatherization ..... 36
Non-Residential Energy Efficiency ..... 38
Communications, Outreach and Education ..... 45
Evaluations ..... 46

## List of Abbreviations and Acronyms

| | |
|---|---|
| CFL | Compact Fluorescent Lighting |
| DSM | Demand-side Management |
| HCD | Utah Department of Workforce Services, Housing and Community Development Division |
| HVAC | Heating, Ventilation and Air Conditioning |
| IRP | Integrated Resource Plan |
| kW | Kilowatt |
| kWh | Kilowatt hour |
| LED | Lighting-emitting Diode |
| MW | Megawatt |
| MWh | Megawatt hour |
| NTG | Net-to-Gross |
| PCT | Participant Cost Test |
| PTRC | Total Resource Cost Test with 10 percent adder |
| RIM | Ratepayer Impact Measure Test |
| Schedule 193 | Demand-Side Management Cost Adjustment |
| TRC | Total Resource Cost Test |
| UCT | Utility Cost Test |
| VFD | Variable Frequency Drive |

# EXECUTIVE SUMMARY

PacifiCorp is a multi-jurisdictional electric utility providing retail service to customers in Utah, California, Idaho, Oregon, Washington, and Wyoming. Rocky Mountain Power, a division of PacifiCorp ("Company"), serves approximately 850,000 customers in Utah. Rocky Mountain Power, working in partnership with its retail customers and with the approval of the Public Utilities Commission of Utah ("Commission"), acquires energy efficiency and peak reduction resources as cost effective alternatives to the acquisition of supply-side resources. These resources assist the Company in efficiently addressing load growth and contribute to the Company's ability to meet system peak requirements.

Company energy efficiency and peak reduction programs provide participating Utah customers with tools that enable them to reduce or assist in the management of their energy usage, while reducing the overall costs to the Company's customers. These resources are relied upon in resource planning as a least cost alternative to supply-side resources.

This report provides details on program results, activities, expenditures, and status of the Demand-Side Management Cost Adjustment tariff rider ("Schedule 193") revenue for the performance period from January 1, 2016 through December 31, 2016.[1] The Company, on behalf of its customers, invested $60.4 million in energy efficiency and peak reduction resource acquisitions during the reporting period. The investment yielded approximately 334,147 megawatt hours ("MWh") in first year energy savings,[2] 3,757,560 MWh of lifetime savings[3] from 2016 energy efficiency acquisitions and approximately 65 megawatts ("MW") of capacity reduction from energy efficiency savings[4] and realized reductions associated with peak management activities of approximately 127 megawatts[5]. Net benefits based on the projected value of the energy savings over the life of the individual measures are estimated at $116 million[6].

The Demand-side Management ("DSM") portfolio was cost effective based on four of the five standard cost effectiveness tests[7] for the reporting period. The ratepayer impact cost 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. The DSM portfolio cost effectiveness is provided in Table 1. Annual performance information for 2016 cost effectiveness is provided in detail in Appendix 2.

[1] Appendix 1 provides specific requirements from Docket No. 17-035-04 and where they are located in the annual report and appendices.
[2] Reported ex-ante savings are gross and at generation.
[3] Estimated lifetime savings of 2016 Energy Efficiency Acquisitions was calculated by multiplying First Year Acquisitions (measured at the generator) by the weighted average measure life of the portfolio of 11.2 years. No discount was assumed for possible savings degradation over the life of the measures. Savings are gross at generator.
[4] See Planning Process Section for explanation on how the capacity contribution savings values are calculated.
[5] Realized load as measured at generation.
[6] See Table 1 – Utility Cost Test Net Benefits.
[7] Cost effectiveness results include realization rates and Net-to-Gross ("NTG") ratios.

Table 1 – DSM Portfolio Cost Effectiveness

| Benefit/Cost Test | Benefit/Cost Ratio | Net Benefits |
|---|---|---|
| PacifiCorp Total Resource Test plus 10 percent (PTRC)[8] | 1.92 | $123,841,907 |
| Total Resource Cost Test (TRC)[9] | 1.75 | $100,381,626 |
| Utility Cost Test (UCT)[10] | 1.98 | $115,970,816 |
| Participant Cost Test (PCT)[11] | 2.66 | $154,830,751 |
| Ratepayer Impact Cost Test (RIM)[12] | 0.89 | ($28,960,725) |

## 2016 Performance Compared to Forecast

In Docket No 15-035-48 filed November 2, 2015, the Company filed its 2016 forecast for Class I load control and Class II energy efficiency programs against its Integrated Resource Plan ("IRP") forecast. Overall, the Company achieved 93% of its Class I and Class II forecast. The *Irrigation Load Control* program experienced higher than expected participant opt-outs. For the Class II achieved savings, the residential sector was not meeting its forecasted target. Subsequently, the decision was made to ramp up non-residential participation. Table 2 compares the November filings to actual savings achieved.

[8] 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.
[9] 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.
[10] The UCT provides a benefit to cost perspective from the utility only, comparing 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.
[11] The PCT compares the portion of the resource paid directly by participants to the savings realized by the participants.
[12] 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 can lower revenue requirements while putting near-term upward pressure on rates as the remaining fixed costs are spread over fewer kilowatt-hours.

## Table 2 - 2016 Forecast to Actual Savings Comparison

| Utah DSM 2016 Projected Savings | 2015 IRP for 2016 (Gross - at Gen) | | 2016 Forecast (Gross - at Gen) | | 2016 Actual (Gross - at Gen) | |
|---|---|---|---|---|---|---|
| | MWH | MW | MWH | MW | MWH | MW |
| **Class 1 - Load Control Programs** | | | | | | |
| A/C Load Control | | 115 | | 115 | | 113 |
| Irrigation Load Control | | 20 | | 20 | | 14 |
| **Total Class 1** | | **135** | | **135** | | **127** |
| **Class 2 - Residential Programs** | | | | | | |
| Low Income | | | 426 | 0 | 230 | 0 |
| New Homes | | | 3,454 | 1 | 3,598 | 1 |
| Home Energy Reports | | | 62,476 | 12 | 53,833 | 10 |
| Refrig. Recycle | | | 15,237 | 3 | 169 | 0 |
| Home Energy Savings | | | 71,223 | 14 | 49,910 | 10 |
| **Total Residential Class 2** | **N/A** | | **152,816** | **29** | **107,739** | **21** |
| **Class 2 - Non-Residential Programs** | | | | | | |
| wattsmart Business | | | 212,316 | 41 | 226,408 | 43 |
| **Total Non-Residential Class 2** | **N/A** | | **212,316** | **41** | **226,408** | **43** |
| | | | | | | |
| **Total Class 2** | **303,040*** | **58** | **365,132** | **70** | **334,147** | **64** |

*Includes incremental HER savings only.

## 2016 Performance

Program and Sector level results for 2016 are provided in Table 3.

Table 3[13]
Utah Program Results for January 1, 2016 – December 31, 2016[14]

| Load Management Programs | MW/Yr Savings (at site) | MW/Yr Savings (at gen) | Program Expenditures |
|---|---|---|---|
| Cool Keeper | 103 | 113 | $ 4,573,746.18 |
| Irrigation Load Control | 13 | 14 | $ 426,103.31 |
| **Total Load Management** | **116** | **127** | **$ 4,999,849** |
| **Energy Efficiency Programs** | **kWh/Yr Savings (at site)** | **kWh/Yr Savings (at gen)** | **Program Expenditures** |
| Low Income Weatherization | 210,154 | 229,737 | $ 59,339 |
| New Homes | 3,290,951 | 3,597,602 | $ 1,453,696 |
| Refrigerator Recycling | 154,191 | 168,559 | $ 25,376 |
| Home Energy Savings | 45,655,622 | 49,909,813 | $ 11,680,011 |
| Home Energy Reporting | 49,244,502 | 53,833,105 | $ 2,758,456 |
| **Total Residential** | **98,555,421** | **107,738,815** | **$ 15,976,879** |
| *watt* smart Business Agricultural | 10,851,979 | 11,854,062 | $ 1,100,018 |
| *watt* smart Business Commercial | 133,500,517 | 145,131,082 | $ 20,054,995 |
| *watt* smart Business Industrial | 65,589,443 | 69,423,146 | $ 10,315,226 |
| *watt* smart Business Portfolio | | | $ 6,356,869 |
| **Total *watt* smart Business** | **209,941,939** | **226,408,290** | **$ 37,827,108** |
| **Total Energy Efficiency** | **308,497,359** | **334,147,105** | **$ 53,803,987** |
| **Outreach & Communications + Class 4** | | | |
| Outreach and Communication Campaign | | | $ 1,317,861 |
| **Total System Benefit Expenditures - All Programs** | | | **$ 55,121,847** |
| Portfolio Technical Reference Library | | | $ 26,223 |
| Portfolio Potential Study | | | $ 58,754 |
| Portfolio Training | | | $ 36,588 |
| Portfolio DSM Central | | | $ 125,051 |
| **Total Utah Program Expenditures** | | | **$ 60,368,313** |

[13] Reported savings are ex-ante.
[14] The values at generation include line losses between the customer site and the generation source. The Company's line losses by sector for 2016 are 9.32 percent for residential, 8.71 percent for commercial, 5.85 percent for industrial and 9.24 percent for irrigation.

## REGULATORY ACTIVITIES

During the reporting period, the Company made a number of filings with the Commission to be in compliance with various reporting requirements and to modify DSM programs. The Company also provided various reports and evaluations to the DSM Steering Committee, per Commission order.

- On January 19, 2016, the Company filed for modifications to the Low Income Weatherization Program in Docket No. 16-035-T01. Key modifications included adding LED bulbs and fixtures as new offerings. The Commission approved these modifications in its order issued February 12, 2016, with an effective date of March 1, 2016.
- On February 2, 2016, the Company circulated its quarterly DSM Balancing Account Report for the fourth quarter of 2015 to the DSM Steering Committee.
- On February 5, 2016, the Company filed to cancel the See ya later, refrigerator Appliance Recycling Program in Docket No. 16-035-T02. The Commission approved the cancelation in its order issued March 1, 2016, with an effective date of March 6, 2016.
- On February 9, 2016, the Company filed for modifications to the *watt*smart Business Program in Docket No. 16-035-T03. Key modifications included lowering lighting incentives and clarify all measure incentives as maximum not-to-exceed or "up to" amounts. The Commission approved these modifications in its order issued March 9, 2016, with an effective date of March 10, 2016.
- On April 15, 2016, the Company filed to permanently change the due date of the DSM Spring Semi-Annual Forecast Report from May 1st to July 1st in Docket No. 09-035-T08. The Commission approved the revised due date in its order issued April 20, 2016, with an effective date the same day.
- On April 25, 2016, the Company circulated its quarterly DSM Balancing Account Report for the first quarter of 2016 to the DSM Steering Committee.
- On May 9, 2016, the Company posted a 45-day notice on its website to make modifications to the *watt*smart Business LED Instant Incentive Program through the "up to" incentive process established in Docket No. 16-035-T03. Key modifications included lowering lighting incentives offered through the mid-market channel. Notice of these changes was also sent to the DSM Steering Committee on May 9, 2016. These modifications went into effect June 22, 2016.
- On May 23, 2016, the Company filed its 2015 Energy Efficiency and Peak Reduction Report in Docket No. 16-035-17. The Commission acknowledged the report as being compliant with reporting requirements in its correspondence issued July 12, 2016.
- On July 1, 2016, the Company filed its DSM Spring Semi-Annual Forecast Report in Docket No. 16-035-30. The Commission acknowledged the report as being compliant with reporting requirements in its correspondence issued August 24, 2016.
- On July 26, 2016, the Company filed for modifications to the Cool Keeper Program in Docket No. 16-035-T10. Key modifications included streamlining the tariff and removing outdated information. The Commission approved these modifications in its order issued November 16, 2016, with an effective date of December 1, 2016.
- On July 28, 2016, the Company circulated its quarterly DSM Balancing Account Report for the second quarter of 2016 to the DSM Steering Committee.

- On July 28, 2016, the Company provided notice to the DSM Steering Committee that the 2013-2014 Home Energy Savings Evaluation Report had been posted to the Company's website.
- On August 5, 2016, the Company filed for modifications to the *watt*smart Business Program in Docket No. 16-035-T11. Key modifications included the reinstatement of the enhanced incentive for small businesses as a restructured small business direct install offering. The Commission approved these modifications in its order issued August 31, 2016, with an effective date of September 5, 2016.
- On September 6, 2016, the Company made a compliance filing to provide supplemental information requested by DSM Steering Committee members regarding DSM program participation and measure data.
- On September 27, 2016, the Company provided notice to the DSM Steering Committee that the 2014-2015 Home Energy Reports Evaluation Report had been posted to the Company's website.
- On November 1, 2016, the Company filed its DSM Fall Semi-Annual Forecast Report in Docket No. 16-035-30. The Commission acknowledged the report as being compliant with reporting requirements in its correspondence issued December 21, 2016.
- On November 1, 2016, the Company filed for modifications to the New Homes and Home Energy Savings Program in Docket No. 16-035-T13. Key modifications included consolidating the New Homes Program within the Home Energy Savings Program, restructuring incentives tables and updating measures within the Home Energy Savings Program, and rename the Home Energy Savings Program as Residential Energy Efficiency with it marketed as *watt*smart Homes to align with the *watt*smart Business Program. The Commission approved these modifications in its order issued November 29, 2016, with an effective date of December 1, 2016.
- On November 10, 2016, the Company circulated its quarterly DSM Balancing Account Report for the third quarter of 2016 to the DSM Steering Committee.
- On November 17, 2016, the Company posted a 45-day notice on its website to make modifications to the *watt*smart Business LED Instant Incentive Program and prescriptive retrofit lighting measures through the "up to" incentive process established in Docket No. 16-035-T03. Key modifications included increasing the incentive for TLED lamps offered through the mid-market channel and lowering the incentive for the TLED lamp prescriptive offering. Notice of these changes was sent to the DSM Steering Committee on November 18, 2016. These modifications went into effect January 1, 2017.
- On November 23, 2016, the Company filed for modifications to the Schedule 193 surcharge rate, specifically to lower the rate from 4.0 percent to 3.68 percent. The Commission approved these modifications in its order issued December 22, 2016, with an effective date of January 1, 2017.
- On December 1, 2016, the Company filed for approval of its 2017 Strategic Communications and Outreach Plan for DSM programs in Docket No. 16-035-49. The Commission approved the plan in its order issued December 28, 2016, with an effective date of January 1, 2017.

### *Advisory Group and Steering Committee Activities:*

Consistent with the discussion in Docket No. 12-035-69, the Company seeks input regarding its energy efficiency programs from both the Utah DSM Steering Committee and the Utah DSM Advisory Group. Both groups include representatives from a variety of constituent organizations. Members of the Steering Committee, who are not already governed by Commission confidentiality rules, signed Confidentiality Agreements with the Company in order to provide input on issues involving sensitive, confidential, or proprietary information.

The Company consulted with the DSM Steering Committee and DSM Advisory Group throughout 2016 on various matters, and held formal meetings on the following matters:

February 4, 2016 – DSM Steering Committee

- Provided updates on the Appliance Recycling Program, and
- Discussed proposed modifications to the *watt*smart Business Program.

June 16, 2016 – DSM Advisory Group

- Reviewed DSM program evaluation reports, and
- Reviewed the 2015 Annual Energy Efficiency and Peak Reduction Report.

June 16, 2016 – DSM Steering Committee

- Discussed DSM Amortization arising from the Sustainable Transportation and Energy Plan Act,
- Discussed upcoming proposed modifications to the New Homes and Home Energy Savings Programs,
- Provided updates on the small business offerings, and
- Discussed upcoming proposed modifications to the Cool Keeper Program.

October 26, 2016 – DSM Steering Committee

- Provided updates on the Low Income Weatherization Program,
- Provided updates on the Home Energy Savings and New Homes Programs,
- Discussed the DSM Fall Semi-Annual Forecast Report,
- Discussed upcoming proposed adjustments to the Schedule 193 surcharge rate,
- Discussed the necessity of future New Homes Program evaluations, and
- Discussed shifting evaluation, measure, and verification costs from program level to sector level.

December 20, 2016 – DSM Advisory Group

- Discussed the 2016 Smart Grid,
- Reviewed the 2017 DSM Strategic Plan, and
- Reviewed completed program evaluations for *watt*smart Business Strategic Energy Management and New Homes.

December 20, 2016 – DSM Steering Committee

- Discussed how the Company communicates with the DSM Steering Committee, and
- Reviewed the Annual Energy Efficiency and Peak Reduction Report requirements.

## DSM EXPENDITURES

Energy efficiency and peak reduction activities are funded by revenue collected through Schedule 193. Expenditures are charged as incurred. The DSM balancing account is the mechanism used for managing Schedule 193 revenues collected and tracking the offsetting DSM incurred expenses. The balancing account summary for 2016 is shown in Table 4.

Table 4
Schedule 193 Balancing Account Summary

| Month | Monthly Program Costs | Monthly Net Accrued Costs* | Rate Recovery | Carrying Charge | Cash Basis Accumulated Balance | Accrual Based Accumulated Balance |
|---|---|---|---|---|---|---|
| Balance Dec. 2015 | | | | | $ 8,763,656 | $ 14,269,913 |
| Jan-16 | $ 3,957,447 | $ (640,324) | $ (6,219,137) | $ 83,754 | $ 6,551,198 | $ 11,417,132 |
| Feb-16 | $ 5,502,164 | $ (97,141) | $ (5,812,722) | $ 75,673 | $ 6,281,894 | $ 11,050,687 |
| Mar-16 | $ 4,010,643 | $ (101,376) | $ (5,114,181) | $ 78,260 | $ 5,199,630 | $ 9,867,047 |
| Apr-16 | $ 3,649,184 | $ 1,887,279 | $ (5,036,557) | $ 89,429 | $ 3,828,967 | $ 10,383,663 |
| May-16 | $ 4,189,551 | $ (1,727,122) | $ (5,313,045) | $ 93,742 | $ 2,717,589 | $ 7,545,164 |
| Jun-16 | $ 7,211,523 | $ (962,707) | $ (6,686,875) | $ 93,690 | $ 3,253,289 | $ 7,118,156 |
| Jul-16 | $ 3,541,878 | $ 1,301,933 | $ (8,541,981) | $ 84,268 | $ (1,744,022) | $ 3,422,778 |
| Aug-16 | $ 5,719,256 | $ (1,630,704) | $ (8,970,591) | $ 66,663 | $ (5,007,852) | $ (1,471,757) |
| Sep-16 | $ 4,877,906 | $ 1,748,387 | $ (7,603,915) | $ 58,069 | $ (7,757,487) | $ (2,473,004) |
| Oct-16 | $ 5,085,219 | $ (1,078,842) | $ (5,966,674) | $ 54,592 | $ (8,669,344) | $ (4,463,703) |
| Nov-16 | $ 7,231,444 | $ (769,695) | $ (5,240,777) | $ 57,752 | $ (6,707,135) | $ (3,271,189) |
| Dec-16 | $ 5,685,831 | $ (742,558) | $ (6,051,036) | $ 7,276 | $ (7,097,889) | $ (4,404,501) |
| **2016 Total** | **$ 60,662,046** | **$ (2,812,870)** | **$ (76,557,491)** | **$ 843,168** | | |

*December 2016 total accrual was $2,693,388

Column Explanations:

Monthly Program Costs - Monthly expenditures for all DSM program activities posted in 2016.

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

Rate Recovery - Revenue collected through Schedule 193.

Carrying Charge - Monthly carrying charge based on "Cash Basis Accumulated Balance" of the account.

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

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

# PLANNING PROCESS

## Integrated Resource Plan

The Company develops a biennial IRP as a means of balancing cost, risk, uncertainty, supply reliability/deliverability and long-run public policy goals.[15] The plan presents a framework of future actions to ensure the Company continues to provide reliable, 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, communication and/or public pleas.

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 (Potentials Assessment) is conducted to estimate the magnitude, timing and cost of energy efficiency and peak management resources.[16] The main focus of the Potentials 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 Potentials Assessment for Utah is 7,454 GWh by

[15] Information on the Company's integrated resource planning process can be found at the following address: http://www.pacificorp.com/es/irp.html

[16] PacifiCorp Demand-Side Resource Potential Assessment For 2015-2034, http://www.pacificorp.com/es/dsm.html.

2034, or 22 percent of projected baseline loads.[17] 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 Utah by sector is shown in Table 5. The 2015 Potentials Assessment indicates that approximately 69 percent of the achievable technical potential for the Company, excluding Oregon,[18] is available within its Utah service area.[19]

Table 5
Utah Energy Efficiency Achievable Technical Potential by Sector

| Sector | Cumulative GWh in 2034 | Percent of Baseline Sales |
|---|---|---|
| Residential | 2,025 | 21% |
| Commercial | 4,017 | 32% |
| Industrial | 1,369 | 12% |
| Irrigation | 18 | 10% |
| Street Lighting | 24 | 32% |

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 Potentials 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 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 65 MW (at generation) for energy efficiency programs during 2016 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 2016 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 2016 is detailed in Table 6.

[17] Ibid, Volume 2, page 4-2.
[18] Oregon energy efficiency potentials assessments are performed by the Energy Trust of Oregon.
[19] Volume 1, Page 4-2, PacifiCorp Demand-Side Resource Potential Assessment for 2015-2034.

Table 6
Estimated Peak Contribution

| Description | Value |
|---|---|
| First year energy efficiency program MWh savings acquired during 2016 | 334,147 |
| Conversion factor: Coincident MW/MWh | 0.000195 |
| Estimated coincident peak MW contribution of 2016 energy efficiency acquisitions | 65.01 |

## PEAK REDUCTION PROGRAMS

Peak Reduction programs assist the Company in balancing the timing of customer energy requirements during heavy summer use hours. Peak reduction programs are intended to defer the need for higher cost investments in delivery infrastructure and peak generation resources that would otherwise be needed to serve those loads for a few select hours each year. These programs help the Company maximize the efficiency of the Company's existing electrical system and reduce costs for all customers.

Programs targeting capacity related resources are often specific to end use loads most prevalent in a given jurisdiction, such as the agricultural pumping and residential cooling loads in Utah. In 2016, the Company offered the *Irrigation Load Control* program (Schedule 105) for the agricultural sector and the *Air Conditioner Peak Management* Program (Cool Keeper Program, Schedule 114) for the residential and small commercial sectors.

The Peak Reduction Programs achieved a total of 127 MW of maximum realized demand reduction (gross at generation) in 2016. Cost effectiveness results for the reporting period are provided in Table 7.

Table 7
Cost Effectiveness for Load Control Portfolio[20]

| Benefit/Cost Test | Benefit/Cost Ratio |
|---|---|
| PTRC | Pass |
| TRC | Pass |
| UCT | Pass |
| PCT | N/A |
| RIM | Pass |

[20] Decrement values or avoided costs are considered confidential on load control programs. Cost effectiveness ratios and inputs will be available under a protective agreement. A "Pass" designation equates to a benefit to cost ratio of 1.0 or better.

## Irrigation Load Control

The *Irrigation Load Control* program is offered to irrigation customers receiving electric service on Schedule 10, Irrigation and Soil Drainage Pumping Power Service. Participants enroll with a third party administrator and allow the curtailment of their electricity usage in exchange for an incentive. Customer incentives are based on a site's average available load during load control program hours adjusted for the number of opt outs or non-participation. The program hours are from 12 pm to 8 pm Mountain Time, Monday through Friday, and do not include holidays. For most participants, their irrigation equipment is set up with a dispatchable two-way control system giving the Company control over their loads. Participants are provided a day-ahead notification of control events and have the choice to opt-out of a limited number of dispatch events per season.

A summary of the program's cost effectiveness results, performance and participation for the reporting period of May 31, 2016 – August 19, 2016 are provided in Tables 8 and 9.

Table 8
Cost Effectiveness for Irrigation Load Control

| Benefit/Cost Test | Benefit/Cost Ratio |
|---|---|
| PTRC | Pass |
| TRC | Pass |
| UCT | Pass |
| PCT | N/A |
| RIM | Pass |

Table 9
Irrigation Load Control Program Performance

| | |
|---|---|
| Total Enrolled MW (Gross – at Gen) | 37 |
| Maximum Potential MW (at Gen) | 14 |
| Average Realized load MW (at Gen) | 11 |
| Maximum Realized load MW (at Gen) | 13 |
| Participation Customers | 56 |
| Participation (Sites) | 219 |

Program Management

The program manager who is responsible for the *Irrigation Load Control* programs in Utah is also responsible for the *Irrigation Load Control* program in Idaho and the *Cool Keeper* program in Utah along with *Home Energy Reports* program in Utah, Idaho and Wyoming. For each state the program manager is responsible for managing the program administrator, the cost effectiveness of the program, contracting with program administrator through a competitive bid process,

establishing and monitoring program performance and compliance, and recommending changes to increase participation.

Program Administration

EnerNoc administers and manages the *Irrigation Load Control* program through a pay-for-performance structure and is responsible for all aspects of the program, including

- Customer satisfaction including call center support,
- Marketing to maintain a minimum level of megawatt reductions,
- Field operations including installation and maintenance of the EnerNOC devices,
- Management of participation data and reporting to actively manage the program,
- Quality control of the Irrigation Load Control device infrastructure,
- A platform to dispatch the communication network, and
- Customer incentives.

Irrigation Load Control Events and Performance

There were eight load control events initiated in 2016. The date, time and estimated impact for each event is provided in Table 10.

Table 10
Irrigation Load Control Events

| Date | Event | Event Times | Load Reduction - Utah at Gen (MW) |
|---|---|---|---|
| June 21, 2016 | 1 | 3pm-7pm MDT | 11 |
| June 27, 2016 | 2 | 3pm-7pm MDT | 13 |
| June 29, 2016 | 3 | 3pm-7pm MDT | 11 |
| July 21, 2016 | 4 | 3pm-7pm MDT | 11 |
| July 26, 2016 | 5 | 3pm-7pm MDT | 12 |
| July 28, 2016 | 6 | 3pm-7pm MDT | 12 |
| August 15, 2016 | 7 | 3pm-7pm MDT | 8 |
| August 17, 2016 | 8 | 3pm-7pm MDT | 8 |

Program Changes

No program changes occurred during 2016.

Evaluation

No evaluation activities occurred during 2016.

## Cool Keeper

The *Cool Keeper* program is an air conditioner direct load management program targeting residential and qualifying commercial customers (equipment size equal to or less than 15 tons) who cool their homes and businesses with electric central air conditioners. On select summer weekday afternoons, when electricity demand is at its highest, the *Cool Keeper* control equipment installed on a participating customer's cooling equipment is sent a signal to cycle the operation of the air conditioners compressor "off and on" for brief periods each hour in coordination with the air conditioners of other participating customers. For their participation, customers receive an annual bill credit of $5 to $40 per air conditioner depending on the size of the air conditioner and when the customer signed up. If the customer signs up prior to June 1, the incentive is $20 or $40 and depends on the size of the A/C unit. After June 1, the incentive is pro-rated.

The Cool Keeper load control system operates through two-way communications equipment with a wireless mesh network for improved control, measurement and verification of program performance.

A summary of the program's cost effectiveness, performance and participation are provided in Tables 11 and 12 below.

Table 11
Cost Effectiveness for Cool Keeper

| Benefit/Cost Test | Benefit/Cost Ratio |
|---|---|
| PTRC | Pass |
| TRC | Pass |
| UCT | Pass |
| PCT | NA |
| RIM | Pass |

Table 12
Program Performance for Cool Keeper

| | |
|---|---|
| Total Enrolled MW (at Gen) | 216 |
| Maximum Potential MW (at Gen) | 113 |
| Average Realized Load MW (at Gen) | 106 |
| Maximum Realized MW (Gross – at Gen) | 113 |
| Total Participation | 108,269 |

Program Management

The program manager who is responsible for the *Cool Keeper* program in Utah is also responsible for the *Irrigation Load Control* programs in Utah and Idaho along with *Home Energy Reports* in Utah, Idaho and Wyoming. The program manager is responsible for managing the program

administrators, 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 each tariff or state's compliance requirements.

Program Administration

The *Cool Keeper* program is administered by GoodCents and Eaton. GoodCents is responsible for:

- Field operations including trouble calls, installation, and maintenance of the Cool Keeper devices,
- Customer satisfaction including call center support,
- Management of Cool Keeper participation data and reporting to actively manage the program,
- Quality control of the Cool Keeper device infrastructure to ensure a 99% availability of active devices, and
- Marketing to maintain a minimum level of participation and megawatt reductions.

Eaton is responsible for:

- Manufacture and delivery of the Cool Keeper devices,
- Installation, operation, and maintenance of the wireless mesh communication network,
- Quality control of the wireless mesh network,
- A hosted solutions platform to dispatch and monitor the health of the communication network, and
- Program analytics including the ability to gain insight into the system and identify Cool Keeper devices which are no longer communicating.

Cool Keeper Load Control Events and Performance

There were three control events initiated in 2016. The date, time and estimated impact for each event is provided in Table 13.

Table 13
Cool Keeper Load Control Events

| Date | Event | Event Times | Estimated Load Reduction - Utah at Gen (MW) |
|---|---|---|---|
| June 20, 2016 | 1 | 4:00PM – 7:00PM | 105 |
| June 22, 2016 | 2 | 4:00PM – 8:00PM | 99 |
| July 26, 2016 | 3 | 4:00PM – 4:31PM | 113 |

Evaluation

No evaluation activities occurred during 2016.

## ENERGY EFFICIENCY PROGRAMS

Energy Efficiency programs are offered to all major customer sectors: residential, commercial, industrial and agricultural. The overall energy efficiency portfolio included six programs: *Home Energy Savings* – Schedule 111, *Residential Refrigerator Recycling* – Schedule 117, *New Homes* – Schedule 110, *Home Energy Reports*, *Low Income Weatherization* – Schedule 118, and *Non-Residential Energy Efficiency* (*watt*smart Business) – Schedule 140. In addition to the energy efficiency programs, the Company, on behalf of customers, invested in outreach and education for the purpose of promoting the efficient use of electricity and improving program performance.

Energy efficiency savings are reported as ex-ante, gross and at site. In 2016, portfolio savings increased by approximately 7%, from 2015, while program-level expenditures decreased 1%. The portfolio was cost effective from four of the five cost tests. The ratepayer impact test was less than 1.0 indicating that there is near term upward pressure placed on the price per kWh given a reduction in sales. Cost effectiveness results of the 2016 Energy Efficiency Portfolio is provided in Table 14.

Table 14
Cost Effectiveness for Energy Efficiency Portfolio

| Benefit/Cost Test | Benefit/Cost Ratio | Net Benefits |
|---|---|---|
| PTRC | 1.80 | $72,114,582 |
| TRC | 1.64 | $57,400,173 |
| UCT | 2.67 | $92,102,027 |
| PCT | 2.46 | $135,718,086 |
| RIM | 0.74 | ($52,829,514) |

Table 15 provides a program-level summary of Gross and Net savings acquired in 2016 at site and at generation.

Table 15
Energy Efficiency Gross and Net Savings[21]

| Program | Gross kWh Savings at Site | Net kWh Savings at Site | Gross kWh Savings at Gen | Net kWh Savings at Gen |
|---|---|---|---|---|
| Low Income | 210,154 | 147,108 | 229,737 | 160,816 |
| Home Energy Reporting | 49,244,502 | 49,244,502 | 53,833,105 | 53,833,105 |
| Home Energy Savings | 45,655,622 | 28,836,987 | 49,909,813 | 31,524,017 |
| New Homes | 3,290,951 | 1,950,276 | 3,597,602 | 2,132,003 |
| Refrigerator Recycling | 154,191 | 64,760 | 168,559 | 70,795 |
| *watt*smart Business | 209,941,939 | 152,055,251 | 226,408,290 | 155,310,847 |
| **Total** | **308,497,359** | **232,298,884** | **334,147,105** | **243,031,582** |

[21] Net savings include realization rates and NTG ratios.

The Company, working with its third-party program delivery administrators[22], collaborates with the following number of retailers, contractors and vendors in the delivery of its energy efficiency programs in Utah. Table 16 below lists the energy efficiency infrastructure. See Appendix 4 for a complete of Home Energy Savings retailers and Appendix 5 for the non-residential energy efficiency alliance.

Table 16
Energy Efficiency Infrastructure

| Sector | Type | No. |
|---|---|---|
| Residential | Lighting Mid/Upstream Retailers | 210 |
| | Downstream Retailers | 222 |
| | HVAC Trade Allies | 160 |
| | Manufactured Homes Trade Allies | 1 |
| | Plumbing Contractors | 2 |
| | Weatherization Trade Allies | 101 |
| | Low Income Agencies | 1 |
| Commercial and Industrial | Lighting Trade Allies | 173 |
| | HVAC Trade Allies | 75 |
| | Motors Trade Allies | 91 |

[22] See program specific information for backgrounds on third party administrators.

## RESIDENTIAL PROGRAMS

The residential energy efficiency portfolio was comprised of five programs: *Home Energy Savings*, *Refrigerator Recycling*, *New Homes*, *Home Energy Reports*, and *Low Income Weatherization.* Residential savings decreased by approximately 40% from 2015. The decrease is largely driven by a reduction in savings in the *Home Energy Savings* program and the cancellation of the *Refrigerator Recycling* program.

The residential portfolio was cost effective based on four of the five standard cost effectiveness tests for the 2016 reporting period. Table 17 shows the cost effectiveness results for the residential portfolio.

Table 17
Cost Effectiveness for Residential Portfolio

| Benefit/Cost Test | Benefit/Cost Ratio | Net Benefits |
|---|---|---|
| PTRC | 1.87 | $20,276,985 |
| TRC | 1.70 | $16,313,425 |
| UCT | 2.48 | $23,658,723 |
| PCT | 2.96 | $44,108,028 |
| RIM | 0.68 | ($18,304,204) |

## 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 1, 2, or 3. Landlords who own property where the tenant is billed under Electric Service Schedules 1, 2, or 3 also qualify for the program. Program cost effectiveness is provided in Table 18 below.

Table 18
Cost Effectiveness for Home Energy Savings

| Benefit/Cost Test | Benefit/Cost Ratio | Net Benefits |
|---|---|---|
| PTRC | 2.20 | $21,182,692 |
| TRC | 2.00 | $17,647,829 |
| UCT | 3.03 | $23,668,611 |
| PCT | 2.98 | $37,154,856 |
| RIM | 0.78 | ($10,180,461) |

Program participation by measure category is provided in Table 19.

Table 19
Eligible Program Measure Categories (Units)

| Measure Categories | Total kWh/Yr Savings @ Site | Total Incentive | Total Quantity |
|---|---|---|---|
| Appliances | 652,823 | $ 246,666 | 4,905 |
| Building Shell | 1,064,568 | $ 595,717 | 3,306,714 (sq ft) |
| Energy Kits | 213,736 | $ 20,337 | 1,082 |
| HVAC | 10,191,265 | $ 3,789,346 | 14,073 |
| Lighting | 33,518,040 | $ 2,164,762 | 1,127,749 |
| Water Heating | 15,191 | $ 7,000 | 11 |
| **Grand Total** | **45,655,623** | **$ 6,823,828** | **1,147,820** |

Program savings significantly decreased in 2016 compared to 2015. The decrease was primarily driven by a 94% decrease in CFL lighting. In 2016 manufacturers began reducing production of CFLS as they will no longer qualify under ENERGY STAR 2.0 specifications beginning in 2017.

Program Management

The program manager who is responsible for the *Home Energy Savings* program in Utah is also responsible for the *Home Energy Savings* program in Idaho and Wyoming. For each program and in each state the program manager is responsible for program cost effectiveness, identifying and contracting with the program administrator through a competitive bid process, establishing and

monitoring program performance and compliance, and recommending tariff changes in the terms and conditions.

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.
- 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 3.
- Manage savings acquisition to targets within budget.
- Continual improvement of program operations and customer satisfaction.
- 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 are outlined in Appendix 7.

The *Home Energy Savings* program administration contract for all states expired in 2016 and a new contract was established on April 1, 2016.

Infrastructure

The total number of retailers and trade allies who participated in the program was 696. The list of participating and non-participating retailers and trade allies by delivery channel and measure is provided in Appendix 4. Some retailers may have participated in more than one delivery type, so the count of unique participating firms may be less than the total count by delivery type.

Program Changes

In 2016, the *Home Energy Savings* program was renamed and restructured. *Home Energy Savings* is now marketed as the *wattsmart Homes* program. In addition, the *New Homes* program, Schedule 110, was canceled and consolidated under the *wattsmart Homes* program effective December 1, 2016. Also effective December 1, 2016, new offerings for smart thermostats were added and incentives for CFL bulbs and fixtures were retired. Effective January 1, 2017 existing offerings with low participation rates and/or high cost were retired:

- Clothes Washers
- Refrigerators

- Freezers
- Air Sealing
- Windows
- Whole Home Upgrade
- Whole-House Ducted Evaporative Coolers
- Best Practice Install and Proper Sizing for Central Air Conditioners
- Duct Sealing
- Duct Sealing with Insulation
- Duct Sealing in New Manufactured Homes

Evaluation

A process and impact evaluation was published for program years 2013-2014. Key findings include:

- High program satisfaction (99%) from non-lighting program participants, with corresponding high satisfaction with their installed measures, contractor and incentive amounts received.
- Non-lighting participants were mainly aware of the program through retailers and bill inserts.
- Overall NTG ratio was 70 percent.
- The program was cost effective over the two-year period, with a UCT of 2.04.

The full evaluation is available on the Company's website at
http://www.pacificorp.com/es/dsm/utah.html

## Refrigerator Recycling

The *Refrigerator Recycling* program, also known as "*See ya later, refrigerator®*," was designed to decrease electricity use through the voluntary removal and recycling of inefficient refrigerators and freezers. The program was available to residential, business customers and retailers.

On December 4, 2015, the Company filed to suspend the program in Docket No. 15-035-T17 due to the program administrator, JACO Environmental, effectively going out of business. Suspension of the program was granted by the Commission in its order issued December 3, 2015, with an effective date of January 4, 2016.

During December 2015, the Company began an expedited sole source procurement process to contract for remedial or "clean-up" appliance recycling services for customers that had signed up for the program, but were unable to be serviced due to JACO going out of business. A contract with Appliance Recycling Centers of America ("ARCA") was executed December 30, 2015, and customer outreach began in January 2016. ARCA contacted customers who had pick-ups scheduled with JACO that were canceled in late November and December 2015 and, if the customer was still interested, offer the same removal service and incentive. Clean-up services rendered by ARCA were conducted through March 2016.

On February 5, 2016, the Company filed to cancel the program in Docket No. 16-035-T02 due to its inability to administer the program cost effectively. The Commission granted the Company's request to cancel the program in its order issued March 1, 2016, with an effective date of March 6, 2016. Subsequently, the Company did not perform program-level cost effectiveness in this report. However, the costs and benefits are included in the Residential and Portfolio level cost effectiveness analysis.

Customer participation in ARCA's clean-up services for 2016 is provided in Table 20 by measure category.

Table 20
Clean-up Services Participation – Measures (Units)

| Measure Categories | Total kWh/Yr Savings @ Site | Total Incentive | Total Quantity |
|---|---|---|---|
| Freezers | 26,271 | $ 810.00 | 27 |
| Refrigerators | 127,920 | $ 3,120.00 | 104 |
| **Grand Total** | **154,191** | **$ 3,930.00** | **131** |

Evaluation

A process and impact evaluation was published for program years 2013-2014. Key findings include:

- Achieved 25,358,644 kWh evaluated gross savings; 98% of reported gross savings.

- Overall NTG was 44%. The program evaluation found high freeridership levels due to 43% of respondents claiming they would have disposed of their unit without the program.
- High program satisfaction.
- Participants learned of the program primarily through bill inserts, television, word-of-mouth, and the website.

The results of the evaluation can be viewed at http://www.pacificorp.com/es/dsm/utah.html.

## New Homes

The *New Homes* program provided incentives for new homes and multi-family units meeting the specific energy efficiency requirements as outlined in the program's tariff. The *New Homes* program has shown success in helping improve building practices in Utah. To be eligible for program incentives, a home must have installed qualifying stand-alone measures, or a residence must meet the minimum standards and certifications set by the program.

The program was not cost effective from four of the five tests in 2016. The program has been cancelled. Cost effectiveness results are provided in Table 21.

Table 21
Cost Effectiveness for New Homes

| Benefit/Cost Test | Benefit/Cost Ratio | Net Benefits |
|---|---|---|
| PTRC | 0.53 | ($1,299,467) |
| TRC | 0.48 | ($1,433,899) |
| UCT | 0.92 | ($109,382) |
| PCT | 1.29 | $1,085,410 |
| RIM | 0.35 | ($2,445,872) |

Program participation results for 2016 are provided in Table 22 below.

Table 22
New Homes Program Participation

| Single Family Measures | Total KWh Saving @ Site | Total Incentives | Total Quantity |
|---|---|---|---|
| High Performance ENERGY STAR Home: Single Family - UT | 5,015 | $2,500 | 5 |
| ENERGY STAR Home: Single Family - UT | 354,349 | $174,750 | 695 |
| 80% ENERGY STAR lighting - Small Home: Single Family - UT | 110,619 | $9,640 | 241 |
| 80% ENERGY STAR lighting - Medium Home: Single Family - UT | 530,005 | $47,820 | 797 |
| 80% ENERGY STAR lighting - Large Home: Single Family - UT | 382,096 | $45,760 | 572 |
| 60% ENERGY STAR lighting - Small Home: Single Family - UT | 10,168 | $775 | 31 |
| 60% ENERGY STAR lighting - Medium Home: Single Family - UT | 76,950 | $7,290 | 162 |
| 60% ENERGY STAR lighting - Large Home: Single Family - UT | 62,010 | $8,450 | 130 |
| 95% AFUE Gas furnace with ECM: Single Family - UT | 248,040 | $119,250 | 795 |
| HVAC Quality Installation Contractor Certification: Single Family - UT | | | |
| HVAC Quality Installation Rater Certification: Single Family - UT | 123,704 | $65,800 | 658 |
| Exterior Wall Upgrade - 2x6 R-20: Single Family - UT | 189,441 | $97,650 | 1,953 |
| Geothermal Heat Pump: Single Family - UT | 7,052 | $3,500 | 2 |
| High Efficiency Air Conditioning: Single Family - UT | 18,357 | $8,700 | 87 |
| Air-Source Heat Pump: Single Family - UT | 1,586 | $500 | 2 |
| Above Code Home - Builder Certified: Single Family -UT | 165 | $125 | 5 |
| Above Code Home - Rater certified: Single Family - UT | 64,258 | $42,275 | 1,691 |
| R-5 Windows: Single Family - UT | 75 | $24 | 1 |
| CEE Tier 3 Refrigerator: Single Family - UT | | | |
| Premium Evaporative Equipment - Ducted: Single Family - UT | | | |
| Premium Evaporative Equipment - Non-Ducted: Single Family - UT | 1,406 | $500 | 1 |
| **Total for Single Family** | **2,185,296** | **$635,309** | **7,828** |

| Multi Family Measure | Total KWh Saving @ Site | Total Incentives | Total Quantity |
|---|---|---|---|
| High Performance ENERGY STAR Home: Multifamily - UT | | | |
| ENERGY STAR Home: Multifamily - UT | 210,192 | $104,400 | 696 |
| 80% ENERGY STAR lighting - Small Home: Multifamily - UT | 221,676 | $22,620 | 1,131 |
| 80% ENERGY STAR lighting - Medium Home: Multifamily - UT | 388,362 | $30,420 | 1,014 |
| 80% ENERGY STAR lighting - Large Home: Multifamily - UT | 45,236 | $3,440 | 86 |
| 60% ENERGY STAR lighting - Small Home: Multifamily - UT | 5,600 | $600 | 40 |
| 60% ENERGY STAR lighting - Medium Home: Multifamily - UT | 42,588 | $3,120 | 156 |
| 60% ENERGY STAR lighting - Large Home: Multifamily - UT | 19,552 | $1,560 | 52 |
| 95% AFUE Gas furnace with ECM: Multifamily - UT | 8,736 | $4,200 | 28 |
| HVAC Quality Installation Contractor Certification: Multifamily - UT | | | |
| HVAC Quality Installation Rater Certification: Multifamily - UT | 60,514 | $38,300 | 766 |
| Exterior Wall Upgrade - 2x6 R-20: Multifamily - UT | 20,741 | $11,852 | 2,963 |
| Geothermal Heat Pump: Multifamily - UT | | | |
| High Efficiency Air Conditioning: Multifamily - UT | 3,708 | $2,700 | 36 |
| Air-Source Heat Pump: Multifamily - UT | | | |
| Above Code Home - Builder Certified: Multifamily - UT | | | |
| Above Code Home - Rater certified: Multifamily - UT | 78,750 | $46,875 | 1,875 |
| CEE Tier 3 Refrigerator: Multiamily - UT | | | |
| Premium Evaporative Equipment - Ducted: Multifamily - UT | | | |
| Premium Evaporative Equipment - Non-Ducted: Multifamily - UT | | | |
| **Total for Multi Family** | **1,105,655** | **$270,087** | **8,843** |
| **Grand Total for Single and Multi Family** | **3,290,951** | **$905,396** | **16,671** |

Program Management

The program manager responsible for the *New Homes* program in Utah is also responsible for new home services found in the *Home Energy Savings* program in Utah, Idaho and Wyoming. 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 *New Homes* program was administered by Nexant, Inc. ("Nexant"). Nexant's services include design, implementation and evaluation of commercial, industrial, and residential energy efficiency program in the United States. The Company contracts with Nexant to provide coordination and application processing services for the *New Homes* program. Specifically, Nexant is responsible for the following:

- Builder and trade ally engagement – Identifies, recruits, supports and assists builders and their sub-contractors to increase energy efficiency standards in new residential construction.
- Incentive processing and administrative support – Handles incoming inquiries as assigned, processes incentive applications, provide program design services, evaluation and regulatory support upon request.
- Inspections – Verifies on an on-going basis the installation of measures. Summary of the inspection process is in Appendix 3.
- Program specific customer communication and outreach.

The program administrator contract for *New Homes* expired at the end of 2016. The program was transitioned to CLEAResult effective December 1, 2016.

Infrastructure

The program processed 16,671 measures in 5,973 homes in 2016. In addition, the program provided training sessions and promotional support including:

- Program staff participated on the board of directors of the Salt Lake Home Builder Associations and Utah State Home Builders Association.
- Quarterly meetings with home raters.

Program Changes

In 2016, the *New Homes* program was canceled under Schedule 110 and consolidated under the *wattsmart Homes* program, Schedule 111, effective December 1, 2016. The new program includes the following stand-alone measures:

- Central Air Conditioner, $\geq$ 15 SEER
- Gas Furnace, $\geq$ 95% AFUE with ECM

The new qualification for whole home performance is based on a Home Energy Rating System (HERS), a scoring system for home efficiency. The system is based on a software analysis of home plans that takes into consideration all details of the home such as orientation, insulation values, window to wall ratio, HVAC efficiency, water heating efficiency, envelope tightness, duct leakage, and lighting efficiency. This program design allows builders flexibility in reaching measure compliance and all incentive applications are submitted by trained HERS raters, which reduces administrative costs when compared to the previous program design of all stand-alone measures.

Evaluation

A process and impact evaluation for program years 2013 – 2014 was published in 2016. Key findings include:

- High freeridership levels for stand alone measures (52%).
- High program satisfaction amongst active participating builders and home energy raters.
- The program administrator, Nexant, reports that the primary barrier to attracting builders to participate is persuading them to build their homes differently and more efficiently.
- According to the nonparticipant homeowner surveys, the average nonparticipant new home had energy efficient lighting installed in 68% of available sockets, and one-half of these homes had energy efficient lighting installed in at least 80% of available sockets.

The results of the evaluation can be viewed at http://www.pacificorp.com/es/dsm/utah.html.

## Home Energy Reports

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 program's cost effectiveness is provided in Table 23.

Table 23
Cost Effectiveness for Home Energy Reports

| Benefit/Cost Test | Benefit/Cost Ratio | Net Benefits |
|---|---|---|
| PTRC | 1.13 | $359,711 |
| TRC | 1.03 | $76,242 |
| UCT | 1.03 | $76,242 |
| PCT | N/A | N/A |
| RIM | 0.34 | ($5,498,773) |

In 2016, the program achieved total savings at site of 49,244,502 kWh; 24,433,796 kWh for the legacy group, 22,871,929 kWh for the expansion group and 1,938,777 kWh from the refill group. The "legacy" group is defined as the 2012 initial participant wave, the "expansion" group is defined as the 2014 participant expansion wave and the "refill" group is defined as the additional customers added in August 2016.

Reports were initially provided to approximately 95,000 customers in the legacy group and an additional 220,000 customers were added to the expansion group. In order to address customer attrition, a refill wave of 39,000 customers was added in August 2016. The number of participant's decreased over time due to customer attrition related to general customer churn (customer move-outs) and customers requesting to be removed from the program. To date, only 1.9% of customers have requested to be removed from the program. As of December 2016, 267,084 customers were active recipients of Home Energy Reports. In 2016, 343 customers opted out of the program. Total savings and participation by group is provided in Table 24.

Table 24
Savings and Participation for Home Energy Reports

| | Legacy | Expansion | Refill | Total |
|---|---|---|---|---|
| **2016 Savings kWh** | 24,433,796 | 22,871,929 | 1,938,777 | 49,244,502 |
| **Dec. 2016 Participation** | 68,615 | 161,423 | 37,046 | 267,084 |

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 Utah residential customers have access to a web portal which contains other benefits such as a home energy audit tool, the ability for customers to update their home profile (for more accurate comparisons), understand annual usage, see how weather impacts usage, and suggestions on more ways to save energy around their home.

Program Management

The program manager responsible for the *Home Energy Reports* program in Utah is also responsible for the program in Idaho and Wyoming, the *Irrigation Load Control* in Utah and Idaho, and the *Cool Keeper* 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 in each state's compliance requirements.

Program Administration

The *Home Energy Reports* program is administered by Oracle. Oracle'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 Oracle to provide energy savings, software services, and printing and delivery of energy reports to customers.

Oracle is responsible for the following:

- Selecting Qualifying Customers – Oracle 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 – Oracle conducts statistical analysis to perform pattern recognition in order to derive actionable insights to selected customers. Oracle 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 – Oracle operates and maintains a customer Web portal that participants may visit for additional information about their energy usage and saving opportunities, including an online home energy audit.

Evaluation

A process and impact evaluation for program years 2014 – 2015 was published in 2016. Both the legacy and expansion waves were evaluated. The primary objective of the evaluation report was to determine the extent to which participants in the *Home Energy Reports* program reduced their energy consumption due to the program. Secondary objectives were to report on customer

satisfaction with the program, and on behavioral and information effects of the program. Key findings from the evaluation include:

- Savings remained relatively stable across the two years for the Legacy Wave. Expansion Wave reflect the start of this wave in late 2014 and ramp-up into 2015.
- Savings has leveled off for the Legacy Wave since its inception in 2012. This is common for a mature program. The Expansion Wave demonstrates increasing savings over time as is frequently found with newer waves.
- Total double-counted savings was 0.16% of total savings for SYLR and HES programs which means treatment customers were slightly less likely than control customers to participate in other RMP energy efficiency program, thus, double-counting of energy savings does not appear to be a concern. Additionally, Navigant found no evidence of double-counting in the HES upstream lighting program.
- The program was cost effective across all years with the exception of the RIM test.
- Legacy Wave reported lower satisfaction with HER (54%) compared to Expansion Wave (71%). Legacy group had less confidence that the reports were accurate and cited neighbor comparisons as the least valuable component. It is common with HER programs that higher average usage participants report lower overall satisfaction.

The results of the evaluation can be viewed at http://www.pacificorp.com/es/dsm/utah.html.

## Low Income Weatherization

The *Low Income Weatherization* program provides energy efficiency services to income-eligible households through a partnership with the Utah Department of Workforce Services, Housing and Community Development Division ("HCD"). Services are at no cost to the program participants.

In 2016, the program achieved savings at site of 210,154 kWh and served 332 homes. The measures installed through the *Low Income Weatherization* program are limited to those that reduce electricity use in participant's homes. The majority of homes served are not electrically heated and do not have electric water heaters. Therefore, most of the Company funds cover lighting and refrigerator replacement costs.

Cost effectiveness results for 2016 are provided in Table 25.

Table 25
Cost Effectiveness for *Low Income Weatherization*

| Benefit/Cost Test | Benefit/Cost Ratio | Net Benefits |
|---|---|---|
| PTRC | 1.66 | $38,906 |
| TRC | 1.51 | $29,974 |
| UCT | 1.51 | $29,974 |
| PCT | N/A | N/A |
| RIM | 0.41 | ($127,437) |

Total savings, measure type and the corresponding numbers of homes that installed the measure type are provided in Table 26.

Table 26
Total Savings, Homes Served and Measure Counts

| | |
|---|---|
| Total kWh Savings @ Site | 210,154 |
| Participation – Total number of Homes Served | 332 |
| **Measure Type Installed in Each Home** | **#** |
| Ceiling Insulation | 4 |
| Duct Sealing | 1 |
| Furnace Fans | 116 |
| Compact Fluorescent Light Bulbs | 282 |
| Refrigerator Testing on Models not Replaced | 49 |
| Refrigerator Replacements | 43 |
| Energy Education | 3 |
| Light Emitting Diode Light Bulbs | 6 |
| Window Replacement | 3 |

Program Management

The program manager responsible for the *Low Income Weatherization* program in Utah is also responsible for the *Low Income Weatherization* program in California, Idaho, Washington and Wyoming; energy assistance programs in Utah, California, Idaho, Oregon, Washington and Wyoming; and bill discount programs in Utah, California and Washington. The program manager is responsible for the cost effectiveness of the weatherization program in each state, partnerships and agreements in place with 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 agency contracts and state specific tariffs.

Program Administration

The Company currently has a contract in place with HCD to provide services through the *Low Income Weatherization* program. The state agency receives federal funds and subcontracts with seven non-profit agencies that install energy efficiency measures in the homes of income eligible households throughout the Company's service area. Company funding of 50 percent of the cost of approved measures is leveraged by HCD with the federal funding they receive, allowing more homes to be served each year.

By contract with the Company, HCD and their subcontracting local agencies are responsible for the following:

- Income Verification – The local agencies determine if participants are income eligible based on HCD guidelines. Household's interested in obtaining weatherization services apply through the agencies. The current income guidelines can be viewed at www.benefits.gov/benefits/benefit-details/1884.
- Energy Audit – Agencies use a United States Department of Energy approved audit tool 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 the energy efficiency measures.
- Post Inspections – Agencies inspect 100 percent of completed homes. HCD also inspects a random sample of homes. See Appendix 3 for verification summary.
- Billing Notification – HCD is required to submit a billing to Company within 60 days after job completion. They include a form indicating the measures installed and associated cost on each completed home along with their invoice.

Program Changes

Effective March 1, 2016, LEDs were added to the list of efficiency measures eligible for funding.

Evaluation

The Company initiated a process and impact evaluation for program years 2013 – 2015 by Opinion Dynamics. The evaluation is anticipated to be published in 2017.

## NON-RESIDENTIAL ENERGY EFFICIENCY

The *Non-Residential Energy Efficiency* program is promoted to the Company's customers as *watt*smart Business. The *watt*smart 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.

Total non-residential program savings at site increased 74 percent from 2015, from 120,368,311 kWh in 2015 to 209,941,939 kWh in 2016. Energy savings from the commercial sector had the largest savings increase.

The program was cost effective from every test perspective except the RIM. Cost effectiveness results for 2016 are provided in Table 27.

Table 27
Cost Effectiveness for Non-Residential Energy Efficiency

| Benefit/Cost Test | Benefit/Cost Ratio | Net Benefits |
|---|---|---|
| PTRC | 1.82 | $53,402,074 |
| TRC | 1.66 | $42,651,225 |
| UCT | 2.87 | $70,007,782 |
| PCT | 2.30 | $91,610,058 |
| RIM | 0.77 | ($32,960,833) |

Total incentives, savings and completed projects are provided in Table 28 by customer sector.

Table 28
Participation by Sector

| Project Sector | Total kWh Savings @ Site | Cash Incentive | Bill Credits | Total # of Projects |
|---|---|---|---|---|
| Agricultural | 10,851,979 | $1,092,703 | | 47 |
| Commercial | 133,500,517 | $15,772,961 | $1,360,288 | 3910 |
| Industrial | 65,589,443 | $6,419,090 | $2,110,112 | 339 |
| **Grand Total** | **209,941,939** | **$23,284,754** | **$3,470,400** | **4,296** |

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.
- Small Business Direct: Provides enhanced incentives and direct installation of lighting retrofits to qualified small business customers (Note: this offer was suspended in July 2015 due to over participation and was re-launched in September 2016).
- 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 can commit to an energy savings of a minimum of 1,000,000 kWh/year.
- Midstream/LED instant incentive: Provides instant, point-of-purchase incentive for LED lamps and retrofit kits sold through qualifying participating distributors. Customers purchasing lamps from non-participating suppliers can apply for incentives after purchase.

Total savings, projects and incentives by measure category are provided in Table 29 below.

Table 29
Participation by Measure Category

| Measure Categories | Total kWh/Yr Savings | Cash Incentive | Bill Credit | Total kW/Yr Savings | Total # of Projects |
|---|---|---|---|---|---|
| Additional Measures | 6,679,791 | $ 811,710 | $ - | 356 | 16 |
| Building Shell | 1,667,897 | $ 529,533 | $ - | 666 | 169 |
| Compressed Air | 4,587,664 | $ 582,506 | $ 75,030 | 255 | 35 |
| Direct Install | 588,199 | $ 168,812 | | 1,728 | 97 |
| Electronics | 721,675 | $ 40,225 | $ - | 140 | 3 |
| Energy Management | 20,149,968 | $ 402,999 | $ - | 1,421 | 57 |
| Energy Manager Co-Funding | - | $ 476,366 | $ - | - | 7 |
| Farm & Dairy | 67,050 | $ 3,950 | $ - | 9 | 2 |
| Food Service Equipment | 5,978,926 | $ 610,055 | $ - | 875 | 133 |
| HVAC | 18,665,056 | $ 2,469,514 | $ 118,585 | 3,396 | 230 |
| Irrigation | 761,772 | $ 91,872 | $ - | 200 | 34 |
| Lighting | 128,241,826 | $ 14,597,776 | $ 2,975,645 | 16,553 | 3,399 |
| Motors | 18,013,297 | $ 1,998,155 | $ 283,306 | 1,880 | 101 |
| Refrigeration | 3,818,818 | $ 501,282 | $ 17,833 | 321 | 13 |
| **Grand Total** | **209,941,939** | **$ 23,284,754** | **$ 3,470,400** | **27,800** | **4,296** |

Program Administration

The program is primarily administered through two delivery channels that are differentiated based upon customer needs: contracted DSM delivery and internal DSM delivery.

*Contracted DSM Delivery*

The contracted DSM delivery channel generally targets typical opportunities which serves small to medium sized business customers and, to a lesser extent, large business customers. Administration is provided through Company contracts outlined below by contractor and associated tasks:

- Nexant, Inc. ("Nexant") manages trade ally coordination, midstream incentives, trade ally training and application processing services for commercial measures.
- Cascade Energy ("Cascade") manages trade ally coordination, midstream incentives, trade ally training and application processing services for industrial and agricultural measures.
- Willdan Energy Solutions ("Willdan") manages coordination, outreach training and application processing services for the small business direct installation offering.

Nexant and Cascade are responsible for the following:

- Trade ally engagement – includes identification, recruiting, training, supporting and assisting trade allies to increase sales and installation of energy efficient equipment at qualifying business customer facilities.
- Incentive processing and administrative support – includes handling incoming inquiries as assigned, processing incentive applications, developing and maintaining standardized analysis tools, providing program design services, and evaluation and regulatory support upon request.
- Custom analysis and project facilitation for small/medium customer projects.
- Managing savings acquisition to targets within budget.
- Continual improvement of program operations and customer satisfaction.
- Inspections – includes verifying on an on-going basis the installation of measures. A summary of the inspection process is in Appendix 3.

Willdan is responsible for the following:

- Small business engagement - includes identification, outreach, assessing/auditing, installing and inspecting installation of energy efficient equipment at qualifying business customer facilities.
- Administrative support – includes handling incoming inquiries as assigned, processing applications, developing and maintaining standardized analysis tools, providing program design services, and evaluation and regulatory support upon request.
- Managing savings acquisition to targets within budget.
- Continual improvement of program operations and customer satisfaction.

*Internal DSM Delivery*

The internal DSM delivery channel targets large energy users who generally have multiple opportunities for energy efficiency improvements, such as those that require complex custom analysis. These large projects are administered by internal Company project managers and allows for a single point of contact to assist customers with their various opportunities. In this delivery channel, project managers are responsible for the following:

- Single point of contact for large customers to assist with their energy efficiency projects.
- Provide customer outreach and education of energy efficiency opportunities.
- Facilitate custom energy efficiency analysis, quality assurance and verification of savings through a pre-contracted group of engineering firms. See table 30.
- Manage engineering firms to ensure program compliance, quality of work and customer satisfaction.
- Manage *watt*smart Business projects through the entire project lifecycle.

The contracts for the outsourced delivery channel expired June 30, 2016. Following a competitive bid process, these contracts were awarded to Nexant and Cascade for another 3-year term. A third contract, awarded to Willdan, will administer the Small Business Direct Installation offer within the *watt*smart Business Program. Additional information is included in the Program Changes section.

Infrastructure

*Contracted DSM Delivery*

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 lighting, HVAC, motors/VFDs, and irrigation. 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 5 to this report. In most cases, customers are not required to select a vendor from these lists to receive an incentive[23].

The current counts of participating trade allies by technology are in Table 30 below.

Table 30
Participating Trade Allies[24]

| Lighting | HVAC | Motors and VFD |
|---|---|---|
| 173 | 75 | 91 |

[23] Customers receiving Small Business Lighting incentives are required to use an approved contractor selected from a competitive request for bid process.
[24] Some trade allies may participate in more than one technology. Therefore, the count of unique participating firms is less than the total count provided above.

*Internal DSM Delivery*

Given the diversity of the non-residential customers served by the Company, a pre-approved, pre-contracted group of engineering firms are used to perform facility specific energy efficiency analysis, quality assurance and verification services. Each customer's project is directly managed by one of the Company's in-house project managers. The project manager works directly with the customer or through the appropriate Company regional business manager located in Utah.

On October 31, 2016 the contracts for engineering firms providing these services expired. Consequently, the Company initiated a request for proposals in early 2016 to obtain contracts with qualified firms to provide these services to customers. Twelve firms were selected. Table 31 lists the engineering firms under contract with the Company both before this bid cycle and afterward.

Table 31
Energy Engineering Firms

| Engineering Firm | Main Office Location | Contracted prior to 10/31/16 | Contracted after 11/01/16 |
|---|---|---|---|
| Abacus Resource Management Company | Beaverton, OR | X | |
| Brendle Group | Fort Collins, CO | X | X |
| Cascade Energy Engineering | Cedar Hills, UT | X | X |
| Compression Engineering Corp | Salt Lake City, UT | X | |
| Ecova | Portland, OR | X | |
| EMP2, Inc | Richland, VA | X | X |
| Energy Resource Integration, LLC | Sausalito, CA | X | X |
| Energy and Resource Solutions | North Andover, MA | X | |
| EnerNOC Inc. | Portland, OR | X | |
| EnSave, Incorporated | Richmond, VT | X | X |
| ETC Group, Incorporated | Salt Lake City, UT | X | X |
| Evergreen Consulting Group | Beaverton, OR | X | X |
| Fazio Engineering | Weston, OR | X | |
| kW Engineering, Inc. | Salt Lake City, UT | X | X |
| Lincus Incorporated | Tempe, AZ | X | |
| Nexant, Incorporated | Salt Lake City, UT | X | X |
| QEI Energy Management, Inc. | Beaverton, OR | X | |
| RM Energy Consulting | Pleasant Grove, UT | X | X |
| Rick Rumsey, LLC | Ammon, ID | X | X |
| SBW Consulting, Inc. | Bellevue, WA | X | |
| Solarc Architecture & Engineering, Inc. | Eugene, OR | X | X |
| Triple Point Energy | Portland, OR | X | |

Program Changes

Several notable changes occurred within the *watt*smart Business Program in 2016 that targeted the small business sector and lighting. These changes include the redesign of the Small Business Lighting offer to the Small Business Direct Installation offer, and a restructuring of LED lighting incentives.

Small Business Lighting was restructured to Small Business Direct Installation. The program change was designed to expand the program offering from lighting to additional energy efficient measures. The intent is to benefit the small business market segment through offering an incentive, in the form of a direct installation of energy efficient measures, by a certified and/or licensed contractor. This program will target specific geographical areas and is intended to include energy audits of customers' facilities identifying qualifying energy savings measures that could be installed, and the associated costs. Project proposals based on completed audits will be provided that fit within customers' operational and budgetary parameters. Customers can then choose to move forward with the entire project installing all qualifying upgrades, or select a portion of qualifying upgrades from the project proposal. Depending on the size and demographics of each area, the following tactics may be used to engage with Small Business customers:

- Direct customer events,
- Community fairs, street fairs, and "Main Street" events,
- Geo-targeted pop-up events and workshops
- City Council and Chamber of Commerce Meetings,
- Trade/Business Association Events,
- Door to door (in person and print)
- Digital (website), and
- Direct-mail, email blasts or print media.

The newly designed Small Business Direct Install offer is structured to increase participation, particularly in rural communities where program participation has historically been lower than urban communities. As mentioned in the Program Administration section, a new outsourced delivery contractor, Willdan, will administer this program.

The Company also restructured LED lighting. LED technology has become the predominant lighting technology in energy efficiency projects, and that trend is anticipated to continue. Long lamp life (30,000 hours+), reduced lifetime maintenance costs, absence of hazardous materials (i.e. mercury), controllability, and higher efficacy (lumens/watt) and decreasing costs relative to traditional technologies have contributed to a shift toward using LED products on most energy efficiency projects.

To address the continuing and rapid shift to more efficient LED technologies, the Company revamped the form and value of lighting incentives listed in the lighting retrofits table on the website. The Company moved away from incenting lighting in technology-specific categories and transitioned to a true pay-for-savings approach. Under the new incentive structure interior, exterior and street/pole lighting are all incentivized at a specific cost per kWh saved, regardless of what

type of technology is installed. Lighting incentives were also lowered proportionately due to decreasing costs for LED technology.

Evaluation

The Strategic Energy Management component of *watt*smart Business was evaluated. The report was published in 2016 and evaluated two projects over the 2014 – 2015 program years. Key findings include:

- Necessary framework exists.
- Refine vetting of potential participants.
- Older billing system does not support automated data collection and reporting.
- Not cost effective for smaller customers with less savings.

The *watt*smart Business program evaluation for program years 2014-2015 was in progress during 2016. It was published in early 2017.

The results of the evaluation can be viewed at http://www.pacificorp.com/es/dsm/utah.html.

## COMMUNICATIONS, OUTREACH AND EDUCATION

*watts*mart is an overarching energy efficiency campaign with the overall goal to engage customers in reducing their energy usage through behavioral changes, and pointing them to the programs and information to assist them. “Rocky Mountain Power wants to help you save energy and money” is the key message, and the Company utilizes earned media, customer communications, education and outreach, advertising and program specific marketing to communicate the value of energy efficiency, provide information regarding low-cost, no-cost energy efficiency measures and to educate customers on the availability of programs, services and incentives.

A summary of 2016 (Year 7) “Utah Demand-side Management Outreach and Communications Campaign” is included in Appendix 7.

# 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, 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 3.

Evaluation, measurement and verification tasks are segregated within the Company organization to ensure they are performed and managed by personnel who are not directly responsible for program management.

Information on evaluation activities completed or in progress during 2016 is summarized in the chart below. A summary of the recommendations are provided in Appendix 6. The evaluation report is available at www.pacificorp.com/es/dsm/utah.html

| Program | Years Evaluated | Evaluator | Progress Status |
|---|---|---|---|
| Home Energy Savings | 2013 – 2014 | Cadmus | Completed |
| Home Energy Reports | 8/1/2012 - 1/31/2014 | Navigant | Completed |
| New Homes | 2013 - 2014 | Cadmus | Completed |
| Refrigerator Recycling | 2013 - 2014 | Cadmus | Completed |
| Strategic Energy Management | 2014 - 2015 | Cadmus | Completed |
| *watt*smart Business | 2014 - 2015 | Cadmus | Completed in 2017 |
| Home Energy Savings | 2015 - 2016 | Cadmus | In Progress |
| Low Income Weatherization | 2013 - 2015 | Opinion Dynamics | In Progress |

# Appendix 1

# Report Requirements

Report requirements were revised and approved pursuant to the Commission's Order issued February 16, 2017, in Docket No. 17-035-04, effective February 17, 2017.

| Requirement No. | Description | Report Reference |
|---|---|---|
| 1. | The Company will file the Annual Report between May 1 and June 1. | Filed May 15, 2017 |
| 2. | The Company shall report Class 1 capacity reduction, estimated Class 2 megawatt savings during system peak, and Class 2 megawatt-hour savings achieved, all compared against the Integrated Resource Plan targets and forecast targets submitted in the applicable DSM November 1st Deferred Account and Forecast Report.[1] | Table 2, Page 7 |
| 3. | In the executive summary, include the lifetime megawatt-hour savings in addition to first year megawatt-hour savings. | Page 5 |
| 4. | The Company shall clearly state for each program and measure whether all reported savings are ex-post or ex-ante. | Pg. 5, footnote 2; pg. 8, footnote 13; pg. 21 |
| 5. | The Company shall accurately and clearly report all cost effectiveness test results at the portfolio and sector level in addition to the program and measure category levels. | Appendix 2 |
| 6. | The Company shall perform cost effectiveness tests using avoided costs from planned assumptions. | Appendix 2 |
| 7. | The Company shall provide cost effectiveness results with associated decrement values and program expenditures for the year's performance of the Company's Class 1 programs, subject to the confidentiality requirements of Utah Administrative Code R746-100-16. | Confidential Appendix 8 |
| 8. | For Class 1 programs, capacity reduction will be reported in megawatts. | Tables 2, 3, and Peak Reduction section |
| 9. | The Company shall provide Class 1 program data regarding loads available for curtailment, actual curtailment achieved, and program expenditures. | Peak Reduction section |
| 10. | The Company shall include published evaluations that have not previously been provided in an Annual Report, and also include a schedule of current and upcoming evaluations. | Evaluation section |
| 11. | The Company shall submit process and impact evaluation and annual reporting costs at the sector level for the cost effectiveness tests. | N/A for 2016 Report |

[1] Pursuant to the Phase I Stipulation filed August 3, 2009, in Docket No. 09-035-T08, and approved in the order dated August 25, 2009, in the same, the Company must provide a forecast of expenditures for approved programs and their acquisition targets for the next calendar year by November 1st of each year.

# Appendix 2

# Utah Cost Effectiveness

**Utah Portfolio Level**

Navigant estimated the cost-effectiveness for the overall energy efficiency portfolio and component sectors, based on 2016 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall energy efficiency portfolio and the two sector components.

The portfolio passes the cost-effectiveness for all the tests except the RIM test. The memo consists of the following tables.

Table 1 - Utility Inputs
Table 2 – Portfolio Level Costs 2016
Table 3 – Benefit/Cost Ratios by Portfolio Type
Table 4 – 2016 DSM Portfolio with Load Control Programs Cost-Effectiveness Results
Table 5 - 2016 Total Energy Efficiency Portfolio Cost-Effectiveness Results
Table 6 – 2016 C&I Energy Efficiency Portfolio Cost-Effectiveness Results
Table 7 – 2016 Residential Energy Efficiency Portfolio Cost-Effectiveness Results

**Table 1 - Utility Inputs**

| Parameter | Value |
|---|---|
| Discount Rate | 6.66% |
| Residential Line Loss | 9.32% |
| Commercial Line Loss | 8.71% |
| Industrial Line Loss | 5.85% |
| Irrigation Line Loss | 9.24% |
| Residential Energy Rate ($/kWh) | $0.1111 |
| Commercial Energy Rate ($/kWh) | $0.0852 |
| Industrial Energy Rate ($/kWh) | $0.0605 |
| Irrigation Energy Rate ($/kWh) | $0.0778 |
| Inflation Rate[1] | 1.9% |

[1] Future rates determined using a 1.9% annual escalator.

**Table 2 – Portfolio Level Costs 2016**

| Expense | Cost |
|---|---|
| Outreach & Communications Campaign | $1,317,861 |
| Portfolio Technical Reference Library | $26,223 |
| Portfolio Potential Study | $58,754 |
| Portfolio Training | $36,588 |
| DSM Central | $125,051 |
| **Total Costs** | **$1,564,477** |

**Table 3 – Benefit/Cost Ratios by Portfolio Type**

| Measure Group | PTRC | TRC | UCT | RIM | PCT |
|---|---|---|---|---|---|
| DSM Portfolio with Load Control Programs | 1.92 | 1.75 | 1.98 | 0.89 | 2.66 |
| Total Energy Efficiency Portfolio | 1.80 | 1.64 | 2.67 | 0.74 | 2.46 |
| C&I Programs | 1.82 | 1.66 | 2.87 | 0.77 | 2.30 |
| Residential Programs | 1.87 | 1.70 | 2.48 | 0.68 | 2.96 |

**Table 4 – 2016 DSM Portfolio with Load Control Programs Cost-Effectiveness Results**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | n/a | $134,221,176 | $258,063,082 | $123,841,907 | 1.92 |
| Total Resource Cost Test (TRC) No Adder | n/a | $134,221,176 | $234,602,802 | $100,381,626 | 1.75 |
| Utility Cost Test (UCT) | n/a | $118,631,986 | $234,602,802 | $115,970,816 | 1.98 |
| Rate Impact Test (RIM) | | $263,563,527 | $234,602,802 | -$28,960,725 | 0.89 |
| Participant Cost Test (PCT) | | $93,055,904 | $247,886,655 | $154,830,751 | 2.66 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0001050263 |

**Table 5 - 2016 Total Energy Efficiency Portfolio Cost-Effectiveness Results**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0501 | $89,743,923 | $161,858,505 | $72,114,582 | 1.80 |
| Total Resource Cost Test (TRC) No Adder | $0.0501 | $89,743,923 | $147,144,095 | $57,400,173 | 1.64 |
| Utility Cost Test (UCT) | $0.0308 | $55,042,068 | $147,144,095 | $92,102,027 | 2.67 |
| Rate Impact Test (RIM) | | $199,973,609 | $147,144,095 | -$52,829,514 | 0.74 |
| Participant Cost Test (PCT) | | $93,055,904 | $228,773,990 | $135,718,086 | 2.46 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0001915867 |

**Table 6 – 2016 C&I Energy Efficiency Portfolio Cost-Effectiveness Results**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0451 | $64,857,269 | $118,259,343 | $53,402,074 | 1.82 |
| Total Resource Cost Test (TRC) No Adder | $0.0451 | $64,857,269 | $107,508,494 | $42,651,225 | 1.66 |
| Utility Cost Test (UCT) | $0.0261 | $37,500,712 | $107,508,494 | $70,007,782 | 2.87 |
| Rate Impact Test (RIM) | | $140,469,327 | $107,508,494 | -$32,960,833 | 0.77 |
| Participant Cost Test (PCT) | | $70,572,824 | $162,182,882 | $91,610,058 | 2.30 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0001014324 |

**Table 7 – 2016 Residential Energy Efficiency Portfolio Cost-Effectiveness Results**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0662 | $23,322,177 | $43,599,162 | $20,276,985 | 1.87 |
| Total Resource Cost Test (TRC) No Adder | $0.0662 | $23,322,177 | $39,635,601 | $16,313,425 | 1.70 |
| Utility Cost Test (UCT) | $0.0453 | $15,976,879 | $39,635,601 | $23,658,723 | 2.48 |
| Rate Impact Test (RIM) | | $57,939,806 | $39,635,601 | -$18,304,204 | 0.68 |
| Participant Cost Test (PCT) | | $22,483,080 | $66,591,108 | $44,108,028 | 2.96 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0001039341 |

NAVIGANT

**Utah Wattsmart Business Program**

Navigant estimated the cost-effectiveness results for the Utah Wattsmart Business Program, based on 2016 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program and for the 14 measure categories.

Cost-effectiveness was tested using the 2016 IRP east industrial 40%, east commercial lighting 53%, east commercial cooling 14% and east plug loads 71% load factor decrements. The program passes PTRC, TRC and UCT cost-effectiveness tests. The memo consists of the following tables.

Table 1 – Utility Inputs
Table 2 – Annual Wattsmart Business Program Costs by Measure Category
Table 3 – Annual Wattsmart Business Program Savings by Measure Category
Table 4 – Benefit/Cost Ratios by Measure Category
Table 5 – Wattsmart Business Program Level Cost-Effectiveness Results
Table 6 – Wattsmart Business Additional Measures Cost-Effectiveness Results
Table 7 – Wattsmart Business Building Shell Cost-Effectiveness Results
Table 8 – Wattsmart Business Compressed Air Cost-Effectiveness Results
Table 9 – Wattsmart Business Direct-Install Lighting Cost-Effectiveness Results
Table 10 – Wattsmart Business Electronics Cost-Effectiveness Results
Table 11 – Wattsmart Business Energy Management Cost-Effectiveness Results
Table 12 – Wattsmart Business Energy Manager Co-Funding Cost-Effectiveness Results
Table 13 – Wattsmart Business Farm and Dairy Cost-Effectiveness Results
Table 14 – Wattsmart Business Food Service Equipment Cost-Effectiveness Results
Table 15 – Wattsmart Business HVAC Cost-Effectiveness Results
Table 16 – Wattsmart Business Irrigation Cost-Effectiveness Results
Table 17 – Wattsmart Business Lighting Cost-Effectiveness Results
Table 18 – Wattsmart Business Motors Cost-Effectiveness Results
Table 19 – Wattsmart Business Refrigeration Cost-Effectiveness Results

1375 Walnut Street
Suite 200 | Boulder, CO 80302
303.728.2500 main
navigant.com

**Table 1 – Utility Inputs**

| Parameter | Value |
|---|---|
| Discount Rate | 6.66% |
| Commercial Line Loss | 8.71% |
| Industrial Line Loss | 5.85% |
| Irrigation Line Loss | 9.24% |
| Commercial Energy Rate ($/kWh) | 6.10% |
| Industrial Energy Rate ($/kWh) | $0.0778 |
| Irrigation Energy Rate ($/kWh) | $0.0736 |
| Inflation Rate[1] | 1.9% |

[1] Future rates determined using a 1.9% annual escalator.

**Table 2 – Annual Wattsmart Business Program Costs by Measure Category**

| Measure Group | Engineering Costs | Utility Admin | Program Delivery | Program Dev. | Incentives | Bill Credits | Total Utility Costs | Gross Customer Costs |
|---|---|---|---|---|---|---|---|---|
| Additional Measures | $231,201 | $24,089 | $402,115 | $23,100 | $811,710 | $0 | $1,492,215 | $2,800,317 |
| Building Shell | $57,729 | $6,015 | $100,405 | $5,768 | $529,533 | $0 | $699,450 | $1,347,436 |
| Compressed Air | $158,788 | $16,544 | $276,172 | $15,865 | $582,506 | $75,030 | $1,124,905 | $1,813,338 |
| Direct Install-Lighting | $0 | $2,121 | $414,768 | $2,034 | $168,812 | $0 | $587,735 | $0 |
| Electronics | $24,979 | $2,602 | $43,444 | $2,496 | $40,225 | $0 | $113,746 | $97,100 |
| Energy Management | $697,431 | $72,665 | $1,213,004 | $69,681 | $402,999 | $0 | $2,455,780 | $508,212 |
| Energy Man. Co-Funding | $0 | $0 | $0 | $0 | $476,366 | $0 | $476,366 | $0 |
| Farm & Dairy | $2,321 | $242 | $4,036 | $232 | $3,950 | $0 | $10,781 | $41,930 |
| Food Ser. Equip. | $206,943 | $21,561 | $359,924 | $20,676 | $610,055 | $0 | $1,219,159 | $1,195,107 |
| HVAC | $646,035 | $67,310 | $1,123,614 | $64,546 | $2,469,514 | $118,585 | $4,489,604 | $9,699,989 |
| Irrigation | $26,366 | $2,747 | $45,858 | $2,634 | $91,872 | $0 | $169,477 | $245,586 |
| Lighting | $835,972 | $462,465 | $321,432 | $443,478 | $14,597,776 | $2,975,645 | $19,636,768 | $46,799,732 |
| Motors | $623,476 | $64,959 | $1,084,379 | $62,293 | $1,998,155 | $283,306 | $4,116,568 | $4,593,972 |
| Refrigeration | $132,177 | $13,771 | $229,888 | $13,206 | $501,282 | $17,833 | $908,158 | $1,430,104 |
| **Total** | **$3,643,418** | **$757,091** | **$5,619,039** | **$726,009** | **$23,284,754** | **$3,470,400** | **$37,500,712** | **$70,572,824** |

**Table 3 – Annual Wattsmart Business Program Savings by Measure Category**

| Measure Group | Gross kWh Savings | Realization Rate | Adjusted Gross kWh Savings | Net to Gross Ratio | Net kWh Savings | Measure Life |
|---|---|---|---|---|---|---|
| Additional Measures | 6,679,791 | 74% | 4,943,045 | 76% | 3,756,714 | 20 |
| Building Shell | 1,667,897 | 74% | 1,234,244 | 76% | 938,025 | 15 |
| Compressed Air | 4,587,664 | 74% | 3,394,871 | 76% | 2,580,102 | 15 |
| Direct Install-Lighting | 588,199 | 90% | 529,379 | 90% | 476,441 | 12 |
| Electronics | 721,675 | 74% | 534,040 | 76% | 405,870 | 5 |
| Energy Management | 20,149,968 | 84% | 16,925,973 | 76% | 12,863,740 | 12 |
| Energy Manager Co-Funding | 0 | 0% | 0 | 0% | 0 | 0 |
| Farm & Dairy | 67,050 | 81% | 54,311 | 76% | 41,276 | 15 |
| Food Service Equipment | 5,978,926 | 74% | 4,424,405 | 76% | 3,362,548 | 5 |
| HVAC | 18,665,056 | 93% | 17,358,502 | 76% | 13,192,462 | 14 |
| Irrigation | 761,772 | 81% | 617,035 | 76% | 468,947 | 12 |
| Lighting | 128,241,826 | 100% | 128,241,826 | 76% | 97,463,788 | 13 |
| Motors | 18,013,297 | 100% | 18,013,297 | 76% | 13,690,106 | 14 |
| Refrigeration | 3,818,818 | 97% | 3,704,253 | 76% | 2,815,233 | 13 |
| **Total** | **209,941,939** | **95%** | **199,975,182** | **76%** | **152,055,251** | **13** |

**Table 4 – Benefit/Cost Ratios by Measure Category**

| Measure Group | PTRC | TRC | UCT | RIM | PCT |
|---|---|---|---|---|---|
| Additional Measures | 1.30 | 1.18 | 2.22 | 0.63 | 2.07 |
| Building Shell | 0.67 | 0.61 | 1.03 | 0.53 | 1.04 |
| Compressed Air | 1.05 | 0.95 | 1.56 | 0.54 | 1.89 |
| Direct Install-Lighting | 0.79 | 0.72 | 0.51 | 0.35 | 0.00 |
| Electronics | 0.50 | 0.45 | 0.59 | 0.32 | 1.69 |
| Energy Management | 3.30 | 3.00 | 2.98 | 0.71 | 21.19 |
| Energy Manager Co-Funding | n/a | n/a | n/a | n/a | n/a |
| Farm & Dairy | 0.84 | 0.76 | 2.74 | 0.64 | 1.21 |
| Food Service Equipment | 0.82 | 0.75 | 0.93 | 0.48 | 1.75 |
| HVAC | 2.00 | 1.82 | 3.75 | 1.18 | 1.60 |
| Irrigation | 1.75 | 1.59 | 2.48 | 0.94 | 1.85 |
| Lighting | 1.91 | 1.74 | 3.33 | 0.78 | 2.20 |
| Motors | 1.70 | 1.54 | 2.00 | 0.58 | 3.38 |
| Refrigeration | 1.46 | 1.33 | 2.16 | 0.65 | 2.30 |
| **Total** | **1.82** | **1.66** | **2.87** | **0.77** | **2.30** |

**Table 5 – Wattsmart Business Program Level Cost-Effectiveness Results**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0451 | $64,857,269 | $118,259,343 | $53,402,074 | 1.82 |
| Total Resource Cost Test (TRC) No Adder | $0.0451 | $64,857,269 | $107,508,494 | $42,651,225 | 1.66 |
| Utility Cost Test (UCT) | $0.0261 | $37,500,712 | $107,508,494 | $70,007,782 | 2.87 |
| Rate Impact Test (RIM) | | $140,469,327 | $107,508,494 | -$32,960,833 | 0.77 |
| Participant Cost Test (PCT) | | $70,572,824 | $162,182,882 | $91,610,058 | 2.30 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0001014324 |

Table 6 through Table 19 provide cost-effectiveness results for all 14 measures.

**Table 6 – Wattsmart Business Additional Measures Cost-Effectiveness Results (Decrement – East Industrial – 40%, Load Shape – Machinery General)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0590 | $2,808,746 | $3,644,641 | $835,896 | 1.30 |
| Total Resource Cost Test (TRC) No Adder | $0.0590 | $2,808,746 | $3,313,310 | $504,565 | 1.18 |
| Utility Cost Test (UCT) | $0.0313 | $1,492,215 | $3,313,310 | $1,821,096 | 2.22 |
| Rate Impact Test (RIM) | | $5,289,633 | $3,313,310 | -$1,976,323 | 0.63 |
| Participant Cost Test (PCT) | | $2,800,317 | $5,808,313 | $3,007,996 | 2.07 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000039988 |
| Discounted Participant Payback (years) | | | | | 9.07 |

**Table 7 – Wattsmart Business Building Shell Cost-Effectiveness Results (Decrement – East Industrial - 40%, Load Shape – HVAC)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.1198 | $1,193,968 | $795,684 | -$398,285 | 0.67 |
| Total Resource Cost Test (TRC) No Adder | $0.1198 | $1,193,968 | $723,349 | -$470,620 | 0.61 |
| Utility Cost Test (UCT) | $0.0702 | $699,450 | $723,349 | $23,899 | 1.03 |
| Rate Impact Test (RIM) | | $1,366,378 | $723,349 | -$643,029 | 0.53 |
| Participant Cost Test (PCT) | | $1,347,436 | $1,407,069 | $59,634 | 1.04 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000017210 |
| Discounted Participant Payback (years) | | | | | 20.80 |

**Table 8 – Wattsmart Business Compressed Air Cost-Effectiveness Results (Decrement – East Industrial – 40%, Load Shape – Machinery General)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0707 | $1,845,506 | $1,928,700 | $83,194 | 1.05 |
| Total Resource Cost Test (TRC) No Adder | $0.0707 | $1,845,506 | $1,753,364 | -$92,142 | 0.95 |
| Utility Cost Test (UCT) | $0.0431 | $1,124,905 | $1,753,364 | $628,458 | 1.56 |
| Rate Impact Test (RIM) | | $3,234,566 | $1,753,364 | -$1,481,203 | 0.54 |
| Participant Cost Test (PCT) | | $1,813,338 | $3,433,406 | $1,620,068 | 1.89 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000039643 |
| Discounted Participant Payback (years) | | | | | 6.61 |

**Table 9 – Wattsmart Business Direct-Install Lighting Cost-Effectiveness Results (Decrement – East Commercial Lighting – 53%, Load Shape – Lighting)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0979 | $418,923 | $330,010 | -$88,913 | 0.79 |
| Total Resource Cost Test (TRC) No Adder | $0.0979 | $418,923 | $300,009 | -$118,914 | 0.72 |
| Utility Cost Test (UCT) | $0.1373 | $587,735 | $300,009 | -$287,726 | 0.51 |
| Rate Impact Test (RIM) | | $867,649 | $300,009 | -$567,640 | 0.35 |
| Participant Cost Test (PCT) | | $0 | $479,828 | $479,828 | n/a |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000018897 |
| Discounted Participant Payback (years) | | | | | n/a |

**Table 10 – Wattsmart Business Electronics Cost-Effectiveness Results (Decrement – East Plug Loads – 71%, Load Shape – Plug Load)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.1018 | $147,317 | $73,508 | -$73,808 | 0.50 |
| Total Resource Cost Test (TRC) No Adder | $0.1018 | $147,317 | $66,826 | -$80,491 | 0.45 |
| Utility Cost Test (UCT) | $0.0786 | $113,746 | $66,826 | -$46,920 | 0.59 |
| Rate Impact Test (RIM) | | $208,103 | $66,826 | -$141,277 | 0.32 |
| Participant Cost Test (PCT) | | $97,100 | $164,379 | $67,279 | 1.69 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000011224 |
| Discounted Participant Payback (years) | | | | | 2.33 |

**Table 11 – Wattsmart Business Energy Management Cost-Effectiveness Results (Decrement – East Industrial – 40%, Load Shape – Machinery General)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | n/a | $2,439,022 | $8,051,570 | $5,612,549 | 3.30 |
| Total Resource Cost Test (TRC) No Adder | n/a | $2,439,022 | $7,319,609 | $4,880,588 | 3.00 |
| Utility Cost Test (UCT) | n/a | $2,455,780 | $7,319,609 | $4,863,829 | 2.98 |
| Rate Impact Test (RIM) | | $10,334,083 | $7,319,609 | -$3,014,473 | 0.71 |
| Participant Cost Test (PCT) | | $508,212 | $10,769,187 | $10,260,975 | n/a |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000100356 |
| Discounted Participant Payback (years) | | | | | n/a |

**Table 12 – Wattsmart Business Energy Manager Co-Funding Cost-Effectiveness Results (Decrement – None, Load Shape – None)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | n/a | $476,366 | $0 | -$476,366 | n/a |
| Total Resource Cost Test (TRC) No Adder | n/a | $476,366 | $0 | -$476,366 | n/a |
| Utility Cost Test (UCT) | n/a | $476,366 | $0 | -$476,366 | n/a |
| Rate Impact Test (RIM) | | $476,366 | $0 | -$476,366 | n/a |
| Participant Cost Test (PCT) | | $0 | $476,366 | $476,366 | n/a |
| Lifecycle Revenue Impacts ($/kWh) | | | | | n/a |
| Discounted Participant Payback (years) | | | | | n/a |

**Table 13 – Wattsmart Business Farm and Dairy Cost-Effectiveness Results (Decrement – East Industrial – 40%, Load Shape – Machinery General)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0889 | $38,697 | $32,534 | -$6,163 | 0.84 |
| Total Resource Cost Test (TRC) No Adder | $0.0889 | $38,697 | $29,576 | -$9,121 | 0.76 |
| Utility Cost Test (UCT) | $0.0248 | $10,781 | $29,576 | $18,796 | 2.74 |
| Rate Impact Test (RIM) | | $46,403 | $29,576 | -$16,826 | 0.64 |
| Participant Cost Test (PCT) | | $41,930 | $50,821 | $8,891 | 1.21 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000000450 |
| Discounted Participant Payback (years) | | | | | 16.00 |

**Table 14 – Wattsmart Business Food Service Equipment Cost-Effectiveness Results (Decrement – East Industrial – 40%, Load Shape – Machinery General)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0883 | $1,517,385 | $1,247,456 | -$269,929 | 0.82 |
| Total Resource Cost Test (TRC) No Adder | $0.0883 | $1,517,385 | $1,134,051 | -$383,334 | 0.75 |
| Utility Cost Test (UCT) | $0.0709 | $1,219,159 | $1,134,051 | -$85,108 | 0.93 |
| Rate Impact Test (RIM) | | $2,341,619 | $1,134,051 | -$1,207,568 | 0.48 |
| Participant Cost Test (PCT) | | $1,195,107 | $2,086,976 | $891,869 | 1.75 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000095935 |
| Discounted Participant Payback (years) | | | | | 2.93 |

**Table 15 – Wattsmart Business HVAC Cost-Effectiveness Results (Decrement – East Comm. Cooling – 14%, Load Shape – HVAC)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0677 | $9,273,497 | $18,544,207 | $9,270,710 | 2.00 |
| Total Resource Cost Test (TRC) No Adder | $0.0677 | $9,273,497 | $16,858,370 | $7,584,873 | 1.82 |
| Utility Cost Test (UCT) | $0.0328 | $4,489,604 | $16,858,370 | $12,368,765 | 3.75 |
| Rate Impact Test (RIM) | | $14,281,168 | $16,858,370 | $2,577,201 | 1.18 |
| Participant Cost Test (PCT) | | $9,699,989 | $15,471,736 | $5,771,747 | 1.60 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | -$0.0000073771 |
| Discounted Participant Payback (years) | | | | | 9.55 |

**Table 16 – Wattsmart Business Irrigation Cost-Effectiveness Results (Decrement – East Comm. Cooling – 14%, Load Shape – Irrigation)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0756 | $264,251 | $462,849 | $198,598 | 1.75 |
| Total Resource Cost Test (TRC) No Adder | $0.0756 | $264,251 | $420,772 | $156,521 | 1.59 |
| Utility Cost Test (UCT) | $0.0485 | $169,477 | $420,772 | $251,295 | 2.48 |
| Rate Impact Test (RIM) | | $445,675 | $420,772 | -$24,903 | 0.94 |
| Participant Cost Test (PCT) | | $245,586 | $455,290 | $209,704 | 1.85 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000000829 |
| Discounted Participant Payback (years) | | | | | 4.76 |

**Table 17 – Wattsmart Business Lighting Cost-Effectiveness Results (Decrement – East Comm. Lighting – 53%, Load Shape – Lighting)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0405 | $37,631,144 | $71,952,238 | $34,321,094 | 1.91 |
| Total Resource Cost Test (TRC) No Adder | $0.0405 | $37,631,144 | $65,411,126 | $27,779,982 | 1.74 |
| Utility Cost Test (UCT) | $0.0211 | $19,636,768 | $65,411,126 | $45,774,358 | 3.33 |
| Rate Impact Test (RIM) | | $84,379,290 | $65,411,126 | -$18,968,165 | 0.78 |
| Participant Cost Test (PCT) | | $46,799,732 | $102,760,950 | $55,961,218 | 2.20 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000583719 |
| Discounted Participant Payback (years) | | | | | 4.96 |

**Table 18 – Wattsmart Business Motors Cost-Effectiveness Results (Decrement – East Industrial – 40%, Load Shape – Machinery General)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0430 | $5,326,526 | $9,035,641 | $3,709,115 | 1.70 |
| Total Resource Cost Test (TRC) No Adder | $0.0430 | $5,326,526 | $8,214,219 | $2,887,693 | 1.54 |
| Utility Cost Test (UCT) | $0.0333 | $4,116,568 | $8,214,219 | $4,097,650 | 2.00 |
| Rate Impact Test (RIM) | | $14,188,518 | $8,214,219 | -$5,974,299 | 0.58 |
| Participant Cost Test (PCT) | | $4,593,972 | $15,534,026 | $10,940,054 | 3.38 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000171011 |
| Discounted Participant Payback (years) | | | | | 2.25 |

**Table 19 – Wattsmart Business Refrigeration Cost-Effectiveness Results (Decrement – East Industrial – 40%, Load Shape – Refrigeration)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0523 | $1,475,922 | $2,160,303 | $684,381 | 1.46 |
| Total Resource Cost Test (TRC) No Adder | $0.0523 | $1,475,922 | $1,963,912 | $487,990 | 1.33 |
| Utility Cost Test (UCT) | $0.0322 | $908,158 | $1,963,912 | $1,055,754 | 2.16 |
| Rate Impact Test (RIM) | | $3,009,876 | $1,963,912 | -$1,045,964 | 0.65 |
| Participant Cost Test (PCT) | | $1,430,104 | $3,284,533 | $1,854,429 | 2.30 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000032188 |
| Discounted Participant Payback (years) | | | | | 5.04 |

**Utah Home Energy Savings Program**

Navigant estimated the cost-effectiveness results for the Utah Home Energy Savings Program, based on 2016 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program and for the 7 measure categories.

Cost-effectiveness was tested using the 2015 IRP east residential whole house 31%, east residential lighting 47%, east plug loads 71%, east residential cooling 9% and east residential water heating 53% load factor decrements. The program passes the cost-effectiveness for all the tests except the RIM test. The memo consists of the following tables.

Table 1 - Home Energy Savings Inputs
Table 2 – Home Energy Savings Annual Program Costs
Table 3 – Home Energy Savings – Savings by Measure Category
Table 4 - Benefit/Cost Ratios by Measure Category
Table 5 – Home Energy Savings Program Level Cost-Effectiveness Results
Table 6 - Home Energy Savings Appliance Cost-Effectiveness Results
Table 7 - Home Energy Savings Building Shell Cost-Effectiveness Results
Table 8 - Home Energy Savings Energy Kits – DHW Cost-Effectiveness Results
Table 9 - Home Energy Savings Energy Kits – Lighting Cost-Effectiveness Results
Table 10 - Home Energy Savings HVAC Cost-Effectiveness Results
Table 11 - Home Energy Savings Lighting Cost-Effectiveness Results
Table 12 - Home Energy Savings Water Heating Cost-Effectiveness Results

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Suite 200 | Boulder, CO 80302
303.728.2500 main
navigant.com

**Table 1 - Home Energy Savings Inputs**

| Parameter | Value |
|---|---|
| Discount Rate | 6.66% |
| Residential Line Loss | 9.32% |
| Residential Energy Rate ($/kWh) | $0.1111 |
| Inflation Rate[1] | 1.9% |

[1] Future rates determined using a 1.9% annual escalator.

**Table 2 – Home Energy Savings Annual Program Costs**

| Measure Group | Engineering Costs | Utility Admin | Program Delivery | Program Dev. | Incentives | Total Utility Costs | Gross Customer Costs |
|---|---|---|---|---|---|---|---|
| Appliances | $0 | $3,617 | $185,006 | $2,744 | $246,666 | $438,032 | $1,043,807 |
| Building Shell | $0 | $5,898 | $301,692 | $4,474 | $595,717 | $907,781 | $2,854,272 |
| Energy Kits - DHW | $0 | $713 | $21,240 | $541 | $5,913 | $28,407 | $6,552 |
| Energy Kits - Lighting | $0 | $471 | $14,037 | $357 | $14,424 | $29,289 | $17,687 |
| HVAC | $0 | $56,467 | $2,888,137 | $42,830 | $3,789,346 | $6,776,780 | $435,750 |
| Lighting | $0 | $185,713 | $998,815 | $140,865 | $2,164,762 | $3,490,154 | $14,347,220 |
| Water Heating | $0 | $84 | $4,305 | $64 | $7,000 | $11,453 | $15,396 |
| **Total** | **$0** | **$252,964** | **$4,413,231** | **$191,875** | **$6,823,828** | **$11,681,897** | **$18,720,683** |
| Credit - Incentive | - | - | - | - | -$1,886 | - | - |
| **Total** | **$0** | **$252,964** | **$4,413,231** | **$191,875** | **$6,821,942** | **$11,680,011** | **$18,720,683** |

**Table 3 – Home Energy Savings – Savings by Measure Category**

| Measure Group | Gross kWh Savings | Realization Rate | Adjusted Gross kWh Savings | Net to Gross Ratio | Net kWh Savings | Measure Life |
|---|---|---|---|---|---|---|
| Appliances | 652,823 | 100% | 652,823 | 81% | 528,787 | 14 |
| Building Shell | 1,064,568 | 100% | 1,064,568 | 100% | 1,064,568 | 30 |
| Energy Kits - DHW | 128,689 | 100% | 128,689 | 78% | 100,377 | 10 |
| Energy Kits - Lighting | 85,048 | 100% | 85,048 | 78% | 66,337 | 10 |
| HVAC | 10,191,265 | 100% | 10,191,265 | 83% | 8,458,750 | 16 |
| Lighting | 33,518,040 | 91% | 30,501,416 | 61% | 18,605,864 | 12 |
| Water Heating | 15,191 | 100% | 15,191 | 81% | 12,305 | 15 |
| **Total** | **45,655,623** | **93%** | **42,638,999** | **68%** | **28,836,987** | **13** |

**Table 4 - Benefit/Cost Ratios by Measure Category**

| Measure Group | PTRC | TRC | UCT | RIM | PCT |
|---|---|---|---|---|---|
| Appliances | 0.30 | 0.28 | 0.65 | 0.27 | 0.99 |
| Building Shell | 0.57 | 0.52 | 1.81 | 0.56 | 0.91 |
| Energy Kits - DHW | 1.83 | 1.67 | 1.62 | 0.38 | 19.17 |
| Energy Kits - Lighting | 1.32 | 1.20 | 1.18 | 0.38 | 5.29 |
| HVAC | 7.24 | 6.58 | 3.25 | 1.23 | 39.45 |
| Lighting | 1.23 | 1.12 | 3.24 | 0.48 | 2.43 |
| Water Heating | 0.52 | 0.47 | 0.70 | 0.30 | 1.70 |
| **Total** | **2.20** | **2.00** | **3.03** | **0.78** | **2.98** |

**Table 5 – Home Energy Savings Program Level Cost-Effectiveness Results**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0623 | $17,700,793 | $38,883,484 | $21,182,692 | 2.20 |
| Total Resource Cost Test (TRC) No Adder | $0.0623 | $17,700,793 | $35,348,622 | $17,647,829 | 2.00 |
| Utility Cost Test (UCT) | $0.0411 | $11,680,011 | $35,348,622 | $23,668,611 | 3.03 |
| Rate Impact Test (RIM) | | $45,529,083 | $35,348,622 | -$10,180,461 | 0.78 |
| Participant Cost Test (PCT) | | $18,720,683 | $55,875,539 | $37,154,856 | 2.98 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000313290 |
| Discounted Participant Payback (years) | | | | | n/a |

Table 6 through Table 12 provides cost-effectiveness results for all 7 measures.

**Table 6 - Home Energy Savings Appliance Cost-Effectiveness Results (Decrement - East Plug Load- 71%, Load Shape – Plug Loads)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.1951 | $1,036,850 | $314,206 | -$722,644 | 0.30 |
| Total Resource Cost Test (TRC) No Adder | $0.1951 | $1,036,850 | $285,642 | -$751,208 | 0.28 |
| Utility Cost Test (UCT) | $0.0824 | $438,032 | $285,642 | -$152,390 | 0.65 |
| Rate Impact Test (RIM) | | $1,071,535 | $285,642 | -$785,893 | 0.27 |
| Participant Cost Test (PCT) | | $1,043,807 | $1,028,768 | -$15,039 | n/a |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000022496 |
| Discounted Participant Payback (years) | | | | | n/a |

**Table 7 - Home Energy Savings Building Shell Cost-Effectiveness Results (Decrement - East Residential Whole House - 31%, Load Shape – Cooling)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.1882 | $3,166,336 | $1,802,970 | -$1,363,366 | 0.57 |
| Total Resource Cost Test (TRC) No Adder | $0.1882 | $3,166,336 | $1,639,063 | -$1,527,272 | 0.52 |
| Utility Cost Test (UCT) | $0.0540 | $907,781 | $1,639,063 | $731,282 | 1.81 |
| Rate Impact Test (RIM) | | $2,921,866 | $1,639,063 | -$1,282,803 | 0.56 |
| Participant Cost Test (PCT) | | $2,854,272 | $2,609,802 | -$244,470 | 0.91 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000017446 |
| Discounted Participant Payback (years) | | | | | n/a |

**Table 8 - Home Energy Savings Energy Kits – DHW Cost-Effectiveness Results (Decrement - East Residential Water Heating - 53%, Load Shape – Water Heating)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0352 | $27,604 | $50,577 | $22,973 | 1.83 |
| Total Resource Cost Test (TRC) No Adder | $0.0352 | $27,604 | $45,979 | $18,375 | 1.67 |
| Utility Cost Test (UCT) | $0.0362 | $28,407 | $45,979 | $17,572 | 1.62 |
| Rate Impact Test (RIM) | | $121,738 | $45,979 | -$75,759 | 0.38 |
| Participant Cost Test (PCT) | | $6,552 | $125,569 | $119,017 | 19.17 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000003018 |
| Discounted Participant Payback (years) | | | | | 0.06 |

**Table 9 - Home Energy Savings Energy Kits – Lighting Cost-Effectiveness Results (Decrement - East Residential Lighting - 47%, Load Shape – Lighting)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0553 | $28,661 | $37,914 | $9,253 | 1.32 |
| Total Resource Cost Test (TRC) No Adder | $0.0553 | $28,661 | $34,468 | $5,806 | 1.20 |
| Utility Cost Test (UCT) | $0.0565 | $29,289 | $34,468 | $5,179 | 1.18 |
| Rate Impact Test (RIM) | | $90,970 | $34,468 | -$56,502 | 0.38 |
| Participant Cost Test (PCT) | | $17,687 | $93,501 | $75,814 | 5.29 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000002251 |
| Discounted Participant Payback (years) | | | | | 0.43 |

**Table 10 - Home Energy Savings HVAC Cost-Effectiveness Results (Decrement - East Residential Cooling - 9%, Load Shape – Cooling)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0359 | $3,349,107 | $24,243,197 | $20,894,090 | 7.24 |
| Total Resource Cost Test (TRC) No Adder | $0.0359 | $3,349,107 | $22,039,270 | $18,690,163 | 6.58 |
| Utility Cost Test (UCT) | $0.0727 | $6,776,780 | $22,039,270 | $15,262,490 | 3.25 |
| Rate Impact Test (RIM) | | $17,898,813 | $22,039,270 | $4,140,457 | 1.23 |
| Participant Cost Test (PCT) | | $435,750 | $17,189,385 | $16,753,635 | 39.45 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | -$0.0000104084 |
| Discounted Participant Payback (years) | | | | | n/a |

**Table 11 - Home Energy Savings Lighting Cost-Effectiveness Results (Decrement - East Residential Lighting - 47%, Load Shape – Lighting)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0603 | $10,077,196 | $12,425,782 | $2,348,586 | 1.23 |
| Total Resource Cost Test (TRC) No Adder | $0.0603 | $10,077,196 | $11,296,166 | $1,218,969 | 1.12 |
| Utility Cost Test (UCT) | $0.0209 | $3,490,154 | $11,296,166 | $7,806,011 | 3.24 |
| Rate Impact Test (RIM) | | $23,399,118 | $11,296,166 | -$12,102,952 | 0.48 |
| Participant Cost Test (PCT) | | $14,347,220 | $34,802,407 | $20,455,187 | n/a |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000402924 |
| Discounted Participant Payback (years) | | | | | n/a |

**Table 12 - Home Energy Savings Water Heating Cost-Effectiveness Results (Decrement - East Water Heating - 53%, Load Shape – Water Heating)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.1304 | $16,924 | $8,838 | -$8,086 | 0.52 |
| Total Resource Cost Test (TRC) No Adder | $0.1304 | $16,924 | $8,035 | -$8,889 | 0.47 |
| Utility Cost Test (UCT) | $0.0882 | $11,453 | $8,035 | -$3,418 | 0.70 |
| Rate Impact Test (RIM) | | $26,930 | $8,035 | -$18,895 | 0.30 |
| Participant Cost Test (PCT) | | $15,396 | $26,107 | $10,711 | 1.70 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000000506 |
| Discounted Participant Payback (years) | | | | | 6.87 |

**Utah Home Energy Reporting Program**

Navigant estimated the cost-effectiveness results for the Utah Home Energy Reporting Program, based on 2016 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program.

Cost-effectiveness was tested using the 2015 IRP east residential whole house 31% load factor decrement. The program passes the cost-effectiveness for all the tests except the RIM and PCT tests.

Table 1 – Home Energy Reporting Inputs
Table 2 – Home Energy Reporting Annual Program Costs
Table 3 – Home Energy Reporting Savings by Measure Category
Table 4 – Home Energy Reporting Program Level Cost-Effectiveness Results

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**Table 1 – Home Energy Reporting Inputs**

| Parameter | Value |
|---|---|
| Discount Rate | 6.66% |
| Residential Line Loss | 9.32% |
| Residential Energy Rate ($/kWh) | $0.1111 |
| Inflation Rate[1] | 1.9% |

[1] Future rates determined using a 1.9% annual escalator.

**Table 2 – Home Energy Reporting Annual Program Costs**

| Measure Group | Engineering Costs | Utility Admin | Program Delivery | Program Dev. | Incentives | Total Utility Costs | Gross Customer Costs |
|---|---|---|---|---|---|---|---|
| HER | $0 | $42,322 | $2,627,845 | $88,289 | $0 | $2,758,456 | $0 |
| **Total** | **$0** | **$42,322** | **$2,627,845** | **$88,289** | **$0** | **$2,758,456** | **$0** |

**Table 3 – Home Energy Reporting Savings by Measure Category**

| Measure Group | Gross kWh Savings | Realization Rate | Adjusted Gross kWh Savings | Net to Gross Ratio | Net kWh Savings | Measure Life |
|---|---|---|---|---|---|---|
| HER | 49,244,502 | 100% | 49,244,502 | 100% | 49,244,502 | 1 |
| **Total** | **49,244,502** | **100%** | **49,244,502** | **100%** | **49,244,502** | **1** |

**Table 4 – Home Energy Reporting Program Level Cost-Effectiveness Results (Decrement – Residential Whole House - 31%, Load Shape – Whole House)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0587 | $2,758,456 | $3,118,167 | $359,711 | 1.13 |
| Total Resource Cost Test (TRC) No Adder | $0.0587 | $2,758,456 | $2,834,697 | $76,242 | 1.03 |
| Utility Cost Test (UCT) | $0.0587 | $2,758,456 | $2,834,697 | $76,242 | 1.03 |
| Rate Impact Test (RIM) | | $8,333,470 | $2,834,697 | -$5,498,773 | 0.34 |
| Participant Cost Test (PCT) | | $0 | $5,575,014 | $5,575,014 | n/a |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0002167685 |
| Discounted Participant Payback (years) | | | | | n/a |

**Utah New Homes Program**

Navigant estimated the cost-effectiveness results for the Utah New Homes Program, based on 2016 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program.

Cost-effectiveness was tested using the 2015 IRP east residential whole house 31% load factor decrement. The program passes only the PCT cost-effectiveness test.

Table 1 – New Homes Program Inputs
Table 2 – New Homes Annual Program Costs
Table 3 – New Homes Savings by Measure Category
Table 4 - New Homes Program Level Cost-Effectiveness Results

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**Table 1 – New Homes Program Inputs**

| Parameter | Value |
|---|---|
| Discount Rate | 6.66% |
| Residential Line Loss | 9.32% |
| Residential Energy Rate ($/kWh) | $0.1111 |
| Inflation Rate[1] | 1.9% |

[1] Future rates determined using a 1.9% annual escalator.

**Table 2 – New Homes Annual Program Costs**

| Measure Group | Engineering Costs | Utility Admin | Program Delivery | Program Dev. | Incentives | Total Utility Costs | Gross Customer Costs |
|---|---|---|---|---|---|---|---|
| New Homes | $0 | $20,408 | $520,511 | $7,631 | $905,146 | $1,453,696 | $3,762,397 |
| **Total** | **$0** | **$20,408** | **$520,511** | **$7,631** | **$905,146** | **$1,453,696** | **$3,762,397** |

**Table 3 – New Homes Savings by Measure Category**

| Measure Group | Gross kWh Savings | Realization Rate | Adjusted Gross kWh Savings | Net to Gross Ratio | Net kWh Savings | Measure Life |
|---|---|---|---|---|---|---|
| New Homes | 3,290,951 | 100% | 3,290,951 | 59% | 1,950,276 | 14 |
| **Total** | **3,290,951** | **100%** | **3,290,951** | **59%** | **1,950,276** | **14** |

**Table 4 - New Homes Program Level Cost-Effectiveness Results**
**(Decrement - East Residential Whole House - 31%, Load Shape – Whole House)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.1417 | $2,778,213 | $1,478,745 | -$1,299,467 | 0.53 |
| Total Resource Cost Test (TRC) No Adder | $0.1417 | $2,778,213 | $1,344,314 | -$1,433,899 | 0.48 |
| Utility Cost Test (UCT) | $0.0742 | $1,453,696 | $1,344,314 | -$109,382 | 0.92 |
| Rate Impact Test (RIM) | | $3,790,186 | $1,344,314 | -$2,445,872 | 0.35 |
| Participant Cost Test (PCT) | | $3,762,397 | $4,847,807 | $1,085,410 | 1.29 |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000070012 |
| Discounted Participant Payback (years) | | | | | n/a |

**Utah Low Income Weatherization Program**

Navigant estimated the cost-effectiveness results for the Utah Low Income Weatherization Program, based on 2016 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program.

Cost-effectiveness was tested using the 2015 IRP east residential lighting 47% load factor decrement. The program passes cost-effectiveness for all the tests except RIM and PCT tests.

Table 1 - Low Income Weatherization Inputs
Table 2 - Low Income Weatherization Annual Program Costs
Table 3 - Low Income Weatherization Savings by Measure Category
Table 4 - Low Income Weatherization Program Level Cost-Effectiveness Results

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**Table 1 - Low Income Weatherization Inputs**

| Parameter | Value |
|---|---|
| Discount Rate | 6.66% |
| Residential Line Loss | 9.32% |
| Residential Energy Rate ($/kWh) | $0.1111 |
| Inflation Rate[1] | 1.9% |

[1] Future rates determined using a 1.9% annual escalator.

**Table 2 - Low Income Weatherization Annual Program Costs**

| Measure Group | Engineering Costs | Utility Admin | Program Delivery | Program Dev. | Incentives | Total Utility Costs | Gross Customer Costs |
|---|---|---|---|---|---|---|---|
| Low Income Weatherization | $0 | $17,586 | $2,648 | $11,268 | $27,837 | $59,339 | $0 |
| **Total** | **$0** | **$17,586** | **$2,648** | **$11,268** | **$27,837** | **$59,339** | **$0** |

**Table 3 - Low Income Weatherization Savings by Measure Category**

| Measure Group | Gross kWh Savings | Realization Rate | Adjusted Gross kWh Savings | Net to Gross Ratio | Net kWh Savings | Measure Life |
|---|---|---|---|---|---|---|
| Low Income Weatherization | 210,154 | 70% | 147,108 | 100% | 147,108 | 12 |
| **Total** | **210,154** | **70%** | **147,108** | **100%** | **147,108** | **12** |

**Table 4 - Low Income Weatherization Program Level Cost-Effectiveness Results (Decrement - East Residential Lighting - 47%, Load Shape – Lighting)**

| Cost-Effectiveness Test | Levelized $/kWh | Costs | Benefits | Net Benefits | Benefit/Cost Ratio |
|---|---|---|---|---|---|
| Total Resource Cost Test (PTRC) + Conservation Adder | $0.0449 | $59,339 | $98,245 | $38,906 | 1.66 |
| Total Resource Cost Test (TRC) No Adder | $0.0449 | $59,339 | $89,314 | $29,974 | 1.51 |
| Utility Cost Test (UCT) | $0.0449 | $59,339 | $89,314 | $29,974 | 1.51 |
| Rate Impact Test (RIM) | | $216,750 | $89,314 | -$127,437 | 0.41 |
| Participant Cost Test (PCT) | | $0 | $185,248 | $185,248 | n/a |
| Lifecycle Revenue Impacts ($/kWh) | | | | | $0.0000004243 |
| Discounted Participant Payback (years) | | | | | n/a |

# Appendix 3

# Utah Measure Installation Verifications

# Utah Measure Installation Verification

## Low Income Weatherization

All projects

- All measures are qualified through US Department of Energy approved audit tool or priority list.
- 100 percent inspection by agency inspector of all homes treated, reconciling work completed and quality prior to invoicing Company.
- State inspectors randomly inspect 5-10 percent of completed homes.

## Home Energy Savings

Site inspections are performed by Program Administrator staff for retrofit and/or new homes measures. Inspections are performed on >=5 percent of single family homes, >=5 percent of manufactured homes, and 100 percent of multifamily projects. Measures include:

- Air sealing
- Central air conditioner best practice installation & proper sizing
- Ductless heat pumps
- Duct sealing
- Duct sealing and insulation
- Electrically commutated motor (ECM) retrofit on existing gas furnace
- Gas furnace with ECM
- Heat pumps
- Heat pump water heaters
- Insulation
- Windows

Pre and post site inspections are performed on 100 percent of all whole home ducted evaporative coolers by Program Administrator staff.

Site inspections are not performed for some measures. However all post-purchase incented measures undergo a quality assurance review prior to the issuance of the customer/dealer incentive. The quality assurance includes verification of proof of purchase receipt review and eligible equipment review. Additionally, customer accounts and customer addresses are verified to ensure the Company does not double pay for the same measure or double count measure savings. The following measures do not receive a site inspection:

- Central air conditioners
- Clothes washers
- Electric water heaters

- Evaporative coolers (excluding whole home ducted)
- Freezers
- Light fixtures
- Refrigerators

Site inspections are not performed on measures that are upstream, manufacturer buy-down model. Promotion agreement contracts are signed with manufacturers and retailers to set incentive levels, final product prices, and limits to the total number of units that can be purchased per customer. The Program Administrator verifies measures for product eligibility and correct pricing. Pricing is also verified by Program Administrator field visits to retail locations. These measures include:

- CFL bulbs
- LED bulbs
- Room air conditioners
- Advanced power strips

Customer eligibility for *watt*smart Starter Kits is verified using the customer's account number and last name, and cross-verifying with the current PacifiCorp customer database.

**New Homes**

Site inspections by Program Administrator staff for the following measures (>=5 percent):

- 15 SEER AC
- Evaporative Cooling Equipment
- Ground Source Heat Pumps
- 2x6 Walls – R20 insulation
- ENERGY STAR Lighting
- Refrigerator – CEE Tier 3
- HVAC-Quality Installation
- ECM Motor
- R-5 Windows
- IECC Energy Code Certification
- ENERGY STAR Certified Home
- High Performance ENERGY STAR Certified Home

***watt*smart Business**

For projects delivered by third part program administrator

Lighting projects

- Retrofits - 100 percent pre- and post-installation site inspections by third party consultant of all projects with incentives over a specified dollar amount. Project cost documentation reviewed for all projects.
- New construction - 100 percent post-installation site inspections by third party consultant of all projects with incentives over a specified dollar amount.
- A percent of post-installation site inspections by program administrator of projects with incentives under a specified dollar amount.

Non-lighting projects (typical upgrades/listed measures, custom measures)

- 100 percent of applications with an incentive that exceeds a specified dollar amount will be inspected (via site inspection) by program administrator.
- A minimum of a specified percent of remaining non-lighting applications will be inspected, either in person or via telephone interview, by program administrator.

For Company in-house project manager delivered projects

Lighting and non-lighting

- 100 percent pre/post-installation site inspections by third party consulting engineering firms, invoice reconciled to inspection results.
- No pre-inspection for new construction

**All Programs**

As part of the third-party program evaluations (two-year cycle) process, the Company is implementing semi-annual customer surveys to collect evaluation-relevant data more frequently to cure for memory loss and other detractors such as customers moving and data not be readily available at evaluation time). This will serve as a further check verifying customer participation and measures installed.

Additional record reviews and site inspections (including metering/data logging) is conducted as part of the process and impact evaluations, a final verification of measure installations.

# Appendix 4

# Home Energy Savings Retailers and Trade Allies

**List of 2016 Participating Upstream/Midstream Lighting Retailers**

| Retailer | City | State | CFLs | LEDs | Fixtures* |
|---|---|---|---|---|---|
| Ace Hardware - Hurst #5738 | Cedar City | UT | x | x | |
| Ace Hardware - Jones | Castle Dale | UT | x | x | |
| Ace Hardware - Olympus Hills | Salt Lake City | UT | x | x | |
| Ace Hardware - Rasmussen #3961 | Gunnison | UT | x | x | |
| Ace Hardware - Salt Lake City | Salt Lake City | UT | x | x | |
| Ace Hardware - Smith & Edwards | Ogden | UT | | x | |
| Ace Hardware - Tremonton #14654 | Tremonton | UT | x | x | |
| Ace Hardware - Wyndom Square | Layton | UT | x | | |
| Ace Hardware #14886 | Highland | UT | x | x | |
| Ace Hardware #9314 | Pleasant Grove | UT | x | x | |
| Ace Hardware Clearfield #15411 | Clearfield | UT | x | | |
| Ace Hardware Delta #4954 | Delta | UT | x | x | |
| Ace Hardware of Kamas | Kamas | UT | x | x | |
| Barrett's Foodtown | Salina | UT | x | x | |
| Batteries Plus #356 | Layton | UT | | x | |
| Batteries Plus #358 | Salt Lake City | UT | x | x | |
| Batteries Plus #754 | West Jordan | UT | x | x | |
| Batteries Plus #802 | Riverdale | UT | | x | |
| Batteries Plus #909 | West Valley City | UT | | x | |
| Big Lots #4091 | Kearns | UT | x | x | |
| Big Lots #4108 | South Ogden | UT | x | | |
| Big Lots #4485 | West Jordan | UT | x | x | |
| Big Lots #4583 | Salt Lake City | UT | x | | |
| Costco #1019 | South Jordan | UT | | x | |
| Costco #113 | Salt Lake City | UT | | x | |
| Costco #487 | Sandy | UT | | x | |
| Costco #622 | West Valley City | UT | | x | |
| Costco #764 | Murray | UT | | x | |
| Costco #770 | Ogden | UT | | x | |
| Do it Best - Greer's | Tremonton | UT | x | x | |
| Do It Best - Jenson Lumbus | Draper | UT | x | x | |
| Do It Best - Marshall's Hardware | Salt Lake City | UT | x | x | |
| Dollar Tree #2601 | Sandy | UT | x | | |
| Dollar Tree #2605 | Orem | UT | x | | |
| Dollar Tree #2608 | Salt Lake City | UT | x | | |
| Dollar Tree #2612 | Ogden | UT | x | | |
| Dollar Tree #2630 | Draper | UT | x | | |
| Dollar Tree #2642 | Magna | UT | x | | |
| Dollar Tree #2646 | Salt Lake City | UT | x | | |
| Dollar Tree #2652 | Salt Lake City | UT | x | | |
| Dollar Tree #2659 | South Jordan | UT | x | | |
| Dollar Tree #2665 | Cedar City | UT | x | | |
| Dollar Tree #2669 | Clinton | UT | x | | |
| Dollar Tree #2670 | Salt Lake City | UT | x | | |
| Dollar Tree #2678 | Tooele | UT | x | | |
| Dollar Tree #2815 | West Valley City | UT | x | | |
| Dollar Tree #3693 | Ogden | UT | x | | |
| Dollar Tree #3779 | Riverdale | UT | x | | |
| Dollar Tree #3869 | Syracuse | UT | x | | |

| Retailer | City | State | CFLs | LEDs | Fixtures* |
|---|---|---|---|---|---|
| Dollar Tree #4979 | South Jordan | UT | x | | |
| Dollar Tree #5036 | Lindon | UT | x | | |
| Family Dollar #10148 | Cedar City | UT | | x | |
| Family Dollar #5136 | Ogden | UT | | x | |
| Family Dollar #5137 | Ogden | UT | | x | |
| Family Dollar #5143 | Salt Lake City | UT | | x | |
| Family Dollar #5170 | Clearfield | UT | | x | |
| Family Dollar #5256 | Salt Lake City | UT | | x | |
| Family Dollar #5566 | Salt Lake City | UT | | x | |
| Family Dollar #5624 | Moab | UT | | x | |
| Family Dollar #5631 | West Valley City | UT | | x | |
| Family Dollar #5704 | West Valley City | UT | | x | |
| Family Dollar #5761 | Taylorsville | UT | | x | |
| Family Dollar #5816 | West Valley City | UT | | x | |
| Family Dollar #5832 | Ogden | UT | | x | |
| Family Dollar #5853 | Tremonton | UT | | x | |
| Family Dollar #5871 | West Valley City | UT | | x | |
| Family Dollar #6141 | Ogden | UT | | x | |
| Family Dollar #6223 | West Valley City | UT | | x | |
| Family Dollar #6224 | Tooele | UT | | x | |
| Family Dollar #6282 | Magna | UT | | x | |
| Family Dollar #6287 | Orem | UT | | x | |
| Family Dollar #6292 | West Jordan | UT | | x | |
| Family Dollar #6628 | Delta | UT | | x | |
| Family Dollar #6999 | Castle Dale | UT | | x | |
| Family Dollar #7301 | Grantsville | UT | | x | |
| Family Dollar #7399 | Salt Lake City | UT | | x | |
| Family Dollar #8251 | Kamas | UT | | x | |
| Family Dollar #8729 | Midvale | UT | | x | |
| Family Dollar #9401 | Salt Lake City | UT | | x | |
| Griffith Foodtown | Coalville | UT | x | | |
| Gunnison Market #2 | Gunnison | UT | x | x | |
| Home Depot #4401 | Riverdale | UT | x | x | |
| Home Depot #4402 | Salt Lake City | UT | x | x | |
| Home Depot #4403 | Salt Lake City | UT | x | x | |
| Home Depot #4406 | West Valley City | UT | x | x | |
| Home Depot #4409 | Sandy | UT | x | x | |
| Home Depot #4410 | West Jordan | UT | x | x | |
| Home Depot #4411 | Ogden | UT | x | x | |
| Home Depot #4413 | Salt Lake City | UT | x | x | |
| Home Depot #4415 | Park City | UT | x | x | |
| Home Depot #4418 | Cedar City | UT | x | x | |
| Home Depot #4419 | Tooele | UT | x | x | |
| Home Depot #4421 | Sandy | UT | x | x | |
| Home Depot #8566 | Riverton | UT | x | x | |
| Kamas Foodtown (Fresh Market) | Kamas | UT | x | x | |
| Lowe's #1080 | Riverdale | UT | x | x | |
| Lowe's #1133 | West Valley City | UT | x | x | |
| Lowe's #15 | Layton | UT | | x | |
| Lowe's #1613 | West Jordan | UT | x | x | |
| Lowe's #2275 | Salt Lake City | UT | x | x | |
| Lowe's #2296 | Riverton | UT | x | x | |
| Lowe's #2606 | Sandy | UT | x | x | |
| Lowe's #2845 | Clinton | UT | x | x | |

| Retailer | City | State | CFLs | LEDs | Fixtures* |
|---|---|---|---|---|---|
| Lowe's #2858 | Ogden | UT | x | x | |
| Lowe's #342 | Murray | UT | x | x | |
| Rancho Markets #2 | West Valley City | UT | x | | |
| Rancho Markets #3 | Salt Lake City | UT | x | | |
| Rancho Markets #5 | Magna | UT | x | | |
| Rancho Markets #8 | Ogden | UT | x | | |
| Ream's Foods #10 | Kearns | UT | x | x | |
| Ream's Foods #11 | West Jordan | UT | x | | |
| Ream's Foods #12 | Salt Lake City | UT | x | | |
| Ream's Foods #2 | Salt Lake City | UT | x | | |
| Ream's Foods #6 | Salt Lake City | UT | x | | |
| Ream's Foods #8 | Magna | UT | x | | |
| Ream's Foods #9 | Sandy | UT | x | | |
| Sam's Club #4718 | South Jordan | UT | | x | |
| Sam's Club #4730 | West Jordan | UT | x | x | |
| Sam's Club #6682 | Layton | UT | x | x | |
| Sam's Club #6683 | Murray | UT | x | x | |
| Sam's Club #6684 | Riverdale | UT | x | x | |
| Sam's Club #6686 | Salt Lake City | UT | x | x | |
| Smith's #108 | Herriman | UT | x | | |
| Smith's #131 | Ogden | UT | x | | |
| Smith's #132 | Draper | UT | x | | |
| Smith's #137 | West Valley City | UT | x | | |
| Smith's #140 | Sunset | UT | x | | |
| Smith's #142 | Syracuse | UT | x | | |
| Smith's #144 | Orem | UT | x | | |
| Smith's #147 | West Valley City | UT | x | | |
| Smith's #158 | West Jordan | UT | x | | |
| Smith's #28 | Salt Lake City | UT | x | | |
| Smith's #30 | Ogden | UT | x | | |
| Smith's #42 | Cedar City | UT | x | | |
| Smith's #44 | Salt Lake City | UT | x | | |
| Smith's #47 | Sandy | UT | x | | |
| Smith's #65 | Magna | UT | x | | |
| Smith's #66 | Salt Lake City | UT | x | | |
| Smith's #69 | Salt Lake City | UT | x | | |
| Smith's #72 | Park City | UT | x | | |
| Smith's #73 | Pleasant Grove | UT | x | | |
| Smith's #77 | Salt Lake City | UT | x | | |
| Smith's #80 | Salt Lake City | UT | x | | |
| Smith's #81 | Salt Lake City | UT | x | | |
| Smith's Marketplace #274 | West Jordan | UT | | x | |
| Smith's Marketplace #279 | North Ogden | UT | x | x | |
| Smith's Marketplace #475 | Salt Lake City | UT | x | x | |
| Smith's Marketplace #495 | West Jordan | UT | x | x | |
| Smith's Marketplace #94 | Salt Lake City | UT | x | x | |
| Sutherland Lumber | Salt Lake City | UT | x | x | |
| Target #0768 | West Jordan | UT | x | x | |
| Target #1751 | Salt Lake City | UT | | x | |
| Target #1752 | Sandy | UT | x | x | |
| Target #1753 | Riverdale | UT | x | x | |
| Target #1754 | Orem | UT | x | x | |
| Target #1755 | Layton | UT | x | x | |
| Target #2123 | South Jordan | UT | x | x | |

| Retailer | City | State | CFLs | LEDs | Fixtures* |
|---|---|---|---|---|---|
| Target #2150 | West Jordan | UT | x | x | |
| Target #2609 | West Valley City | UT | x | x | |
| Target #2641 | Salt Lake City | UT | x | x | |
| The Market at Park City | Park City | UT | x | x | |
| True Value Family Stores | Salt Lake City | UT | x | x | |
| True Value Hardware - Losee Lumber | Delta | UT | x | x | |
| True Value Hardware - Valley Builder | Gunnison | UT | x | | |
| Walgreens #01776 | Pleasant Grove | UT | x | | |
| Walgreens #02527 | South Ogden | UT | x | | |
| Walgreens #06669 | South Jordan | UT | x | | |
| Walgreens #07007 | Riverton | UT | x | | |
| Walgreens #10415 | Tooele | UT | x | | |
| Walgreens #11337 | Cedar City | UT | x | | |
| Walgreens #12294 | Draper | UT | x | | |
| Walgreens #15013 | South Ogden | UT | x | | |
| Walgreens #2519 | Clinton | UT | x | | |
| Walgreens #2529 | Syracuse | UT | x | | |
| Walgreens #6282 | Taylorsville | UT | x | | |
| Walgreens #6988 | West Jordan | UT | x | | |
| Walgreens #7495 | Roy | UT | x | | |
| Walgreens #9237 | Sandy | UT | x | | |
| Walgreens #9464 | Sandy | UT | x | | |
| Wal-Mart - Supercenter #1699 | Layton | UT | x | x | |
| Wal-Mart - Supercenter #2921 | Harrisville | UT | x | x | |
| Wal-Mart - Supercenter #3589 | Salt Lake City | UT | x | x | |
| Wal-Mart - Supercenter #3620 | Riverton | UT | x | x | |
| Walmart #1438 | Cedar City | UT | x | x | |
| Walmart #1440 | Tooele | UT | x | x | |
| Walmart #1686 | Taylorsville | UT | x | x | |
| Walmart #1708 | Riverdale | UT | x | x | |
| Wal-Mart #1827 | Park City | UT | x | x | |
| Walmart #2207 | Midvale | UT | | x | |
| Walmart #2307 | South Jordan | UT | x | x | |
| Walmart #3232 | West Jordan | UT | x | x | |
| Walmart #3568 | West Valley City | UT | x | x | |
| Walmart #3789 | Ogden | UT | x | x | |
| Walmart #3848 | Syracuse | UT | x | x | |
| Walmart #4208 | Salt Lake City | UT | | x | |
| Walmart #4689 | Cedar Hills | UT | x | x | |
| Walmart #5109 | West Valley City | UT | | x | |
| Walmart #5110 | Draper | UT | | x | |
| Walmart #5120 | South Jordan | UT | | x | |
| Walmart #5205 | Layton | UT | | x | |
| Walmart #5206 | South Ogden | UT | | x | |
| Walmart #5233 | West Valley City | UT | x | x | |
| Walmart #5234 | Clinton | UT | x | x | |
| Wal-Mart #5350 | Salt Lake City | UT | x | x | |
| Walmart #5763 | South Jordan | UT | x | x | |
| Wal-Mart #7168 | Herriman | UT | | x | |
| Wal-Mart of Lindon #5270 | Lindon | UT | x | x | |
| Walmart of Sandy #5235 | Sandy | UT | x | x | |
| Wal-Mart of Syracuse #3848 | Syracuse | UT | x | x | |

| Retailer | City | State | CFLs | LEDs | Fixtures* |
|---|---|---|---|---|---|
| Winegar's Supermarkets Inc Roy | Roy | UT | x | | |

*No dowstream fixtures were offered in 2016.

**List of 2016 Participating Upstream/Midstream Appliance Retailers**

| Retailer | City | State | Room Air Conditioners | Advanced Power Strips |
|---|---|---|---|---|
| There were no participating retailers for room air conditioners or advanced power strips. | | | | |

**List of 2016 Participating Downstream Retailers**

Includes a summary of product types that were redeemed in 2016 at each location

| Participating Retailer (Retailers who are actively enrolled in the program) | City* | State | Clothes Washer | Freezer | Clothes Dryer | Smart Thermostat | Refrigerator | Evaporative Cooler - Permanently Installed,Self-Installed | Evaporative Cooler - Portable | Evaporative Cooler - Premium Ducted,Self-Installed | Evaporative Cooler - Premium,Self-Installed | Evaporative Cooler - Replacement,Self-Installed | Evaporative Cooler - Tier 2 | Heat Pump Water Heater, Self-installed | Insulation-Attic | Insulation-Attic,Self-Installed | Insulation-Floor,Self-Installed | Insulation-Wall | Insulation-Wall,Self-Installed | Windows |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ace Hardware - Riverton | Riverton | UT | | | | | | | | | | x | | | | | | | | |
| Boyle Appliance Center | Ogden | UT | x | x | | | x | | | | | | | | | | | | | |
| Costco #1019 | South Jordan | UT | | x | | | | | | | x | | | | | | | | | |
| Costco #113 | Salt Lake City | UT | | x | | | | | | | | x | | | | | | | | |
| Costco #484 | Orem | UT | | | | | | | | | x | | | | | | | | | |
| Costco #487 | Sandy | UT | | x | | | | | | | x | | | | | | | | | |
| Costco #622 | West Valley City | UT | | x | | | | | | | x | | | | | | | | | |
| Costco #733 | Lehi | UT | | x | | | | | | | | | | | | | | | | |
| Costco #764 | Murray | UT | | x | | | | | | | | | | | | | | | | |
| Costco #770 | Ogden | UT | | x | | | | | | | | | | | | | | | | |
| Home Depot #1802* | Idaho Falls | ID | | | | | | x | | | | | | | | | | | | |
| Home Depot #4401 | Riverdale | UT | x | x | | | | x | x | x | x | x | | | | x | | | x | |
| Home Depot #4402 | Salt Lake City | UT | x | x | | | | x | x | | x | x | | | | x | | | x | |
| Home Depot #4403 | Salt Lake City | UT | x | x | | | x | x | x | x | x | x | | | | x | x | | x | x |
| Home Depot #4406 | West Valley City | UT | x | x | | | x | x | x | | x | x | | | | x | | | | |
| Home Depot #4407 | Lindon | UT | x | x | | | x | x | | x | x | x | | | | x | | | | |
| Home Depot #4408 | Centerville | UT | x | x | | | x | x | x | | x | x | | | | x | | | x | |
| Home Depot #4409 | Sandy | UT | x | x | | | x | x | x | | x | x | | | | x | | | x | x |
| Home Depot #4410 | West Jordan | UT | x | x | | | | x | x | x | x | x | | | | x | | | x | |
| Home Depot #4411 | Ogden | UT | x | x | | | | x | x | | x | x | | | | x | | | x | x |
| Home Depot #4412 | Washington | UT | x | | | | | | | | x | | | | | | | | | |
| Home Depot #4413 | Salt Lake City | UT | x | x | | | x | x | x | x | x | x | | | | x | | | x | x |
| Home Depot #4414 | Logan | UT | x | x | | | x | x | x | | x | x | | | | | | | | |
| Home Depot #4415 | Park City | UT | x | x | | | | | | | x | | | | | | | | | |
| Home Depot #4416 | Provo | UT | x | x | | | | x | x | | x | x | | | | x | x | | | |
| Home Depot #4417 | American Fork | UT | x | x | | | x | x | | | x | x | | | | x | | | x | |
| Home Depot #4418 | Cedar City | UT | x | x | | | | x | x | | x | x | | | | x | | | x | |
| Home Depot #4419 | Tooele | UT | x | x | | | | x | x | | x | x | | | | x | | | x | |
| Home Depot #4420 | St. George | UT | x | | | | | | | | x | | | | | | | | | |
| Home Depot #4421 | Sandy | UT | x | | | | x | | x | | x | x | | | | | | | | x |

| Participating Retailer (Retailers who are actively enrolled in the program) | City* | State | Clothes Washer | Freezer | Clothes Dryer | Smart Thermostat | Refrigerator | Evaporative Cooler - Permanently Installed,Self-Installed | Evaporative Cooler - Portable | Evaporative Cooler - Premium Ducted,Self-Installed | Evaporative Cooler - Premium,Self-Installed | Evaporative Cooler - Replacement,Self-Installed | Evaporative Cooler - Tier 2 | Heat Pump Water Heater, Self-installed | Insulation-Attic | Insulation-Attic,Self-Installed | Insulation-Floor,Self-Installed | Insulation-Wall | Insulation-Wall,Self-Installed | Windows |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Home Depot #4422 | Richfield | UT | x | x | | | | x | x | | x | x | | | | x | | | | |
| Home Depot #8566 | Riverton | UT | x | x | | | x | x | x | | x | x | | | | x | | | x | |
| Home Depot #8583 | Layton | UT | x | x | | | x | x | x | x | x | x | | | | x | | | x | |
| Larsen's Ace Hardware #1044 | Richfield | UT | | | | | | x | x | | x | x | | | x | | | | | |
| Lowe's #1080 | Riverdale | UT | x | x | | | | x | | | x | x | | | | | | | x | |
| Lowe's #1118 | St. George | UT | x | x | | | | | | | x | x | | | | | | | | |
| Lowe's #1133 | West Valley City | UT | x | x | | | | x | | | x | x | | | | x | | | | |
| Lowe's #15 | Layton | UT | x | x | | | | | x | | x | x | | | | x | | | | |
| Lowe's #1501 | Logan | UT | x | x | | | | | x | | x | | | x | | x | | | | |
| Lowe's #1613 | West Jordan | UT | x | x | | | | | | x | x | x | | | | | | | x | x |
| Lowe's #178 | Orem | UT | x | x | | | | x | | | x | x | | | | | | | | |
| Lowe's #2275 | Salt Lake City | UT | x | x | | | | x | | | x | x | | x | | x | | | x | |
| Lowe's #2293 | Lehi | UT | x | x | | | x | | | | x | | | | | | | | | |
| Lowe's #2296 | Riverton | UT | x | x | | | | | | | x | x | | | | x | | | | |
| Lowe's #2606 | Sandy | UT | x | x | | | | x | | | x | x | | | | x | | | | x |
| Lowe's #2662 | West Bountiful | UT | x | x | | | | | | | x | x | | | | | | | | |
| Lowe's #2834 | Vernal | UT | x | x | | | | | | | x | | | | | | | | | |
| Lowe's #2845 | Clinton | UT | x | x | | | | | | | x | x | | | | x | | | x | x |
| Lowe's #2858 | Ogden | UT | x | x | | | | x | x | | x | x | | | | | | | | |
| Lowe's #342 | Murray | UT | x | x | | | | x | | | x | x | | | | | | | | |
| RC Willey - Murray | Murray | UT | x | x | | | | | | | | | | | | | | | | |
| RC Willey - Orem | Orem | UT | x | | | | | | | | | | | | | | | | | |
| RC Willey - Riverdale | Riverdale | UT | x | x | | | x | | | | | | | | | | | | | |
| RC Willey - Syracuse | Syracuse | UT | x | x | | | | | | | | | | | | | | | | |
| RC Willey- Draper | Draper | UT | x | x | | | | | | | | | | | | | | | | |
| RC Willey Home Furnishings | Salt Lake City | UT | x | x | | | | | | | | | | | | | | | | |
| Sutherlands #2219 | Casper | UT | | | | | | | | | | x | | | | | | | | |
| Ace Hardware - Hurst #5738 | Cedar City | UT | | | | | | x | | | x | | | | | | | | | |
| Ace Hardware - Rasmussen #3961 | Gunnison | UT | | | | | | | | | | x | | | | | | | | |
| Best Buy #1146 | West Jordan | UT | x | x | | | | | | | | | | | | | | | | |
| Best Buy #1402 | American Fork | UT | x | x | | | | | | | | | | | | | | | | |
| Best Buy #1761 | Park City | UT | x | | | | | | | | | | | | | | | | | |
| Best Buy #496 | Riverdale | UT | x | x | | | | | | | | | | | | | | | | |
| Best Buy #497 | Sandy | UT | x | | | | | | | | | | | | | | | | | |
| Best Buy #521 | Murray | UT | x | x | | | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Best Buy #527 | Salt Lake City | UT | x | | | | | | | | | | | | | | | | | |
| Best Buy #773 | Orem | UT | x | | | | | | | | | | | | | | | | | |
| Bill's Home Furnishings Inc | Price | UT | | | | | | x | | | | | | | | | | | | |
| Boulevard Home Furnishings | St. George | UT | x | | | | | | | | | | | | | | | | | |
| Charlie Fuller's Appliance | Woods Cross | UT | x | | | | | | | | | | | | | | | | | |
| Darrell's Appliance Service & Sales | Benson | UT | x | x | | | | | | | | | | | | | | | | |
| Duerden's Appliance | Bountiful | UT | x | x | | | | | | | | | | | | | | | | |
| Heber Appliance | Heber City | UT | x | | | | | | | | | | | | | | | | | |
| Home Selections by Fergusons | Salt Lake City | UT | | x | | | | | | | | x | | | | | | | | |
| Hooker Appliance Inc | Logan | UT | x | | | | | | | | | | | | | | | | | |
| Hutch's Home Furnishings | Lehi | UT | x | | | | | | | | | | | | | | | | | |
| Liddiard Home Furnishings | Tooele | UT | x | | | | | | | | | | | | | | | | | |
| Mountain Land Design - SLC | Salt Lake City | UT | x | x | | | | | | | | | | | | | | | | |
| Murphy's Appliance | Brigham City | UT | x | | | | | | | | | | | | | | | | | |
| Ogden's Superstore | Richfield | UT | x | x | | | | | | | | | | | | | | | | |
| Sears | Layton | UT | x | x | | | | | | | | | | | | | | | | |
| Sears #1118 | Salt Lake City | UT | x | x | | | | | | | | | | | | | | | | |
| Sears #1301 | Provo | UT | x | x | | | | | | | | | | | | | | | | |
| Sears #1718 | Ogden | UT | x | x | | | | | | | | | | | | | | | | |
| Sears #1888 | West Jordan | UT | x | x | | | | | | | | | | | | | | | | |
| Sears #2220 | St. George | UT | x | | | | | | | | | | | | | | | | | |
| Sears #2559 | Sandy | UT | x | x | | | | | | | | | | | | | | | | |
| Sears #3058 | Price | UT | x | x | | | | | | | | | | | | | | | | |
| Sears #3529 | Cedar City | UT | x | x | | | | | | | | | | | | | | | | |
| Sears #7408 | Tooele | UT | x | | | | | | | | | | | | | | | | | |
| Southwest Appliance Wholesale | Cedar City | UT | x | x | | | | | | | | | | | | | | | | |
| Sparrow's Home Furnishings | Roy | UT | x | x | | | | | | | | | | | | | | | | |
| Sutherlands - SLC | Salt Lake City | UT | | | | | | x | | | x | x | | | | | | | | |

*Retailer is located in Idaho but participates in the wattsmart Homes Program.

| Participating Retailer (Retailers who are actively enrolled in the program) | City* | State | Clothes Washer | Freezer | Clothes Dryer | Smart Thermostat | Refrigerator | Evaporative Cooler - Permanently Installed,Self-Installed | Evaporative Cooler - Portable | Evaporative Cooler - Premium Ducted,Self-Installed | Evaporative Cooler - Premium,Self-Installed | Evaporative Cooler - Replacement,Self-Installed | Evaporative Cooler - Tier 2 | Heat Pump Water Heater, Self-installed | Insulation-Attic | Insulation-Attic,Self-Installed | Insulation-Floor,Self-Installed | Insulation-Wall | Insulation-Wall,Self-Installed | Windows |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Redemptions from Non-Participating Retailer's (Retailer may not be located in the service territory)** | **City*** | **State** | **Clothes Washer** | **Freezer** | **Clothes Dryer** | **Smart Thermostat** | **Refrigerator** | **Evaporative Cooler - Permanently Installed,Self-Installed** | **Evaporative Cooler - Portable** | **Evaporative Cooler - Premium Ducted,Self-Installed** | **Evaporative Cooler - Premium,Self-Installed** | **Evaporative Cooler - Replacement,Self-Installed** | **Evaporative Cooler - Tier 2** | **Heat Pump Water Heater, Self-installed** | **Insulation-Attic** | **Insulation-Attic,Self-Installed** | **Insulation-Floor,Self-Installed** | **Insulation-Wall** | **Insulation-Wall,Self-Installed** | **Windows** |
| Ace Hardware Delta #4954 | Delta | CO | | | | | | x | | | | x | | | | | | | | |
| Anasazi Heating & Air Conditioning | Hurricane | UT | | | | | | | | | x | | | | | | | | | |
| Forsyth Heating & Air Conditioning | Cedar City | UT | | | | | | | | | | x | | | | | | | | |
| Home Depot #4013 | Portland | OR | x | | | | | | | | | | | | | | | | | |
| AJ MADISON INC | Online | N/A | x | x | | | | | | | | | | | | | | | | |
| AllergyandAir.com | Online | N/A | | | | | | | | | x | | | | | | | | | |
| Alside Supply | Ogden | UT | | | | | | | | | | | | | | | | | | x |
| Alside Supply Center | Salt Lake City | UT | | | | | | | | | | | | | | | | | | x |
| Alumaline Corporation | Salt Lake City | UT | | | | | | | | | | | | | | | | | | x |
| Alvey Lumber Company | Sigurd | UT | | | | | | | | | | | | | | | | | x | |
| Amazon.com | Online | N/A | x | x | | | | | | | | x | | | | | | | | |
| American Appliance | Riverton | UT | | | | | | x | | | | | | | | | | | | |
| Appliancesconnection.com | Online | N/A | | | | | | | | | | | | x | | | | | | |
| Aspire Design | Sandy | UT | x | | | | | | | | | | | | | | | | | |
| Attic Pro Insulation | American Fork | UT | | | | | | | | | | | | | | x | | | | |
| Beckler HVAC | West Valley | UT | | | | | | | | | | x | | | | | | | | |
| Ben Lomond Heating & Air Conditioning Inc. | Harrisville | UT | | | | | | | | | | x | | | | | | | | |
| Best Buy #318 | Vernon Hills | IL | | x | | | | | | | | | | | | | | | | |
| BestBuy.com | Online | N/A | x | x | | | | | | | | | | | | | | | | |
| Blue Seal Energy | Adrian | OR | | | | | | | | | | | | | | | | | x | |
| Bountiful Window and Door | Bountiful | UT | | | | | | | | | | | | | | | | | | x |
| Brent Alvey Plumbing | Ogden | UT | x | x | | | | | | | | | | | | | | | | |
| Brody's Glass House | Ogden | UT | | | | | | | | | | | | | | | | | | x |
| Build.com, Inc. | Online | N/A | | | | | | | | | | | | x | | | | | | |
| Burton Lumber | Lindon | UT | | | | | | | | | | | | | | | | | | x |
| Carlos Appliances | Sandy | UT | x | | | | | | | | | | | | | | | | | |
| Case Construction & Roofing | Salt Lake City | UT | | | | | | | | | x | | | | | | | | | |
| CJS Do It Center | Price | UT | | | | | | x | | | | x | | | | | | | | |
| Clear Choice Windows | West Jordan | UT | | | | | | | | | | | | | | | | | | x |
| Comfortable Air | Salt Lake City | UT | | | | | | | | | x | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ComfortGurus.com | Online | N/A | | | | | | | | | x | | | | | | | | | |
| Contractors Window Supply | Salt Lake City | UT | | | | | | | | | | | | | | | | | | x |
| Cooler Runnings | Sandy | UT | | | | | | | | | | x | | | | | | | | |
| Cooling Heating Supply | Cedar City | UT | | | | | | | | | x | | | | | | | | | |
| Costco | Billings | UT | x | | | | | | | | | | | | | | | | | |
| Costco #735 | West Bountiful | UT | | x | | | | | x | | | | | | | | | | | |
| Costco.com | Online | N/A | x | | | | | | | | | | | | | | | | | |
| Department of Veterans Affairs | Salem | OR | x | | | | | | | | | | | | | | | | | |
| Eagle Rock Supply | Salt Lake City | UT | | | | | | | | | | | | | | x | | | x | |
| EJ Martin Roofing | Kearns | UT | | | | | | | | | | x | | | | | | | | |
| Energy One | Sandy | UT | | | | | | | | | | | | | | | | | | x |
| Essential + Heating & Air Conditioning LLC | West Valley City | UT | | | | | | | | | | x | | | | | | | | |
| EZ Rent to Own | Ogden | UT | x | | | | | | | | | | | | | | | | | |
| Fairway Glass LLC | Morgan | UT | | | | | | | | | | | | | | | | | | x |
| Ferguson Enterprises | Los Angeles | CA | x | x | | | | | | | | | | | | | | | | |
| Ferguson Enterprises - Orem | Orem | UT | | | | | | | | | | x | | | | | | | | |
| Ferguson Enterprises, Inc #3032 | Salt Lake City | UT | | | | | | | | | | x | | | | | | | | |
| GE Appliance Store--online | Online | N/A | x | | | | | | | | | | | | | | | | | |
| Glen Paulsen Co. | South Jordan | UT | | | | | | | | | | | | | | | | | | x |
| Goedecker's | Online | N/A | x | | | | | | | | | | | | | | | | | |
| Guardian Energy Tech | Reno | NV | | | | | | | | | | | | | | | x | | | |
| Guy Webb & Company LLC | Riverton | UT | | | | | | x | | | | | | | | | | | | |
| Guy's Glass Inc. | Clearfield | UT | | | | | | | | | | | | | | | | | | x |
| Handyman Services & Swamp Cooler Maintenance | Salt Lake City | UT | | | | | | | | | | x | | | | | | | | |
| Hercules Industries - SLC | Salt Lake City | UT | | | | | | | | | x | | | | | | | | | |
| Hill Main Exchange Store | Hill AFB | UT | | x | | | | | | | | | | | | | | | | |
| Hilton Homeworks, Inc. | Riverton | UT | | | | | | | | | | | | | | | | | | x |
| Home Depot | Baton Rouge | UT | | | | | | | | | | x | | | | | | | | |
| Home Depot #1513 | Grand Junction | UT | | | | | | | x | | | x | | | | | | | | |
| Home Depot #3855 | Fairborn | OH | | | | | | | | | | x | | | | | | | | |
| Home Depot #8119 | Atlanta | GA | | | | | | | | | x | | | | | | | | | |
| Home Depot 0402 | Yuma | AZ | x | | | | | | | | x | | | | | | | | | |
| Home Depot At Home Services | Online | N/A | | | | | | | | | | | | | | | | | | x |
| HomeDepot.com | Online | N/A | x | x | | | x | x | | | x | x | | | | | | | | |
| HomeShopBuy.com | Online | N/A | x | | | | | | | | | | | | | | | | | |
| Insulation Solutions | Alpine | UT | | | | | | | | | | | | | | x | | | | |
| Intermountain Heating & Air Conditioning, Inc | Twin Falls | ID | | | | | | | | | x | | | | | | | | | |

| Participating Retailer (Retailers who are actively enrolled in the program) | City* | State | Clothes Washer | Freezer | Clothes Dryer | Smart Thermostat | Refrigerator | Evaporative Cooler - Permanently Installed,Self-Installed | Evaporative Cooler - Portable | Evaporative Cooler - Premium Ducted,Self-Installed | Evaporative Cooler - Premium,Self-Installed | Evaporative Cooler - Replacement,Self-Installed | Evaporative Cooler - Tier 2 | Heat Pump Water Heater, Self-installed | Insulation-Attic | Insulation-Attic,Self-Installed | Insulation-Floor,Self-Installed | Insulation-Wall | Insulation-Wall,Self-Installed | Windows |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JCPenny.com | Online | N/A | x | x | | | | | | | | | | | | | | | | |
| Johnson Electric Motor, Inc. | Ogden | UT | | | | | | | | | x | | | | | | | | | |
| K&C Windows | Gilbert | AZ | | | | | | | | | | | | | | | | | | x |
| Karl's Sales and Service | Fairfield | NJ | x | | | | | | | | | | | | | | | | | |
| KJS Heating and Air Conditioning LLC | Draper | UT | | | | | | | | | x | | | | | | | | | |
| Knowles Home Furnishings | Moab | UT | x | | | | | | | | | | | | | | | | | |
| Lansing Building Products | Logan | UT | | | | | | | | | | | | | | | | | | x |
| Lonnie's DO-IT-All Handyman Service | Ferron | UT | | | | | | x | | | | | | | | | | | | |
| Lowe's of Grand Junction | Grand Junction | CO | x | | | | | | | | | | | | | | | | | |
| Lowe's of Hurst | Hurst | TX | | x | | | | | | | | | | | | | | | | |
| Lowe's of Las Vegas | Las Vegas | NV | | | | | | | | | | x | | | | | | | | |
| Lowe's of Orem - Duplicate | Orem | UT | | | | | | | | | | | | x | | | | | | |
| Lowe's of Wilkesboro | Wilkesboro | NC | x | | | | | | | | | | | | | | | | | |
| Lowes.com | Online | N/A | x | x | | | | x | | | x | x | | x | | | | | | |
| Mitton Services | Taylorsville | UT | | | | | | | | | | x | | | | | | | | |
| Peak Home Improvement | Ogden | UT | | | | | | | | | x | x | | | | | | | | |
| Peterson Plumbing & Heating | Richfield | UT | | | | | | | | | | x | | | | | | | | |
| Peterson Plumbing Supply | Richfield | UT | | | | | | | | | | x | | | | | | | | |
| Powell's Pro | Sandy | UT | | | | | | | | | | | | | | | | | | x |
| RC Willey - Summerlin | Las Vegas | NV | x | | | | | | | | | | | | | | | | | |
| RC WIlley Appliances Online Order | Online | N/A | x | x | | | x | | | | | | | | | | | | | |
| R-Factor LLC | Salt Lake City | UT | | | | | | | | | | | | | | x | | | | |
| Richard Maughan Carpentry | Sandy | UT | | | | | | | | | | | | | | | | | | x |
| Riverside Plumbing & Heating | Moab | UT | | | | | | | x | | | | | | | | | | | |
| Roper Lumber Company | Fillmore | UT | | | | | | | | | x | x | | | | | | | | |
| Salt City Heating and Air Conditioning | Salt Lake City | UT | | | | | | x | | | | | | | | | | | | |
| Sears | Ann Arbor | UT | x | | | | | | | | | | | | | | | | | |
| Sears # 5578 | Logan | UT | x | x | | | | | | | | | | | | | | | | |
| Sears #03298 | Helena | MT | x | | | | | | | | | | | | | | | | | |
| Sears #1229 | Boise | ID | x | | | | | | | | | | | | | | | | | |
| Sears #1558 | Murray | UT | x | | | | | | | | | | | | | | | | | |
| Sears #1808 | Houston | TX | x | | | | | | | | | | | | | | | | | |
| Sears #2049 | Everett | WA | x | | | | | | | | | | | | | | | | | |
| Sears #2361 | Grand Jct | CO | x | | | | | | | | | | | | | | | | | |
| Sears #4654 | Murray | UT | x | | | | | | | | | | | | | | | | | |
| Sears #5202 | Heber City | UT | | x | | | | | | | | | | | | | | | | |
| Sears Home Improvement Products | Longwood | UT | | | | | | | | | | | | x | | | | | | x |
| Sears of Logan | Logan | UT | x | | | | | | | | | | | | | | | | | |
| Sears.com | Online | N/A | x | x | | | x | | | | | | | | | | | | | |
| Sierra West & Associates, LLC. | Midvale | UT | | | | | | | | | | | | | | | | | | x |

| Participating Retailer (Retailers who are actively enrolled in the program) | City* | State | Clothes Washer | Freezer | Clothes Dryer | Smart Thermostat | Refrigerator | Evaporative Cooler - Permanently Installed,Self-Installed | Evaporative Cooler - Portable | Evaporative Cooler - Premium Ducted,Self-Installed | Evaporative Cooler - Premium,Self-Installed | Evaporative Cooler - Replacement,Self-Installed | Evaporative Cooler - Tier 2 | Heat Pump Water Heater, Self-installed | Insulation-Attic | Insulation-Attic,Self-Installed | Insulation-Floor,Self-Installed | Insulation-Wall | Insulation-Wall,Self-Installed | Windows |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STANDARD PLUMBING SUPPLY CO | Sandy | UT | | | | | | | | | | x | | | | | | | | |
| Stott Plumbing & Heating | South Salt Lake | UT | | | | | | | | | | x | | | | | | | | |
| Sutherland Bldg Material Shopping Centers, Inc. | Price | UT | | | | | | x | | | x | x | | | | | | | | |
| Sutherlands - Price | Price | UT | | | | | | x | x | | | x | | | | | | | | |
| Tapp Glass and Windows LLC | Sandy | UT | | | | | | | | | | | | | | | | | | x |
| Temperature Difference LLC | Sandy | UT | | | | | | | | | | x | | | | | | | | |
| The Home Depot, Inc. | Atlanta | GA | | | | | | | | | | x | | | | | | | | |
| The NPS Store Industrial | Salt Lake City | UT | | | | | | x | | | | | | | | | | | | |
| Tri-Tech Glass | Farr West | UT | | | | | | | | | | | | | | | | | | x |
| United Subcontractors, Inc. | Salt Lake City | UT | | | | | | | | | | | | | x | | | x | | x |
| UNI-WEST INC. | Riverton | UT | | | | | | | | | | x | | | | | | | | |
| Utah Discount Windows | Midvale | UT | | | | | | | | | | | | | | | | | | x |
| Valley Glass Inc (Layton) | Layton | UT | | | | | | | | | | | | | | | | | | x |
| Walmart of Laurel | Laurel | MT | x | | | | | | | | | | | | | | | | | |
| wal-mart.com | Online | N/A | | x | | | x | x | | | | x | | | | | | | | |
| Wheelwright Lumber | Ogden | UT | | | | | | | | | | | | | | | | | x | |
| Whirlpool Everyhome Partners.com | Online | N/A | x | | | | | | | | | | | | | | | | | |
| Whirlpool.com | Online | N/A | x | | | | | | | | | | | | | | | | | |
| Window Depot of Utah | North Salt Lake | UT | | | | | | | | | | | | | | | | | | x |
| Window Monsters | Provo | UT | | | | | | | | | | | | | | | | | | x |
| Woody's Best Value | St George | UT | | | | | | | x | | | | | | | | | | | |
| Zoro | Buffalo Grove | UT | | | | | | | | | x | | | | | | | | | |

**List of 2016 Participating HVAC Trade Allies**
Includes a summary of measures that were redeemed in 2016 from each trade ally

| Trade Ally Name (Trade ally may be located outside of the territory) | City | State | Central Air Conditioner Best Practice Installation & Sizing | Central Air Conditioner Equipment | Central Air Conditioner Equipment - Tier 1 | Central Air Conditioner Equipment - Tier 2 | Central Air Conditioner Equipment - Tier 3 | ECM Retrofit, Gas Furnace | Efficient Gas Furnace with ECM | Electric System to Heat Pump Conversion - Tier 1 | Electric System to Heat Pump Conversion - Tier 2 | Evaporative Cooler - Permanently Installed | Evaporative Cooler - Premium | Evaporative Cooler - Premium Ducted | Evaporative Cooler - Premium Ducted,Self-Installed | Evaporative Cooler - Premium,Self-Installed | Evaporative Cooler - Replacement | Evaporative Cooler - Replacement,Self-Installed | Evaporative Cooler - Tier 2 | Heat Pump to Heat Pump Upgrade - Tier 1 | Heat Pump to Heat Pump Upgrade - Tier 2 | Heat Pump, Multi-Head, Ductless | Heat Pump, Single-Head, Ductless | Heat Pump, Supplemental, Ductless |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A Better Service Co | Murray | UT | | | | | | | | | | | x | | | | | | | | | | | |
| AAA Comfort Specialists | Eagle Mountain | UT | | | | | | | | | | | | | | | | x | | | | | | |
| AAA Comfort Specialists Heating & Cooling | Eagle Mountain | UT | | | | | | | | | | | | | | x | | | | | | | | |
| ABC Swamp Cooler | Layton | UT | | | | | | | | | | | x | | | x | x | | | | | | | |
| Absolute Air Heating and Air Conditioning | Mapleton | UT | x | | x | x | x | | x | | | | | | | | | | | | | | | |
| ABT Mechanical | Orem | UT | x | | | x | | | | | | | | | | | | | | | | | | |
| Ace Air Conditioning & Heating LLC | Bluffdale | UT | | | | | | | | | | | x | x | | | x | | | | | | | |
| Action Plumbing, Heating, and AC | West Jordan | UT | | | x | x | x | x | x | | | | | | | | | x | | | | | | |
| Acx Service | Ogden | UT | | | | | | | | | | | | | | | x | | | | | | | |
| Advanced Heating & Air Conditioning, Inc. | Logan | UT | | | x | | | | x | | | | | | | | | | | | | | | x |
| Advantage Heating and Air | West Jordan | UT | | x | | | | | x | | | | | | | | | | | | | | | |
| Affordable Heating and Cooling Inc | Salt Lake City | UT | | | x | x | | | x | | | | | | | | | | | | | | | |
| After Hours Heating & Cooling | Holladay | UT | | | x | | | | | | | | | | | | | | | | | | | |
| Air Conditioning & Heating Service | North Ogden | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| Air Design Heating and Cooling LLC | Murray | UT | x | | x | x | | x | x | | | | | | | | x | | | | | | | |
| Air Force Heating & AC Inc | Springville | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| Air Now Heating & Air Conditioning | Ogden | UT | | | x | x | | | x | | | | | | | | | | | | | | | |
| Air Source Heating & Cooling, Inc. | Lehi | UT | | | | x | | | x | | | | | | | | | | | | | | | |
| Aire Expresso Heating & Cooling | Tooele | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| Aire Serv of Salt Lake/Tooele | Salt Lake City | UT | x | | x | x | | | x | | | | x | | | | | | | | | | | |
| Aire Serv of Utah Valley (Comfort Tech) | Orem | UT | x | | | x | | | x | | | | | | | | | | | | | | | |
| Aire-Flo Heating and Air Conditioning, Inc. | Murray | UT | | | | | | | x | | | | | | | | x | | | | | | | |
| Airtime Heating and Cooling | Bluffdale | UT | | | x | | | | | | | | | | | | | | | | | | | |
| All-Pro HVAC | Ogden | UT | x | | x | x | | | x | | | | | | | | | | | | | | | |
| Allred's Inc. | Midvale | UT | | | | | | | | | | | | | x | x | | | | | | | | |
| Any Climate Mechanical | Sandy | UT | | | x | | | | | | | | | | | | | | | | | | | |
| Any Hour, Inc. | Orem | UT | | | | | | | x | | | | | | | | | | | | | | | |
| Arrant Heating | Clearfield | UT | x | | x | x | | | x | | | | | | | | x | | | | | | | |
| Atherton Park Apartments | Taylorsville | UT | | | | | | | | | | | | | | | x | | | | | | | |
| Atkinson Electronics, Inc. | Murray | UT | | | | | | x | | | | | | | | | | | | | | | | |
| Authority Heating & Cooling | Orem | UT | | | x | x | | | x | | | | | | | | | | | | | | | |
| Automated Heating & Air Conditioning Inc. | Ogden | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| Barwick Heating & Cooling | Springville | UT | | | | x | | | | | | | | | | | | | | | | | | |
| Bergmann Heating and Air Conditioning | Orem | UT | x | | x | x | | x | x | | | | | | | | | | | | | | | x |
| Berry Plumbing and Heating | Spanish Fork | UT | | | | x | | | | | x | | | | | | | | | | | | | |
| Bills Comfort Systems | Layton | UT | x | | x | x | | | x | | | x | | | | | | x | | | x | x | | |
| Bill's Comfort Systems Murray | Murray | UT | x | | x | x | | x | x | | | | | | | | | | | | | | | |
| Boulard Heating & Air Conditioning | West Jordan | UT | | | x | | | | | | | | | | | | x | | | | | | | |
| Boyd I Hoskins Jr & Son Inc | Ogden | UT | | | | | | | | | | | | | | | | x | | | | | | |
| Brian's Canvas Products | Clearfield | UT | | | | | | | | | | | | | | x | | x | | | | | | |
| Bryan Pons Enterprises | Taylorsville | UT | | | | | | | | | | | x | | | | | | | | | | | |
| Budget Plumbing & Rooter LLC | American Fork | UT | | | | | | | | | | | | x | | | | | | | | | | |
| Call Climate Services | Centerville | UT | x | | x | x | x | | x | | | | | | | | | | | | | | | |
| Canyon Heating and Air Conditioning | Salt Lake City | UT | | | x | | | | | | | | | | | | | | | | | | | |
| Carpenter Furnace Co Inc | Ogden | UT | x | | x | | | | x | | | | | | | | | | | | | | | x |
| Cedar Valley Heating & Air Conditioning | Cedar City | UT | | | x | | | | x | | | | x | x | | | x | | | | | | | |
| Climate Doctor LLC | Payson | UT | x | | | | | | x | | | | | | | | | | | | | | | |
| Comfort Champions | Draper | UT | x | | x | x | | x | x | | | | | | | | | | | | | | | |
| Comfort Solutions | Ogden | UT | x | | x | x | x | | x | | | | | | | | | | | | | | | x |
| Comfort Systems USA | Salt Lake City | UT | x | | x | x | | | x | | | | | | | | | | | | | | | x |

| Trade Ally Name (Trade ally may be located outside of the territory) | City | State | Central Air Conditioner Best Practice Installation & Sizing | Central Air Conditioner Equipment | Central Air Conditioner Equipment - Tier 1 | Central Air Conditioner Equipment - Tier 2 | Central Air Conditioner Equipment - Tier 3 | ECM Retrofit, Gas Furnace | Efficient Gas Furnace with ECM | Electric System to Heat Pump Conversion - Tier 1 | Electric System to Heat Pump Conversion - Tier 2 | Evaporative Cooler - Permanently Installed | Evaporative Cooler - Premium | Evaporative Cooler - Premium Ducted | Evaporative Cooler - Premium Ducted,Self-Installed | Evaporative Cooler - Premium,Self-Installed | Evaporative Cooler - Replacement | Evaporative Cooler - Replacement,Self-Installed | Evaporative Cooler - Tier 2 | Heat Pump to Heat Pump Upgrade - Tier 1 | Heat Pump to Heat Pump Upgrade - Tier 2 | Heat Pump, Multi-Head, Ductless | Heat Pump, Single-Head, Ductless | Heat Pump, Supplemental, Ductless |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Comfort Zone/ PC Industries | Salt Lake City | UT | | | x | x | | | x | | | | | | | | | | | | | | | |
| Complete Comfort Heating & Air Conditioning | Springville | UT | x | | x | | | | x | | | | | | | | | | | | | | | |
| Connect Building Services, Inc | Sandy | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| CTR Heating and Air | West Jordan | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| Custom Air, Inc. | Murray | UT | | | x | | | | | | | | | | | | | | | | | | | |
| Custom Comfort | Centerville | UT | | | | | | | | | | | | | | | x | | | | | | | |
| Customer Comfort LLC | Centerville | UT | | | | x | | | x | | | | | | | | | | | | | | | |
| CW Heating and Air | Riverton | UT | | | x | | | | | | | | | | | | | | | | | | | |
| Davis Heating & A/C Service, Inc. | Cedar City | UT | | | | | | | | | | | | | | | | x | | | | | | |
| Denny's Service Co | South Ogden | UT | x | | x | | | | x | | | | | | | | x | | | | | | | |
| Design Comfort | Salt Lake City | UT | | | x | x | | | | | | | x | | | | x | | | | | | | |
| Dick Kearsley Service Center | Clearfield | UT | x | | x | | | | x | | | x | x | x | | | x | x | | | | | | |
| Eagar Heating & Cooling | Pleasant Grove | UT | | | | x | | | | | | | | | | | | | | | | | | |
| EcoServices Intermountain | Ogden | UT | | | x | x | | | x | | | | | | | | | | | | | | | x |
| Elite Heating & Air Conditioning, LLC. | West Jordan | UT | | | | | | | | | | | | | | | | | | | | x | | |
| Energy Rewards Heating and Air Conditioning LLC | West Haven | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| Energy Savers Insulation | Layton | UT | | | | | | | | | | | | | | | x | | | | | | | |
| Environmental Refrigeration Services Inc Heating and Cooling (ERS Inc) | Plain City | UT | | | | | | | x | | | | | | | | x | | | | | | | |
| ESCO Services | Salt Lake City | UT | | | x | x | | | x | | | | | | | | | | | | | | | x |
| Extraordin-Aire | Plain City | UT | | | | | | x | x | | | | x | | | x | x | | | | | | | |
| Fahrenheit Heating & Air Conditioning | Mapleton | UT | | | | | | | x | | | | | | | | | | | | | | | |
| Fisher HVAC | Salt Lake City | UT | | | x | | | | x | | | | | | | | | | | | | | | x |
| Genuine Comfort HVAC | Centerville | UT | | | | | x | | | | | | | | | | | | | | | | | |
| Gillette Heating and Air Conditioning | Salem | UT | x | | x | x | | | x | | | | | | | | | | | | | | | x |
| Gray Wolf Mechanical | Provo | UT | | | x | | | x | x | | | | | | | | | | | | | | | |
| Gunther's Comfort Air | American Fork | UT | x | | x | x | x | | x | | | | | | | | | | | | | | | x |
| H & M Heating | Kaysville | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| Hansen HVAC & Plumbing Services | West Jordan | UT | x | | x | x | | | x | | | | | | | | | | | | | | | x |
| Harris-Dudley Plumbing Co. | Salt Lake City | UT | | | | | | | x | | | | | | | | | | | | | | | |
| Hartman Plumbing, Heating, and Air | Sandy | UT | | | | | | | x | | | | | | | | | | | | | | | |
| Healthy Home | Salt Lake City | UT | | | | | | | | | | | x | | | | x | | | | | | | |
| Heber Park City Appliance Sales and Service | Heber City | UT | | | | | | | | | x | | | | | | | | | | | | x | |
| High Country HVAC, Inc. | Centerville | UT | x | | x | x | x | x | x | | | | | | | | | | | | | | | |
| Holbrook Service, LLC | Salt Lake City | UT | | | | x | | | x | | | | x | | | | | | | | | | | |
| Holmes & Holmes Industrial | Magna | UT | x | | x | x | | x | x | | | | | | | | | | | | | | | |
| Home Energy Solutions | Centerville | UT | | | | | | | | | | | | | | x | | | | | | | | |
| Huish Heating and A/C Inc. | Taylorsville | UT | | | | | | | x | | | | | | | | | | | | | | | |
| Humphrey Heating and Air | Bountiful | UT | | | x | | | | x | | | | | | | | | | | | | | | x |
| Hustad Mechanical Inc | Nibley | UT | | | | | | | x | | | | | | | | | | | | | | | |
| HVAC Construction Inc | North Salt Lake | UT | | | x | x | | | x | | | | | | | | | | | | | x | | |
| HVAC Plus, Inc. | Salt Lake City | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| HVAC Utah | Layton | UT | x | | x | x | x | | x | | | | | | | | | | | | | | | |
| Hyland Heating | West Jordan | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| Ideal Heating & Cooling, Inc. | Park City | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| Intermountain Swamp Cooler Service Inc | Murray | UT | | | | | | | | | | | | | | x | | | | | | | | |
| J & M Plumbing, Heating & Air Inc. | West Jordan | UT | | | | | | | | | | | x | | | | x | | | | | | | |
| Jones Heating & Air Conditioning | West Valley City | UT | | | x | x | | | | | | | x | | | | x | | | | | | | |
| Just Right Heating & Cooling, LLC. | Salt Lake City | UT | x | | x | x | | | x | | | | | | | | | | | | | | | |
| K Lund Mechanical | West Jordan | UT | | | | | | | | | | | x | | | | | | | | | | | |
| K.O. Installers, Inc. | Plain City | UT | | | | | | | | | | x | x | | | x | x | x | | | | | | |
| Kelly's Heating and Cooling | South Salt Lake City | UT | x | | x | | | | x | | | | | | | | | | | | | | | |
| Larkin HVAC on Utah, Inc. | Sandy | UT | | | | x | | | | | | | | | | | | | | | | | | |

| Trade Ally Name (Trade ally may be located outside of the territory) | City | State | Central Air Conditioner Best Practice Installation & Sizing | Central Air Conditioner Equipment | Central Air Conditioner Equipment - Tier 1 | Central Air Conditioner Equipment - Tier 2 | Central Air Conditioner Equipment - Tier 3 | ECM Retrofit, Gas Furnace | Efficient Gas Furnace with ECM | Electric System to Heat Pump Conversion - Tier 1 | Electric System to Heat Pump Conversion - Tier 2 | Evaporative Cooler - Permanently Installed | Evaporative Cooler - Premium | Evaporative Cooler - Premium Ducted | Evaporative Cooler - Premium Ducted,Self-Installed | Evaporative Cooler - Premium,Self-Installed | Evaporative Cooler - Replacement | Evaporative Cooler - Replacement,Self-Installed | Evaporative Cooler - Tier 2 | Heat Pump to Heat Pump Upgrade - Tier 1 | Heat Pump to Heat Pump Upgrade - Tier 2 | Heat Pump, Multi-Head, Ductless | Heat Pump, Single-Head, Ductless | Heat Pump, Supplemental, Ductless |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larsen Heating & Air Conditioning | Saratoga Springs | UT | | | x | x | | | x | | | | | | | | | | | | | | | |
| Lee's Heating and Air | Salt Lake City | UT | | | x | x | x | | x | | | | | | | | | | | | | | | x |
| Long's Air Service Inc | American Fork | UT | | | | | x | | x | | | | | | | | | | | | | | | |
| Lyman Dutson | Riverton | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| Main Street Heating & Cooling | Sandy | UT | | | x | x | | x | x | | | | | | | | | | | | | | | x |
| Manwill Plumbing and Heating | Salt Lake City | UT | | | x | x | x | x | x | | | | x | | | | x | x | | | | | | x |
| Max Comfort Air Systems | West Valley | UT | | | | | | | | | | | x | | | | | | | | | | | |
| McLaughlin Air Conditioning and Heating Inc | Hurricane | UT | | | | | | | | | | | | | | | | | | | | x | x | x |
| Method Air HVAC | Sandy | UT | | | x | x | | | x | | | | | | | | | | | | | | | |
| Mike Hansen's HVAC Solutions | Syracuse | UT | | | x | | | | | | | | | | | | | | | | | | | |
| Millcreek Plumbing Inc. | Salt Lake City | UT | | | | | | | | | | | x | | | | | | | | | | | |
| Moab Heat & Cool, LLC. | Moab | UT | | | | | | | x | | | | x | | | | x | | | | | | | |
| Modern Mechanical | Ogden | UT | | | | | | | | | | | | | | | x | | | | | | | |
| Mountain Air Conditioning and Heating | Ogden | UT | | | x | x | x | x | x | | x | | | | | | | | | | | | | x |
| Mountainwest Service Experts | North Salt Lake | UT | x | | x | | | | x | | | | | | | | | | | | | | | |
| My Buddy the Plumber Heating & Air | Salt Lake City | UT | x | | x | x | | | x | | | | | | | | | | | | | | | |
| Nebo Comfort Systems | Payson | UT | x | | | x | | | x | | | | | | | | | | | | | | | |
| Neerings Plumbing & Heating | Salt Lake City | UT | | | x | x | x | | x | | | | | | | | | | | | | | | |
| Nelson's Heating & Refrigeration | Moab | UT | | | | | | | | | | | | | x | | | | | | | | | |
| Nichols HVAC, LLC. | Murray | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| North Star Heating & Air Conditioning | West Jordan | UT | | | x | | | | | | | | | | | | | | | | | | | |
| Outfitters HVAC, Inc | Centerville | UT | | | | | | | | | | | x | | | | | | | | | | | |
| Parley's PPM LLC | Orem | UT | x | | x | x | | | x | | | | x | | | | | | | | | | | x |
| PerfecTemp Heating and Air | Ogden | UT | | | | x | | | x | | | | | | | | x | | | | | | | |
| Performance HVAC LLC | Sandy | UT | x | | | | | | x | | | | | | | | x | | | | | | | |
| Pleasant Air | Pleasant Grove | UT | x | | | x | | | x | | | | | | | | | | | | | | | |
| Pond's Plumbing Heating AC | North Salt Lake | UT | | | x | x | | | x | | | | x | | | | | | | | | | | |
| Precise Plumbing Heating & AC | Midvale | UT | | | | | | | | | | | | | | | | x | | | | | | |
| Precision Air Management | Lehi | UT | | | | | | | x | | | | | | | | | | | | | | | x |
| Precision Comfort Systems | Murray | UT | | | x | | | | x | | | | | | | | | | | | | | | |
| Preferred Service Heating, Cooling and Air Purity Inc | South Jordan | UT | | | x | | x | | x | | | | | | | | | | | | | | | |
| Professional Heating and Air Conditioning | Pleasant Grove | UT | | | x | | | | x | | | | | | | | x | | | | | | | |
| Rentmeister Total Home Services | Syracuse | UT | | | x | x | | | x | | | | x | | | | x | | | | | | | |
| Riverside Plumbing and Heating Inc. | Moab | UT | | | | | | | | | | | x | | | | x | | | | | | | |
| Rocky Mountain Air Systems | Midvale | UT | | | | | | | | | | | x | | | | | | | | | | | |
| Salmon HVAC | Centerville | UT | x | | x | x | x | x | x | | | | | | | | | | | | | | | |
| Same Day Heating and Air | Salt Lake City | UT | x | | x | x | x | | x | | | | | | | | | | | | | | | |
| Sammy's Heating and Air, LLC | Bountiful | UT | | | | | | | | | | | x | | | | x | | | | | | | |
| Scott Hale Plumbing, Heating & Air | Salt Lake City | UT | | | x | | | | | | | | | | | | | | | | | | | |
| Scott Heating & Air Inc | Ogden | UT | | | x | x | | x | x | | | | x | | | | | | | | | | | |
| Select Comfort Systems | West Valley City | UT | | | x | | | x | x | | | | | | | | | | | | | | | |
| Service Experts Heating & Air Conditioning | Ogden | UT | x | | x | x | x | | x | | | | | | | | x | | | | | | | |
| Service Experts of Salt Lake City | Midvale | UT | x | | x | x | x | x | x | | | | | | | | | | | | | | | |
| Service Experts of Utah - Provo | Midvale | UT | | | x | x | x | x | x | | | | | | | | | | | | | | | |
| Sloan Construction Corp. | Salt Lake City | UT | | | | | | | | | | | x | x | | | | | | | | | | |
| Smedley & Associates Plumbing and Heating | Layton | UT | x | | x | x | x | | x | | | | | | | | | | | | | | | |
| Snow Canyon Heating & Cooling Inc | St George | UT | | | x | | | | | | x | | | | | | | | | | | | | |
| Southwest Air Conditioning Heating and Energy LLC | St George | UT | | | | | | | | | | | | | | | | | | | | x | | |
| Superior Water and Air, Inc. | West Valley City | UT | x | | x | x | x | | x | x | | | | | | | x | | | | | x | | x |
| The Furnace Man Heating-Cooling LLC | Salt Lake City | UT | | | | | | | | | | | | | | | x | | | | | | | |
| Thompson's Comfort Connection | Midvale | UT | | | x | x | | | x | | | | | | | | | | | | | | | x |

| Trade Ally Name (Trade ally may be located outside of the territory) | City | State | Central Air Conditioner Best Practice Installation & Sizing | Central Air Conditioner Equipment | Central Air Conditioner Equipment - Tier 1 | Central Air Conditioner Equipment - Tier 2 | Central Air Conditioner Equipment - Tier 3 | ECM Retrofit, Gas Furnace | Efficient Gas Furnace with ECM | Electric System to Heat Pump Conversion - Tier 1 | Electric System to Heat Pump Conversion - Tier 2 | Evaporative Cooler - Permanently Installed | Evaporative Cooler - Premium | Evaporative Cooler - Premium Ducted | Evaporative Cooler - Premium Ducted,Self-Installed | Evaporative Cooler - Premium,Self-Installed | Evaporative Cooler - Replacement | Evaporative Cooler - Replacement,Self-Installed | Evaporative Cooler - Tier 2 | Heat Pump to Heat Pump Upgrade - Tier 1 | Heat Pump to Heat Pump Upgrade - Tier 2 | Heat Pump, Multi-Head, Ductless | Heat Pump, Single-Head, Ductless | Heat Pump, Supplemental, Ductless |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Titan Heating & Air Conditioning | West Jordan | UT | | | x | | | | x | | | | | x | | | | | | | | | | |
| Triple T Inc | Spanish Fork | UT | x | | x | x | | | x | | | | | | | | | | | | | | | x |
| Warner Heating | Riverton | UT | | | x | | | | | | | | | | | | | | | | | | | |
| Welch Heating and Air Conditioning | Salt Lake City | UT | | | x | | | | | | | | | | | | | | | | | | | |
| Western Heating & Air Conditioning | Orem | UT | x | | x | x | x | | x | | | | | | | | | | | | | | | |
| Western Mechanical Inc. | Logan | UT | | | x | | x | | x | | | | | | | | x | | | | | | | |
| Whipple Service Champions | Salt Lake City | UT | x | | x | x | | | x | | | | | | | | | | | | | | | |

**List of 2016 Participating Manufactured Homes Trade Allies**
Includes a summary of measures that were redeemed in 2016 from each trade ally

| Trade Ally Name (Trade ally may be located outside of the territory) | City | State | Manufactured Homes Duct Sealing | Duct Sealing w/Crossover - Manufactured Homes |
|---|---|---|---|---|
| Home Energy Experts | Clearfield | UT | x | x |

**List of 2016 Participating Plumbing Trade Allies**
Includes a summary of measures that were redeemed in 2016 fro

| Trade Ally Name (Trade ally may be located outside of the territory) | City | State | Heat Pump Water Heaters |
|---|---|---|---|
| JM Mechanical | Hyde Park | UT | x |
| Straightline Plumbing LLC | St George | UT | x |

**List of 2016 Participating Weatherization Trade Allies**
Includes a summary of measures that were redeemed in 2016 from each trade ally

| Trade Ally Name (Trade ally may be located outside of the territory) | City | State | Air Sealing | Duct Sealing & Insulation | Insulation-Attic | Insulation-Attic,Self-Installed | Insulation-Floor | Insulation-Wall | Insulation-Wall,Self-Installed | Windows |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 Star Building Products, LLC | Orem | UT | | | x | | | | | |
| 5 Star Building Products, LLC. | Orem | UT | | | x | | | | | |
| A1 Utah Insulation | South Jordan | UT | | | x | | | | | |
| ABCO Glass Products | Lindon | UT | | | | | | | | x |
| Absolute Air Heating and Air Conditioning | Mapleton | UT | | | x | | | | | |
| Advanced Insulation | Morgan | UT | | | x | | | | | |
| Advanced Window Products, Inc. | Salt Lake City | UT | | | | | | | | x |
| Advantage Window & Door LLC | Taylorsville | UT | | | | | | | | x |
| Air Tight Energy Inc. (Omnia Services Group) | Orem | UT | x | x | | | | | | |
| Aire-Flo Heating and Air Conditioning, Inc. | Murray | UT | | | | | | | | |
| All Purpose Windows & Doors-Salt Lake City 84114 | Salt Lake City | UT | | | | | | | | x |
| All-Purpose Windows & Doors-Salt Lake City 84119 | Salt Lake City | UT | | | | | | | | x |
| Alpine Exteriors, LLC. | South Jordan | UT | | | | | | | | x |
| American Exteriors LLC | West Valley City | UT | | | | | | | | x |
| American Home Services, Inc. | Orem | UT | | | | | | | | x |
| Andersen Construction | West Jordan | UT | | | | | | | | x |
| Apex Energy Solutions LLC | Salt Lake City | UT | | | | | | | | x |
| Applied Energy Solutions | Woods Cross | UT | | | x | | | x | | |
| Barton Insulation | Vernal | UT | | | x | | | | | |
| BDI Insulation of Salt Lake City | Salt Lake City | UT | | | x | | | x | | |
| Bennett's Glass of Logan | Logan | UT | | | | | | | | x |
| Best Property Improvements Inc. | Holladay | UT | | | x | | | x | | |
| Best Property Improvements Inc. | Holladay | UT | | x | | | | | | |
| Bonded Insulation | Salt Lake City | UT | | | x | | | x | | |
| Bruce Allsop Insulation | Hyrum | UT | | | x | | | | | |
| Building Services Group | Salt Lake City | UT | | | x | | | x | | |
| Burton Lumber Insulation | Salt Lake City | UT | | | | | | | | x |
| Caco Construction Corp. | Lehi | UT | | | | | | | | x |
| Champion Windows | Salt Lake City | UT | | | | | | | | x |
| Chris W. Thurgood Construction Inc. | Bothwell | UT | | | | | | | | x |
| CJ's Home Improvement | West Valley City | UT | | | | | | | | x |
| Clean Cut Glass | West Valley City | UT | | | | | | | | x |
| Clear View Installs, LLC. | Sandy | UT | | | | | | | | x |
| Colonial Building Supply | Centerville | UT | | | | | | | | x |
| Cornerstone Worx Inc | Riverdale | UT | | | x | | | x | | |
| Double T, Inc. | Salt Lake City | UT | | | | | | | | x |
| Eco Insulation | St George | UT | x | | x | x | | x | | |
| Eco Insulation | St George | UT | | | x | | | | | |
| Element Construction, Inc. | Harrisville | UT | | | | | | | | x |
| Elite Energy Solutions | Lindon | UT | | x | x | | | x | | |
| Energy Pro | Syracuse | UT | | | x | x | | x | | |
| Energy Savers Insulation | Layton | UT | | x | x | x | x | x | x | |
| Energy Wise Insulation | Salt Lake City | UT | | x | x | | | | | |
| ESCO Services | Salt Lake City | UT | | | x | | | | | |
| Greenhome Specialties | Layton | UT | | | x | | | x | | x |
| Greenify Energy Savers | Sandy | UT | | | x | | | | | x |
| Hansen All Seasons | Lindon | UT | | | x | | | x | | |
| Home Energy Experts | Clearfield | UT | | x | | | | | | |

| Trade Ally Name (Trade ally may be located outside of the territory) | City | State | Air Sealing | Duct Sealing & Insulation | Insulation-Attic | Insulation-Attic,Self-Installed | Insulation-Floor | Insulation-Wall | Insulation-Wall,Self-Installed | Windows |
|---|---|---|---|---|---|---|---|---|---|---|
| Home Energy Solutions | Centerville | UT | | x | x | | | | | |
| Homestar Windows and Doors | Sandy | UT | | | | | | | | x |
| Hone Insulation | Levan | UT | | | x | | | x | | |
| Housing Authority of Utah County | Provo | UT | | | x | | | | | |
| Insulation From Hale LLC | North Salt Lake | UT | | | x | | | x | | |
| Insulation From Hale, LLC | Salt Lake City | UT | | | x | | | | | |
| International Installations LLC | Lehi | UT | | | | | | | | x |
| J & K Insulation LLC | PLEASANT VIEW | UT | | | x | x | | x | | |
| J.R. Remodeling Specialist | Draper | UT | | | x | | | | | |
| Jake Steenbergen Construction, Inc. | Murray | UT | | | | | | | | x |
| Jarrett Construction Inc | Orem | UT | | | | | | | | x |
| Jones Paint & Glass | American Fork | UT | | | | | | | | x |
| Jones Paint & Glass- Provo | Provo | UT | | | | | | | | x |
| Jones Paint & Glass- St George | St George | UT | | | | | | | | x |
| K-Designers | West Valley City | UT | | | | | | | | x |
| Kendall Insulation | Ogden | UT | | | x | | | x | | |
| Mountain States Windows & Siding | Lehi | UT | | | | | | | | x |
| Mountainland Exteriors | Riverton | UT | | | | | | | | x |
| Moyes Glass and Supply | Ogden | UT | | | | | | | | x |
| Mr. Window | Salt Lake City | UT | | | | | | | | x |
| Nelson Insulation | Roy | UT | | | x | | | x | | |
| New Look Siding, LLC | Midvale | UT | | | | | | | | x |
| New Vision Construction Inc. | West Haven | UT | | | | | | | | x |
| Peach Building Products | Midvale | UT | | | | | | | | x |
| Pella Windows & Doors | Draper | UT | | | | | | | | x |
| Penguin Insulation, LLC | Layton | UT | | | x | | | | | |
| Performance Glass | Stansbury Park | UT | | | | | | | | x |
| Precision Building, LLC | West Valley | UT | | | x | | | x | | |
| Premier Building Supply | American Fork | UT | | | x | | | | | |
| Property Medics | Bluffdale | UT | | | x | | | | | |
| Renewal by Andersen of Salt Lake | Salt Lake City | UT | | | | | | | | x |
| RLA & Sons, LLC. | Draper | UT | | | x | | | | | |
| Roberts Bros Inc | West Valley City | UT | | | | | | | | x |
| Rocky Mountain Windows and Doors Inc. | Orem | UT | | | | | | | | x |
| SB Window Sales LC | Salt Lake City | UT | | | | | | | | x |
| Service Experts Heating & Air Conditioning | Ogden | UT | | | x | | | | | |
| Service Experts of Salt Lake City | Midvale | UT | | | x | | | | | |
| Slade N Company | Salt Lake City | UT | | | | | | | | x |
| Sunroc Building Materials | Lindon | UT | | | x | | | x | x | |
| Superior Home Improvement | South Salt Lake | UT | | | x | | | | | x |
| Tate's Construction Contracting Inc | West Valley City | UT | | | | | | | | x |
| The Brokerage, Inc. | Salt Lake City | UT | | | | | | | | x |
| Thermal Solutions LLC | Springville | UT | | | x | | | | | |
| Tonks Insulation | Washington | UT | | | x | | | | | |
| U.N.I. Exteriors | Draper | UT | | | | | | | | x |
| USI Cardalls LLC | Logan | UT | | | x | | | x | | |
| USI Cardalls LLC - North Salt Lake City | North Salt Lake City | UT | | | x | | | x | | |
| Valley Glass Inc. | Ogden | UT | | | | | | | | x |
| Whitaker Roofing Services | Salt Lake City | UT | | | | x | | | | |
| White Leaf Enterprises Inc | North Ogden | UT | | | | | | | | x |
| Wholesale Windows and Door, Inc. | Orem | UT | | | | | | | | x |

| Trade Ally Name (Trade ally may be located outside of the territory) | City | State | Air Sealing | Duct Sealing & Insulation | Insulation-Attic | Insulation-Attic,Self-Installed | Insulation-Floor | Insulation-Wall | Insulation-Wall,Self-Installed | Windows |
|---|---|---|---|---|---|---|---|---|---|---|
| Window World of Utah | Murray | UT | | | | | | | | x |
| Wittes Fine Finish Work | Layton | UT | | | | | | | | x |

| Customer City | % of All Applications | % of Appliance & Fixture Applications | % of HVAC Applications | % of Manufactured Homes Applications | % of Kits Applications |
|---|---|---|---|---|---|
| ABRAHAM | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| ALPINE | 0.58% | 0.40% | 0.64% | 0.00% | 0.74% |
| AMALGA | 0.01% | 0.02% | 0.01% | 0.00% | 0.00% |
| AMERICAN FORK | 1.04% | 1.34% | 0.81% | 0.00% | 1.11% |
| ANNABELLA | 0.07% | 0.04% | 0.11% | 0.00% | 0.00% |
| APPLE VALLEY | 0.13% | 0.00% | 0.12% | 0.00% | 0.00% |
| AURORA | 0.05% | 0.02% | 0.06% | 0.00% | 0.00% |
| AVON | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| AXTELL | 0.01% | 0.00% | 0.01% | 0.00% | 0.09% |
| BEAR RIVER CITY | 0.03% | 0.02% | 0.01% | 0.00% | 0.00% |
| BEAVER | 0.01% | 0.00% | 0.02% | 0.00% | 0.00% |
| Benjamin | 0.04% | 0.08% | 0.03% | 0.00% | 0.00% |
| BENSON | 0.01% | 0.04% | 0.00% | 0.00% | 0.00% |
| BLUFF | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| BLUFFDALE | 1.08% | 1.30% | 1.23% | 0.00% | 0.37% |
| BOTHWELL | 0.01% | 0.02% | 0.00% | 0.00% | 0.09% |
| BOUNTIFUL | 0.04% | 0.04% | 0.02% | 0.00% | 0.18% |
| BRIGHAM CITY | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| BRIGHTON | 0.00% | 0.02% | 0.00% | 0.00% | 0.00% |
| BROOKSIDE | 0.02% | 0.00% | 0.03% | 0.00% | 0.00% |
| CASTLE DALE | 0.03% | 0.04% | 0.04% | 0.00% | 0.00% |
| CEDAR CITY | 1.27% | 1.00% | 1.43% | 0.00% | 1.66% |
| CEDAR FORT | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| CEDAR HILLS | 0.49% | 0.70% | 0.45% | 0.00% | 0.09% |
| CENTERFIELD | 0.03% | 0.02% | 0.04% | 0.00% | 0.00% |
| CENTERVILLE | 0.85% | 1.15% | 0.74% | 0.00% | 0.74% |
| CENTRAL | 0.02% | 0.02% | 0.02% | 0.00% | 0.00% |
| CENTRAL VALLEY | 0.06% | 0.06% | 0.07% | 0.00% | 0.09% |
| CHESTER | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| CIRCLEVILLE | 0.04% | 0.02% | 0.06% | 0.00% | 0.00% |
| CLARKSTON | 0.01% | 0.04% | 0.00% | 0.00% | 0.00% |
| CLEARFIELD | 0.98% | 1.02% | 0.93% | 0.00% | 0.83% |
| CLEVELAND | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| CLINTON | 0.80% | 0.85% | 0.74% | 0.00% | 0.92% |
| COALVILLE | 0.16% | 0.09% | 0.04% | 0.00% | 0.09% |
| COLLEGE WARD | 0.01% | 0.02% | 0.01% | 0.00% | 0.00% |
| COLLINSTON | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| COPPERTON | 0.01% | 0.00% | 0.02% | 0.00% | 0.00% |
| CORINNE | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| COTTONWOOD HEIGHTS | 1.96% | 1.71% | 1.96% | 0.00% | 2.03% |
| CROYDON | 0.00% | 0.00% | 0.00% | 0.00% | 0.09% |
| DAMMERON VALLEY | 0.34% | 0.04% | 0.41% | 0.00% | 0.09% |
| DELTA | 0.13% | 0.13% | 0.16% | 0.00% | 0.18% |
| DESERET | 0.02% | 0.02% | 0.01% | 0.00% | 0.09% |
| DEWEYVILLE | 0.01% | 0.02% | 0.00% | 0.00% | 0.09% |
| DIAMOND VALLEY | 0.07% | 0.02% | 0.07% | 0.00% | 0.09% |
| DRAPER | 3.82% | 2.56% | 4.61% | 0.00% | 3.05% |
| EAGLE MOUNTAIN | 1.02% | 1.26% | 0.74% | 0.00% | 1.85% |
| EAST CARBON | 0.02% | 0.00% | 0.04% | 0.00% | 0.00% |
| EDEN | 0.11% | 0.24% | 0.06% | 0.00% | 0.09% |
| ELMO | 0.03% | 0.00% | 0.04% | 0.00% | 0.00% |
| ELSINORE | 0.11% | 0.08% | 0.13% | 0.00% | 0.18% |
| ELWOOD | 0.01% | 0.02% | 0.01% | 0.00% | 0.09% |
| EMERY | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |

| Customer City | % of All Applications | % of Appliance & Fixture Applications | % of HVAC Applications | % of Manufactured Homes Applications | % of Kits Applications |
|---|---|---|---|---|---|
| ENOCH | 0.16% | 0.19% | 0.12% | 0.00% | 0.28% |
| ENTERPRISE | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| EPHRAIM | 0.00% | 0.02% | 0.00% | 0.00% | 0.00% |
| ERDA | 0.12% | 0.08% | 0.13% | 0.00% | 0.09% |
| EUREKA | 0.00% | 0.02% | 0.00% | 0.00% | 0.00% |
| FARMINGTON | 1.08% | 1.73% | 0.79% | 0.00% | 1.20% |
| FARR WEST | 0.25% | 0.47% | 0.17% | 0.65% | 0.18% |
| FAYETTE | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| FERRON | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| FIELDING | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| FOUNTAIN GREEN | 0.01% | 0.04% | 0.01% | 0.00% | 0.00% |
| FRANCIS | 0.05% | 0.15% | 0.01% | 0.00% | 0.18% |
| FRUIT HEIGHTS | 0.20% | 0.30% | 0.17% | 0.00% | 0.00% |
| GARDEN CITY | 0.03% | 0.04% | 0.03% | 0.00% | 0.00% |
| GARLAND | 0.04% | 0.06% | 0.00% | 0.00% | 0.18% |
| GENOLA | 0.02% | 0.00% | 0.03% | 0.00% | 0.00% |
| Glendale | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| GLENWOOD | 0.03% | 0.02% | 0.04% | 0.00% | 0.00% |
| GOSHEN | 0.02% | 0.00% | 0.04% | 0.00% | 0.00% |
| GRANTSVILLE | 0.36% | 0.49% | 0.39% | 0.00% | 0.09% |
| GREEN RIVER | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| GUNLOCK | 0.06% | 0.00% | 0.07% | 0.00% | 0.00% |
| GUNNISON | 0.05% | 0.02% | 0.08% | 0.00% | 0.00% |
| HARRISVILLE | 0.37% | 0.24% | 0.44% | 0.00% | 0.37% |
| HEBER CITY | 0.00% | 0.00% | 0.00% | 0.00% | 0.09% |
| HELPER | 0.02% | 0.00% | 0.02% | 0.00% | 0.09% |
| HENEFER | 0.02% | 0.06% | 0.00% | 0.00% | 0.00% |
| HERRIMAN | 2.90% | 2.79% | 3.48% | 0.00% | 1.20% |
| HIDEOUT | 0.02% | 0.06% | 0.00% | 0.00% | 0.09% |
| HIGHLAND | 0.91% | 1.11% | 0.89% | 0.00% | 0.18% |
| HINCKLEY | 0.03% | 0.02% | 0.04% | 0.00% | 0.00% |
| HOLDEN | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| HOLIDAY | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| HOLLADAY | 1.47% | 1.58% | 1.39% | 0.00% | 1.02% |
| HONEYVILLE | 0.02% | 0.02% | 0.01% | 0.00% | 0.00% |
| HOOPER | 0.38% | 0.68% | 0.29% | 0.00% | 0.18% |
| HOWELL | 0.01% | 0.02% | 0.01% | 0.00% | 0.00% |
| HOYTSVILLE | 0.05% | 0.06% | 0.00% | 0.00% | 0.00% |
| HUNTINGTON | 0.03% | 0.06% | 0.03% | 0.00% | 0.09% |
| HUNTSVILLE | 0.07% | 0.17% | 0.06% | 0.00% | 0.00% |
| HURRICANE | 0.16% | 0.00% | 0.00% | 24.18% | 0.09% |
| HYDE PARK | 0.08% | 0.23% | 0.02% | 0.00% | 0.18% |
| INDIANOLA | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| IVINS | 0.50% | 0.21% | 0.57% | 0.00% | 0.37% |
| JOSEPH | 0.05% | 0.02% | 0.08% | 0.00% | 0.00% |
| JUNCTION | 0.03% | 0.02% | 0.05% | 0.00% | 0.00% |
| KAMAS | 0.10% | 0.30% | 0.01% | 0.00% | 0.55% |
| KANARRAVILLE | 0.00% | 0.02% | 0.00% | 0.00% | 0.00% |
| KANESVILLE | 0.00% | 0.02% | 0.00% | 0.00% | 0.00% |
| KAYSVILLE | 0.03% | 0.04% | 0.02% | 0.00% | 0.09% |
| KEARNS | 1.23% | 1.09% | 1.37% | 0.00% | 0.46% |
| KENILWORTH | 0.01% | 0.00% | 0.01% | 0.00% | 0.09% |
| KINGSTON | 0.02% | 0.00% | 0.04% | 0.00% | 0.00% |
| LA VERKIN | 0.11% | 0.02% | 0.12% | 0.00% | 0.37% |

| Customer City | % of All Applications | % of Appliance & Fixture Applications | % of HVAC Applications | % of Manufactured Homes Applications | % of Kits Applications |
|---|---|---|---|---|---|
| LAKE POINT | 0.03% | 0.04% | 0.04% | 0.00% | 0.00% |
| LAYTON | 3.41% | 4.24% | 3.07% | 5.88% | 2.96% |
| LEAMINGTON | 0.01% | 0.02% | 0.01% | 0.00% | 0.00% |
| LEEDS | 0.18% | 0.08% | 0.22% | 0.00% | 0.00% |
| LEHI | 0.06% | 0.17% | 0.01% | 0.00% | 0.00% |
| LEVAN | 0.00% | 0.02% | 0.00% | 0.00% | 0.00% |
| LEWISTON | 0.03% | 0.04% | 0.01% | 0.00% | 0.28% |
| LIBERTY | 0.05% | 0.11% | 0.04% | 0.00% | 0.09% |
| LINCOLN | 0.03% | 0.02% | 0.03% | 0.00% | 0.00% |
| LINDON | 0.49% | 0.87% | 0.38% | 0.00% | 0.74% |
| LOGAN | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| LYNNDYL | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| MAGNA | 0.83% | 0.73% | 0.90% | 0.00% | 0.28% |
| MANDERFIELD | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| MANTUA | 0.03% | 0.08% | 0.03% | 0.00% | 0.00% |
| MAPLETON | 0.24% | 0.45% | 0.20% | 0.00% | 0.18% |
| MARRIOTT SLATERVILLE | 0.09% | 0.19% | 0.06% | 0.00% | 0.09% |
| MARRIOTT-SLATERVILLE | 0.01% | 0.00% | 0.00% | 0.00% | 0.00% |
| MARYSVALE | 0.05% | 0.00% | 0.08% | 0.00% | 0.09% |
| MAYFIELD | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| MCCORNICK | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| MENDON | 0.04% | 0.08% | 0.04% | 0.00% | 0.00% |
| MIDVALE | 2.00% | 0.88% | 2.71% | 0.00% | 1.57% |
| MIDWAY | 0.01% | 0.04% | 0.00% | 0.00% | 0.00% |
| MILFORD | 0.13% | 0.00% | 0.11% | 0.00% | 0.09% |
| MILLCREEK CANYON | 0.00% | 0.00% | 0.00% | 0.00% | 0.09% |
| MILLVILLE | 0.03% | 0.08% | 0.01% | 0.00% | 0.09% |
| MINERSVILLE | 0.03% | 0.02% | 0.04% | 0.00% | 0.00% |
| MOAB | 0.21% | 0.08% | 0.24% | 0.00% | 1.02% |
| MONA | 0.03% | 0.06% | 0.01% | 0.00% | 0.28% |
| MONROE | 0.04% | 0.02% | 0.06% | 0.00% | 0.00% |
| Morgan | 0.10% | 0.13% | 0.04% | 0.00% | 0.09% |
| MORONI | 0.02% | 0.04% | 0.01% | 0.00% | 0.00% |
| MOUNTAIN GREEN | 0.27% | 0.49% | 0.22% | 0.00% | 0.09% |
| MT PLEASANT | 0.00% | 0.02% | 0.00% | 0.00% | 0.00% |
| MURRAY | 0.75% | 0.60% | 0.75% | 0.00% | 0.65% |
| NAPLES | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| NEPHI | 0.01% | 0.04% | 0.00% | 0.00% | 0.00% |
| NEW HARMONY | 0.02% | 0.02% | 0.01% | 0.00% | 0.09% |
| NEWTON | 0.03% | 0.04% | 0.03% | 0.00% | 0.00% |
| NIBLEY | 0.13% | 0.17% | 0.10% | 0.00% | 0.74% |
| NORTH LOGAN | 0.24% | 0.38% | 0.12% | 0.00% | 1.20% |
| NORTH OGDEN | 0.80% | 1.04% | 0.69% | 0.00% | 0.65% |
| NORTH SALT LAKE | 1.07% | 1.15% | 1.14% | 0.00% | 0.65% |
| OAKLEY | 0.04% | 0.09% | 0.02% | 0.00% | 0.18% |
| OASIS | 0.01% | 0.02% | 0.01% | 0.00% | 0.00% |
| OGDEN | 3.45% | 2.69% | 3.72% | 0.00% | 2.59% |
| ORANGEVILLE | 0.03% | 0.00% | 0.05% | 0.00% | 0.00% |
| OREM | 3.23% | 4.39% | 2.69% | 0.00% | 4.16% |
| PANGUITCH | 0.02% | 0.04% | 0.01% | 0.00% | 0.00% |
| PARADISE | 0.01% | 0.02% | 0.01% | 0.00% | 0.00% |
| PARK CITY | 0.81% | 1.21% | 0.48% | 0.00% | 4.16% |
| PAROWAN | 0.01% | 0.00% | 0.02% | 0.00% | 0.00% |
| PEOA | 0.01% | 0.02% | 0.01% | 0.00% | 0.09% |

| Customer City | % of All Applications | % of Appliance & Fixture Applications | % of HVAC Applications | % of Manufactured Homes Applications | % of Kits Applications |
|---|---|---|---|---|---|
| PERRY | 0.13% | 0.34% | 0.04% | 0.00% | 0.09% |
| PETERSBORO | 0.00% | 0.02% | 0.00% | 0.00% | 0.00% |
| PLAIN CITY | 0.32% | 0.53% | 0.26% | 0.00% | 0.55% |
| PLEASANT GROVE | 1.35% | 2.13% | 1.09% | 0.00% | 1.02% |
| PLEASANT VIEW | 0.50% | 0.64% | 0.46% | 0.00% | 0.37% |
| PLYMOUTH | 0.01% | 0.00% | 0.01% | 0.00% | 0.09% |
| PRICE | 0.07% | 0.11% | 0.06% | 0.00% | 0.00% |
| PROVIDENCE | 0.15% | 0.34% | 0.07% | 0.00% | 0.37% |
| PROVO CANYON | 0.03% | 0.00% | 0.03% | 0.00% | 0.09% |
| RANDOLPH | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| REDMOND | 0.03% | 0.04% | 0.04% | 0.00% | 0.00% |
| RICHFIELD | 0.48% | 0.17% | 0.65% | 0.00% | 0.74% |
| RICHMOND | 0.06% | 0.15% | 0.03% | 0.00% | 0.18% |
| RIVER HEIGHTS | 0.07% | 0.06% | 0.06% | 0.00% | 0.46% |
| RIVERDALE | 0.33% | 0.24% | 0.39% | 0.65% | 0.00% |
| RIVERSIDE | 0.01% | 0.04% | 0.00% | 0.00% | 0.00% |
| RIVERTON | 2.11% | 2.67% | 1.73% | 0.00% | 1.76% |
| ROCKVILLE | 0.03% | 0.00% | 0.01% | 0.00% | 0.00% |
| ROCKY RIDGE | 0.01% | 0.00% | 0.01% | 0.00% | 0.09% |
| ROY | 2.30% | 1.28% | 2.09% | 67.97% | 1.02% |
| RUSH VALLEY | 0.01% | 0.00% | 0.02% | 0.00% | 0.00% |
| SALINA | 0.17% | 0.02% | 0.26% | 0.00% | 0.28% |
| SALT LAKE CITY | 10.42% | 8.42% | 10.80% | 0.00% | 12.38% |
| SANDY | 5.50% | 4.90% | 5.25% | 0.00% | 4.44% |
| SANTAQUIN | 0.23% | 0.55% | 0.07% | 0.00% | 0.92% |
| SARATOGA SPRINGS | 0.69% | 1.37% | 0.48% | 0.00% | 0.92% |
| SCIPIO | 0.02% | 0.00% | 0.03% | 0.00% | 0.00% |
| SCOFIELD | 0.01% | 0.02% | 0.00% | 0.00% | 0.00% |
| SEVIER | 0.02% | 0.00% | 0.03% | 0.00% | 0.00% |
| SIGURD | 0.02% | 0.00% | 0.04% | 0.00% | 0.00% |
| SKULL VALLEY | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| SMITHFIELD | 0.16% | 0.28% | 0.07% | 0.00% | 0.28% |
| SNOWVILLE | 0.01% | 0.02% | 0.01% | 0.00% | 0.09% |
| SNYDERVILLE | 0.15% | 0.30% | 0.05% | 0.00% | 0.74% |
| SO Jordan | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| So. Jordan | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| SOUTH JORDAN | 3.91% | 4.86% | 3.49% | 0.00% | 2.96% |
| SOUTH OGDEN | 0.93% | 0.73% | 0.95% | 0.00% | 0.65% |
| SOUTH SALT LAKE | 1.86% | 0.70% | 2.62% | 0.00% | 1.20% |
| SOUTH WEBER | 0.43% | 0.83% | 0.27% | 0.00% | 0.37% |
| SPRING GLEN | 0.01% | 0.02% | 0.01% | 0.00% | 0.00% |
| SPRINGDALE | 0.01% | 0.00% | 0.01% | 0.00% | 0.09% |
| St. George | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| STANSBURY PARK | 1.05% | 0.56% | 1.45% | 0.00% | 0.28% |
| STERLING | 0.02% | 0.04% | 0.01% | 0.00% | 0.00% |
| STOCKTON | 0.04% | 0.11% | 0.02% | 0.00% | 0.00% |
| SUMMIT | 0.00% | 0.02% | 0.00% | 0.00% | 0.00% |
| SUMMIT COUNTY | 0.11% | 0.26% | 0.01% | 0.00% | 0.65% |
| SUNSET | 0.18% | 0.19% | 0.20% | 0.00% | 0.09% |
| SUTHERLAND | 0.01% | 0.02% | 0.01% | 0.00% | 0.09% |
| SYRACUSE | 1.44% | 2.35% | 1.25% | 0.00% | 1.29% |
| TAYLOR | 0.05% | 0.08% | 0.04% | 0.00% | 0.18% |
| TAYLORSVILLE | 3.28% | 2.24% | 3.79% | 0.00% | 2.87% |
| TINTIC | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |

| Customer City | % of All Applications | % of Appliance & Fixture Applications | % of HVAC Applications | % of Manufactured Homes Applications | % of Kits Applications |
|---|---|---|---|---|---|
| TOOELE | 1.33% | 1.05% | 1.56% | 0.00% | 0.92% |
| TOQUERVILLE | 0.10% | 0.02% | 0.11% | 0.00% | 0.09% |
| TREMONTON | 0.48% | 0.23% | 0.65% | 0.00% | 0.28% |
| TRENTON | 0.01% | 0.02% | 0.01% | 0.00% | 0.00% |
| UINTAH | 0.15% | 0.15% | 0.14% | 0.65% | 0.18% |
| UPTON | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| VENICE | 0.03% | 0.00% | 0.06% | 0.00% | 0.00% |
| VERNAL | 0.22% | 0.23% | 0.04% | 0.00% | 2.96% |
| VERNON | 0.01% | 0.02% | 0.01% | 0.00% | 0.00% |
| VEYO | 0.02% | 0.00% | 0.03% | 0.00% | 0.00% |
| VINEYARD | 0.07% | 0.23% | 0.00% | 0.00% | 0.37% |
| VIRGIN | 0.00% | 0.02% | 0.00% | 0.00% | 0.00% |
| W Jordan | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| WALES | 0.02% | 0.02% | 0.02% | 0.00% | 0.09% |
| WALLSBURG | 0.01% | 0.02% | 0.00% | 0.00% | 0.09% |
| WANSHIP | 0.01% | 0.06% | 0.00% | 0.00% | 0.00% |
| WASATCH COUNTY | 0.05% | 0.17% | 0.00% | 0.00% | 0.28% |
| WASHINGTON TERRACE | 0.42% | 0.32% | 0.51% | 0.00% | 0.09% |
| WELLINGTON | 0.03% | 0.00% | 0.04% | 0.00% | 0.09% |
| WELLSVILLE | 0.10% | 0.13% | 0.05% | 0.00% | 0.37% |
| WEST BOUNTIFUL | 0.25% | 0.47% | 0.11% | 0.00% | 0.37% |
| WEST HAVEN | 0.53% | 1.13% | 0.32% | 0.00% | 0.46% |
| WEST JORDAN | 5.79% | 5.10% | 6.34% | 0.00% | 5.08% |
| WEST POINT | 0.53% | 0.66% | 0.50% | 0.00% | 0.18% |
| West Valley | 0.04% | 0.02% | 0.06% | 0.00% | 0.00% |
| WEST VALLEY CITY | 4.45% | 3.75% | 5.05% | 0.00% | 4.16% |
| WEST WEBER | 0.03% | 0.04% | 0.04% | 0.00% | 0.00% |
| WILLARD | 0.10% | 0.21% | 0.06% | 0.00% | 0.09% |
| WINCHESTER HILLS | 0.13% | 0.00% | 0.14% | 0.00% | 0.00% |
| WOODRUFF | 0.01% | 0.02% | 0.01% | 0.00% | 0.00% |
| WOODS CROSS | 0.38% | 0.58% | 0.29% | 0.00% | 0.28% |
| WVC | 0.01% | 0.00% | 0.01% | 0.00% | 0.00% |
| YOUNG WARD | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |

# Appendix 5

# *watt*smart Business Trade Allies

# Energy Efficiency Alliance

The following is a list of contractors, distributors and other businesses participating in Rocky Mountain Power's Energy Efficiency Alliance displayed in random order (unless sorted by the user) based on the search criteria selected. This listing is provided solely as a convenience to our customers. Rocky Mountain Power does not warrant or guarantee the work performed by these participating vendors. You are solely responsible for any contract with a participating vendor and the performance of any vendor you have chosen.

An asterisk (*) indicates Rocky Mountain Power Outstanding Contribution Award winning trade allies in 2013, 2014 and/or 2015.

## *Search Criteria:*

| | |
|---|---|
| **Selected State(s):** | Utah |
| **Specialties:** | HVAC - evaporative<br>HVAC - unitary |
| **Business Type:** | --ANY-- |

## *Search Results: 75 - Date and Time: 03/30/2017 02:49:27 PM*

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Contractors HVAC Supply**<br>2468 S. 1760 W<br>Ogden, UT - 84401<br>Phone: 801-487-8565<br>Website: contractorshvacsupply.com | HVAC - unitary | Distributor | 07/01/2010 | |
| **Redd Mechanical Incorporated**<br>1012 SOUTH 300 WEST<br>BLANDING, UT - 84511<br>Phone: 435-678-2500 x 2500<br>Website: www.reddmechanical.com | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 07/02/2015 | |
| **DesignTek Consulting Group, LLC**<br>1600 W. 2200 S.<br>Salt Lake City, UT - 84119<br>Phone: 801-255-5449<br>Website: www.designtekconsulting.com | Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Contractor<br>Engineering Firm | 11/11/2013 | |
| **RealWinWin, Inc.**<br>1926 Arch Street, 4F<br>Philadelphia, PA - 19103<br>Phone: 215-732-4480 x 349<br>Website: www.realwinwin.com | Appliances<br>Building envelope<br>Controls<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Office Equipment | Other: Energy Efficiency Incentive Administration and Consultation | 10/14/2013 | 43 |
| **Riverside Plumbing & Htg, Inc.**<br>366 N 500 W<br>Moab, UT - 84532<br>Phone: 435-259-8324 | HVAC - unitary<br>Motors and VFDs | Contractor | 11/01/2005 | |
| **Budget Plumbing & Rooter LLC**<br>390 W Main<br>American Fork, UT - 84003<br>Phone: 801-763-5775<br>Website: www.budgetknowsplumbing.com | Controls<br>HVAC - evaporative<br>HVAC - unitary | Contractor | 01/08/2016 | |
| **Contractors HVAC Supply**<br>West Jordan, UT -<br>Phone: 801-613-3230<br>Website: contractorshvacsupply.com | HVAC - unitary | Distributor | 07/01/2010 | |
| **Coolerado Corporation**<br>4700 W. 60th Ave., Ste. 3<br>Arvada, CO - 80003<br>Phone: 303-375-0878<br>Website: coolerado.com | HVAC - evaporative<br>HVAC - unitary | Distributor<br>Manufacturer - Rep | 03/01/2007 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Modern Mechanical LLC**<br>1501 West 2650 South Ste 103<br>Ogden, UT - 84401<br>Phone: 801-731-0337<br>Website: www.modernmechanicalutah.com | Appliances<br>Compressed Air<br>Controls<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 08/14/2014 | |
| **Contractors HVAC Supply**<br>1433 West130 South<br>orem, UT - 84058<br>Phone: 435-725-0019<br>Website: contractorshvacsupply.com | HVAC - unitary | Distributor | 07/01/2010 | |
| **Architectural Nexus, Inc.**<br>2505 East Parleys Way<br>Salt Lake City, UT - 84109<br>Phone: 801-924-5000<br>Website: www.archnexus.com | Appliances<br>Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Office Equipment | Architect | 08/18/2014 | |
| **Allred's Incorporated - Logan**<br>642 North 1000 West Unit # 104<br>Logan, UT - 84321<br>Phone: 435-774-1200<br>Website: www.allreds.net | HVAC - unitary | Distributor | 05/11/2011 | |
| **KHI Mechanical**<br>2630 S 3270 W Ste B<br>Salt Lake City, UT - 84119<br>Phone: 801-972-2680 | HVAC - unitary<br>Motors and VFDs | Contractor | 01/01/2009 | |
| **Engineering Economics, Inc.**<br>780 Simms Street Suite 210<br>Golden, CO - 80401<br>Phone: 800-869-6902 | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary | Engineering Firm | 01/20/2014 | |
| **Gray Wolf Mechanical LLC**<br>P.O. Box 505<br>Provo, UT - 84603<br>Phone: 801-805-6531<br>Website: Graywolfair.com | HVAC - evaporative<br>HVAC - unitary | Contractor | 11/12/2015 | |
| **SUMMA Energy Services**<br>250 N 200 W<br>Hyrum, UT - 84319<br>Phone: 435-245-6120<br>Website: summaenergy.com | HVAC - unitary<br>Motors and VFDs<br>Other: Other Specialty | Other | 01/01/2009 | |
| **Forced Aire HVAC**<br>1384 N Angel Street<br>Layton, UT - 84041<br>Phone: 801-593-8265<br>Website: http:www.forcedaire.com | HVAC - evaporative | Contractor | 08/28/2015 | |
| **Rocky Mountain Mechanical**<br>3412 S. West Temple<br>Salt Lake City, UT - 84115<br>Phone: 801-997-0585<br>Website: www.automatedutah.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 03/08/2016 | |
| **Van Boerum & Frank Associates**<br>330 South 300 East<br>Salt Lake City, UT - 84111<br>Phone: 801-530-3148<br>Website: www.vbfa.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Architect<br>Engineering Firm<br>Other | 01/01/2012 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Mark and Delaun Enterprises Inc.**<br><br>55 E Center St. Suite 140<br>Heber City, UT - 84032<br>Phone: 435-654-4623<br>Website: www.heberappliance.com | Appliances<br>HVAC - evaporative | Contractor | 06/23/2015 | |
| **Honeywell International**<br><br>2371 S. Presidents Way Suite A<br>Salt Lake City, UT - 84120<br>Phone: 801-978-7136<br>Website: honeywell.com | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor<br>Distributor<br>Manufacturer - Rep | 05/01/2006 | |
| **Case, Lowe & Hart, Inc.**<br><br>2484 Washington Blvd.<br>Suite 510,<br>Ogden, UT - 84401<br>Phone: 801-399-5821<br>Website: www.clhae.com | Building envelope<br>Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Architect<br>Engineering Firm | 05/17/2013 | |
| **Hussmann Corporation**<br><br>1385 W 2200 St<br>Salt Lake City, UT - 84119<br>Phone: 805-458-7615<br>Website: hussmann.com | Controls<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Manufacturer - Rep | 01/14/2015 | |
| **Harris Mechanical Intermountain**<br><br>1925 South Milestone Drive<br>Suite E,<br>Salt Lake City, UT - 84104<br>Phone: 801-433-2640<br>Website: www.hmcc.com | HVAC - evaporative<br>HVAC - unitary | Contractor | 01/27/2014 | |
| **Prettyman Electric**<br><br>5901 S. Jonquil Drive<br>5901 S. Jonquil Drive,<br>Taylorsville, UT - 84129<br>Phone: 801-243-4055 | Appliances<br>Building envelope<br>Compressed Air<br>Controls<br>Food Service<br>HVAC - unitary<br>Irrigation<br>Motors and VFDs | Contractor<br>Other: Design Build, Repair, Service, Maintenance | 12/05/2013 | |
| **Trane***<br><br>2817 S. 1030 W.<br>Salt Lake City, UT - 84119<br>Phone: 801-486-0500<br>Website: www.trane.com | Controls<br>HVAC - unitary<br>Motors and VFDs | Distributor<br>Manufacturer - Rep | 03/01/2005 | |
| **Gray Wolf Mechanical LLC**<br><br>P.O. Box 505<br>Provo, UT 84603,<br>Mapleton, UT - 84664<br>Phone: 801-805-6531<br>Website: Graywolfair.com | HVAC - evaporative<br>HVAC - unitary | Contractor | 10/23/2015 | |
| **Engineered Systems Assoc., Inc.**<br><br>1355 E. Center Street<br>Pocatello, ID - 83201<br>Phone: 208-233-0501 | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Engineering Firm | 01/10/2014 | |
| **Smart Building Solutions**<br><br>2876 South 460 West<br>Salt Lake City, UT - 84115<br>Phone: 801-733-6000<br>Website: www.intellivex.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Office Equipment<br>Other: Other Specialty | Distributor<br>Manufacturer - Rep | 03/04/2015 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **PVE, Inc***<br><br>1040 North 2200 West, Suite 100<br>Salt Lake City, UT - 84107<br>Phone: 801-359-3158 | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm | 07/29/2013 | |
| **Utah Engineering**<br><br>145 W. 2950 S.<br>Salt Lake City, UT - 84115<br>Phone: 801-466-3583<br>Website: samedayutah.com | Controls<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 12/24/2013 | |
| **Contractors HVAC Supply**<br><br>3145 S. Washington Street<br>Salt Lake City, UT - 84115<br>Phone: 801-487-8565<br>Website: contractorshvacsupply.com | HVAC - unitary | Distributor | 07/01/2010 | |
| **Hidden Peak Electric Company Inc.**<br><br>1064 South 700 West<br>Salt lake City, UT - 84104<br>Phone: 801-262-5513<br>Website: www.hiddenpeakelectric.com | Controls<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Contractor | 02/14/2013 | 2 |
| **Johnson Controls, Inc.**<br><br>2255 Technology Parkway<br>West Valley City, UT - 84119<br>Phone: 801-903-7532 | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor<br>Manufacturer - Rep | 06/01/2007 | |
| **Provident Energy, INC.**<br><br>2882 N. 1300 E.<br>North Ogden, UT - 84414<br>Phone: 801-668-7910 | Appliances<br>Building envelope<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting | Contractor<br>Other: Energy Rating & Consulting | 02/15/2016 | |
| **Commercial Mechanical Systems & Service**<br><br>3395 West 1820 South<br>Salt Lake City, UT - 84104<br>Phone: 801-977-3925<br>Website: cmsutah.com | HVAC - unitary<br>Motors and VFDs<br>Other: Other Specialty | Contractor | 02/01/2012 | |
| **Gustave A. Larson Company**<br><br>210 W. Crosswood Square<br>Salt Lake City, UT - 84115<br>Phone: 801-487-0644<br>Website: galarson.com | HVAC - unitary<br>Motors and VFDs | Distributor | 02/01/2007 | |
| **USAirconditioning Distributors**<br><br>375 W 2100 South<br>Salt Lake City, UT - 84115<br>Phone: 801-485-8071<br>Website: utahhvac.com | HVAC - unitary | Distributor | 10/01/2008 | |
| **American Mechanical Systems Service, LLC**<br><br>7530 South State Street<br>Midvale, UT - 84047<br>Phone: 801-428-0400<br>Website: www.ams-ut.com | Controls<br>HVAC - unitary<br>Motors and VFDs | Contractor | 11/30/2012 | |
| **Gunthers Comfort Air***<br><br>81 S 700 E<br>American Fork, UT - 84003<br>Phone: 801-756-9683<br>Website: gunterscomfortair.com | HVAC - unitary | Contractor | 08/01/2004 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Lux Energy Group**<br><br>1111 South 120 East<br>Farmington, UT - 84025<br>Phone: 801-989-8375 | Building envelope<br>Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm<br>Other: Energy Resource Managers | 10/13/2015 | |
| **Optica Energy Management, LLC**<br><br>1772 Ross Dr<br>Ogden, UT - 84403<br>Phone: 888-442-4866<br>Website: www.opticaenergy.com | HVAC - unitary<br>Lighting<br>Motors and VFDs | Distributor<br>Other: Energy Management Company | 04/11/2013 | 17 |
| **Mountain West Mechanical**<br><br>2336 W. 5200 S.<br>Rexburg, ID - 83440<br>Phone: 208-356-0370<br>Website: www.mountainwestmechanical.com | HVAC - evaporative<br>HVAC - unitary | Contractor | 03/17/2014 | |
| **Mechanical Products Intermountain**<br><br>198 W. CottageAve<br>Sandy, UT - 84070<br>Phone: 801-352-9003<br>Website: mp-int.com | Controls<br>HVAC - evaporative<br>HVAC - unitary | Distributor<br>Manufacturer - Rep | 06/01/2008 | |
| **WHW Engineering Inc.**<br><br>8619 Sandy Parkway #101<br>Sandy, UT - 84070<br>Phone: 801-466-4021 | HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Engineering Firm | 02/23/2015 | |
| **EME, Inc**<br><br>2496 S West Temple<br>Salt Lake City , UT - 84115<br>Phone: 801-746-2828<br>Website: www.EMEUtah.com | Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 06/06/2016 | |
| **Johnson Powers, LLC**<br><br>8704 South 120 East<br>Sandy, UT - 84070<br>Phone: 801-878-7831<br>Website: www.johnsonpowers.com | Appliances<br>Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Contractor | 07/23/2014 | |
| **Sammy's Heating and Air**<br><br>935 E. 1150 N.<br>Bountiful, UT - 84010<br>Phone: 801-698-0096<br>Website: sammyshvac.com | HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 11/02/2015 | |
| **PPM Plumbing, Heating & Cooling**<br><br>864 North 1430 West<br>Orem, UT - 84058<br>Phone: 801-226-3033 | HVAC - unitary | Contractor | 06/01/2004 | |
| **Energy Management Corporation***<br><br>501 West 700 South<br>Salt Lake City, UT - 84101<br>Phone: 801-366-4100<br>Website: emcsolutions.com | HVAC - unitary<br>Motors and VFDs | Distributor | 05/01/2004 | |
| **Utah Yamas Controls Inc.***<br><br>13526 S. 110 W.<br>Draper, UT - 84020<br>Phone: 801-990-1950<br>Website: www.utahyamas.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Other: Other Specialty | Contractor<br>Distributor<br>Engineering Firm<br>Manufacturer - Rep | 01/21/2013 | 1 |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Lennox**<br><br>1008 W 2780 S<br>Salt Lake City, UT - 84119<br>Phone: 801-556-6114<br>Website: lennoxcommercial.com | HVAC - unitary | Distributor | 11/01/2005 | |
| **Nelson's Heating & Refrigeration**<br><br>1070 Bowling Alley Ln.<br>Moab, UT - 84532<br>Phone: 435-259-5625 | HVAC - unitary<br>Motors and VFDs | Contractor | 12/01/2005 | |
| **Encentiv Energy, LLC**<br><br>1501 Ardmore Blvd.<br>Suite 102,<br>Pittsburgh, PA - 15221<br>Phone: 412-723-1516<br>Website: www.encentivenergy.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Other: Energy Efficiency Analytics<br>Other: Energy Efficiency Rebate Processing | 11/11/2015 | 1 |
| **Cedar Valley Heating & Air Conditioning, Inc.**<br><br>1400 N. Main, Bldg A<br>Cedar City, UT - 84721<br>Phone: 435-586-8788<br>Website: cedarvalleyheatingandair.com | HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 05/18/2016 | |
| **Acx Service**<br><br>563 Ogden Canyon<br>Ogden, UT - 84401<br>Phone: 385-325-2295<br>Website: acxservice.com | Appliances<br>Building envelope<br>Compressed Air<br>Controls<br>Farm and Dairy<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Irrigation<br>Motors and VFDs<br>Office Equipment<br>Other: Other Specialty | Contractor<br>Other: Energy Audits & Commissioning | 04/14/2015 | |
| **United Team Mechanical**<br><br>151 N 600 W<br>Kaysville, UT - 84037<br>Phone: 801-991-1145 | HVAC - unitary<br>Motors and VFDs | Contractor | 09/01/2005 | |
| **Nebo Comfort Systems**<br><br>210 E 800 S<br>Genola, UT - 84655<br>Phone: 801-465-2709 | HVAC - unitary | Contractor | 10/03/2013 | |
| **Green Planet Company**<br><br>63 East 11400 South #257<br>Sandy , UT - 84070<br>Phone: 801-980-1518<br>Website:<br>www.greenplanetcompany.com | Appliances<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Distributor<br>Manufacturer - Rep | 05/07/2014 | 14 |
| **Midgley-Huber, Inc.***<br><br>2465 Progress Drive<br>Salt Lake City, UT - 84119<br>Phone: 801-972-5011<br>Website: Migley-huber.com | HVAC - evaporative<br>HVAC - unitary | Manufacturer - Rep | 05/01/2007 | |
| **Jacobs Engineering Group, Inc.**<br><br>3 Tower Bridge<br>2 Ash Street,<br>Conshohocken, PA - 19428<br>Phone: 610-238-1000<br>Website: www.Jacobs.com | Building envelope<br>Compressed Air<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Other: Other Specialty | Engineering Firm | 05/08/2015 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Precision Air Management, LLC**<br><br>1388 South 350 West<br>Lehi, UT - 84043<br>Phone: 801-360-1848<br>Website: precisionairmgmt.com | Controls<br>HVAC - unitary<br>Motors and VFDs<br>Office Equipment | Contractor | 11/24/2015 | |
| **Siemens Industry, Inc.**<br><br>9707 S Sandy Parkway<br>Sandy, UT - 84070<br>Phone: 801-316-2439 | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Irrigation<br>Lighting<br>Motors and VFDs | Contractor | 01/11/2013 | 1 |
| **McKinstry Essention, LLC**<br><br>112 N. Rubey Dr.<br>Suite 200,<br>Golden, CO - 80403<br>Phone: 435-632-8433<br>Website: www.mckinstry.com | Building envelope<br>Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Irrigation<br>Motors and VFDs<br>Other: Other Specialty | Engineering Firm | 02/12/2014 | |
| **Aspen Engineering and Environmental LLC**<br><br>140 Aspen Circle<br>Park City, UT - 84098<br>Phone: 435-565-1535<br>Website: www.a2e-llc.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Engineering Firm | 03/18/2013 | |
| **Colvin Engineering Associates, Inc.**<br><br>244 W 300 N<br>Suite 200,<br>Salt Lake City, UT - 84103<br>Phone: 801-322-2400 | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Other: Other Specialty | Architect<br>Engineering Firm | 04/29/2013 | |
| **MKK Consulting Engineers Inc.**<br><br>4760 S. Highland Drive Suite 106<br>Salt Lake City, UT - 84115<br>Phone: 303-796-6000 | Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm | 01/18/2016 | |
| **Mechanical Service & Systems, Inc.**<br><br>1055 South 700 West<br>Salt Lake City, UT - 84104<br>Phone: 801-255-9333 x 1<br>Website: www.mss84.com | HVAC - unitary<br>Motors and VFDs | Contractor | 08/01/2006 | 2 |
| **B. Jackson Construction**<br><br>4188 West Nike Drive<br>West Jordan, UT - 84088<br>Phone: 801-260-0988 | HVAC - unitary<br>Lighting | Contractor | 06/01/2010 | 6 |
| **Engineering System Solutions DBA ES2**<br><br>4943 N 29 E Suite A<br>Idaho Falls, ID - 83401<br>Phone: 208-552-9874<br>Website: www.es2eng.com | Appliances<br>Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm | 05/08/2014 | |
| **HD Supply Facilities Maintenance, Ltd.**<br><br>10641 Scripps Summit Court<br>San Diego, CA - 92131<br>Phone: 858-831-2231<br>Website: www.hdsupplysolutions.com | Appliances<br>HVAC - evaporative<br>HVAC - unitary | Distributor | 01/22/2014 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Applied Product Solutions**<br><br>2822 South 1030 West<br>Salt Lake City, UT - 84119<br>Phone: 801-441-4949<br>Website: www.aps.hvacinfo.com | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Manufacturer - Rep | 11/17/2015 | |
| **Comfort Systems USA Intermountain**<br><br>2035 Milestone Dr. Suite A<br>Salt Lake City, UT - 84104<br>Phone: 801-907-6700<br>Website: comfortsystemsutah.com | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 06/30/2014 | |
| **Royal Engineering, Inc.**<br><br>2335 S. State Street<br>Suite 100,<br>Provo, UT - 84606<br>Phone: 801-375-2228<br>Website: www.royaleng.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm | 12/31/2014 | |
| **Musgrove Engineering, PA**<br><br>234 Whisperwood Way<br>`<br>,<br>Boise, ID - 83709<br>Phone: 208-384-0585<br>Website: musgrovepa.com | Compressed Air<br>Controls<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs<br>Office Equipment | Engineering Firm | 07/28/2015 | |

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# Energy Efficiency Alliance

The following is a list of contractors, distributors and other businesses participating in Rocky Mountain Power's Energy Efficiency Alliance displayed in random order (unless sorted by the user) based on the search criteria selected. This listing is provided solely as a convenience to our customers. Rocky Mountain Power does not warrant or guarantee the work performed by these participating vendors. You are solely responsible for any contract with a participating vendor and the performance of any vendor you have chosen.

An asterisk (*) indicates Rocky Mountain Power Outstanding Contribution Award winning trade allies in 2013, 2014 and/or 2015.

## *Search Criteria:*

| | |
|---|---|
| **Selected State(s):** | Utah |
| **Specialties:** | Lighting |
| **Business Type:** | --ANY-- |

## *Search Results: 173 - Date and Time: 03/30/2017 02:47:44 PM*

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **A-C Electric Inc.**<br>729 South 330 West<br>Salt Lake City, UT - 84101<br>Phone: 801-364-1747<br>Website: CampbellAndBruce.com | Lighting | Contractor | 04/03/2003 | 55 |
| **AD-Lite Electric Inc.**<br>2802 W. 3500 So.<br>West Valley, UT - 84119<br>Phone: 801-856-4555 | Lighting | Contractor | 03/06/2006 | 7 |
| **Advanced Energy Lighting Technology**<br>146 N. Old Highway 91 Suite 4<br>Hurricane,, UT - 84737<br>Phone: 435-703-0711 | Lighting | Distributor | 06/06/2006 | 44 |
| **Advanced Lighting, Inc. - Utah***<br>3099 south 1030 west<br>Salt Lake City, UT - 84119<br>Phone: 801-972-9530<br>Website: www.advlight.com | Lighting | Contractor | 07/04/2004 | 381 |
| **All American LED, LLC**<br>3234 E 4650 N<br>Liberty, UT - 84310<br>Phone: 801-920-7276<br>Website: www.All-AmericanLED.com | Lighting | Distributor | 12/18/2012 | 50 |
| **All Electric Plus, Inc.**<br>182 S. 200 West<br>Paragonah, UT - 94160<br>Phone: 435-477-9591<br>Website: www.allelectricplus.com | Controls<br>Farm and Dairy<br>Irrigation<br>Lighting<br>Motors and VFDs | Distributor | 11/03/2014 | 2 |
| **American Electric Company, Inc.**<br>78 West 13775 South, Suite 9<br>Draper, UT - 84020<br>Phone: 801-254-0782<br>Website: www.americanelectric.cc | Appliances<br>Building envelope<br>Controls<br>Lighting<br>Motors and VFDs<br>Other: Other Specialty | Contractor | 04/06/2015 | |
| **Amos and Connors Sales**<br>1323 West 7900 South suite #107<br>West Jordan, UT - 84088<br>Phone: 801-565-8919<br>Website: www.amosandconnors.com | Lighting | Manufacturer - Rep | 07/10/2015 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Architectural Nexus, Inc.**<br>2505 East Parleys Way<br>Salt Lake City, UT - 84109<br>Phone: 801-924-5000<br>Website: www.archnexus.com | Appliances<br>Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Office Equipment | Architect | 08/18/2014 | |
| **Arco Electric, Inc. - Utah**<br>597 West 9320 South<br>Sandy, UT - 84070<br>Phone: 801-566-1695 | Lighting | Contractor | 09/21/2012 | 1 |
| **B. Jackson Construction**<br>4188 West Nike Drive<br>West Jordan, UT - 84088<br>Phone: 801-260-0988 | HVAC - unitary<br>Lighting | Contractor | 06/01/2010 | 6 |
| **Bastion Technologies, LLC**<br>175 W 7065 S<br>Midvale, UT - 84047<br>Phone: 800-328-6024<br>Website: www.bastiontech.com | Lighting | Distributor<br>Manufacturer - Rep<br>Other: consultant | 07/30/2014 | 24 |
| **Batteries Plus Bulbs (#909)**<br>2731 S 5600 W<br>Ste. D,<br>West Valley City, UT - 84120<br>Phone: 801-965-6000 x 3<br>Website: www.batteriesplusbulbs.com | Lighting | Distributor<br>Other: Commercial/Industrial Lamp Sales | 09/01/2016 | |
| **Batteries Plus Bulbs 848 - Lehi**<br>770 East Main Street, Suite E<br>Lehi, UT - 84043<br>Phone: 801-372-3249<br>Website: www.batteriesplusbulbs.com | Lighting | Distributor | 10/28/2013 | 5 |
| **BKJ Holdings, LLC**<br>3458 E Fairway Lane<br>Spanish Fork, UT - 84660<br>Phone: 801-636-5969 | Lighting | Distributor<br>Manufacturer - Rep | 01/06/2015 | 2 |
| **Bleu Skye, LLC**<br>1901 Ryan Park Ave<br>Sandy, UT - 84092<br>Phone: 801-557-1800<br>Website: www.bleuskyeservices.com | Controls<br>Lighting | Contractor | 07/24/2014 | |
| **BNA Consulting**<br>635 South State Street<br>Salt Lake City, UT - 84111<br>Phone: 801-532-2196<br>Website: www.bnaconsulting.com | Lighting | Other | 05/10/2010 | |
| **Bright Star Energy Management, LLC**<br>214 S. Cole Rd.<br>Boise, ID - 83709<br>Phone: 208-922-6460<br>Website: brightstarenergy.net | Lighting | Other | 07/01/2012 | 18 |
| **Burton Electric, Inc.**<br>8805 South 1300 West<br>West Jordan, UT - 84088<br>Phone: 801-450-1201 | Lighting | Contractor | 08/23/2006 | 19 |
| **Candle3 LLC**<br>6385 Corporate Dr.<br>Colorado Springs, CO - 80919<br>Phone: 719-930-9099<br>Website: www.candle3.com | Controls<br>Lighting | Distributor<br>Manufacturer - Rep | 11/21/2014 | 1 |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **CAO Group, Inc.**<br>4628 W. Skyhawk Drive<br>West Jordan, UT - 84084<br>Phone: 801-256-9282<br>Website: www.caolighting.com | Lighting | Engineering Firm<br>Other: Manufacturer | 11/16/2015 | 4 |
| **CCMS Lighting, Inc.**<br>88 A Elm Street<br>Hopkinton, MA - 01748<br>Phone: 508-435-5837<br>Website: ccmslighting.com | Lighting | Other | 05/01/2011 | 1 |
| **Central Electric Supply***<br>190 North 100 West<br>Richfield, UT - 84701<br>Phone: 435-896-8486<br>Website: www.centralelectricsupply.com | Lighting | Distributor | 01/02/2006 | 168 |
| **Codale Electric Supply, Inc - Casper***<br>3131 Wood Court<br>Casper, WY - 82601<br>Phone: 702-261-8900<br>Website: www.codale.com | Lighting | Distributor | 06/27/2013 | 1 |
| **Codale Electric Supply, Inc - Cedar City***<br>477 North 100 West<br>Cedar City, UT - 84720<br>Phone: 435-586-7681<br>Website: www.codale.com | Lighting | Distributor | 04/22/2013 | 28 |
| **Codale Electric Supply, Inc. - Ogden***<br>3083 S. 2025 W<br>Ogden, UT - 84401<br>Phone: 801-624-6100<br>Website: www.codale.com | Lighting | Distributor | 07/01/2011 | 103 |
| **Codale Electric Supply, Inc.- Salt Lake City***<br>5225 West 2400 South<br>Salt Lake City, UT - 84120<br>Phone: 801-975-7300<br>Website: codale.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 10/02/2002 | 483 |
| **Collings Development llc**<br>150 south 1300 east<br>springville, UT - 84663<br>Phone: 801-979-9358 | Controls<br>Lighting<br>Motors and VFDs | Contractor | 04/20/2015 | |
| **Commercial Lighting Supply, Inc.***<br>2440 South 900 West<br>Salt Lake City, UT - 84115<br>Phone: 801-262-0888<br>Website: commerciallightinginc.com | Lighting | Distributor | 11/02/2002 | 791 |
| **Conserve-A-Watt Lighting***<br>2327 South Decker Lake Blvd<br>West Valley City, UT - 84119<br>Phone: 801-975-9363<br>Website: Cawlighting.com | Lighting | Distributor | 04/03/2003 | 170 |
| **Consolidated Electrical Distributors - Logan, UT***<br>636 N. 600 W.<br>Logan, UT - 84321<br>Phone: 435-752-8905 | Farm and Dairy<br>Irrigation<br>Lighting | Distributor | 03/26/2005 | 71 |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Consolidated Electrical Distributors - Vernal***<br><br>397 South 1000 East<br>Vernal, UT - 84078<br>Phone: 435-789-9070 | Building envelope<br>Controls<br>Irrigation<br>Lighting<br>Motors and VFDs | Distributor | 09/16/2015 | |
| **Consolidated Electrical Distributors, Inc. - Layton***<br><br>606 N Marshall Way Ste B<br>Layton, UT - 84401<br>Phone: 801-499-0257 | Controls<br>Lighting | Distributor | 01/28/2015 | 11 |
| **Consolidated Electrical Distributors, Inc. - Salt Lake City***<br><br>1819 S. 900 W.<br>Salt Lake City, UT - 84104<br>Phone: 801-486-3501 | Lighting<br>Motors and VFDs | Distributor | 09/25/2012 | 192 |
| **Consolidated Electrical Distributors, Inc. - Sandy***<br><br>622 W. 9400 S.<br>Sandy, UT - 84070<br>Phone: 801-566-4864 | Lighting | Distributor | 08/01/2011 | 5 |
| **Cooper Lighting**<br><br>1121 Highway 74 South<br>Peachtree, GA - 30269<br>Phone: 770-486-3092<br>Website: www.cooperlighting.com | Controls<br>Lighting | Manufacturer - Rep | 12/13/2012 | |
| **Cornerstones Enterprise Services, Corp.**<br><br>P. O. Box 2263<br>Sandy, UT - 84091<br>Phone: 801-968-0471<br>Website:<br>www.cornerstonesservices.com | Controls<br>Lighting<br>Motors and VFDs | Contractor | 02/29/2016 | |
| **CR Lighting & Electric, Inc.**<br><br>1035 W. Gentile St.<br>Layton, UT - 84041<br>Phone: 801-544-1533<br>Website: crlighting.net | Lighting | Contractor | 04/03/2003 | 33 |
| **Crescent Electric Supply Company - Orem**<br><br>1490 West 105 North<br>Orem, UT - 84057<br>Phone: 801-224-3355 | Lighting | Distributor | 08/15/2013 | |
| **Crescent Electric Supply Company - Salt Lake City**<br><br>3140 South 300 West<br>Salt Lake City, UT - 84115<br>Phone: 801-486-0701<br>Website: www.cesco.com | Lighting | Distributor | 10/17/2012 | 38 |
| **Crum Electric Supply - Salt Lake City**<br><br>1003 West 1060 South<br>Salt Lake City, UT - 84119<br>Phone: 801-539-7471<br>Website: crum.com | Lighting | Distributor | 02/10/2007 | 4 |
| **Custom Lighting Services, LLC**<br><br>9901 South Prosperity Road<br>West Jordan, UT - 84081<br>Phone: 801-569-9219<br>Website: www.blackandmcdonald.com | Controls<br>Lighting | Contractor<br>Engineering Firm | 11/01/2013 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Cutler Electric Inc.**<br><br>1417 East 150 South<br>Springville, UT - 84663<br>Phone: 801-489-1351 | Lighting<br>Motors and VFDs | Contractor | 02/12/2015 | |
| **D & A Johnson Electric, Inc.**<br><br>8 South Angel Street<br>Kaysville, UT - 84037<br>Phone: 801-593-9559 | Appliances<br>Lighting<br>Office Equipment | Contractor | 05/14/2015 | |
| **Delta T Corporation**<br><br>2348 Innovation Drive<br>Lexington, KY - 40511<br>Phone: 877-244-3267<br>Website: www.bigasssolutions.com | Lighting<br>Other: Other Specialty | Distributor<br>Manufacturer - Rep | 11/16/2015 | |
| **DesignTek Consulting Group, LLC**<br><br>1600 W. 2200 S.<br>Salt Lake City, UT - 84119<br>Phone: 801-255-5449<br>Website: www.designtekconsulting.com | Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Contractor<br>Engineering Firm | 11/11/2013 | |
| **DiVi Energy, LLC***<br><br>191 North 290 West<br>Lindon, UT - 84042<br>Phone: 801-243-1811 | Lighting | Manufacturer - Rep<br>Other | 01/23/2013 | 98 |
| **DMA - Total Lighting Concepts**<br><br>5263 S. Commerce Dr.<br>Suite 201,<br>Murray, UT - 84107<br>Phone: 801-268-6300<br>Website: www.dmatlc.com | Controls<br>Lighting | Manufacturer - Rep | 05/30/2005 | 22 |
| **Duncan Electric Supply**<br><br>580 South 1100 West<br>West Bountiful, UT - 84087<br>Phone: 501-295-5548 | Lighting | Distributor | 09/26/2008 | 19 |
| **Eco Safe Lighting**<br><br>4600 NW Camas Meadows Drive,<br>Suite 210<br>Camas, WA - 98607<br>Phone: 360-567-1923<br>Website: http://www.est-lights.com/about-us/ | Lighting | Distributor | 02/11/2013 | |
| **Electrical Marketing Solutions (DBA) EMS**<br><br>2139 S West Temple<br>Salt Lake City, UT - 84115<br>Phone: 801-869-1445<br>Website: http://emsreps.com/ | Controls<br>Lighting | Manufacturer - Rep | 12/31/2014 | 5 |
| **Electrical Power & Controls**<br><br>5203 Holder Dr.<br>WVC, UT - 84120<br>Phone: 801-971-1913<br>Website: www.epc120.com | Lighting<br>Motors and VFDs | Contractor | 03/28/2014 | |
| **Electrical Wholesale Supply - Layton***<br><br>600 North 630 West<br>Layton, UT - 84041<br>Phone: 801-544-1206<br>Website: www.ewsutah.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 04/25/2013 | 12 |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Electrical Wholesale Supply - Logan, UT***<br><br>1651 North 1000 West<br>Logan, UT - 84321<br>Phone: 435-774-8800<br>Website: ewsutah.com | Lighting | Distributor | 03/11/2011 | 6 |
| **Electrical Wholesale Supply - Murray, UT***<br><br>P.O. Box 57857<br>Murray, UT - 84157<br>Phone: 801-268-2555<br>Website: ewsutah.com | Lighting | Distributor | 01/20/2007 | 56 |
| **Electro Systems Corp.**<br><br>559 West 9460 South<br>Sandy, UT - 84070<br>Phone: 801-562-2231 | Controls<br>Lighting | Contractor | 06/23/2014 | |
| **Elysium Energy LLC**<br><br>14466 South Long Ridge Drive<br>Herriman , UT - 84096<br>Phone: 801-440-6821 | Lighting<br>Other: Other Specialty | Other | 04/30/2015 | 17 |
| **Encentiv Energy, LLC**<br><br>1501 Ardmore Blvd.<br>Suite 102,<br>Pittsburgh, PA - 15221<br>Phone: 412-723-1516<br>Website: www.encentivenergy.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Other: Energy Efficiency Analytics<br>Other: Energy Efficiency Rebate Processing | 11/11/2015 | 1 |
| **Energy Efficient Lighting**<br><br>2228 Bryan Circle<br>Salt Lake City, UT - 84108<br>Phone: 801-913-1965 | Lighting | Distributor | 09/16/2013 | 1 |
| **Energy Planning Associates, Inc (DBA) Envirobrite**<br><br>148 Maritime Dr<br>Sanford, FL - 32771<br>Phone: 407-302-0001<br>Website: www.envirobrite.net | Lighting | Manufacturer - Rep | 07/24/2015 | |
| **Engineering System Solutions DBA ES2**<br><br>4943 N 29 E Suite A<br>Idaho Falls, ID - 83401<br>Phone: 208-552-9874<br>Website: www.es2eng.com | Appliances<br>Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm | 05/08/2014 | |
| **ESCO**<br><br>2525 South 300 West<br>South Salt Lake, UT - 84115<br>Phone: 801-486-8421<br>Website: escoservice.com | Lighting | Contractor | 07/04/2004 | 31 |
| **ESP+***<br><br>9580 South 500 West<br>Sandy, UT - 84070<br>Phone: 801-566-0600<br>Website: espplus.net | Lighting | Distributor | 04/05/2005 | 585 |
| **Evergreen Consulting**<br><br>2302 West 8540 South<br>West Jordan, UT - 84088<br>Phone: 801-233-0882 | Lighting | Contractor | 03/02/2015 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Express Lighting LLC**<br>7050 South State Street<br>Midvale, UT - 84047<br>Phone: 801-617-1133<br>Website: www.express.lighting | Lighting | Distributor<br>Manufacturer - Rep | 12/01/2015 | 4 |
| **Fanlight Corp**<br>2000 S Grove Ave Bldg B<br>Ontario, CA - 91761<br>Phone: 909-930-6868<br>Website: plusriteusa.com / mynaturazled.com | Lighting | Manufacturer - Rep | 02/22/2016 | |
| **Freedom Lighting**<br>4967 Wallace Lane<br>Holladay, UT - 84117<br>Phone: 801-859-7943 | Lighting | Distributor | 05/16/2008 | 11 |
| **GE**<br>664 East 1300 North<br>Pleasant Grove, UT - 84062<br>Phone: 801-785-8838<br>Website: www.gelighting.com | Controls<br>Lighting | Manufacturer - Rep | 09/04/2014 | |
| **Golden Spike Electric**<br>12058 N. Harley Dr.<br>Garland, UT - 84312<br>Phone: 435-279-4861 | Lighting | Contractor | 03/01/2010 | 3 |
| **Grainger Industrial Supply**<br>2775 S. 900 W.<br>Salt Lake City, UT - 84119<br>Phone: 801-972-1340<br>Website: grainger.com | Lighting | Distributor | 07/04/2004 | 80 |
| **Graybar Electric Company - Salt Lake City**<br>2841 So. 900 W.<br>Salt Lake City, UT - 84119<br>Phone: 801-975-1115<br>Website: graybar.com | Lighting | Distributor | 05/30/2005 | 37 |
| **Green Light National, LLC***<br>1001 South 400 East<br>Orem, UT - 84077<br>Phone: 801-722-8677<br>Website: www.greenlightnational.com | Lighting | Contractor<br>Distributor | 02/18/2015 | 40 |
| **Green Planet Company**<br>63 East 11400 South #257<br>Sandy , UT - 84070<br>Phone: 801-980-1518<br>Website: www.greenplanetcompany.com | Appliances<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Distributor<br>Manufacturer - Rep | 05/07/2014 | 14 |
| **GTC Electric**<br>PO Box 731<br>Park City, UT - 84060<br>Phone: 435-731-0727 | Appliances<br>Lighting<br>Motors and VFDs | Contractor | 07/30/2014 | |
| **Hatch Lighting**<br>4133 N 45 E<br>Idaho Falls, ID - 83401<br>Phone: 208-200-3000 | Lighting | Distributor | 05/06/2014 | 12 |
| **Hedgehog Electric**<br>14553 South 790 West Suite C<br>Bluffdale, UT - 84065<br>Phone: 801-870-6986<br>Website: hedgehogelectric.com | Lighting | Contractor | 09/10/2012 | 1 |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Hidden Peak Electric Company Inc.**<br>1064 South 700 West<br>Salt lake City, UT - 84104<br>Phone: 801-262-5513<br>Website: www.hiddenpeakelectric.com | Controls<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Contractor | 02/14/2013 | 2 |
| **Hogan Electric Inc.**<br>4035 South Main<br>Salt Lake City, UT - 84107<br>Phone: 801-261-8300 | Lighting | Contractor | 07/01/2004 | 17 |
| **Holophane**<br>8195 S. Andorra Lane<br>Sandy, UT - 84093<br>Phone: 801-942-5456<br>Website: holophane.com | Lighting | Manufacturer - Rep<br>Other | 07/04/2004 | |
| **Hunt Electric, Inc.**<br>1863 West Alexander Street<br>Salt Lake City, UT - 84119<br>Phone: 801-975-8844 | Lighting | Contractor | 08/05/2005 | 31 |
| **Hussmann Corporation**<br>1385 W 2200 St<br>Salt Lake City, UT - 84119<br>Phone: 805-458-7615<br>Website: hussmann.com | Controls<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Manufacturer - Rep | 01/14/2015 | |
| **IG Group LLC-Dba IG Sign**<br>880 North 100 East<br>Lehi, UT - 84043<br>Phone: 801-836-7446<br>Website: www.igsign.com | Lighting<br>Other: Other Specialty | Other | 03/11/2013 | |
| **Innovative Repairs LLC**<br>524 S. 300 E.<br>Springville, UT - 84663<br>Phone: 801-489-4460 | Controls<br>Farm and Dairy<br>Lighting<br>Motors and VFDs | Manufacturer - Rep | 04/19/2013 | 9 |
| **Intertech Communications Electric, Inc.**<br>756 South Main Suite A<br>Brigham City, UT - 84302<br>Phone: 435-723-7165 | Lighting | Contractor | 01/21/2013 | |
| **J and J Electric Inc.**<br>3410 S. 1500 W.<br>Ogden, UT - 84401<br>Phone: 801-622-0270 | Lighting | Contractor | 07/01/2011 | 10 |
| **Jacobs Engineering Group, Inc.**<br>3 Tower Bridge<br>2 Ash Street,<br>Conshohocken, PA - 19428<br>Phone: 610-238-1000<br>Website: www.Jacobs.com | Building envelope<br>Compressed Air<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Other: Other Specialty | Engineering Firm | 05/08/2015 | |
| **Jenson Lighting Maintenance/Refrigeration, Inc.**<br>539 W Billins Rd<br>Salt Lake City, UT - 84115<br>Phone: 801-262-7800 | Lighting | Contractor<br>Manufacturer - Rep | 06/01/2005 | |
| **Jenson Refrigeration Inc.DBA Jenson Lighting Maintenence**<br>539 W. Bilinis Road<br>Murray, UT - 84157<br>Phone: 801-262-7800<br>Website: www.jensonutah.com | Lighting | Contractor | 04/15/2013 | 1 |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Johnson Powers, LLC**<br><br>8704 South 120 East<br>Sandy, UT - 84070<br>Phone: 801-878-7831<br>Website: www.johnsonpowers.com | Appliances<br>Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Contractor | 07/23/2014 | |
| **Jordan Valley Electric, Inc.**<br><br>4225 W. Nike Dr. #A<br>West Jordan, UT - 84088<br>Phone: 801-282-2310 | Lighting | Contractor | 10/05/2005 | 2 |
| **JRC Inc.**<br><br>3041 West 2100 South<br>Salt Lake City, UT - 84119<br>Phone: 801-972-3970<br>Website: jrclight.com | Controls<br>Lighting | Manufacturer - Rep<br>Other | 06/18/2007 | 14 |
| **Ken Garner Engineering, Inc.**<br><br>420 E. South Temple<br>Suite 370,<br>Salt Lake City, UT - 84111<br>Phone: 801-328-8800<br>Website: kengarner.com | Lighting | Engineering Firm | 05/11/2011 | |
| **Kendrick Electric**<br><br>1700 E 1700 North<br>Logan, UT - 84341<br>Phone: 435-752-1888 | Lighting | Contractor | 11/14/2014 | 6 |
| **Kent Lindquist - Electrical Contractor**<br><br>1436 Spanish Valley Dr<br>Moab, UT - 84532<br>Phone: 435-259-5638 | Building envelope<br>Lighting | Contractor | 11/04/2014 | |
| **Larsen Electric, LLC**<br><br>250 Laurel Lane<br>Chubbuck, ID - 83202<br>Phone: 208-237-2058<br>Website: larsenelectric.net | Lighting | Contractor | 03/23/2016 | |
| **Layton Sales Agency**<br><br>4404 W. 2100 S.<br>Salt Lake City, UT - 84120<br>Phone: 801-973-8100<br>Website: laytonsales.com | Lighting | Manufacturer - Rep | 02/10/2007 | 1 |
| **Light Energy Development LLC**<br><br>41 North Rio Grande<br>Salt Lake City, UT - 84101<br>Phone: 801-456-3910<br>Website:<br>www.lightenergydevelopment.net | Lighting | Other | 07/23/2013 | 39 |
| **LMS - Lighting Maintenance Service - Utah***<br><br>663 West 4330 South<br>Salt Lake City, UT - 84123<br>Phone: 801-281-0400<br>Website: lmslighting.com | Controls<br>Lighting<br>Motors and VFDs | Contractor | 10/02/2002 | 542 |
| **Loeb Lighting Services**<br><br>1800 E 5th Ave<br>Columbia, OH - 43219<br>Phone: 800-866-5616 | Controls<br>Lighting | Distributor | 03/16/2015 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **LONG Building Technologies, Inc.**<br><br>P.O. Box 51089<br>3534 Salt Creek Highway,<br>Casper, WY - 82601<br>Phone: 307-265-5997<br>Website: www.long.com | Lighting | Distributor<br>Manufacturer - Rep | 09/27/2012 | 1 |
| **Lux Energy Group**<br><br>1111 South 120 East<br>Farmington, UT - 84025<br>Phone: 801-989-8375 | Building envelope<br>Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm<br>Other: Energy Resource Managers | 10/13/2015 | |
| **Lynn Woodward Electric LLC**<br><br>3336 So. 1325 W.<br>Ogden, UT - 84401<br>Phone: 801-621-3220<br>Website: lwe-llc.com | Lighting | Contractor | 06/01/2007 | 23 |
| **Marathon Electric LLC**<br><br>4327 S Main St<br>Murray, UT - 84107<br>Phone: 801-301-7902 | Lighting<br>Motors and VFDs | Contractor | 10/01/2008 | 3 |
| **Mark Clary**<br><br>2302 West 8540 South<br>West Jordan, UT - 84088<br>Phone: 801-233-0882 | Lighting | Architect | 08/08/2013 | |
| **Meyer Lighting & Supply LLC**<br><br>1192 Draper Parkway #212<br>Draper, UT - 84020<br>Phone: 801-523-3980 | Lighting | Distributor | 03/06/2006 | 72 |
| **Midwest Electric, Inc.**<br><br>40 West Truman Ave.<br>Salt Lake City, UT - 84115<br>Phone: 801-633-9245<br>Website: midwest-electric.com | Lighting | Contractor | 02/01/2005 | 3 |
| **Millcreek Electric Co., Inc.**<br><br>4042 Buck Hollow Lane<br>Bluffdale, UT - 84065<br>Phone: 801-263-2300<br>Website: www.millcreekelectric.com | Appliances<br>Controls<br>Food Service<br>Irrigation<br>Lighting<br>Motors and VFDs<br>Office Equipment | Contractor | 06/16/2014 | 13 |
| **Miter Corp.**<br><br>6364 Shady Grove Cir.<br>Murray, UT - 84121<br>Phone: 801-949-6364 | Lighting | Contractor | 09/22/2012 | 20 |
| **MKK Consulting Engineers Inc.**<br><br>4760 S. Highland Drive Suite 106<br>Salt Lake City, UT - 84115<br>Phone: 303-796-6000 | Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm | 01/18/2016 | |
| **Mountain Lighting**<br><br>390 S Main Street<br>Cedar city, UT - 84720<br>Phone: 435-586-5502<br>Website: www.mountainlighting.com | Lighting | Distributor | 05/09/2013 | 6 |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Neon Lighting and Display Inc - DBA - Neon Lighting & Electric Signs**<br><br>211 WEST 1000 SOUTH<br>OGDEN , UT - 84404<br>Phone: 801-393-0415<br>Website: NEONLIGHTINGUT.COM | Lighting<br>Other: Other Specialty | Manufacturer - Rep<br>Other: SIGN CONTRACTOR | 03/24/2014 | 4 |
| **Optica Energy Management, LLC**<br><br>1772 Ross Dr<br>Ogden, UT - 84403<br>Phone: 888-442-4866<br>Website: www.opticaenergy.com | HVAC - unitary<br>Lighting<br>Motors and VFDs | Distributor<br>Other: Energy Management Company | 04/11/2013 | 17 |
| **Osram Sylvania**<br><br>2826 Elkhorn Ln<br>Sandy, UT - 84093<br>Phone: 801-201-8746<br>Website: mysylvania.com | Lighting | Manufacturer - Rep<br>Other | 06/04/2004 | |
| **Ovation Engineering & Consulting**<br><br>1113 N Victoria Way<br>Salt Lake City, UT - 84116<br>Phone: 801-871-0900 | Controls<br>Lighting | Engineering Firm | 12/08/2014 | |
| **Pacheco Company LLC**<br><br>3646 E. Summer Hill<br>Salt Lake City, UT - 84121<br>Phone: 801-541-3375<br>Website: www.pachecoco.com | Lighting<br>Other: Other Specialty | Contractor<br>Distributor<br>Manufacturer - Rep | 02/12/2015 | |
| **Perfect Vision Lighting**<br><br>1489 So. Trapper Ct.<br>Saratoga Springs, UT - 84043<br>Phone: 801-509-1235 | Lighting | Other | 05/30/2005 | 200 |
| **Petroleum Equipment Co**<br><br>1174 So. 300 W<br>Salt Lake City, UT - 84101<br>Phone: 801-487-8276<br>Website: www.petro-equip.net | Lighting | Distributor | 10/03/2013 | 26 |
| **Platt Electric Supply, Inc. - Layton***<br><br>730 Marshall Way<br>Layton, UT - 84041<br>Phone: 801-544-5144 | Controls<br>Lighting<br>Motors and VFDs | Distributor | 10/02/2013 | 11 |
| **Platt Electric Supply, Inc. - Lindon***<br><br>7 South 1550 West<br>Lindon, UT - 84042<br>Phone: 801-785-1677<br>Website: www.platt.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 11/16/2007 | 2 |
| **Platt Electric Supply, Inc. - Ogden***<br><br>3754 Pacific Avenue<br>Ogden, UT - 84405<br>Phone: 801-629-0200<br>Website: platt.com | Lighting | Distributor | 11/16/2007 | 14 |
| **Platt Electric Supply, Inc. - Salt Lake City***<br><br>840 W 2600 S<br>Salt Lake City, UT - 84119<br>Phone: 801-974-5773<br>Website: www.platt.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 11/16/2007 | 111 |
| **Platt Electric Supply, Inc. - Sandy***<br><br>8720 S. Sandy Parkway<br>Sandy, UT - 84070<br>Phone: 801-562-5786<br>Website: platt.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 11/16/2007 | 73 |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Platt Electric Supply, Inc. - Tooele***<br>1183 North 80 East<br>Tooele, UT - 84074<br>Phone: 435-843-7335<br>Website: platt.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 11/16/2007 | 15 |
| **Platt Electric Supply, Inc. - West Valley***<br>1730 South 4650 West<br>West Valley, UT - 84104<br>Phone: 801-972-1464<br>Website: www.platt.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 11/27/2012 | |
| **Positive Power LLC**<br>4658 W. 1150 S.<br>Ogden, UT - 84404<br>Phone: 801-732-0680 | Lighting | Contractor<br>Distributor | 03/06/2006 | 25 |
| **Professional Electrical Services, Inc.**<br>2443 Progress Dr.<br>Salt Lake City, UT - 84119<br>Phone: 801-973-8381<br>Website: proelectric.cc | Lighting | Contractor | 12/10/2014 | |
| **Progressive Power Solutions, Inc.**<br>1182 N 1565 W<br>Orem, UT - 84057<br>Phone: 801-602-8369<br>Website: ppswest.com | Controls<br>Farm and Dairy<br>Irrigation<br>Lighting | Contractor<br>Distributor | 05/12/2009 | 8 |
| **Provident Energy, INC.**<br>2882 N. 1300 E.<br>North Ogden, UT - 84414<br>Phone: 801-668-7910 | Appliances<br>Building envelope<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting | Contractor<br>Other: Energy Rating & Consulting | 02/15/2016 | |
| **PVE, Inc***<br>1040 North 2200 West, Suite 100<br>Salt Lake City, UT - 84107<br>Phone: 801-359-3158 | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm | 07/29/2013 | |
| **Quantum Lighting Group**<br>4074 S. 300 W<br>Salt Lake City, UT - 84107<br>Phone: 801-270-0010 | Lighting | Manufacturer - Rep<br>Other | 05/30/2005 | 34 |
| **RealWinWin, Inc.**<br>1926 Arch Street, 4F<br>Philadelphia, PA - 19103<br>Phone: 215-732-4480 x 349<br>Website: www.realwinwin.com | Appliances<br>Building envelope<br>Controls<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Office Equipment | Other: Energy Efficiency Incentive Administration and Consultation | 10/14/2013 | 43 |
| **RME, Inc**<br>8685 W State St<br>Boise, ID - 83714<br>Phone: 208-853-2968<br>Website: rmeinc.net | Controls<br>Lighting | Contractor<br>Engineering Firm | 10/14/2014 | |
| **Robbins Central Electric Co., Inc.**<br>564 Evesham Drive<br>Murray, UT - 84107<br>Phone: 801-476-5479<br>Website: www.central-electric.com | Controls<br>Lighting<br>Motors and VFDs | Contractor | 02/11/2015 | 2 |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Rocky Mountain Electric - Idaho Falls**<br><br>6698 N. 25th E<br>Idaho Falls, ID - 83401<br>Phone: 208-587-9682 x 6 | Lighting | Contractor | 08/27/2014 | |
| **Royal Engineering, Inc.**<br><br>2335 S. State Street<br>Suite 100,<br>Provo, UT - 84606<br>Phone: 801-375-2228<br>Website: www.royaleng.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm | 12/31/2014 | |
| **Royal Wholesale Electric - Cedar City***<br><br>429 No. 2150 West #2<br>Cedar City, UT - 84721<br>Phone: 435-865-6400 | Controls<br>Irrigation<br>Lighting | Distributor | 08/09/2013 | 53 |
| **Royal Wholesale Electric - Logan***<br><br>917 W 600 N Ste 101<br>Logan, UT - 84321<br>Phone: 435-752-7692<br>Website: royalutah.com | Lighting | Distributor | 01/09/2008 | 19 |
| **Royal Wholesale Electric - Ogden***<br><br>1210 W. 3050 S.<br>Ogden, UT - 84401<br>Phone: 801-621-6730<br>Website: royalutah.com | Lighting | Distributor | 04/28/2007 | 91 |
| **Royal Wholesale Electric - Orem***<br><br>21 S 1500 W<br>Orem, UT - 84058<br>Phone: 801-224-5555<br>Website: www.royalutah.com | Lighting | Distributor | 09/22/2012 | 4 |
| **Royal Wholesale Electric - Salt Lake City***<br><br>3100 So. 900 W.<br>Salt Lake City, UT - 84119<br>Phone: 801-973-6000 | Lighting | Distributor | 06/09/2007 | 2 |
| **Royal Wholesale Electric - Tooele***<br><br>332 So. 1200 W<br>Tooele, UT - 84704<br>Phone: 435-882-4787 | Lighting | Distributor | 06/09/2007 | 10 |
| **Runnin G Electric LLC**<br><br>4750 South 6700 West<br>Hooper, UT - 84015<br>Phone: 801-628-6791<br>Website: N/A | Appliances<br>Building envelope<br>Lighting<br>Office Equipment | Contractor | 01/12/2016 | |
| **Saddleback Lighting, Inc.**<br><br>1425 W. Red Ledge Road<br>Suite 101,<br>Washington, UT - 84780<br>Phone: 435-656-1866<br>Website: www.SaddlebackLighting.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 05/01/2008 | 35 |
| **Salmon Electrical Contractors**<br><br>1116 W. 500 S. Suite 1<br>West Bountiful, UT - 84087<br>Phone: 801-292-3444 | Lighting | Contractor | 04/01/2006 | 33 |
| **Salt Lake Winlectric**<br><br>6120 South 300 West<br>Murray, UT - 84107<br>Phone: 801-293-1600<br>Website: www.slcwinlectric.com | Lighting | Distributor | 09/03/2013 | 5 |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Schooley Electric Inc.**<br>676 W. 8th Ave<br>Midvale, UT - 84047<br>Phone: 801-641-3395 | Lighting | Contractor | 03/26/2009 | 18 |
| **SES Green Energy**<br>2750 West Rasmussen Rd #101<br>Park City, UT - 84098<br>Phone: 435-615-2844<br>Website: www.sesgreenenergy.com | Lighting<br>Other: Other Specialty | Contractor | 05/10/2016 | |
| **Siemens Industry, Inc.**<br>9707 S Sandy Parkway<br>Sandy, UT - 84070<br>Phone: 801-316-2439 | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Irrigation<br>Lighting<br>Motors and VFDs | Contractor | 01/11/2013 | 1 |
| **Skyline Electric Company**<br>1848 W 2300 S<br>West Valley City, UT - 84119<br>Phone: 801-972-3656<br>Website: skyline-electric.com | Lighting | Contractor | 12/02/2002 | 23 |
| **Smart Building Solutions**<br>2876 South 460 West<br>Salt Lake City, UT - 84115<br>Phone: 801-733-6000<br>Website: www.intellivex.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Office Equipment<br>Other: Other Specialty | Distributor<br>Manufacturer - Rep | 03/04/2015 | |
| **Spectrum Engineers**<br>324 S. State Street, Suite 400<br>Salt Lake City, UT - 84111<br>Phone: 801-328-5151 | Lighting | Engineering Firm | 10/14/2013 | |
| **Star Sign Inc.**<br>1060 East Tabernacle<br>St George, UT - 84770<br>Phone: 435-628-7806<br>Website: www.starsignonline.com | Lighting<br>Other: Other Specialty | Contractor | 07/26/2016 | |
| **Stewart & Co., Inc.**<br>4730 Mile High Dr.<br>Provo, UT - 84604<br>Phone: 801-787-2363<br>Website: stewconst.com | Controls<br>Lighting<br>Motors and VFDs | Contractor<br>Distributor | 08/26/2014 | |
| **SugarHouse Electric, L.L.C.**<br>2223 South Highland Dr. #E6-132<br>Salt Lake city, UT - 84106<br>Phone: 801-633-7722 | Building envelope<br>Irrigation<br>Lighting<br>Motors and VFDs | Contractor | 12/12/2015 | |
| **SuperGreen Solutions**<br>2682 S. Highland Dr. Ste 103<br>SALT LAKE CITY, UT - 84106<br>Phone: 801-953-1096<br>Website:<br>www.supergreensolutions.com | Controls<br>Lighting | Distributor | 08/26/2015 | 20 |
| **Taylor Electric, Inc.**<br>1018 W Beardsley Pl.<br>Salt Lake City, UT - 84119<br>Phone: 801-413-1376 | Lighting | Contractor | 04/28/2007 | 16 |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **TEC Electric**<br><br>755 West 200 South<br>Logan, UT - 84321<br>Phone: 435-753-0920<br>Website: www.tec-electric.com | Controls<br>Lighting<br>Motors and VFDs | Contractor | 05/11/2011 | 10 |
| **Thomson Electric Sales Inc.**<br><br>127 S. Main Street<br>Logan, UT - 84321<br>Phone: 435-752-2252 | Lighting | Distributor<br>Engineering Firm | 10/22/2007 | 32 |
| **Titan LED - Green Funds of Utah - Delta**<br><br>123 East 100 North<br>Delta, UT - 84624<br>Phone: 435-406-1775<br>Website: www.TitanLED.net | Lighting | Distributor | 07/01/2011 | 8 |
| **Titan LED - North Logan**<br><br>641 E 2200 N<br>North Logan, UT - 84341<br>Phone: 801-784-8260<br>Website: www.titanled.net | Lighting | Manufacturer - Rep | 07/08/2014 | 5 |
| **Utah LED Lighting**<br><br>4077 Rons Ct<br>Riverton, UT - 84096<br>Phone: 801-860-9984 | Lighting | Other | 03/28/2013 | 19 |
| **Utah Yamas Controls Inc.***<br><br>13526 S. 110 W.<br>Draper, UT - 84020<br>Phone: 801-990-1950<br>Website: www.utahyamas.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Other: Other Specialty | Contractor<br>Distributor<br>Engineering Firm<br>Manufacturer - Rep | 01/21/2013 | 1 |
| **Utility Cost Management Consultants**<br><br>102 E. Cobble Creek Drive<br>Cedar City, UT - 84721<br>Phone: 435-807-1882<br>Website: www.ucmc-USA.com | Lighting | Other: consultant | 10/23/2015 | 9 |
| **Vibrant**<br><br>619 S Bluff St #401<br>St George, UT - 84770<br>Phone: 702-701-2450<br>Website: vibrantenergygroup.com | Lighting | Distributor<br>Manufacturer - Rep<br>Other: consulting, sales | 01/15/2015 | |
| **Voss Electric Co.**<br><br>6547 S Racine Circle, Suite 100<br>Centennial , CO - 80111<br>Phone: 303-243-5503<br>Website: vosslighting.com | Controls<br>Lighting | Distributor | 09/09/2016 | |
| **Wasatch Electric**<br><br>2455 West 1500 South Suite A<br>Salt Lake City, UT - 84104<br>Phone: 801-487-4511<br>Website: wasatchelectric.com | Lighting | Contractor | 02/01/2010 | 3 |
| **WESCO Distribution - Salt Lake City**<br><br>3210 South 900 West<br>Salt Lake City, UT - 84119<br>Phone: 801-975-0600<br>Website: wesco.com | Lighting<br>Motors and VFDs | Distributor | 03/04/2004 | 13 |
| **Western Land Management LLC**<br><br>2815 East Linwood Lane<br>Manila, UT - 84046<br>Phone: 949-285-9454 | Food Service<br>Lighting | Distributor | 01/29/2016 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Whitehead Wholesale Electric, Inc.**<br><br>247 34th St.<br>Ogden, UT - 84402<br>Phone: 801-394-1657 | Lighting | Distributor | 04/15/2006 | 123 |
| **Wyer Electric, LLC**<br><br>5263 Commerce Dr<br>Murray, UT - 84107<br>Phone: 801-262-5673 | Building envelope<br>Controls<br>Lighting<br>Motors and VFDs | Contractor | 09/05/2014 | |
| **YESCO -Young Electric Sign Company - Logan, UT***<br><br>1651 North 1000 West<br>Logan, UT - 84321<br>Phone: 435-774-8800<br>Website: yesco.com | Lighting | Contractor<br>Distributor | 04/07/2007 | 24 |
| **YESCO LLC - Young Electric Sign Co. - Salt Lake City, UT***<br><br>1605 S. Gramercy Road<br>Salt Lake City, UT - 84104<br>Phone: 801-464-6413<br>Website: www.yesco.com | Appliances<br>Controls<br>Lighting<br>Motors and VFDs | Contractor<br>Manufacturer - Rep | 09/22/2012 | 70 |
| **Zeus Electric, LLC**<br><br>5526 W 13400 S #314<br>Herriman, UT - 84096<br>Phone: 801-541-8468 | Building envelope<br>Lighting | Contractor | 01/15/2016 | 2 |

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# Energy Efficiency Alliance

The following is a list of contractors, distributors and other businesses participating in Rocky Mountain Power's Energy Efficiency Alliance displayed in random order (unless sorted by the user) based on the search criteria selected. This listing is provided solely as a convenience to our customers. Rocky Mountain Power does not warrant or guarantee the work performed by these participating vendors. You are solely responsible for any contract with a participating vendor and the performance of any vendor you have chosen.

An asterisk (*) indicates Rocky Mountain Power Outstanding Contribution Award winning trade allies in 2013, 2014 and/or 2015.

## *Search Criteria:*

| | |
|---|---|
| **Selected State(s):** | Utah |
| **Specialties:** | Motors and VFDs |
| **Business Type:** | --ANY-- |

## *Search Results: 91 - Date and Time: 03/30/2017 02:50:27 PM*

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Ace Electrical, Inc**<br>3575 South West Temple<br>Suite 7,<br>Salt L:ake City, UT - 84115<br>Phone: 801-266-3848<br>Website: www.ace-electrical.com | Controls<br>Motors and VFDs | Contractor | 02/11/2013 | |
| **Acx Service**<br>563 Ogden Canyon<br>Ogden, UT - 84401<br>Phone: 385-325-2295<br>Website: acxservice.com | Appliances<br>Building envelope<br>Compressed Air<br>Controls<br>Farm and Dairy<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Irrigation<br>Motors and VFDs<br>Office Equipment<br>Other: Other Specialty | Contractor<br>Other: Energy Audits & Commissioning | 04/14/2015 | |
| **All Electric Plus, Inc.**<br>182 S. 200 West<br>Paragonah, UT - 94160<br>Phone: 435-477-9591<br>Website: www.allelectricplus.com | Controls<br>Farm and Dairy<br>Irrigation<br>Lighting<br>Motors and VFDs | Distributor | 11/03/2014 | 2 |
| **American Electric Company, Inc.**<br>78 West 13775 South, Suite 9<br>Draper, UT - 84020<br>Phone: 801-254-0782<br>Website: www.americanelectric.cc | Appliances<br>Building envelope<br>Controls<br>Lighting<br>Motors and VFDs<br>Other: Other Specialty | Contractor | 04/06/2015 | |
| **American Mechanical Systems Service, LLC**<br>7530 South State Street<br>Midvale, UT - 84047<br>Phone: 801-428-0400<br>Website: www.ams-ut.com | Controls<br>HVAC - unitary<br>Motors and VFDs | Contractor | 11/30/2012 | |
| **Applied Product Solutions**<br>2822 South 1030 West<br>Salt Lake City, UT - 84119<br>Phone: 801-441-4949<br>Website: www.aps.hvacinfo.com | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Manufacturer - Rep | 11/17/2015 | |
| **Architectural Nexus, Inc.**<br>2505 East Parleys Way<br>Salt Lake City, UT - 84109<br>Phone: 801-924-5000<br>Website: www.archnexus.com | Appliances<br>Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Office Equipment | Architect | 08/18/2014 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Aspen Engineering and Environmental LLC**<br><br>140 Aspen Circle<br>Park City, UT - 84098<br>Phone: 435-565-1535<br>Website: www.a2e-llc.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Engineering Firm | 03/18/2013 | |
| **Black Diamond Electric**<br><br>170 S. Mountain Way Dr.<br>Orem, UT - 84058<br>Phone: 801-473-1203<br>Website: blackdiamondelectriclc.com | Motors and VFDs | Contractor | 05/11/2011 | 5 |
| **Case, Lowe & Hart, Inc.**<br><br>2484 Washington Blvd.<br>Suite 510,<br>Ogden, UT - 84401<br>Phone: 801-399-5821<br>Website: www.clhae.com | Building envelope<br>Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Architect<br>Engineering Firm | 05/17/2013 | |
| **Cedar Valley Heating & Air Conditioning, Inc.**<br><br>1400 N. Main, Bldg A<br>Cedar City, UT - 84721<br>Phone: 435-586-8788<br>Website: cedarvalleyheatingandair.com | HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 05/18/2016 | |
| **Codale Electric Supply, Inc.- Salt Lake City***<br><br>5225 West 2400 South<br>Salt Lake City, UT - 84120<br>Phone: 801-975-7300<br>Website: codale.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 10/02/2002 | 483 |
| **Collings Development llc**<br><br>150 south 1300 east<br>springville, UT - 84663<br>Phone: 801-979-9358 | Controls<br>Lighting<br>Motors and VFDs | Contractor | 04/20/2015 | |
| **Comfort Systems USA Intermountain**<br><br>2035 Milestone Dr. Suite A<br>Salt Lake City, UT - 84104<br>Phone: 801-907-6700<br>Website: comfortsystemsutah.com | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 06/30/2014 | |
| **Commercial Mechanical Systems & Service**<br><br>3395 West 1820 South<br>Salt Lake City, UT - 84104<br>Phone: 801-977-3925<br>Website: cmsutah.com | HVAC - unitary<br>Motors and VFDs<br>Other: Other Specialty | Contractor | 02/01/2012 | |
| **Compressor-Pump & Service, Inc.**<br><br>3333 W 2400 S<br>Salt Lake City, UT - 84119<br>Phone: 801-973-0154<br>Website: compressor-pump.com | Motors and VFDs | Distributor<br>Manufacturer - Rep | 09/01/2005 | |
| **Consolidated Electrical Distributors - Vernal***<br><br>397 South 1000 East<br>Vernal, UT - 84078<br>Phone: 435-789-9070 | Building envelope<br>Controls<br>Irrigation<br>Lighting<br>Motors and VFDs | Distributor | 09/16/2015 | |
| **Consolidated Electrical Distributors, Inc. - Salt Lake City***<br><br>1819 S. 900 W.<br>Salt Lake City, UT - 84104<br>Phone: 801-486-3501 | Lighting<br>Motors and VFDs | Distributor | 09/25/2012 | 192 |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Cornerstones Enterprise Services, Corp.**<br><br>P. O. Box 2263<br>Sandy, UT - 84091<br>Phone: 801-968-0471<br>Website: www.cornerstonesservices.com | Controls<br>Lighting<br>Motors and VFDs | Contractor | 02/29/2016 | |
| **Cutler Electric Inc.**<br><br>1417 East 150 South<br>Springville, UT - 84663<br>Phone: 801-489-1351 | Lighting<br>Motors and VFDs | Contractor | 02/12/2015 | |
| **Dairy Systems Company**<br><br>4004 N Highway 91<br>Hyde Park, UT - 84318<br>Phone: 435-563-6660 | Controls<br>Farm and Dairy<br>Irrigation<br>Motors and VFDs | Contractor<br>Distributor<br>Other: Retailer | 05/13/2013 | |
| **DesignTek Consulting Group, LLC**<br><br>1600 W. 2200 S.<br>Salt Lake City, UT - 84119<br>Phone: 801-255-5449<br>Website: www.designtekconsulting.com | Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Contractor<br>Engineering Firm | 11/11/2013 | |
| **Dixon Electric Inc.**<br><br>1273 South River View Dr.<br>Spanish Fork, UT - 84660<br>Phone: 801-310-4928 | Motors and VFDs | Contractor | 04/07/2014 | |
| **Electrical Power & Controls**<br><br>5203 Holder Dr.<br>WVC, UT - 84120<br>Phone: 801-971-1913<br>Website: www.epc120.com | Lighting<br>Motors and VFDs | Contractor | 03/28/2014 | |
| **Electrical Wholesale Supply - Layton***<br><br>600 North 630 West<br>Layton, UT - 84041<br>Phone: 801-544-1206<br>Website: www.ewsutah.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 04/25/2013 | 12 |
| **EME, Inc**<br><br>2496 S West Temple<br>Salt Lake City , UT - 84115<br>Phone: 801-746-2828<br>Website: www.EMEUtah.com | Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 06/06/2016 | |
| **Encentiv Energy, LLC**<br><br>1501 Ardmore Blvd.<br>Suite 102,<br>Pittsburgh, PA - 15221<br>Phone: 412-723-1516<br>Website: www.encentivenergy.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Other: Energy Efficiency Analytics<br>Other: Energy Efficiency Rebate Processing | 11/11/2015 | 1 |
| **Energy Management Corporation***<br><br>501 West 700 South<br>Salt Lake City, UT - 84101<br>Phone: 801-366-4100<br>Website: emcsolutions.com | HVAC - unitary<br>Motors and VFDs | Distributor | 05/01/2004 | |
| **Engineered Systems Assoc., Inc.**<br><br>1355 E. Center Street<br>Pocatello, ID - 83201<br>Phone: 208-233-0501 | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Engineering Firm | 01/10/2014 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Engineering System Solutions DBA ES2**<br><br>4943 N 29 E Suite A<br>Idaho Falls, ID - 83401<br>Phone: 208-552-9874<br>Website: www.es2eng.com | Appliances<br>Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm | 05/08/2014 | |
| **Green Planet Company**<br><br>63 East 11400 South #257<br>Sandy , UT - 84070<br>Phone: 801-980-1518<br>Website:<br>www.greenplanetcompany.com | Appliances<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Distributor<br>Manufacturer - Rep | 05/07/2014 | 14 |
| **GTC Electric**<br><br>PO Box 731<br>Park City, UT - 84060<br>Phone: 435-731-0727 | Appliances<br>Lighting<br>Motors and VFDs | Contractor | 07/30/2014 | |
| **Gustave A. Larson Company**<br><br>210 W. Crosswood Square<br>Salt Lake City, UT - 84115<br>Phone: 801-487-0644<br>Website: galarson.com | HVAC - unitary<br>Motors and VFDs | Distributor | 02/01/2007 | |
| **Hawk Electric, Inc.**<br><br>P.O. Box 540150<br>North Salt Lake, UT - 84054<br>Phone: 801-397-1020 | Motors and VFDs | Contractor | 05/01/2005 | 9 |
| **Hidden Peak Electric Company Inc.**<br><br>1064 South 700 West<br>Salt lake City, UT - 84104<br>Phone: 801-262-5513<br>Website: www.hiddenpeakelectric.com | Controls<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Contractor | 02/14/2013 | 2 |
| **Honeywell International**<br><br>2371 S. Presidents Way Suite A<br>Salt Lake City, UT - 84120<br>Phone: 801-978-7136<br>Website: honeywell.com | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor<br>Distributor<br>Manufacturer - Rep | 05/01/2006 | |
| **Hussmann Corporation**<br><br>1385 W 2200 St<br>Salt Lake City, UT - 84119<br>Phone: 805-458-7615<br>Website: hussmann.com | Controls<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Manufacturer - Rep | 01/14/2015 | |
| **Innovative Repairs LLC**<br><br>524 S. 300 E.<br>Springville, UT - 84663<br>Phone: 801-489-4460 | Controls<br>Farm and Dairy<br>Lighting<br>Motors and VFDs | Manufacturer - Rep | 04/19/2013 | 9 |
| **Jacobs Engineering Group, Inc.**<br><br>3 Tower Bridge<br>2 Ash Street,<br>Conshohocken, PA - 19428<br>Phone: 610-238-1000<br>Website: www.Jacobs.com | Building envelope<br>Compressed Air<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Other: Other Specialty | Engineering Firm | 05/08/2015 | |
| **Johnson Controls, Inc.**<br><br>2255 Technology Parkway<br>West Valley City, UT - 84119<br>Phone: 801-903-7532 | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor<br>Manufacturer - Rep | 06/01/2007 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Johnson Powers, LLC**<br><br>8704 South 120 East<br>Sandy, UT - 84070<br>Phone: 801-878-7831<br>Website: www.johnsonpowers.com | Appliances<br>Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Contractor | 07/23/2014 | |
| **KEE Engineering and Consulting LLC**<br><br>695 W. 1980 So<br>Price, UT - 84501<br>Phone: 435-613-1220<br>Website: www.keeengineering.com | Controls<br>Motors and VFDs | Engineering Firm | 03/14/2016 | |
| **KHI Mechanical**<br><br>2630 S 3270 W Ste B<br>Salt Lake City, UT - 84119<br>Phone: 801-972-2680 | HVAC - unitary<br>Motors and VFDs | Contractor | 01/01/2009 | |
| **LMS - Lighting Maintenance Service - Utah***<br><br>663 West 4330 South<br>Salt Lake City, UT - 84123<br>Phone: 801-281-0400<br>Website: lmslighting.com | Controls<br>Lighting<br>Motors and VFDs | Contractor | 10/02/2002 | 542 |
| **Lux Energy Group**<br><br>1111 South 120 East<br>Farmington, UT - 84025<br>Phone: 801-989-8375 | Building envelope<br>Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm<br>Other: Energy Resource Managers | 10/13/2015 | |
| **Marathon Electric LLC**<br><br>4327 S Main St<br>Murray, UT - 84107<br>Phone: 801-301-7902 | Lighting<br>Motors and VFDs | Contractor | 10/01/2008 | 3 |
| **McKinstry Essention, LLC**<br><br>112 N. Rubey Dr.<br>Suite 200,<br>Golden, CO - 80403<br>Phone: 435-632-8433<br>Website: www.mckinstry.com | Building envelope<br>Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Irrigation<br>Motors and VFDs<br>Other: Other Specialty | Engineering Firm | 02/12/2014 | |
| **Mechanical Service & Systems, Inc.**<br><br>1055 South 700 West<br>Salt Lake City, UT - 84104<br>Phone: 801-255-9333 x 1<br>Website: www.mss84.com | HVAC - unitary<br>Motors and VFDs | Contractor | 08/01/2006 | 2 |
| **Millcreek Electric Co., Inc.**<br><br>4042 Buck Hollow Lane<br>Bluffdale, UT - 84065<br>Phone: 801-263-2300<br>Website: www.millcreekelectric.com | Appliances<br>Controls<br>Food Service<br>Irrigation<br>Lighting<br>Motors and VFDs<br>Office Equipment | Contractor | 06/16/2014 | 13 |
| **MKK Consulting Engineers Inc.**<br><br>4760 S. Highland Drive Suite 106<br>Salt Lake City, UT - 84115<br>Phone: 303-796-6000 | Compressed Air<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm | 01/18/2016 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Modern Mechanical LLC**<br><br>1501 West 2650 South Ste 103<br>Ogden, UT - 84401<br>Phone: 801-731-0337<br>Website: www.modernmechanicalutah.com | Appliances<br>Compressed Air<br>Controls<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 08/14/2014 | |
| **Mountain Valley Pump Service**<br><br>1444 N 300 W<br>Logan, UT - 84341<br>Phone: 435-753-0916 | Motors and VFDs | Distributor | 08/01/2004 | |
| **Musgrove Engineering, PA**<br><br>234 Whisperwood Way<br>`<br>,<br>Boise, ID - 83709<br>Phone: 208-384-0585<br>Website: musgrovepa.com | Compressed Air<br>Controls<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs<br>Office Equipment | Engineering Firm | 07/28/2015 | |
| **Nelson's Heating & Refrigeration**<br><br>1070 Bowling Alley Ln.<br>Moab, UT - 84532<br>Phone: 435-259-5625 | HVAC - unitary<br>Motors and VFDs | Contractor | 12/01/2005 | |
| **Optica Energy Management, LLC**<br><br>1772 Ross Dr<br>Ogden, UT - 84403<br>Phone: 888-442-4866<br>Website: www.opticaenergy.com | HVAC - unitary<br>Lighting<br>Motors and VFDs | Distributor<br>Other: Energy Management Company | 04/11/2013 | 17 |
| **Platt Electric Supply, Inc. - Layton***<br><br>730 Marshall Way<br>Layton, UT - 84041<br>Phone: 801-544-5144 | Controls<br>Lighting<br>Motors and VFDs | Distributor | 10/02/2013 | 11 |
| **Platt Electric Supply, Inc. - Lindon***<br><br>7 South 1550 West<br>Lindon, UT - 84042<br>Phone: 801-785-1677<br>Website: www.platt.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 11/16/2007 | 2 |
| **Platt Electric Supply, Inc. - Salt Lake City***<br><br>840 W 2600 S<br>Salt Lake City, UT - 84119<br>Phone: 801-974-5773<br>Website: www.platt.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 11/16/2007 | 111 |
| **Platt Electric Supply, Inc. - Sandy***<br><br>8720 S. Sandy Parkway<br>Sandy, UT - 84070<br>Phone: 801-562-5786<br>Website: platt.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 11/16/2007 | 73 |
| **Platt Electric Supply, Inc. - Tooele***<br><br>1183 North 80 East<br>Tooele, UT - 84074<br>Phone: 435-843-7335<br>Website: platt.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 11/16/2007 | 15 |
| **Platt Electric Supply, Inc. - West Valley***<br><br>1730 South 4650 West<br>West Valley, UT - 84104<br>Phone: 801-972-1464<br>Website: www.platt.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 11/27/2012 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Precision Air Management, LLC**<br><br>1388 South 350 West<br>Lehi, UT - 84043<br>Phone: 801-360-1848<br>Website: precisionairmgmt.com | Controls<br>HVAC - unitary<br>Motors and VFDs<br>Office Equipment | Contractor | 11/24/2015 | |
| **Prettyman Electric**<br><br>5901 S. Jonquil Drive<br>5901 S. Jonquil Drive,<br>Taylorsville, UT - 84129<br>Phone: 801-243-4055 | Appliances<br>Building envelope<br>Compressed Air<br>Controls<br>Food Service<br>HVAC - unitary<br>Irrigation<br>Motors and VFDs | Contractor<br>Other: Design Build, Repair, Service, Maintenance | 12/05/2013 | |
| **PVE, Inc***<br><br>1040 North 2200 West, Suite 100<br>Salt Lake City, UT - 84107<br>Phone: 801-359-3158 | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm | 07/29/2013 | |
| **RealWinWin, Inc.**<br><br>1926 Arch Street, 4F<br>Philadelphia, PA - 19103<br>Phone: 215-732-4480 x 349<br>Website: www.realwinwin.com | Appliances<br>Building envelope<br>Controls<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Office Equipment | Other: Energy Efficiency Incentive Administration and Consultation | 10/14/2013 | 43 |
| **Redd Mechanical Incorporated**<br><br>1012 SOUTH 300 WEST<br>BLANDING, UT - 84511<br>Phone: 435-678-2500 x 2500<br>Website: www.reddmechanical.com | Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 07/02/2015 | |
| **Riverside Plumbing & Htg, Inc.**<br><br>366 N 500 W<br>Moab, UT - 84532<br>Phone: 435-259-8324 | HVAC - unitary<br>Motors and VFDs | Contractor | 11/01/2005 | |
| **Robbins Central Electric Co., Inc.**<br><br>564 Evesham Drive<br>Murray, UT - 84107<br>Phone: 801-476-5479<br>Website: www.central-electric.com | Controls<br>Lighting<br>Motors and VFDs | Contractor | 02/11/2015 | 2 |
| **Rocky Mountain Mechanical**<br><br>3412 S. West Temple<br>Salt Lake City, UT - 84115<br>Phone: 801-997-0585<br>Website: www.automatedutah.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 03/08/2016 | |
| **Royal Engineering, Inc.**<br><br>2335 S. State Street<br>Suite 100,<br>Provo, UT - 84606<br>Phone: 801-375-2228<br>Website: www.royaleng.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs | Engineering Firm | 12/31/2014 | |
| **Saddleback Lighting, Inc.**<br><br>1425 W. Red Ledge Road<br>Suite 101,<br>Washington, UT - 84780<br>Phone: 435-656-1866<br>Website: www.SaddlebackLighting.com | Controls<br>Lighting<br>Motors and VFDs | Distributor | 05/01/2008 | 35 |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Sammy's Heating and Air**<br>935 E. 1150 N.<br>Bountiful, UT - 84010<br>Phone: 801-698-0096<br>Website: sammyshvac.com | HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 11/02/2015 | |
| **Siemens Industry, Inc.**<br>9707 S Sandy Parkway<br>Sandy, UT - 84070<br>Phone: 801-316-2439 | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Irrigation<br>Lighting<br>Motors and VFDs | Contractor | 01/11/2013 | 1 |
| **Smart Building Solutions**<br>2876 South 460 West<br>Salt Lake City, UT - 84115<br>Phone: 801-733-6000<br>Website: www.intellivex.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Office Equipment<br>Other: Other Specialty | Distributor<br>Manufacturer - Rep | 03/04/2015 | |
| **St. George Winlectric**<br>298 North Industrial Road<br>St. George, UT - 84770<br>Phone: 435-628-1680 | Controls<br>Farm and Dairy<br>Motors and VFDs | Distributor | 12/10/2013 | |
| **Stewart & Co., Inc.**<br>4730 Mile High Dr.<br>Provo, UT - 84604<br>Phone: 801-787-2363<br>Website: stewconst.com | Controls<br>Lighting<br>Motors and VFDs | Contractor<br>Distributor | 08/26/2014 | |
| **SugarHouse Electric, L.L.C.**<br>2223 South Highland Dr. #E6-132<br>Salt Lake city, UT - 84106<br>Phone: 801-633-7722 | Building envelope<br>Irrigation<br>Lighting<br>Motors and VFDs | Contractor | 12/12/2015 | |
| **SUMMA Energy Services**<br>250 N 200 W<br>Hyrum, UT - 84319<br>Phone: 435-245-6120<br>Website: summaenergy.com | HVAC - unitary<br>Motors and VFDs<br>Other: Other Specialty | Other | 01/01/2009 | |
| **TEC Electric**<br>755 West 200 South<br>Logan, UT - 84321<br>Phone: 435-753-0920<br>Website: www.tec-electric.com | Controls<br>Lighting<br>Motors and VFDs | Contractor | 05/11/2011 | 10 |
| **Trane***<br>2817 S. 1030 W.<br>Salt Lake City, UT - 84119<br>Phone: 801-486-0500<br>Website: www.trane.com | Controls<br>HVAC - unitary<br>Motors and VFDs | Distributor<br>Manufacturer - Rep | 03/01/2005 | |
| **United Team Mechanical**<br>151 N 600 W<br>Kaysville, UT - 84037<br>Phone: 801-991-1145 | HVAC - unitary<br>Motors and VFDs | Contractor | 09/01/2005 | |
| **Utah Engineering**<br>145 W. 2950 S.<br>Salt Lake City, UT - 84115<br>Phone: 801-466-3583<br>Website: samedayutah.com | Controls<br>Food Service<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Contractor | 12/24/2013 | |

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# Energy Efficiency Alliance

| | Specialties | Business Type | Join Date | Projects Completed |
|---|---|---|---|---|
| **Utah Yamas Controls Inc.***<br><br>13526 S. 110 W.<br>Draper, UT - 84020<br>Phone: 801-990-1950<br>Website: www.utahyamas.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Lighting<br>Motors and VFDs<br>Other: Other Specialty | Contractor<br>Distributor<br>Engineering Firm<br>Manufacturer - Rep | 01/21/2013 | 1 |
| **Valley Implement**<br><br>213 West 8th North<br>Preston, ID - 83263<br>Phone: 208-852-0430<br>Website: valley-implement.com | Controls<br>Irrigation<br>Motors and VFDs | Contractor | 12/05/2012 | null |
| **Valley Implement**<br><br>2570 N Main<br>Logan, UT - 84341<br>Phone: 435-787-1586<br>Website: valley-implement.com | Controls<br>Farm and Dairy<br>Irrigation<br>Motors and VFDs | Contractor | 12/05/2012 | null |
| **Van Boerum & Frank Associates**<br><br>330 South 300 East<br>Salt Lake City, UT - 84111<br>Phone: 801-530-3148<br>Website: www.vbfa.com | Building envelope<br>Controls<br>HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Architect<br>Engineering Firm<br>Other | 01/01/2012 | |
| **WESCO Distribution - Salt Lake City**<br><br>3210 South 900 West<br>Salt Lake City, UT - 84119<br>Phone: 801-975-0600<br>Website: wesco.com | Lighting<br>Motors and VFDs | Distributor | 03/04/2004 | 13 |
| **WHW Engineering Inc.**<br><br>8619 Sandy Parkway #101<br>Sandy, UT - 84070<br>Phone: 801-466-4021 | HVAC - evaporative<br>HVAC - unitary<br>Motors and VFDs | Engineering Firm | 02/23/2015 | |
| **Wilson Mohr**<br><br>3186 S. Washington St.<br>Salt Lake City, UT - 84115<br>Phone: 801-214-3300<br>Website: wilsonmohr.com | Motors and VFDs | Contractor | 10/01/2011 | |
| **Wyer Electric, LLC**<br><br>5263 Commerce Dr<br>Murray, UT - 84107<br>Phone: 801-262-5673 | Building envelope<br>Controls<br>Lighting<br>Motors and VFDs | Contractor | 09/05/2014 | |
| **YESCO LLC - Young Electric Sign Co. - Salt Lake City, UT***<br><br>1605 S. Gramercy Road<br>Salt Lake City, UT - 84104<br>Phone: 801-464-6413<br>Website: www.yesco.com | Appliances<br>Controls<br>Lighting<br>Motors and VFDs | Contractor<br>Manufacturer - Rep | 09/22/2012 | 70 |

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# Appendix 6

# Utah Program Evaluation Recommendations and Responses

# Utah 2016 Program Evaluations

## Program Evaluation Recommendations and Company Responses

Evaluation reports provide detailed information on the process and impact evaluations performed on each program. The reports summarize the methodology used to calculate the evaluated savings, provide recommendations for the Company to consider for improving the process or impact of the program and survey customer satisfaction.

The table below lists the programs, the program years that were evaluated during 2016 and the third party evaluator who completed the evaluation. Program evaluations are available for review at www.pacificorp.com/es/dsm/utah.html

### Table 1 – Program Evaluations

| Program | Program Years Evaluated | Evaluator | Progress Status |
|---|---|---|---|
| Home Energy Savings | 2013 – 2014 | Cadmus | Completed |
| Home Energy Reports | 8/1/2012 - 1/31/2014 | Navigant | Completed |
| New Homes | 2013 - 2014 | Cadmus | Completed |
| Refrigerator Recycling* | 2013 - 2014 | Cadmus | Completed |
| Strategic Energy Management | 2014 - 2015 | Cadmus | Completed |
| *watt*smart Business | 2014 - 2015 | Cadmus | Completed in 2017 |
| Home Energy Savings | 2015 - 2016 | Cadmus | In Progress |
| Low Income Weatherization | 2013 - 2015 | Opinion Dynamics | In Progress |

In each report published, Table 2 summarizes the third party evaluator's recommendations and the Company's response. *Refrigerator Recycling recommendations are not provided due to cancellation of the program.

### Table 2 – Home Energy Savings Evaluation Recommendations

| Home Energy Savings Evaluation Recommendations | Rocky Mountain Power Action Plan |
|---|---|
| Assign measure categories by end use (instead of delivery channel) to ensure the most appropriate cost-effectiveness results instead of delivery channel. | The Company implemented the Technical Resource Library (TRL) in 2015, which includes measure categorization. The program administrator now follows the same categorization. |
| For the upstream lighting database, track all data in a consistent manner across each program evaluation period (i.e. 2015-2016, 2016-2017 etc.). It was difficult for the evaluator to map the program administrator's database to the price database. | The program administrator will standardize upstream lighting database tracking to ensure that all data provided is consistent and accurate. |
| Consider accounting for commercial installation of upstream bulbs in the reported savings. Currently, the | The program evaluation covered a period before the Company began offering instant incentives for LED |

| Home Energy Savings Evaluation Recommendations | Rocky Mountain Power Action Plan |
|---|---|
| Company does not account for cross-sector sales from the upstream lighting incentives. | lighting to non-residential customers. Given the changing nature of the lighting market and the new offering for non-residential customers, the Company does not plan to adjust savings for cross-sector sales at this time, but will continue to monitor this trend in future evaluations. |
| Consider using nonparticipant spillover analysis in the NTG estimation for all programs. Nonparticipant spillover results in energy savings caused by, but not rebated through, a utility's demand-side management activities. Through responses to the general population survey, Cadmus estimated nonparticipant spillover as 1% of HES program savings. These savings were not included because this estimation is relatively new in the industry. | The Company will incorporate nonparticipant spillover in the NTG estimation in the next round of evaluations. |
| Rocky Mountain Power should continue using the Retail Sales Allocation Tool ("RSAT") to determine which stores in their territory should be included as participating stores in the program. | The program administrator will continue using the RSAT. |
| Consider additional studies to quantify spillover and market transformation for use in lighting NTG calculations. This evaluation examined a portion of participant spillover found from the upstream lighting store intercept leakage survey, however, it was not an exhaustive view of spillover since the sample was designed to capture leakage and not spillover. | The Company will consider this recommendation in its next evaluation cycle. |
| Continue to pursue a multi-touch marketing strategy, using a mix of bill inserts and retailer/contractor training. Given the large percentage of customers who learned of wattsmart offerings through bill inserts, examine the proportion of customers selecting to receive online bills and ensure these online channels proportionately advertise the programs with the messages that motivated customers to participate: long-lasting products, saving energy, replacing equipment and reducing costs. | The Company will continue to pursue a multi-touch marketing strategy. |
| Continue to review methods for simplifying the applications, particularly for duct sealing and insulation applications which have been prone to greater errors. Implement additional training for HVAC and weatherization contractors to help mitigate this issue by covering the data points required for a complete application and how to best support a customer who chooses to fill out the application, and explore making duct sealing and insulation an online application to reduce errors. | The program continues to simplify the application process. Online applications are available for duct sealing and insulation applications. The program will include online application training in future enrollment of trade allies. |
| Continue regular trainings with trade allies (e.g., distributors, retailers, sales associates, contractors), updating them on tariff changes and, where appropriate, supporting them with sales and marketing | Program will continue to send quarterly trade ally newsletters, provide roundtable events bi-annually, and identify areas for additional training where feasible and cost-effective. |

| Home Energy Savings Evaluation Recommendations | Rocky Mountain Power Action Plan |
|---|---|
| training. Analyze success of efforts to register non-registered contractors who worked with rebate participants within 90 days to determine whether the additional outreach mitigated the number of rejected applications due to non-qualified contractors. | |

## Table 3 – Home Energy Reports Evaluation Recommendations

| Home Energy Reports Evaluation Recommendations | Rocky Mountain Power Action Plan |
|---|---|
| Future refill waves should target the highest usage customers not already in the program. Prior to adding future refill waves, the program should verify that the allocation of households across the treatment and control groups is consistent with a RCT (randomized control trial). | The Company has already refilled the customer base of the next highest usage customers not already in the program. First report went out August 2016. |

## Table 4 – New Homes Evaluation Recommendations

| New Homes Evaluation Recommendations | Rocky Mountain Power Action Plan |
|---|---|
| Due to Utah's new residential energy code (went into effect July 1, 2014), the baseline for typical, non-Energy Star new homes will become more efficient. The Company should evaluate the impact of this code change on the baseline of the new construction program. | New construction measures were redesigned in 2016 and the current code is taken into consideration for baseline calculations. |
| Due to homebuyers not inquiring about energy efficient homes, the Company should consider a campaign to increase awareness of the benefits of energy efficient homes. This may include engaging real estate professionals via realtor and appraiser trainings and incorporating energy efficiency designations and ratings into multiple listing services. | The new program administrator will explore new marketing tactics. |
| Many inactive builders believed that participation in the program was not worth the effort. Explore methods of encouraging inactive and nonparticipant builders to attend workshops. | The new program administrator will explore new marketing and outreach tactics. |
| Because of the limited scope of a traditional NTG analysis, the program may not be fully quantifying the long term impact in which the program has influenced building practices in the state of Utah. Conduct a market effects analysis for added savings. | The Company will consider this option. However, the Company will scrutinize the appropriateness and cost of the analysis considering the New Homes program was condensed into the Home Energy Savings program. |

## Table 5 – Strategic Energy Management Evaluation Recommendations

| Strategic Energy Management Evaluation Recommendations | Rocky Mountain Power Action Plan |
|---|---|
| Due to the challenges and learning curves of new program implementation, RMP may wish to review other Strategic Energy Management ("SEM") programs or offerings. | RMP is actively participating in industry workgroups facilitated by Consortium for Energy Efficiency and Northwest Energy Efficiency Alliance to stay abreast of industry best practices on strategic energy management. RMP also meets regularly with SEM implementation firms from around the country to learn of new practices and evaluate current program administration. |
| Finding the "right" customer to engage with SEM can be challenging. Continue further refinement of the customer vetting process and seek input from the Energy Management Provider ("EMP") and participants. | RMP has continued to refine its customer vetting process over the last 24 months to target customers who have high energy intensity, as well as organizational structures enabling them to succeed in a strategic energy management engagement. RMP has also development tools to aid in the identification of prime customers, such as a one page scoping document designed to measure customer readiness and energy savings potential. |
| To reduce future customer confusion and increase customer buy-in, engage potential senior-level executives during recruitment and describe how it fits with the customer's current involvement with other RMP offerings. Set clear expectations for staff involvement and time commitments. | RMP began this process prior to the publication of this recommendation. All SEM candidates are engaged in kickoff meetings where executives must be present, and must sign a letter of intent fully demonstrating their knowledge of the staff and time commitments the engagement will necessitate. Through this process executive buy in is garnered upfront and employees are empowered to make the necessary changes within their organizations to facilitate energy savings. |
| Provide clear protocols and project priorities to EMPs, specifically all communication and data request protocols. Provide EMPs with clear priorities for each project. | RMP began this process prior to the publication of this recommendation. Protocols for obtaining customer data have been long established through dedicated email addresses and RMP staff members. Project priorities, milestones, and reporting expectations are established at the outset of each engagement. |

# Appendix 7

# Utah DSM Outreach and Communications Year 7 Report

January – December 2016

## TABLE OF CONTENTS

Year 7 Report – January through December 2016…….. pp. 3-19

## Exhibits

| | |
|---|---|
| Exhibit A | Be *watt*smart, Begin At Home Utah Program 2016 Report |
| Exhibit B | Creative and News Stories |

## Preface

On June 11, 2009, the Commission approved the Company's proposal to implement an outreach and communications campaign. The objective of the program is to promote energy efficiency and conservation through education and increase customer awareness of and participation in the Company's DSM programs. In approving the campaign, the Commission directed the Company to monitor program effectiveness on an annual basis and to report on such assessments to the Commission. This report presents an assessment of year 7 (calendar year 2016) of the DSM outreach and communications campaign, including an evaluation of the program in meeting its objectives and a summary of year 7 program activities.

## Customer Survey Results

The Company has conducted customer research each year from 2010 to 2016 to determine the effectiveness of the outreach and communications campaign in increasing the awareness of and self-reported participation in DSM programs. The findings of this survey work, along with program recommendations for 2017, are included below. Results from the MSI National Benchmarking Database Study support increasing the focus of the Company's outreach and communications budget to small-and medium-sized business customers. The change is also intended to align with the Company's IRP goals.

### Research Methodology

A research study was conducted during the general timeframe of the Year 7 (2016) Campaign on customers' awareness and perception of the Company's energy efficiency and demand response programs. A third-party, independent market research firm conducted the study with customers via telephone interviews and online surveys.

- **MSI National Benchmarking Database Study –** 300 telephone interviews (for each residential and business) were completed June 2016. This study identifies the main ways residential and small- to medium-sized business customers' perceptions and evaluations of Rocky Mountain Power's performance impacts customer satisfaction. These responses are analyzed to understand perceptions of special topics related to Web interactions, billing, communication, and energy efficiency.

### Key Research Findings – Residential customers

Advertising and communications recall

Approximately three-quarters of residential customers say Rocky Mountain Power does a "good job" of having programs that help customers use energy efficiently and providing information on how to control their electricity costs. Positive ratings are similar to 2015 findings. The Company remains a top quartile performer among 90 utilities in the 2016 MSI National benchmarking for providing information on how to control your electricity costs**.**

More than half of Rocky Mountain Power customers are somewhat or very familiar with the *watt*smart programs, and familiarity has increased from the 2015 level.

Actions taken to conserve electricity

Six-in-ten Rocky Mountain Power residential customers (59%) say they have taken action to reduce energy in the past year. “Installing energy efficient lights” and “turning off lights more frequently” remained the top responses among those who reported taking action; thermostat settings (both increasing and decreasing) saw a slight increase in response in 2016.

The percent of customers who reported taking actions to conserve energy has remained fairly constant over the past few years. The reason cited most often for reducing home energy use is both to save money and help protect the environment (55-62%). The second most cited reason is to just save money (33-37%). The most often mentioned action taken to save energy is installing energy-efficient lighting (34-48%).

**Key Research Findings – Commercial customers**

Approximately seven-in-ten (72%) Rocky Mountain Power commercial customers are aware of utility programs to help them use energy efficiently. About half (49%) give Rocky Mountain Power very high marks, giving the Company a score between 8-10 on the 10-point satisfaction scale.

Nearly seven-in-ten (69%) of Rocky Mountain Power customers believe their utility is doing a good job of providing information on how to control electricity costs.

More than six-in-ten (64%) customers say their utility helps their company by providing incentives to save money on their energy bills.

Approximately eight-in-ten (81%) Rocky Mountain Power customers feel their utility company does a “good job” of providing information about products and services that are of value to them and their organizations. This represents a significant improvement among Rocky Mountain Power customers compared to last year (81% versus 74%).

Nearly half (47%) of Rocky Mountain Power customers are familiar with the *watt*smart programs.

The majority of customers (54%) have taken actions to save energy within the past year to reduce their usage. Energy saving actions most commonly include installing efficient lighting (68%) or turning off lights more frequently.

**Conclusions**

The awareness level for being *watt*smart has remained fairly consistent and customers feel their utility is doing a good job of providing information. Customers are also taking action and as in years past, are more likely to conserve energy by using energy-saving lighting than any other method. Customers are driven to conserve energy both to save money and help protect the

environment. Moving forward, the Company plans to make a stronger connection between saving energy and money and helping the environment.

## Campaign Activities

### Communications, Outreach and Education

*watt*smart is an overarching energy efficiency campaign with the overall goal to engage customers in reducing their energy usage through behavioral changes, and pointing them to the programs and information to help them do it. "Rocky Mountain Power wants to help you save energy and money" is the key message, and the Company uses earned media, customer communications, education and outreach, advertising, and program specific marketing to communicate the value of energy efficiency, provide information regarding low-cost, no-cost energy efficiency measures and to educate customers on the availability of programs, services and incentives.

In 2016, the Rocky Mountain Power employed a stronger focus on tying the *watt*smart concept to messages about others who are being *watt*smart and the benefits they received with a heavier focus on business customers while maintaining broad reach through traditional paid media and social media, community outreach, earned media outreach and digital (online) tools.

Earned media is managed by the Company's external communications department in cooperation with the customer and community managers located in Utah. "Earned media" generally refers to favorable television, radio, newspaper or internet news coverage gained through press releases, media events, opinion pieces, story pitches or other communication with news editors and reporters. A list of the new creative and new stories is included in Exhibit B.

## Customer Communications

Beyond paid media, the Company also used statement communications, email, website, social media, and news coverage. Tapping into all resources with consistent messaging has been the Company's approach and will continue to be refined. As part of the Company's regular communications to its customers, support materials and newsletters across all customer classes, and the Company's website, promote energy efficiency initiatives and case studies on a regular basis. In May and October 2016, the Company included the *wattsup* newsletter for all residential customers. This bill insert provided information about *watt*smart energy efficiency programs and incentives prior to seasonal changes. Inserts describing specific energy efficiency programs and incentives and outer envelopes featuring energy efficiency messages and programs have also been used on a consistent basis. The Company uses the following tactics consistently to communicate to customers.

Website:

- rockymountainpower.net/wattsmart (wattsmart.com)
- URLs link directly to the energy efficiency landing page. Once there, customers can self-select their state for specific programs and incentives.
- Home page messages promote seasonal *watt*smart /energy efficiency each month.

Social Media:

- Twitter feed promotes energy efficiency tips and *watt*smart t programs multiple times per week.
- Facebook posts *watt*smart t messages three to five times per week.

Newsletters

- *Voices* residential newsletter is sent via bill insert (and email to paperless billing customers) six times a year; each issue includes energy efficiency tips and incentive program information.
- *wattsup* insert is a seasonal change insert dedicated to energy efficiency, distributed to customers in May and October.
- *Energy Connections* and *Energy Insights* newsletters target businesses and community leaders and contains articles on commercial and industrial energy efficiency as well as represented case studies on a monthly and quarterly basis.

## ***watt*smart Campaign**

Paid Media

The overall paid media plan objective is to effectively reach its customers through a multi-media mix that extends both reach and frequency. The audiences for communications were prioritized as follows:

- *PRIMARY*: Small and large businesses *SECONDARY*: Residential households in the Company's service area

Table 1 outlines the value provided by each communication channel.

**Table 1 – Communication Channels**

| Communication Channel | Value to Communication Portfolio | Placement |
|---|---|---|
| Television Media demo: Adults 25-54,<br>Primary: Small/Mid-sized businesses.<br>Secondary: residential (English and Spanish) | Due to the strength and reach of the Salt Lake City designated market area, television is the most effective media channel. | April – September 2016: 13,105,000 impressions. |
| Radio | Given the cost relative to television, radio builds on communications delivered via television while providing for increased frequency of messages. | May – September 2015: 4,732,000 impressions. |

| Communication Channel | Value to Communication Portfolio | Placement |
|---|---|---|
| Newspaper | Supports broadcast messages and guarantees coverage of the Utah service territory. | April – September 2016: 3,849,590 impressions. |
| Facebook | Awareness for early adopters regarding energy efficiency tips and provides a centralized location to share information on how to be *watt*smart; feature incentive programs and other seasonal information.<br><br>Information posted at least three times a week. | In 2016, Facebook advertising delivered 1.4M impressions, 22,009 clicks, and a CTR (click through rate) of 1.52% - which is 15.2 times above the National average of 0.10% |
| Twitter (@RMP_Utah) | Awareness for early adopters regarding energy efficiency tips.<br><br>Tweets posted on a weekly basis. | As of December 2016 there were 4,921 Twitter followers in Utah. |
| Digital Display | Supports the broadcast and print media while also increasing awareness for early adopters who are online and are likely to be receptive to energy saving messaging.<br><br>The campaign ran through Ad Network on Deseret News, KSL, YuMe, LinkedIn, and Hulu (streaming television). | Display advertising delivered 8.1M impressions, 41,665 clicks, and a CTR of .51% - which is 5.1 times above the national average of 0.1% The search campaign delivered 51,021 impressions, 752 clicks, and a CTR of 5.56% - which is 5.56 times above the national average of 1%. Average position was 1.7 (goal is to be top 3). The two year comparison shows 2016 with a lower CTR than 2015, due to campaign KPI's shifting to more engagement and website traffic measurement. |
| Magazine | Content targeting business and metro area customers. | 2,579,886 impressions |
| Out of Home | Supports the broadcast and print media while increasing awareness. | 33,957,94- impressions |

| Communication Channel | Value to Communication Portfolio | Placement |
|---|---|---|
| Event Sponsorships | Reaches consumers at popular events and ties the *watt*smart messaging to positive activities. | 35,972,292 impressions |

The total number of 2016 impressions for the *watt*smart campaign was 103,769,409.

Web links to the current portfolio of advertisements are included in Exhibit B of this report.

Public Outreach

The Company leveraged the messages initially developed in the communications campaign through various public outreach initiatives in 2016. Table 2 summarizes the Company's efforts to educate the public on the importance of implementing energy efficiency practices.

**Table 2 – Outreach Initiatives**

| Initiative | Description |
|---|---|
| Salt Lake Real | Ads occurred:<br>• Preseason – February<br>• Regular season - March – October<br><br>Included in sponsorship – about 19,000 fans per game<br>• Television (for all local Team-controlled broadcasts)<br>  o In-game television broadcast :30 spot<br>  o In-game television open and close billboard<br>• Radio<br>  o :30 pre-game spot<br>  o :30 in-game spot<br>• Online - rotating banner ad on RealSaltLake.com<br>• Signage<br>  o One minute LED Ribbon Board per home game; Runs in 15 second (:15) increments Runs pre-game, in game and post-game |
| University of Utah | The Company continued to use the "save your energy for the game" video to play at all home football and men's basketball games when the team is announced.<br><br>The sponsorship also includes LED signage at all Home Football, men's basketball and women's gymnastics meets. Football (7 home games – about 45,000 fans per game):<br>• Open ceremony video board feature for football<br>• Messaging on the south end zone LED board and the Pro-Ad LED board |

| Initiative | Description |
|---|---|
| | One pre-game and one post game radio spot for all football games. Basketball (17 home games – about 10,000+ fans per game):<br>• Opening ceremony video board feature for Basketball<br>• Messaging on baseline LED boards for men's basketball games<br>One pre-game and one post game radio spot for all men's basketball games. Gymnastics (6 home meets – about 14,000 fans per meet). |
| KUED | Weekly sponsorship of children's programming. These included quick tips from Slim the Lineman on how to be *watt*smart. |
| Ragnar Relay | The Company's *watt*smart program sponsored a team in the Ragnar Relay event. Twelve Company employees completed the 192 mile Ragnar Relay from Logan to Park City. The team spread the word about energy efficiency with messages on their shirts, vans and *watt*smart giveaways including sunscreen and buffs. This allowed them to engage other runners during the 192 mile event. |
| Education | The Company offers a "Be *watt*smart, Begin at Home" school education program through the National Energy Foundation ("NEF"). The program is designed to develop a culture of energy efficiency among teachers, students and families. The centerpiece is a series of one hour presentations with hands-on, large group activities for 5th grade students. Teachers are provided instructional materials for use in their classrooms, and students are sent home with a Home Energy Worksheet to explore energy use in their homes and encourage efficient behaviors. A summary of NEF's 2016 activities and accomplishments is provided in Exhibit A.<br><br>Presentations are based on state education guidelines. In fall 2016, nearly 12,000 Utah students participated in the curriculum, which includes 131 schools taught by 444 teachers. Students received "Home Energy Worksheets" and were asked to audit their homes to receive LED night lights as incentives. Teachers were eligible to receive $50 mini-grants for their classrooms depending on how many students completed their worksheet. |
| Multicultural Outreach | The Company provided outreach support at the Cinco de Mayo festival in West Valley City on May 7, 2016. The Company had a booth providing the *watt*smart message to nearly 20,000 attendees. Company representatives spoke to attendees about being *watt*smart. The sponsorship also |

| Initiative | Description |
|---|---|
| | included 120 commercial on Telemundo and 100 promotional announcements. |

*watt*smart Business advocacy

The *watt*smart Business advocacy program is designed to create more awareness of the benefits of being a *watt*smart Business. The advocacy program is intended to generate awareness, participation, and lasting partnerships in the *watt*smart t Business program.

The Company partnered with the Salt Lake Chamber to provide energy efficiency and *watt*smart Business content for twice-monthly Utah Business Report radio segments presented weekdays on KSL. Content was created for social media posts about *watt*smart Business and relevant posts made by the Chamber were shared to Rocky Mountain Power followers.

Additional business advocacy outreach was conducted through the Company's involvement with the Utah Manufacturers' Association, at the Governor's Economic Development Summit, the Governor's Energy Development Summit and the Utah Sustainability event.

**Program Specific Marketing**

All energy efficiency program marketing and communications are under the *watt*smart umbrella to insure 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 *watt*smart 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 *watt*smart Starter Kits to targeted customers throughout the year to achieve savings goals.

*Home Energy Savings* program staff attended the Salt Lake Tribune's Home and Garden Festival March 11-13, 2016, at the South Towne Expo Center in Sandy, Utah. To help drive festival attendance, a news release was distributed to local media and admission coupons were inserted in customer bills leading up to the show. Total attendance at the spring show was approximately 41,900. More than 500 customers used the coupon or the online coupon code. Customers who visited the booth were provided a flyer to communicate the different upgrades that they can consider to make their homes *watt*smart. Festival attendees were interested in LED lighting, HVAC systems and insulation. Some customers inquired with program staff about *Home Energy Reports* and the Company's Subscriber Solar program.

Program staff also attended the Deseret News Home Show October 7-9, 2016, to help educate customers on energy efficiency and *watt*smart program incentives. Total attendance at the fall

home show was 26,246, an increase from 20154. Program representatives estimated 222 admission coupon redemptions.

In fall 2016, the Company promoted the low-cost *watt*smart Starter Kits to Utah customers with a press release, along with direct mail and email to targeted customers.

In 2016, program communications delivered approximately 537,494 impressions. A breakdown of estimated impressions by channel is shown in Table 3 below. These estimates do not reflect all of the customer, retailer and trade ally touchpoints.

**Table 3 – *Home Energy Savings* Impressions by Channel**

| Communications Channel | 2016 Estimated Impressions |
|---|---|
| Bill inserts | 514,000 |
| Direct mail | 16,248 |
| Email | 7,246 |

In 2016, the *wattsmart New Homes* program was integrated into the *Home Energy Savings* program. Some changes to the website and collateral updates were made. The program continues to encourage home builders to incorporate energy-efficient measures in the homes they build.

Home Energy Reports

*Home Energy Reports* were mailed to approximately 275,000 customers quarterly in 2016, with two additional seasonal reports sent in May and December. Many customers also receive email reports with customized energy-saving tips. In addition, customers can access the program Web Portal with additional tools, insights and ways to save energy. Approximately 200 customers log in to the Web Portal each month.

In January 2016, reports included a promotion on incentives for home insulation upgrades as a way to increase comfort and savings.

Cool Keeper

*Cool Keeper* outreach was primarily completed to manage program attrition. Letters are sent to new occupants of homes with an existing Cool Keeper device. Rocky Mountain Power call center agents also provide brief information about the program to Utah customers when they call in for service requests and other inquiries.

*watt*smart Business

During 2016, *watt*smart Business communications encouraged customers to inquire about incentives for lighting, HVAC, compressed air, irrigation and other energy efficiency measures.

The program was marketed with radio, newspaper, magazine, eblasts, digital display and digital paid search advertising throughout the reporting period. Radio and print ads featured case study examples from program participants which were repurposed in social media. Quarterly eblasts directed viewers to the Company's website, wattsmart.com. This was in addition to direct customer contact by Company project managers and regional business managers, trade ally partners, articles in Company newsletters, Chamber newsletter outreach and content on the Company website, on Facebook and Twitter.

Three businesses were award the "*watt*smart Business Partner of the Year" at regional events. This award recognizes businesses that excel in achieving load reduction through energy efficiency. News releases and photos were released for each award presented.

The Company continued to use a *watt*smart "open sign" for businesses. Customers were photographed with the open sign and the photos were used newsletter articles, and social media posts.

Targeted direct mail was sent to approximately 1,800 Utah irrigation customers in the fall to encourage energy-saving retrofits. Emails focused on vertical markets were sent to office/retail, grocery/convenience stores and restaurant/lodging businesses. A separate webinar was held for restaurants and food service customers to educate and inform them about incentives and savings available to their industry.

During 2016, the program garnered 9,283,050 impressions. Breakdown of impressions by media type is shown in Table 4 below.

**Table 4 – *watt*smart Business Impressions by Media Type**

| Communications Channel | Impressions |
|---|---|
| Radio | 4,251,000 |
| Newspaper | 3,596,355 |
| Magazine | 518,700 |
| Digital display | 824,518 |
| Search | 9,160 |
| Eblast | 81,517 |
| Irrigation direct mail | 1,800 |
| **Total Impressions** | **9,283,050** |

**Outreach Campaign Budget Results**

The 2016 budget for outreach activities was $1,430,465, as presented in Table 5 below. Expense activities are summarized by the channel of communication.

**Table 5 – 2016 Budget, Actuals, and Variance**

| | Budget | Actuals | Variance |
|---|---|---|---|
| TV | $ 401,952 | $ 484,357 | $ 82,405 |
| Radio | $ 73,344 | $ 44,283 | $ (29,061) |
| Print | $ 146,176 | $ 111,776 | $ (34,400) |
| Outdoor/Transit | $ 49,910 | $ 34,400 | $ (15,510) |
| Digital/Online | $ 153,778 | $ 155,285 | $ 1,507 |
| Creative/Production/Planning | $ 150,000 | $ 180,508 | $ 30,508 |
| Media pitches/ Event Support PR/Public Affairs | $ 60,000 | $ 1,145 | $ (58,855) |
| *watt*smart Business Advocacy Program | $ 75,000 | $ 40,700 | $ 34,300 |
| Sponsorships (KUED, Real, and Ragnar) | $ 76,750 | $ 59,976 | $ (16,774) |
| University of Utah sports sponsorship | $ 55,555 | $ 55,555 | $ 0 |
| Be *watt*smart, Begin at Home School Education Program (NEF) | $ 141,000 | $ 156,226 | $ (15,226) |
| U of U Student Energy Ambassador | $ 7,000 | $ 0 | $ 7,000 |
| Multicultural Outreach | $ 15,000 | $ 15,001 | $ (1) |
| Research | $ 25,000 | $ 0 | $ (25,000) |
| **Total** | **$ 1430,465** | **$ 1,339,212** | **$ (91,253)** |

# Exhibit A

# National Energy Foundation

2OSIXTEEN

# NEF

## BE WATTSMART, BEGIN AT HOME

UTAH

PROGRAM REPORT

Prepared for:

ROCKY MOUNTAIN POWER

wattsmart.com

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Rocky Mountain Power

201 South Main, Suite 2300

Salt Lake City, UT 84111

Prepared by:

Marilyn Clark

Program Director

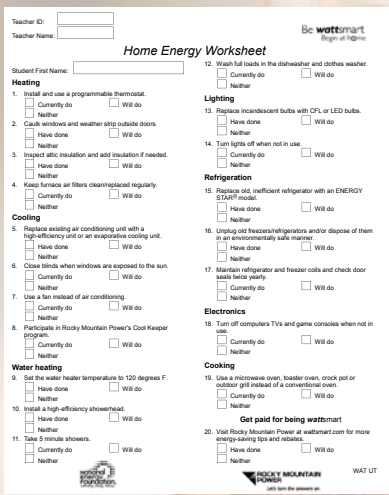
National Energy Foundation

4516 South 700 East, Suite 100

Salt Lake City, UT 84107

March 9, 2017

# Savings



Teacher ID:

Teacher Name:

Be wattsmart Begin at home

*Home Energy Worksheet*

Student First Name:

**Heating**

1. Install and use a programmable thermostat.
   - ☐ Currently do ☐ Will do
   - ☐ Neither
2. Caulk windows and weather strip outside doors.
   - ☐ Have done ☐ Will do
   - ☐ Neither
3. Inspect attic insulation and add insulation if needed.
   - ☐ Have done ☐ Will do
   - ☐ Neither
4. Keep furnace air filters clean/replaced regularly.
   - ☐ Currently do ☐ Will do
   - ☐ Neither

**Cooling**

5. Replace existing air conditioning unit with a high-efficiency unit or an evaporative cooling unit.
   - ☐ Have done ☐ Will do
   - ☐ Neither
6. Close blinds when windows are exposed to the sun.
   - ☐ Currently do ☐ Will do
   - ☐ Neither
7. Use a fan instead of air conditioning.
   - ☐ Currently do ☐ Will do
   - ☐ Neither
8. Participate in Rocky Mountain Power's Cool Keeper program.
   - ☐ Currently do ☐ Will do
   - ☐ Neither

**Water heating**

9. Set the water heater temperature to 120 degrees F.
   - ☐ Have done ☐ Will do
   - ☐ Neither
10. Install a high-efficiency showerhead.
    - ☐ Have done ☐ Will do
    - ☐ Neither
11. Take 5 minute showers.
    - ☐ Currently do ☐ Will do
    - ☐ Neither
12. Wash full loads in the dishwasher and clothes washer.
    - ☐ Currently do ☐ Will do
    - ☐ Neither

**Lighting**

13. Replace incandescent bulbs with CFL or LED bulbs.
    - ☐ Have done ☐ Will do
    - ☐ Neither
14. Turn lights off when not in use.
    - ☐ Currently do ☐ Will do
    - ☐ Neither

**Refrigeration**

15. Replace old, inefficient refrigerator with an ENERGY STAR® model.
    - ☐ Have done ☐ Will do
    - ☐ Neither
16. Unplug old freezers/refrigerators and/or dispose of them in an environmentally safe manner.
    - ☐ Have done ☐ Will do
    - ☐ Neither
17. Maintain refrigerator and freezer coils and check door seals twice yearly.
    - ☐ Currently do ☐ Will do
    - ☐ Neither

**Electronics**

18. Turn off computers TVs and game consoles when not in use.
    - ☐ Currently do ☐ Will do
    - ☐ Neither

**Cooking**

19. Use a microwave oven, toaster oven, crock pot or outdoor grill instead of a conventional oven.
    - ☐ Currently do ☐ Will do
    - ☐ Neither

**Get paid for being wattsmart**

20. Visit Rocky Mountain Power at wattsmart.com for more energy-saving tips and rebates.
    - ☐ Have done ☐ Will do
    - ☐ Neither

WAT UT

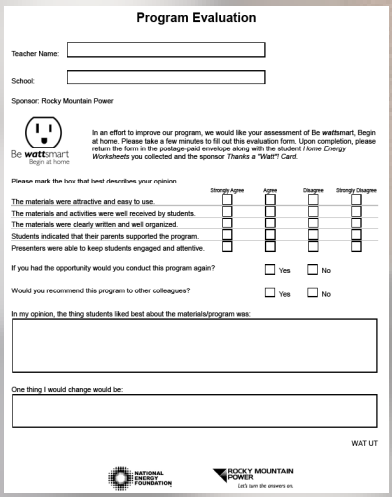
National Energy Foundation

Rocky Mountain Power — Let's turn the answers on.

# Home Energy Worksheets

– Returned: 8,385 –

– 74.24% –



**Program Evaluation**

Teacher Name:

School:

Sponsor: Rocky Mountain Power

Be wattsmart Begin at home

In an effort to improve our program, we would like your assessment of Be wattsmart, Begin at home. Please take a few minutes to fill out this evaluation form. Upon completion, please return the form in the postage-paid envelope along with the student *Home Energy Worksheets* you collected and the sponsor *Thanks a "Watt"! Card*.

Please mark the box that best describes your opinion.

| | Strongly Agree | Agree | Disagree | Strongly Disagree |
|---|---|---|---|---|
| The materials were attractive and easy to use. | ☐ | ☐ | ☐ | ☐ |
| The materials and activities were well received by students. | ☐ | ☐ | ☐ | ☐ |
| The materials were clearly written and well organized. | ☐ | ☐ | ☐ | ☐ |
| Students indicated that their parents supported the program. | ☐ | ☐ | ☐ | ☐ |
| Presenters were able to keep students engaged and attentive. | ☐ | ☐ | ☐ | ☐ |

If you had the opportunity would you conduct this program again? ☐ Yes ☐ No

Would you recommend this program to other colleagues? ☐ Yes ☐ No

In my opinion, the thing students liked best about the materials/program was:

One thing I would change would be:

WAT UT

National Energy Foundation

Rocky Mountain Power — Let's turn the answers on.

# Teacher Packets

– Returned: 370 –

– 84.47% –

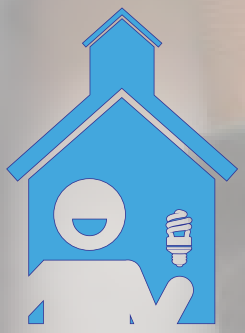
# Participants

## Students

– 11,245 –

## Teachers

– 444 –



## Schools

– 122 –

# Table of Contents

**Program Overview** ..... 1

Program Administration 1
Program Summary 1
Building Collaborations 1
Promotional Materials (Implementation) 1
Program Registration 1
Be wattsmart, Begin at home Presentation 2
Student and Teacher Materials 2
Program Accomplishments – Fall 2016 2
Summary and Attachments 3

**ATTACHMENTS** ..... 5

Fall 2016 Participating Schools 5
Program Promotions 7
Program Documents 9
*Teacher Evaluation* 51
*Teacher Evaluation* Compilation 52
*Home Energy Worksheet* (English) 64
*Home Energy Worksheet* (Spanish) 65
Wise Energy Behaviors in Rocky Mountain Power Utah Homes 66
*Home Energy Worksheet* Summary – Rocky Mountain Power 67
Sampling of *Thanks a "WATT" Cards* 68

# Program Overview

## Program Administration

The National Energy Foundation (NEF) is pleased to report on activities of the Be *watt*smart, Begin at home energy efficiency education program conducted during the 2016 – 2017 school year. Our mission remains constant, to cultivate and promote an energy literate society. The objective is to provide Utah teachers and students with a quality educational experience and materials to support them in teaching and learning this valuable message. NEF acknowledges that through the support of Rocky Mountain Power, the Foundation has been able to move the mission forward. Thank you for your commitment to this very important task.

Be *watt*smart, Begin at home is administered by the National Energy Foundation, a non-profit organization (established in 1976) dedicated to the development, dissemination, and implementation of supplementary educational materials, programs and services relating primarily to energy, water, natural resources, science, math, technology, conservation, energy efficiency and the environment.

Anne Lowe, Vice President - Operations, oversees program organization. Gary Swan, Vice President - Development, oversees contract accounting. Marilyn Clark, Program Director, is responsible for the implementation of the scope of work and the program reporting. Patti Clark, Program Coordinator, oversees school enrollment and communication with teachers. Diane Baum, Program Scheduler, is responsible for scheduling presentations and teacher communication. A team of trained and seasoned presenters brought the interactive, hands-on program to Utah schools.

## Program Summary

The fall 2016 Be *watt*smart, Begin at home program provided quality energy education to schools in the Rocky Mountain Power Service territory. The program consisted of a 60-minute education presentation given to groups of fifth grade students and their teachers. Two professional presenters from the National Energy Foundation were involved in the implementation of each interactive program. Important energy concepts learned through these presentations were then communicated to Rocky Mountain Power households through the *Student Guide* and implementation of the *Home Energy Worksheet.*

## Building Collaborations

The Utah State Office of Education's Core Curriculum for fifth grade correlate well to the content of Be *watt*smart, Begin at home. Teachers appreciated the collaborative efforts to align program components to their core curriculum. Curriculum correlations were provided to teacher participants in their *Teacher Materials Folder* and also on the program registration website wattsmart.com/begin.

## Promotional Materials (Implementation)

During the month of April 2016 the 18 schools wait listed from the 2015 program were contacted by phone call and informed registration for the 2016 program was available. Twelve of these schools participated in the 2016 program. 122 of the 2015 participating schools were emailed the invitation to register for 2016. Eight schools were not invited back due to very low HEW return rates. In August, a reminder to register email was sent to all priority unregistered 2015 participating schools. A promotional flier was sent to all qualified/unregistered teachers within the Rocky Mountain service territory.

## Program Registration

Be *watt*smart, Begin at home was filled in September with 122 schools plus three additional schools with more than 160 students requiring a second presentation and counting as two schools. The 2016 program has 3 schools on a wait list for 2017.

Registration for the program was online at wattsmart.com/begin. Each registered school was checked against the qualified school list before email and phone communication was made with teachers to determine optimum presentation dates and other pertinent information.

Registration for the program was followed by a series of email communications with teachers, sent automatically by the program registration website. The website calculated *Home Energy Worksheet* returns as well as earned gift card levels and communicated this information to the participant. Later communications were customized through programming to be sent only to teachers needing a reminder to return their program documents. Automatic email also contained live links to vital program documents such as the *Spanish Home Energy Worksheet* and *Spanish Student Booklet.*

## Be wattsmart, Begin at home Presentation

Be ***watt***smart, Begin at home presentations were given during the period of September 19th through November 11th, 2016. The presentation featured a custom Keynote slideshow that brought energy concepts to the forefront of Utah education. The presentation focused on important concepts, such as natural resources, electrical generation, the energy mix used by Rocky Mountain Power to generate electricity and tips for energy efficiency in the home.

The presentation provided interactive activities that involved and engaged the audience. Students participated in making a human electrical circuit, during which they learned key core curriculum concepts such as insulators and conductors of electricity and electrical generation. Student volunteers used props to demonstrate the process of electrical generation for their classmates. All students reviewed material learned with an "Energy Lingo" review activity at designated points throughout the presentation. To help students remember energy efficiency tips, participants watched Slim the Lineman energy efficiency video vignettes. At the end of each short video, students completed a rhyme about Slim's wise energy choice.

The last portion of the presentation communicated the importance of the program take home pieces. These documents enabled households to participate in energy education along with students.

## Student and Teacher Materials

A *Parent Letter* was provided to explain the importance of Be ***watt***smart, Begin at home. In addition, students took home a *Student Guide* and *Home Energy Worksheet* to share with their families. Students who returned their worksheet received a special reward, an Energy Star© rated nightlight featuring the Rocky Mountain Power Logo.

Educators were also given helpful energy educational materials. Each teacher participant was provided with a custom Be ***watt***smart, Begin at home folder. It contained a custom *Teacher Guide* with additional information and activities to supplement and continue energy education in the classroom. Also in the folder were the NEF instructional posters, *Renewable Energy* and *Bright Ways to Save Energy*.

A program *Implementation Steps Flier* assisted teachers in carrying out the program. It also gave simple steps for successfully returning the *Home Energy Worksheets,* the *Program Evaluation*, and the sponsor *Thanks a "Watt" Card* in the postage paid envelope provided in the *Teacher Materials Folder*. A *Rewarding Results Flier* gave information concerning the Visa® gift card that teacher participants could receive for returning their student surveys. Educators received a $50 gift card for an 80% return, or a $25 gift card for a 50 – 79% return by the December 2, 2016 deadline.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## Program Accomplishments – Fall 2016

- 131 Be ***watt***smart, Begin at home presentations completed at 122 Schools
- 3 schools waitlisted
- 11,689 students and families reached
- 444 Utah teachers reached
- 74.24% *Home Energy Worksheet* survey return
- $50 Visa gift cards delivered to 333 Utah teachers
- $25 Visa gift cards delivered to 34 Utah teachers

## Summary and Attachments

The National Energy Foundation is pleased to participate with Rocky Mountain Power in bringing this informative program to Utah teachers, students and families. The partnership between the organizations has been successful in developing and continually enhancing program deliverables. Be ***watt***smart, Begin at home is now an established part of the Utah educational community culture. It is also an important resource for bringing energy literacy to the forefront of fifth grade student education. Thank you for your continued commitment to Utah Schools.

- Fall 2016 Participating Schools
- Program Promotions
- Program Documents
  - Keynote Presentation
  - *Teacher Implementation Steps Flier*
  - *Rewarding Results Flier*
  - *Student Guide*
  - *Teacher Guide*
  - Lingo Card
  - Utah Core Curriculum Correlations
  - *Parent Letter*
- *Teacher Evaluation*
- *Teacher Evaluation* Compilation
- *Home Energy Worksheet* (English)
- *Home Energy Worksheet* (Spanish)
- Wise Energy Behaviors in Rocky Mountain Power Utah Homes
- *Home Energy Worksheet* Summary – Rocky Mountain Power
- Sampling of *Thanks a "Watt" Cards*

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# ATTACHMENTS

## Fall 2016 Participating Schools

| School Name | School Address | School City | State |
|---|---|---|---|
| Altara Elementary | 800 East 11000 South | Sandy | UT |
| Arcadia Elementary | 3461 W 4850 S | Taylorsville | UT |
| Aspen Elementary | 945 West 2000 North | Orem | UT |
| Backman Elementary | 601 North 1500 West | Salt Lake City | UT |
| Blackridge Elementary | 14131 S. Rosecrest Road | Herriman | UT |
| Burch Creek Elementary | 4300 Madison Ave | South Ogden | UT |
| Butler Elementary | 7000 S. 2700 E. | Cottonwood Heights | UT |
| Butterfield Canyon Elementary | 6860 Mary Leizan Lane | Herriman | UT |
| Cedar Ridge Elementary | 4501 Cedar Hills Drive | Cedar Hills | UT |
| Centerville Elementary | 350 North 100 East | Centerville | UT |
| Century Elementary | 5820 North 4800 West | Bear River City | UT |
| Channing Hall | 13515 S. 150 E. | Draper | UT |
| Cook Elementary | 1175 W 1350 S | Syracuse | UT |
| Copper Canyon | 8917 Copper Wood Drive | West Jordan | UT |
| Copper Canyon | 1600 N. Broadway St. | Tooele | UT |
| Copper Hills Elementary | 7635 West 3715 South | Magna | UT |
| Cottonwood Elementary | 5205 South Holladay Boulevard | Holladay | UT |
| Crescent Elementary | 11100 South 230 East | Sandy | UT |
| Crestview Elementary | 2100 E Lincoln Lane | Holladay | UT |
| Crestview | 185 W. Golden Ave | Layton | UT |
| D.T. Orchard Elementary | 6744 West 3800 South | Salt Lake City | UT |
| East Elementary | 255 E. College Ave | Cedar City | UT |
| Eastlake Elementary | 4389 W Isla Daybreak Rd | South Jordan | UT |
| Eastwood Elementary | 3305 South Wasatch Blvd. | Salt Lake City | UT |
| Elk Meadows | 3448 9800 S | South Jordan | UT |
| Elk Run Elementary | 3550 S Helen Dr | Magna | UT |
| Enoch Elementary | 4701 Wagon Wheel Dr. | Enoch | UT |
| Falcon Ridge | 6111 w 7000 s | West Jordan | UT |
| Fielding Elementary | 90 West Main Street | Fielding | UT |
| Foothill Elementary | 920 N 1240 E | Orem | UT |
| Fox Hollow Elementary | 6020 W. 8200 S. | West Jordan | UT |
| Foxboro Elementary | 547 N Foxboro Dr | North Salt Lake | UT |
| Freedom Elementary | 10326 North 6800 West | Highland | UT |
| Gateway Preparatory Academy | 201 E Thorough Bred Way | Enoch | UT |
| Geneva Elementary | 665 W 400 N | Orem | UT |
| Goshen Elementary | 60 North Center | Goshen | UT |
| Granite Elementary | 9760 South 3100 East | Sandy | UT |
| Grantsville Elementary | 50 S. Park | Grantsville | UT |
| Green Acres | 640 E. 1900 N. | North Ogden | UT |
| Gunnison Elementary | 550 So. 300 E. | Gunnison | UT |
| Hawthorne | 1675 South 600 East | Salt Lake City | UT |
| Heritage Elementary | 925 West 3200 South | Nibley | UT |
| Hillside | 4283 South 6000 West | West Valley | UT |
| JC Fremont | 4249 S. Atherton Drl | Taylorsville | UT |
| Jeremy Ranch Elementary | 3050 Rasmussen Road | Park City | UT |
| Jim Bridger Elementary | 5368 West Cyclamen Way | West Jordan | UT |
| John Hancock Charter | 125 N 100 E | Pleasant Grove | UT |
| Jordan Ridge Elementary | 2636 W. 9800 S. | South Jordan | UT |
| Lakeview Elementary | 2025 West 5000 South | Roy | UT |
| Legacy Elementary | 28 East 1340 North | American Fork | UT |
| Lincoln Academy | 1582 W 3300 N | Pleasant Grove | UT |
| Lincoln Elementary | 550 E Canfield Dr. | Ogden | UT |
| Lindon Elementary | 30 N Main | Lindon | UT |
| Lomond View | 3644 North 900 West | North Ogden | UT |
| Lone Peak | 11515 High Mesa Drive | Sandy | UT |
| Magna Elementary | 3100 South 8400 West | Magna | UT |
| Mapleton Elementary | 120 W Maple | Mapleton | UT |
| McPolin Elementary | 2270 Kearns Blvd | Park City | UT |
| Monte Vista | 11121 S. 2700 W. | South Jordan | UT |
| Morningside | 4170 South 3000 East | Salt Lake | UT |
| Mount Mahogany Elementary | 618 N 1300 W | Pleasant Grove | UT |

| School Name | School Address | School City | State |
|---|---|---|---|
| Mountain Shadows Elementary | 5255 W 7000 So | West Jordan | UT |
| Mountainville Academy | 195 South Main | Alpine | UT |
| North Park Elementary | 50 West 700 North | Tremonton | UT |
| Odyssey Charter School | 738 East Quality Drive | American Fork | UT |
| Oquirrh Hills Elementary | 5241 s. 4280 W. | Kearns | UT |
| Orchard Hills Elementary | 168 E 610 S | Santaquin | UT |
| Orem Elementary | 450 W. 400 S | Orem | UT |
| Park Lane | 9955 South 2300 East | Sandy | UT |
| Parkside Elemantary | 2262 North 1500 WEst | Clinton | UT |
| Parley's Park Elementary | 4600 Silver Springs Road | Park City | UT |
| Peruvian Park Elementary | 1545 E 8425 S | Sandy | UT |
| Philo T. Farnsworth Elementary | 3751 South 4225 West | West Valley City | UT |
| Pioneer Elementary | 250 N. 1600 W. | Ogden | UT |
| Plymouth Elementary | 5220 S. 1470 W. | Taylorsville | UT |
| Providence Hall | 4795 West Patriot Ridge Drive | Herriman | UT |
| Quest Academy | 4862 W 4000 S | West Haven | UT |
| Riverside | 1220 West 8737 South | West Jordan | UT |
| Rolling Meadows Elem | 2950 Whitehall Dr | WVC | UT |
| Rose Creek Elementary | 12812 S 3600 W | Riverton | UT |
| Rose Springs Elementary | 5349 Insbrook Place | Erda | UT |
| Rosecrest Elementary | 2420 Fisher Lane | Salt Lake City | UT |
| Roy Elementary | 2888 W. 5600 S. | Roy | UT |
| Sandy Springs Elementary | 242 N 3200 W | Layton | UT |
| Sandy Elementary | 8725 S. 280 E. | Sandy | UT |
| Scera Park Elementary | 450 S 400 E | Orem | UT |
| Settlement Canyon Elementary | 935 W Timpie Road | Tooele | UT |
| Shadow Valley Elementary | 4911 South 1500 East | Ogden | UT |
| Silver Crest Elementary | 12937 South Elementary Drive | Herriman | UT |
| South Elementary | 499 W. 400 S. | Cedar City | UT |
| South Jordan Elementary | 11205 S. Black Cherry Way | South Jordan | UT |
| South Weber Elementary | 1285 East Lester Street | South Weber | UT |
| St. Francis Xavier | 4501 West 5215 South | Kearns | UT |
| Stansbury Elementary | 3050 South 2700 West | West Valley City | UT |
| Summit | 80 W Center St | Smithfield | UT |
| Summit Academy | 1285 East 13200 South | Draper | UT |
| Summit Academy Bluffdale | 15327 South Noell Nelson Drive | Bluffdale | UT |
| Summit Academy Independence | 15327 South Noell Nelson Drive | Bluffdale | UT |
| Sunrise Elementary | 1542 E. 11245 S. | Sandy | UT |
| Sunset Elementary | 2014 N 250 West | Sunset | UT |
| Syracuse Arts Academy | 2893 West 1700 South | Syracuse | UT |
| Taylor Canyon Elementary | 2130 Taylor Ave. | Ogden | UT |
| Taylorsville Elementary | 2010 W. 4230 So. | Taylorville | UT |
| Three Mile Creek | 2625 South 1050 West | Perry | UT |
| Upland Terrace | 3700 Sunnydale Drive | Salt Lake City | UT |
| Vae View | 1750 W 1600 N | Layton | UT |
| Valley View Elementary | 941 Orchard Drive | Pleasant Grove | UT |
| Valley View | 2465 West 4500 South | Roy | UT |
| Vineyard Elementary | 620 E Holdaway Rd. | Orem | UT |
| Voyage Academy | 1891 North 1500 West` | Clinton | UT |
| Washington Elementary | 420 North 200 West | Salt Lake City | UT |
| Wellsville Elementary | 90 East 100 South | Wellsville | UT |
| West Jordan Elementary | 7220 S. 2370 W. | West Jordan | UT |
| West Point Elementary | 3788 W 300 North | West Point | UT |
| West Valley elementary | 6049 W. Brud Dr. | WVC | UT |
| Westbrook | 3451W 6200S | West Jordan | UT |
| Westland Elementary | 2925 W. 7180 Sourth | West Jordan | UT |
| Westmore Elementary | 1150 South Main Street | Orem | UT |
| Windsor Elementary | 1315 North Main St. | Orem | UT |
| Woodrow Wilson | 2576 South Main | South Salt Lake City | UT |
| Woods Cross Elementary | 745 W 1100 South | Woods Cross | UT |
| Woodstock | 6015 S 1300 E | Salt Lake City | UT |


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# Be wattsmart
## Begin at home

**Be wattsmart, Begin at home** is an energy education program sponsored by Rocky Mountain Power that is available to you in the fall of 2016. This program focuses on the Utah State Office of Education fifth-grade core curriculum for electricity while showing students and teachers how wise energy actions make a difference. Here is what local teachers have to say about the program:

> **"The students enjoyed this program and it fits perfectly with our unit on electricity."**

> **"The circuit demonstration taught important electrical concepts and engaged students."**

Please join us in this important effort. You may qualify to receive a **Visa® gift card of up to $50** depending upon participation.

| | |
|---|---|
| **What:** | A 45 - 60 minute educational presentation with FREE wattsmart energy education posters, activities and student materials |
| **When:** | September 19 - November 11, 2016 |
| **Where:** | Your school |
| **Who:** | Fifth-grade students and their teachers |
| **How:** | Enroll at your earliest convenience to ensure a spot! **wattsmart.com/begin** or email **diane.baum@nef1.org**. |

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cultivating energy literacy

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Be ***watt***smart
Begin at home

Dear Be ***watt***smart, Begin at home 2015 program participant:

Thank you for participating in the Be ***watt***smart, Begin at home program. Rocky Mountain Power will once again be supporting teachers in educating students on required energy standards during the 2016-17 school year.

As a former program participant, you have the opportunity to enroll your fifth-grade class in advance for the fall 2016 Be ***watt***smart, Begin at home program.

The 45-60 minute school presentations include **FREE** wattsmart energy education posters, activities and student materials. They will be scheduled during the weeks of **September 19 – November 11, 2016.** Teachers may qualify to receive a Visa® gift card of up to $50 depending upon participation.

Register soon at wattsmart.com/begin to ensure your 2016 participation or email diane.baum@nef1.org.

Thank you.

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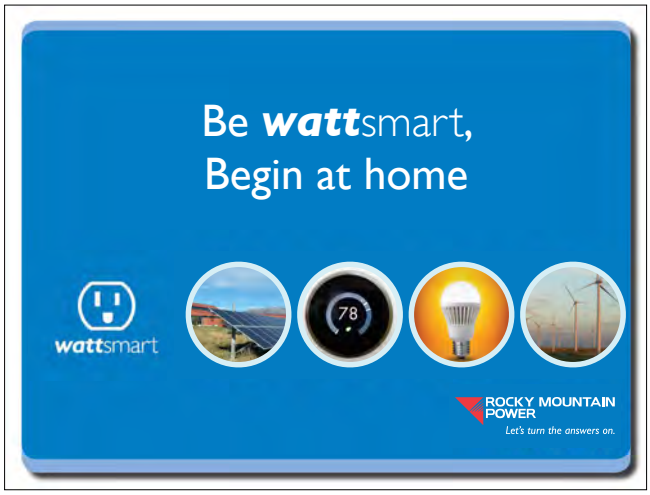
## Program Documents

Keynote Presentation

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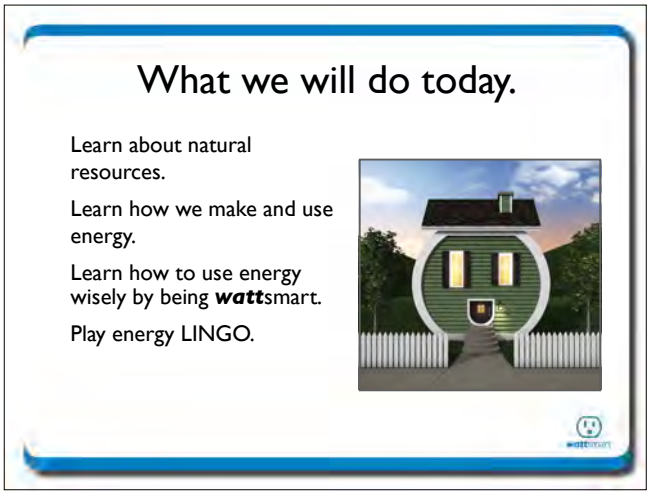


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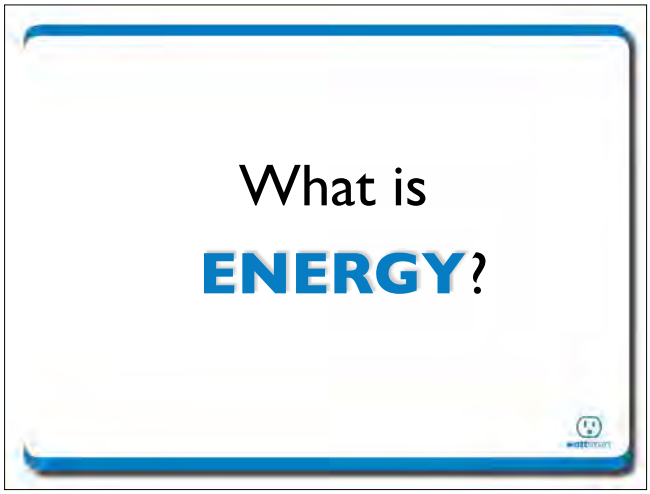


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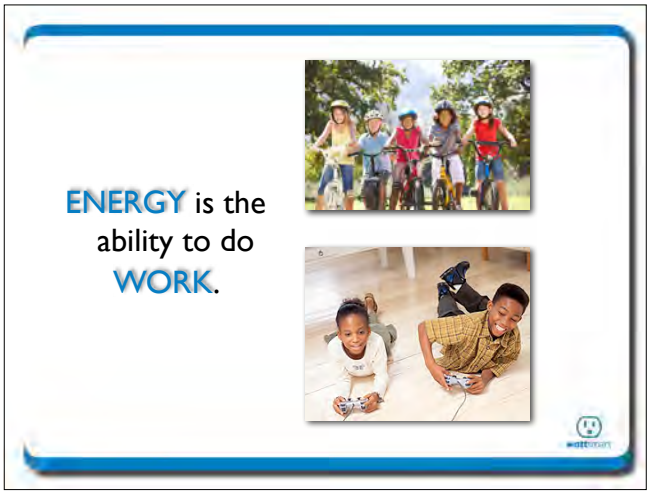


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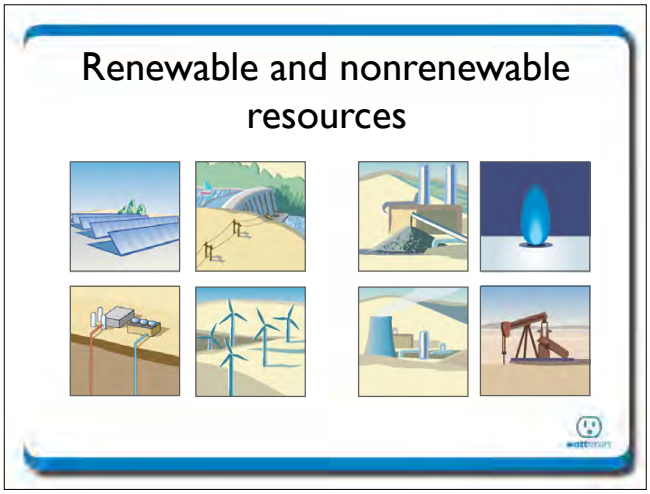


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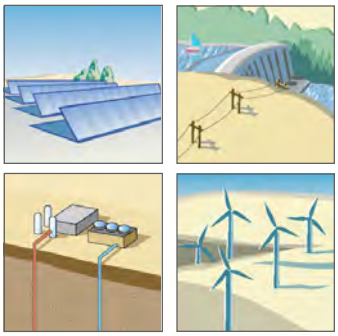
## Renewable resources



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## Nonrenewable resources

8

## Electricity

- The electricity we use is not a natural resource.
- It is made from natural resources.
- Since electricity is made from natural resources, it is called a **secondary energy source**.
- Power lines carry the electricity from where it is generated to where it is used.

9

## Let's LINGO

Find the words on your LINGO board that match these definitions:

- The ability to do work. **Energy**
- A resource often found with oil. **Natural gas**
- A secondary energy source. **Electricity**
- Something useful from the earth or the sun. **Natural resource**

10

## Rocky Mountain Power

Electric generation by energy source

Coal 61.96%

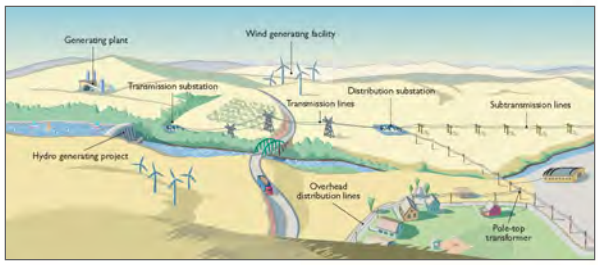
**Renewables** 13.17%

Natural gas 15.40%

Other sources 9.47%

11

## Electric generation




12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## What is a circuit?

13

## Let's make a circuit.

What things do we need to make an electrical circuit?

- An **energy source**, such as a battery.
- A **conductor** to carry electrical energy, such as wire.
- A **load** to use the energy, such as a light bulb.

Open circuit:
No electricity can flow

Closed circuit:
Electricity can flow

14

## Energy efficiency

**Energy efficiency**

- Using less energy to accomplish the same amount of work.

**Technology**

- Install energy-efficient products, appliances and devices.

**Behavior**

- Use less energy through wise behaviors that conserve energy.

15

Know what you want before you open the refrigerator.

16

## Refrigerators and freezers

What can you do to be ***watt***smart?

Decide what you want to eat quickly!

17

Use a fan to stay cool.

18

## Home heating and cooling

What can you do to be ***watt***smart?

- Use a fan instead of an air conditioner.
- Install a programmable thermostat.
- Look for the ENERGY STAR® label.
- Change furnace filters at least every 3 months.
- Insulate your home and seal air leaks.

19

Turn off the TV when you leave the room.

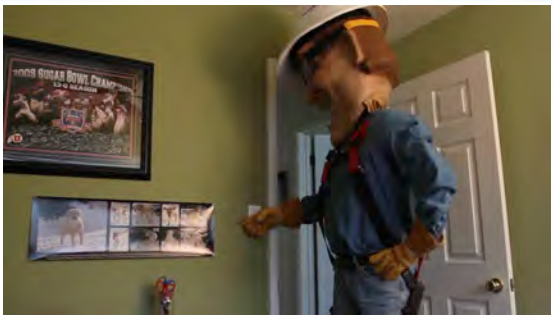
20

## Electronics

What can you do to be ***watt***smart?

- Unplug the thug. Beware of **phantom loads**.
- Turn off TVs, computers and game consoles when not in use.
- Use advanced power strips to reduce phantom load.

21



Turn off the lights when you leave the room.

22

## Lighting

What can you do to be ***watt***smart?

Turn off the lights when you leave a room.

Replace standard bulbs with CFLs (compact fluorescent light) bulbs or **LEDs** (light-emitting diode) light bulbs.

Let daylight shine in.

23

## Let's LINGO

Find the words on your LINGO board that match these definitions:

- Using less energy to accomplish the same amount of work. **Energy efficiency**
- An energy resource that is capable of being renewed or is replaceable. **Renewable**
- Fossil fuels – such as coal, natural gas and oil – are considered **Nonrenewable** resources.
- A resource used to produce gasoline. **Oil**

24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## Water heating

What can you do to be ***watt***smart?

- Install a water-efficient showerhead.
- Take shorter showers.
- Turn off the water when brushing teeth.
- Tell your parents that your **water heater** should be set to 120°F.

25

## Dishwashers

What can you do to be ***watt***smart?

- Only run dishwashers when full.
- Use the "air dry" or "no heat dry" settings.

26

## Laundry

What can you do to be ***watt***smart?

- Wash clothes in cold water.
- Clean the lint filter in the dryer with each load.
- Use a clothesline whenever possible.

27

## Cooking

What can you do to be ***watt***smart?

- Use a microwave oven when possible.
- Use lids to shorten **cooking** time.

28

## The 3 Rs

What can you do to be ***watt***smart?

- **Reduce**
  – use less of something.
- **Reuse**
  – use something again.
- **Recycle**
  – make something into another new thing.

29

## Let's LINGO

Find the words on your LINGO board that match these definitions:

- A light that can last 25 times longer than an incandescent. **LED**
- Electricity consumed by an electronic device while it is turned off or in standby mode. **Phantom load**
- Using a toaster oven or microwave for **Cooking** is more energy-efficient than using the oven.
- Set this to 120°F for a comfortable shower. **Water heater**
- To use less of something. **Reduce**

30

## What have we done today?

- **Learned** why energy is important.
- **Discussed** energy and where it comes from.

31

## Engage

Review your **Be *watt*smart, Begin at home** booklet with your parent(s).

Complete the *Home Energy Worksheet* and return it to receive an energy-efficient nightlight.

Sign the *Thanks A "Watt" Card* and your teacher will mail it along with your worksheet and the teacher's *Program Evaluation*.

32

***YOU** can make a difference when you are **watt**smart!*

Visit **wattsmart.com** for more energy-saving ideas.

33


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Be **wattsmart**
Begin at home

# Teacher Program Implementation Steps

1. Verify that you have received each of the following:
   - *Teacher Materials Folder*
     - Your **Be wattsmart, Begin at home** *Student Booklet*
     - Your **Be wattsmart, Begin at home** *Teacher Guide*
     - *Program Evaluation*
     - Sponsor *Thank You Card*
     - Teacher Visa® gift card announcement
     - Self-addressed postage-paid return envelope
     - Instructional posters
   - *Home Energy Worksheets* for you and your students
   - **Be wattsmart, Begin at home** student booklets
   - Set of *Parent Letters*
   - wattsmart nightlights (student incentive for returning the *Home Energy Worksheet*)

2. Distribute to each student a:
   - **Be wattsmart, Begin at home** student booklet
   - *Home Energy Worksheet*
   - *Parent Letter*

3. Reward each student who returns a completed *Home Energy Worksheet* with a wattsmart nightlight.

4. Complete the *Program Evaluation* form.

5. Have each student sign the *Thank You Card* to Rocky Mountain Power.

6. Mail in the self-addressed, postage-paid envelope:
   - Completed *Home Energy Worksheet*
   - The *Thank You Card*
   - The *Program Evaluation* form

**To thank you for postmarking your envelope by December 2, 2016, you will receive a Visa® gift card for classroom use.**
**80% or greater return of registered students'** *Home Energy Worksheets* **= $50**
**50 – 79% return of registered students'** *Home Energy Worksheets* **= $25**

For questions or additional information, please email Diane Baum at **diane.baum@nef1.org**.

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# ATTENTION TEACHERS!

Be **watt**smart
Begin at home

Help us out by mailing your student *Home Energy Worksheets* and receive a **$25 - $50** Visa® gift card for classroom use, depending upon participation:

80% or greater return of registered students' *Home Energy Worksheets* = $50
50 - 79% return of registered students' *Home Energy Worksheets* = $25

Postmark due date:
**December 2, 2016**

Offer open only to teachers participating in Be wattsmart, Begin at home. Certain restrictions may apply. Good while grant funding is in place. *Home Energy Worksheets* must be completed for eligibility. For more information, contact Diane at diane.baum@nef1.org.

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Let's turn the answers on.

### *Dear Parent(s):*

The **Be wattsmart, Begin at home** program assists teachers and students to learn about energy, discuss important energy topics and engage in energy efficiency actions now. Your child has participated in a presentation addressing natural resources, energy basics and energy efficiency. Your participation in this program will help you be wattsmart, enhance energy efficiency in your home and help save money on your utility bills. Here are three simple ways that you can help:

- Review this **Be wattsmart, Begin at home** booklet with your child.
- Assist your child with completing the activities on Page 7.
- Have your child return the ***Home Energy Worksheet*** to their teacher.

Thank you for being wattsmart and for your participation!

# What's inside?

This booklet is divided into three sections that will help you:

1. **Learn** about sources of energy, how they get to your home and why they are important in your life.
2. **Discuss** wattsmart energy efficiency tips that will help you use energy wisely and save money.
3. **Engage in energy efficiency** by determining how energy can be saved in your home through a simple audit activity and the *Home Energy Worksheet*.

### About Rocky Mountain Power

Rocky Mountain Power is a leading electric utility in the western United States. One of the lowest-cost producers of electricity in the U.S., Rocky Mountain Power provides more than 1 million customers in Utah, Wyoming and Idaho with safe, reliable, efficient energy. In addition, it is the second-largest rate-regulated utility owner of renewable, wind-generated electricity in the U.S.

### About National Energy Foundation

The National Energy Foundation is a unique 501(c)3 nonprofit educational organization dedicated to the development, dissemination and implementation of supplementary educational materials and programs. These resources for education relate primarily to energy, water, natural resources, science, math, technology, conservation, energy efficiency and the environment.

# What does it mean to be ***watt***smart?

- Being wattsmart is all about taking steps to save energy – which in turn can help you save money.
- Rocky Mountain Power's wattsmart programs and incentives can help customers become more energy efficient in their homes and businesses and that's good for their wallets and the environment.

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# The importance of energy:

Energy is the ability to do work or produce change. Virtually everything we do or use at work and home uses energy.

- Heating and cooling systems
- Computers
- Electronic equipment such as gaming and entertainment systems and TVs
- Charging electronic tablets, music players and cell phones
- Appliances
- Lights
- Manufacturing
- Food storage and preparation
- Security systems

# Where does energy come from?

Our energy comes from natural resources. There are two general categories of natural resources – nonrenewable and renewable. A nonrenewable resource is not capable of being renewed, replaced or takes a very long time to replace. A renewable resource is capable of being renewed or replaced.

**PRIMARY NATURAL RESOURCES** are used to convert energy into electricity. They can be either nonrenewable or renewable.

**Nonrenewable** examples are:

**Coal** is the most abundant nonrenewable energy source in the world. There is an estimated 129 year supply remaining.

**Oil** can be both refined and unrefined. Refined oil is transformed into petroleum products and unrefined oil remains as crude oil.

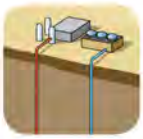
**Natural Gas** is usually captured alongside oil deposits and is a major source for electrical generation.

**Uranium** is the fuel most widely used by nuclear plants. Nuclear energy is the energy inside the nucleus (core) of the atom of uranium.

**Renewable** examples are:

**Solar** is energy from the sun.

**Wind** is energy from the wind captured by a group of wind turbines (generators).



**Geothermal** is energy derived from the heat of the earth.

**Hydropower** is energy from water that generates electricity.

**SECONDARY ENERGY RESOURCES** are created by using nonrenewable and renewable resources of energy.

**Electricity** is the most abundant **secondary energy resource** used. It is the flow of electrical power or charge. It occurs in nature as lightning and static electricity. A generator uses energy resources to create mechanical energy that is then converted into electrical energy.



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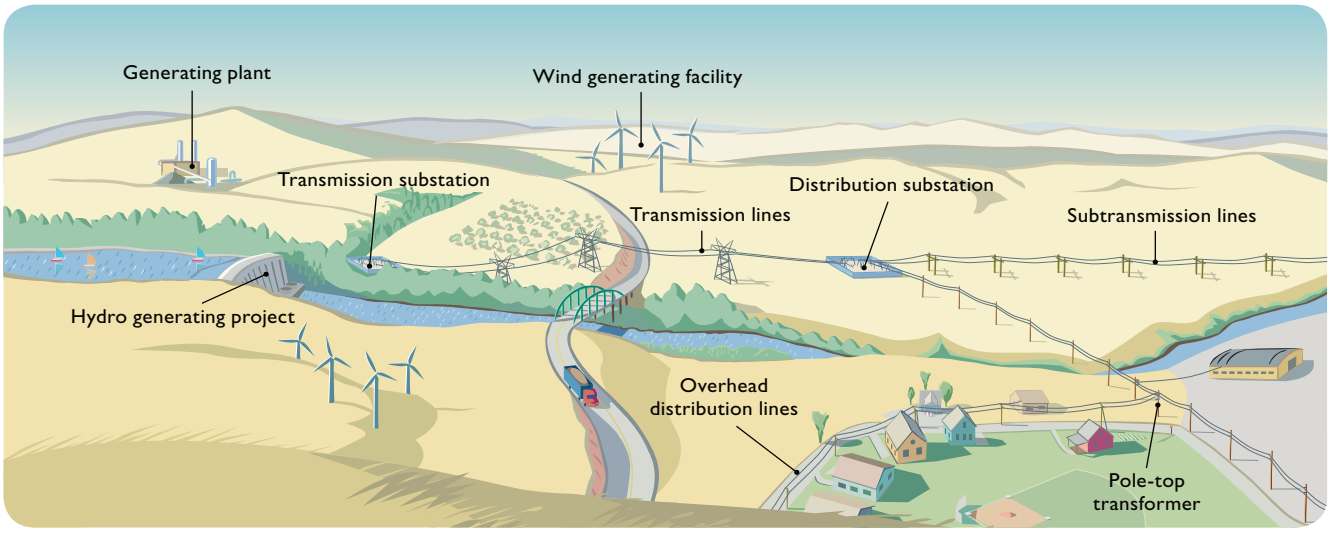
# Energy efficiency

Energy efficiency is using less energy to accomplish the same amount of work – we call it being wattsmart. There are many technologies we can use today that decrease the amount of energy needed to do work. Good examples are ENERGY STAR® products and LED lighting.

You can save even more money if you start thinking about using energy wisely. Try turning off the lights when you leave the room, take shorter showers or turn off your electronics when you are not using them.

# Using electricity




For more than 100 years, electricity has made our homes more comfortable and industries more productive. Today electricity is powering a world of electronics.

How is electricity generated? It begins with a fuel that heats water and turns it to steam. The steam drives the turbine that turns the generator motor to produce electricity.

How is electricity transmitted? Once the electricity is produced, the current flows from the generator to the power plant transformer where the voltage is increased to boost the flow of the electric current through the transmission lines. The transmission lines transport the electricity to Rocky Mountain Power's substations where the voltage is decreased. Power lines then carry the electricity from the substations to be used in our homes and businesses.

**ELECTRICAL GENERATION**

| Energy resource | Rocky Mountain Power (2015 basic fuel mix)* | United States (U.S. EPA, 2013 data) |
|---|---|---|
| Coal | 61.96% | 39% |
| Natural gas | 15.40% | 27% |
| Renewables | 13.17% | 12% |
| Hydroelectric | 5.18% | 7% |
| Wind | 7.10% | 4% |
| Biomass | 0.43% | 1% |
| Geothermal | 0.38% | -- |
| Solar | 0.08% | 0% |
| Nuclear | 0.00% | 19% |
| Other/misc. | 9.47% | 3% |
| Total* | 100% | 100% |

**This information is based on Federal Energy Regulatory Commission Form 1 data. The Rocky Mountain Power "basic fuel mix" is based on energy production and not resource capability, capacity or delivered energy. All or some of the renewable energy attributes associated with wind, solar, biomass, geothermal and qualifying hydro facilities in Rocky Mountain Power's basic fuel mix may be: (a) used in future years to comply with renewable portfolio standards or other regulatory requirements, (b) sold to third parties in the form of renewable energy credits and/or other environmental commodities or (c) excluded from energy purchased. Rocky Mountain Power's basic fuel mix includes owned resources and purchases from third parties.*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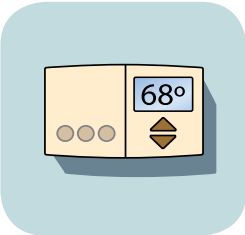
# ***watt***smart tips to lower your energy use and help save money

Saving energy happens in two ways. First, you can use less energy through wise behaviors that conserve energy. Second, you can install energy-efficient products, appliances and devices that use less energy to accomplish the same task. Let's talk about the following areas of your home that have the largest potential to save energy.

## Home heating and cooling




- Install a programmable thermostat. Set your thermostat to 78°F or higher in the summer and 68°F or lower in the winter.
- Make sure your house is properly insulated. If you have less than 6 inches of insulation in your attic, you would benefit from adding more.
- You can save 10 percent or more on your energy bill by reducing the air leaks in your home with caulking and weather stripping.

- To help your furnace run more efficiently and cost-effectively, keep your air filters clean.
- For windows with direct sunlight, close your blinds in the summer to keep the heat out. Open them on winter days to let the warmth in.
- Small room fans are an energy-efficient alternative to air conditioning.
- Inspect and replace weather stripping and caulking in your home.
- For information about energy-saving programs and cash incentives, visit **wattsmart.com**.

## Water and water heating

- Check your faucets for leaks that can cost you hundreds of dollars each year.
- Install a water-efficient showerhead and save as much as $50 a year.
- Set the water heater at 120°F.
- Install faucet aerators to decrease water use.

## Lighting

- Let the sun shine in. Use daylight and turn off lights near windows when possible.

- Replace your incandescent bulbs with CFLs (compact fluorescent light) or LEDs (light-emitting diodes) and save $5 to $8 per year per bulb. These bulbs use up to 75 percent less energy than incandescent bulbs and last much longer.
- Use lighting controls such as motion detectors and timers.
- Turn off lights when you leave the room.
- Always use the lowest wattage bulb that still gives you the light you need.
- Keep your light bulbs clean. It increases the amount of light from the bulb and reduces the need to turn on more lights.

***Safety note:*** Burned out CFLs, which contain a small amount of mercury, should be disposed of properly. To locate a collection site in your area, or to learn what to do if a CFL breaks, visit **getenergysmart.org**.

## Electronics

- Turn off your computer and game consoles when not in use.
- Home electronics are made to turn on and off many times. Always turn them off to save energy.
- Electronics with the ENERGY STAR® label use as much as 60 percent less energy while providing the same performance.
- Beware of phantom loads which continue to draw electricity when they are plugged in but not in use. Examples are telephone chargers, electronic games and television sets. Use power strips for household electronics. One button will turn off multiple appliances, which conserves electricity.



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### Refrigerators and freezers

- When looking to replace your old refrigerator, do so with an ENERGY STAR® model, which requires 40 percent less energy than conventional models and provides energy savings without sacrificing the features you want.
- The coils in the back or bottom of your refrigerator and freezer should be kept as clean as possible.

### Dishwashers

- Only run dishwashers when full and use the "air dry" or "no heat dry" settings.
- ENERGY STAR® dishwashers use at least 41 percent less energy than the federal minimum standard for energy consumption.

### Laundry

- Buy a moisture-sensitive dryer that automatically shuts off when clothes are dry.
- Use a clothesline whenever possible.

### Cooking

- Use a microwave oven, toaster oven or crock pot instead of a conventional oven.
- Use the right-sized pan for the stove top element.
- Cover pans with lids to keep heat from escaping.

### Reduce

- Use less.
- Purchase products with little packaging.

### Reuse

- Use something again.
- Reuse a box or a grocery bag.

### Recycle

- Make something into another new item.
- Participate in the recycling programs in your community.

## *Parents, be wattsmart and watch the energy savings add up.*

An individual with a combined electric and heating fuel bill of $2,500 per year could save 20 percent or $42/month by using these and other energy efficiency tips. That is like getting a pay raise without having to work harder or longer.


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# The cost of lighting your home

Take a walk around your home with your family to learn about your lighting.

1. Count the types of bulbs in each room and record in Table 1; then total each column.
2. Transfer the total for each type of lighting into Column A on Table 2.

**TABLE 1**

| Location | Incandescent | CFL | LED |
|---|---|---|---|
| Bedroom 1 | | | |
| Bedroom 2 | | | |
| Kitchen | | | |
| Dining room | | | |
| Living room | | | |
| Hallway | | | |
| Laundry room | | | |
| Family room | | | |
| Front porch | | | |
| Other | | | |
| **TOTAL** | | | |

3. In Table 2, multiply the numbers in Column A by the given amounts in Column B. Place the answers in Column C.
4. Add the numbers in Column C to get the total approximate cost of electricity for lighting your home.
5. Discover how much money you will save if all the bulbs in your home were CFLs or LEDs. Add the numbers in Column A to get the total number of bulbs in your home. Transfer the total to both rows in Table 3, Column E as indicated by the arrows.

**TABLE 2**

| | A | B | C |
|---|---|---|---|
| | Number of bulbs from Table 1 | Annual cost of electricity for one bulb | Annual cost of electricity for lighting |
| Incandescent | | × $4.80 | |
| CFL | | × $1.08 | |
| LED | | × $0.60 | |
| **TOTAL** | | | |

6. Multiply the total number of CFLs by the annual cost of electricity for one CFL provided in Column F and put your answer in Column G.
7. In the last row of Table 3, multiply the total number of LEDs in Column E by the annual cost of electricity for one LED bulb provided in Column F and put your answer in Column G.

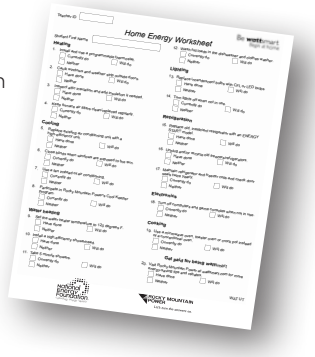
   How do the amounts in Column G compare with your current total cost for lighting in Column C above?

**TABLE 3**

| | E | F | G |
|---|---|---|---|
| All CFLs | | × $1.08 | Annual cost of electricity with only CFLs |
| All LEDs | | × $0.60 | Annual cost of electricity with only LEDs |

*Cost figures are for an individual bulb (60 Watt incandescent), the lumens equivalent CFL (13 Watts) and LED (7 Watts) each used for 2 hours each day for 30 days. EEI Typical Bills and Rates Report, Winter 2016 (12 months ending 2015).*

# Be ***watt***smart – it's up to you




Together with your parent(s), complete the separate *Home Energy Worksheet*. Return it to your classroom teacher and receive your wattsmart nightlight. You may find you are already practicing ways to be energy efficient but there is always room to do more.

Challenge yourself and your family to commit to practice energy efficiency by making wise energy choices and being wattsmart. You will not only help extend the life of our natural resources, but save money, too!

For other energy-saving ideas and incentives, visit **wattsmart.com**. Congratulations to you and your family for making a difference.



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Be **watt**smart

Begin at home

National Energy Foundation™
cultivating energy literacy

**watt**smart.com

ROCKY MOUNTAIN POWER

*Let's turn the answers on.*

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# Be *watt*smart
## Begin at home

TEACHER GUIDE

National Energy Foundation™
cultivating energy literacy

ROCKY MOUNTAIN POWER
*Let's turn the answers on.*

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# Welcome to Be ***watt***smart, Begin at home

This program teaches the importance of energy and assists students and their families in saving energy in their homes. For teachers, **Be *watt*smart, Begin at home** reinforces important electrical concepts from your curriculum.

This *Teacher Guide* was designed to supplement program instruction. A variety of tools have been provided to allow you to format **Be *watt*smart, Begin at home** to meet your instructional needs. These tools include:

- General guidelines and activity suggestions
- Classroom activities to further the impact of lessons
- Additional fun and interesting activities for students
- Activities containing STEM-correlated curriculum for your classroom

## Table of Contents


STEM Correlations....2

**Section One: Energy Efficiency**

Energy Challenge....3
Conservation Cookie....4
Pass the Sack....5
Energy Tickets....6
The Search for Energy....8

**Section Two: Resources You Can Use Efficiently**

Energy Challenge....9
Where Do Fossil Fuels Come From?....10
Energy for Electricity....11
Electrical Generation Poster....13

**Section Three: Be wattsmart, Begin at home**

Energy Challenge....14
Insulation Tests....15
How Bright Is Your Light?....16
Energy in Math....17
Be wattsmart, Begin at home Poster....19


### About Rocky Mountain Power

Rocky Mountain Power is a leading electric utility in the western United States. One of the lowest-cost producers of electricity in the U.S., Rocky Mountain Power provides 1 million customers in Utah, Wyoming and Idaho with safe, reliable, efficient energy. In addition, it is the second-largest rate-regulated owner of wind-generated electricity in the U.S.

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The National Energy Foundation is a unique 501(c)(3) nonprofit educational organization dedicated to the development, dissemination and implementation of supplementary educational materials and programs. These resources for education relate primarily to energy, water, natural resources, science, math, technology, conservation, energy efficiency and the environment. NEF recognizes the importance and contribution of natural resources to our economy, to our national security, the environment and our quality of life.


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# STEM Correlations

STEM education is an approach to teaching and learning that integrates the content and skills of science, technology, engineering and mathematics. Some of the skills include: problem-solving, innovation, invention, inquiry, logical reasoning, critical thinking, technological literacy, communication tools, research tools, design and modeling, data analysis and probability, collaboration and real world connection. This chart correlates *Teacher Guid*e activities to STEM skills and behaviors.

| | **Science** | | | | **Technology** | | | | **Engineering** | | | | | **Math** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Activity** | Science as Inquiry | Energy Sources, Forms and Transformations | Science and Technology | Personal and Social Perspectives | Productivity Tools | Communication Tools | Research Tools | Problem-solving and Decision-making Tools | Historical Perspective | Design and Modeling | Invention and Innovation | Test Design and Troubleshooting | Use and Maintain | Numbers and Operations | Measurement | Data Analysis and Probability | Connection to the Real World |
| Conservation Cookie | X | | | X | | | | | | | | | | X | X | X | X |
| Pass the Sack | X | X | | X | | | | | | | | | | | | | |
| Energy Ticket | X | X | | X | | | | X | | | | | | X | X | X | X |
| The Search for Energy | X | X | X | X | | | | | | | | | | X | | X | X |
| Where Do Fossil Fuels Come from? | X | X | X | | | | | X | | | | | | X | X | | |
| Energy for Electricity | X | X | X | X | | | X | | | | | | | | | | |
| Insulation Tests | X | X | X | X | | | X | X | | X | X | X | X | X | X | X | X |
| How Bright Is Your Light? | X | X | X | | | | X | | X | | | | | X | | X | X |
| Energy in Math | | | | | | | | | | | | | | X | | X | X |



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# **Section One:**
# Energy Efficiency

**Objective:** Identify and explain types of natural resources, conservation and energy efficiency.

### Vocabulary:

**Natural resource:** A material source of wealth, such as timber, fresh water or a mineral deposit that occurs in a natural state and has economic value.

**Renewable resource:** A natural resource that is capable of being renewed or is replaceable such as energy from the sun or wind.

**Nonrenewable resource:** A natural resource that is not capable of being renewed, replaced or takes a very long time to replace, such as fossil fuels.

**Fossil fuel:** A combustible material created naturally beneath the earth's surface over a long period of time from the remains of plants and animals. Examples include coal, natural gas and oil.

**Conservation:** The protection, preservation, management, or restoration of wildlife and of natural resources such as forests, soil and water.

**Energy efficiency:** Managing the consumption of energy through the use of technologies and wise behaviors.

### Classroom Activities:

- "Conservation Cookie"
- "Pass the Sack"
- "Energy Tickets"
- "The Search for Energy"

# Energy Challenge

**Discussion idea:** Embodied energy in a glass of milk

**Objective:** Trace the energy and resources needed to make a common product.

Review the steps that it takes to produce a glass of milk and bring it to the consumer.

- Feeding and raising a cow
- Milking a cow
- Packaging
- Refrigeration
- Transportation of milk (dairy to warehouses to store to home)

### Discuss with your class:

1. What natural resources go into making and transporting a glass of milk?
2. The energy used to make and transport a product is called **embodied energy**.
3. What embodied energy sources are involved in producing and transporting milk?
4. How can understanding embodied energy in our daily lives encourage us to be energy-efficient?


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# Conservation Cookie

## Objective:
To demonstrate the results of conservation of a resource.

## Pre-activity discussion:
- What is conservation?
- Why is conservation so important?

## Materials:
- Two cookies (or other food item) for each person
- One watch or clock with a second hand for timing
- Computer or graph paper to graph results

## STEM Connection
**Science**
- Science as Inquiry
- Personal and Social Perspectives

**Math**
- Numbers and Operations
- Measurement
- Data Analysis and Probability
- Connection to the Real World

## Procedure:
1. Tell students that this is the first of two rounds. In each round, they will be eating a cookie, which represents our natural resources. They are to stand at their desk and you say to eat the cookie as they normally would, then when the cookie has been completely swallowed, sit down. The activity will work better if you ask students NOT to put the entire cookie in their mouth at one time, to take at least two bites!
2. Give each student a cookie, with instructions not to eat it until you say. Start the watch and tell the students to eat the cookie as they would normally eat it. At 30 second intervals, count the number of students standing and record this data.
3. Individually or as a class, graph this data using a line graph.
4. Tell students they will now practice conservation with a second cookie. To represent conservation, students will only take a bite from their cookie when you say "BITE." Just as before, they will stand, take bites the same size they took last time, and sit after the entire cookie has been swallowed.
5. Pass out a second cookie to each student.
6. Start the watch and have everyone take a "BITE" and then wait 30 seconds. Record the number of students standing and again say "BITE." Repeat this procedure until almost everyone has finished his or her second cookie.
7. On the same graph used for the first cookie, add a second line graph for the conservation cookie.

## Discussion:
- Compare the two graphs. If desired, have students calculate the slope of each graph from 0 to 30 seconds and from 30 seconds to 1 minute. How do the slopes vary over time and between graphs? What does a change in slope represent?
- Discuss the term "conservation" and its effects on our natural resources. Can we control how rapidly we use water or energy by conserving it? Water and energy are some of the most important things we use in our lives. If they are used up quickly, and all at once, we will not have enough left for the future.



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# Pass the Sack

## Objective:
To demonstrate the difference between renewable and nonrenewable resources and the need for conservation of resources.

## Materials:
- Two different kinds of candy or other objects students find desirable
- Sack to hold candy, such as a gallon size plastic bag

## STEM Connection
**Science**
- Science as Inquiry
- Energy Sources, Forms and Transformations
- Personal and Social Perspectives

## Procedure:
1. Count out enough candy so that there is one piece per student (some of each type of candy – perhaps less of one so it will run out faster). Put it in the sack or bag. Save the remaining candy. If you have a very polite class, count enough candy for half of the class. You want the candy to run out before everyone gets some!
2. Tell students you will be demonstrating how resources get used over time by playing "Pass the Sack." Show students the sack and tell them when they get the sack, they should take some energy and pass the sack to the person next to them.
3. Before passing the sack to the first student, review renewable and nonrenewable resources. Have students give examples of each as you hand the sack to a student.
4. While this discussion is taking place, allow students to pass around the bag of candy without any rules about how many pieces students may take. Occasionally, add four or five pieces of one of the types of candy you are using. (This will be your renewable resource.) The sack will be empty before it reaches all the students.
5. Ask students that did not get any candy how they might obtain energy from other students. What if each student represented a country? How do countries obtain resources? Trade? Barter (trade for goods)? Buy (trade for currency)? Invade and take (go to war)? What effect did the availability of candy have on relationships between students? What effect might the availability of natural resources have on the relationship among nations, provinces, states, people, standards of living and quality of life?
6. Explain how our resources are like the candy. Which type was nonrenewable? How could you tell? (No more was added to the bag once it was being passed around.) Which type was renewable? How could you tell? (It was added to the bag periodically.)
7. Point out that resources have limits just like the candy. Emphasize that many resources, such as fossil fuels, are nonrenewable and are being consumed faster than they are being replaced by nature. Discuss the fact that it would be more difficult for students to eat the candy if they had to search the room to find it instead of just taking it from the sack. Energy companies must seek resource deposits and obtain rights to drill or mine for them; they do not just magically appear. Point out that natural gas, coal and oil companies are looking harder for more resources as supplies dwindle.
8. Now plan to pass out the remaining candy. Should rules be established? Do oil, coal and natural gas companies have rules (regulations) that they must follow to find resources? Should there be rules and regulations on how much oil, coal and natural gas people use? How would students get resources if they could not leave their desks? How do the students' social decisions influence the availability of candy?


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# Energy Tickets

## Objective:
See how energy decisions affect our standard of living and our quality of life. This will help students realize how important it is to use energy efficiently.

## Materials needed:
- Energy Tickets – 25 per student
- Box to collect tickets (toll box)

## STEM Connection
**Science**
- Science as Inquiry
- Energy Sources, Forms and Transformations
- Personal and Social Perspectives

**Technology**
- Problem-solving and Decision-making Tools

**Math**
- Numbers and Operations
- Measurement
- Data Analysis and Probability
- Connection to the Real World

## Procedure:
1. Before class begins, copy a page of tickets from the master on page 8 for each student. Alternatively, you may use preprinted tickets available from retail stores.
2. Introduce the game to the students by listing several places the students use energy in the school, for example, in the classroom: lights, computers and heaters.
3. Provide each student with 25 Energy Tickets, and instruct them to write their name on all of their Energy Tickets.
4. Every time a student uses energy, have them write how the Energy Ticket was used on the back and put the ticket in the toll box. If they use heated water, it will cost two tickets, because they are using both energy and water. It also costs two tickets if they waste energy unnecessarily. For example, leaving lights or a computer on when not in use wastes energy.
5. Keep a record of how many tickets the students have left each day.
6. Optional: look at how the tickets were used and create a graph of tickets used for different categories (sharpening pencils or using computers, for example) out of the tickets deposited in the box.

## Discussion:
- What would happen if there was a real energy shortage in the community and families were issued a certain number of Energy Tickets?
- What if after they used them, all of their electricity and gas were shut off?
- What would they do to adjust their use of energy?
- What are other alternate sources of energy?

## Language Arts Connection:
- Quick write – Describe one thing you could do to reduce your personal energy usage.
- Creative writing – Write a story about life after our nonrenewable energy sources are gone.



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ENERGY TICKET
This ticket allows
one energy use.

student name

ENERGY TICKET
This ticket allows
one energy use.

student name

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This ticket allows
one energy use.

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one energy use.

student name



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# The Search for Energy

## Objective:
To learn the difference between renewable and nonrenewable resources.

## Materials needed:
- About 1/4 cup seed beads (solar energy)
- Colored beads in the following proportions: 84 percent black beads (about 250 beads) for coal; 16 percent red (about 50 beads) for uranium; 2 percent white (about 7 beads) for natural gas; 1 percent blue (about 4 beads) for oil. These proportions approximately reflect the nonrenewable energy reserves in the U.S.
- Optional: large bed sheet or tarp to place beads on for easy cleanup

## STEM Connection
**Science**
- Science as Inquiry
- Energy Sources, Forms and Transformations
- Science and Technology
- Personal and Social Perspectives

**Math**
- Numbers and Operations
- Data Analysis and Probability
- Connection to the Real World

## Procedure:
1. Divide the class into five equal groups. Each group will be a company going after a particular resource. The beads represent reserves of the various energy resources. Have students gather in a large circle around the sheet or other area where you will place the beads.
2. Scatter the large beads plus a spoonful of "solar" beads on the sheet so they are well spread out. Explain that this exercise shows how the amount of available resources changes over time. You may want to designate certain places as protected areas, where the resources are off limits to protect the environment.
3. Tell students you will do several trials and look to see how the types of available resources change after each trial. Tell each group that they will have 30 seconds to pick up as many beads possible of their color, then you will stop and look at how things are changing. It is NOT a race! After checking for understanding, start timing.
4. After 30 seconds, have the groups stop and count the beads they have gathered. Record the results in a data table. If some groups have collected all of their available resource, point out that the resource is now depleted and they are unemployed. You can allow the students to join another group. Collect the beads students picked up in the first trial.
5. Scatter another spoonful of solar energy, helping students realize that since solar is a renewable resource, there is the same amount of it each time you look, whereas the fossil fuels are being depleted. Repeat the search period so students can get more beads.
6. Stop after 30 seconds and have the group count and record the beads collected again. Note that there are fewer fossil fuels found in the second round. Students have to look harder to find what is left. The solar count is slowly but surely catching up with the fossil fuels. Repeat with additional trials as needed.
7. Create a multi-line graph of the number of beads collected each trial. This can be done by individual students or as a class. Note that the nonrenewable resources decrease until they are depleted but the solar increases steadily.

## Discussion:
- Why does the solar line differ from the others? Why does it go up rather than down?
- How do improvements in technology affect the extraction of resources from the earth?
- How do improvements in technology affect our usage of renewable resources?
- In the real world, can we extract ALL of one resource? Why do some deposits go unused?



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# **Section Two:**
# Resources You Can Use Efficiently

### Objective:
To discuss and identify various resources students use every day.

### Vocabulary:
**Electricity:** The flow of electric charge used as power.

**Green energy:** Electricity produced by renewable energy sources that are nonpolluting, or that pollute very little.

**Natural gas:** A fossil fuel that is a mixture of gases occurring in underground deposits.

### Classroom activities:
- "Where Do Fossil Fuels Come From?"
- "Energy for Electricity"
- "Electrical Generation Poster"

# Energy Challenge

### Discussion idea:
What natural resources can you save by recycling?

### Optional activity:
1. Have students keep track of each paper product that they use during one day with tally marks.
2. Compare amounts of paper used by students in the class. Ask students if they were surprised by the amount of paper they used.
3. Based on their usage of paper in one day, have students estimate how much paper they would use in a week, a month and a year.
4. Discuss the difference between reducing, reusing and recycling.
   - Reduce – using less of something
   - Reuse – using something again
   - Recycle – making something into another new item
5. Brainstorm several ways that paper use can be reduced, that paper can be reused and how paper can be recycled in your community.
6. Tell students that recycling 1 ton of paper saves:
   - enough energy to power the average American home for six months.
   - 7,000 gallons of water
   - 3.3 cubic yards of landfill space
   - 1 metric ton of carbon equivalent (MTCE).

   (EPA, 2014)

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# Where Do Fossil Fuels Come From?

## Objective:
This activity investigates the production of natural gas and oil from ancient life. This activity models this process.

## Materials per Student Group:
- A clear container to represent the ocean
- Sand or dirt
- Baking soda "plankton"
- Vinegar (20 percent) and water (80 percent) "ocean" mixture
- Cup or scoop
- Safety goggles

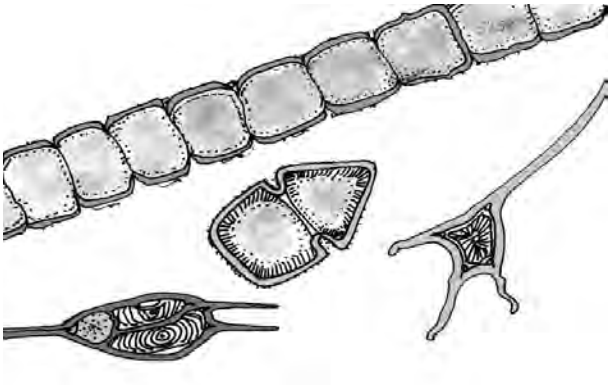
NOTE: You may do this as a demonstration, or have students do it in small groups.

## STEM Connection
**Science**
- Science as Inquiry
- Energy Sources, Forms and Transformations
- Science and Technology

**Technology**
- Problem-solving and Decision-making Tools

**Math**
- Numbers and Operations
- Measurement

## Procedure:
1. Explain to students that you will be showing them a model of how oil and natural gas form in the ocean. A very similar process takes place on land with plants to form coal.
2. Have students wear safety goggles to avoid splashing vinegar water in their eyes. It is harmless but uncomfortable.
3. Have students sprinkle a small amount of sand to cover the bottom of the container. The ocean floor is covered with sediments, and the sand represents these sediments.
4. Next, have students sprinkle "plankton" over the sand, liberally covering the bottom of the container. This represents plankton (microscopic life plant and animal-like creatures called protists) that have died and settled down to the bottom of the ocean.
5. Explain that over time, sediments are deposited on the ocean floor. Students should completely cover the plankton with sand. (You can gently push the sand around with your hands to simulate the pressure and weight the overlaying sediments have on the plankton.)
6. The ocean has water in it, so pour some of the vinegar/water ("ocean" mixture) into the container. Bubbles and foam begin to appear. You can see the bubbles bursting and can hear the gas being released to the air. Point out that this is a sign of a chemical change.



## Discussion:
- Discuss with students that natural gas in the ocean is produced much in the same way as you have modeled, but that the process takes MANY years. In the ocean the plankton is buried under miles and miles of sediments which caused the weight of those sediments to "cook" the plankton under high temperature and pressure. The heat and pressure changes the plankton into oil and natural gas. Natural gas floats on top of the oil produced.
- Discuss how this model is different from real life. The gas produced in the experiment is carbon dioxide rather than natural gas, and since our container is open, the gas escapes into the air. In the ocean, there are usually impermeable layers that keep natural gas and oil trapped beneath the surface until we drill down and release it.



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# Energy for Electricity

## Objective:

Trace the flow of energy from a natural resource to electricity in our homes.

## STEM Connection

**Science**

- Science as Inquiry
- Energy Sources, Forms and Transformations
- Science and Technology
- Personal and Social Perspectives

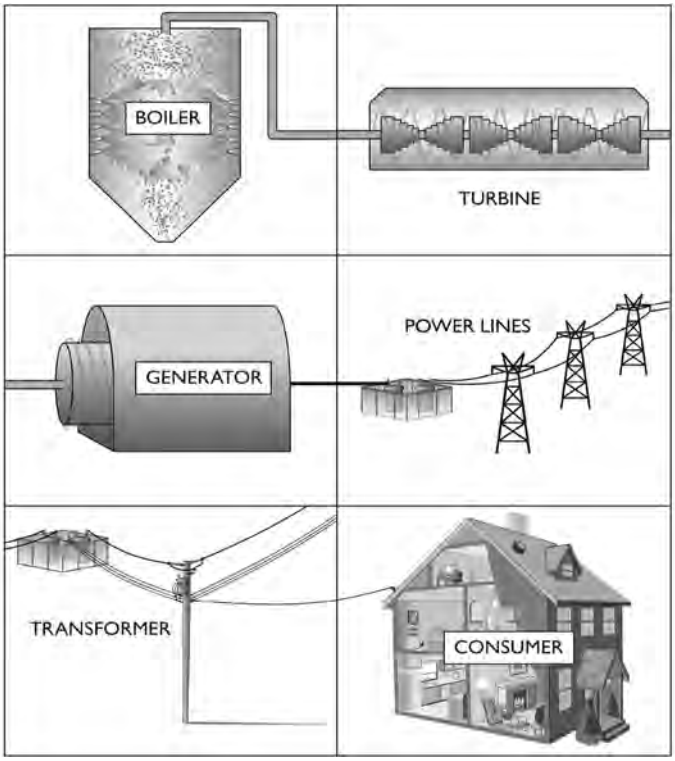
**Technology**

- Research Tools

## Procedure:

1. Ask students how their lives would be different without electricity. Where does electricity come from?
2. Pass out a copy of the "Electrical Generation Puzzle" found on the following page. Have students cut each part of the puzzle (transformer, turbine, generator, boiler, power lines and consumer) into separate pieces. Then, have them take a few minutes to put the puzzle pieces in order from the first to the last step of the process of electrical generation.
3. Go through each puzzle piece, explaining the process of each step:
   - Boiler – converts chemical energy from fuel (fossil fuels, biomass, hydrogen) to thermal energy, changing water to steam
   - Turbine – turned by steam, converting thermal energy to mechanical energy
   - Generator – turned by turbine, rotating coil of wire in a magnetic field, converts mechanical energy to electrical energy
   - Power lines – transmit electrical energy at several thousand Volts
   - Transformer – step-up transformers along the power lines increase voltage periodically; step-down transformers on poles or in yards reduce the voltage to a safe level for use
   - Consumer – converts electrical energy into many forms to run lighting and appliances

Completed puzzle for teacher reference





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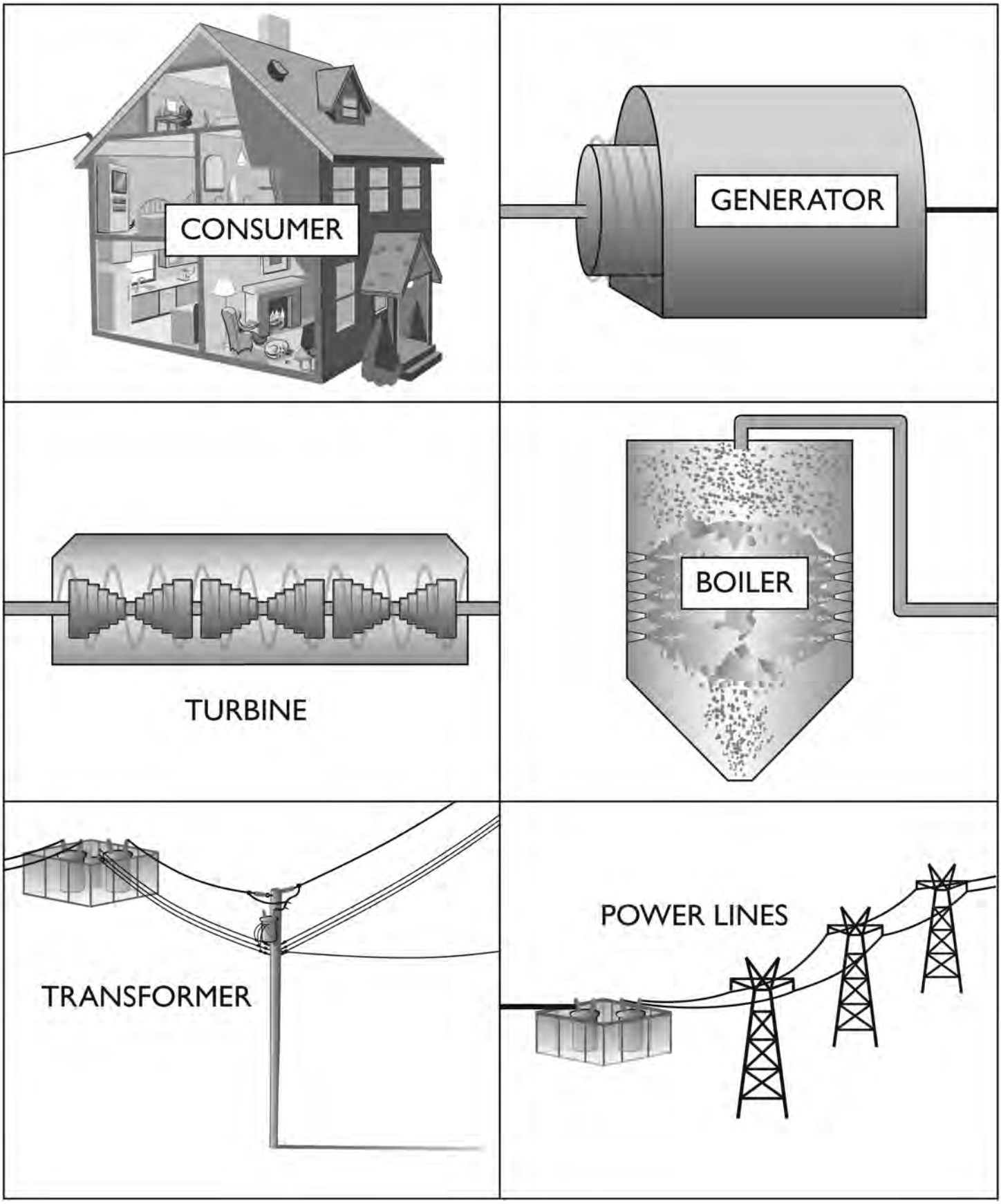
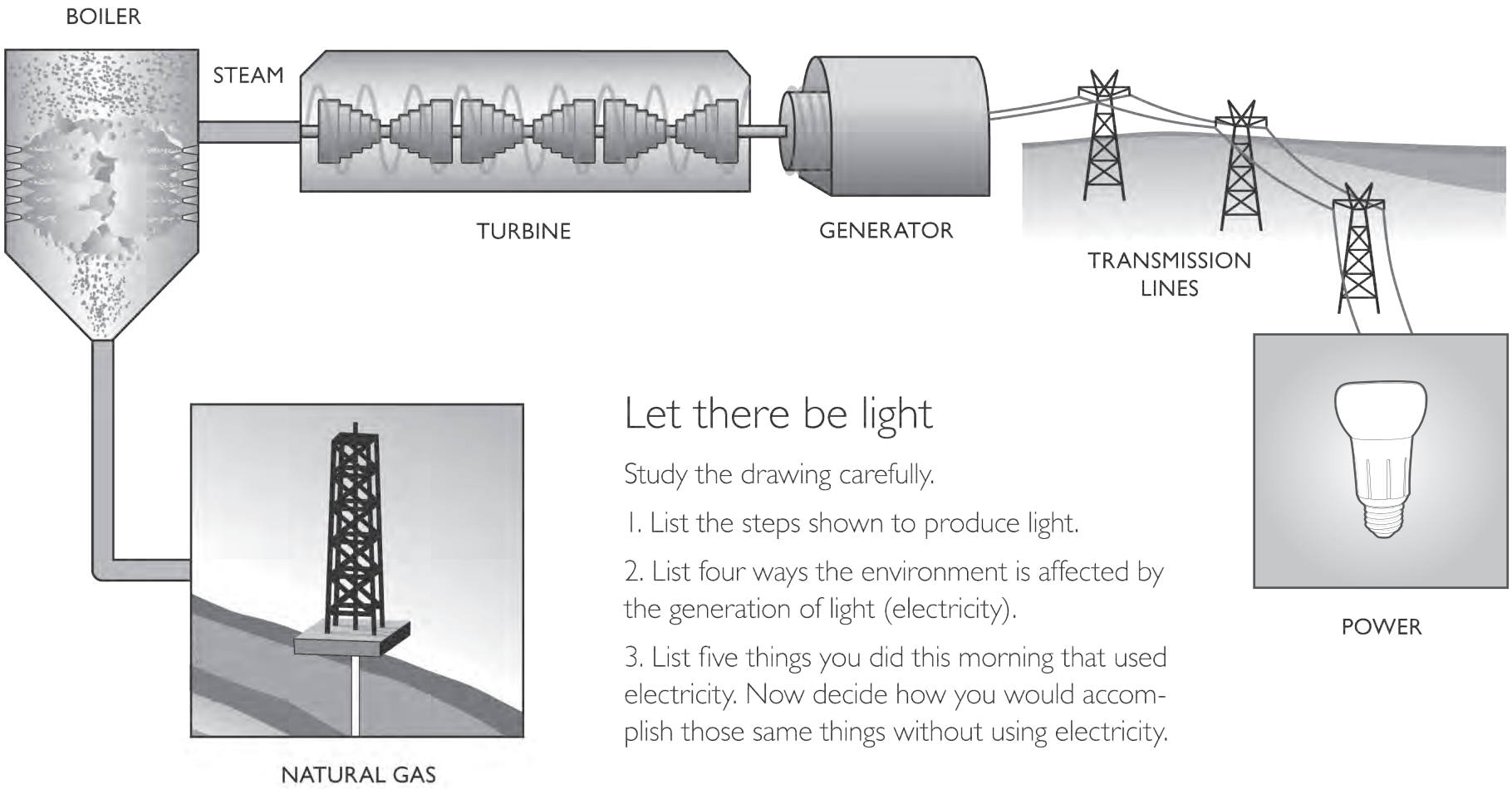

CONSUMER
GENERATOR
TURBINE
BOILER
TRANSFORMER
POWER LINES

# Electrical Generation




## Let there be light

Study the drawing carefully.

1. List the steps shown to produce light.

2. List four ways the environment is affected by the generation of light (electricity).

3. List five things you did this morning that used electricity. Now decide how you would accomplish those same things without using electricity.



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# **Section Three:**
# Be ***watt***smart, Begin at home

### Objective:
To apply the principles of energy efficiency at home by changing habits.

### Vocabulary:
**Shell:** The floors, windows, doors, walls and roof of a building that form a barrier between the indoor and outdoor environment.

**Convection:** Heat transfer in a gas or liquid by currents that circulate from one region to another. Convection works because heated fluids or gases expand, and since they are less dense, rise through the cooler materials around them.

**Conduction:** Heat transfer in a solid or liquid without any motion or flow of matter in the material. Heat is transferred by the motion of molecules and electrons. Higher speed particles from the warmer areas collide with slower ones from the cooler areas, causing a transfer of energy to the slower particles.

**Radiation:** Heat transfer between objects via electromagnetic waves. Photons traveling at the speed of light transfer the heat energy, so the objects do not have to be in contact with each other for heat to be transferred. Radiation can travel through space.

**Insulation:** A barrier that minimizes the transfer of heat energy from one material to another by reducing the effects of conduction, convection and/or radiation.

### Classroom activities:
- "Insulation Tests"
- "How Bright Is Your Light?"
- "Energy in Math"
- "Be wattsmart, Begin at home Poster"

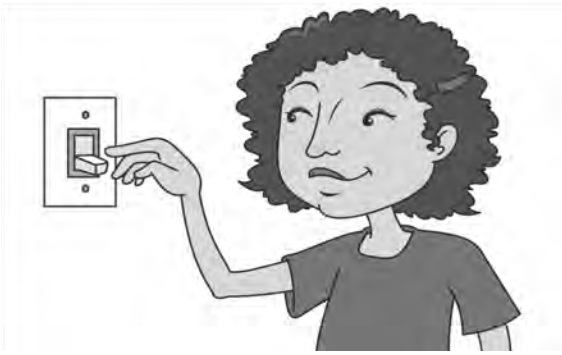
# Energy Challenge

### Discussion:
- What changes does your school need to make to be energy-efficient?

### Optional activity:
- Have students tour the school building to fill out the following checklist:

| | Yes | No |
|---|---|---|
| 1. Are outside doors weather stripped? | ____ | ____ |
| 2. Are windows caulked to prevent air leaks? | ____ | ____ |
| 3. Are lights turned off when no one needs them? | ____ | ____ |
| 4. Is electrical equipment turned off when not in use? | ____ | ____ |
| 5. Are faucets in bathrooms and kitchen areas free of leaks? | ____ | ____ |

### Discussion idea:
- In which of the five areas does your school need the most improvement? How could students assist in making a change?





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# Insulation Tests

## Objective:
To demonstrate the different types of materials that can be used for insulation.

## Materials:
- Thermometer
- Graduated cylinder or measuring cup
- Large jug of water
- Large board or tray
- Baby food jars with lids (one for each material being tested)
- Insulation materials to test: gloves, socks of different materials, other types of clothing, plastic foam, paper, aluminum foil, leaves, etc.

## STEM Connection
### Science
- Science as Inquiry
- Energy Sources, Forms and Transformations
- Science and Technology
- Personal and Social Perspectives

### Technology
- Research Tools
- Problem-solving and Decision-making Tools

### Engineering
- Design and Modeling
- Invention and Innovation
- Test Design and Troubleshooting
- Use and Maintain

### Math
- Numbers and Operations
- Measurement
- Data Analysis and Probability
- Connection to the Real World

## Procedure:
1. On a piece of paper, list all of the materials being tested.
2. Using the jug of water, fill each jar with 120 mL (1/2 cup) of water.
3. Measure the temperature of the water in each jar to make sure they are the same, then put on the lids.
4. Wrap all but one of the jars with the materials being tested. Label the unwrapped jar "control."
5. Place each jar on the large board or tray.
6. Carry the board or tray outside and leave it there.
7. Create a data table to record the beginning and ending temperature of the water in each jar.
8. After a pre-determined amount of time has passed, measure the new temperature of each jar and record the ending temperatures in the data table.
9. Calculate the change in temperature for each jar and add it to the data table. Graph the temperature change for each jar in a bar graph.

## Discussion:
- What materials made the best/worst insulators?
- Could you use these to keep your home warm in the winter or cool in the summer?
- What materials are used in homes for insulation? (fiberglass, blown-in insulation, polyurethane foam, etc.)
- What do good insulating materials have in common? How does insulation work? (They have large pore spaces that block conduction of heat through surfaces.)

## Language arts connection:
Quick write – Based on the information in your data table, give recommendations for insulating a tree house.


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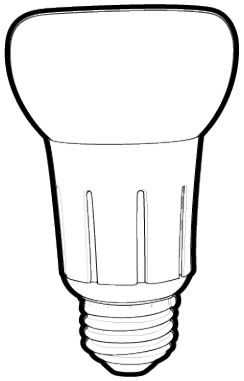
# How Bright Is Your Light?



## Objective:
To demonstrate which lighting sources are the most energy efficient.

## Materials:
- Various light bulbs (incandescent, CFL and LED)
- Lamp or light socket
- Thermometer

## STEM Connection
**Science**
- Science as Inquiry
- Energy Sources, Forms and Transformations
- Science and Technology

**Technology**
- Research Tools

**Engineering**
- Historical Perspective

**Math**
- Numbers and Operations
- Data Analysis and Probability
- Connection to the Real World

## Procedure:
1. Ask students what electrical item is used most often in any building and can also account for a lot of wasted energy (lights).
2. Put each light bulb in the lamp and leave it on for five minutes. Hold a thermometer at a distance from, not touching, the bulbs. Record the temperatures. Which bulb produces the most heat?
3. Not all light sources are created equal. Some are much more energy efficient than others. The least efficient light bulbs are incandescents. These bulbs were invented by Thomas Edison and have changed very little in the last 100 years. Incandescent bulbs get very hot when they are turned on because about 90 percent of the energy that goes into an incandescent bulb is given off as heat instead of light.

   By contrast, the compact fluorescent light, or CFL, uses 75 percent less energy because it gives off less heat. A CFL can last up to 10 times longer. LED bulbs are even more efficient, using 75 – 80 percent less energy than traditional incandescent bulbs and can last as much as 25 times longer.

## Discussion:
- Does your family use energy-efficient CFLs or LEDs? How can heat from an incandescent bulb cause further energy waste during the summer?



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# Energy in Math

## STEM Connection

**Math**

- Numbers and Operations
- Data Analysis and Probability
- Connection to the Real World

1. Jessie saved more energy than Michael. Michael saved more energy than Maggie. Maggie saved less energy than Jessie. Karen saved more energy than Jessie. List the kids' names in order of how much energy they saved, least to most:

   ☐ Jessie, Karen, Maggie, Michael
   ☐ Maggie, Michael, Jessie, Karen
   ☐ Michael, Jessie, Maggie, Karen
   ☐ Maggie, Karen, Michael, Jessie

2. The Maher family used 57,000 gallons of water a year, costing them $525 to heat it. Estimate how much money they would save in a year if they cut their hot water use by 30,820 gallons.

   ☐ $100
   ☐ $240
   ☐ $284
   ☐ $525

3. If each person in a house uses a 60 Watt bulb in their bedroom 4 hours a day, and there are three people living there, how many Watts will be used a day to light their room?

   ☐ 20 Watts
   ☐ 240 Watts
   ☐ 650 Watts
   ☐ 720 Watts

4. For every 10 degrees the water heater setting is turned down, you can save 6 percent of the energy used. If Charles turns his water heater down by 15 degrees, about what percent savings in energy will he save?

   ☐ 6%
   ☐ 9%
   ☐ 12%
   ☐ 15%


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# Energy in Math - Answer key

1. Jessie saved more energy than Michael. Michael saved more energy than Maggie. Maggie saved less energy than Jessie. Karen saved more energy than Jessie. List the kids' names in order of how much energy they saved, least to most:

   ☐ Jessie, Karen, Maggie, Michael
   ■ Maggie, Michael, Jessie, Karen
   ☐ Michael, Jessie, Maggie, Karen
   ☐ Maggie, Karen, Michael, Jessie

2. The Maher family used 57,000 gallons of water a year, costing them $525 to heat it. Estimate how much money they would save in a year if they cut their hot water use by 30,820 gallons.

   ☐ $100
   ☐ $240
   ■ $284
   ☐ $525

3. If each person in a house uses a 60 Watt bulb in their bedroom 4 hours a day, and there are three people living there, how many Watts will be used a day to light their room?

   ☐ 20 Watts
   ☐ 240 Watts
   ☐ 650 Watts
   ■ 720 Watts

4. For every 10 degrees the water heater setting is turned down, you can save 6 percent of the energy used. If Charles turns his water heater down by 15 degrees, about what percent savings in energy will he save?

   ☐ 6%
   ■ 9%
   ☐ 12%
   ☐ 15%



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# Be ***watt***smart, Begin at home Poster

### Materials:
- House poster found on the following page
- Colored markers or pens

### Instructions:
- Add or color the items below. You may want to do different items each day as you cover different topics: electricity, natural gas, water, etc.
- Add a bicycle.
- Add some recycling bins in the garage.
- Add some trees to shade the house.
- Add a ceiling or floor fan to the home for cooling.
- Put a blue star (for ENERGY STAR® products) on the refrigerator, television and furnace.
- Color the energy-efficient shower head.
- Color all items that use electricity, yellow.
- Color the thermostat brown.
- Color the furnace filter that is being changed orange.
- Draw a purple water drop next to all items in the house that use water.

### Language Arts Connection:
Quick write – Write a brief description of the things your family has done to improve the energy efficiency of your home. Add items that you will encourage your family to do in the future.

### Social Studies Connection:
- Choose one natural resource used for energy and create a T-chart or Venn diagram comparing the positive and negative effects of the use of this resource on the physical environment.
- The more efficient your home is, the smaller your carbon footprint. Your carbon footprint is the total amount of carbon dioxide ($CO_2$) and other greenhouse gases you generate annually. The lower your footprint, the better!


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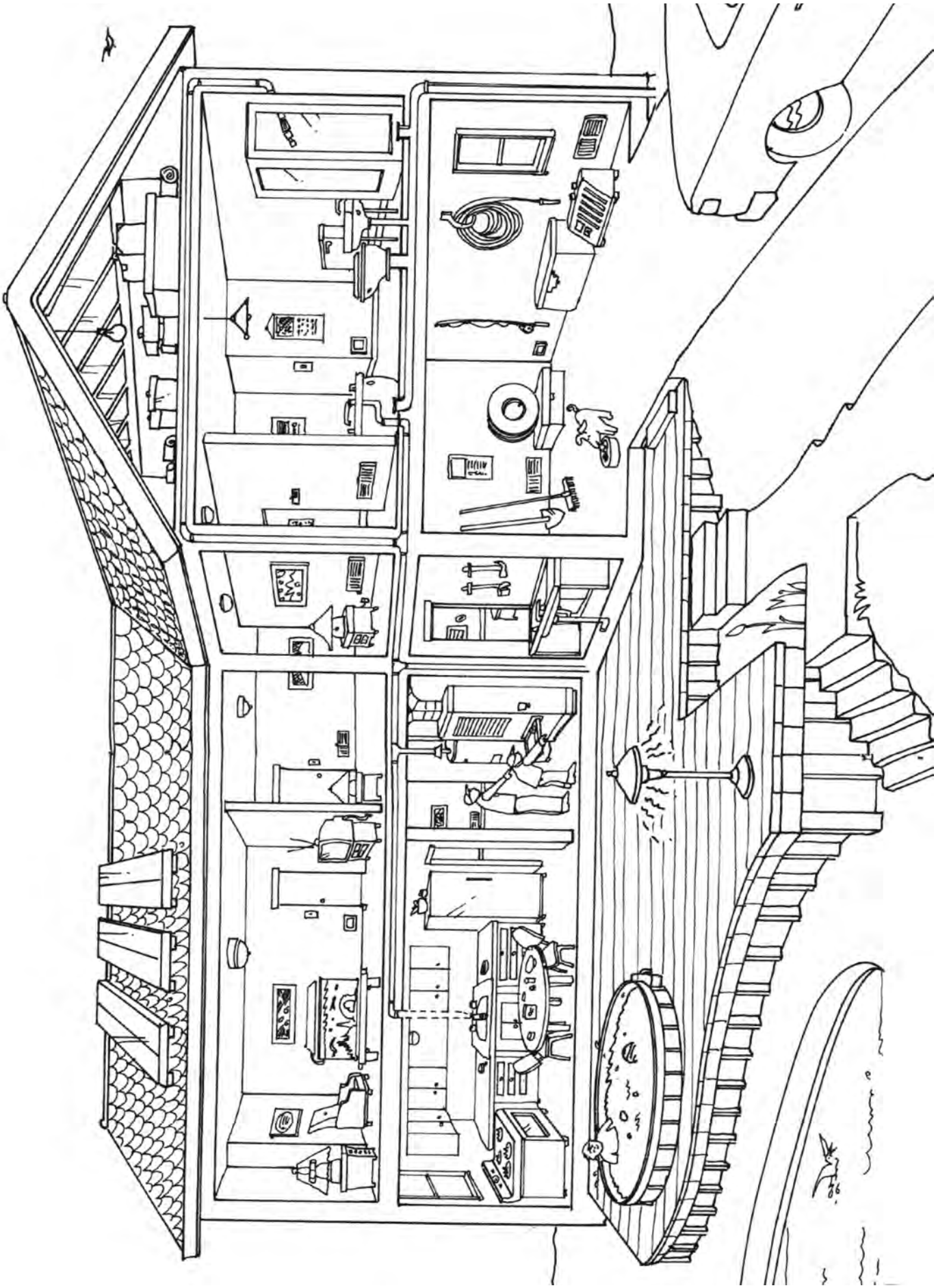

Be **watt**smart

Begin at home

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ROCKY MOUNTAIN POWER

*Let's turn the answers on.*



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*Lingo Card*

| L | I | N | G | O |
|---|---|---|---|---|
| Water Heater | Natural Gas | Natural Resource | Incandescent | Reduce |
| Reuse | Phantom Load | Oil | Coal | ENERGY STAR® |
| Renewable | Energy | Be ***watt***smart Begin at home | Turn It Off! | Uranium |
| Energy Efficiency | LED | Recycle | 68 Degrees | Embodied Energy |
| Cooking | 78 Degrees | Solar | Thermostat | Electricity |

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| L | I | N | G | O |
|---|---|---|---|---|
| Reuse | Natural Gas | Phantom Load | LED | 78 Degrees |
| Cooking | Electricity | Renewable | Recycle | 68 Degrees |
| Natural Resource | Water Heater | Be ***watt***smart Begin at home | ENERGY STAR® | Nonrenewable |
| Embodied Energy | Coal | Energy Efficiency | Heating | Incandescent |
| Thermostat | Reduce | Oil | Solar | Uranium |

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| L | I | N | G | O |
|---|---|---|---|---|
| Coal | Natural Gas | Solar | Turn It Off! | Renewable |
| Water Heater | Nonrenewable | Phantom Load | Electricity | Reuse |
| Energy | Oil | Be ***watt***smart Begin at home | 68 Degrees | Cooking |
| Thermostat | Incandescent | Recycle | Uranium | Natural Resource |
| Reduce | 78 Degrees | Embodied Energy | LED | Energy Efficiency |

http://print-bingo.com

| L | I | N | G | O |
|---|---|---|---|---|
| Natural Resource | Water Heater | Natural Gas | Thermostat | 78 Degrees |
| Turn It Off! | Reduce | Oil | Embodied Energy | Cooking |
| Phantom Load | ENERGY STAR® | Be ***watt***smart Begin at home | Uranium | Recycle |
| Energy | LED | 68 Degrees | Energy Efficiency | Heating |
| Electricity | Renewable | Incandescent | Reuse | Solar |

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| Be ***watt***smart, Begin at home | | Teacher Guide Activities | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Essential Academic Learning Requirements** | **Utah 5th Grade Correlations** | Energy Challenge - Embodied Energy | Conservation Cookie | Pass the Sack | Energy Ticket | The Search for Energy | Energy Challenge- Recycling | Where do Fossil Fuels Come From? | Energy for Electricity |
| **Science** | **Topic** | p.3 | p.4 | p.5 | p.6 | p.8 | p.9 | p.10 | p.11 |
| **Intended Learning Outcomes (ILO): 1 - 6** | Scientific process, experimentation, measurements, observations, conclusions, communication, how science affects life | 1a,b,d; 5a | 1a,b,d,f,h,i; 2a,c,e; 3a,b; 4a-c,e; 5a | 1a,b,d,f,h,i; 2a,c,e; 3a,b; 4a-c,e; 5a | 1a,b,d,f,h,i; 2a,c,e; 3a,b; 4a-c,e; 5a | 1a,b,d,f,h,i; 2a,c,e; 3a,b; 4a-c,e; 5a | 1a,b,d,f,h,i; 2a,c,e; 3a,b; 4a-c,e; 5a | 1a,b,d,f,h,i; 2a,c,e; 3a,b; 4a-c,e; 5a | 1a,b,d,f,h,i; 2a,c,e; 3a,b; 4a-c,e; 5a |
| **Standard 1: Chemical Change** | Evidence of a chemical reaction, daily life example, compare to physical change | | | | | | | 3c,d | |
| **Standard 4: Electricity** | **Objective 2:** Behavior of current electricity | | | | | | | | |
| **Earth Day Every Day** | Classroom and community projects improve local environment | X | X | X | X | X | X | | |
| **Social Studies** | | | | | | | | | |
| **Standard 5: US Role as a World Power** | **Objective 3:** Current world issue and how the U.S. can be part of the solution | | 3b | 3b | 3b | 3b | 3b | | |
| **Math (Common Core)** | | | | | | | | | |
| **Number and Operations in Base Ten** | Operations with multi-digit whole number and with decimals to hundredths | | 5.G.A.2 | | 5.G.A.2 | 5.G.A.2 | | | |
| **Language Arts (Common Core)** | | | | | | | | | |
| **Reading** | Reading for information, speaking and listening | SL.5.1 | SL.5.1 | SL.5.1 | SL.5.1 | SL.5.1 | SL.5.1 | SL.5.1 | SL.5.1 |
| **Writing** | Writing for effective communication | | | | W.4.3 | | | | W.4.3 |


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| Be ***watt***smart, Begin at home | | Teacher Guide Activities | | | | | Student Activities | | Posters | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Essential Academic Learning Requirements** | **Utah 5th Grade Correlations** | Energy Challenge-Energy Efficient | Insulation Tests | How Bright Is Your Light? | Energy in Math | Be ***watt***smart, Begin at home Poster | Presentation Information | Student Booklet | Bright Ways to Save Energy Poster | Electrical Generation Poster |
| **Science** | **Topic** | p.14 | p.15 | p.16 | p. 17 | p. 19 | | | | |
| **Intended Learning Outcomes (ILO): 1 - 6** | Scientific process, experimentation, measurements, observations, conclusions, communication, how science affects life | 1a,b,d; 5a | 1a-d,f,h,i; 2a,c,e; 3a,b; 4a-c,e; 5a | 1a-d,f,h,i; 2a,c,e; 3a,b; 4a-c,e; 5a | 1a,b,d; 5a | 1a,b,d; 5a | 1a,d,f,h,i; 2a,c,e; 3a-c; 4b; 5a | 1a,b,d,f,h,i; 2a,c,e;3a-c; 4a-c,e; 5a; 6c | 1a,b,d; 2a,e; 3a,b; 4a-e; 5a | 1a,b,d,f,h,i; 2a,c,e; 3a,b; 4a-c,e; 5a |
| **Standard 1: Chemical Change** | Evidence of a chemical reaction, daily life example, compare to physical change | | | | | | | | | |
| **Standard 4: Electricity** | **Objective 2:** Behavior of current electricity | | | | | | 2a,c-e | | | 2a,c-e |
| **Earth Day Every Day** | Classroom and community projects improve local environment | X | X | X | | X | X | X | X | X |
| **Social Studies** | | | | | | | | | | |
| **Standard 5: US Role as a World Power** | **Objective 3:** Current world issue and how the U.S. can be part of the solution | | | | | 3b | 3b | 3b | 3b | |
| **Math (Common Core)** | | | | | | | | | | |
| **Number and Operations in Base Ten** | Operations with multi-digit whole number and with decimals to hundredths | 5.G.A.2 | 5.G.A.2 | 5.G.A.2 | 5.NBT.B.5 | | | 5.NBT.B.5 | | |
| **Language Arts (Common Core)** | | | | | | | | | | |
| **Reading** | Reading for information, speaking and listening | SL.5.1 | SL.5.1 | SL.5.1 | | | RI.5.6 | RI.5.6 | RI.5.6 | RI.5.6 |
| **Writing** | Writing for effective communication | | W.4.3 | | | W.4.3 | | | | |

# Be **watt**smart
## Begin at home

Dear Parent(s),

Today your child participated in the **Be wattsmart, Begin at home** program sponsored by Rocky Mountain Power. In this engaging presentation, your student learned key concepts of his or her science curriculum as well as important ways to be more efficient with energy use at home.

As part of the **Be wattsmart, Begin at home** program, your child received a:

- **Be wattsmart, Begin at home** booklet
- *Home Energy Worksheet*

Please take a moment to read through this informative booklet with your student. Then, fill out the *Home Energy Worksheet* and return it to your child's teacher. To thank you, Rocky Mountain Power will provide your student with a wattsmart nightlight.

We appreciate your efforts to reinforce important **Be wattsmart, Begin at home** energy knowledge and efficiency actions in your home!

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# Program Evaluation

Teacher Name: _____

School: _____

Sponsor: Rocky Mountain Power

Be **watt**smart
Begin at home

In an effort to improve our program, we would like your assessment of Be ***watt***smart, Begin at home. Please take a few minutes to fill out this evaluation form. Upon completion, please return the form in the postage-paid envelope along with the student *Home Energy Worksheets* you collected and the sponsor *Thanks a "Watt!" Card*.

Please mark the box that best describes your opinion.

| | Strongly Agree | Agree | Disagree | Strongly Disagree |
|---|---|---|---|---|
| The materials were attractive and easy to use. | ☐ | ☐ | ☐ | ☐ |
| The materials and activities were well-received by students. | ☐ | ☐ | ☐ | ☐ |
| The materials were clearly written and well-organized. | ☐ | ☐ | ☐ | ☐ |
| Students indicated that their parents supported the program. | ☐ | ☐ | ☐ | ☐ |
| Presenters were able to keep students engaged and attentive. | ☐ | ☐ | ☐ | ☐ |

If you had the opportunity would you conduct this program again? ☐ Yes ☐ No

Would you recommend this program to other colleagues? ☐ Yes ☐ No

In my opinion, the thing students liked best about the materials/program was:

One thing I would change would be:

WAT UT

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ROCKY MOUNTAIN POWER
*Let's turn the answers on.*

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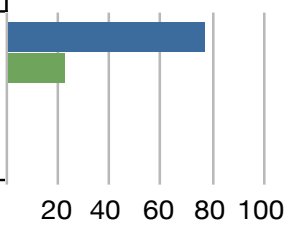
***Watt*smart Rocky Mountain program**
**Program Evaluation Summary Report**

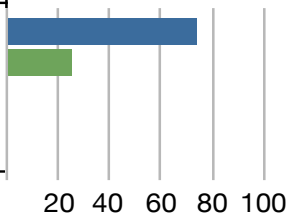
Materials were attractive and easy to use.

| Response | Frequency | Percent |
|---|---|---|
| Strongly agree | 243 | 77.1% |
| Agree | 72 | 22.9% |
| Disagree | 0 | 0.0% |
| Strongly disagree | 0 | 0.0% |
| No response | 0 | 0.0% |



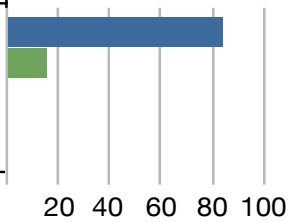

Materials and activities were well received by students.

| Response | Frequency | Percent |
|---|---|---|
| Strongly agree | 233 | 74.0% |
| Agree | 81 | 25.7% |
| Disagree | 0 | 0.0% |
| Strongly disagree | 0 | 0.0% |
| No response | 1 | 0.3% |



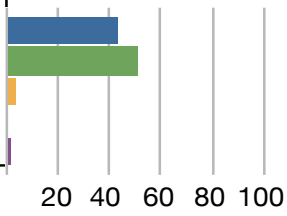

Materials were clearly written and well organized.

| Response | Frequency | Percent |
|---|---|---|
| Strongly agree | 264 | 83.8% |
| Agree | 50 | 15.9% |
| Disagree | 0 | 0.0% |
| Strongly disagree | 0 | 0.0% |
| No response | 1 | 0.3% |



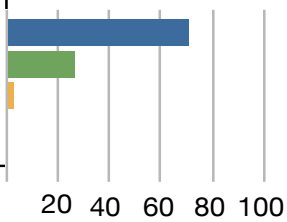

Students indicated that their parents supported the program.

| Response | Frequency | Percent |
|---|---|---|
| Strongly agree | 136 | 43.2% |
| Agree | 161 | 51.1% |
| Disagree | 12 | 3.8% |
| Strongly disagree | 0 | 0.0% |
| No response | 6 | 1.9% |




Presenters were able to keep students engaged and attentive.

| Response | Frequency | Percent |
|---|---|---|
| Strongly agree | 223 | 70.8% |
| Agree | 83 | 26.3% |
| Disagree | 7 | 2.2% |
| Strongly disagree | 1 | 0.3% |
| No response | 1 | 0.3% |





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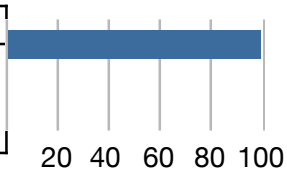
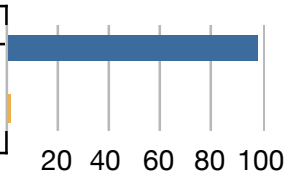
If you had the opportunity, would you conduct this program again?

| Response | Frequency | Percent |
|---|---|---|
| Yes | 313 | 99.4% |
| No | 0 | 0.0% |
| No response | 2 | 0.6% |




Would you recommend this program to other colleagues?

| Response | Frequency | Percent |
|---|---|---|
| Yes | 309 | 98.1% |
| No | 0 | 0.0% |
| No response | 6 | 1.9% |



## In my opinion, the thing the students liked best about the materials/program was:

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| Activities they were involved in. |
| All of it! I think it was one of the best presentations I have ever seen. It fit our curriculum and was a great add on. |
| All of it. |
| All the interactive parts, for example, the closed circuit, the power generation line, and Lingo. |
| Awareness brought to students. |
| Being able to participate. |
| Being able to participate. |
| Being involved! |
| Calling students up, the Lingo game, videos, and everything interactive. Thank you! This program has improved in so many ways. Thank you for making it tailored to the age group with he activities and learning methods. |
| Completing circuits with the tube thingy. Open/closed circuit. |
| Connecting the circuit while holding hands. |
| Creating the circuit. |
| Creating the human circuit, Lingo, and cartoon man in the videos. |
| Different sources of electricity. The presenters were engaging and did a wonderful job! |
| During our discussion they realized that they could make a huge difference. |
| Engaging powerpoint and slides. |
| Everything! |
| Excellent group participation and interest due to the information, activities, and involvement from presenters. |
| Fantastic program! The human circuit was a big hit. The visuals were also great. I like how you related the big picture to their everyday lives. |
| Finding ways they can make a difference in their world. |
| Getting a light when they brought their survey back. |
| Getting the night lights, and they liked the circuit activity too. |
| Getting the night lights. |
| Getting up and involved with LINGO, videos and demonstrations. |
| Good program! They liked the Lingo game. |
| Great interactive activities. |
| Great presenters! I love the games. different modalities in the presentation and presenter enthusiasm. |
| Hands on demonstrations |
| Having the opportunity to complete the worksheet at home and receive a night light. |
| How clear it was and how exciting the material was made by the presenters. They did a great job. |
| How engaging it was! They learned a lot about energy! |
| How interactive the presentation was. |
| How to conserve energy, for example, turn off water when brushing teeth, and turn off the lights. |
| I enjoyed the presentation. They workbook and materials were very effective. |
| I liked having the students participate in the group when the kids were conductors. |
| I loved how involved the students were. The kids loved Lingo! |
| I think any tools we can use to help them become more aware of who to wisely use the energy sources we have been given is beneficial. |
| I think they enjoyed how interactive it was. The energy stick and night lights were a hit! Thank you! |
| I think they loved the interactive video clips. |
| In my opinion the students loved the LINGO game and in keeping with that game they learned new vocabulary and new concepts. They seemed to enjoy the parent home assignment and the night light they received because of completion.<br><br>P.S. I had a student move. |
| Interactive materials<br>Student engagement |
| Involving the students. |
| It gets them thinking about electricity. |
| It gets them thinking thinking about electricity! |
| It helped me as a teacher plan my unit since it is my first year teaching this science core and students liked the content. |
| It is helping students develop a mindset of conservation and using energy wisely in a way they relate to. Interactivity with he students is key. Good job. |
| It is linked to things they need to lear win our curriculum. |
| It made the students think about how much they use electricity in their everyday lives. |
| It ties in with our Utah core standards. |
| It was interactive, hands on, engaging, educational, and relevant. |


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## In my opinion, the thing the students liked best about the materials/program was:

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| It was outstanding! |
| It was well presented and the power point game kept them engaged. |
| Kids love the Lingo game. They also get a kick out of the night lights. |
| Learning about energy and finding places on the large home picture where saving energy could happen. It made them realize they can contribute at their level. |
| Learning the facts about being Wattsmart at home. |
| LINGO |
| Lingo |
| Lingo<br>Human Circuit<br>Light bulbs for students to keep. |
| LINGO<br>Slim |
| Lingo and getting a night light after they had completed the Home Energy Worksheet. |
| Lingo and the energy stick activity. |
| Lingo and the slideshow are well put together. |
| Lingo and the survey prize. |
| Lingo game and the videos! |
| Lingo game, and electricity open and closed circuits. |
| Lingo was fun. They also liked the night light. |
| Lingo was well liked. |
| Lingo, it kept them interested in learning. |
| Lingo, the night light, and the creating a current. |
| Love that I can apply this information into my curriculum! Love even more that my students refer to it when I ask for an example! |
| Love the interaction from the presenters with the students. |
| Love the program! |
| Loved the bingo game and the night lights. |
| Making a complete circuit and playing Lingo. |
| Making a complete circuit with their friends. They also were really enjoying their night light. |
| Making a human circuit. |
| Making the circuits using the light stick, Lingo, and the slim videos. |
| Making the human circuit, it was a crowd pleaser! |
| Making the sound effects in the presentation. |
| Manipulative are always helpful for students memory of an event or presentation. |
| Many of the kids have commented that they liked the program. They really like the night lights. Some of the kids were surprised at things they learned doing the home survey. They found it to be fun and exciting. As a teach I liked getting materials in advance. |
| My students love the nightlight. The powerpoint was also great, especially the videos. |
| My students loved the light. |
| My students loved your Lingo game and the worksheet. They loving dong "homework" with their parents. |
| Participating in front of the group for the demonstrations and also receiving the night lights for completing the home forms. |
| Participating in the activities, fun power point, and Lingo. |
| Playing Lingo and  making the circuit. |
| Playing Lingo to help them learn the concepts presented. |
| Playing Lingo. |
| Playing Lingo. They loved it! |
| Playing the game. |
| PPT was colorful and great for keeping attention. Kids liked LINGO. Loved the night lights. |
| Presenters were well prepared. Interaction, participation, and the Lingo game. It was a great presentation, students really enjoyed all of it. |
| Showing how the circuit worked. |
| Someone else sharing information with students. |
| Standing together to create a current. |
| Students really love the hands on activities they got to participate in. |
| Talking about renewable and non renewable resources. |
| Thank you! |
| The activities, Lingo, and electrical sticks. |
| The activities. |

## In my opinion, the thing the students liked best about the materials/program was:

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| The activity level was great. Lingo, the demonstrations involving students. |
| The bingo game to stay focused. |
| The Bingo game, the energy stick, and the night light as an incentive to fill out the survey. |
| The Bingo game, the student involvement throughout the presentation. |
| The bingo game. |
| The bingo, the human circuit, and the ability to participate in the learning. |
| The circuit activity. |
| The circuit connecting activity. |
| The circuit stick and Lingo. |
| The circuits the students made. |
| The current, anything interactive was amazing! |
| The demonstrations and Lingo. |
| The demonstrations that involved the students. |
| The demonstrations, especially the human circuit. |
| The demonstrations. My students love to see how it works. |
| The electricity demonstration. |
| The electricity stick and the interaction between the teachers and students. |
| The energy activities where they helped demonstrate an open and closed circuit. Thank you! |
| The energy stick and making a closed circuit. |
| The energy stick that was used to show a complete circuit. |
| The energy stick. |
| The energy stick. |
| The engaging activities and the game atmosphere. |
| The example of a "closed" vs "open" circuit. The reward nightlight. |
| The examples that connected with them, such as phone chargers, water, etc. |
| The experiments and visuals. |
| The favorite activity was making a complete circuit. |
| The fun Lingo game, the videos, and the question and answer session. |
| The fun way to learn about energy and how we need to be wise about the use of it. Loved the lingo. |
| The game. |
| The game. |
| The hands on activities and demonstrations. |
| The hands on activities for students. |
| The hands on activities. |
| The hands on activities. |
| The hands on activities. |
| The hands on activities. |
| The hands on activities. |
| The hands on activities. |
| The hands on activities. Especially when they to to be part of a circuit. |
| The hands on activities/demonstrations-they love getting up and moving and being part of the presentation. |
| The hands on activity and Lingo game. |
| The hands on circuit activity and the night light. |
| The hands on demonstrations. |
| The hands on demonstrations. |
| The hands on experiments. |
| The hands on interaction and Lingo. |
| The hands on materials. |
| The hands on pieces. |
| The hands-on activities were engaging and fun and really helped the students remember the process of getting and using our natural resources. |
| The hands-on activities. |
| The hands-on activities. |
| The high interest of the human circuit and the lingo game were very engaging. |
| The human circuit and getting a nightlight. |
| The human circuit and the night light. |
| The human circuit made with the energy stick. Presenters did a great job modifying for our demographic. They were awesome. |
| The human circuit. |


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## In my opinion, the thing the students liked best about the materials/program was:

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|---|
| The interaction with the presents. The students loved helping and participating. |
| The interactive activities |
| The interactive activities and the Lingo game. |
| The interactive activities with the energy stick. It was very entertaining and fun for the students. |
| The interactive activities. |
| The interactive circuit. |
| The interactive electricity, where they could  make the tube light up by making a complete circuit. |
| The interactive games and pictures. |
| The interactive nature of the program. |
| The interactive presentation kept students engaged with the material. |
| The interactive, engaging presentation. |
| The interactiveness of the presentation really was engaging for the students. And the repetition and the variety of activities was also good. |
| The kids enjoy this program and it fits so well with core curriculum. They really like the Lingo and the circuits. |
| The kids enjoyed touching the energy tube. |
| The kids liked lingo and the funny electric company worker. They thought the night lights were great. |
| The kids loved the activities! The "buy-in" was great! |
| The kids really enjoy earning a night light. Thanks! That was so fun! |
| The ladies presented a very engaging, informative lesson in a fun and interesting way! |
| The Lingo and circuit circle. |
| The Lingo cards, they kept the kids focused. |
| The lingo cards. |
| The Lingo game and the two activities. |
| The Lingo game helped them retain what was taught to them. |
| The Lingo game kept students engaged in learning. |
| The lingo game kept them with the presenters. The pace kept the students attention. |
| The Lingo game to keep them engaged, and the night light for completing the home worksheet. |
| The lingo game was great, and the energy stick was very interesting. |
| The lingo game, and it flowed really well. The students enjoyed the program. |
| The Lingo game, it kept them very engaged. |
| The Lingo game. |
| The Lingo game. |
| The Lingo game. |
| The lingo game. |
| The lingo game. |
| The Lingo game. |
| The Lingo game. |
| The Lingo game. I think you could create a great cahoots with this material and really keep the students engaged. |
| The Lingo game. They didn't like the "big head guy", thought he was too childish. |
| The loved the demonstrations. |
| The magic created by the science experiments and the hands on enrichment experiments. |
| The night light and Lingo. |
| The night light and the interaction. |
| The night light of course. The colorful home handout packet, and the current stick experience. |
| The night light. That was a big influence in bringing back their papers. |
| The night lights and making a complete and incomplete circuit. |
| The night lights. |
| The night lights. |
| The nightlight opportunity, the videos and a variety of activities, along with the the  Lingo game. |
| The open and closed conductor experiment. |
| The opportunities for the students to participate in the hands-on activities during the presentation. |
| The opportunity to  make circuits comparing different conductors. |
| The participation with the presenters. |
| The powerpoint, hands on learning, and Lingo. |
| The presentation and getting a night light. |
| The presentation had lots of information, but it moved quickly along. They loved making the human circuit. |
| The presentation was bright and colorful. The interactive component with the lingo card was great! |
| The presentation was engaging and they liked Lingo of course. The interactive elements were really interesting and involving. Thank you! We love it when you come! |

## In my opinion, the thing the students liked best about the materials/program was:

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| The presenters knew how to hold the students attention. The assembly taught the science core in a way my students will remember. Amazing! |
| The presenters were upbeat and positive. The kids loved it and learned a lot. Thank you! |
| The program is wonderful for the students. The students loved getting the night light. Presenters did a great job. |
| The reward. |
| The role play of how the gas goes from the ground to their house. They also love making the human circuit. |
| The search definition bingo cards were a hit. |
| The student participation in completing a circuit and the bingo game. Great visual aids. |
| The students and teacher loved the complete circuit experiment the most! The way the two ladies kept changing turns talking. |
| The students enjoyed learning about electricity and energy. They liked doing the Lingo game, and being involved in the energy chain. They were excited to get the night light when they brought back they surgery. Thanks! |
| The students enjoyed learning about power and how we get it. |
| The students enjoyed making a circuit and experimenting with them as conductors of electricity. Also, the lingo game was a fun way to break up the presentation. Great presentation! Thanks. |
| The students enjoyed the experiments, especially the closed circuit. The students also enjoyed the Lingo game. |
| The students enjoyed the hands on learning experience. |
| The students enjoyed the presentation and of course being able to earn a night light. |
| The students enjoyed the presentation. They were engaged with the Lingo game and the electrical circuits activity. The students had positive comments about their home energy worksheet. Thank you! |
| The students learned about phantom loads and a lot of the rest of it ties into our electricity unit. |
| The students liked playing the bingo game and the light wands that went on when they made a circuit. |
| The students liked putting their hands together and the light stick. |
| The students liked that it was interactive. |
| The students loved being in a large group and creating an open or closed pathway. They also enjoy the night lights. |
| The students loved doing the human circuit. They also enjoyed playing Lingo. I think that the presenters did a great job asking the students questions to see what they know. |
| The students loved getting the opportunity to participate in the demonstrations. |
| The students loved making the circuit and being a part of the activities. |
| The students loved the "Big Circle Circuit" activity. It amazed them that they could be energy conductors! |
| The students loved the demonstrations. |
| The students really enjoyed the lingo game and making a human circuit with the energy stick, |
| The students really enjoyed the Lingo game during the presentation. |
| The students really liked the energy stick and the discussion of open and closed circuits. They also liked being able to apply energy use to their everyday lives. |
| The students thought it was really cool when the presenters made the human circuit. They also liked the videos. |
| The students were engaged and learning. |
| The video clips<br>the LINGO card<br>The energy stick activity |
| The videos and the electricity demonstration. |
| The videos in the presentation and the energy stick. |
| The videos, Lingo, closed circuit activity, and moments to pause and talk about what they learned. |
| The videos. |
| The videos. |
| The whole presentation was organized, engaging, and presented in an interesting way! |
| The whole presentation. |
| The women are very engaging and the students loved the hands on demonstrations they did. They also loved Lingo! |
| They liked the hands on activities and the lights. |
| They could relate to what the presenters were teaching and informing them. |
| They enjoyed completing the circuit with the light they held. It was great to bring back to their memory when we discussed conductors. |
| They enjoyed playing Lingo throughout the presentation and enjoyed being a human conductor for the circuit. |
| They enjoyed the bingo game. |
| They enjoyed the hands-on activities and the night lights. |
| They enjoyed volunteering. |
| They got to participate in the program. The ladies did a great job. |
| They like the hands on, and the connection it made to science. |


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## In my opinion, the thing the students liked best about the materials/program was:

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| They liked participating in the activities and they enjoyed Lingo. I think they learned a lot, thank you! |
| They liked playing Lingo. They liked Slim and the video. |
| They liked the demonstrations with the volunteers, especially the part where they formed the human circuit. |
| They liked the game but the students would get out of control every time they marked a word. We will try better next time. |
| They liked the game that they played. They also liked the electric circuit that was created. |
| They liked the hands on parts best. |
| They liked the presentation, playing Lingo, and they liked earning the night light. |
| They love the group experiments, and the human circuit! |
| They loved all things hands on! |
| They loved being a part of the program as volunteers and building a circuit. |
| They loved doing the stand in a circle and complete the circuit activity. They also liked getting the lights for the survey. |
| They loved having "parent homework" and being able to get the night light. It was also great the presenters had enough energy sticks that all 90 kids got to have a hands-on experiment. |
| They loved how interactive the presentation was with the bingo game and demonstrations. |
| They loved its when they got to participate. |
| They loved learning about electricity and are now very excited for our electricity unit. |
| They loved Lingo. The powerpoint was effective. |
| They loved making electricity in a circle. |
| They loved the electricity sticks and learning about where power comes from. |
| They loved the experiment for open and closed circuits. |
| They loved the game and getting the night light. |
| They loved the hands on demonstrations. The static tubes were a huge hit, the students talked about them after the assembly. |
| They loved the Lingo game. The interactive game was fun. We all loved how enthusiastic the presenters were. |
| They loved the nightlight and the prospect of getting a class pet with the dollars they earned returning the survey and participating in the activities. |
| They loved the powerpoint presentation and of course, the night light. They also liked the discussion with their parents and the correlation of the presentation to what we are learning in class. |
| They really enjoyed the presentation and the night lights were a real draw. |
| They really liked the closed circuit light up activity. |
| They really liked the lingo game, short videos, and hands on participation. |
| They they got to get up and be involved. |
| This was the best presentation yet! It followed our fifth grade core and taught them about electricity and how it worked along with conserving energy. |
| To se the light go on and off. |
| Using Lingo during the presentation kept students engaged. |
| Very age appropriate and engaging for all. |
| Very student interactive, they loved the connectors, perfect for the kids! |
| We do this every year and love it! |
| When students were in a circle and electricity passed through-circuit.<br>LINGO game throughout presentation |
| When the presenters showed the closed and open circuit experiment. That had the most impact. |
| When they were shown how their bodies were conductors of energy. |
| Your presentation is very engaging and my students learned a lot in a short amount of time. We definitely appreciate the money incentive, it helps our classroom. |

## In the future, one thing I would change would be:

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| A bigger picture to show how the energy travels, it was difficult to see on the slideshow. |
| A couple times prisoners moved on while students were still talking. Don't be afraid to wait until all students are respectful. |
| A few more hands on activities during the presentation would help the students be more engaged. |
| A model of a house with a wording circuit would be cool. |
| A model of a house with a working circuit would be cool. |
| Add a few more just "fun" pages to the activity book. |
| Allow all students to participate in hands on demonstration. Many checked out while the few students got to participate. |
| Allowing more than 12 kids to do the demonstrations. |
| An attention getter when students talk too much. Like you say "watt", the students respond with "smart" and are expected to be quiet after, just a thought. |
| An hour is a little long for 5th graders, but great information. |
| As a presenter, do not talk down to them as if they are little kids. They are but, but 5th graders hate being talked to as if they are little. More hands on. |
| Could be cool to have a review video that we could watch as a class after we got our papers in. |
| Different Lingo cards. |
| Do presentation with a smaller group. Instead of 4 classes, do 2 classes. |
| Even more clear, nailing the main points so it is more memorable to the student. |
| Even more curriculum fitting the Utah core science standards. |
| Even more interaction. |
| Every went really smoothly. The presenters were excellent. |
| Excellent program and presentation! |
| Find a way to get them involved more (less time in between activities) |
| For the first time I had parents contact me about why they are collecting family data through children and what the school gets out of it. |
| Get the kids to laugh, like joke or have the presenters do something memorable. |
| Giving students enough time to answer the questions. They didn't want more than 1-2 seconds before asking for an answer. So the same quicker students always answered the questions. Students don't process information as quickly as adults do. |
| Have a shorter presentation. |
| Have it later in the year as a review. Some of the information and activities have spoiled my inquiry based lessons. |
| Have students be sure to not have Lingo and pencil within reach during not the Lingo time. |
| Have two sessions so more students could be involved and less management issues. |
| I can't think of anything at this time. |
| I can't think of anything right now. |
| I could not get my students to turn in 80% of the surveys, even after passing them out a couple of times and bribes. |
| I had a substitute this day, she said you did a fabulous job. |
| I liked it. |
| I love this program, its very informative. I wouldn't change anything. |
| I think it is great! It really made students think how to save energy. |
| I think it was just right! |
| I thought everything was great. The program gets a little bit better every year. |
| I thought it was great! Anything interactive is always fun!! |
| I thought the program was engaging enough and education enough to warrant another 5 to 10 minutes. However, the materials given to us as teachers could help us give and provide additional instructions. |
| I wish the pamphlet had students activity pages instead of just info. |
| I would add more hands on activities. |
| I would change nothing! Our presenters were prepared, organized, and entertaining. They looked very professional and knew exactly what they were talking about. The pace of the program was great! |
| I would change up the pacing a bit. There were a few times of to slow and pace when presenting. |
| I would have had it in a room outside the classroom and maybe earlier in the day. |
| I would make better use of the activities in the teacher guided to supplement the presentation. |
| I would not change anything! Well done! |
| I wouldn't change anything. |
| I wouldn't. |
| I'm sure everything can be improved or at least tweaked, but if this were done the same way it would be great. |
| If you had the ability to use your presentation on a SMART Board it might be easier for you. |
| In title 1 schools, it might benefit the lower income students to have 2 different sessions of this program. A lot of students had problems discussing this with families. |


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## In the future, one thing I would change would be:

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|---|
| Include more engagement strategies for all students. |
| It could be bit shorter. |
| It was a great program, don't change a thing. |
| It was all great. |
| It was excellent! Thank you. |
| It was great! |
| It was great! |
| It was too long. One hour is too much out of the day and the students lost focus! |
| It's such an informative experience that I wish we could do it later in the year, closer to end of year testing. |
| Just an idea. It was great already...<br>It would be fun to see a larger variety of items that can be tested as to its ability to conduct electricity. |
| Keep making as many connections to the core as possible. |
| Keep them a little more engaged, videos, and more hands on activities. |
| Keeping students engaged better near the end of the presentation. |
| Last year all of the kids got to participate in the human circuit but that didn't happen this year. |
| Less creepy mascot. |
| Let each child answer to a partner so they feel hear. Then bring them back and call on one. |
| Lingo does not seem very effective. |
| Make it a little longer with more time for each student to try things out. |
| Make it a little shorter. It lost the students engagement towards the end. |
| Make sure presenters talk of 5th graders, not 1st graders. Also keep gift/treat for returning surveys a surprise. |
| Make sure they are paying attention, and being respectful. Paper and pencils being used also require good management. |
| Make the posters less cartoonish so they can relate to real life. |
| Make the presentation shorter. |
| Management and expectations need to be outlined to the students so that they know how to act. |
| Maybe even more displays and hands on activities. |
| Maybe I would try to add one more experiment into the presentation. |
| Maybe small prizes for the Lingo game. |
| Maybe use a grant to leave one of those tube thingys with each teacher. |
| Meeting in such a large group diminished the impact of the presentation. Students would have been more engaged in small groups with hands on. |
| More exciting videos to keep students engaged. |
| More explicit directions on the Lingo game. |
| More games. |
| More hands on activities and student participation activities. |
| More interactive activities. |
| More interactive. |
| More student involvement, but overall the program was very well done. |
| More student involvement. |
| Moving all three classes in the same room for the presentation. |
| Natalie was a great presenter, but Gail has a hard time keeping their attention. |
| Next time, I will have the library or gym reserved so students are more comfortable. |
| Nope, love it! |
| Not as long of an assembly. |
| Not one thing! |
| Not one thing! It was fantastic! Best guest presentation ever! |
| Nothing caught my eyes to change. |
| Nothing I can think of, thank you! |
| Nothing it is wonderful . |
| Nothing it was great! |
| Nothing needs to be changed, it is great. Thanks! |
| Nothing really. I wish we could change parent support but we can't. I had some refuse to do the survey, but I talked them into writing their reason on the back of the survey and turning it in. |
| Nothing-it was great. |
| Nothing-we love the program. |
| Nothing, I enjoyed every minute of it. |
| Nothing, I really enjoy it! |
| Nothing, I think the presentation is great! |
| Nothing, I thought it was great! |

## In the future, one thing I would change would be:

| |
|---|
| Nothing, I thought it was great! |
| Nothing, it was awesome! Thanks! |
| Nothing, it was great. |
| Nothing, it was wonderful! |
| Nothing! |
| Nothing! everything was great! |
| Nothing! It was great! |
| Nothing! Presenters, Jan and Peg, were great! My students loved Peg's dancing! |
| Nothing! Thank you! |
| Nothing! We love your program! Thank you very much! |
| Nothing. The presenters took turns which makes the pace seem faster. All the materials are easy to understand. |
| Nothing. This is an excellent program that gets students and their families thinking about power consumption. |
| Nothing. This is an excellent program. The presenters are fantastic and have great rapport and display presentation and enthusiasm. |
| On the Home Energy Worksheet write instructions if you need an X or check mark filled in the box. Some parents did a check mark very lightly or big and I wasn't sure your scanner would pick up the mark. |
| Presenters may want to verify the students understand behavior expectations before presenting. |
| Presenters need an attention grabber to get kids back on track. |
| Probably more hands on activities for the whole class. |
| Some more interaction. |
| Some of the pictures on the presentation were a little small to be seen by a large group. |
| Some of the slides were just read in the presentation and the kids started to loose focus. If they are going to be read, maybe have the students do it. |
| Some smaller group activities for higher engagement. |
| Teach it to smaller groups. |
| Tell the kids there aren't any prizes for winning Lingo ahead of time. Or give a few? |
| Thank you! |
| The "come on" of a contest with a prize when there is no prize for the contest, only a light for returning homework. |
| The amount of students we has was too large. A smaller presentation would have been more beneficial. |
| The audience's behavior. I feel like some students need to show more respect to the presenters.-I am sorry for the poor behavior. |
| The directions for the parents to fill out, some were confused. |
| The documents are so knowledgeable. I feel like the kids would get more out of their presentation if they didn't have to teach to such a large group. Smaller classes would be great. |
| The kids liked the video clips, it would be fun to have a few more of them. |
| The length of the presentation. |
| The presentation was too long. |
| The presenters asked half of their audience about 50 kids to participate in the energy activity. Those who participated, loved it. However, those who were left in the audience couldn't see. They missed out. Also, teachers were asked to join the kids participating. By doing this, teachers couldn't damage control the audience. Next time, do a small group on the stage so everyone can see. |
| The presenters were late, snappy and impatient. It seemed as if they didn't want to be there. |
| The program is a bit long for students. |
| The program is a bit long for students. |
| The time when they came so it would be during our electricity unit. |
| There isn't anything I would change. |
| There really wasn't anything that needs to be changed! |
| They involved a lot of students in the demonstration, but then when they were standing and doing it the students sitting down could see and it made it harder to keep them engaged. |
| They number of ways to help conserve. Children don't usually wash clothes or have control of how food is cooked. Ideas that are extremely applicable work  better. |
| They survey, quite a few parents commented that they thought it asked too many questions. |
| Two presentations instead of one for our large group. |
| use a microphone. |
| Use a microphone. |
| Visit all 5th grade classes, not just one. |
| We enjoyed it! |
| We needed a bigger room. |
| When yo are giving out lots of information, I like you play Lingo. |
| Write how the information from the surveys will be used so the parents are more understanding and less suspicious. |


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## In the future, one thing I would change would be:

Your original email to us went into the junk folder, so we didn't know the kids needed a pencil. We got some, but it took a few minutes.

## *Home Energy Worksheet* (English)

Teacher ID: ☐

Teacher Name: ☐

Be **watt**smart
Begin at home

# *Home Energy Worksheet*

Student First Name: ☐

### Heating

1. Install and use a programmable thermostat.
   ☐ Currently do ☐ Will do
   ☐ Neither
2. Caulk windows and weather strip outside doors.
   ☐ Have done ☐ Will do
   ☐ Neither
3. Inspect attic insulation and add insulation if needed.
   ☐ Have done ☐ Will do
   ☐ Neither
4. Keep furnace air filters clean/replaced regularly.
   ☐ Currently do ☐ Will do
   ☐ Neither

### Cooling

5. Replace existing air conditioning unit with a high-efficiency unit or an evaporative cooling unit.
   ☐ Have done ☐ Will do
   ☐ Neither
6. Close blinds when windows are exposed to the sun.
   ☐ Currently do ☐ Will do
   ☐ Neither
7. Use a fan instead of air conditioning.
   ☐ Currently do ☐ Will do
   ☐ Neither
8. Participate in Rocky Mountain Power's Cool Keeper program.
   ☐ Currently do ☐ Will do
   ☐ Neither

### Water heating

9. Set the water heater temperature to 120 degrees F.
   ☐ Have done ☐ Will do
   ☐ Neither
10. Install a high-efficiency showerhead.
    ☐ Have done ☐ Will do
    ☐ Neither
11. Take 5 minute showers.
    ☐ Currently do ☐ Will do
    ☐ Neither
12. Wash full loads in the dishwasher and clothes washer.
    ☐ Currently do ☐ Will do
    ☐ Neither

### Lighting

13. Replace incandescent bulbs with CFL or LED bulbs.
    ☐ Have done ☐ Will do
    ☐ Neither
14. Turn lights off when not in use.
    ☐ Currently do ☐ Will do
    ☐ Neither

### Refrigeration

15. Replace old, inefficient refrigerator with an ENERGY STAR® model.
    ☐ Have done ☐ Will do
    ☐ Neither
16. Unplug old freezers/refrigerators and/or dispose of them in an environmentally safe manner.
    ☐ Have done ☐ Will do
    ☐ Neither
17. Maintain refrigerator and freezer coils and check door seals twice yearly.
    ☐ Currently do ☐ Will do
    ☐ Neither

### Electronics

18. Turn off computers TVs and game consoles when not in use.
    ☐ Currently do ☐ Will do
    ☐ Neither

### Cooking

19. Use a microwave oven, toaster oven, crock pot or outdoor grill instead of a conventional oven.
    ☐ Currently do ☐ Will do
    ☐ Neither

### Get paid for being *watt*smart

20. Visit Rocky Mountain Power at *wattsmart.com* for more energy-saving tips and rebates.
    ☐ Have done ☐ Will do
    ☐ Neither

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ROCKY MOUNTAIN POWER
*Let's turn the answers on.*

WAT UT


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## *Home Energy Worksheet* (Spanish)

Nombre del Profesor(a): _____

Ser ***watt***smart
Empieza en casa

# Verificación de la Energía Doméstica

Nombre del Estudiante: _____

### Calefacción

1. Instalar y usar un termostato programable.
   ☐ Lo hago ☐ Lo haré ☐ Ninguno
2. Calafatear ventanas e instalar burletes en el exterior de las puertas.
   ☐ Lo he hecho ☐ Lo haré ☐ Ninguno
3. Inspeccionar el aislamiento del ático y agregar aislamiento si es necesario.
   ☐ Lo he hecho ☐ Lo haré ☐ Ninguno
4. Mantener los filtros de aire de la calefacción limpios/ reemplezarlos regularmente.
   ☐ Lo hago ☐ Lo haré ☐ Ninguno

### Enfriamiento

5. Reemplazar la unidad de aire acondicionado existente por una unidad de alta eficiencia o un enfriador evaporativo.
   ☐ Lo he hecho ☐ Lo haré ☐ Ninguno
6. Cerrar las persianas cuando las ventanas estén expuestas al sol.
   ☐ Lo hago ☐Lo haré ☐ Ninguno
7. Usar un ventilador en lugar del aire acondicionado.
   ☐ Lo hago ☐ Lo haré ☐ Ninguno
8. Participar en el programa "Cool Keeper" de Rocky Mountain Power.
   ☐ Lo hago ☐ Lo haré ☐ Ninguno

### Calentadores de agua

9. Programar el calentador de agua a 120 grados F.
   ☐ Lo he hecho ☐ Lo haré ☐Ninguno
10. Instalar una cabezal de ducha de alta eficiencia.
    ☐ Lo he hecho ☐ Lo haré ☐ Ninguno
11. Tomar duchas de 5 minutos.
    ☐ Lo hago ☐ Lo haré ☐ Ninguno
12. Lavar cargas llenas en los lavaplatos y las lavadoras de ropa.
    ☐ Lo hago ☐ Lo haré ☐ Ninguno

### Iluminación

13. Reemplazar los focos incandescentes con focos CFL o LED.
    ☐ Lo he hecho ☐ Lo haré ☐ Ninguno
14. Apagar las luces cuando no estén en uso.
    ☐ Lo hago ☐ Lo haré ☐ Ninguno

### Refrigeración

15. Reemplazar refrigerador antiguo e ineficiente con modelo de ENERGY STAR®.
    ☐ Lo he hecho ☐ Lo haré ☐ Ninguno
16. Desenchufar viejos refrigeradores/congeladores y/o desecharlos de una manera ambientalmente segura.
    ☐ Lo he hecho ☐ Lo haré ☐ Ninguno
17. Mantener la bobina del refrigerador y del congelador e inspeccionar el sello de las puertas de dos veces al año.
    ☐ Lo hago ☐ Lo haré ☐ Ninguno

### Electrónicos

18. Apagar computadoras, televisores y consolas de juegos cuando no estén en uso.
    ☐ Lo hago ☐ Lo haré ☐ Ninguno

### Cocinar

19. Usar un horno microonda, un horno eléctrico, un olla de cocimiento lento o un parrilla de aire libre en lugar del horno convencional.
    ☐ Lo hago ☐ Lo haré ☐ Ninguno

### Reciba paga siendo *watts*mart

20. Visite Rocky Mountain Power en *wattsmart.com* para obtener más consejos y rebajas de ahorro de energía.
    ☐ Lo he hecho ☐ Lo haré ☐ Ninguno

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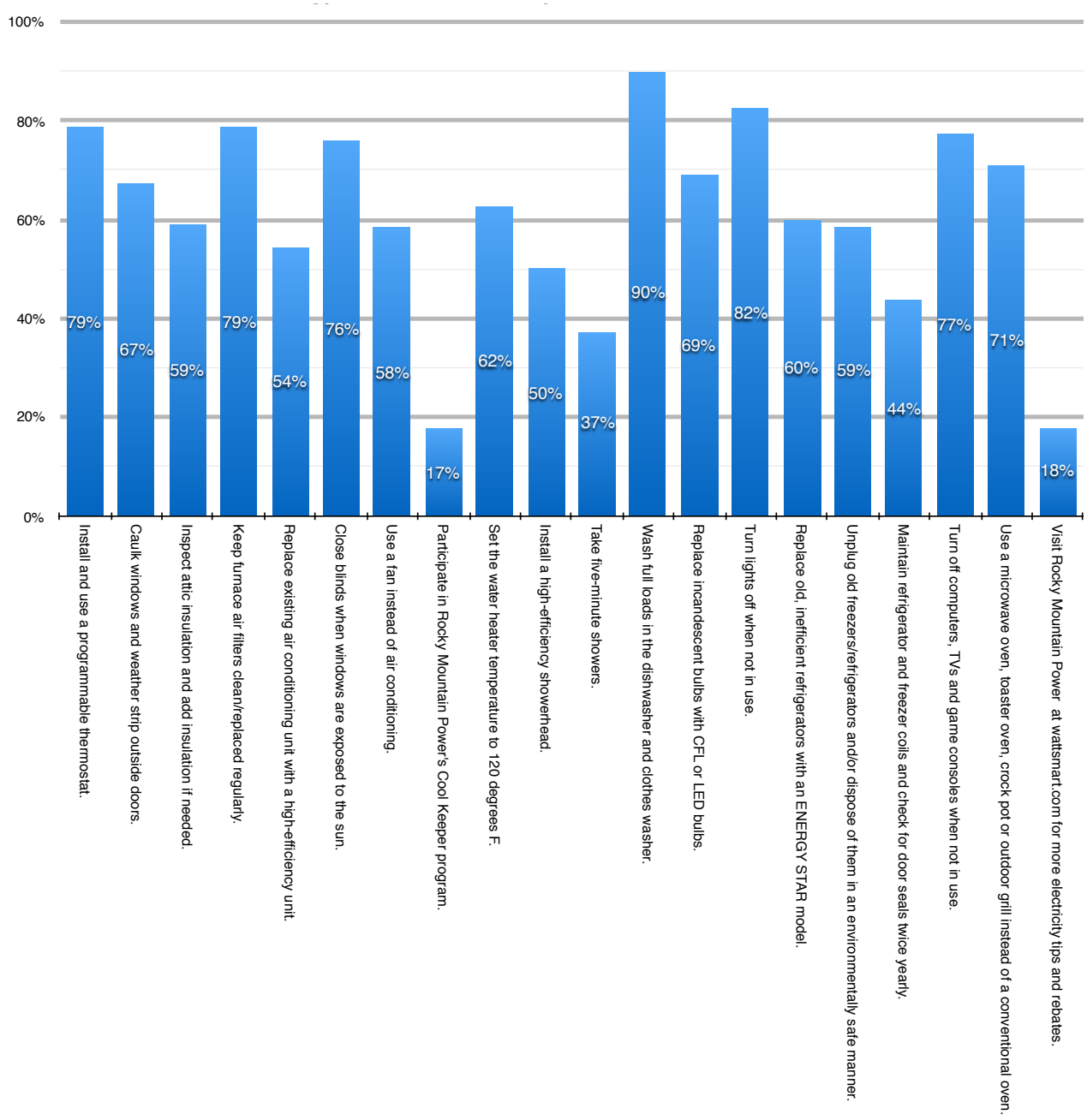
*Hagamos brillar las soluciones.*

# Wise Energy Behaviors in Rocky Mountain Power Utah Homes





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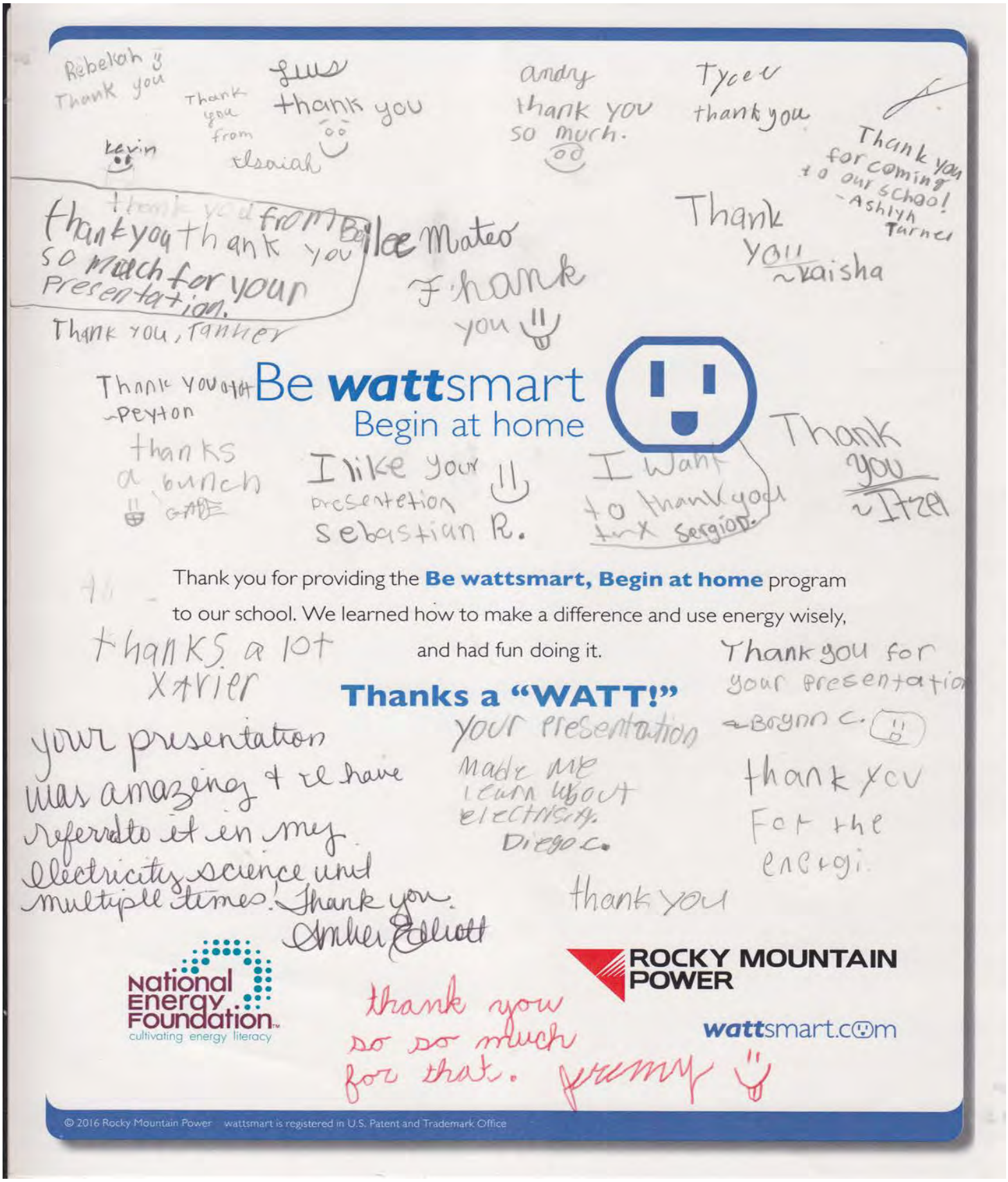
## *Home Energy Worksheet* Summary – Rocky Mountain Power

| Energy Efficient Activity | Currently do/ Have done | Will do | Neither |
|---|---|---|---|
| Install and use a programmable thermostat. | 79% | 10% | 11% |
| Caulk windows and weather strip outside doors. | 67% | 19% | 14% |
| Inspect attic insulation and add insulation if needed. | 59% | 18% | 23% |
| Keep furnace air filters clean/replaced regularly. | 79% | 14% | 7% |
| Replace existing air conditioning unit with a high-efficiency unit. | 54% | 17% | 29% |
| Close blinds when windows are exposed to the sun. | 76% | 12% | 13% |
| Use a fan instead of air conditioning. | 58% | 17% | 25% |
| Participate in Rocky Mountain Power's Cool Keeper program. | 17% | 25% | 57% |
| Set the water heater temperature to 120 degrees F. | 62% | 21% | 17% |
| Install a high-efficiency showerhead. | 50% | 21% | 29% |
| Take five-minute showers. | 37% | 31% | 32% |
| Wash full loads in the dishwasher and clothes washer. | 90% | 5% | 5% |
| Replace incandescent bulbs with CFL or LED bulbs. | 69% | 21% | 10% |
| Turn lights off when not in use. | 82% | 14% | 3% |
| Replace old, inefficient refrigerators with an ENERGY STAR model. | 60% | 17% | 23% |
| Unplug old freezers/refrigerators and/or dispose of them in an environmentally safe manner. | 59% | 16% | 25% |
| Maintain refrigerator and freezer coils and check for door seals twice yearly. | 44% | 38% | 18% |
| Turn off computers, TVs and game consoles when not in use. | 77% | 16% | 6% |
| Use a microwave oven, toaster oven, crock pot or outdoor grill instead of a conventional oven. | 71% | 15% | 14% |
| Visit Rocky Mountain Power at wattsmart.com for more electricity tips and rebates. | 18% | 60% | 22% |

## Sampling of *Thanks a "WATT" Cards*





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Thank you! Mrs Lots

Rebekah

Addie

Gracie

Braidyn

Morgan H.

Andrew

Carsyn

Ashton

Sarah Jane

Kamri Durbin

Be **watt**smart
Begin at home

Jake

Braxton

Averee Campos

thanks Prepan

Brooke!

Thank you for providing the **Be wattsmart, Begin at home** program to our school. We learned how to make a difference and use energy wisely, and had fun doing it. thank you

Buannanade

**Thanks a "WATT!"**

Mason

jaden

Jaxson

Trace

Thomas

Ahlerik

Thank you!

Matthew

Gianna!

Kylie Martinez

Justin

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cameron

ROCKY MOUNTAIN POWER

Bennet

allie

wattsmart.com

Thanks) Madison T!

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Cristian thank you for the night light.

Greyson thank you for giving us night lights and coming to ave school

Thank you! -Lehua Englea

Thank A the Ava night Light

# Be wattsmart
## Begin at home

Thancy by Emanuel

thank you so so much for giving me that night light and teaching our class about electricity and were a wattmonster Mia Sequed

Thank you for showing us what we should do without power. -Braydell

Thank you for providing the **Be wattsmart, Begin at home** program to our school. We learned how to make a difference and use energy wisely, and had fun doing it.

Sam Opdyke thanks

## Thanks a "WATT!"

thanks for teaching us. thanks for the light -Lauren

Thank you for coming to our school and teaching us how to save energy! - Sophia Kenton

Thank you for the high lights! -Stephanie

Led Led Let's go Led AJ

Thank you for those awsome night lights, so now I'm not afraid of the BIG BAD monsters. -Judah

Thank you- Dylan

Thank you for the night lights! -Lena

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Jeremiah

Maggie

Vanessa "Thanks"

Gistlle

Eduardo

Daniela

Brandon

Be **watt**smart
Begin at home

Daysi

Juan!

Whitney

Thank you for providing the **Be wattsmart, Begin at home** program to our school. We learned how to make a difference and use energy wisely, and had fun doing it.

Cesar

**Thanks a "WATT!"**

Kianna

Lexi "thanks"

Thank you so much. you are all so sweet. I learned so much awesome stuff.

Alexis

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Ibah

& Stuff I didn't know

wattsmart.com

Cody

Evelin

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Thank you for the night lights! -Lydia

Your Amazing Cedric aka Skinny noodle

Sebastian Bodily

Dante

thanks -cooper

Thank you for the night lights! Your AMAZing -Mariah Rodriguez

Thanks for the bulb and night light from Connor!

Be **watt**smart
Begin at home

Samuel

Gate

HI Samuel

HI

HI

HI

Thank you for providing the **Be wattsmart, Begin at home** program to our school. We learned how to make a difference and use energy wisely, and had fun doing it.

Thank you for teaching us about electricity! -Devan Davis

## Thanks a "WATT!"

We loved it and learned a LOT! Thanks for the nightlights! ♡ Mrs. Rocchi

Thank you for taking your time to teach us about electricity. -Tanishitp

Hector

We loved you teach us to save

We are so grateful! -SophieNeff

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Thank you so much for coming -Abby

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# Exhibit B

## Creative and News Stories

**wattsmart TV**

- Bike Shop/Bright Future
- Eco Flower
- Sweet Savings
- Weber State University
- Crown Burgers
- Loveland Living Planet Aquarium

**wattsmart radio**

- Smart Power Strips
- Answers from Phil - weatherize/seal air leaks
- Answers from Marty – energy saving answers
- Weber State University energy savings
- Crown Burgers
- Loveland Living Planet Aquarium
- Traffic radio – script

**wattsmart Print**

- Eco Flower
- Program ad for the Utah Governor's Economic Summit – Eco Flower
- Weber State University case study - color | b/w
- Crown Burgers case study – color | b/w
- Loveland Living Planet Aquarium color | b/w
- Genpak case study
- Smart Businesses become wattsmart Businesses
- Be wattsmart. Keep Utah's economy buzzing.
- Powering Utah
- Thank you ad
- Farm Bureau ad
- Incentives for irrigation projects

**wattsmart Outdoor**

Your energy options are growing

**Digital & Facebook**

- Weber State University case study
- Weber State University (animated)
- Weber State University Facebook
- Crown Burgers gallery wrap
- Crown Burgers static
- Crown Burgers Facebook
- Loveland Living Planet Aquarium static
- Loveland Living Planet Aquarium Facebook

**Direct mail**

- wattsmart Starter Kits
- Home Energy Seasonal Report - May
- Home Energy Seasonal Report - December
- Cool Keeper letter and Cool Keeper brochure
- wattsmart Small Business Direct - Postcard
- Midstream lighting direct mail
- Irrigation letter and application

**Email**

- wattsmart Starter Kits
- Office/retail eblast
- Help your business. And the planet. eblast
- Seasonal change eblast for business
- Food service webinar
- Grocery & convenience store eblast
- Lighting incentives for business - eblast
- Take control and save energy - eblast

**Collateral**

- Summer wattsmart handout
- Winter wattsmart handout
- wattsmart Business Brochure
- wattsmart Business Overview
- wattsmart Business Lighting Retrofit process
- wattsmart Business LED instant incentives
- Energy Efficiency Opportunites and wattsmart Business Incentives - Retail / Offices
- Energy Efficiency Opportunities and wattsmart Business Incentives - Grocery / Convenience Stores
- Energy Efficiency Opportunities and wattsmart Business Incentives - Restaurant / Lodging
- Energy Benchmarking

**University of Utah sponsorship creative**

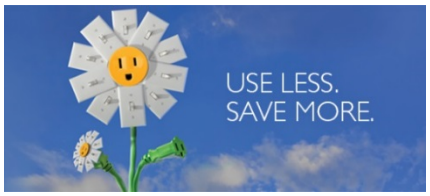
- Football video
- Save your energy for the game – basketball
- Football radio
- Basketball radio

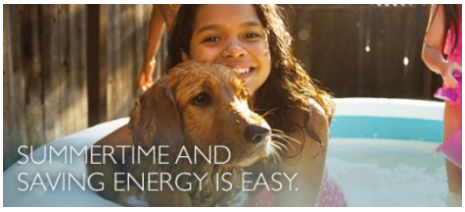
University of Utah LEDs

- Baseline
- Courtside
- Scrolling

**Sample Web Features**

*Imagery on wattsmart.com:*



## Newsletters/Bill Inserts

### Voices Newsletters

- January 2016 – Your day energized
- March 2016 – wattsmart savings spring up at home
- April 2016 – LEDs and more
- July 2016 – Coolest Ways to Save
- September 2016 – Visit the home show to save
- November 2016 – Be wattsmart for winter

### wattsup Inserts

- May 2016 wattsup insert – Summertime, savings time
- October 2016 – wattsup insert – energy efficiency and renewable options

**Bill Inserts**

- Utah Spring Home Show 2016
- Bright Idea for Summit County

**Outer Bill Envelope**

- January 2016
- April 2016

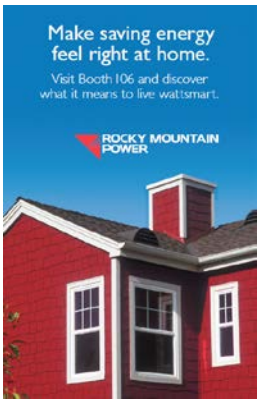
**Energy Insights Newsletters**

- Winter issue
- Spring issue
- Summer issue
- Fall issue

**Photos from** Spring Home Show

**Samples of communications for the Deseret News Home Show – Fall 2016**

*Digital signs at the show*



*Email to Rocky Mountain Power employees*

# You're Invited

Discover home energy solutions

Don't miss this year's Deseret News Fall Home Show at the South Towne Expo Center in Sandy, Utah.

DESERET NEWS HOME SHOW

View the latest in energy-saving products and services and talk with experts from Rocky Mountain Power's wattsmart program about options to save energy and reduce your environmental impact.

Rocky Mountain Power representatives will be at booth #106 in the ENERGY STAR® Center.

**What:** Deseret Fall News Home Show

**When:** Friday – Sunday, October 7-9

**Where:** South Towne Expo Center in Sandy

Employees and customers can get $4 off admission online using the coupon code: wattsmart

Or, print the coupon and receive $3 off at the door. Regular admission is $10 for adults, $7 for seniors and free for children age 12 and under.

The company offers wattsmart energy efficiency programs and renewable energy options, such as the Subscriber Solar program. Learn more about saving energy and sustainable options at wattsmart.com.

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# Confidential Appendix 8
# Confidential Cost Effectiveness
# 2016 Utah Peak Reduction

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