Idaho Energy Efficiency and Peak Reduction Annual Report

January 1, 2019 – December 31, 2019

Issued April 20, 2020

ROCKY MOUNTAIN POWER

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List of Abbreviations and Acronyms

CAPAI	Community Action Partnership Association of Idaho
DSM	Demand-Side Management
EICAP	Eastern Idaho Community Action Plan
GWh	Gigawatt-hour
HVAC	Heating, Ventilation and Air Conditioning
IDHW	Idaho Department of Health and Welfare
IRP	Integrated Resource Plan
kWh	Kilowatt hour
LED	Light-emitting Diode
LIHEAP	Low Income Home Energy Assistance
MW	Megawatt
NEF	National Energy Foundation
PCT	Participant Cost Test
PTRC	PacifiCorp Total Resource Cost Test with 10 percent adder
RIM	Ratepayer Impact Measure Test
SEICAA	South Eastern Idaho Community Action Agency
TRC	Total Resource Cost Test
UCT	Utility Cost Test
VFD	Variable Frequency Drive

EXECUTIVE SUMMARY

PacifiCorp dba Rocky Mountain Power ("Company") is a multi-jurisdictional electric utility providing retail service to customers in California, Idaho, Oregon, Utah, Washington, and Wyoming. Rocky Mountain Power serves approximately 82,000 customers in southeastern Idaho.

The Company, working in partnership with its retail customers and with the approval of the Idaho Public Utilities Commission ("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 Idaho 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 the status of the Demand Side Management (DSM) Tariff Rider, Customer Efficiency Service Charge - Schedule 191 ("Schedule 191") as of the reporting period from January 1, 2019 through December 31, 2019. The Company, on behalf of its customers, invested $4.9 million in energy efficiency resource acquisitions during the reporting period. The investment yielded approximately 23.7 gigawatt-hours ("GWh") of first year savings[1] and approximately 4.8 megawatts ("MW") of capacity reduction from energy efficiency.[2] Net benefits based on the projected value of the energy efficiency program savings over the life of the individual measures are estimated at $423 thousand.[3]

Pursuant to Commission Order No. 32196, the costs for the Idaho Irrigation Load Control Program are allocated across PacifiCorp's six-state system. Therefore, these costs are not recovered through Schedule 191. However, additional information on the Irrigation Load Control Program is provided later in this report.

The energy efficiency portfolio was cost effective for both the Utility Cost Test (UCT) and Participant Cost Test (PCT) for the reporting period. Under direction of Case No. GNR-E-12-01, *Low Income Weatherization* program uses the 10 percent energy conservation adder to the total resource cost test. As a result, Table 1 provides the cost effectiveness of the energy efficiency portfolio including and excluding *Low Income Weatherization*.

[1] Reported savings at the generator. For line losses, see footnote 11.
[2] See Energy Efficiency Section for explanation about the calculation of capacity contribution savings.
[3] See Table 1 – Utility Cost Test Net Benefits including Low Income Weatherization.

Table 1
Cost effectiveness Energy Efficiency Portfolio (includes non-energy impacts)

Benefit/Cost Test	Includes Low Income Weatherization Program		Excludes Low Income Weatherization Program	
	Benefit/Cost Ratio	Net Benefits	Benefit/Cost Ratio	Net Benefits
PacifiCorp Total Resource Cost Test plus 10 percent (PTRC)4	0.92	$ (636,468)	0.91	$ (655,423)
Total Resource Cost Test (TRC)5	0.85	$ (1,165,680)	0.84	$ (1,175,784)
Utility Cost Test (UCT)6	1.09	$ 423,646	1.16	$ 701,801
Participant Cost Test (PCT)7	2.54	$ 8,805,321	2.46	$ 8,355,136
Ratepayer Impact Test (RIM)8	0.38	$ (8,793,672)	0.38	$ (8,378,880)

Portfolio-level cost effectiveness includes portfolio costs, such as the Potential Assessment and DSM system database. Sector-level cost effectiveness, reported in the Residential and Non-Residential sections of this report, includes sector-specific evaluation, measurement and verification expenditures. The Company includes quantifiable non-energy impacts at the portfolio and residential level, as well as the Wattsmart Homes and Low Income Weatherization program level. Appendix 1 provides 2019 cost effectiveness performance.

REGULATORY ACTIVITIES

During the 2019 reporting period the Company filed a number of compliance and/or informational reports, updates, notices, and requests with the Commission in support of Company DSM programs. The following is a list of those activities:

- On January 16, 2019, the Company filed Advice No. 19-01 to make modifications to Electric Service Schedule 21 – Low Income Weatherization services. The proposed modifications were to increase reimbursement costs from 85 percent to 100 percent for ductless heat pumps to address the lack of federal funding. The Commission approved the Company's proposed modifications via Consent Agenda during the Decision Meeting held March 5, 2019, with an effective date of March 6, 2019.

- On February 1, 2019, the Company circulated the DSM balancing account report for the fourth quarter of 2018.

- On March 1, 2019, the Company submitted a compliance filing in Case No. PAC-E-18-12 to update the effective date of adjusted rates in Schedule 191, approved in the Commission's Order No. 34255 issued February 27, 2019. Rates were decreased from 2.70 percent to 2.25 percent, effective March 1, 2019.

- On April 30, 2019, pursuant to Order No. 29976, the Company submitted its 2018 Idaho Energy Efficiency and Peak Reduction Annual Report in Case No. PAC-E-05-10.

- On May 1, 2019, the Company circulated the DSM balancing account report for the first quarter of 2019.

- On June 5, 2019, consistent with the 45-day notice process for maximum "up to" incentives, a notice of changes to the Wattsmart Homes program was posted on the program website,[4] 45 days prior to going into effect July 22, 2019. Program changes included the discontinuation of the incentive offering for gas furnaces with electronically commutated motors due to changes in minimum market standards.

- On July 31, 2019, the Company circulated the DSM balancing account report for the second quarter of 2019.

- On August 8, 2019, consistent with the 45-day notice process for maximum "up to" incentives, a notice of changes to the Wattsmart Business program was posted on the program website,[5] 45 days prior to going into effect September 23, 2019. Program changes included increasing incentives for mid-market lighting and exterior retrofit lighting offerings in an effort to increase participation.

[4] https://www.wattsmarthomes.com/state/ID

[5] https://www.rockymountainpower.net/savings-energy-choices/business/wattsmart-efficiency-incentives-idaho.html

- On December 16, 2019, the Company circulated its 2020 communications plan with Idaho Commission Staff.

- On December 20, 2019, consistent with the flexible tariff process for the Wattsmart Business program, documented and approved in Case No. PAC-E-12-10, a notice of changes to the program was posted on the program website,[6] 45 days prior to going into effect February 3, 2020. Program changes were designed to streamline incentive tables by discontinuing/combining various incentive offerings for the agricultural and dairy sectors.

Meetings with Idaho Public Utilities Commission Staff ("Idaho Staff")

The Company consulted with Idaho Staff throughout 2019, with formal presentations on the following matters:

June 14, 2019

- Discussed the Company's 2018 Idaho Energy Efficiency and Peak Reduction Annual Report;
- Reviewed results from the Wattsmart Business 2016-2017 program evaluation;
- Provided updates on the Irrigation Load Control Pilot Program;
- Reviewed Regional Technical Forum Standards for Irrigation Savings;
- Reviewed changes to the Wattsmart Homes and Wattsmart Business Programs; and
- Discussed the Eastern Idaho Culinary Water Cohort.

December 5, 2019

- Reviewed the 2019 Year-to-Date Status;
- Reviewed the 2019 Integrated Resource Plan Results;
- Discussed 2020 Targets and Planning;
- Reviewed Wattsmart Business Program changes;
- Provided updates on the Irrigation Load Control Program, including proposed program changes and pilot program results;
- Provided a Blue Sky Program update;
- Discussed Innovative Projects, including Battery Storage.

[6] https://www.rockymountainpower.net/savings-energy-choices/business/wattsmart-efficiency-incentives-idaho.html

DSM EXPENDITURES

In Case PAC-E-05-10, approved in Order No. 29976, the Commission authorized recovery of all DSM program costs through Schedule 191, with exception of the expenses associated with the Irrigation Load Control Program.[7] Schedule 191 appears as a line item on customer bills. The Company posts eligible DSM program costs as incurred to the balancing account.

Schedule 191 balancing account activity for 2019 is outlined in Table 2.

Table 2
Schedule 191 Balancing Account Activity

Month	Monthly Program Costs - Fixed Assets	Monthly Net Accrued Costs	Rate Recovery	Carrying Charge	Cash Basis Accumulated Balance	Accrual Basis Accumulated Balance
18-Dec					$ (1,858,213)	$ (1,541,064)
19-Jan	$ 349,549	$ 63,705	$ (358,584)	$ (3,105)	$ (1,870,353)	$ (1,489,499)
19-Feb	$ 532,642	$ 54,404	$ (331,929)	$ (2,950)	$ (1,672,590)	$ (1,237,332)
19-Mar	$ 474,360	$ (40,735)	$ (283,372)	$ (2,628)	$ (1,484,229)	$ (1,089,706)
19-Apr	$ 404,631	$ (76,084)	$ (224,667)	$ (2,324)	$ (1,306,590)	$ (988,151)
19-May	$ 343,792	$ (37,426)	$ (277,671)	$ (2,123)	$ (1,242,593)	$ (961,580)
19-Jun	$ 244,759	$ 234,956	$ (395,852)	$ (2,197)	$ (1,395,882)	$ (879,914)
19-Jul	$ 271,223	$ 9,491	$ (656,593)	$ (2,648)	$ (1,783,900)	$ (1,258,441)
19-Aug	$ 626,460	$ (172,323)	$ (609,162)	$ (2,959)	$ (1,769,561)	$ (1,416,426)
19-Sep	$ 338,018	$ (5,387)	$ (491,067)	$ (3,077)	$ (1,925,687)	$ (1,577,938)
19-Oct	$ 296,698	$ 64,218	$ (281,124)	$ (3,196)	$ (1,913,308)	$ (1,501,342)
19-Nov	$ 166,183	$ 185,798	$ (284,803)	$ (3,288)	$ (2,035,217)	$ (1,437,453)
19-Dec	$ 718,679	$ (58,748)	$ (286,226)	$ (3,032)	$ (1,605,796)	$ (1,066,780)
2019 Total	**$ 4,766,994**	**$ 221,867**	**$ (4,481,050)**	**$ (33,527)**		

Column Explanations:

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

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

Rate Recovery: Revenue collected through Schedule 191.

Carrying Charge: Monthly interest charge based on Cash Basis Accumulated Balance of the account. The interest rate applied to the Accumulated Balance during the reporting period was 1 percent per year.

[7] Commission Order No. 32196 in Case No. PAC-E-10-07 ruled that costs associated with the Idaho Irrigation Load Control Program should be system allocated and not situs assigned to Idaho customers. The Commission recommended the Company treat the benefits of the program as a system resource for cost recovery purposes.

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

PLANNING PROCESS

Integrated Resource Plan

The Company develops a biennial integrated resource plan ("IRP") as a means of balancing cost, risk, uncertainty, supply reliability/deliverability and long-run public policy goals.[8] The plan presents a framework of future actions to ensure the Company continues to provide reliable, reasonably priced service to customers. Energy efficiency and peak management opportunities are incorporated into the IRP based on their availability, characteristics and costs.

PacifiCorp divides energy efficiency and peak management resources into four general classes:

- **Class 1 DSM—Resources from fully dispatchable or scheduled firm capacity product offerings/programs**—Class 1 DSM programs are those for which capacity savings occur as a result of active Company control or advanced scheduling. Once customers agree to participate in a Class 1 DSM program, the timing and persistence of the load reduction is involuntary on their part within the agreed upon limits and parameters of the program. Program examples include residential and small commercial central air conditioner load control programs that are dispatchable, and irrigation load management and interruptible or curtailment programs (which may be dispatchable or scheduled firm, depending on the particular program design or event noticing requirements).

- **Class 2 DSM—Resources from non-dispatchable, firm energy and capacity product offerings/programs**—Class 2 DSM programs are those for which 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 on a customer's part to manage the energy use at their facility or home. Class 2 DSM programs generally provide financial or service incentives to customers to improve the efficiency of existing or new customer-owned facilities through: (1) the installation of more efficient equipment, such as lighting, motors, air conditioners, or appliances; (2) upgrading building efficiency through improved insulation levels, windows, etc.; or (3) behavioral modifications, such as strategic energy management efforts at business facilities and home energy reports for residential customers. The savings endure (are considered firm) over the life of the improvement or customer action. Program examples include comprehensive commercial and industrial new and retrofit energy efficiency programs, comprehensive home improvement retrofit programs, strategic energy management and home energy reports.

- **Class 3 DSM—Resources from price responsive energy and capacity product offerings/programs**—Class 3 DSM programs seek to achieve short-duration (hour by hour) energy and capacity savings from actions taken by customers voluntarily, based on a financial incentive or signal.

[8] Information on the Company's integrated resource planning process can be found at the following address: http://www.pacificorp.com/energy/integrated-resource-plan.html

- As a result of their voluntary nature, participation tends to be low and savings are less predictable, making Class 3 DSM resources less suitable to incorporate into resource planning, at least until their size and customer behavior profile provide sufficient information for a reliable diversity result (predictable impact) for modeling and planning purposes. Savings typically only endure for the duration of the incentive offering and, in many cases, loads tend to be shifted rather than being avoided. The impacts of Class 3 DSM resources may not be explicitly considered in the resource planning process; however, they are captured naturally in long-term load growth patterns and forecasts. Program examples include time-of-use pricing plans, critical peak pricing plans, and inverted block tariff designs.

- **Class 4 DSM—Non-incented behavioral-based savings achieved through broad energy education and communication efforts—**Class 4 DSM programs promote reductions in energy or capacity usage through broad-based energy education and communication efforts. The program objectives are to help customers better understand how to manage their energy usage through no-cost actions such as conservative thermostat settings and turning off appliances, equipment and lights when not in use. The programs are also used to increase customer awareness of additional actions they might take to save energy and the service and financial tools available to assist them. Class 4 DSM programs help foster an understanding and appreciation of why utilities seek customer participation in Classes 1, 2 and 3 DSM programs. Similar to Class 3 DSM resources, the impacts of Class 4 DSM programs may not be explicitly considered in the resource planning process; however, they are captured naturally in long-term load growth patterns and forecasts. Program examples include Company brochures with energy savings tips, customer newsletters focusing on energy efficiency, case studies of customer energy efficiency projects, and public education and awareness programs.

Class 1 and 2 DSM resources are included as resource options in the resource planning process. Class 3 and 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, the Company engages a third-party consultant to conduct a DSM Potential Assessment.[9] The study primarily seeks to develop reliable estimates of the magnitude, timing and cost of DSM resources likely available to PacifiCorp over the 20-year planning horizon of the IRP. The main focus of the Potential Assessment is on resources with sufficient reliability characteristics that are anticipated to be technically feasible and considered achievable during the IRP's 20-year planning horizon. By definition, the estimated achievable technical potential is the energy efficiency potential that may be achievable to acquire during the 20-year planning horizon prior to cost effectiveness screening.

Demand-side resources vary in their reliability, load reduction and persistence over time. Based on the significant number of measures and resource options reviewed and evaluated in the Potential

[9] PacifiCorp's Demand-side Resource Potential Assessments can be found at http://www.pacificorp.com/energy/integrated-resource-plan/support.html.

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.

Cost effectiveness

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.

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

ENERGY EFFICIENCY PROGRAMS

Energy efficiency programs are offered to all major customer sectors: residential, commercial, industrial and agricultural. The overall energy efficiency portfolio included four programs: *Wattsmart Homes* – Schedule 118, *Low Income Weatherization* – Schedule 21, *Home Energy Reports, and Wattsmart Business* – Schedule 140. Program savings and cost results for 2019 are provided in Table 3 below.[10]

Table 3
Idaho Program Results for January 1, 2019 – December 31, 2019[11]

Program	kWh/Yr. Savings (at site)	kWh/Yr. Savings (at generator)	Program Expenditures
Low Income Weatherization	99,120	110,485	$ 341,665
Home Energy Reporting	3,405,550	3,796,030	$ 78,228
Wattsmart Homes	2,808,414	3,130,426	$ 812,707
Total Residential	**6,313,084**	**7,036,942**	**$ 1,232,601**
Wattsmart Business	**15,040,933**	**16,631,805**	**$ 3,296,479**
Total Energy Efficiency	**21,354,017**	**23,668,747**	**$ 4,529,080**
Commercial & Industrial Evaluation Costs			$ 15,682
Residential Evaluation Costs			$ 95,408
Low Income Conservation Education			$ 25,000
Outreach & Communications			$ 167,717
Potential Study			$ 11,056
System Support			$ 24,535
Total System Benefit Expenditures - All Programs			**$ 4,868,479**

[10]Active Idaho energy efficiency measures are reported in Appendix 6. For a breakdown of program expenditures by category, see Appendix 2.

[11] The values at generation include line losses between the customer site and the generation source. The Company's line losses by sector for 2019 are 11.47 percent for residential, 10.75 percent for commercial, 7.52 percent for industrial and 11.45 percent for irrigation.

Estimated Peak Contributions from Energy Efficiency Programs

The Company estimates its capacity reduction during PacifiCorp's system peak period from the 2019 energy efficiency portfolio. An energy-to-capacity conversion factor, developed from Class 2 DSM selections in the 2017 IRP, is used to translate 2019 energy savings to estimated demand reduction during the system peak. The use 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 2017 IRP. Use of this factor in determining the MW contribution of energy efficiency programs is detailed in Table 4.

Table 4
Estimated Peak Contribution

Description	Value
First year Energy Efficiency program kWh savings acquired during 2019	23,669
Conversion factor: Coincident kW/kWh	0.0002012
Estimated coincident peak MW gross contribution of 2019 Idaho energy efficiency	4.76

RESIDENTIAL PROGRAMS

The residential energy efficiency portfolio is comprised of three programs: *Wattsmart Homes*, *Home Energy Report*, and *Low Income Weatherization.* As shown in Table 5, the residential portfolio was cost effective based on three of the five cost effectiveness tests for the 2019 reporting period. The UCT for the residential portfolio was above 1.0 when the Low Income Weatherization program was excluded for the cost tests, as shown in Table 6.

Table 5
Cost effectiveness for Residential Portfolio
(Includes non-energy impacts)

Benefit/Cost Test	Includes Evaluation Costs		Excludes Evaluation Costs	
	Benefit/Cost Ratio	Net Benefits	Benefit/Cost Ratio	Net Benefits
PTRC	1.21	$ 445,186	1.27	$ 540,594
TRC	1.16	$ 330,435	1.21	$ 425,843
UCT	0.85	$ (205,497)	0.91	$ (110,089)
PCT	3.27	$ 2,955,694	3.27	$ 2,955,694
RIM	0.31	$ (2,526,049)	0.32	$ (2,430,641)

Due to the Low Income Weatherization program emphasizing the PTRC rather than the UCT, Table 6 is included to show the residential portfolio cost effectiveness without the Low Income Weatherization program.

Table 6
Cost effectiveness for Residential Portfolio excluding Low Income Weatherization
(Includes non-energy impacts)

Benefit/Cost Test	Includes Evaluation Costs		Excludes Evaluation Costs	
	Benefit/Cost Ratio	Net Benefits	Benefit/Cost Ratio	Net Benefits
PTRC	1.24	$ 426,231	1.32	$ 521,639
TRC	1.18	$ 320,331	1.25	$ 415,739
UCT	1.07	$ 72,658	1.19	$ 168,066
PCT	2.92	$ 2,505,509	2.92	$ 2,505,509
RIM	0.33	$ 2,111,258)	0.34	$ (2,015,850)

Information related to individual program performance, program management and program infrastructure is provided on the following pages.

WATTSMART HOMES PROGRAM

The Wattsmart Homes program provides 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 or 36. Landlords who own property where the tenant is billed under Electric Service Schedules 1 or 36 also qualify for the program. Program participation by measure category is provided in Table 7.

Table 7
Eligible Program Measures (Units)

Measure Category	kWh/Yr. Savings (@ Site)	Total Incentive	Total Quantity
Appliances	3,615	$ 1,650	33
Building Shell	8,513	$ 7,600	9,550 (sq ft)
Electronics	156,600	$ 23,200	725
Energy Kits	108,156	$ 3,588	374
HVAC	652,847	$ 127,680	598
Lighting	1,474,117	$ 80,205	81,893
Water Heating	302,701	$ 16,518	6,288
Whole Home	101,865	$ 2,500	38
Grand Total	**2,808,414**	**$322,940**	

The program passed all cost effective tests except the RIM as shown in Table 8.

Table 8
Cost effectiveness for Wattsmart Homes Program
(Includes non-energy impacts)

Benefit/Cost Test	Benefit/Cost Ratio	Net Benefits
PTRC	1.27	$ 425,331
TRC	1.21	$ 335,298
UCT	1.11	$ 87,625
PCT	2.68	$ 2,187,227
RIM	0.34	$ (1,778,008)

Program Management

The program manager who is responsible for the Wattsmart Homes program in Idaho is also responsible for the program in Utah 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 continually improving the program.

Program Administration

The Wattsmart Homes program is administered by CLEAResult and Evergreen Consulting. Together they are responsible for the following:

- Retailer and trade ally engagement – these tasks transitioned from CLEAResult to Evergreen Consulting in April of 2019. Evergreen Consulting 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 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 – this task also transitioned from CLEAResult to Evergreen in April of 2019. Evergreen Consulting 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.
- Managing 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 complete, 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 on behalf of the Company is outlined in the Communication, Outreach, and Education section of this report.

Infrastructure

The total number of retailers and trade allies participating in the program is currently 77. Detail of participating retailers by delivery channel and measure type is available in Appendix 4.

Program Changes

The Wattsmart Homes program discontinued incentivizing new gas furnaces with ECMs due to changes in minimum market standards. The qualified product list for smart thermostats was also expanded to include all ENERGY STAR certified models.

HOME ENERGY REPORTS PROGRAM

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 achieved 3,405,550 kWh of savings at site in 2019. Program cost effectiveness is provided in Table 9.

Table 9
Cost effectiveness for Home Energy Reports Program

Benefit/Cost Test	Benefit/Cost Ratio	Net Benefits
PTRC	2.23	$ 96,308
TRC	2.03	$ 80,441
UCT	2.03	$ 80,441
PCT	N/A	N/A
RIM	0.40	$ (237,841)

Reports were initially provided to approximately 21,000 customers in 2019. There were additional 8,400 customers added to the program in 2019. These new customers were added to increase savings and participations. The number of participant's decreases over time due to customer attrition related to general customer churn (customer move-outs) and customers requesting to be removed from the program. In 2019, less than 1% of customers have requested to be removed from the program. As of December 2019, there were 18,876 customers were active recipients of Home Energy Reports. In 2019, 138 total customers opted out of the program.

Participants have access to a web portal containing the same information about their usage that was provided in the reports. In addition, all Idaho residential customers (including non-participants) have access to the web portal which contains other benefits such as the ability for customers to update their home profile (for more accurate comparisons) and suggestions on ways to save energy.

Program Management

The program manager who is responsible for the Home Energy Reports program in Idaho is also responsible for the program in Utah and Wyoming as well as Irrigation Load Control program in Idaho and Utah and 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 continually improving the program.

Program Administration

The Home Energy Reports program is administered by Bidgely. Bidgely's Utility Artificial Intelligence platform leverages energy disaggregation to provide customers with personalized information regarding their energy usage by appliance and how their usage compares to similar homes. Furthermore, users receive recommendations on how to save energy and money by making small behavioral changes to their energy consumption. The Company contracted with Bidgely to provide energy savings, software services, and delivery of energy reports to customers.

Bidgely is responsible for the following:

- Design and distribution of paper and electronic reports.
- Maximizing email treatment for customers receiving electronic reports.
- Deploying and maintaining a web portal – Bidgely operated and maintained a customer web portal which users can visit for additional information about their energy usage and saving opportunities. Customers can access the web portal from the Company's website[12].

[12] https://www.rockymountainpower.net/

LOW INCOME WEATHERIZATION PROGRAM

The Low Income Weatherization program provides energy efficiency services through a partnership between the Company and local non-profit agencies to residential customers who meet income-eligible guidelines. Services are at no cost to the program participants.

In 2019, the program achieved 99,120 kWh of savings at site and treated 71 homes. Total homes treated as well as the type and frequency of specific energy efficiency measures installed in each home is provided in Table 10.

Table 10
Homes Receiving Specific Measures

Participation – Total # of Completed/Treated Homes	71
Number of Homes Receiving Specific Measures	
Attic Ventilation	40
Ceiling Insulation	47
LED Light Bulbs	67
Duct Insulation	6
Floor Insulation	44
Furnace Repair	18
Furnace Replacements	2
Health & Safety Measures	49
Infiltration	54
Refrigerators	37
Replacement Windows	51
Thermal Doors	12
Wall Insulation	4
Water Heater Repair	12
Water Heater Replacement	0
Water Pipe Insulation	62

The Low Income Weatherization program was cost effective from the PTRC and TRC.[13] Table 11 shows 2019 program cost effectiveness results.

[13] The Low Income Energy Conservation Education funding of $25,000 was excluded from the program cost effectiveness, but is included in the residential sector and portfolio cost effectiveness.

Table 11
Cost effectiveness for Low Income Weatherization
(Includes non-energy impacts)

Benefit/Cost Test	Benefit/Cost Ratio	Net Benefits
PTRC	1.13	$ 43,955
TRC	1.10	$ 35,104
UCT	0.26	$ (253,155)
PCT	N/A	N/A
RIM	0.19	$ (389,791)

Program Management

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

Program Administration

The Company contracts with Eastern Idaho Community Action Partnership ("EICAP") and South Eastern Idaho Community Action Agency ("SEICAA") to provide services. The two agencies receive federal funds allocated to the Idaho Department of Health and Welfare ("IDHW") and administered by the Community Action Partnership Association of Idaho ("CAPAI"). Energy efficiency measures are installed in the homes of income eligible households throughout the Company's service territory by EICAP and SEICAA. The Company is required to fund 85 percent of the cost of approved measures, pursuant to Commission Order No. 32151. Under Advice No. 19-01 filed with Idaho Public Utilities Commission on January 16, 2019, Commission approved reimbursement of up to 100% of related installed costs of ductless heat pumps effective March 6, 2019. Agencies cover remaining costs with the funding received by IDHW.

EICAP and SEICAA are responsible for the following:

- Income Verification – Agencies determine participant income eligibility based on CAPAI guidelines. Household's interested in obtaining weatherization services apply through the agencies. The current income guidelines can be viewed at CAPAI's website http://www.capai.org/wx
- 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. CAPAI also inspects a random sample of homes. See Appendix 3 for the verification summary.
- Billing Notification – Agencies are required to submit a billing to Company within 120 days after job completion. The agencies include a form indicating the measures installed and associated cost on each completed home along with their invoice.

Low Income Energy Conservation Education

Commission Order No. 32788 authorized the Company to fund the Low Income Energy Conservation Education with $25,000 annually. These education services are provided by EICAP and SEICAA and target participants who receive Low Income Home Energy Assistance Program ("LIHEAP") funds. EICAP, SEICAA and the Company discussed the allocation of the annual funding amount with the agencies determining the efficiency measures to distribute. EICAP received $16,000 and SEICAA $9,000 for a total of $25,000 prior to the beginning of their 2019/2020 LIHEAP program year. While the conservation education activities do result in energy savings, the savings are not considered when calculating the performance results of the Low Income Weatherization program, other energy efficiency programs or portfolios results.[14]

The agencies provided a conservation education curriculum to households and reported the following activities and program specifics for 2019 in Table 12.

Table 12
2019 Conservation Education Activities

	EICAP	SEICCA
Annual Funds	$16,000	$9,000
Expenditures	0	$9,000
Balance as of 12/31/19	$47,833	0
Households served	418	22

Distribution

EICAP did not purchase kits in 2019 and plans to purchase 500 kits in February 2020. The new kits will include 3 LED bulbs, 1 LED night light, a window insulation kit, a smoke detector with alkaline battery, a wall plate thermometer, a showerhead and a hot water gauge. EICAP continued distribution of their 2017 and 2018 kits in their inventory. As of December 31, 2019, EICAP has 276 kits purchased in 2018 in their inventory.

EICAP's program objective was to educate Rocky Mountain Power customers on how to conserve energy through useful tips and tools to help them save year-round. They served Rocky Mountain Power households that received energy assistance and/or requested energy conservation education.

[14] Order No. 32788

SEICAA purchased 350 robust energy savings pre-packaged kits in 2019 absorbing 2019 and 2020 program year funds for a total of $15,750. The new packaged kits include light bulbs, weather stripping, sink aerator, mobile thermostat for refrigerator/freezer, and power timers. They received kits on December 9, 2019. SEICAA depleted their inventory of kits previously purchased and anticipate that all kits purchased this year will be distributed by or before December 31, 2020. SEICAA distributed 22 conservation energy kits to 22 households from January 1, 2019 to December 31, 2019.

Table 13 provides information regarding the education offered by the agencies.

Table 13
Additional Information on Education by Agencies

	EICAP	SEICAA
Program Design	Educate Rocky Mountain Power customers about how to conserve energy.	Reduce electricity usage and monthly bills for participants of the LIHEAP program.
Target Audience	Rocky Mountain Power customers who receive energy assistance and request energy conservation education.	LIHEAP recipients who have not received weatherization program services are a priority. Households can also be identified through SEICAA's other programs.
How Company Funds Were Used	Plan to purchase energy efficiency kits in February 2020.	Energy efficiency kits purchased.
Program Benefits to Participants	Households receive useful tips and tools to help them save energy year around but especially during the winter months.	Households are educated on how they can reduce kWh usage through behavioral changes in addition to the energy savings benefits of installing energy conservation measures they receive during LIHEAP intake. All conservation items are easy-to-install measures.

NON-RESIDENTIAL ENERGY EFFICIENCY

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

Wattsmart Business is intended to increase the efficiency of electricity usage by new and existing non-residential customers through the installation of energy efficiency measures and adoption of improved energy management protocols. Qualifying measures include those which, when implemented in an eligible facility, produce verifiable electric energy efficiency improvements.

Total incentives, savings and completed projects are provided in Table 14 by customer sector.

Table 14
Savings by Sector

Sector	2019 Total kWh/Yr Savings	Total Incentive	Total Projects
Commercial	7,933,564	$ 989,481	271
Industrial	1,924,553	$ 158,904	24
Irrigation	5,182,816	$ 407,810	158
Grand Total	**15,040,933**	**$ 1,556,194**	**453**

Incentives and services offered through Wattsmart Business include:

- Typical Upgrades: streamlined incentives for lighting, HVAC, compressed air and other equipment upgrades that increase electrical energy efficiency and exceed code energy efficiency requirements.
- Small Business Direct Install: provides enhanced incentives for lighting retrofits installed by a Rocky Mountain Power contractor at eligible small business customer facilities.
- 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.
- Custom Analysis: 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 management projects can range in size from small Tune-ups to the robust Strategic Energy Management offering.
- Energy Project Manager Co-funding: available to customers who can commit to an annual goal of completing projects resulting in a minimum of 1,000,000 kWh per year in energy savings.

Total incentives and savings by measure category is provided in Table 15.

Table 15
Savings by Measure Category

Measure Category	Total kWh/Yr. Savings (@ site)	Total Incentive	Total Projects
Building Shell	13,941	$ 5,698	3
Compressed Air	144,063	$ 21,574	2
Direct Install	1,145,681	$ 332,247	95
Energy Management	2,528,789	$ 50,576	14
Farm & Dairy	250,530	$ 36,750	5
Food Service Equipment	16,764	$ 1,135	1
HVAC	678,964	$ 85,816	14
Irrigation	4,504,156	$ 397,096	158
Lighting	5,014,277	$ 528,263	151
Motors	634,267	$ 48,853	8
Refrigeration	109,501	$ 16,425	2
Energy Manager Co-funding	-	$ 31,762	14
Grand Total	**15,040,933**	**$ 1,556,194**	**453**

The Non-Residential Portfolio was cost effective from the UCT and PCT test perspectives. Program performance results for 2019 are provided in Table 16 below.

Table 16
Cost effectiveness for Non-Residential Portfolio

Benefit/Cost Test	Includes Portfolio Costs		Excludes Portfolio Costs	
	Benefit/Cost Ratio	Net Benefits	Benefit/Cost Ratio	Net Benefits
PTRC	0.84	$ (878,345)	0.84	$ (862,663)
TRC	0.76	$ (1,292,806)	0.76	$ (1,277,125)
UCT	1.25	$ 832,451	1.26	$ 848,133
PCT	2.33	$ 5,849,627	2.33	$ 5,849,627
RIM	0.41	$ (6,064,314)	0.41	$ (6,048,632)

Program Management

The Idaho Wattsmart Business Program Manager is also responsible for the Wattsmart Business program in Utah and Wyoming. For each state, the Program Manager is responsible for managing program implementers, achieving and monitoring program performance/compliance, recommending changes in customer and vendor participation terms and conditions, cost effectiveness, inputs for regulatory changes, marketing, ensuring satisfactory customer complaint resolution, overseeing customer care center agent training (internal and 3rd party call centers) and contracting with program implementers through competitive bid processes.

Program Administration

The program has historically been administered through two delivery models that were differentiated based upon customer size and need: contracted DSM delivery and internal DSM delivery. Internal delivery centered on large customers for primarily custom projects, whereas contracted delivery centered on small/medium customers for primarily typical measure projects. The internal program delivery approach was used from January 1, 2019 to June 30, 2019. On July 1, 2019 the program shifted to a fully contracted model, meaning all Idaho Wattsmart Business delivery became administered by contracted implementers. The change in program administration was intended to improve customer experience by adding more contracted staff dedicated specifically to Idaho Wattsmart Business customers and reducing the project timelines. A narrative of the program administration approaches is described below.

Internal DSM Delivery (January 1, 2019 to June 30, 2019)

Internal DSM Delivery targeted large energy users who generally had multiple opportunities for energy efficiency improvements, such as those that required complex custom analysis. These large projects were administered by internal Company project managers and allowed for a single point of contact to assist customers with their various opportunities. Project managers were responsible for the following:

- Single point of contact for large customers to assist with 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 20 below.)
- Manage engineering firms to ensure program compliance, quality of work and customer satisfaction.
- Manage Wattsmart Business projects through the whole project lifecycle from project inception to incentive payment.

Contracted DSM Delivery

The Contracted DSM delivery channel targets typical measure upgrades that serve small to medium sized business customers and, to a lesser extent, large business customers. Administration is provided through Company contracts with Nexant, Inc. ("Nexant"), Cascade Energy ("Cascade") and Willdan Energy Solutions ("Willdan"). Nexant and Cascade manage trade ally coordination, training and application processing services for commercial measures and industrial/agricultural measures respectively. As of July 1st 2019, Cascade now manages the former "Internal DSM Delivery" (DSM relationship management and custom energy analysis services for large customers). Willdan manages the small business direct installation offer.

Nexant and Cascade are responsible for the following:

- Trade ally and Midstream/LED instant incentive engagement – includes identification, recruiting, training, supporting and assisting trade allies and distributors 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 incentive project management or small/medium customer projects, including the Energy Management offer.
- Nexant provides typical measure support to trade allies and customers while also receiving typical measure applications and processing/delivering incentive checks to customers and qualified trade allies.
- DSM relationship management and custom analysis for large customer projects, including Energy Management and Energy Project Manager Co-funding. (Cascade – July 1, 2019 to present)
- 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:

- Small Business Direct Install – includes direct customer outreach, energy assessment, product supply, product installation, project inspection, incentive processing, and administrative support (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).
- Managing savings acquisition to targets within budget.
- Continual improvement of program operations and customer satisfaction.

Infrastructure

Contracted DSM Delivery – Trade Ally, Typical Measures & Midstream Distributor Networks

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 and motors/VFDs. This work includes identifying and recruiting trade allies, providing program and technical training and providing sales support on an ongoing basis.

The current list of 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.[15] Table 17 provides the engineering firms associated with the trade ally program.

Table 17 - Trade Ally Program Delivery Firms

Engineering Firm	Main Office Location	Expertise
Nexant, Incorporated (with subcontractors Evergreen Consulting Group, EMP2 and RM	Salt Lake City, UT	Commercial
Cascade Energy, with subcontractor partner Rick Rumsey, LLC	Pleasant Grove, UT Ammon, ID	Industrial, Agriculture, Irrigation

Contracted DSM Delivery – Small Business Direct Installation Offer

The Small Business Direct Install offer provides enhanced incentives for lighting retrofits installed by a Rocky Mountain Power contractor at eligible small business customer facilities. In 2019, the offer resulted in:

- 1,145,681 kWh installed directly at customer sites;
- 16 cities served: Ammon, Ashton, Downey, Dubois, Grace, Idaho Falls, Iona, Lava Hot Springs, Lewisville, McCammon, Menan, Rexburg, Rigby, Roberts, Saint Anthony, Ucon.
- 95 installed customer projects;
- Average kWh per installed project: 12,060;
- Average customer copay: $110,749;
- Average customer incentive: $3,497.

Internal DSM Delivery – January 1, 2019 to June 30, 2019

Internal DSM delivery targeted large, non-residential customers with custom projects. Each large customer's project was directly managed by one of the Company's internal project managers. A pre-approved, pre-contracted group of engineering firms were used to perform custom facility-specific energy efficiency analysis, quality assurance and verification services for the Wattsmart Business program.

Table 18 lists the engineering firms under contract with the Company during this time to provide energy efficiency analysis for internal DSM delivery.

[15] Customers receiving Small Business Lighting incentives do need to use an approved contractor that has been selected from a competitive request for bid process.

Table 18
Engineering Stable
Engineering Firms on contract through June 30, 2019

Engineering Firm	Main Office Location
Brendle Group	Fort Collins, CO
Cascade Energy Engineering	Cedar Hills, UT
EMP2, Inc	Richland, VA
Energy Resource Integration, LLC	Sausalito, CA
4Sight Energy	Boise, ID
ETC Group, Incorporated	Salt Lake City, UT
Evergreen Consulting Group	Beaverton, OR
kW Engineering, Inc.	Salt Lake City, UT
Nexant, Incorporated	Salt Lake City, UT
RM Energy Consulting	Pleasant Grove, UT
Rick Rumsey, LLC	Ammon, ID
Solarc Architecture & Engineering, Inc.	Eugene, OR

Contracted DSM Delivery – July 1, 2019 to present

As of July 1, 2019, Cascade Energy and a team of subcontractors took over delivery of the former Internal DMS Delivery project management role (see Table 20 below). Cascade is responsible for their portion of the Idaho energy savings target, forecasting and budgeting, relationship management with large energy user and community customers, custom energy analysis, project measurement and verification, quality control (QC) services, and coordination with trade ally delivery program personnel.

There is one project manager that assists large commercial and community customers (kW Engineering) and one project manager that assists large industrial customers (Cascade Energy). Project managers travel to Idaho on a regular basis to visit and assist customers. These project managers provide direct assistance to access all Wattsmart Business program offerings based on rate schedule. This approach ensures that each large customer understands and is taking advantage of the Wattsmart Business program offerings as much as they would like. Cascade is managed by a Company Program Manager. Table 19 shows the engineering firms associated with delivering products and services within this delivery channel.

Table 19
Large Customer Program Delivery Staff
July 1, 2019 to Present

Implementer Role	Engineering Firm	Main Office Location
Prime	Cascade Energy	Pleasant Grove, UT
Partner	kW Engineering	Salt Lake City, UT
Partner	Solarc Energy Group	Salt Lake City, UT
Partner	The Brendle Group	Fort Collins, CO
Partner	4Sight Energy	Spokane, WA

Cascade Energy also manages the energy management and energy project manager co-funding offerings. A description is provided below.

Energy Management

Energy Management is a system of practices that creates reliable and persistent electric energy savings through improved operations, maintenance and management practices in customer facilities. Energy management can result in improved system operation, lower energy costs, reduced maintenance and repair costs and extended equipment life, and improved occupant comfort and productivity for tenants and employees.

In 2019, the Company followed up on the significant effort in 2018 to engage with municipal water and wastewater customers through the Strategic Energy Management (SEM) delivery model. Partnerships were leveraged with BPA and Idaho Power to bring together like groups of customers in an effort to achieve the most cost effective savings as possible. Four participating customers (Ammon, Mud Lake, Rexburg and Rigby) achieved 1.3 million kWh of annual savings. These efforts are expected to yield significant additional savings in future years.

Energy Project Manager Co-Funding

The Energy Project Manager offering is a co-funded staff resource within a customer facility to identify and implement energy projects. Customers establish an annual energy savings goal that exceeds one million kWh and receive Energy Project Manager Co-funding proportionate to that goal (subject to caps). To date, one Idaho customer consistently participates in this offer due to their large size. Table 20 illustrates how Energy Project Manager's may be incented.

Table 20
Energy Project Manager Incentive Structure

Payment Structure	Payment Amount	Milestone
1 - Initial payment (optional)	1/3 of funding amount* (not to exceed $25,000)	1. Customer selects an Energy Project Manager. 2. Company & Customer work together on Comprehensive Plan for electric energy savings. 3. Customer signs the Energy Project Manager Offer.
2 - Final payment	$0.025 per kWh of energy savings achieved, to a maximum 100 percent of approved Energy Project Manager Salary and less the initial payment	1. At the end of performance period as defined in the Energy Project Manager Offer.

To summarize the Wattsmart Business structure, Table 21 shows delivery channels, targeted customer segments, provider(s), and service type.

Table 21
Wattsmart Business Structure

Delivery Channel	Targeted Customer Segment	Providers	Measure Types
(1/1/19 to 6/30/19) Internal Project Management	Managed Accounts (Large customer accounts)	Internal staff, Contracted Engineering Firms	Custom, typical, energy management, energy project manager co-funding
Contracted Delivery	Small Business	Willdan	Small Business Direct Install
	Non-Managed Accounts (small to medium customers)	Nexant (commercial) Cascade (industrial)	Typical, midstream, custom, energy management
	(July 1, 2019 to present) Managed Accounts	Cascade & Partners	Custom, typical, energy management, energy project manager co-funding

PEAK REDUCTION PROGRAM

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

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 enrolled with a third party administrator to 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 12pm to 8pm Mountain Time, Monday through Friday, and exclude holidays.

For most participants, their irrigation equipment is set up with a dispatchable two-way control system giving the Company control of the equipment. Under this control option, 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 performance, participation and cost effectiveness results for the program period of May 28, 2019– August 16, 2019 are provided in Tables 22 and 23.

Table 22
Irrigation Load Control Program Performance

Total Enrolled MW (Gross – at Gen)	214
Average Realized Load MW (at Gen)	0
Maximum Realized Load MW (at Gen)	0
Participation Customers	157
Participation (Sites)	1,300

Table 23
Cost Effectiveness for Irrigation Load Control

Benefit/Cost Test	Benefit/Cost Ratio
PTRC	Pass
TRC	Pass
UTC	Pass
PCT	n/a
RIM	Pass

Program Management

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

Load Control Events and Performance

There were zero load control events initiated in 2019. In general, energy prices were low during the program control season and it did not make economic sense to call upon the program. For the program to add value and lower overall net power costs, the participating load does not need to always be curtailed. The available load from the Irrigation program can be utilized as a reserve which provides value to the program and benefits customers.

Rocky Mountain Power has been offering an Irrigation Load Control Program in Idaho for decades. The program has provided value in assisting the Company to manage peak loads during summer periods. However, demand response programs throughout the utility industry are continually evolving. Programs that can be called upon real-time and are flexible may provide additional value as the industry transitions to smart grid applications.

Pilot Program

In 2019, a pilot program study was conducted with 25 irrigation pumps which controlled up to 4 MW of load during peak periods. It was dispatched for 7 events in real time. The pilot program was developed to study items such as

1. Will a real time irrigation program with little to no advance notice work for irrigators?
2. How would a real-time irrigation program impact field operations?
3. Is the technology commercially available for real-time dispatch?
4. Impacts to the overall grid?
5. What additional benefits would a real-time program provide to all rate payers?

Rocky Mountain Power is still gathering data from the pilot program to inform the study and may continue the pilot in 2020.

COMMUNICATIONS, OUTREACH AND EDUCATION

The Company uses earned media, customer communications, paid media, and program-specific media to communicate the value of energy efficiency, provide information regarding low-cost, no-cost energy efficiency measures and to educate customers on the availability of technical assistance, services and incentives. The overall goal is to engage customers to reduce their energy usage through behavioral changes as well as changes in equipment, appliances, and structures. The Company calls this multi-faceted campaign "*Wattsmart*" and shares a common theme: Rocky Mountain Power wants to help you save money and energy.

Customer Communications

As part of the Company's regular communications to its customers, newsletters are delivered to residential customers to provide energy efficiency tips, programs and incentives. Bill inserts and outer envelopes that feature energy efficiency messages are consistently used. The Company also uses its website and social media, such as Twitter and Facebook, to communicate and engage customers on DSM offers and incentives. Table 24 shows the communication source and the frequency of the message.

Table 24
Communication Source and Frequency

Communication Source	Frequency of Message
Web: **rockymountainpower.net/*wattsmart*** and promotional URL ***Wattsmart*.com** link directly to the energy efficiency landing page. Once there customers can self-select their state for specific programs and incentives.	Messages rotate each month based on the season
Twitter	Weekly tweets
Facebook	Information and tips posted 3-4 times per month. Promoted posts and mobile ads are also used where appropriate.
Connect residential newsletter	Newsletters are sent via bill insert and email 4 times per year with energy efficiency information
Wattsmart Homes program inserts	1 per year

Paid Media/ Wattsmart Campaign

In 2019, the Company continued the *Wattsmart* advertising campaign to inform and educate residential customers about the benefits energy efficiency contributes to the greater good in addition to saving money. The overall paid media plan objective is to effectively reach our customers through a multi-media mix that extends both reach and frequency. Tapping into all resources with consistent messaging has been the Company's approach and will continue to be refined.

Key strategies include:

- Implement an advertising campaign that features *Wattsmart* energy efficiency messaging and connect it to benefits for Idaho.
- Promote customer conservation (behavioral changes) and increase participation and savings through the Company's *Wattsmart* DSM programs.
- Motivate customers in Idaho to reduce consumption independently or to do so by participating in the Company's *Wattsmart* DSM programs.
- Educate customers on how these programs can help them save money on their utility bills, reduce energy consumption and to help Idaho thrive.
- Demonstrate by example how business customers are saving energy and enjoying the benefits of being *Wattsmart*.

The audiences for these messages were prioritized as follows:

- Residential customers
- Low-income customers
- Small/mid-size business customers
- Large commercial/industrial customers
- Retailers, contractors and trade allies

General Key Messages:

- Using energy wisely at home and in your business saves you money, and it's good for Idaho.
- Surprising as it sounds, Rocky Mountain Power wants to help you use less energy.
- Rocky Mountain Power is your energy partner
    - We want to help you keep your costs down.
    - We offer *Wattsmart* programs and cash incentives to help you save money and energy in your home or business.
    - Being *Wattsmart* is good for your wallet, and for Idaho, now and into the future.

To reach residential customers, the Company used TV, radio, social, and digital. Large-scale typography along with beautiful scenic images of Idaho was combined with footage of people taking smalls steps (changing lighting to LED lamps, adjusting smart thermostat setting) to save energy and money and to make a big difference for Idaho and the environment, now and into the future.

New creative was developed to target business customers and included TV, radio, print, social media, and digital. An overlay of typography to punctuate key points was included in TV ads so messages resonate better when played on hand-held devices when the sound is muted. Ads focused on case studies and highlighted business customers that saved energy and money by being *Wattsmart*. Ads geo-targeted by zip code were used on Facebook to reach small business customers with time-sensitive messages to encourage lighting upgrades.

Table 25 outlines each communication channel and the overall impressions achieved in 2019.

Table 25
Communication Channels

Communication Channel	Value to Communication Portfolio	Impressions to date
Television	Television has the broadest reach and works as the most effective media channel.	Idaho Falls: • 467,280 residential impressions • 623,040 business impressions
Radio	Given the cost relative to television, radio builds on communications delivered via television while providing for increased frequency of messages.	Idaho Falls: • 467,280 residential impressions • 778,800 business impressions
Newspaper	Supports broadcast messages and guarantees coverage in areas harder to reach with broadcast.	A total of 18 insertions targeting business customers were provided to: • Jefferson Star/Shelley Pioneer • Idaho State Journal • Idaho Falls Post Register • News-Examiner • Preston Citizen • Rexburg Standard Journal • 200,448 total impressions
Digital Display	Include banner ads on local sites, blogs, behavioral ad targeting, and pay-per-click ad placements.	1,117,261 residential impressions 807,323 business impressions
Internet Search (i.e. Google)	Internet search ads focused on key words related to energy efficiency and incentives.	9,495 total impressions
Twitter (@RMP_Idaho)	Tweets energy efficiency tips, Tweets posted on a weekly basis	1,370 Twitter followers
Facebook www.facebook.com/rockymountainpower	Awareness regarding energy efficiency tips and a location to share information.	26,391 Facebook followers Facebook advertising – 1,346,209 residential impressions 679,327 business impressions

The total number impressions for the *Wattsmart* campaign were 5,178,015 impressions.

Residential Creative Links

TV

- Being wattsmart is good, Idaho
  http://rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/tv/ID_DSM_2019_TV.mov

Radio

- Being wattsmart is good, Idaho
  https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/radio/ID_DSM_Res_Radio_Thrive.mp3

Social

- Being wattsmart is good, Idaho
  https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/social/ID_DSM_social_2019.png
- Being wattsmart is good, Idaho – video
  https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/social/ID_DSM_social_2019_better.png

Online

- Being wattsmart is Good, Helps, Better, Idaho
  - http://rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/digital-display/19254-38_ID-DSMRes_Winter_320x50_F.jpg
  - https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/digital-display/19254-38_ID-DSMRes_HELPS_Winter_728x90_F.jpg
  - https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/digital-display/19254-38_ID-DSMRes_HELPS_Winter_300x250_F.jpg
  - https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/digital-display/19254-38_ID-DSMRes_GOOD_Winter_728x90_F.jpg
  - https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/digital-display/19254-38_ID-DSMRes_GOOD_Winter_300x250_F.jpg
  - https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/digital-display/19254-38_ID-DSMRes_BETTER_Winter_728x90_F.jpg
  - https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/digital-display/19254-38_ID-DSMRes_BETTER_Winter_300x250_F.jpg
  - https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/digital-display/19282-2_ID-DSMRes-GOOD_728x90_F.jpg
  - https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/digital-display/19282-2_ID-DSMRes-GOOD_320x50_F.jpg
  - https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/residential/digital-display/19282-2_ID_DSMRes-GOOD_300x250_F.jpg

Business Creative Links

TV

- Intermountain Healthcare case study TV
  https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/business/tv/Idaho_DSM_TV.mov

Radio

- Intermountain Healthcare case study radio
- https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/wattsmart-business/radio/19-pcrmp-6001_RMP_IntermountainHealthcare.mp3

Print

- Intermountain Healthcare case study print
  http://rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/business/print/RMP_IHC_Print_Ad_5.043x10_BW_FNL.pdf
- Idaho Thank You print ad
  http://rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/wattsmart-business/print/18966-55_ID_wattsmartBiz_ThankYou_5.041x10_F.pdf

Social Media

- Intermountain Healthcare case study
  http://rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/wattsmart-business/social/PAC-IHC_Facebook_Instagram_Ad_Reference.pdf

Online

- Intermountain Healthcare case study digital
  - http://rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/business/digital/RMP_IHC_Display_Ad_1024x768.jpg
  - http://rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/business/digital/RMP_IHC_Display_Ad_768x1024.jpg
  - https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/business/digital/RMP_IHC_Display_Ad_728x90.jpg
  - https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/business/digital/RMP_IHC_Display_Ad_600x200.jpg
  - https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/business/digital/RMP_IHC_Display_Ad_336x280.jpg

- https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/business/digital/RMP_IHC_Display_Ad_320x50.jpg
- https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/business/digital/RMP_IHC_Display_Ad_300x600.jpg
- https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/business/digital/RMP_IHC_Display_Ad_300x250.jpg
- https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/business/digital/RMP_IHC_Display_Ad_300x50.jpg
- https://www.rockymountainpower.net/content/dam/pcorp/media/en/rocky-mountain-power/savings-energy-choices/business/digital/RMP_IHC_Display_Ad_160x600.jpg

Program Specific Communications

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

Wattsmart Homes

Information on the Wattsmart Homes program is communicated to customers, retailers and trade allies through a variety of channels including social media, direct mail, email, newsletters and website.

The program communications team supported three main initiatives in 2019:

1) Offering a free Google Nest Thermostat E to targeted customers.
2) Launching a new and improved customer web portal.
3) Promoting smart thermostat instant incentives during the holidays.

In October, 1,104 Idaho customers living in manufactured homes who had previously participated in a direct install measure received an offer for a free Google Nest Thermostat E. Offers were delivered through email, direct mail and in-person door knocks in a manufactured home park. This effort resulted in 100 smart thermostat orders.

The program team also launched a new and improved customer web portal, *Wattsmart*homes.com, in the fall. The new site offers improved content, functionality and navigation, along with an easy and seamless transition between Rocky Mountain Power's main website, rockymountainpower.net, and *Wattsmart*homes.com.

Over the holidays, the program team encouraged customers to purchase a new smart thermostat to take advantage of *Wattsmart* incentives and manufacturer discounts. Social media advertising for smart thermostats ran on Facebook and Instagram from mid-November through early December in Idaho.

A summary of outreach is displayed in Table 26.

Table 26
Wattsmart Homes Communications

Communications Channel	Impressions
Social media ads – Facebook & Instagram	429,995
Email	1,134
Direct mail	700
Door knocks	26
Total	**431,855**

Home Energy Reports

Thousands of print and email Home Energy Reports were delivered to Idaho customers in 2019.

With Rocky Mountain Power's new and improved website launch in July, the company added an additional promotion for customers to easily access their usage data, appliance breakdown and recommendations on the Bidgely platform.

Customer satisfaction and engagement with the Bidgely program demonstrated early and consistently positive results. Email open rates averaged 38 percent – nearly double the utility industry norm. Email recipients also gave the email communications they received 80 percent "likes" via thumbs up and thumbs down voting buttons included with every message.

Wattsmart Business program

During 2019, communications reminded customers to inquire about incentives for lighting and lighting controls, HVAC upgrades with an emphasis on advanced rooftop controls, irrigation upgrades and other energy efficiency measures. Radio and print ads featured case study examples from program participants. Emails directed recipients to the Company's website.[16] Collateral material for Wattsmart Business was used for direct customer contact by the Company's project managers, regional business managers, and its trade allies.

Emails encouraged customers to reach out for free energy assessments for lighting and/or HVAC improvements.

[16] www.***Wattsmart***.com

Promoted posts on *Wattsmart* Small Business Direct, a program specifically designed to help small businesses upgrade to energy efficient lighting, was promoted in geo-targeted zip codes on Facebook.

Direct mail was also used in the spring and fall to target irrigation customers and to encourage energy saving retrofits.

The program's breakdown of impressions by media type is shown in Table 27.

Table 27
Impressions by Media Type

Communications Channel	2019
Radio	350,460
Print	133,632
Display	844,958
Social	127,799
Eblasts	3,193
Direct Mail	3,611

Energy Education in Schools

The Company offers a *Wattsmart* Schools 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 4th grade students. Teachers are provided instructional materials for use in their classrooms, and students are sent home with a Household Report Card to explore energy use in their homes and to encourage efficient behaviors.

In 2019, NEF conducted presentations in Idaho schools in the fall. Presentations were given during one week in September and a second week in October. The program met its outreach goals by completing presentations at 24 schools to reach 1,696 students and 71 teachers with 77 percent of "Household Report Cards" completed and returned, which are used as part of a home energy audit activity.

The Idaho NEF report is available as 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, definitions of terms, and protocols including those outlined in the National Action Plan for Energy Efficiency Program Impact Evaluation and the California Evaluation Framework guides.

A component of the overall evaluation efforts is aimed at the reasonable verification of installations of energy efficient measures 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 responsible for program management.

Information on evaluation activities completed or in progress during 2019 is summarized in Table 28 below. Evaluation reports are available at https://www.pacificorp.com/environment/demand-side-management.html

Table 28
Program Evaluations

Program	Years Evaluated	Evaluator	Progress Status
Wattsmart Business	2018 - 2019	Cadmus	In-Progress
Wattsmart Homes	2017 - 2018	ADM	Completed

ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

Appendix 1
Idaho Cost Effectiveness

NAVIGANT
A Guidehouse Company

Memorandum

To: Nicole Karpavich and Alesha Pino, PacifiCorp

From: David Basak, Navigant

Date: April 3, 2020

Re: Cost-Effectiveness for the Portfolio and Sector Level - Idaho

Navigant estimated the cost-effectiveness for the overall energy efficiency portfolio and component sectors, based on 2019 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 the UCT and PCT test. The memo consists of the following tables.

1375 Walnut Street
Suite 100 | Boulder, CO 80302
303.728.2500 main
guidehouse.com

Table 1 - Utility Inputs

Parameter	Value
Discount Rate	6.57%
Residential Line Loss	11.47%
Commercial Line Loss	10.75%
Industrial Line Loss	7.52%
Irrigation Line Loss	11.45%
Residential Energy Rate ($/kWh)[1]	$0.0994
Commercial Energy Rate ($/kWh)[1]	$0.0852
Industrial Energy Rate ($/kWh)[1]	$0.0609
Irrigation Energy Rate ($/kWh)[1]	$0.0887
Inflation Rate	2.20%

[1] Future rates determined using a 2.20% annual escalator.

Table 2 – Portfolio Level Costs 2019

Expense	Cost
Commercial & Industrial Evaluation Costs	$15,682
Residential Evaluation Costs	$95,408
Low Income Energy Conservation Education	$25,000
Outreach & Communications	$167,717
Potential Study	$11,056
System Support	$24,535
Total Costs	**$339,398**

Table 3 – Benefit/Cost Ratios by Portfolio Type

Measure Group	PTRC	TRC	UCT	RIM	PCT
Total Portfolio (Including NEBs)	0.92	0.85	1.09	0.38	2.54
Total Portfolio	0.75	0.68	1.09	0.38	2.36
C&I Programs	0.84	0.76	1.25	0.41	2.33
Residential Programs (Including NEBs)	1.21	1.16	0.85	0.31	3.27
Residential Programs	0.60	0.54	0.85	0.31	2.50

Table 4 – 2019 Total Portfolio (Including NEBs) Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0685	$7,755,135	$7,118,668	-$636,468	0.92
Total Resource Cost Test (TRC) No Adder	$0.0685	$7,755,135	$6,589,455	-$1,165,680	0.85
Utility Cost Test (UCT)	$0.0430	$4,868,479	$5,292,124	$423,646	1.09
Rate Impact Test (RIM)		$14,085,796	$5,292,124	-$8,793,672	0.38
Participant Cost Test (PCT)		$5,711,841	$14,517,162	$8,805,321	2.54
Lifecycle Revenue Impacts ($/kWh)					$0.0000108124
Discounted Participant Payback (years)					2.34

Table 5 - 2019 Total Portfolio Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0685	$7,755,135	$5,821,337	-$1,933,799	0.75
Total Resource Cost Test (TRC) No Adder	$0.0685	$7,755,135	$5,292,124	-$2,463,011	0.68
Utility Cost Test (UCT)	$0.0430	$4,868,479	$5,292,124	$423,646	1.09
Rate Impact Test (RIM)		$14,085,796	$5,292,124	-$8,793,672	0.38
Participant Cost Test (PCT)		$5,711,841	$13,508,090	$7,796,249	2.36
Lifecycle Revenue Impacts ($/kWh)					$0.0000077312
Discounted Participant Payback (years)					2.34

Table 6 – 2019 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	$0.0595	$5,437,419	$4,559,074	-$878,345	0.84
Total Resource Cost Test (TRC) No Adder	$0.0595	$5,437,419	$4,144,613	-$1,292,806	0.76
Utility Cost Test (UCT)	$0.0362	$3,312,161	$4,144,613	$832,451	1.25
Rate Impact Test (RIM)		$10,208,926	$4,144,613	-$6,064,314	0.41
Participant Cost Test (PCT)		$4,409,896	$10,259,523	$5,849,627	2.33
Lifecycle Revenue Impacts ($/kWh)					$0.0000129964
Discounted Participant Payback (years)					2.92

Table 7 – 2019 Residential Energy Efficiency Portfolio (Including NEBs) Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0971	$2,114,408	$2,559,594	$445,186	1.21
Total Resource Cost Test (TRC) No Adder	$0.0971	$2,114,408	$2,444,843	$330,435	1.16
Utility Cost Test (UCT)	$0.0621	$1,353,009	$1,147,512	-$205,497	0.85
Rate Impact Test (RIM)		$3,673,561	$1,147,512	-$2,526,049	0.31
Participant Cost Test (PCT)		$1,301,945	$4,257,639	$2,955,694	3.27
Lifecycle Revenue Impacts ($/kWh)					$0.0000072865
Discounted Participant Payback (years)					1.27

Table 8 – 2019 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	$0.0971	$2,114,408	$1,262,263	-$852,145	0.60
Total Resource Cost Test (TRC) No Adder	$0.0971	$2,114,408	$1,147,512	-$966,896	0.54
Utility Cost Test (UCT)	$0.0621	$1,353,009	$1,147,512	-$205,497	0.85
Rate Impact Test (RIM)		$3,673,561	$1,147,512	-$2,526,049	0.31
Participant Cost Test (PCT)		$1,301,945	$3,248,567	$1,946,622	2.50
Lifecycle Revenue Impacts ($/kWh)					$0.0000037656
Discounted Participant Payback (years)					1.27

The tables below summarize the non-energy benefits for the Low Income and Home Energy Savings programs.

Table 9 – Low Income Non-Energy Benefits (2019)

Non-Energy Benefit	Program Impact	Perspective Adjusted
Reduced Arrearage	$108,772.00	PTRC, TRC
Health & Safety	$179,487.00	PTRC, TRC
Total	**$288,259.00**	

Table 10 - Home Energy Savings Non-Energy Benefits by Measure

Measure Name	Non-Energy Benefits Water ($/yr)	Non-Energy Benefits Other ($/yr)	Quantity	Measure Life	Total NEBs ($/yr)	Discount Rate	Total Net Present Value Benefits
Appliances	$702	$0	61	14.0	$702	6.57%	$6,718.79
Energy Kits - DHW	$4,993	$0	1,132	10.8	$4,993	6.57%	$40,124.68
Energy Kits - Lighting	$0	$252	1,181	13.0	$252	6.57%	$2,296.50
Lighting	$0	$62,221	66,930	12.0	$62,221	6.57%	$540,002.55
Water Heating	$47,242	$0	6,278	10.2	$47,242	6.57%	$365,082.20
Total NEBs	**$52,937**	**$62,473**	**75,582**	**60.0**	**$115,410**	**-**	**$954,224.73**

NAVIGANT
A Guidehouse Company

Memorandum

To: Nicole Karpavich and Alesha Pino, PacifiCorp

From: David Basak, Navigant

Date: April 3, 2020

Re: Cost-Effectiveness for the Portfolio and Sector Level - Idaho

Navigant estimated the cost-effectiveness for the overall energy efficiency portfolio and component sectors, based on 2019 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 the UCT and PCT test. The memo consists of the following tables.

1375 Walnut Street
Suite 100 | Boulder, CO 80302
303.728.2500 main
guidehouse.com

Table 1 - Utility Inputs

Parameter	Value
Discount Rate	6.57%
Residential Line Loss	11.47%
Commercial Line Loss	10.75%
Industrial Line Loss	7.52%
Irrigation Line Loss	11.45%
Residential Energy Rate ($/kWh)[1]	$0.0994
Commercial Energy Rate ($/kWh)[1]	$0.0852
Industrial Energy Rate ($/kWh)[1]	$0.0609
Irrigation Energy Rate ($/kWh)[1]	$0.0887
Inflation Rate	2.20%

[1] Future rates determined using a 2.20% annual escalator.

Table 2 – Portfolio Level Costs 2019

Expense	Cost
Commercial & Industrial Evaluation Costs	$15,682
Residential Evaluation Costs	$95,408
Outreach & Communications	$167,717
Potential Study	$11,056
System Support	$24,535
Total Costs	**$339,398**

Table 3 – Benefit/Cost Ratios by Portfolio Type

Measure Group	PTRC	TRC	UCT	RIM	PCT
Total Portfolio (Including NEBs)	0.91	0.84	1.16	0.38	2.46
Total Portfolio	0.77	0.70	1.16	0.38	2.29
C&I Programs	0.84	0.76	1.25	0.41	2.33
Residential Programs (Including NEBs)	1.24	1.18	1.07	0.33	2.92
Residential Programs	0.67	0.61	1.07	0.33	2.15

*Residential sector and portfolio level results do not include the Low Income Program

Table 4 – 2019 Total Portfolio (Including NEBs) Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0660	$7,388,470	$6,733,047	-$655,423	0.91
Total Resource Cost Test (TRC) No Adder	$0.0660	$7,388,470	$6,212,686	-$1,175,784	0.84
Utility Cost Test (UCT)	$0.0402	$4,501,813	$5,203,614	$701,801	1.16
Rate Impact Test (RIM)		$13,582,494	$5,203,614	-$8,378,880	0.38
Participant Cost Test (PCT)		$5,711,841	$14,066,977	$8,355,136	2.46
Lifecycle Revenue Impacts ($/kWh)					$0.0000114532
Discounted Participant Payback (years)					2.57

*Portfolio level results do not include the Low Income Program

Table 5 - 2019 Total Portfolio Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0660	$7,388,470	$5,723,975	-$1,664,495	0.77
Total Resource Cost Test (TRC) No Adder	$0.0660	$7,388,470	$5,203,614	-$2,184,856	0.70
Utility Cost Test (UCT)	$0.0402	$4,501,813	$5,203,614	$701,801	1.16
Rate Impact Test (RIM)		$13,582,494	$5,203,614	-$8,378,880	0.38
Participant Cost Test (PCT)		$5,711,841	$13,057,905	$7,346,064	2.29
Lifecycle Revenue Impacts ($/kWh)					$0.0000079367
Discounted Participant Payback (years)					2.57

*Portfolio level results do not include the Low Income Program

Table 6 – 2019 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	$0.0595	$5,437,419	$4,559,074	-$878,345	0.84
Total Resource Cost Test (TRC) No Adder	$0.0595	$5,437,419	$4,144,613	-$1,292,806	0.76
Utility Cost Test (UCT)	$0.0362	$3,312,161	$4,144,613	$832,451	1.25
Rate Impact Test (RIM)		$10,208,926	$4,144,613	-$6,064,314	0.41
Participant Cost Test (PCT)		$4,409,896	$10,259,523	$5,849,627	2.33
Lifecycle Revenue Impacts ($/kWh)					$0.0000129964
Discounted Participant Payback (years)					2.92

Table 7 – 2019 Residential Energy Efficiency Portfolio (Including NEBs) Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0852	$1,747,743	$2,173,973	$426,231	1.24
Total Resource Cost Test (TRC) No Adder	$0.0852	$1,747,743	$2,068,073	$320,331	1.18
Utility Cost Test (UCT)	$0.0481	$986,344	$1,059,001	$72,658	1.07
Rate Impact Test (RIM)		$3,170,259	$1,059,001	-$2,111,258	0.33
Participant Cost Test (PCT)		$1,301,945	$3,807,454	$2,505,509	2.92
Lifecycle Revenue Impacts ($/kWh)					$0.0000079683
Discounted Participant Payback (years)					1.88

*Residential sector level results do not include the Low Income Program

Table 8 – 2019 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	$0.0852	$1,747,743	$1,164,902	-$582,841	0.67
Total Resource Cost Test (TRC) No Adder	$0.0852	$1,747,743	$1,059,001	-$688,741	0.61
Utility Cost Test (UCT)	$0.0481	$986,344	$1,059,001	$72,658	1.07
Rate Impact Test (RIM)		$3,170,259	$1,059,001	-$2,111,258	0.33
Participant Cost Test (PCT)		$1,301,945	$2,798,382	$1,496,438	2.15
Lifecycle Revenue Impacts ($/kWh)					$0.0000035839
Discounted Participant Payback (years)					1.88

*Residential sector level results do not include the Low Income Program

The tables below summarize the non-energy benefits for the Home Energy Savings programs.

Table 9 - Home Energy Savings Non-Energy Benefits by Measure

Measure Name	Non-Energy Benefits Water ($/yr)	Non-Energy Benefits Other ($/yr)	Quantity	Measure Life	Total NEBs ($/yr)	Discount Rate	Total Net Present Value Benefits
Appliances	$702	$0	61	14.0	$702	6.57%	$6,718.79
Energy Kits - DHW	$4,993	$0	1,132	10.8	$4,993	6.57%	$40,124.68
Energy Kits - Lighting	$0	$252	1,181	13.0	$252	6.57%	$2,296.50
Lighting	$0	$62,221	66,930	12.0	$62,221	6.57%	$540,002.55
Water Heating	$47,242	$0	6,278	10.2	$47,242	6.57%	$365,082.20
Total NEBs	**$52,937**	**$62,473**	**75,582**	**60.0**	**$115,410**	**-**	**$954,224.73**

NAVIGANT
A Guidehouse Company

Memorandum

To: Nicole Karpavich and Alesha Pino, PacifiCorp

From: David Basak, Navigant

Date: March 24, 2020

Re: Cost-Effectiveness Results for the Home Energy Savings Program - Idaho

Navigant estimated the cost-effectiveness results for the Idaho Home Energy Savings Program, based on 2019 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program and for the 9 measure categories.

Cost-effectiveness was tested using the 2017 IRP decrement for all measure categories. The program passes the cost-effectiveness for the UCT and PCT test. The memo consists of the following tables.

1375 Walnut Street
Suite 100 | Boulder, CO 80302
303.728.2500 main
guidehouse.com

Table 1 - Home Energy Savings Inputs

Parameter	Value
Discount Rate	6.57%
Residential Line Loss	11.47%
Residential Energy Rate ($/kWh) [1]	$0.0994
Inflation Rate	2.20%

[1] Future rates determined using a 2.20% 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	$17	$306	$35	$1,650	$2,007	$4,117
Building Shell	$0	$39	$720	$82	$7,600	$8,441	$12,432
Electronics	$0	$723	$13,239	$1,505	$23,200	$38,667	$38,904
Energy Kits - DHW	$0	$472	$15,931	$983	$2,538	$19,924	$2,538
Energy Kits - Lighting	$0	$27	$924	$57	$1,050	$2,058	$1,050
HVAC	$0	$3,014	$55,190	$6,276	$127,680	$192,160	$371,859
Lighting	$0	$6,805	$296,093	$14,171	$80,205	$397,274	$768,224
Water Heating	$0	$1,397	$25,590	$2,910	$16,518	$46,415	$14,257
Whole Home	$0	$470	$41,813	$979	$62,500	$105,762	$88,566
Total	**$0**	**$12,964**	**$449,805**	**$26,998**	**$322,940**	**$812,707**	**$1,301,945**

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	3,615	100%	3,615	100%	3,615	14
Building Shell	8,513	100%	8,513	100%	8,513	45
Electronics	156,600	100%	156,600	100%	156,600	5
Energy Kits - DHW	102,226	87%	88,937	97%	86,269	11
Energy Kits - Lighting	5,930	87%	5,159	97%	5,004	13
HVAC	652,847	100%	652,319	89%	581,242	10
Lighting	1,474,117	66%	972,917	78%	758,875	12
Water Heating	302,701	100%	302,701	100%	302,701	10
Whole Home	101,865	100%	101,865	91%	92,697	45
Total	**2,808,414**	**82%**	**2,292,626**	**87%**	**1,995,516**	**12**

Table 4 - Benefit/Cost Ratios by Measure Category

Measure Group	PTRC	TRC	UCT	RIM	PCT
Appliances with NEBs	1.94	1.90	0.89	0.30	3.00
Appliances	0.44	0.40	0.89	0.30	1.37
Building Shell	0.99	0.90	1.42	0.46	2.05
Electronics	0.48	0.44	0.61	0.21	2.48
Energy Kits with NEBs - DHW	3.75	3.59	1.62	0.33	48.38
Energy Kits - DHW	1.79	1.62	1.62	0.33	33.04
Energy Kits with NEBs - Lighting	2.34	2.22	1.11	0.31	8.23
Energy Kits - Lighting	1.24	1.13	1.11	0.31	6.11
HVAC	0.79	0.72	1.49	0.42	1.83
Lighting with NEBs	0.84	0.80	0.79	0.28	1.89
Lighting	0.38	0.34	0.79	0.28	1.34
Water Heating with NEBs	14.64	14.42	2.08	0.32	57.03
Water Heating	2.41	2.19	2.08	0.32	19.15
Whole Home	1.16	1.06	1.24	0.43	3.12
Total with NEBs	**1.27**	**1.21**	**1.11**	**0.34**	**2.68**
Total	**0.63**	**0.57**	**1.11**	**0.34**	**1.90**

Table 5 – Home Energy Savings Program Level (without NEBs) Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0899	$1,574,106	$990,366	-$583,741	0.63
Total Resource Cost Test (TRC) No Adder	$0.0899	$1,574,106	$900,332	-$673,774	0.57
Utility Cost Test (UCT)	$0.0464	$812,707	$900,332	$87,625	1.11
Rate Impact Test (RIM)		$2,678,341	$900,332	-$1,778,008	0.34
Participant Cost Test (PCT)		$1,301,945	$2,480,100	$1,178,155	1.90
Lifecycle Revenue Impacts ($/kWh)					$0.0000030362
Discounted Participant Payback (years)					5.28

Table 6 through Table 14 provides cost-effectiveness results without NEBs for all 9 measures.

Table 6 - Home Energy Savings Appliances Cost-Effectiveness Results (Load Shape – Residential_ERWH_7P)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1200	$4,474	$1,958	-$2,517	0.44
Total Resource Cost Test (TRC) No Adder	$0.1200	$4,474	$1,780	-$2,694	0.40
Utility Cost Test (UCT)	$0.0539	$2,007	$1,780	-$227	0.89
Rate Impact Test (RIM)		$5,979	$1,780	-$4,200	0.30
Participant Cost Test (PCT)		$4,117	$5,622	$1,505	1.37
Lifecycle Revenue Impacts ($/kWh)					$0.0000000848
Discounted Participant Payback (years)					7.70

Table 7 - Home Energy Savings Building Shell Cost-Effectiveness Results (Load Shape – ID_Single_Family_Cooling)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0798	$13,272	$13,205	-$67	0.99
Total Resource Cost Test (TRC) No Adder	$0.0798	$13,272	$12,005	-$1,268	0.90
Utility Cost Test (UCT)	$0.0507	$8,441	$12,005	$3,564	1.42
Rate Impact Test (RIM)		$26,326	$12,005	-$14,321	0.46
Participant Cost Test (PCT)		$12,432	$25,485	$13,053	2.05
Lifecycle Revenue Impacts ($/kWh)					$0.0000000893
Discounted Participant Payback (years)					6.23

Table 8 - Home Energy Savings Electronics Cost-Effectiveness Results (Load Shape – ID_Single_Family_Plug)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0788	$54,370	$26,091	-$28,280	0.48
Total Resource Cost Test (TRC) No Adder	$0.0788	$54,370	$23,719	-$30,652	0.44
Utility Cost Test (UCT)	$0.0560	$38,667	$23,719	-$14,948	0.61
Rate Impact Test (RIM)		$111,948	$23,719	-$88,229	0.21
Participant Cost Test (PCT)		$38,904	$96,481	$57,578	2.48
Lifecycle Revenue Impacts ($/kWh)					$0.0000050255
Discounted Participant Payback (years)					0.99

Table 9 - Home Energy Savings Energy Kits – DHW Cost-Effectiveness Results (Load Shape – Residential_ERWH_7P)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0268	$19,847	$35,466	$15,619	1.79
Total Resource Cost Test (TRC) No Adder	$0.0268	$19,847	$32,242	$12,395	1.62
Utility Cost Test (UCT)	$0.0269	$19,924	$32,242	$12,319	1.62
Rate Impact Test (RIM)		$98,803	$32,242	-$66,561	0.33
Participant Cost Test (PCT)		$2,538	$83,857	$81,319	33.04
Lifecycle Revenue Impacts ($/kWh)					$0.0000017147
Discounted Participant Payback (years)					n/a

Table 10 - Home Energy Savings Energy Kits – Lighting Cost-Effectiveness Results (Load Shape – Residential_Lighting_7P)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0415	$2,027	$2,508	$481	1.24
Total Resource Cost Test (TRC) No Adder	$0.0415	$2,027	$2,280	$253	1.13
Utility Cost Test (UCT)	$0.0421	$2,058	$2,280	$222	1.11
Rate Impact Test (RIM)		$7,262	$2,280	-$4,982	0.31
Participant Cost Test (PCT)		$1,050	$6,414	$5,365	6.11
Lifecycle Revenue Impacts ($/kWh)					$0.0000001084
Discounted Participant Payback (years)					n/a

Table 11 - Home Energy Savings HVAC Cost-Effectiveness Results (Load Shape – ID_Single_Family_Cooling)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0855	$395,820	$313,910	-$81,911	0.79
Total Resource Cost Test (TRC) No Adder	$0.0855	$395,820	$285,372	-$110,448	0.72
Utility Cost Test (UCT)	$0.0415	$192,160	$285,372	$93,213	1.49
Rate Impact Test (RIM)		$684,768	$285,372	-$399,396	0.42
Participant Cost Test (PCT)		$371,859	$680,527	$308,668	1.83
Lifecycle Revenue Impacts ($/kWh)					$0.0000113261
Discounted Participant Payback (years)					4.45

Table 12 - Home Energy Savings Lighting Cost-Effectiveness Results (Load Shape – Residential_Lighting_7P)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1314	$916,284	$347,226	-$569,058	0.38
Total Resource Cost Test (TRC) No Adder	$0.1314	$916,284	$315,660	-$600,624	0.34
Utility Cost Test (UCT)	$0.0570	$397,274	$315,660	-$81,614	0.79
Rate Impact Test (RIM)		$1,139,786	$315,660	-$824,126	0.28
Participant Cost Test (PCT)		$768,224	$1,032,143	$263,920	1.34
Lifecycle Revenue Impacts ($/kWh)					$0.0000194464
Discounted Participant Payback (years)					10.88

Table 13 - Home Energy Savings Water Heating Cost-Effectiveness Results (Load Shape – Residential_HPWH_7P)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0183	$44,154	$106,210	$62,056	2.41
Total Resource Cost Test (TRC) No Adder	$0.0183	$44,154	$96,554	$52,400	2.19
Utility Cost Test (UCT)	$0.0193	$46,415	$96,554	$50,139	2.08
Rate Impact Test (RIM)		$302,957	$96,554	-$206,403	0.32
Participant Cost Test (PCT)		$14,257	$273,060	$258,803	19.15
Lifecycle Revenue Impacts ($/kWh)					$0.0000058532
Discounted Participant Payback (years)					n/a

Table 14 - Home Energy Savings Whole Home Cost-Effectiveness Results (Load Shape – ID_Single_Family_Cooling)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0684	$123,857	$143,793	$19,936	1.16
Total Resource Cost Test (TRC) No Adder	$0.0684	$123,857	$130,720	$6,864	1.06
Utility Cost Test (UCT)	$0.0584	$105,762	$130,720	$24,958	1.24
Rate Impact Test (RIM)		$300,512	$130,720	-$169,791	0.43
Participant Cost Test (PCT)		$88,566	$276,510	$187,945	3.12
Lifecycle Revenue Impacts ($/kWh)					$0.0000010584
Discounted Participant Payback (years)					2.88

In addition to the energy benefits reported above, appliances, energy savings kits and lighting in the Home Energy Savings program offer significant non-energy benefits (NEBs). Table 15 through Table 21 detail the non-energy benefits and cost-effectiveness results.

Table 15 - Home Energy Savings Non-Energy Benefits by Measure

Measure Name	Non-Energy Benefits Water ($/yr)	Non-Energy Benefits Other ($/yr)	Quantity	Measure Life	Total NEBs ($/yr)	Discount Rate	Total Net Present Value Benefits
Appliances	$702	$0	61	14.0	$702	6.57%	$6,718.79
Energy Kits - DHW	$4,993	$0	1,132	10.8	$4,993	6.57%	$40,124.68
Energy Kits - Lighting	$0	$252	1,181	13.0	$252	6.57%	$2,296.50
Lighting	$0	$62,221	66,930	12.0	$62,221	6.57%	$540,002.55
Water Heating	$47,242	$0	6,278	10.2	$47,242	6.57%	$365,082.20

The following tables provide the cost-effectiveness results after adding in the non-energy benefits detailed above beginning with the overall program results.

Table 16 - Home Energy Savings Program (with NEBs) Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0899	$1,574,106	$1,999,437	$425,331	1.27
Total Resource Cost Test (TRC) No Adder	$0.0899	$1,574,106	$1,909,404	$335,298	1.21
Utility Cost Test (UCT)	$0.0464	$812,707	$900,332	$87,625	1.11
Rate Impact Test (RIM)		$2,678,341	$900,332	-$1,778,008	0.34
Participant Cost Test (PCT)		$1,301,945	$3,489,172	$2,187,227	2.68
Lifecycle Revenue Impacts ($/kWh)					$0.0000068005
Discounted Participant Payback (years)					5.28

Table 17 - Home Energy Savings Appliances (with NEBs) Cost-Effectiveness Results (Load Shape – Residential_ERWH_7P)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1200	$4,474	$8,676	$4,202	1.94
Total Resource Cost Test (TRC) No Adder	$0.1200	$4,474	$8,498	$4,024	1.90
Utility Cost Test (UCT)	$0.0539	$2,007	$1,780	-$227	0.89
Rate Impact Test (RIM)		$5,979	$1,780	-$4,200	0.30
Participant Cost Test (PCT)		$4,117	$12,341	$8,224	3.00
Lifecycle Revenue Impacts ($/kWh)					$0.0000000848
Discounted Participant Payback (years)					7.70

Table 18 - Home Energy Savings Energy Kit – DHW (with NEBs) Cost-Effectiveness Results (Load Shape – Residential_ERWH_7P)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0268	$19,847	$74,387	$54,540	3.75
Total Resource Cost Test (TRC) No Adder	$0.0268	$19,847	$71,163	$51,316	3.59
Utility Cost Test (UCT)	$0.0269	$19,924	$32,242	$12,319	1.62
Rate Impact Test (RIM)		$98,803	$32,242	-$66,561	0.33
Participant Cost Test (PCT)		$2,538	$122,778	$120,240	48.38
Lifecycle Revenue Impacts ($/kWh)					$0.0000017147
Discounted Participant Payback (years)					n/a

Table 19 - Home Energy Savings Energy Kit – Lighting (with NEBs) Cost-Effectiveness Results (Load Shape – Residential_Lighting_7P)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0415	$2,027	$4,736	$2,709	2.34
Total Resource Cost Test (TRC) No Adder	$0.0415	$2,027	$4,508	$2,481	2.22
Utility Cost Test (UCT)	$0.0421	$2,058	$2,280	$222	1.11
Rate Impact Test (RIM)		$7,262	$2,280	-$4,982	0.31
Participant Cost Test (PCT)		$1,050	$8,642	$7,592	8.23
Lifecycle Revenue Impacts ($/kWh)					$0.0000001084
Discounted Participant Payback (years)					n/a

Table 20 - Home Energy Savings Lighting (with NEBs) Cost-Effectiveness Results (Load Shape – Residential_Lighting_7P)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.1314	$916,284	$768,428	-$147,856	0.84
Total Resource Cost Test (TRC) No Adder	$0.1314	$916,284	$736,862	-$179,422	0.80
Utility Cost Test (UCT)	$0.0570	$397,274	$315,660	-$81,614	0.79
Rate Impact Test (RIM)		$1,139,786	$315,660	-$824,126	0.28
Participant Cost Test (PCT)		$768,224	$1,453,345	$685,121	1.89
Lifecycle Revenue Impacts ($/kWh)					$0.0000194464
Discounted Participant Payback (years)					10.88

Table 21 - Home Energy Savings Water Heating (with NEBs) Cost-Effectiveness Results (Load Shape – Residential_ERWH_7P)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0183	$44,154	$646,212	$602,058	14.64
Total Resource Cost Test (TRC) No Adder	$0.0183	$44,154	$636,557	$592,403	14.42
Utility Cost Test (UCT)	$0.0193	$46,415	$96,554	$50,139	2.08
Rate Impact Test (RIM)		$302,957	$96,554	-$206,403	0.32
Participant Cost Test (PCT)		$14,257	$813,063	$798,806	57.03
Lifecycle Revenue Impacts ($/kWh)					$0.0000058532
Discounted Participant Payback (years)					n/a

NAVIGANT
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Memorandum

To: Nicole Karpavich and Alesha Pino, PacifiCorp

From: David Basak, Navigant

Date: March 24, 2020

Re: Cost-Effectiveness Results for the Home Energy Reporting Program - Idaho

Navigant estimated the cost-effectiveness results for the Idaho Home Energy Reporting Program, based on 2019 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program.

Cost-effectiveness was tested using the 2017 IRP decrement. The program passes all cost-effectiveness tests except the RIM.

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Table 1 - Home Energy Reporting Inputs

Parameter	Value
Discount Rate	6.57%
Residential Line Loss	11.47%
Residential Energy Rate ($/kWh) [1]	$0.1006
Inflation Rate	2.20%

[1] Future rates determined using a 2.20% annual escalator.

Table 2 – Home Energy Reporting Annual Program Costs

Measure Group	Engineering Costs	Utility Admin	Program Delivery	Program Development	Incentives	Total Utility Costs	Gross Customer Costs
Home Energy Reports	$0	$7,001	$71,063	$164	$0	$78,228	$0
Total	**$0**	**$7,001**	**$71,063**	**$164**	**$0**	**$78,228**	**$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
Home Energy Reports	3,405,550	92%	3,133,106	100%	3,133,106	1
Total	**3,405,550**	**92%**	**3,133,106**	**100%**	**3,133,106**	**1**

Table 4 - Home Energy Reporting Program Level Cost-Effectiveness Results (Load Shape – ID_Single_Family_Cooling)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0261	$78,228	$174,536	$96,308	2.23
Total Resource Cost Test (TRC) No Adder	$0.0261	$78,228	$158,669	$80,441	2.03
Utility Cost Test (UCT)	$0.0261	$78,228	$158,669	$80,441	2.03
Rate Impact Test (RIM)		$396,511	$158,669	-$237,841	0.40
Participant Cost Test (PCT)		$0	$318,282	$318,282	n/a
Lifecycle Revenue Impacts ($/kWh)					$0.0000679070
Discounted Participant Payback (years)					n/a

NAVIGANT
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Memorandum

To: Nicole Karpavich and Alesha Pino, PacifiCorp

From: David Basak, Navigant

Date: April 3, 2020

Re: Cost-Effectiveness Results for the Low Income Weatherization Program - Idaho

Navigant estimated the cost-effectiveness results for the Idaho Low Income Weatherization Program, based on 2019 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program.

Cost-effectiveness was tested using the 2017 IRP decrement. The program does not pass any of the cost-effectiveness tests.

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Table 1 - Low Income Weatherization Inputs

Parameter	Value
Discount Rate	6.57%
Residential Line Loss	11.47%
Residential Energy Rate ($/kWh)[1]	$0.0994
Inflation Rate	2.20%

[1] Future rates determined using a 2.20% annual escalator.

Table 2 - Low Income Weatherization Annual Program Costs

Measure Group	Engineering Costs	Utility Admin	Program Delivery	Program Development	Incentives	Total Utility Costs	Gross Customer Costs
Low Income Weatherization	$0	$11,018	$11,165	$5,934	$313,548	$341,665	$0
Total	**$0**	**$11,018**	**$11,165**	**$5,934**	**$313,548**	**$341,665**	**$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	99,120	90%	89,208	100%	89,208	23
Total	**99,120**	**90%**	**89,208**	**100%**	**89,208**	**23**

Table 4 - Benefit/Cost Ratios by Measure Category

Measure Group	PTRC	TRC	UCT	RIM	PCT
Low Income Weatherization with NEBs	1.13	1.10	0.26	0.19	n/a
Low Income Weatherization	0.28	0.26	0.26	0.19	n/a

Table 5 - Low Income Weatherization Program Level (without NEBs) Cost-Effectiveness (Load Shape – ID_Single_Family_Cooling

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.2673	$341,665	$97,361	-$244,304	0.28
Total Resource Cost Test (TRC) No Adder	$0.2673	$341,665	$88,510	-$253,155	0.26
Utility Cost Test (UCT)	$0.2673	$341,665	$88,510	-$253,155	0.26
Rate Impact Test (RIM)		$478,302	$88,510	-$389,791	0.19
Participant Cost Test (PCT)		$0	$450,185	$450,185	n/a
Lifecycle Revenue Impacts ($/kWh)					$0.0000047699
Discounted Participant Payback (years)					n/a

In addition to the energy benefits reported above, the Low Income program offers significant non-energy benefits (NEBs). Table 6 details the non-energy benefits and Table 7 provides the cost-effectiveness results.

Table 6 - Low Income Weatherization Non-Energy Benefits

Non-Energy Benefit	Program Impact	Perspective Adjusted
Reduced Arrearage	$108,772.00	PTRC, TRC
Health & Safety	$179,487.00	PTRC, TRC
Total	**$288,259.00**	

Table 7 - Low Income Weatherization Program (with NEBs) Level Cost-Effectiveness Results (Load Shape – ID_Single_Family_Cooling)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.2673	$341,665	$385,620	$43,955	1.13
Total Resource Cost Test (TRC) No Adder	$0.2673	$341,665	$376,769	$35,104	1.10
Utility Cost Test (UCT)	$0.2673	$341,665	$88,510	-$253,155	0.26
Rate Impact Test (RIM)		$478,302	$88,510	-$389,791	0.19
Participant Cost Test (PCT)		$0	$450,185	$450,185	n/a
Lifecycle Revenue Impacts ($/kWh)					$0.0000047699
Discounted Participant Payback (years)					n/a

NAVIGANT
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Memorandum

To: Nicole Karpavich and Alesha Pino, PacifiCorp

From: David Basak, Navigant

Date: March 26, 2020

Re: Cost-Effectiveness Results for the Wattsmart Business Program - Idaho

Navigant estimated the cost-effectiveness results for the Idaho Wattsmart Business Program, based on 2019 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program and for the 12 measure categories.

Cost-effectiveness was tested using the 2017 IRP decrement for all measure categories. The program passes the UCT and PCT cost-effectiveness test. The memo consists of the following tables.

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Table 1 - Utility Inputs

Parameter	Value
Discount Rate	6.57%
Commercial Line Loss	10.75%
Industrial Line Loss	7.52%
Irrigation Line Loss	11.45%
Commercial Energy Rate ($/kWh)[1]	$0.0852
Industrial Energy Rate ($/kWh)[1]	$0.0609
Irrigation Energy Rate ($/kWh)[1]	$0.0887
Inflation Rate	2.20%

[1] Future rates determined using a 2.20% annual escalator.

Table 2 – Annual Wattsmart Business Program Costs by Measure Category

Measure Category	Engineering Costs	Utility Admin	Program Delivery	Program Dev.	Inspections	Incentives	Total Utility Costs	Gross Customer Costs
Building Shell	$17	$81	$1,741	$62	$0	$5,698	$7,597	$35,681
Compressed Air	$0	$1,149	$3,908	$639	$0	$21,574	$27,271	$36,449
Direct Install	$0	$18,315	$149,048	$5,085	$0	$332,247	$504,695	$110,749
Energy Management	$23,041	$13,897	$110,448	$11,224	$0	$50,576	$209,186	$64,737
Farm & Dairy	$0	$1,450	$30,372	$1,112	$0	$36,750	$69,684	$61,587
Food Service Equipment	$0	$97	$1,981	$74	$0	$1,135	$3,288	$4,128
HVAC	$23,154	$4,250	$31,862	$3,014	$0	$85,816	$148,095	$246,871
Irrigation	$0	$6,857	$399,816	$19,991	$0	$397,096	$823,760	$1,753,639
Lighting	$0	$41,292	$669,744	$22,255	$34,004	$528,263	$1,295,558	$1,903,468
Motors	$48,151	$10,083	$39,796	$2,815	$0	$48,853	$149,699	$146,958
Refrigeration	$0	$634	$8,339	$486	$0	$16,425	$25,884	$45,630
Energy Mngr. Co-funding	$0	$0	$0	$0	$0	$31,762	$31,762	$0
Total	**$94,364**	**$98,105**	**$1,447,055**	**$66,758**	**$34,004**	**$1,556,194**	**$3,296,479**	**$4,409,896**

Table 3 – Annual Wattsmart Business Program Savings by Measure Category

Measure Category	Gross kWh Savings	Realization Rate	Adjusted Gross kWh Savings	Net to Gross Ratio	Net kWh Savings	Measure Life
Building Shell	13,941	72%	10,038	89%	8,933	15
Compressed Air	144,063	100%	144,063	84%	121,013	15
Direct Install	1,145,681	90%	1,031,113	90%	928,002	12
Energy Management	2,528,789	100%	2,528,789	84%	2,124,183	3
Farm & Dairy	250,530	97%	243,014	74%	179,830	10
Food Service Equipment	16,764	72%	12,070	89%	10,742	15
HVAC	678,964	100%	678,964	65%	441,327	14
Irrigation	4,504,156	95%	4,285,287	80%	3,417,947	7
Lighting	5,014,277	94%	4,713,420	89%	4,194,944	14
Motors	634,267	84%	532,784	77%	410,244	15
Refrigeration	109,501	100%	109,501	100%	109,501	12
Energy Mngr. Co-funding	0	0%	0	0%	0	0
Total	**15,040,933**	**95%**	**14,289,043**	**84%**	**11,946,666**	**10**

Table 4 - Benefit/Cost Ratios by Measure Category

Measure Category	PTRC	TRC	UCT	RIM	PCT
Building Shell	0.17	0.16	0.70	0.32	0.44
Compressed Air	1.97	1.79	2.38	0.46	4.32
Direct Install	1.53	1.39	0.75	2.20	3.00
Energy Management	1.00	0.91	0.93	0.26	10.44
Farm & Dairy	0.93	0.84	0.95	0.33	3.46
Food Service Equipment	1.09	1.00	1.76	0.42	3.17
HVAC	1.19	1.08	1.62	0.42	2.98
Irrigation	0.52	0.48	1.06	0.32	1.60
Lighting	0.92	0.83	1.59	0.41	2.48
Motors	1.11	1.01	1.45	0.46	3.15
Refrigeration	0.91	0.83	1.76	0.39	2.37
Energy Manager Co-funding	0.00	0.00	0.00	0.00	0.00
Total	**0.84**	**0.76**	**1.26**	**0.41**	**2.33**

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	$0.0593	$5,421,737	$4,559,074	-$862,663	0.84
Total Resource Cost Test (TRC) No Adder	$0.0593	$5,421,737	$4,144,613	-$1,277,125	0.76
Utility Cost Test (UCT)	$0.0360	$3,296,479	$4,144,613	$848,133	1.26
Rate Impact Test (RIM)		$10,193,244	$4,144,613	-$6,048,632	0.41
Participant Cost Test (PCT)		$4,409,896	$10,259,523	$5,849,627	2.33
Lifecycle Revenue Impacts ($/kWh)					$0.0000129627
Discounted Participant Payback (years)					2.92

Table 6 through Table 17 provide cost-effectiveness results for all 12 measures.

Table 6 - Wattsmart Building Shell Measures Cost-Effectiveness Results (Load Shape – ID_Large_Office_Space_Cool)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.3477	$33,655	$5,873	-$27,783	0.17
Total Resource Cost Test (TRC) No Adder	$0.3477	$33,655	$5,339	-$28,316	0.16
Utility Cost Test (UCT)	$0.0785	$7,597	$5,339	-$2,258	0.70
Rate Impact Test (RIM)		$16,444	$5,339	-$11,105	0.32
Participant Cost Test (PCT)		$35,681	$15,638	-$20,042	0.44
Lifecycle Revenue Impacts ($/kWh)					$0.0000002091
Discounted Participant Payback (years)					n/a

Table 7 - Wattsmart Business Compressed Air Cost-Effectiveness Results (Load Shape – ID_Miscellaneous_Mfg_General)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0277	$36,314	$71,509	$35,195	1.97
Total Resource Cost Test (TRC) No Adder	$0.0277	$36,314	$65,008	$28,694	1.79
Utility Cost Test (UCT)	$0.0208	$27,271	$65,008	$37,738	2.38
Rate Impact Test (RIM)		$141,501	$65,008	-$76,492	0.46
Participant Cost Test (PCT)		$36,449	$157,562	$121,113	4.32
Lifecycle Revenue Impacts ($/kWh)					$0.0000014405
Discounted Participant Payback (years)					1.50

Table 8 - Wattsmart Business Direct Install Cost-Effectiveness Results (Load Shape – ID_Miscellaneous_Lighting)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0319	$272,122	$417,501	$145,379	1.53
Total Resource Cost Test (TRC) No Adder	$0.0319	$272,122	$379,547	$107,424	1.39
Utility Cost Test (UCT)	$0.0592	$504,695	$379,547	-$125,149	0.75
Rate Impact Test (RIM)		$172,448	$379,547	$207,098	2.20
Participant Cost Test (PCT)		$110,749	$332,247	$221,498	3.00
Lifecycle Revenue Impacts ($/kWh)					-$0.0000048868
Discounted Participant Payback (years)					n/a

Table 9 - Wattsmart Business Energy Management Cost-Effectiveness Results (Load Shape – ID_Miscellaneous_Mfg_General)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0364	$212,989	$212,912	-$77	1.00
Total Resource Cost Test (TRC) No Adder	$0.0364	$212,989	$193,556	-$19,433	0.91
Utility Cost Test (UCT)	$0.0357	$209,186	$193,556	-$15,630	0.93
Rate Impact Test (RIM)		$734,467	$193,556	-$540,911	0.26
Participant Cost Test (PCT)		$64,737	$675,911	$611,174	10.44
Lifecycle Revenue Impacts ($/kWh)					$0.0000514100
Discounted Participant Payback (years)					0.08

Table 10 - Wattsmart Business Farm & Dairy Cost-Effectiveness Results (Load Shape – ID_Irrigation_General)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0548	$78,509	$72,866	-$5,643	0.93
Total Resource Cost Test (TRC) No Adder	$0.0548	$78,509	$66,242	-$12,267	0.84
Utility Cost Test (UCT)	$0.0487	$69,684	$66,242	-$3,442	0.95
Rate Impact Test (RIM)		$200,320	$66,242	-$134,078	0.33
Participant Cost Test (PCT)		$61,587	$213,285	$151,697	3.46
Lifecycle Revenue Impacts ($/kWh)					$0.0000038022
Discounted Participant Payback (years)					1.61

Table 11 - Wattsmart Business Food Service Equipment Cost-Effectiveness Results (Load Shape – ID_Miscellaneous_Mfg_General)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0501	$5,827	$6,378	$552	1.09
Total Resource Cost Test (TRC) No Adder	$0.0501	$5,827	$5,799	-$28	1.00
Utility Cost Test (UCT)	$0.0282	$3,288	$5,799	$2,511	1.76
Rate Impact Test (RIM)		$13,926	$5,799	-$8,128	0.42
Participant Cost Test (PCT)		$4,128	$13,088	$8,960	3.17
Lifecycle Revenue Impacts ($/kWh)					$0.0000001531
Discounted Participant Payback (years)					3.37

Table 12 - Wattsmart Business HVAC Cost-Effectiveness Results (Load Shape – ID_School_HVAC_Aux)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0478	$222,745	$264,194	$41,449	1.19
Total Resource Cost Test (TRC) No Adder	$0.0478	$222,745	$240,176	$17,431	1.08
Utility Cost Test (UCT)	$0.0318	$148,095	$240,176	$92,081	1.62
Rate Impact Test (RIM)		$566,306	$240,176	-$326,130	0.42
Participant Cost Test (PCT)		$246,871	$734,441	$487,570	2.98
Lifecycle Revenue Impacts ($/kWh)					$0.0000065854
Discounted Participant Payback (years)					4.56

Table 13 - Wattsmart Business Irrigation Cost-Effectiveness Results (Load Shape – ID_Irrigation_General)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0903	$1,829,102	$959,410	-$869,693	0.52
Total Resource Cost Test (TRC) No Adder	$0.0903	$1,829,102	$872,191	-$956,912	0.48
Utility Cost Test (UCT)	$0.0407	$823,760	$872,191	$48,430	1.06
Rate Impact Test (RIM)		$2,740,630	$872,191	-$1,868,439	0.32
Participant Cost Test (PCT)		$1,753,639	$2,800,345	$1,046,705	1.60
Lifecycle Revenue Impacts ($/kWh)					$0.0000758807
Discounted Participant Payback (years)					4.75

Table 14 - Wattsmart Business Lighting Cost-Effectiveness Results
(Load Shape – ID_Miscellaneous_Lighting)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0563	$2,461,382	$2,260,009	-$201,373	0.92
Total Resource Cost Test (TRC) No Adder	$0.0563	$2,461,382	$2,054,554	-$406,828	0.83
Utility Cost Test (UCT)	$0.0296	$1,295,558	$2,054,554	$758,996	1.59
Rate Impact Test (RIM)		$5,021,154	$2,054,554	-$2,966,600	0.41
Participant Cost Test (PCT)		$1,903,468	$4,714,325	$2,810,857	2.48
Lifecycle Revenue Impacts ($/kWh)					$0.0000599031
Discounted Participant Payback (years)					4.32

Table 15 - Wattsmart Business Motors Cost-Effectiveness Results
(Load Shape – ID_Miscellaneous_Mfg_General)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0481	$214,003	$238,376	$24,373	1.11
Total Resource Cost Test (TRC) No Adder	$0.0481	$214,003	$216,706	$2,703	1.01
Utility Cost Test (UCT)	$0.0337	$149,699	$216,706	$67,007	1.45
Rate Impact Test (RIM)		$468,330	$216,706	-$251,625	0.46
Participant Cost Test (PCT)		$146,958	$462,660	$315,703	3.15
Lifecycle Revenue Impacts ($/kWh)					$0.0000047386
Discounted Participant Payback (years)					3.71

Table 16 - Wattsmart Business Refrigeration Cost-Effectiveness Results
(Load Shape – ID_Grocery_Refrigeration)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0548	$55,088	$50,046	-$5,043	0.91
Total Resource Cost Test (TRC) No Adder	$0.0548	$55,088	$45,496	-$9,592	0.83
Utility Cost Test (UCT)	$0.0257	$25,884	$45,496	$19,612	1.76
Rate Impact Test (RIM)		$117,718	$45,496	-$72,222	0.39
Participant Cost Test (PCT)		$45,630	$108,259	$62,629	2.37
Lifecycle Revenue Impacts ($/kWh)					$0.0000017042
Discounted Participant Payback (years)					3.21

Table 17 - Wattsmart Business Energy Manager Co-Funding Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	n/a	$0	$0	$0	n/a
Total Resource Cost Test (TRC) No Adder	n/a	$0	$0	$0	n/a
Utility Cost Test (UCT)	n/a	$31,762	$0	-$31,762	n/a
Rate Impact Test (RIM)		$0	$0	$0	n/a
Participant Cost Test (PCT)		$0	$31,762	$31,762	n/a
Lifecycle Revenue Impacts ($/kWh)					n/a
Discounted Participant Payback (years)					n/a

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Appendix 2
Program Expenditures by Category

2019 Program	Admin - Prog Delivery Total	Admin - Utility Total	Customer Incentive Total	Dealer / Trade Ally Incentive Total	Engineering Total	Inspection Total	Marketing, education and outreach + Program Dev + Eval	Total Cost
Home Energy Reporting	$ 71,063	$ 7,001					$ 164	$ 78,228
wattsmart Homes	$ 449,805	$ 12,964	$ 161,575	$ 161,365			$ 26,998	$ 812,707
Low Income Weatherization	$ 11,165	$ 11,018	$ 313,548				$ 5,934	$ 341,665
Low Income Education		$ 25,000						$ 25,000
Wattsmart Business - Agricultural	$ 875	$ 6,376	$ 409,444					$ 416,696
Wattsmart Business - Commercial	$ 38,636	$ 53,575	$ 976,432	$ -	$ 24,600	$ 24,820		$ 1,118,064
Wattsmart Business - Industrial	$ 13,546	$ 37,539	$ 170,317	$ -	$ 69,763	$ 9,183		$ 300,350
Wattsmart Business - Portfolio	$ 1,394,518	$ 614					$ 66,238	$ 1,461,370
2019 Program Cost	**$ 1,979,608**	**$ 154,088**	**$ 2,031,318**	**$ 161,365**	**$ 94,364**	**$ 34,004**	**$ 99,334**	**$ 4,554,081**

2019 Portfolio Activity	Admin - Prog Delivery Total	Admin - Utility Total	Customer Incentive Total	Dealer / Trade Ally Incentive Total	Engineering Total	Inspection Total	Marketing & Program Development Total	Total Cost
Outreach & Comm - wattsmart	$ 38,993	$ 2,199					$ 126,525	$ 167,717
Portfolio - DSM Central	$ 293	$ 23,536						$ 23,830
Portfolio - TRL		$706						$ 706
Portfolio - Potential Study	$ 7,931	$ 3,125						$ 11,056
Portfolio - Evaluation - C&I	$ 4,225	$ 11,457						$ 15,682
Portfolio Evaluation - Residential	$ 76,631	$ 18,777						$ 95,408
Total 2019 Portfolio Cost	**$ 2,107,682**	**$ 213,887**	**$ 2,031,318**	**$ 161,365**	**$ 94,364**	**$ 34,004**	**$ 225,859**	**$ 4,868,479**

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Appendix 3
Idaho Energy Efficiency
Measure Installation Verifications

Idaho Measure Installation Verifications

Low Income Weatherization

All projects

- All measures are qualified through US Department of Energy approved audit tool.
- 100 percent inspection by agency inspector of all homes treated, reconciling work completed and quality (corrective action includes measure verification) prior to invoicing Company.
- Community Action Partnership Association of Idaho (CAPAI) follows with random inspections.
- Company program manager and/or inspector joins CAPAI and state inspectors during their monitoring session provided their random selection of homes includes dwellings funded by Rocky Mountain Power.

Wattsmart Homes

Site inspections are performed by Program Administrator staff for the following retrofit measures. Inspections are performed on > 5 percent of single family homes, $\geq$ 5 percent of manufactured homes, and 100 percent of multifamily projects.

- Duct sealing
- Duct sealing and insulation
- Ductless heat pumps
- Gas furnace with electrically commutated motor (ECM)
- Ground source heat pumps
- Heat pumps
- Heat pump best practices installation and proper sizing
- Heat pump tune-ups
- Heat pump water heaters
- Insulation
- Windows

Site inspections are not conducted for the following measures. However, all post-purchase incented measures undergo a quality assurance review prior to the issuance of the customer/dealer incentive and recording of savings (e.g. proof of purchase receipt review) and eligible equipment review. Additionally, customer account and customer address are checked to ensure the Company does not double pay for the same measure or double count measure savings.

- Central air conditioners
- Clothes washers
- Evaporative coolers
- Smart Thermostats

Site inspections are not conducted for the following measures, which are delivered via an 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. Program Administrator verifies measures for product eligibility and correct pricing. Pricing is also verified by Program Administrator field visits to retail locations.

- LED bulbs
- Light fixtures
- 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.

Wattsmart Business

Projects delivered by third party program administrator

Lighting projects

Incentive		Retrofit	Lighting Controls Only	New Construction or Major Renovation
(A) less than $2,500	PRE	Not required	Not required	Not applicable
	POST	Inspect at least 5% of projects (5% of Lighting Controls Only, Retrofit Lighting and NCMP project count combined, per state)		
(B) $2,500 or greater and less than $10,000	PRE	Inspect each project [2]	Not required	Not applicable
	POST	Inspect at least 5% of projects [3]	Inspect Each Project	
(C) $10,000 and greater	PRE	Inspect each project [2]		Not applicable
	POST	Inspect each project		

1. The dollar values in the first column are projected incentive values. If the incentive value later increases due to scope changes during installation, a pre-inspection will

inspections.

3. Situation-specific exceptions to provisions in the table may be approved by Program Manager.

Inspection sampling methods and thresholds are confidential and may not be shared with customers or vendors

Non-lighting projects (typical upgrades/listed measures)

Incentive		Inspection Rate	Baseline Verification Techniques PRE / Installation Verification Techniques
(A) less than $10,000	PRE	Not applicable [1]	UES Typical Measures. Program messaging encourages customers and/or trade allies to contact us prior to purchase. Pre-approval is recommended but not required.
	POST	Inspect at least 5% of projects (per state) in person or by telephone [2,3]	Confirm quantities, schedule, setpoints, loading, performance improvement, performance issues. Photos of equipment, nameplates, setpoints, gauges. Collect invoices.
(B) $10,000 or greater	PRE	Not applicable [1]	UES projects at this level may occur, but are uncommon. Pre-purchase inquiry and interaction usually takes place when potential incentive reaches this level, thought it is not a requirement for Typical Measures.
	POST	Inspect each project	Same as above.

1. Except for retrofit lighting, Typical Measures are administered via post-purchase application. No interaction prior to installation is formally required, though it may be useful in some cases and it does commonly occur.

2. **Exception** - All chiller projects require post-installation inspection.

3. Inspection of non-lighting measures may in some cases be completed via telephone, where appropriate. Envelope measures, for example, are typically not viewable, with no specific identifiers such as model or serial number. Establishing whether a rewound green motor has been put into service or placed into inventory is readily done

4. Not every detail in the verification method cells is applicable to every project, nor are these lists intended to be exhaustive. Professional judgement is required. For example, if a photo of a nameplate is missing or illegible, this is not an issue if the invoice or purchase order identifies the model number so that the equipment can be

5. Situation-specific exceptions to provisions in table may be approved by Program Manager. For example, if a project to be inspected is so remote as to necessitate many hours of driving, and if invoices, information from telephone conversations, and photos provided by the end user are sufficient to document installation and performance of the measure(s), then the site visit portion of the inspection requirement may be waived by the Program Manager.

Project Manager Delivered Projects

Project Savings		Inspection	Baseline / Installation Verification Techniques	Type of report	Type of QC review	Examples
(A) less than 50,000 kWh	PRE	Not applicable	Establishment of baseline prior to purchase not required for Typical Measures. In practice, program analyst or engineer frequently provides calculator-based analysis to end user prior to purchase in response to end user request. Information for calculation comes by phone and email from operators, contractors, and suppliers, or from site visit (though site visit not required).	Calculator serves as report	Internal technical review by analyst ither than the one who did analysis	25 hp VFD air compressor.Chiller.High-efficiency Electric Submersible Pump.Potato Storage Fan VFD.HVAC/IDEC.
	POST	Inspect at least 5% of projects (per state)	Confirm quantities, schedule, setpoints, loading, performance improvement, performance issues.Photos of equipment, nameplates, setpoints, gauges.Collect invoices.	Calculator serves as report		
(B) >50,000 kWh to 100,000 kWh	PRE	Not applicable	Same as above.	Calculator serves as report		Smaller evaporator fan VFD project.Larger instances of the above.
	POST	Inspect at least 20% of projects (per state)	Same as above.	Calculator serves as report		
(C) greater than 100,000 kWh [3]	PRE	Not applicable [1]	Establishment of baseline prior to purchase not required for Typical Measures. In practice, program analyst or engineer frequently provides calculator-based analysis to end user prior to purchase in response to end user request. Information for calculation comes by phone and email from operators, contractors, and suppliers, or from site visit (though site visit not required). In some instances trade allies or vendors provide logged usage data from their equipment sizing and sales efforts.	Calculator serves as report unless customer contact needs more substantial report to support the purchase decision.		75 hp VFD air compressor.Large irrigation pump VFD.Group of multiple irrigation pump VFDs.
	POST	Inspect each project	Same as above.	Calculator serves as report		

1. Descriptions above assume that an experienced analyst or engineer with understanding of the systems involved performs the savings calculation, exercising judgment in the evaluation of site-specific information, conditions, and data to develop a reasonably repeatable savings estimate.

2. Savings in the first column is on a per measure or per system basis. Savings from unrelated measures (e.g. compressed air and lighting) or from the same measure on different systems (e.g. economizers on multiple buildings or VFDs on multiple pumps in different systems) do not combine to push a project into the next size category. Savings from measures on a common system do combine, and the total savings determines the size category (e.g. VFDs on multiple pumps in the same system or a compressed

3. Projects in this category are infrequent. There were only 6 in 2014.

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Appendix 4

wattsmart Homes Retailers 2019

Contents

Table 1: 2019 Participating Midstream/Upstream Retailers

Retailer	City	State	LED's	Fixtures
Ace Hardware #14355	Rexburg	ID	✓	✓
Ace Hardware #15881	Lava Hot Spring	ID	✓	
Ace Hardware 15551	Saint Anthony	ID	✓	
Broulim's Fresh Foods #1	Montpelier	ID	✓	
Broulim's Fresh Foods #2	Rexburg	ID	✓	✓
Costco #1033	Pocatello	ID	✓	✓
Do It Best - Malad City	Malad City	ID	✓	✓
Dollar Tree #2762	Pocatello	ID	✓	
Dollar Tree #3691	Rexburg	ID	✓	
Downey Food Center #1	Downey	ID	✓	
Home Depot #1807	Chubbuck	ID	✓	✓
Kroger – Fred Meyer #70100260	Pocatello	ID	✓	
Lowe's #2587	Pocatello	ID	✓	
Stokes Marketplace	Preston	ID	✓	
Thomas Market Inc. #1	Malad City	ID	✓	
True Value Agri - Service	Terreton	ID	✓	✓
True Value Hardware #10217	Montpelier	ID	✓	
Wal-Mart - Supercenter #1995	Chubbuck	ID	✓	
Wal-Mart #1878	Rexburg	ID	✓	✓
Wal-Mart #1905	Blackfoot	ID	✓	✓

Table 2: 2019 Participating Downstream Retailers

Participating Retailer (Retailers who are actively enrolled in the program)	City*	State	Clothes Washer	Smart Thermostat	Evaporative Cooler - Tier 2	Windows	Heat Pump Water Heater	No Redemptions in 2019
Ace Hardware #14165	Idaho Falls	ID		✓				
Ace Hardware #14355	Rexburg	ID						✓
Best Buy #944	Idaho Falls	ID	✓					
Bingham & Sons Furniture and Appliance	Rexburg	ID						✓
D & D Electric	Rexburg	ID						✓
Darnell Weekes Electric Inc	Rexburg	ID						✓
Denning's Showkase	Idaho Falls	ID	✓					
Do It Best	Rigby	ID						✓
Dollar Tree #3691	Rexburg	ID						✓
Electrical Wholesale Supply	Rexburg	ID						✓
Home Depot #1802	Idaho Falls	ID	✓	✓	✓	✓	✓	
Home Depot #4414	Logan*	UT		✓				
Kohl's - Ammon	Ammon	ID		✓				
Lowe's #1501	Logan	UT	✓					
Lowe's #1906	Idaho Falls	ID	✓	✓	✓	✓		
Lowe's of Pocatello	Pocatello	ID	✓	✓		✓	✓	
Rocknacks Hardware Plus	Idaho Falls	ID						✓
Sears #5578	Logan*	UT	✓					
Sears #2278	Idaho Falls	ID	✓					
Sears #3290	Rexburg	ID	✓					
True Value Hardware #10217	Montpelier	ID						✓
Wal-Mart #1902	Ammon	ID						✓
Wal-Mart #5494	Idaho Falls	ID						✓

Retailers located outside of Idaho but participated in the program

Table 3: 2019 Non-Participating Downstream Retailers

Redemptions from Non-Participating Retailer's (Retailer's may not be located in the service territory)	City	State	Clothes Washer	Clothes Dryer	Smart Thermostat	Heat Pump Water Heather	Insulation - Attic	Insulation - Attic, Self-Installed	Windows
Alside Supply Center	SLC	UT							✓
Amazon.com	Online	N/A			✓				
B&B Specialties, LLC	Preston	ID					✓		
BestBuy.com	Online	N/A			✓				
Drawknife Designs	Terreton	ID							✓
E-Bay	Online	N/A			✓				
Home Depot #1807	Chubbuck	ID						✓	
HomeDepot.com	Online	N/A			✓				
J & B Superior Exteriors	Idaho Falls	ID							✓
John's Paint & Glass, Inc	Montpelier	ID							✓
Kohls.com	Online	N/A			✓				
Lowes.com	Online	N/A	✓						
Pella Mountain West	Chandler	AZ							✓
Pocatello Electric Co.	Pocatello	ID	✓						
RC Willey Appliances	Meridian	ID	✓						
Sears.com	Online	N/A	✓						
The Home Depot, Inc.	Atlanta	GA				✓			

Table 4: 2019 Participating Idaho HVAC Trade Allies

Trade Ally Name (Trade Ally may be located outside of the Territory)	City	State	Central Air Conditioner Equipment	Duct Sealing & Insulation	Efficient Gas Furnace with ECM	Electric System to Ground Source Heat Pump Conversion	Electric System to Heat Pump Conversion	Evaporative Cooler - Tier 2	Heat Pump to Heat Pump Upgrade	Heat Pump Best Practice installation & Sizing	Heat Pump, Ductless	Heat Pump, Multi-head, Ductless	Heat Pump, Single-Head, Ductless	No Redemptions in 2019
Advanced Home Services	Rigby	ID												✓
Alpha Mechanical Heating & AC	Idaho Falls	ID												✓
Alpine Heating	Idaho Falls	ID			✓	✓					✓			
Aspen Air Design	Malad	ID									✓			
Conan Heating Inc.	Malad	ID			✓									
Doug's Repair	Rexburg	ID												✓
Excellence Heating & Cooling	Idaho Falls	ID												✓
First Call Jewel Inc.	Idaho Falls	ID			✓	✓				✓	✓			
High Tech Comfort	Aberdeen	ID									✓			
Housley Pumps Inc.	St. Anthony	ID									✓			
Mathews Plumping & Heating, Inc.	Shelley	ID												✓
Modern Plumbing	Rigby	ID												✓
Right Now, Inc.	Caldwell	ID				✓					✓			
Semrad Service & Repair	Malad	ID												✓
Sermon Service & Electric	Idaho Falls	ID												✓
Sprinter Heating and Hydronics	Rigby	ID				✓								
Superior Appliance Repair Service LLC	Pocatello	ID												✓
Vogt's Heating & Air	Pocatello	ID									✓			
Wiemer Heating	Idaho Falls	ID		✓										
Young Electric, Heating, and Air	Idaho Falls	ID												✓

Table 5: 2019 Participating Idaho Weatherization Trade Allies

Trade Ally Name (Trade Ally may be located outside of the service territory)	City*	State	Insulation - Attic	Insulation - Floor	Insulation - Wall	Windows	No Redemptions in 2019
Advanced Insulation	Idaho Falls	ID	✓		✓		
BMC West	Idaho Falls	ID	✓				
Campbell's Quality Exteriors	Idaho Falls	ID				✓	
Chris Kent Inc	Idaho Falls	ID				✓	
Green Acres Home Improvement	Idaho Falls	ID					✓
High Country Glass & Mirror, Inc.	St. Anthony	ID					✓
Johnson Brothers Planning Mill, Inc.	Idaho Falls	ID					✓
K-Designers	Billings*	MT				✓	
Lott Builders	Soda Springs	ID	✓				
Synergy Efficiency LLC	Chubbuck	ID	✓				
USI Cardalls LLC	Logan*	UT			✓		
Valley Glass	Idaho Falls	ID				✓	

Retailers located outside of Idaho but participated in the program

Table 6: 2019 Participating Idaho Manufactured Homes Trade Allies

Trade Ally Name (Trade Ally may be located outside of the service territory)	City*	State	Manufactured Homes, Duct Sealing	No Redemptions in 2019
Home Energy Experts	Centerville*	UT	✓	
Synergy Efficiency LLC	Chubbuck	ID	✓	

Retailers located outside of Idaho but participated in the program

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Appendix 5

Wattsmart Business Energy Efficiency Alliance

wattsmart® Business Vendor Network

The following is a list of contractors, distributors, manufacturers and other vendors participating in Rocky Mountain Power's wattsmart® Business Vendor Network 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.

Search Criteria:

State(s)	[Idaho]
Program(s)	[Commercial]
Specialties	[Appliances, Building envelope, Compressed air, Controls – HVAC, Controls – Lighting, Farm and dairy, Food service, HVAC - evaporative, HVAC - unitary, HVAC check-up, HVAC instant incentives, Irrigation, Lighting, Lighting instant incentives, Motors and VFDs, Office equipment, Other Specialty]
Service Address	
Business Name	

Search Results: 29 record(s) found

About Us	Service Areas	Company Name	Contact Information	Specialty	Business Type	Projects Completed	Distance (miles)
Premium Vendor	Idaho, Utah, Wyoming	**Automated Mechanical** Address: 1574 West 2650 South Ogden, UT 84010 Website: http://www.automatedmechanical.com	Phone: 801-525-9500 Name: Thomas Mudge Email: tmudge@automatedmechanical.com	Controls – HVAC, Controls – Lighting, HVAC - evaporative, HVAC - unitary, HVAC check-up, Motors and VFDs	Contractor	39	
Premium Vendor Learn More: https://wattsmartbusiness.com/premiumvendors/codale-slc/	Idaho, Utah, Wyoming	**Codale - Salt Lake City** Address: 5225 West 2400 South Salt Lake City, UT 84120 Website:	Phone: 801-975-5525 Name: Tammy Smith Email: tammys@codale.com	Controls – Lighting, Lighting, Lighting instant incentives	Distributor	36	

wattsmart® Business Vendor Network

Premium Vendor Learn More: https://wattsmartbusiness.com/premiumvendors/lms/	Idaho, Utah	**Lighting & Maintenance Service** Address: 663 West 4330 South Salt Lake City, UT 84123 Website: http://www.lmslighting.com	Phone: 801-281-0400 Name: Chris Munford Email: cmunford@lmslighting.com	Lighting	Contractor	36
Premium Vendor	Idaho, Utah, Wyoming	**CED- Logan** Address: 636 N. 600 W. Logan, UT 84321 Website: http://cedlogan.shopced.com	Phone: 435-752-8905 Name: Devin Migliori Email: devinm@cedlogan.com	Farm and dairy, Irrigation, Lighting, Lighting instant incentives	Distributor	6
	Idaho, Wyoming	**D&S Electrical** Address: 455 South Eastern Avenue Idaho Falls, ID 83402 Website: http://www.d-s.com/index.html	Phone: 208-731-3701 Name: Dave Bennett CSLT Email: davebennett@d-s.com	Lighting, Motors and VFDs	Distributor	29
	Idaho, Utah, Wyoming	**Optica Lighting** Address: 1772 Ross Dr Ogden, UT 84403 Website: http://www.opticalighting.com	Phone: 801-510-6314 Name: Mike Walsh Email: mike@opticalighting.com	Lighting	Contractor, Distributor	3
	Idaho, Utah, Wyoming	**Engie Services U.S. Inc** Address: 136 Longwater Drive, Suite 103 Norwell, MA 02061 Website: http://www.engieservices.us	Phone: 415-632-6162 Name: Casey Erisman Email: casey.erisman@engie.com	Controls – Lighting, HVAC - unitary, Lighting, Motors and VFDs	Contractor, Engineering_Firm	11
	Idaho, Utah	**Lennox Industries Inc.** Address: 1008 W 2780 S Salt Lake City, UT 84119 Website: http://www.lennoxcommercial.com	Phone: 801-973-8889 Name: Jeff Barrett Email: jeff.barrett@lennoxind.com	HVAC - unitary	Distributor	1

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	Idaho	**CED - Idaho Falls** Address: 1305 South Utah Avenue Idaho Falls, ID 83402 Website: https://ced-if.shopced.com	Phone: 208-523-2022 Name: Julian Abrajan Email: jabrajan@cedidahofalls.com	Controls – Lighting, Lighting, Lighting instant incentives	Distributor	1
	Idaho	**Platt Electric Supply-Pocatello** Address: 2815 Garrett Way A Pocatello, ID 83201 Website:	Phone: 208-233-2002 Name: Mark Steed Email: mark.steed@platt.com	Lighting, Lighting instant incentives	Distributor	3
	Idaho, Utah, Wyoming	**Clark's Quality Roofing, Inc.** Address: 334 West Anderson Avenue Murray, UT 84107 Website: http://www.clarkroof.com	Phone: 801-266-3575 Name: Hilary Clark Email: hilaryc@clarkroof.com	Building envelope	Contractor	1
	Idaho, Utah, Wyoming	**ACES Companies** Address: 33 N Main St. Suite 207 Logan, UT 84321 Website: https://www.acescompanies.com/	Phone: 435-232-2821 Name: TY Haguewood Email: ty@acescompanies.com	Lighting, Other Specialty	Contractor	1
	Idaho, Utah, Wyoming	**BidEnergy Inc.** Address: 1628 JFK Blvd, Suite 2100 Philadelphia, PA 19103 Website: http://bidenergy.com/	Phone: 215-732-4480 Name: Tim Mayo Email: tim.mayo@bidenergy.com	Appliances, Building envelope, Controls – Lighting, Food service, HVAC - evaporative, HVAC - unitary, Lighting, Motors and VFDs, Office equipment	Other	2
	Idaho, Utah	**Bright Star Property Services** Address: 214 S Cole Rd Boise, ID 83709 Website: http://www.brightstarps.com/	Phone: 208-922-6460 Name: Jennifer Jennifer Gamble Email: JenniferS@BrightStarPS.com	Lighting	Other	

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	Idaho, Utah, Wyoming	**Long Building Technologies** Address: 4689 S. Cherry St. Murray, UT 84123 Website: http://www.long.com/	Phone: 801-290-6506 Name: Paul Christiansen Email: pchristiansen@long.com	HVAC - evaporative, HVAC instant incentives, Motors and VFDs	Distributor, Manufacturer_Rep	1
	Idaho, Utah, Wyoming	**Elite Energy Solutions** Address: 162 S 1900 W Suite 100 Lindon, UT 84042 Website: http://www.eliteenergysolutions.com	Phone: 801-640-9779 Name: Chet Stevens Email: cstevens@elitees.net	Building envelope	Contractor	42
	Idaho	**Hatch Lighting Inc** Address: P.O. Box 51163 Idaho Falls, ID 83405 Website:	Phone: 208-200-3000 Name: Alban Hatch Email: alban@hatchlightingsupply.com	Lighting	Distributor	12
	Idaho	**Patriot Electric, Heating & Air Inc.** Address: 1347 E 1500 N Terreton, ID 83450 Website: http://www.facebook.com/PtriotElectricHeatingAir	Phone: 208-680-7345 Name: Russell Rumbaugh Email: rrumbaugh@mudlake.net	Controls – Lighting, Lighting, Motors and VFDs	Contractor	1
	Idaho, Utah, Wyoming	**BriteSwitch, LLC** Address: 195 Nassau St, Ste 13 Princeton, NJ 08542 Website: http://www.briteswitch.com	Phone: 609-945-5349 Name: Laura Oliver Email: laura.oliver@briteswitch.com	Controls – Lighting, Lighting	Other	1
	Idaho, Utah, Wyoming	**Electrical Company** Address: PO Box 4667 Logan, UT 84323 Website:	Phone: 435-787-2008 Name: Lisa Evans Email: lisa_ies@yahoo.com	Controls – Lighting, Lighting	Contractor	7
	Idaho, Utah, Wyoming	**Trane** Address: 2817 South 1030 West Salt Lake City , UT 84119 Website: http://www.trane.com	Phone: 801-415-2032 Name: Mario Maestas Email: mmaestas@trane.com	Building envelope, Compressed air, Controls – HVAC, HVAC - evaporative, HVAC - unitary, Motors and VFDs, Other Specialty	Contractor, Distributor, Manufacturer_Rep, Other	1

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	Idaho, Utah, Wyoming	**OEO Energy Solutions** Address: 143 East Main Street Lake Zurich, IL 60047 Website: www.oeo.com	Phone: 847-847-3989 Name: Greg Amick Email: greg@oeo.com	Controls – Lighting, Lighting	Distributor	1
	Idaho, Utah, Wyoming	**Brilliant Lighting Center** Address: 1964 N 400 E North Ogden, UT 84414 Website: http://www.brilliantlightingcenter.com	Phone: 435-327-1020 Name: Mark Miller Email: mark@brilliantlightingcenter.com	Lighting, Lighting instant incentives	Distributor	2
	Idaho	**Platt Electric Supply - Idaho Falls** Address: 3020 S Yellowtone Hwy Idaho Falls, ID 83402 Website:	Phone: 801-597-0867 Name: Joey Golden Email: Joey.golden@platt.com	Lighting, Lighting instant incentives	Distributor	1
	Idaho, Utah, Wyoming	**Harris Lighting Products** Address: 1405 west 800 north Preston, ID 83263 Website: http://www.haleymhamblin.wixsite.com/harrislp	Phone: 208-852-2890 Name: Ryan Harris Email: ryan@harrislightingproducts.com	Controls – Lighting, Lighting	Distributor, Manufacturer_Rep, Other	10
	Idaho, Utah, Wyoming	**Energy Management Collaborative llc** Address: 2890 Vicksburg Lane N Plymouth, MN 55447 Website: http://www.emcllc.com	Phone: 952-542-7968 Name: Jolene Fenn-Jansen Email: jfenn-jansen@emcllc.com	Lighting	Other	4
	Idaho, Utah, Wyoming	**Comfort Solutions** Address: 1470 Wall Ave Ogden, UT 84404 Website: http://www.comfortsolutionsutah.com	Phone: 801-393-2206 Name: Adam Yearsley Email: adam@comfortsolutionsutah.com	HVAC - unitary, HVAC instant incentives	Contractor	1

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	Idaho	**Electrical Wholesale Supply** Address: 1355 Fremont Ave Idaho Falls, ID 83402 Website: http://electricalwholesalesupply.com/	Phone: 208-523-2800 Name: Neil Price Email: neil.price@electricalwholesale.com	Controls – Lighting, Lighting	Distributor, Other	1
	Idaho, Utah, Wyoming	**Relevant Solutions** Address: 3186 Washington Street Salt Lake City, UT 84115 Website: http://www.relevantsolutions.com	Phone: 801-214-3317 Name: Alan Sweatfield Email: alan.sweatfield@relevantsolutions.com	Controls – HVAC, Motors and VFDs	Distributor	1

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Appendix 6
Idaho Active Measures

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
Wattsmart Homes						
Appliances	Clothes Washers - CEE Tier 2 and Above - Electric DHW & Electric Dryer - ID	Energy efficient clothes washer	1/30/2016	RTF Deemed	153	Measure
	Clothes Washers - CEE Tier 3 - Electric DHW & Electric Dryer - ID	Energy efficient clothes washer	1/30/2016	RTF Deemed	180	Measure
	Clothes Washers - CEE Tier 2 - Electric DHW & Gas Dryer - ID	Energy efficient clothes washer	1/29/2016	RTF Deemed	84.1	Measure
	Clothes Washers - CEE Tier 3 - Electric DHW & Gas Dryer - ID	Energy efficient clothes washer	1/29/2016	RTF Deemed	102	Measure
	Clothes Washers - CEE Tier 2 - Gas DHW & Electric Dryer - ID	Energy efficient clothes washer	1/29/2016	RTF Deemed	67.01	Measure
	Clothes Washers - CEE Tier 3 - Gas DHW & Electric Dryer - ID	Energy efficient clothes washer	1/29/2016	RTF Deemed	76.98	Measure
	HPWH Tier 1 Basement 0-55gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1214	Measure
	HPWH Tier 1 Basement 0-55gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1214	Measure
	HPWH Tier 1 Garage 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	689	Measure
	HPWH Tier 1 Garage 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	689	Measure
	HPWH Tier 1 Indoor Electric Resistance Heat 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1124	Measure
	HPWH Tier 1 Indoor Electric Resistance Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1124	Measure
	HPWH Tier 1 Indoor Gas Heat 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1418	Measure
	HPWH Tier 1 Indoor Gas Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1418	Measure
	HPWH Tier 1 Indoor Heat Pump 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1217	Measure
	HPWH Tier 1 Indoor Heat Pump 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1217	Measure
Building Shell	Insulation - Attic - Electric FAF Heating System - ID	Install attic insulation - Contractor	1/30/2016	RTF Deemed	0.64	Sq. ft.
	Insulation - Attic - Electric Heat Pump Heating System - ID	Install attic insulation - Contractor	1/30/2016	RTF Deemed	0.35	Sq. ft.
	Insulation - Attic - Electric Zonal Heating System - ID	Install attic insulation - Contractor	1/30/2016	RTF Deemed	0.5	Sq. ft.
	Insulation - Attic - Self Install - Electric FAF Heating System - ID	Install attic insulation - Self-install	1/30/2016	RTF Deemed	0.64	Sq. ft.
	Insulation - Attic - Self Install - Electric Heat Pump Heating System - ID	Install attic insulation - Self-install	1/30/2016	RTF Deemed	0.35	Sq. ft.
	Insulation - Attic - Self Install - Electric Zonal Heating System - ID	Install attic insulation - Self-install	1/30/2016	RTF Deemed	0.5	Sq. ft.
	Insulation - Floor - Electric FAF Heating System - ID	Install floor insulation-Contractor	1/30/2016	RTF Deemed	1.66	Sq. ft.
	Insulation - Floor - Electric Heat Pump Heating System - ID	Install floor insulation-Contractor	1/30/2016	RTF Deemed	0.4	Sq. ft.
	Insulation - Floor - Electric Zonal Heating System - ID	Install floor insulation-Contractor	1/30/2016	RTF Deemed	1.63	Sq. ft.
	Insulation - Floor - Self Install - Electric FAF Heating System - ID	Install floor insulation-Self Install	1/30/2016	RTF Deemed	1.66	Sq. ft.
	Insulation - Floor - Self Install - Electric Heat Pump Heating System - ID	Install floor insulation-Self Install	1/30/2016	RTF Deemed	0.4	Sq. ft.
	Insulation - Floor - Self Install - Electric Zonal Heating System - ID	Install floor insulation-Self Install	1/30/2016	RTF Deemed	1.63	Sq. ft.
	Insulation - Wall - Electric FAF Heating System - ID	Install wall insulation - Contractor	1/30/2016	RTF Deemed	2.96	Sq. ft.
	Insulation - Wall - Electric Heat Pump Heating System - ID	Install wall insulation - Contractor	1/30/2016	RTF Deemed	1.79	Sq. ft.
	Insulation - Wall - Electric Zonal Heating System - ID	Install wall insulation - Contractor	1/30/2016	RTF Deemed	2.17	Sq. ft.
	New Homes Windows - U-0.22 - Electric FAF - ID	Install windows of .22 U value or lower in new home	1/30/2016	RTF Deemed	2.37	Sq. ft.
	New Homes Windows - U-0.22 - Electric FAF - ID	Install windows of .22 U value or lower in new home	2/28/2019	RTF Deemed	2.37	Sq. ft.
	New Homes Windows - U-0.22 - Electric Zonal Heat - ID	Install windows of .22 U value or lower in new home	2/28/2019	RTF Deemed	1.84	Sq. ft.
	New Homes Windows - U-0.22 - Electric Zonal Heat - ID	Install windows of .22 U value or lower in new home	1/30/2016	RTF Deemed	1.84	Sq. ft.
	New Homes Windows - U-0.22 - Heat Pump System - ID	Install windows of .22 U value or lower in new home	1/30/2016	RTF Deemed	1.36	Sq. ft.
	New Homes Windows - U-0.22 - Heat Pump System - ID	Install windows of .22 U value or lower in new home	2/28/2019	RTF Deemed	1.36	Sq. ft.
	Window Tier 1 - U-0.30 - Electric FAF Heating System - ID	Install low U-factor window - Tier 1	1/30/2016	RTF Deemed	0.9	Sq. ft.
	Window Tier 1 - U-0.30 - Electric Heat Pump Heating System - ID	Install low U-factor window - Tier 1	1/30/2016	RTF Deemed	0.5	Sq. ft.
	Window Tier 1 - U-0.30 - Electric Zonal Heating System - ID	Install low U-factor window - Tier 1	1/30/2016	RTF Deemed	0.71	Sq. ft.
	Window Tier 2 - U-0.22 - Electric FAF Heating System - ID	Install low U-factor window - Tier 2	1/30/2016	RTF Deemed	2.37	Sq. ft.
	Window Tier 2 - U-0.22 - Electric FAF Heating System - ID	Install low U-factor window - Tier 2	2/28/2019	RTF Deemed	2.37	Sq. ft.
	Window Tier 2 - U-0.22 - Electric Heat Pump Heating System - ID	Install low U-factor window - Tier 2	1/30/2016	RTF Deemed	1.36	Sq. ft.
	Window Tier 2 - U-0.22 - Electric Heat Pump Heating System - ID	Install low U-factor window - Tier 2	2/28/2019	RTF Deemed	1.36	Sq. ft.
	Window Tier 2 - U-0.22 - Electric Zonal Heating System - ID	Install low U-factor window - Tier 2	1/30/2016	RTF Deemed	1.84	Sq. ft.
	Window Tier 2 - U-0.22 - Electric Zonal Heating System - ID	Install low U-factor window - Tier 2	2/28/2019	RTF Deemed	1.84	Sq. ft.
Electronics	Advanced Power Strip - IR Sensing - Direct Install - ID	Advanced Power Strip	1/30/2016	RTF Deemed	216	Measure
	Advanced Power Strip - IR Sensing - Owner Install - ID	Advanced Power Strip	1/30/2016	RTF Deemed	216	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Advanced Power Strip - Load Sensing - Direct Install - ID	Advanced Power Strip	1/30/2016	RTF Deemed	40	Measure
	Advanced Power Strip - Load Sensing - Owner Install - ID	Advanced Power Strip	1/30/2016	RTF Deemed	30	Measure
	Advanced Power Strip - Occupancy Sensing - Direct Install - ID	Advanced Power Strip	1/30/2016	RTF Deemed	70	Measure
	Advanced Power Strip - Occupancy Sensing - Owner Install - ID	Advanced Power Strip	1/30/2016	RTF Deemed	70	Measure
Energy Kits	Energy Savings Kit - CFL - ID	Energy savings kit - 4-13 W CFLs	4/14/2014	RMP Deemed	63.68	Measure
	Energy Savings Kit - LED - ID	Energy savings kit - 4-9.5 W LEDs	3/30/2017	RMP Deemed	32.76	Measure
	Energy Savings Kit - Basic - 1 Bathroom - ID	Energy savings kit - 4-13W CFLs, 1.5 GPM kitchen aerator, 0.5 GPM bathroom aerator, 1.5 GPM showerhead	4/14/2014	RMP Deemed	412.04	Measure
	Energy Savings Kit - Basic - 2 Bathrooms - ID	Energy savings kit - 4-13W CFLs, 1.5 GPM kitchen aerator, 2-0.5 GPM bathroom aerators, 2-1.5 GPM showerheads	4/14/2014	RMP Deemed	734.63	Measure
	Energy Savings Kit - Best - 1 Bathroom - ID	Energy savings kit - 4-9.5W LEDs, 1.5 GPM kitchen aerator, 0.5 GPM bathroom aerator, 1.5 GPM handheld showerhead	3/30/2017	RMP Deemed	375.24	Measure
	Energy Savings Kit - Best - 2 Bathrooms - ID	Energy savings kit - 4-9.5W LEDs, 1.5 GPM kitchen aerator, 2-0.5 GPM bathroom aerators, 2-1.5 GPM handheld showerheads	3/30/2017	RMP Deemed	582.22	Measure
	Energy Savings Kit - Better - 1 Bathroom - ID	Energy savings kit - 4-13W CFLs, 1.5 GPM kitchen aerator, 0.5 GPM bathroom aerator, 1.5 GPM handheld showerhead	4/14/2014	RMP Deemed	412.04	Measure
	Energy Savings Kit - Better - 2 Bathrooms - ID	Energy savings kit - 4-13W CFLs, 1.5 GPM kitchen aerator, 2-0.5 GPM bathroom aerators, 2-1.5 GPM handheld showerheads	4/14/2014	RMP Deemed	734.63	Measure
HVAC	Smart Thermostat - CAC Only - ID	A smart thermostat is a thermostat that is Wi-Fi enabled, capable of occupancy sensing, remote communication, and utilizes learning algorithms to minimize HVAC runtime.	3/30/2017	RMP Deemed	162	Measure
	Smart Thermostat - CAC Only - ID	A smart thermostat is a thermostat that is Wi-Fi enabled, capable of occupancy sensing, remote communication, and utilizes learning algorithms to minimize HVAC runtime.	8/15/2019	RMP Deemed	162	Measure
	Smart Thermostat - CAC Only - Instant Rebates - ID	A smart thermostat is a thermostat that is Wi-Fi enabled, capable of occupancy sensing, remote communication, and utilizes learning algorithms to minimize HVAC runtime.	8/15/2019	RMP Deemed	162	Measure
	Smart Thermostat - Electric FAF - ID	A smart thermostat is a thermostat that is Wi-Fi enabled, capable of occupancy sensing, remote communication, and utilizes learning algorithms to minimize HVAC runtime.	8/15/2019	RMP Deemed	604	Measure
	Smart Thermostat - Electric FAF - Instant Rebates - ID	A smart thermostat is a thermostat that is Wi-Fi enabled, capable of occupancy sensing, remote communication, and utilizes learning algorithms to minimize HVAC runtime.	8/15/2019	RMP Deemed	604	Measure
	Smart Thermostat - Electric FAF w/ CAC - ID	A smart thermostat is a thermostat that is Wi-Fi enabled, capable of occupancy sensing, remote communication, and utilizes learning algorithms to minimize HVAC runtime.	8/15/2019	RMP Deemed	766	Measure
	Smart Thermostat - Electric FAF w/ CAC - Instant Rebates - ID	A smart thermostat is a thermostat that is Wi-Fi enabled, capable of occupancy sensing, remote communication, and utilizes learning algorithms to minimize HVAC runtime.	8/15/2019	RMP Deemed	766	Measure
	Smart Thermostat - Electric Heat Pump - ID	A smart thermostat is a thermostat that is Wi-Fi enabled, capable of occupancy sensing, remote communication, and utilizes learning algorithms to minimize HVAC runtime.	8/15/2019	RMP Deemed	1143	Measure
	Smart Thermostat - Electric Heat Pump - Instant Rebates - ID	A smart thermostat is a thermostat that is Wi-Fi enabled, capable of occupancy sensing, remote communication, and utilizes learning algorithms to minimize HVAC runtime.	8/15/2019	RMP Deemed	1143	Measure
	Smart T-stat w/ ASHP - ID	Wi-Fi enabled, programmable climate control device that allows the user to customize a schedule to control the temperature of their home throughout the day	1/30/2016	RMP Deemed	1063	
	Smart T-stat w/ EFAF - ID	Wi-Fi enabled, programmable climate control device that allows the user to customize a schedule to control the temperature of their home throughout the day	1/30/2016	RMP Deemed	1330	

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Smart T-stat w/ EFAF + CAC - ID	Wi-Fi enabled, programmable climate control device that allows the user to customize a schedule to control the temperature of their home throughout the day	1/30/2016	RMP Deemed	1448	
	Smart_Tstat_W/Any_Gas_Instant_Rebates - ID	Wi-Fi enabled smart thermostat with occupancy sensing technology	9/3/2018	RMP Deemed	162	Measure
	Smart_Tstat_w/ASHP_Instant_Rebates - ID	Wi-Fi enabled smart thermostat with occupancy sensing technology	3/1/2018	RMP Deemed	1063	Measure
	Smart_Tstat_W/EFAF_CAC_Instant_Rebates - ID	Wi-Fi enabled smart thermostat with occupancy sensing technology	3/1/2018	RMP Deemed	1448	Measure
	Smart_Tstat_w/EFAF_Instant_Rebates - ID	Wi-Fi enabled smart thermostat with occupancy sensing technology	3/1/2018	RMP Deemed	1330	Measure
	Central Air Conditioner - ID	Energy efficient central air conditioning	1/30/2016	RMP Deemed	89.25	Measure
	Evaporative Cooler - 2,000 - 3,499 CFM - ID	Evaporative coolers	1/30/2016	RMP Deemed	210	Measure
	Evaporative Cooler - Min 3,500 CFM - ID	Evaporative coolers	1/30/2016	RMP Deemed	368	Measure
	Evaporative Cooler - Min 3,500 CFM - Self Install - ID	Evaporative coolers	1/30/2016	RMP Deemed	368	Measure
	Room Air Conditioner - ID	Energy efficient room air conditioners	1/30/2016	RMP Deemed	39	Measure
	Duct Sealing & Insulation - Electric Heat - ID	Seal and insulate existing duct work	1/30/2016	RTF Deemed	3802	Measure
	Duct Sealing Only - Pre-Insulated Ducts - Electric FAF with CAC - ID	Seal existing duct work - Pre-insulated ducts	8/20/2012	RTF Deemed	2177	Measure
	Duct Sealing Only - Pre-Insulated Ducts - Electric FAF without CAC - ID	Seal existing duct work - Pre-insulated ducts	8/20/2012	RTF Deemed	2138	Measure
	Duct Sealing Only - Pre-Insulated Ducts - Electric Heat - ID	Seal existing duct work	1/30/2016	RTF Deemed	2474	Measure
	Duct Sealing Only - Pre-Insulated Ducts - Electric Heat Pump Heating system - ID	Seal existing duct work - Pre-insulated ducts	8/20/2012	RTF Deemed	2059	Measure
	Manufactured Home - Duct Sealing - Direct Install - Test Only - ID	Test existing duct work	1/30/2016	RMP Deemed	0	
	Manufactured Home - Duct Sealing - Direct Install - Test, Crossover Replacement, Seal and Insulate - ID	Test, Seal and insulate existing duct work. Crossover replacement	1/30/2016	RMP Deemed	3267	
	Manufactured Home - Duct Sealing - Direct Install - Test, Seal and Insulate - ID	Test, Seal and insulate existing duct work	1/30/2016	RMP Deemed	3267	
	New Homes Heat Pump with Best Practices Installation and Sizing - ID	New Homes Heat Pump with Best Practices Installation and Sizing - ID	1/30/2016	RMP Deemed	598	
	Heat Pump Conversion - Tier 1 - Electric FAF with CAC - ID	Convert electric forced air furnace to air source heat pump with Best Practices Installation and Proper Sizing	1/30/2016	RTF Deemed	6429	Measure
	Heat Pump Conversion - Tier 1 - Electric FAF without CAC - ID	Convert electric forced air furnace to air source heat pump	1/30/2016	RTF Deemed	6077	Measure
	Heat Pump Conversion - Tier 2 - Electric FAF with CAC - ID	Convert electric forced air furnace to air source heat pump	1/30/2016	RTF Deemed	6493	Measure
	Heat Pump Conversion - Tier 2 - Electric FAF without CAC - ID	Convert electric forced air furnace to air source heat pump	1/30/2016	RTF Deemed	6141	Measure
	Heat Pump Upgrade with Best practice install & sizing - ID	Combine heat pump upgrade with best practices sizing and installation	1/30/2016	RMP Deemed	1078	Measure
	Ductless Heat Pump - ID	Install a Ductless Heat Pump	1/30/2016	RTF Deemed	1516	Measure
	Ductless Heat Pump - ID	Install a Ductless Heat Pump	2/28/2019	RTF Deemed	1516	Measure
	New Homes Ductless Heat Pump - ID	New Homes Ductless Heat Pump - ID	1/30/2016	RMP Deemed	3089	Measure
	GSHP Conversion from FAF without CAC - ID	Convert electric forced air furnace to ground source heat pump	1/30/2016	RTF Deemed	12525	Measure
	GSHP Upgrade from ASHP - ID	Replace air source heat pump with ground source heat pump	1/30/2016	RTF Deemed	4702	Measure
	Heat Pump Best Practices Installation and Proper Sizing - ID	Install new heat pump with best practices installation and proper sizing	1/30/2016	RTF Deemed	1014	Measure
	95% Gas Furnace with ECM Blower - ID	ECM blower in 95% gas furnace	1/30/2016	RMP Deemed	528	Measure
Lighting	CFL Fixture - ENERGY STAR - ID	ENERGY STAR general service CFL fixture	4/14/2014	RMP Deemed	43.66	Measure
	LED Fixture - ENERGY STAR - ID	ENERGY STAR general service LED fixture	4/14/2014	RMP Deemed	40.94	Measure
	CFL General Purpose - A-Lamp: 10 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	10.08	Measure
	CFL General Purpose - A-Lamp: 11 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	12.82	Measure
	CFL General Purpose - A-Lamp: 11 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	9.55	Measure
	CFL General Purpose - A-Lamp: 11 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	9.55	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	CFL General Purpose - A-Lamp: 13 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	21.37	Measure
	CFL General Purpose - A-Lamp: 13 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	15.92	Measure
	CFL General Purpose - A-Lamp: 13 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	15.92	Measure
	CFL General Purpose - A-Lamp: 14 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	20.66	Measure
	CFL General Purpose - A-Lamp: 14 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	15.39	Measure
	CFL General Purpose - A-Lamp: 14 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	15.39	Measure
	CFL General Purpose - A-Lamp: 15 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	19.94	Measure
	CFL General Purpose - A-Lamp: 15 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	14.86	Measure
	CFL General Purpose - A-Lamp: 15 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	14.86	Measure
	CFL General Purpose - A-Lamp: 19 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	17.1	Measure
	CFL General Purpose - A-Lamp: 19 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	12.73	Measure
	CFL General Purpose - A-Lamp: 19 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	12.73	Measure
	CFL General Purpose - A-Lamp: 20 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	23.51	Measure
	CFL General Purpose - A-Lamp: 20 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	17.51	Measure
	CFL General Purpose - A-Lamp: 20 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	17.51	Measure
	CFL General Purpose - A-Lamp: 9 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	14.25	Measure
	CFL General Purpose - A-Lamp: 9 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	10.61	Measure
	CFL General Purpose - A-Lamp: 9 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	10.61	Measure
	CFL General Purpose - Spiral: 10 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	13.53	Measure
	CFL General Purpose - Spiral: 10 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	10.08	Measure
	CFL General Purpose - Spiral: 10 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	10.08	Measure
	CFL General Purpose - Spiral: 11 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	12.82	Measure
	CFL General Purpose - Spiral: 11 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	9.55	Measure
	CFL General Purpose - Spiral: 11 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	9.55	Measure
	CFL General Purpose - Spiral: 12 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	12.11	Measure
	CFL General Purpose - Spiral: 12 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	9.02	Measure
	CFL General Purpose - Spiral: 12 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	9.02	Measure
	CFL General Purpose - Spiral: 13 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	21.37	Measure
	CFL General Purpose - Spiral: 13 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	15.92	Measure
	CFL General Purpose - Spiral: 13 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	15.92	Measure
	CFL General Purpose - Spiral: 14 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	20.66	Measure
	CFL General Purpose - Spiral: 14 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	15.39	Measure
	CFL General Purpose - Spiral: 14 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	15.39	Measure
	CFL General Purpose - Spiral: 15 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	27.07	Measure
	CFL General Purpose - Spiral: 15 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	20.16	Measure
	CFL General Purpose - Spiral: 15 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	20.16	Measure
	CFL General Purpose - Spiral: 18 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	24.93	Measure
	CFL General Purpose - Spiral: 18 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	18.57	Measure
	CFL General Purpose - Spiral: 18 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	18.57	Measure
	CFL General Purpose - Spiral: 19 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	24.22	Measure
	CFL General Purpose - Spiral: 19 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	18.04	Measure
	CFL General Purpose - Spiral: 19 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	18.04	Measure
	CFL General Purpose - Spiral: 20 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	23.51	Measure
	CFL General Purpose - Spiral: 20 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	17.51	Measure
	CFL General Purpose - Spiral: 20 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	17.51	Measure
	CFL General Purpose - Spiral: 21 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	1/30/2016	RMP Deemed	36.33	Measure
	CFL General Purpose - Spiral: 21 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	1/30/2016	RMP Deemed	27.06	Measure
	CFL General Purpose - Spiral: 21 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	27.06	Measure
	CFL General Purpose - Spiral: 22 watts - Direct Install- ID	Energy efficient Compact Fluorescent Lamps-General Purpose	1/30/2016	RMP Deemed	35.62	Measure
	CFL General Purpose - Spiral: 22 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	1/30/2016	RMP Deemed	26.53	Measure
	CFL General Purpose - Spiral: 22 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	26.53	Measure
	CFL General Purpose - Spiral: 23 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	34.9	Measure
	CFL General Purpose - Spiral: 23 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	26	Measure
	CFL General Purpose - Spiral: 23 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	26	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	CFL General Purpose - Spiral: 24 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	1/30/2016	RMP Deemed	34.19	Measure
	CFL General Purpose - Spiral: 24 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	1/30/2016	RMP Deemed	25.47	Measure
	CFL General Purpose - Spiral: 24 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	25.47	Measure
	CFL General Purpose - Spiral: 25 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	1/30/2016	RMP Deemed	33.48	Measure
	CFL General Purpose - Spiral: 25 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	1/30/2016	RMP Deemed	24.94	Measure
	CFL General Purpose - Spiral: 25 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	24.94	Measure
	CFL General Purpose - Spiral: 26 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	32.77	Measure
	CFL General Purpose - Spiral: 26 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	24.41	Measure
	CFL General Purpose - Spiral: 26 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	24.41	Measure
	CFL General Purpose - Spiral: 27 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	32.05	Measure
	CFL General Purpose - Spiral: 27 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	23.88	Measure
	CFL General Purpose - Spiral: 27 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	23.88	Measure
	CFL General Purpose - Spiral: 28 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	31.34	Measure
	CFL General Purpose - Spiral: 28 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	23.35	Measure
	CFL General Purpose - Spiral: 28 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	23.35	Measure
	CFL General Purpose - Spiral: 29 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	30.63	Measure
	CFL General Purpose - Spiral: 29 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	22.82	Measure
	CFL General Purpose - Spiral: 29 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	22.82	Measure
	CFL General Purpose - Spiral: 3 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	8.55	Measure
	CFL General Purpose - Spiral: 3 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	6.37	Measure
	CFL General Purpose - Spiral: 3 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	6.37	Measure
	CFL General Purpose - Spiral: 30 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	29.92	Measure
	CFL General Purpose - Spiral: 30 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	22.28	Measure
	CFL General Purpose - Spiral: 30 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	22.28	Measure
	CFL General Purpose - Spiral: 31 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	29.2	Measure
	CFL General Purpose - Spiral: 31 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	21.75	Measure
	CFL General Purpose - Spiral: 31 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	21.75	Measure
	CFL General Purpose - Spiral: 32 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	28.49	Measure
	CFL General Purpose - Spiral: 32 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	21.22	Measure
	CFL General Purpose - Spiral: 32 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	21.22	Measure
	CFL General Purpose - Spiral: 4 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	14.96	Measure
	CFL General Purpose - Spiral: 4 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	11.14	Measure
	CFL General Purpose - Spiral: 4 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	11.14	Measure
	CFL General Purpose - Spiral: 5 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	17.81	Measure
	CFL General Purpose - Spiral: 5 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	13.26	Measure
	CFL General Purpose - Spiral: 5 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	13.26	Measure
	CFL General Purpose - Spiral: 6 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	16.38	Measure
	CFL General Purpose - Spiral: 6 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	12.2	Measure
	CFL General Purpose - Spiral: 6 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	12.2	Measure
	CFL General Purpose - Spiral: 7 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	15.67	Measure
	CFL General Purpose - Spiral: 7 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	11.67	Measure
	CFL General Purpose - Spiral: 7 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	11.67	Measure
	CFL General Purpose - Spiral: 8 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	14.96	Measure
	CFL General Purpose - Spiral: 8 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	11.14	Measure
	CFL General Purpose - Spiral: 8 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	11.14	Measure
	CFL General Purpose - Spiral: 9 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	14.25	Measure
	CFL General Purpose - Spiral: 9 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	10.61	Measure
	CFL General Purpose - Spiral: 9 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-General Purpose	4/14/2014	RMP Deemed	10.61	Measure
	LED General Purpose: 10 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	23.51	Measure
	LED General Purpose: 10 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	23.51	Measure
	LED General Purpose: 10 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	23.51	Measure
	LED General Purpose: 10.5 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	23.15	Measure
	LED General Purpose: 10.5 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	23.15	Measure
	LED General Purpose: 10.5 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	23.15	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	LED General Purpose: 11 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	22.79	Measure
	LED General Purpose: 11 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	22.79	Measure
	LED General Purpose: 11 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	22.79	Measure
	LED General Purpose: 12 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	22.08	Measure
	LED General Purpose: 12 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	22.08	Measure
	LED General Purpose: 12 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	22.08	Measure
	LED General Purpose: 13 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	21.37	Measure
	LED General Purpose: 13 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	21.37	Measure
	LED General Purpose: 13 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	21.37	Measure
	LED General Purpose: 13 watts - Semi-omnidirectional - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	21.37	Measure
	LED General Purpose: 13 watts - Semi-omnidirectional - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	21.37	Measure
	LED General Purpose: 13 watts - Semi-omnidirectional - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	21.37	Measure
	LED General Purpose: 14 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	20.66	Measure
	LED General Purpose: 14 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	20.66	Measure
	LED General Purpose: 14 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	20.66	Measure
	LED General Purpose: 15 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	19.94	Measure
	LED General Purpose: 15 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	19.94	Measure
	LED General Purpose: 15 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	19.94	Measure
	LED General Purpose: 16 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	26.36	Measure
	LED General Purpose: 16 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	26.36	Measure
	LED General Purpose: 16 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	26.36	Measure
	LED General Purpose: 17 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	39.18	Measure
	LED General Purpose: 17 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	39.18	Measure
	LED General Purpose: 17 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	39.18	Measure
	LED General Purpose: 18 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	38.46	Measure
	LED General Purpose: 18 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	38.46	Measure
	LED General Purpose: 18 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	38.46	Measure
	LED General Purpose: 19 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	37.75	Measure
	LED General Purpose: 19 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	37.75	Measure
	LED General Purpose: 19 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	37.75	Measure
	LED General Purpose: 2 watts - Semi-omnidirectional - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	16.38	Measure
	LED General Purpose: 2 watts - Semi-omnidirectional - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	16.38	Measure
	LED General Purpose: 2 watts - Semi-omnidirectional - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	16.38	Measure
	LED General Purpose: 23 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	34.9	Measure
	LED General Purpose: 23 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	34.9	Measure
	LED General Purpose: 23 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	34.9	Measure
	LED General Purpose: 5 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	27.07	Measure
	LED General Purpose: 5 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	27.07	Measure
	LED General Purpose: 5 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	27.07	Measure
	LED General Purpose: 6 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	16.38	Measure
	LED General Purpose: 6 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	16.38	Measure
	LED General Purpose: 6 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	16.38	Measure
	LED General Purpose: 7 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	15.67	Measure
	LED General Purpose: 7 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	15.67	Measure
	LED General Purpose: 7 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	15.67	Measure
	LED General Purpose: 8 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	14.96	Measure
	LED General Purpose: 8 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	14.96	Measure
	LED General Purpose: 8 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	14.96	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	LED General Purpose: 8 watts - Semi-omnidirectional - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	14.96	Measure
	LED General Purpose: 8 watts - Semi-omnidirectional - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	14.96	Measure
	LED General Purpose: 8 watts - Semi-omnidirectional - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	14.96	Measure
	LED General Purpose: 9 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	14.25	Measure
	LED General Purpose: 9 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	14.25	Measure
	LED General Purpose: 9 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	14.25	Measure
	LED General Purpose: 9 watts - Semi-omnidirectional - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	14.25	Measure
	LED General Purpose: 9 watts - Semi-omnidirectional - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	14.25	Measure
	LED General Purpose: 9 watts - Semi-omnidirectional - Retail - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	1/30/2016	RMP Deemed	14.25	Measure
	CFL Specialty - 3-Way: 10,20,28 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	56.98	Measure
	CFL Specialty - 3-Way: 10,20,28 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	42.45	Measure
	CFL Specialty - 3-Way: 10,20,28 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	42.45	Measure
	CFL Specialty - 3-Way: 12,19,28 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	57.7	Measure
	CFL Specialty - 3-Way: 12,19,28 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	42.98	Measure
	CFL Specialty - 3-Way: 12,19,28 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	42.98	Measure
	CFL Specialty - 3-Way: 12,20,26 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	56.98	Measure
	CFL Specialty - 3-Way: 12,20,26 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	42.45	Measure
	CFL Specialty - 3-Way: 12,20,26 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	42.45	Measure
	CFL Specialty - 3-Way: 12,20,29 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	56.98	Measure
	CFL Specialty - 3-Way: 12,20,29 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	42.45	Measure
	CFL Specialty - 3-Way: 12,20,29 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	42.45	Measure
	CFL Specialty - 3-Way: 12,21,32 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	56.27	Measure
	CFL Specialty - 3-Way: 12,21,32 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	41.92	Measure
	CFL Specialty - 3-Way: 12,21,32 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	41.92	Measure
	CFL Specialty - 3-Way: 12,22,33 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	55.56	Measure
	CFL Specialty - 3-Way: 12,22,33 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	41.39	Measure
	CFL Specialty - 3-Way: 12,22,33 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	41.39	Measure
	CFL Specialty - 3-Way: 12,23,29 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	54.85	Measure
	CFL Specialty - 3-Way: 12,23,29 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	40.86	Measure
	CFL Specialty - 3-Way: 12,23,29 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	40.86	Measure
	CFL Specialty - 3-Way: 13,20,25 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	56.98	Measure
	CFL Specialty - 3-Way: 13,20,25 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	42.45	Measure
	CFL Specialty - 3-Way: 13,20,25 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	42.45	Measure
	CFL Specialty - 3-Way: 14,19,32 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	57.7	Measure
	CFL Specialty - 3-Way: 14,19,32 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	42.98	Measure
	CFL Specialty - 3-Way: 14,19,32 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	42.98	Measure
	CFL Specialty - 3-Way: 15,26,40 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	52.71	Measure
	CFL Specialty - 3-Way: 15,26,40 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	39.26	Measure
	CFL Specialty - 3-Way: 15,26,40 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	39.26	Measure
	CFL Specialty - 3-Way: 16,25,32 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	53.42	Measure
	CFL Specialty - 3-Way: 16,25,32 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	39.79	Measure
	CFL Specialty - 3-Way: 16,25,32 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	39.79	Measure
	CFL Specialty - Candelabra: 11 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/30/2016	RMP Deemed	21.37	Measure
	CFL Specialty - Candelabra: 13 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	21.37	Measure
	CFL Specialty - Candelabra: 13 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	15.92	Measure
	CFL Specialty - Candelabra: 13 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	15.92	Measure
	CFL Specialty - Candelabra: 14 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	20.66	Measure
	CFL Specialty - Candelabra: 14 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	15.39	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	CFL Specialty - Candelabra: 14 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	15.39	Measure
	CFL Specialty - Candelabra: 3 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	26.36	Measure
	CFL Specialty - Candelabra: 3 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	19.63	Measure
	CFL Specialty - Candelabra: 3 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	19.63	Measure
	CFL Specialty - Candelabra: 5 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	14.25	Measure
	CFL Specialty - Candelabra: 5 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	10.61	Measure
	CFL Specialty - Candelabra: 5 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	10.61	Measure
	CFL Specialty - Candelabra: 7 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	23.51	Measure
	CFL Specialty - Candelabra: 7 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	17.51	Measure
	CFL Specialty - Candelabra: 7 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	17.51	Measure
	CFL Specialty - Candelabra: 9 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	22.08	Measure
	CFL Specialty - Candelabra: 9 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	16.45	Measure
	CFL Specialty - Candelabra: 9 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	16.45	Measure
	CFL Specialty - Daylight: 10 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	21.37	Measure
	CFL Specialty - Daylight: 10 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	15.92	Measure
	CFL Specialty - Daylight: 10 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	15.92	Measure
	CFL Specialty - Daylight: 13 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	21.37	Measure
	CFL Specialty - Daylight: 13 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	15.92	Measure
	CFL Specialty - Daylight: 13 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	15.92	Measure
	CFL Specialty - Daylight: 14 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	20.66	Measure
	CFL Specialty - Daylight: 14 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	15.39	Measure
	CFL Specialty - Daylight: 14 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	15.39	Measure
	CFL Specialty - Daylight: 15 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	19.94	Measure
	CFL Specialty - Daylight: 15 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	14.86	Measure
	CFL Specialty - Daylight: 15 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	14.86	Measure
	CFL Specialty - Daylight: 18 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	24.93	Measure
	CFL Specialty - Daylight: 18 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	18.57	Measure
	CFL Specialty - Daylight: 18 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	18.57	Measure
	CFL Specialty - Daylight: 19 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	24.22	Measure
	CFL Specialty - Daylight: 19 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	18.04	Measure
	CFL Specialty - Daylight: 19 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	18.04	Measure
	CFL Specialty - Daylight: 20 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	23.51	Measure
	CFL Specialty - Daylight: 20 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	17.51	Measure
	CFL Specialty - Daylight: 20 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	17.51	Measure
	CFL Specialty - Daylight: 22 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/30/2016	RMP Deemed	35.62	Measure
	CFL Specialty - Daylight: 22 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/30/2016	RMP Deemed	26.53	Measure
	CFL Specialty - Daylight: 22 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	26.53	Measure
	CFL Specialty - Daylight: 23 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	34.9	Measure
	CFL Specialty - Daylight: 23 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	26	Measure
	CFL Specialty - Daylight: 23 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	26	Measure
	CFL Specialty - Daylight: 24 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/30/2016	RMP Deemed	34.19	Measure
	CFL Specialty - Daylight: 24 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/30/2016	RMP Deemed	25.47	Measure
	CFL Specialty - Daylight: 24 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	25.47	Measure
	CFL Specialty - Daylight: 25 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/30/2016	RMP Deemed	33.48	Measure
	CFL Specialty - Daylight: 25 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/30/2016	RMP Deemed	24.94	Measure
	CFL Specialty - Daylight: 25 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/30/2016	RMP Deemed	24.94	Measure
	CFL Specialty - Daylight: 26 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	32.77	Measure
	CFL Specialty - Daylight: 26 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	24.41	Measure
	CFL Specialty - Daylight: 26 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	24.41	Measure
	CFL Specialty - Daylight: 27 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	32.05	Measure
	CFL Specialty - Daylight: 27 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	23.88	Measure
	CFL Specialty - Daylight: 27 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	23.88	Measure
	CFL Specialty - Daylight: 9 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	22.08	Measure
	CFL Specialty - Daylight: 9 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	16.45	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	CFL Specialty - Daylight: 9 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	16.45	Measure
	CFL Specialty - Dimmable: 11 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	20.66	Measure
	CFL Specialty - Dimmable: 11 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	15.39	Measure
	CFL Specialty - Dimmable: 11 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	15.39	Measure
	CFL Specialty - Dimmable: 14 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	32.77	Measure
	CFL Specialty - Dimmable: 14 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	24.41	Measure
	CFL Specialty - Dimmable: 14 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	24.41	Measure
	CFL Specialty - Dimmable: 15 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	32.05	Measure
	CFL Specialty - Dimmable: 15 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	23.88	Measure
	CFL Specialty - Dimmable: 15 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	23.88	Measure
	CFL Specialty - Dimmable: 16 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	17.1	Measure
	CFL Specialty - Dimmable: 16 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	12.73	Measure
	CFL Specialty - Dimmable: 16 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	12.73	Measure
	CFL Specialty - Dimmable: 20 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	28.49	Measure
	CFL Specialty - Dimmable: 20 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	21.22	Measure
	CFL Specialty - Dimmable: 20 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	21.22	Measure
	CFL Specialty - Dimmable: 23 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	54.85	Measure
	CFL Specialty - Dimmable: 23 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	40.86	Measure
	CFL Specialty - Dimmable: 23 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	40.86	Measure
	CFL Specialty - Dimmable: 24 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	54.13	Measure
	CFL Specialty - Dimmable: 24 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	40.33	Measure
	CFL Specialty - Dimmable: 24 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	40.33	Measure
	CFL Specialty - Dimmable: 25 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	12/31/2013	RMP Deemed	39.79	Measure
	CFL Specialty - Dimmable: 26 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	52.71	Measure
	CFL Specialty - Dimmable: 26 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	39.26	Measure
	CFL Specialty - Dimmable: 26 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	39.26	Measure
	CFL Specialty - Dimmable: 27 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	52	Measure
	CFL Specialty - Dimmable: 27 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	38.73	Measure
	CFL Specialty - Dimmable: 27 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	38.73	Measure
	CFL Specialty - Globe: 11 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	20.66	Measure
	CFL Specialty - Globe: 11 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	15.39	Measure
	CFL Specialty - Globe: 11 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	15.39	Measure
	CFL Specialty - Globe: 12 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	19.94	Measure
	CFL Specialty - Globe: 12 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	14.86	Measure
	CFL Specialty - Globe: 12 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	14.86	Measure
	CFL Specialty - Globe: 14 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	20.66	Measure
	CFL Specialty - Globe: 14 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	15.39	Measure
	CFL Specialty - Globe: 14 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	15.39	Measure
	CFL Specialty - Globe: 15 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	19.94	Measure
	CFL Specialty - Globe: 15 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	14.86	Measure
	CFL Specialty - Globe: 15 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	14.86	Measure
	CFL Specialty - Globe: 25 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	19.94	Measure
	CFL Specialty - Globe: 25 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	14.86	Measure
	CFL Specialty - Globe: 25 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	14.86	Measure
	CFL Specialty - Globe: 9 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	22.08	Measure
	CFL Specialty - Globe: 9 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	16.45	Measure
	CFL Specialty - Globe: 9 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	16.45	Measure
	CFL Specialty - Outdoor: 11 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	20.66	Measure
	CFL Specialty - Outdoor: 11 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	15.39	Measure
	CFL Specialty - Outdoor: 11 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	15.39	Measure
	CFL Specialty - Outdoor: 13 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	19.23	Measure
	CFL Specialty - Outdoor: 13 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	14.33	Measure
	CFL Specialty - Outdoor: 13 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	14.33	Measure
	CFL Specialty - Outdoor: 14 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	32.77	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	CFL Specialty - Outdoor: 14 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	24.41	Measure
	CFL Specialty - Outdoor: 14 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	24.41	Measure
	CFL Specialty - Outdoor: 15 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	32.05	Measure
	CFL Specialty - Outdoor: 15 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	23.88	Measure
	CFL Specialty - Outdoor: 15 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	23.88	Measure
	CFL Specialty - Outdoor: 23 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	12.11	Measure
	CFL Specialty - Outdoor: 23 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	9.02	Measure
	CFL Specialty - Outdoor: 23 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	9.02	Measure
	CFL Specialty - Outdoor: 26 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	34.9	Measure
	CFL Specialty - Outdoor: 26 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	26	Measure
	CFL Specialty - Outdoor: 26 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	26	Measure
	CFL Specialty - Outdoor: 9 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	22.08	Measure
	CFL Specialty - Outdoor: 9 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	16.45	Measure
	CFL Specialty - Outdoor: 9 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	16.45	Measure
	CFL Specialty - Reflector: 11 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	13.53	Measure
	CFL Specialty - Reflector: 11 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	10.08	Measure
	CFL Specialty - Reflector: 11 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	10.08	Measure
	CFL Specialty - Reflector: 14 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	36.33	Measure
	CFL Specialty - Reflector: 14 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	27.06	Measure
	CFL Specialty - Reflector: 14 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	27.06	Measure
	CFL Specialty - Reflector: 15 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	35.62	Measure
	CFL Specialty - Reflector: 15 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	26.53	Measure
	CFL Specialty - Reflector: 15 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	26.53	Measure
	CFL Specialty - Reflector: 16 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	34.9	Measure
	CFL Specialty - Reflector: 16 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	26	Measure
	CFL Specialty - Reflector: 16 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	26	Measure
	CFL Specialty - Reflector: 18 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	40.6	Measure
	CFL Specialty - Reflector: 18 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	30.24	Measure
	CFL Specialty - Reflector: 18 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	30.24	Measure
	CFL Specialty - Reflector: 19 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	39.89	Measure
	CFL Specialty - Reflector: 19 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	29.71	Measure
	CFL Specialty - Reflector: 19 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	29.71	Measure
	CFL Specialty - Reflector: 20 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	39.18	Measure
	CFL Specialty - Reflector: 20 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	29.18	Measure
	CFL Specialty - Reflector: 20 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	29.18	Measure
	CFL Specialty - Reflector: 23 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	47.72	Measure
	CFL Specialty - Reflector: 23 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	35.55	Measure
	CFL Specialty - Reflector: 23 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	35.55	Measure
	CFL Specialty - Reflector: 26 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	45.59	Measure
	CFL Specialty - Reflector: 26 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	33.96	Measure
	CFL Specialty - Reflector: 26 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	33.96	Measure
	CFL Specialty - Reflector: 9 watts - Direct Install - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	14.96	Measure
	CFL Specialty - Reflector: 9 watts - Mail By Request - ID	Energy efficient Compact Fluorescent Lamps-Specialty	4/14/2014	RMP Deemed	11.14	Measure
	CFL Specialty - Reflector: 9 watts - Retail - ID	Energy efficient Compact Fluorescent Lamps-Specialty	1/1/2014	RMP Deemed	11.14	Measure
	LED Downlight: 10 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	39.18	Measure
	LED Downlight: 10 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	39.18	Measure
	LED Downlight: 10 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	39.18	Measure
	LED Downlight: 11 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	45.59	Measure
	LED Downlight: 11 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	45.59	Measure
	LED Downlight: 11 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	45.59	Measure
	LED Downlight: 12 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	37.75	Measure
	LED Downlight: 12 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	37.75	Measure
	LED Downlight: 12 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	37.75	Measure
	LED Downlight: 13 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	37.04	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	LED Downlight: 13 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	37.04	Measure
	LED Downlight: 13 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	37.04	Measure
	LED Downlight: 14 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	36.33	Measure
	LED Downlight: 14 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	36.33	Measure
	LED Downlight: 14 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	36.33	Measure
	LED Downlight: 15 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	35.62	Measure
	LED Downlight: 15 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	35.62	Measure
	LED Downlight: 15 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	35.62	Measure
	LED Downlight: 16 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	42.03	Measure
	LED Downlight: 16 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	42.03	Measure
	LED Downlight: 16 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	42.03	Measure
	LED Downlight: 17 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	41.31	Measure
	LED Downlight: 17 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	41.31	Measure
	LED Downlight: 17 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	41.31	Measure
	LED Downlight: 18 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	40.6	Measure
	LED Downlight: 18 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	40.6	Measure
	LED Downlight: 18 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	40.6	Measure
	LED Downlight: 19 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	39.89	Measure
	LED Downlight: 19 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	39.89	Measure
	LED Downlight: 19 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	39.89	Measure
	LED Downlight: 20 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	39.18	Measure
	LED Downlight: 20 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	39.18	Measure
	LED Downlight: 20 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	39.18	Measure
	LED Downlight: 23 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	47.72	Measure
	LED Downlight: 23 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	47.72	Measure
	LED Downlight: 23 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	47.72	Measure
	LED Downlight: 5 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	49.86	Measure
	LED Downlight: 5 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	49.86	Measure
	LED Downlight: 5 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	49.86	Measure
	LED Downlight: 6 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	49.15	Measure
	LED Downlight: 6 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	49.15	Measure
	LED Downlight: 6 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	49.15	Measure
	LED Downlight: 7 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	16.38	Measure
	LED Downlight: 7 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	16.38	Measure
	LED Downlight: 7 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	16.38	Measure
	LED Downlight: 8 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	26.36	Measure
	LED Downlight: 8 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	26.36	Measure
	LED Downlight: 8 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	26.36	Measure
	LED Downlight: 9 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	39.89	Measure
	LED Downlight: 9 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	39.89	Measure
	LED Downlight: 9 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Downlight	1/30/2016	RMP Deemed	39.89	Measure
	LED Specialty - 3-Way: 20 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	56.98	Measure
	LED Specialty - 3-Way: 20 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	56.98	Measure
	LED Specialty - 3-Way: 20 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	56.98	Measure
	LED Specialty - 3-Way: 3,8,18 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	Cadmus Eval / UMP / RTFv3.0	37.04	Measure
	LED Specialty - 3-Way: 5,9,20 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	Cadmus Eval / UMP / RTFv3.0	36.33	Measure
	LED Specialty - Candelabra: 2 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	16.38	Measure
	LED Specialty - Candelabra: 2 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	16.38	Measure
	LED Specialty - Candelabra: 2 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	16.38	Measure
	LED Specialty - Candelabra: 4 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	14.96	Measure
	LED Specialty - Candelabra: 4 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	14.96	Measure
	LED Specialty - Candelabra: 4 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	14.96	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	LED Specialty - Candelabra: 5 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	24.93	Measure
	LED Specialty - Candelabra: 5 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	24.93	Measure
	LED Specialty - Candelabra: 5 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	24.93	Measure
	LED Specialty - Candelabra: 7 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	23.51	Measure
	LED Specialty - Candelabra: 7 watts - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	23.51	Measure
	LED Specialty - Candelabra: 7 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	23.51	Measure
	LED Specialty - Globe: 10 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	21.37	Measure
	LED Specialty - Globe: 10 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	21.37	Measure
	LED Specialty - Globe: 10 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	21.37	Measure
	LED Specialty - Globe: 2 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	16.38	Measure
	LED Specialty - Globe: 2 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	16.38	Measure
	LED Specialty - Globe: 2 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	16.38	Measure
	LED Specialty - Globe: 4 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	14.96	Measure
	LED Specialty - Globe: 4 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	14.96	Measure
	LED Specialty - Globe: 4 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	14.96	Measure
	LED Specialty - Globe: 5 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	24.93	Measure
	LED Specialty - Globe: 5 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	24.93	Measure
	LED Specialty - Globe: 5 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	24.93	Measure
	LED Specialty - Globe: 6 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	24.22	Measure
	LED Specialty - Globe: 6 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	24.22	Measure
	LED Specialty - Globe: 6 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	24.22	Measure
	LED Specialty - Globe: 8 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	22.79	Measure
	LED Specialty - Globe: 8 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	22.79	Measure
	LED Specialty - Globe: 8 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	22.79	Measure
	LED Specialty - Reflector: 10 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	24.93	Measure
	LED Specialty - Reflector: 10 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	24.93	Measure
	LED Specialty - Reflector: 10 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	24.93	Measure
	LED Specialty - Reflector: 4 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	18.52	Measure
	LED Specialty - Reflector: 4 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	18.52	Measure
	LED Specialty - Reflector: 4 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	18.52	Measure
	LED Specialty - Reflector: 5 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	17.81	Measure
	LED Specialty - Reflector: 5 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	17.81	Measure
	LED Specialty - Reflector: 5 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	17.81	Measure
	LED Specialty - Reflector: 6 watts - Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	17.1	Measure
	LED Specialty - Reflector: 6 watts - Mail By Request - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	17.1	Measure
	LED Specialty - Reflector: 6 watts - Retail - ID	Energy efficient Light Emitting Diode Lamps-Specialty	1/30/2016	RMP Deemed	17.1	Measure
Plumbing	Low Flow Aerator - Direct Install - Electric Only - 0.5 gpm - ID	Install Low Flow Aerator	4/14/2014	RMP Deemed	74.12	Measure
	Low Flow Aerator - Mail By Request - Any Water Heat Fuel - 0.5 gpm - ID	Install Low Flow Aerator	4/14/2014	RMP Deemed	30.67	Measure
	Low Flow Aerator - Mail By Request - Electric Only - 0.5 gpm - ID	Install Low Flow Aerator	4/14/2014	RMP Deemed	62.59	Measure
	Low Flow Aerator - Retail - Any Water Heat Fuel - 0.5 gpm - ID	Install Low Flow Aerator	4/14/2014	RMP Deemed	28.25	Measure
	Low Flow Aerator - Direct Install - Electric Only - 1.5 gpm - ID	Install Low Flow Aerator	4/14/2014	RMP Deemed	30.52	Measure
	Low Flow Aerator - Mail By Request - Any Water Heat Fuel - 1.5 gpm - ID	Install Low Flow Aerator	4/14/2014	RMP Deemed	12.63	Measure
	Low Flow Aerator - Mail By Request - Electric Only - 1.5 gpm - ID	Install Low Flow Aerator	4/14/2014	RMP Deemed	25.77	Measure
	Low Flow Aerator - Retail - Any Water Heat Fuel - 1.5 gpm - ID	Install Low Flow Aerator	4/14/2014	RMP Deemed	11.63	Measure
	Low Flow Showerhead - Direct Install - Electric Only - 1.50 gpm - ID	Install a Low Flow Showerhead	4/14/2014	RTF Deemed	307	Measure
	Low Flow Showerhead - Mail By Request - Any Water Heat Fuel - 1.50 gpm - ID	Install a Low Flow Showerhead	4/14/2014	RTF Deemed	170	Measure
	Low Flow Showerhead - Mail By Request - Electric Only - 1.50 gpm - ID	Install a Low Flow Showerhead	4/14/2014	RTF Deemed	260	Measure
	Low Flow Showerhead - Retail - Any Water Heat Fuel - 1.50 gpm - ID	Install a Low Flow Showerhead	4/14/2014	RTF Deemed	157	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Low Flow Showerhead - Direct Install - Electric Only - 1.75 gpm - ID	Install a Low Flow Showerhead	4/14/2014	RTF Deemed	222	Measure
	Low Flow Showerhead - Mail By Request - Any Water Heat Fuel - 1.75 gpm - ID	Install a Low Flow Showerhead	4/14/2014	RTF Deemed	123	Measure
	Low Flow Showerhead - Mail By Request - Electric Only - 1.75 gpm - ID	Install a Low Flow Showerhead	4/14/2014	RTF Deemed	187	Measure
	Low Flow Showerhead - Retail - Any Water Heat Fuel - 1.75 gpm - ID	Install a Low Flow Showerhead	4/14/2014	RTF Deemed	121	Measure
	Low Flow Showerhead - Direct Install - Electric Only - 2.00 gpm - ID	Install a Low Flow Showerhead	4/14/2014	RTF Deemed	139	Measure
	Low Flow Showerhead - Mail By Request - Any Water Heat Fuel - 2.00 gpm - ID	Install a Low Flow Showerhead	4/14/2014	RTF Deemed	77	Measure
	Low Flow Showerhead - Mail By Request - Electric Only - 2.00 gpm - ID	Install a Low Flow Showerhead	4/14/2014	RTF Deemed	117	Measure
	Low Flow Showerhead - Retail - Any Water Heat Fuel - 2.00 gpm - ID	Install a Low Flow Showerhead	4/14/2014	RTF Deemed	81	Measure
Water Heating	HPWH Tier 2 or Above Basement 0-55gallons - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1750	Measure
	HPWH Tier 2 or Above Basement 0-55gallons Self Install - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1750	Measure
	HPWH Tier 2 or Above Ducted Electric Resistance Heat 0-55 Gallons - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1300	Measure
	HPWH Tier 2 or Above Ducted Electric Resistance Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1300	Measure
	HPWH Tier 2 or Above Ducted Gas Heat 0-55 Gallons - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1785	Measure
	HPWH Tier 2 or Above Ducted Gas Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1785	Measure
	HPWH Tier 2 or Above Ducted Heat Pump 0-55 Gallons - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1510	Measure
	HPWH Tier 2 or Above Ducted Heat Pump 0-55 Gallons Self Install - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1510	Measure
	HPWH Tier 2 or Above Garage 0-55 Gallons - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1570	Measure
	HPWH Tier 2 or Above Garage 0-55 Gallons Self Install - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1570	Measure
	HPWH Tier 2 or Above Indoor Electric Resistance Heat 0-55 Gallons - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1467	Measure
	HPWH Tier 2 or Above Indoor Electric Resistance Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1467	Measure
	HPWH Tier 2 or Above Indoor Gas Heat 0-55 Gallons - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1875	Measure
	HPWH Tier 2 or Above Indoor Gas Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1875	Measure
	HPWH Tier 2 or Above Indoor Heat Pump 0-55 Gallons - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1601	Measure
	HPWH Tier 2 or Above Indoor Heat Pump 0-55 Gallons Self Install - ID	Electric heat pump water heater	3/30/2017	RTF Deemed	1601	Measure
	HPWH_Any_Tier_Midmarket - ID	Electric heat pump water heater	9/1/2018	RTF Deemed	1116	Measure
	New Homes HPWH Tier 1 Basement 0-55gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1214	Measure
	New Homes HPWH Tier 1 Basement 0-55gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1214	Measure
	New Homes HPWH Tier 1 Garage 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	689	Measure
	New Homes HPWH Tier 1 Garage 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	689	Measure
	New Homes HPWH Tier 1 Indoor Electric Resistance Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1124	Measure
	New Homes HPWH Tier 1 Indoor Gas Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1418	Measure
	New Homes HPWH Tier 1 Indoor Heat Pump 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1217	Measure
	New Homes HPWH Tier 1 Indoor Heat Pump 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1217	Measure
	New Homes HPWH Tier 2 Basement 0-55gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1750	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	New Homes HPWH Tier 2 Basement 0-55gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1750	Measure
	New Homes HPWH Tier 2 Ducted Electric Resistance Heat 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1300	Measure
	New Homes HPWH Tier 2 Ducted Electric Resistance Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1300	Measure
	New Homes HPWH Tier 2 Ducted Gas Heat 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1785	Measure
	New Homes HPWH Tier 2 Ducted Gas Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1785	Measure
	New Homes HPWH Tier 2 Ducted Heat Pump 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1510	Measure
	New Homes HPWH Tier 2 Ducted Heat Pump 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1510	Measure
	New Homes HPWH Tier 2 Garage 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1570	Measure
	New Homes HPWH Tier 2 Garage 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1570	Measure
	New Homes HPWH Tier 2 Indoor Electric Resistance Heat 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1467	Measure
	New Homes HPWH Tier 2 Indoor Electric Resistance Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1467	Measure
	New Homes HPWH Tier 2 Indoor Gas Heat 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1875	Measure
	New Homes HPWH Tier 2 Indoor Gas Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1875	Measure
	New Homes HPWH Tier 2 Indoor Heat Pump 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1601	Measure
	New Homes HPWH Tier 2 Indoor Heat Pump 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1601	Measure
	New Homes HPWH Tier 3 Basement 0-55gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1857	Measure
	New Homes HPWH Tier 3 Basement 0-55gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1857	Measure
	New Homes HPWH Tier 3 Ducted Electric Resistance Heat 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1361	Measure
	New Homes HPWH Tier 3 Ducted Electric Resistance Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1361	Measure
	New Homes HPWH Tier 3 Ducted Gas Heat 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1887	Measure
	New Homes HPWH Tier 3 Ducted Gas Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1887	Measure
	New Homes HPWH Tier 3 Ducted Heat Pump 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1585	Measure
	New Homes HPWH Tier 3 Ducted Heat Pump 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1585	Measure
	New Homes HPWH Tier 3 Garage 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1659	Measure
	New Homes HPWH Tier 3 Garage 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1659	Measure
	New Homes HPWH Tier 3 Indoor Electric Resistance Heat 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1545	Measure
	New Homes HPWH Tier 3 Indoor Electric Resistance Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1545	Measure
	New Homes HPWH Tier 3 Indoor Gas Heat 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1982	Measure
	New Homes HPWH Tier 3 Indoor Gas Heat 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1982	Measure
	New Homes HPWH Tier 3 Indoor Heat Pump 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1686	Measure
	New Homes HPWH Tier 3 Indoor Heat Pump 0-55 Gallons Self Install - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1686	Measure
	New Homes HPWH Tier1 Indoor Electric Resistance Heat 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1124	Measure
	New Homes HPWH Tier1 Indoor Gas Heat 0-55 Gallons - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1418	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
Whole Home	Faucet Aerators - Any DHW - 1.0 GPM or Less - Midstream - ID	Aerators save energy and water by producing forceful streams or a splash-free bubble stream at a reduced flow rate that reduces the volume of water used and minimizes the amount of energy required to heat water.	8/1/2019	RTF Deemed	13	Measure
	Faucet Aerators - Any DHW - 1.5 GPM - Midstream - ID	Aerators save energy and water by producing forceful streams or a splash-free bubble stream at a reduced flow rate that reduces the volume of water used and minimizes the amount of energy required to heat water.	8/1/2019	RTF Deemed	21	Measure
	Low-Flow Shower Head - Any DHW - 1.50 GPM - Midstream - ID	Low flow showerheads reduce water heating energy by decreasing the flow rate of the showerheads	8/1/2019	RTF Deemed	78	Measure
	Low-Flow Shower Head - Any DHW - 1.75 GPM - Midstream - ID	Low flow showerheads reduce water heating energy by decreasing the flow rate of the showerheads	8/1/2019	RTF Deemed	35	Measure
	Low-Flow Shower Head - Any DHW - 2.00 GPM - Midstream - ID	Low flow showerheads reduce water heating energy by decreasing the flow rate of the showerheads	8/1/2019	RTF Deemed	6	Measure
	New Homes Whole Home Performance Path Tier 1 - ID	A flexible compliance method for contractors to build to energy efficient new homes.	1/30/2016	RMP Deemed	1727	Measure
	New Homes Whole Home Performance Path Tier 2 - ID	A flexible compliance method for contractors to build to energy efficient new homes.	1/30/2016	RMP Deemed	3454	Measure
	New Homes Whole Home Performance Path Tier 3 - ID	A flexible compliance method for contractors to build to energy efficient new homes.	1/30/2016	RMP Deemed	5181	Measure
	New Manufactured Home Eco-rated Homes - Electric FAF - ID		1/30/2016	RTF Deemed	8897	
	New Manufactured Home Eco-rated Homes - Gas Furnace - ID		1/30/2016	RTF Deemed	1043	
	New Manufactured Home Eco-rated Homes - Heat Pump - ID		1/30/2016	RTF Deemed	6372	
	New Manufactured Home - Energy Star - Any Electric - ID	New Manufactured Homes built to Energy Star specifications	3/1/2018	RTF Deemed	4142	Home
	New High Performance Manufactured Homes - ID	New High Performance Manufactured Homes - ID	1/30/2016	RTF Deemed	11411	
	Whole Home Upgrade Package - Heat Pump Conversion - ID	Combine attic insulation, heat pump conversion with best practices install and sizing, and duct insulation & sealing	1/30/2016	RMP Deemed	0	Measure
	Whole Home Upgrade Package - Heat Pump Upgrade - ID	Combine attic insulation, heat pump upgrade with best practices install and sizing, and duct insulation & sealing	1/30/2016	RMP Deemed	0	Measure

Low Income Weatherization						
Appliances	901 Refrigerator Replacement - ID	Energy Star refrigerators	3/1/2016	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Home
Building Shell	18 Air Sealed/Infiltration - ID	Air sealing	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Home
	31 Thermal Doors - ID	Thermal doors	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Home
	46 Ground Cover - ID	Ground cover when installed with floor insulation	1/1/2014	RMP Deemed	0	Home
	08 Wall Insulation - ID	Wall insulation	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Home

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	09 Ceiling Insulation - ID	Ceiling insulation	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Home
	11 Floor Insulation - ID	Floor insulation	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Home
	10 Attic Ventilation - ID	Attic ventilation	1/1/2014	RMP Deemed	0	Home
	Home Repair Cost - ID	Repairs necessary to install energy efficient measures	1/1/2014	RMP Deemed	0	Home
	ID Weatherization - ID	This is not a distinct measure but allows for a deemed savings amount to be applied to shell measures/a set kWh per home	1/1/2018	RMP Deemed	1185	Home
	32 Double Glass Replacement - ID	Replacement windows with a U-value of 0.35 or less	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Home
Health and Safety	274 Health and Safety - ID	Health and safety measures related to electric usage	1/1/2014	RMP Deemed	0	Home
HVAC	14 Clock Thermostat - ID	Timed thermostats	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Measure
	15 Duct Insulation/Sealing Insulation - ID	Duct insulation	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Home
	581 Duct Sealing - ID	Duct sealing	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Home
	270 Ductless Heat Pump - ID	Install a Ductless Heat Pump	6/20/2019	RTF Deemed	1665	Measure
	271 Furnace Repair - ID	Electric furnace repair	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Measure
	272 Furnace Replacement - ID	Electric furnace replacement	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Measure
Lighting	21 CFL Bulbs - ID	Energy Star CFLs	3/1/2016	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Home
	50 LED Bulbs - ID	Energy Star LEDs	3/1/2016	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Home
	51 LED Light Fixture - ID	LED Light Fixtures	3/1/2016	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Home

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
Water Heating	19 Low Flow Shower Head - ID	Showerheads	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Measure
	501 Faucet Aerators - ID	Faucet aerators	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Measure
	12 Pipe Insulation HYD - ID	Water pipe wrap	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Home
	240 Water Heater Repair - ID	Electric water heater repair	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Measure
	273 Water Heater Replacement - ID	Electric water heater replacement	1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Measure
Whole Home	Energy Conservation Education Kit - ID		1/1/2014	RMP Deemed	Savings included in "ID Weatherization - ID" measure	Measure
Wattsmart Business						
Additional Measures	Dust Collection (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Dust Collection (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Other Controls (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Other Controls (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
Appliances	Clothes Washer - 3.2 MEF or Higher - Electric DHW & Electric Dryer (residential used in a business) - ID	Energy efficient clothes washers	5/14/2016	RTF Deemed	143	Measure
	Clothes Washer - 3.2 MEF or Higher - Electric DHW & Gas Dryer (residential used in a business) - ID	Energy efficient clothes washers	5/14/2016	RTF Deemed	54	Measure
	Clothes Washer - 3.2 MEF or Higher - Gas DHW & Electric Dryer (residential used in a business) - ID	Energy efficient clothes washers	5/14/2016	RTF Deemed	106	Measure
	Clothes Washer - 3.2 MEF or Higher - Gas DHW & Gas Dryer (residential used in a business) - ID	Energy efficient clothes washers	5/14/2016	RTF Deemed	16	Measure
	High-Efficiency Clothes Washer (Must have Electric Water Heating) - Commercial - ENERGY STAR Qualified - ID	Energy Star Qualified High Efficiency Clothes Washer	1/20/2018	RTF Deemed	581	Measure
	HPWH Tier 1 Basement 0-55gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1214	Measure
	HPWH Tier 1 Basement 0-55gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1214	Measure
	HPWH Tier 1 Garage 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	689	Measure
	HPWH Tier 1 Garage 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	689	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	HPWH Tier 1 Indoor Electric Resistance Heat 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1124	Measure
	HPWH Tier 1 Indoor Electric Resistance Heat 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1124	Measure
	HPWH Tier 1 Indoor Gas Heat 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1418	Measure
	HPWH Tier 1 Indoor Gas Heat 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1418	Measure
	HPWH Tier 1 Indoor Heat Pump 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1217	Measure
	HPWH Tier 1 Indoor Heat Pump 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1217	Measure
	HPWH Tier 2 Basement 0-55gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1750	Measure
	HPWH Tier 2 Basement 0-55gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1750	Measure
	HPWH Tier 2 Ducted Electric Resistance Heat 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1300	Measure
	HPWH Tier 2 Ducted Electric Resistance Heat 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1300	Measure
	HPWH Tier 2 Ducted Gas Heat 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1785	Measure
	HPWH Tier 2 Ducted Gas Heat 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1785	Measure
	HPWH Tier 2 Ducted Heat Pump 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1510	Measure
	HPWH Tier 2 Ducted Heat Pump 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1510	Measure
	HPWH Tier 2 Garage 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1570	Measure
	HPWH Tier 2 Garage 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1570	Measure
	HPWH Tier 2 Indoor Electric Resistance Heat 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1467	Measure
	HPWH Tier 2 Indoor Electric Resistance Heat 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1467	Measure
	HPWH Tier 2 Indoor Gas Heat 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1875	Measure
	HPWH Tier 2 Indoor Gas Heat 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1875	Measure
	HPWH Tier 2 Indoor Heat Pump 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1601	Measure
	HPWH Tier 2 Indoor Heat Pump 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1601	Measure
	HPWH Tier 3 Basement 0-55gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1857	Measure
	HPWH Tier 3 Basement 0-55gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1857	Measure
	HPWH Tier 3 Ducted Electric Resistance Heat 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1361	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	HPWH Tier 3 Ducted Electric Resistance Heat 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1361	Measure
	HPWH Tier 3 Ducted Gas Heat 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1887	Measure
	HPWH Tier 3 Ducted Gas Heat 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1887	Measure
	HPWH Tier 3 Ducted Heat Pump 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1585	Measure
	HPWH Tier 3 Ducted Heat Pump 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1585	Measure
	HPWH Tier 3 Garage 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1659	Measure
	HPWH Tier 3 Garage 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1659	Measure
	HPWH Tier 3 Indoor Electric Resistance Heat 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1545	Measure
	HPWH Tier 3 Indoor Electric Resistance Heat 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1545	Measure
	HPWH Tier 3 Indoor Gas Heat 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1982	Measure
	HPWH Tier 3 Indoor Gas Heat 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1982	Measure
	HPWH Tier 3 Indoor Heat Pump 0-55 Gallons (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1686	Measure
	HPWH Tier 3 Indoor Heat Pump 0-55 Gallons Self Install (residential used in a business) - ID	Electric heat pump water heater	1/30/2016	RTF Deemed	1686	Measure
Building Shell	Exterior Shading (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Exterior Shading (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Cool Roof (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Cool Roof (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Glazing (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Glazing (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Insulation Package (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Insulation Package (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Other Building Shell (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Other Building Shell (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Roof/Attic Insulation (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Roof/Attic Insulation (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Wall Insulation (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Wall Insulation (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Roof/Attic Insulation - New Construction - ID	New Construction Roof/Attic Insulation	5/14/2016	RMP Deemed	0.035	Sq. ft.
	Roof/Attic Insulation - Retrofit - ID	Retrofit Roof/Attic Insulation	5/14/2016	RMP Deemed	0.08	Sq. ft.
	Wall Insulation - New Construction - ID	New construction Wall Insulation	5/14/2016	RMP Deemed	0.011	Sq. ft.
	Wall Insulation - Retrofit - ID	Retrofit Wall Insulation	5/14/2016	RMP Deemed	0.064	Sq. ft.
	Cool Roof - New Construction - ID	New Construction, Cool Roof, reflective roofing	1/20/2018	RMP Deemed	0.11	Sq. ft.
	Cool Roof - Retrofit - ID	Retrofit,Cool Roof, reflective roofing	1/20/2018	RMP Deemed	0.22	Sq. ft.
	Window Film: Existing Windows - ID	Window Film	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	Windows - New Construction: Assembly - ID	New construction preassembled windows	5/14/2016	RMP Deemed	1.614	Sq. ft.
	Windows - New Construction: Site-Built - ID	New construction site built windows	5/14/2016	RMP Deemed	1.219	Sq. ft.
	Windows - Retrofit: Assembly - ID	Retrofit preassembled windows	5/14/2016	RMP Deemed	4.425	Sq. ft.
	Windows - Retrofit: Site-Built - ID	Retrofit Site built windows	5/14/2016	RMP Deemed	4.065	Sq. ft.
Compressed Air	Outside air intake (New Construction) - ID	Permanent ductwork between compressor and outdoors for compressor intake air	11/13/2014	RMP Deemed	48.97	Hp
	Outside air intake (Retrofit) - ID	Permanent ductwork between compressor and outdoors for compressor intake air	11/13/2014	RMP Deemed	48.97	hp
	Receiver capacity addition (New Construction) - ID	Incremental receiver capacity in excess of 2 gal/scfm of trim compressor capacity	11/13/2014	RMP Deemed	13.1	Gal above 2 gal/scfm
	Receiver capacity addition (Retrofit) - ID	Incremental receiver capacity in excess of 2 gal/scfm of trim compressor capacity	11/13/2014	RMP Deemed	13.1	Gal above 2 gal/scfm
	Refrigerated cycling dryer (New Construction) - ID	Cycling refrigerated dryer in place of non cycling refrigerated dryer	11/13/2014	RMP Deemed	12.73	Scfm/hr
	Refrigerated cycling dryer (Retrofit) - ID	Cycling refrigerated dryer in place of non cycling refrigerated dryer	11/13/2014	RMP Deemed	12.73	Scfm/hr

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	VFD controlled compressor (New Construction) - ID	VFD compressor in place of fixed speed compressor (oil-flooded only, not oil-free)	11/13/2014	RMP Calculation	Savings vary by install configuration	Site-specific
	VFD controlled compressor (Retrofit) - ID	VFD compressor in place of fixed speed compressor (oil-flooded only, not oil-free)	11/13/2014	RMP Calculation	Savings vary by install configuration	Site-specific
	Zero loss condensate drain (New Construction) - ID	No-loss condensate drain in place of conventional timer drain	11/13/2014	RMP Deemed	786.37	Measure
	Zero loss condensate drain (Retrofit) - ID	No-loss condensate drain in place of conventional timer drain	11/13/2014	RMP Deemed	786.37	Measure
	Control (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Control (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Improvements (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Improvements (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	VFD Compressor (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	VFD Compressor (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
Direct Install	Project Savings - Small Business Direct Install - ID	Project Savings - Small Business Direct Install - UT	1/20/2018		Savings vary by Deemed Hours of Operation	Site-specific
	Project Savings - Small Business Direct Install - ID	Project Savings - Small Business Direct Install - UT	10/14/2019		Savings vary by Deemed Hours of Operation	Site-specific
Electronics	Smart Plug Strip - ID	connected plug-lead appliance through the use of an occupancy sensor, electric load sensor, or timer.	1/20/2018	RTF Deemed	118	Measure
	Advanced Power Strip - Small Business Dierct Install - ID	Non-Lighting - Advaned Power Strip	10/1/2016			Site-specific
Energy Management	Industrial Recommissioning Custom - ID	Custom engineering for industrial and large commercial	5/15/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	Persistent Recommissioning Custom - ID	Custom engineering for industrial and large commercial	5/15/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	Recommissioning Custom - ID	Custom engineering for industrial and large commercial	5/15/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	Strategic Energy Management Custom - ID	Custom engineering for industrial and large commercial	5/15/2018	RMP Calculation	Savings vary by install configuration	Site-specific
Farm & Dairy	Agricultural engine block heater timer (New Construction) - ID	Timer for cycling agricultural engine block heater	11/13/2014	RMP Deemed	512	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Agricultural engine block heater timer (Retrofit) - ID	Timer for cycling agricultural engine block heater	11/13/2014	RMP Deemed	512	Measure
	Circulating fan: >=48" diameter (New Construction) - ID	Circulation fan, extra large (>=48" diameter)	11/13/2014	RMP Deemed	1460	Measure
	Circulating fan: >=48" diameter (Retrofit) - ID	Circulation fan, extra large (>=48" diameter)	11/13/2014	RMP Deemed	1460	Measure
	Circulating fan: 12-23" diameter (New Construction) - ID	Circulation fan, small (12-23" diameter)	11/13/2014	RMP Deemed	419	Measure
	Circulating fan: 12-23" diameter (Retrofit) - ID	Circulation fan, small (12-23" diameter)	11/13/2014	RMP Deemed	419	Measure
	Circulating fan: 24-35" diameter (New Construction) - ID	Circulation fan, medium (24-35" diameter)	11/13/2014	RMP Deemed	486	Measure
	Circulating fan: 24-35" diameter (Retrofit) - ID	Circulation fan, medium (24-35" diameter)	11/13/2014	RMP Deemed	486	Measure
	Circulating fan: 36-47" diameter (New Construction) - ID	Circulation fan, large (36-47" diameter)	11/13/2014	RMP Deemed	557	Measure
	Circulating fan: 36-47" diameter (Retrofit) - ID	Circulation fan, large (36-47" diameter)	11/13/2014	RMP Deemed	557	Measure
	High-efficiency ventilation system: >=48" diameter (New Construction) - ID	Ventilation fan, extra large (>=48" diameter)	11/13/2014	RMP Deemed	3000	Measure
	High-efficiency ventilation system: >=48" diameter (Retrofit) - ID	Ventilation fan, extra large (>=48" diameter)	11/13/2014	RMP Deemed	3000	Measure
	High-efficiency ventilation system: 12-23" diameter (New Construction) - ID	Ventilation fan, small (12-23" diameter)	11/13/2014	RMP Deemed	419	Measure
	High-efficiency ventilation system: 12-23" diameter (Retrofit) - ID	Ventilation fan, small (12-23" diameter)	11/13/2014	RMP Deemed	419	Measure
	High-efficiency ventilation system: 24-35" diameter (New Construction) - ID	Ventilation fan, medium (24-35" diameter)	11/13/2014	RMP Deemed	750	Measure
	High-efficiency ventilation system: 24-35" diameter (Retrofit) - ID	Ventilation fan, medium (24-35" diameter)	11/13/2014	RMP Deemed	750	Measure
	High-efficiency ventilation system: 36-47" diameter (New Construction) - ID	Ventilation fan, large (36-47" diameter)	11/13/2014	RMP Deemed	1500	Measure
	High-efficiency ventilation system: 36-47" diameter (Retrofit) - iD	Ventilation fan, large (36-47" diameter)	11/13/2014	RMP Deemed	1500	Measure
	Potato or onion storage fan VFD - ID	Add variable frequency drive to existing or new fan in potato or onion storage.	12/22/2016	RMP Deemed	1193	hp
	Programmable ventilation controller (New Construction) - ID	Controller for automatic switching of ventilation fans	11/13/2014	RMP Deemed	1020	Measure
	Programmable ventilation controller (Retrofit) - ID	Controller for automatic switching of ventilation fans	11/13/2014	RMP Deemed	1020	Measure
	High efficiency livestock waterer (New Construction) - ID	High efficiency livestock waterer	11/13/2014	RMP Deemed	1209	Measure
	High efficiency livestock waterer (Retrofit) - ID	High efficiency livestock waterer	11/13/2014	RMP Deemed	1209	Measure
	Automatic milker takeoffs (retrofit only) - ID	Automatic milker takeoff	11/13/2014	RMP Deemed	992	Measure
	Milk pre-cooler (New Construction) - ID	Precool milk with well water prior to refrigeration	11/13/2014	RMP Calculation	Savings vary by install configuration	Site-specific
	Milk pre-cooler (Retrofit) - ID	Precool milk with well water prior to refrigeration	11/13/2014	RMP Calculation	Savings vary by install configuration	Site-specific

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Variable frequency drive for dairy vacuum pump (retrofit only) - ID	Add VFD to dairy vacuum pump	12/22/2016	RMP Calculation	Savings vary by install configuration	site-specific
	Heat recovery (New Construction) - ID	Reclaim heat from refrigeration condenser to heat water	11/13/2014	RMP Calculation	Savings vary by install configuration	Site-specific
	Heat recovery (Retrofit) - ID	Reclaim heat from refrigeration condenser to heat water	11/13/2014	RMP Calculation	Savings vary by install configuration	Site-specific
Food Service Equipment	Electric Combination Oven: (16-20 pans) - ID	High efficiency Electric Combination Oven with Heavy Load Efficiency	1/20/2018	RTF Deemed	17877	Measure
	Electric Combination Oven: (6-15 pans) - ID	High efficiency Electric Combination Oven with Heavy Load Efficiency	1/20/2018	RTF Deemed	12990	Measure
	Electric Commercial Fryer: Tier 1 - ID	High Efficiency Energy Star qualified Commercial Fryer (Electric Only)	5/14/2016	RMP Deemed	1689	Measure
	Electric Convection Oven: Full Size - ID	High Efficiency Electric Convection Oven	1/20/2018	PP Deemed	1661	Measure
	Electric Convection Oven: Half Size - ID	High Efficiency Electric Convection Oven	1/20/2018	PP Deemed	1683	Measure
	Electric Griddle: Tier 2 - ID	High Efficiency Energy Star Tier 2 qualified Electric Griddle	5/14/2016	RMP Deemed	2595	Measure
	Electric Steam Cooker: 3-, 4-, 5- and 6-pan sizes - Tier 1 - ID	High Efficiency Energy Star qualified Electric Steam Cooker with a Cooking Efficiency >= 50%	5/14/2016	RMP Deemed	18769	Measure
	Electric Steam Cooker: 3-, 4-, 5- and 6-pan sizes - Tier 2 - ID	High Efficiency Energy Star qualified Electric Steam Cooker with a Heavy Load Efficiency >=68%	1/20/2018	RMP Deemed	37362	Measure
	Commercial Dishwasher (Electric DHW): Multiple Tank Conveyor - ID	Tank Conveyor Dishwasher with electric booster using electically heated domestic water	5/14/2016	RMP Deemed	27408	Measure
	Commercial Dishwasher (Electric DHW): Single Tank Conveyor - ID	Tank Conveyor Dishwasher with electric booster using electically heated domestic water	5/14/2016	RMP Deemed	9212	Measure
	Commercial Dishwasher (Electric DHW): Stationary Rack, Single Tank, Door Type - ID	Stationary Rack, Single Tank, Door Type Dishwasher with electric booster using electically heated domestic water	5/14/2016	RMP Deemed	11863	Measure
	Commercial Dishwasher (Electric DHW): Undercounter - ID	Undercounter Dishwasher with electric booster using electically heated domestic water	5/14/2016	RMP Deemed	3171	Measure
	Commercial Dishwasher (Gas DHW): Multiple Tank Conveyor - ID	Tank Conveyor Dishwasher with electric booster using gas heated domestic water	5/14/2016	RMP Deemed	11230	Measure
	Commercial Dishwasher (Gas DHW): Single Tank Conveyor - ID	Tank Conveyor Dishwasher with electric booster using gas heated domestic water	5/14/2016	RMP Deemed	4948	Measure
	Commercial Dishwasher (Gas DHW): Stationary Rack, Single Tank, Door Type - ID	Stationary Rack, Single Tank, Door Type Dishwasher with electric booster using gas heated domestic water	5/14/2016	RMP Deemed	4840	Measure
	Commercial Dishwasher (Gas DHW): Undercounter - ID	Undercounter Dishwasher with electric booster using gas heated domestic water	5/14/2016	RMP Deemed	2089	Measure
	Commercial Transparent Door Freezer: 30 <= V < 50 - ID	High Efficiency Energy Star qualified Commercial Transparent Door Freezer with an interior volume equal to (30 <= V < 50 cubic feet)	11/13/2014	RMP Deemed	1504	Measure
	Anti-Sweat Heater Controls - Low Temp - ID	Anti-Sweat Heater Controls-RTF-Low Temp	1/20/2018	RTF Deemed	305	Linear ft.
	Anti-Sweat Heater Controls - Med Temp - ID	Anti-Sweat Heater Controls-RTF-Med Temp	1/20/2018	RTF Deemed	217	Linear ft.
	Electric Insulated Holding Cabinet: < 13 cu. ft. - ID	High Efficiency Energy Star qualified 1/2 Size Electric Insulated Holding Cabinet	1/20/2018	RMP Deemed	253	Measure
	Electric Insulated Holding Cabinet: >= 28 cu. Ft. - ID	High Efficiency Energy Star qualified Full Size Electric Insulated Holding Cabinet	1/20/2018	RMP Deemed	820	Measure
	Electric Insulated Holding Cabinet: 13 <= V < 28 cu. ft. - ID	High Efficiency Energy Star qualified 3/4 Size Electric Insulated Holding Cabinet with internal volume of 13 <= V < 28 cubic feet	5/14/2016	RMP Deemed	2770	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Ice Machines (Air-Cooled Only): Tier 1: Harvest Rate < 500 lbs/day - ID	High Efficiency Energy Star qualified Ice Machine with an ice harvest rate of less than 500 lbs per day	5/14/2016	RMP Deemed	748	Measure
	Ice Machines (Air-Cooled Only): Tier 1: Harvest Rate >= 500 lbs/day - ID	High Efficiency Energy Star qualified Ice Machine with a ice harvest rate of equal to or greater than 500 lbs/ day	5/14/2016	RMP Deemed	2410	Measure
	Ice Machines (Air-Cooled Only): Tier 2: Harvest Rate < 500 lbs/day - ID	High Efficiency CEE Tier 2 qualified Ice Machine with an Ice harvest rate less than 500 lbs/day	5/14/2016	RMP Deemed	1355	Measure
	Ice Machines (Air-Cooled Only): Tier 2: Harvest Rate >= 500 lbs/day - ID	High Efficiency CEE Tier 2 qualified Ice Machine with an Ice harvest rate of equal to or greater than 500 lbs/day	5/14/2016	RMP Deemed	3876	Measure
	Demand Controlled Kitchen Ventilation - ID	Demand Controlled Kitchen Ventilation	5/14/2016	RMP Calculation	Savings vary by install configuration	Measure
HVAC	365/366 day Programmable Thermostat or Occupancy-based Thermostat-ID	365 day Programmable Thermosat	5/14/2016	RMP Deemed	1310	Measure
	Advanced Rooftop Unit Control: => 5 tons and <= 10 tons - ID	Qualifying advanced rooftop unit control installed on existing rooftop unit w/ =>5 and <=10 nominal tons	1/20/2018	RMP Calculation	Site-Specific	
	Advanced Rooftop Unit Control: > 10 tons and <= 15 tons - ID	Qualifying advanced rooftop unit control installed on existing rooftop unit w/ >10 and <=15 nominal tons	1/20/2018	RMP Calculation	Site-Specific	
	Advanced Rooftop Unit Control: > 15 tons and <= 20 tons - ID	Qualifying advanced rooftop unit control installed on existing rooftop unit w/ >15 and <=20 nominal tons	1/20/2018	RMP Calculation	Site-Specific	
	Advanced Rooftop Unit Control: > 20 tons - ID	Qualifying advanced rooftop unit control installed on existing rooftop unit >20 nominal tons	1/20/2018	RMP Calculation	Site-Specific	
	Occupancy Based PTHP/PTAC control - ID	Occupancy based PTHP/PTAC control, all sizes with no prior occupancy based control, retrofit only	5/14/2016	RMP Deemed	446	Measure
	Smart Thermostat - ID	Residential used in a business, see Home Energy Savings program requirements.	1/20/2018	RMP Calculation	Site-Specific	
	Chillers - ID	High Efficiency Chiller	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	Evaporative Cooling - ID	Indirect or Direct Evaporative Cooling	5/14/2016	RMP Deemed	0.39	Cfm
	Evaporative Pre-Cooler - Retrofit - ID	coil included as part of building cooling system. For single air-cooled packaged rooftop or matched split system condensers only.	5/14/2016	RMP Deemed	202	Ton
	Indirect-Direct Evaporative Cooling (IDEC) - ID	Indirect-direct Evaporative cooling	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	PTAC: <= 8,000 Btu/hr: Single package - ID	High efficiency package terminal air conditioners <= 8,000 Btu/hr, Single package	5/14/2016	RMP Deemed	21	Ton
	PTAC: > 13,500 Btu/hr: Single package - ID	High efficiency package terminal air conditioners > 13,500 Btu/hr, Single package	5/14/2016	RMP Deemed	27	Ton
	PTAC: > 8,000 Btu/hr and < 10,500 Btu/hr: Single package - ID	High efficiency package terminal air conditioners > 8,000 Btu/hr and < 10,500 Btu/h, Single package	5/14/2016	RMP Deemed	45	Ton
	PTAC: >= 10,500 Btu/hr and <= 13,500 Btu/hr: Single package - ID	High efficiency package terminal air conditioners >= 10,500 Btu/hr and <= 13,500 Btu/hr, Single package	5/14/2016	RMP Deemed	28	Ton
	Unitary CAC (Air): < 65, 000 Btu/hr (single phase): Single Package - CEE Advanced Tier - ID	CEE Tier 2, High Efficiency Air Conditioner Air Cooled < 65,000 Btu/hr, single package	1/20/2018	RMP Calculation	Savings vary by install configuration	
	Unitary CAC (Air): < 65, 000 Btu/hr (single phase): Single Package - CEE Tier 2 - ID	CEE Tier 2, High Efficiency Air Conditioner Air Cooled < 65,000 Btu/hr, single package	1/20/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	Unitary CAC (Air): < 65, 000 Btu/hr (single phase): Split System - CEE Advanced Tier - ID	CEE Tier 2, High Efficiency Air Conditioner Air Cooled < 65,000 Btu/hr, split system	1/20/2018	RMP Calculation	Savings vary by install configuration	

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Unitary CAC (Air): < 65, 000 Btu/hr (single phase): Split System - CEE Tier 2 - ID	CEE Tier 2, High Efficiency Air Conditioner Air Cooled < 65,000 Btu/hr, split system	1/20/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	Unitary CAC (Air): All equipment sizes (three phase): Single Package - CEE Advanced Tier - ID	CEE Tier 1, High Efficiency Air Conditioner Air Cooled, All equipment sizes, single package	1/20/2018	RMP Calculation	Savings vary by install configuration	
	Unitary CAC (Air): All equipment sizes (three phase): Single Package - CEE Tier 2 - ID	CEE Tier 2, High Efficiency Air Conditioner Air Cooled, All equipment sizes, single package	1/20/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	Unitary CAC (Air): All equipment sizes (three phase): Split System - CEE Advanced Tier - ID	CEE Tier 2, High Efficiency Air Conditioner Air Cooled, All equipment sizes, split system	1/20/2018	RMP Calculation	Savings vary by install configuration	
	Unitary CAC (Air): All equipment sizes (three phase): Split System - CEE Tier 2 - ID	CEE Tier 2, High Efficiency Air Conditioner Air Cooled, All equipment sizes, split system	1/20/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	Unitary CAC (Evaporative) All equipment sizes: Single Package - CEE Tier 1 - ID	High Efficiency Air Conditioner Water and Evaporatively Cooled, Single Package	1/20/2018	RMP Calculation	Savings vary by install configuration	
	Unitary CAC (Evaporative): All equipment sizes: Split System - CEE Tier 1 - ID	High Efficiency Air Conditioner Water and Evaporatively Cooled, Split System	1/20/2018	RMP Calculation	Savings vary by install configuration	
	Unitary CAC (Water): All equipment sizes: Single Package - CEE Tier 1 - ID	High Efficiency Air Conditioner Water and Evaporatively Cooled, Single Package	1/20/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	Unitary CAC (Water): All equipment sizes: Split System - CEE Tier 1 - ID	High Efficiency Air Conditioner Water and Evaporatively Cooled, Split System	1/20/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	Chiller (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Chiller (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	CO2 Air Controls (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	CO2 Air Controls (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Cooling Tower - VFD Fan (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Cooling Tower - VFD Fan (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	DDC (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	DDC (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Economizer (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Economizer (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Evaporative Cooler (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Evaporative Cooler (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Fan Controls (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Fan Controls (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Fan-Powered VAV (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Fan-Powered VAV (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Garage CO Fan Conts (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Garage CO Fan Conts (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Groundwater-Source Heat Pumps (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Groundwater-Source Heat Pumps (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Heat Pump (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Heat Pump (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Heat Recovery (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Heat Recovery (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	High-Effic. Air Cond. (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	High-Effic. Air Cond. (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Other HVAC (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Other HVAC (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Package HVAC (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Package HVAC (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Premium RTU (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Premium RTU (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	VAV (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	VAV (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	VFD Fan (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	VFD Fan (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	VFD Pump (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	VFD Pump (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Water-Loop Heat Pump (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Water-Loop Heat Pump (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	HP - Air (Heating & Cooling Mode): < 65, 000 Btu/hr (single phase): Single	CEE Tier 2, High Efficiency Single Package heat pump air cooled < 65, 000	1/20/2018	RMP Calculation	Savings vary by	Site-specific
	HP - Air (Heating & Cooling Mode): < 65, 000 Btu/hr (single phase): Single	CEE Tier 2, High Efficiency Single Package heat pump air cooled < 65, 000	1/20/2018	RMP Calculation	Savings vary by	Site-specific
	HP - Air (Heating & Cooling Mode): < 65, 000 Btu/hr (single phase): Split	CEE Tier 2, High Efficiency Split System heat pump air cooled < 65, 000	1/20/2018	RMP Calculation	Savings vary by	Site-specific
	HP - Air (Heating & Cooling Mode): < 65, 000 Btu/hr (single phase): Split	CEE Tier 2, High Efficiency Split System heat pump air cooled < 65, 000	1/20/2018	RMP Calculation	Savings vary by	Site-specific
	HP - Air (Heating & Cooling Mode): < 65, 000 Btu/hr (three phase): Single	CEE Tier 1, High Efficiency Single Package heat pump air cooled < 65, 000	1/20/2018	RMP Calculation	Savings vary by	Site-specific
	HP - Air (Heating & Cooling Mode): < 65, 000 Btu/hr (three phase): Single	CEE Tier 2, High Efficiency Single Package heat pump air cooled < 65, 000	1/20/2018	RMP Calculation	Savings vary by	Site-specific
	HP - Air (Heating & Cooling Mode): < 65, 000 Btu/hr (three phase): Split	CEE Tier 1, High Efficiency Split System heat pump air cooled < 65, 000	1/20/2018	RMP Calculation	Savings vary by	Site-specific
	HP - Air (Heating & Cooling Mode): < 65, 000 Btu/hr (three phase): Split	CEE Tier 2, High Efficiency Split System heat pump air cooled < 65, 000	1/20/2018	RMP Calculation	Savings vary by	Site-specific
	HP - Air (Heating & Cooling Mode): >= 65,000 Btu/hr (three phase): Single Package - 17°F db/15°F wb outdoor air - CEE Tier 1 - ID	CEE Tier 1, High Efficiency Single Package heat pump air cooled >= 65,000 Btu/hr and : 17°F db/15°F wb outdoor air three phase	1/20/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	HP - Air (Heating & Cooling Mode): >= 65,000 Btu/hr (three phase):	CEE Tier 2, High Efficiency Single Package heat pump air cooled >= 65,000	1/20/2018	RMP Calculation	Savings vary by	
	HP - Air (Heating & Cooling Mode): >= 65,000 Btu/hr (three phase):	CEE Tier 1, High Efficiency Single Package heat pump air cooled >= 65,000	1/20/2018	RMP Calculation	Savings vary by	Site-specific
	HP - Air (Heating & Cooling Mode): >= 65,000 Btu/hr (three phase): Single Package - 47°F db/43°F wb outdoor air - CEE Tier 2 - ID	CEE Tier 2, High Efficiency Single Package heat pump air cooled >= 65,000 Btu/hr and : 47F db/15F wb outdoor air three phase	1/20/2018	RMP Calculation	Savings vary by install configuration	
	HP - Air (Heating & Cooling Mode): >= 65,000 Btu/hr (three phase): Split System - 17°F db/15°F wb outdoor air - CEE Tier 1 - ID	CEE Tier 1, High Efficiency Split System heat pump air cooled >= 65,000 Btu/hr and : 17°F db/15°F wb outdoor air three phase	1/20/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	HP - Air (Heating & Cooling Mode): >= 65,000 Btu/hr (three phase): Split System - 17°F db/15°F wb outdoor air - CEE Tier 2 - ID	CEE Tier 2, High Efficiency Split System heat pump air cooled >= 65,000 Btu/hr and : 17°F db/15°F wb outdoor air three phase	1/20/2018	RMP Calculation	Savings vary by install configuration	
	HP - Air (Heating & Cooling Mode): >= 65,000 Btu/hr (three phase): Split System - 47°F db/43°F wb outdoor air - CEE Tier 1 - ID	CEE Tier 1, High Efficiency Split System heat pump air cooled >= 65,000 Btu/hr and : 47F db/15F wb outdoor air three phase	1/20/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	HP - Air (Heating & Cooling Mode): >= 65,000 Btu/hr (three phase): Split System - 47°F db/43°F wb outdoor air - CEE Tier 2 - ID	CEE Tier 2, High Efficiency Split System heat pump air cooled >= 65,000 Btu/hr and : 47F db/15F wb outdoor air three phase	1/20/2018	RMP Calculation	Savings vary by install configuration	

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	HP - Ground (Heating & Cooling Mode): Closed Loop - ID	Ground Source Heat Pump Loop (closed loop)	5/14/2016	RMP Deemed	519	Ton
	HP - Ground (Heating & Cooling Mode): Heat Pump, Ground Source - ID	High Efficiency heat pumps (Ground source or groundwater)	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	HP - Ground (Heating & Cooling Mode): Open Loop - ID	Groundwater Source Heat Pump Loop (open loop)	5/14/2016	RMP Deemed	637	Ton
	HP - Water (Heating and Cooling Mode): < 135,000 Btu/hr: CEE Tier 1 - ID	CEE Tier 1 High Efficiency water source heat pumps	1/20/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	HP - Water (Heating Mode): < 135,000 Btu/hr: CEE Tier 1 - ID	CEE Tier 1 High Efficiency water source heat pumps	1/20/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	PTHP (Heating & Cooling Mode): <= 8,000 Btu/hr: Single package - ID	High Efficiency package terminal heat pumps <= 8,000 Btu/hr,Single package	5/14/2016	RMP Deemed	298	Ton
	PTHP (Heating & Cooling Mode): > 13,500 Btu/hr: Single package - ID	High Efficiency package terminal heat pumps > 13,500 Btu/hr,Single package	5/14/2016	RMP Deemed	325	Ton
	PTHP (Heating & Cooling Mode): > 8,000 Btu/hr and < 10,500 Btu/hr: Single package - ID	High Efficiency package terminal heat pumps > 8,000 Btu/hr and < 10,500 Btu/hr,Single package	5/14/2016	RMP Deemed	293	Ton
	PTHP (Heating & Cooling Mode): >= 10,500 Btu/hr and <= 13,500 Btu/hr: Single package - ID	High Efficiency package terminal heat pumps >= 10,500 Btu/hr and <= 13,500 Btu/hr,Single package	5/14/2016	RMP Deemed	159	Ton
	VRF Air-Cooled Heat Pump (Heating & Cooling Mode): CEE Tier 1 - ID	CEE Tier 1, High Efficiency variable refrigerant flow heat pump air cooled	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	VRF Water-Cooled Heat Pump (Heating & Cooling Mode): < 135,000 Btu/hr - CEE Tier 1 - ID	CEE Tier 1, High Efficiency variable refrigerant flow heat pump water cooled	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	Variable-Frequency Drives (HVAC fans and pumps): <= 100 horsepower: HVAC fans - ID	Variable Frequency Drive controlling an HVAC applied fan	5/14/2016	RMP Deemed	1184	Hp
	Variable-Frequency Drives (HVAC fans and pumps): <= 100 horsepower: HVAC pumps - ID	Variable Frequency Drive controlling an HVAC applied pump	5/14/2016	RMP Deemed	919	Hp
Irrigation	Irrigation Pump VFD - ID	Add VFD to irrigation pump	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Pump Replacement / Rebuild (Retrofit) - ID	Replace or rebuild irrigation pump	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Pump Upgrades (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Pump Upgrades (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Sprinkler Package Replacement (Retrofit) - ID	Replace sprinkler package on pivot or linear	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	System Redesign (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	System Redesign (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	System Redesign (Retrofit) - ID	Redesign irrigation system, including distribution equipment	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Upgrade Wheel Line / Hand Line Equipment (Retrofit) - ID	Replace wheel lines, handlines, and/or components thereof	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Irrigation pump VFD- ID	Add VFD to existing or new irrigation pump	1/1/2018	PP Calculation	install configuration -	Site-specific
	Center pivot base boot gasket - ID	Replace leaking center pivot base boot gasket	1/1/2018	PP Deemed	1423.76	Measure
	Center pivot tower gasket - ID	Replace leaking tower gasket with new tower gasket	1/1/2018	PP Deemed	35.59	Measure
	Drain for wheel line, hand line, portable main line, pivot, or linear - ID	New drain replacing leaking drain	1/1/2018	PP Deemed	169.25	Measure
	Drop tube (3 ft minimum length) - ID	New drop tube OR add drop tube as part of conversion to low pressure system.	1/1/2018	PP Deemed	7.48	Measure
	Flow control nozzle - ID	New flow control nozzle for impact sprinkler replacing existing nozzle or worn flow control nozzle of same design flow or less	1/1/2018	PP Deemed	40.62	Measure
	Gasket for wheel line, hand line, or portable main line - ID	Replace leaking gasket, including mainline valve or section gasket, seal, or riser cap	1/1/2018	PP Deemed	163.3	Measure
	Gooseneck as part of conversion to low pressure system - ID	New gooseneck as part of conversion to low pressure system	1/1/2018	PP Deemed	7.48	Measure
	Impact sprinkler - ID	New or rebuilt impact sprinkler replacing worn or leaking impact sprinkler	1/1/2018	PP Deemed	27.29	Measure
	Low pressure sprinkler replacing impact sprinkler - ID	Replace impact sprinkler with low pressure sprinkler	1/1/2018	PP Deemed	49.49	Measure
	Low pressure sprinkler replacing worn low pressure sprinkler - ID	Replace low pressure sprinkler with low pressure sprinkler	1/1/2018	PP Deemed	49.94	Measure
	Nozzle - ID	New nozzle replacing worn nozzle of same design flow or less on existing	1/1/2018	PP Deemed	40.62	Measure
	Pipe repair - ID	Cut and press or weld repair of leaking wheel line, hand line, or portable	1/1/2018	PP Deemed	81.25	Measure
	Pressure regulator - ID	Replace sprinkler pressure regulator or, in conversion from higher pressure	1/1/2018	PP Deemed	47.98	Measure
	Rotating sprinkler - ID	New rotating sprinkler replacing worn or leaking impact or rotating sprinkler	1/1/2018	PP Deemed	27.29	Measure
	Thunderbird wheel line hub - ID	New Thunderbird wheel line hub replacing leaking hub	1/1/2018	PP Deemed	70.31	Measure
	Center Pivot Replacing Set Move System (Retrofit) - ID	New center pivot replacing previous (non-pivot) system	1/1/2017	RMP Calculation	install configuration	Site-specific
	Sprinkler Pressure Regulator Package (Custom) - ID	New pivot or linear pressure regulators replacing worn pressure regulators.	11/13/2014	RMP Calculation	install configuration	Site-specific
	Wheel line feed hose - ID	New or rebuilt wheel line feed hose replacing leaking wheel line feed hose	1/1/2018	PP Deemed	163.53	Measure
	Wheel line leveler - ID	New or rebuild wheel line leveler replacing leaking or malfunctioning leveler	1/1/2018	PP Deemed	40.49	Measure
Lighting	Exterior Dimming Control - New Construction/Major Renovation - ID	to LED fixture or fixture-mounted and reduce fixture power by 75% or more for a min of 6 hrs per night or when the space has been unoccupied for 15	1/20/2018	RMP Deemed	install configuration	Site-specific
	General Illumination Lighting Control - Retrofit - Custom - ID	Custom General Illumination Lighting Control, control not listed in tariff incentive tables	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	Exterior General Illuminance Lighting - New Construction/Major Renovation - Custom - ID	Custom General Illumination Lighting, exterior fixture or lamp not listed in tariff incentive tables	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	LED Canopy/Soffit Fixture - New Construction/Major Renovation - ID	New construction/major renovation exterior LED Canopy/Soffit fixture	5/14/2016	RMP Deemed	460	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	LED Flood Light Fixture - < 100 W - New Construction/Major Renovation - ID	New construction/major renovation exterior LED Flood Light fixture, < 100 W	5/14/2016	RMP Deemed	679	Measure
	LED Flood Light Fixture - >= 100 W - New Construction/Major Renovation - ID	New construction/major renovation exterior LED Flood Light fixture, >= 100 W	5/14/2016	RMP Deemed	1183	Measure
	LED Outdoor Pole/Roadway Decorative Fixture - < 75 W - New Construction/Major Renovation - ID	New construction/major renovation exterior LED Outdoor Pole/Roadway decorative fixture	5/14/2016	RMP Deemed	460	Measure
	LED Outdoor Pole/Roadway Fixture - <= 200 W - New Construction/Major Renovation - ID	New construction/major renovation exterior LED Outdoor Area and Roadway fixture, <= 200 W	5/14/2016	RMP Deemed	1095	Measure
	LED Outdoor Pole/Roadway Fixture - > 200 W - New Construction/Major Renovation - ID	New construction/major renovation exterior LED Outdoor Area and Roadway fixture, > 200 W	5/14/2016	RMP Deemed	3285	Measure
	LED Wall Pack Fixture - < 50 W - New Construction/Major Renovation - ID	New construction/major renovation exterior LED Wall Pack fixture, < 50 W	5/14/2016	RMP Deemed	460	Measure
	LED Wall Pack Fixture - >= 50 W - New Construction/Major Renovation - ID	New construction/major renovation exterior LED Wall Pack fixture, >= 50 W	5/14/2016	RMP Deemed	657	Measure
	Custom - Retrofit - ID	Custom lighting measure. Must save energy over baseline. Lighting product must be listed on qualified equipment lists.	1/20/2018	RMP Calculation	Site-Specific	
	Ext. Controls-only Upgrade to Advanced Dimming Controls - Retrofit - ID	Exterior lighting system upgrades, controls only. Controls must be advanced dimming controls.	9/23/2019	RMP Calculation	Savings vary by install configuration	Site-Specific
	Ext. Controls-only Upgrade to Advanced Dimming Controls - Retrofit - ID	Exterior lighting system upgrades, controls only. Controls must be advanced dimming controls.	5/24/2018	RMP Calculation	Site-Specific	
	Ext. Fixture Retrofit Kits w/ Advanced Dimming Controls - Retrofit - ID	Exterior lighting upgrades, retrofit kits with advanced dimming lighting controls. LED must be listed on qualified equipment lists.	9/23/2019	RMP Calculation	install configuration	Site-Specific
	Ext. Fixture Retrofit Kits w/ Advanced Dimming Controls - Retrofit - ID	Exterior lighting upgrades, retrofit kits with advanced dimming lighting	5/24/2018	RMP Calculation	Site-Specific	
	Ext. Fixture Retrofit Kits w/ No Controls - Retrofit - ID	Exterior lighting system upgrades, retrofit kits only. LED must be listed on	5/24/2018	RMP Calculation	Site-Specific	
	Ext. Fixture Retrofit Kits w/ No Controls - Retrofit - ID	Exterior lighting system upgrades, retrofit kits only. LED must be listed on	9/23/2019	RMP Calculation	Savings vary by	Site-Specific
	Ext. Full Fixture Replacement w/ Advanced Dimming Controls - Retrofit -	Exterior lighting upgrades, full fixture replacement with advanced dimming	5/24/2018	RMP Calculation	Site-Specific	
	Ext. Full Fixture Replacement w/ Advanced Dimming Controls - Retrofit -	Exterior lighting upgrades, full fixture replacement with advanced dimming	9/23/2019	RMP Calculation	Savings vary by	Site-Specific
	Ext. Full Fixture Replacement w/ No Controls - Retrofit - ID	Exterior lighting system upgrades, fixture replacement only. LED must be listed on qualified equipment lists.	5/24/2018	RMP Calculation	Site-Specific	
	Ext. Full Fixture Replacement w/ No Controls - Retrofit - ID	Exterior lighting system upgrades, fixture replacement only. LED must be listed on qualified equipment lists.	9/23/2019	RMP Calculation	Savings vary by install configuration	Site-Specific
	Ext. Street Lighting w/ Advanced Dimming Controls - Retrofit - ID	Exterior lighting system upgrades, w advanced only. LED must be listed on qualified equipment lists.	9/23/2019	RMP Calculation	Savings vary by install configuration	Site-Specific
	Ext. Street Lighting w/ Advanced Dimming Controls - Retrofit - ID	Exterior lighting system upgrades, w advanced only. LED must be listed on qualified equipment lists.	5/24/2018	RMP Calculation	Site-Specific	
	Ext. Street Lighting w/ No Controls - Retrofit - ID	Exterior lighting system upgrades, w no only. LED must be listed on qualified equipment lists.	9/23/2019	RMP Calculation	Savings vary by install configuration	Site-Specific
	Ext. Street Lighting w/ No Controls - Retrofit - ID	Exterior lighting system upgrades, w no only. LED must be listed on qualified equipment lists.	5/24/2018	RMP Calculation	Site-Specific	
	Exterior Lighting - Retrofit - ID	Lighting Retrofits Exterior - ID	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Int. Controls-only Upgrade to Advanced Controls - Retrofit - ID	Interior lighting system upgrades, controls only. Controls must be advanced	5/24/2018	RMP Calculation	Site-Specific	
	Int. Controls-only Upgrade to Basic Controls - Retrofit - ID	Interior lighting system upgrades, controls only. Controls must be advanced	5/24/2018	RMP Calculation	Site-Specific	
	Int. Fixture Retrofit Kits w/ Basic or Advanced Controls - Retrofit - ID	Interior lighting system upgrades, retrofit kits only. LED must be listed on qualified equipment lists.	5/24/2018	RMP Calculation	Site-Specific	

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Int. Fixture Retrofit Kits w/ No Controls - Retrofit - ID	Interior lighting system upgrades, retrofit kits only. LED must be listed on qualified equipment lists.	5/24/2018	RMP Calculation	Site-Specific	
	Int. Full Fixture Replacement w/ Advanced Controls - Retrofit - ID	controls. LED and control system must be listed on qualified equipment lists.	5/24/2018	RMP Calculation	Site-Specific	
	Int. Full Fixture Replacement w/ Basic Controls - Retrofit - ID	Interior lighting system upgrades, fixture replacement only. LED must be listed on qualified equipment lists.	5/24/2018	RMP Calculation	Site-Specific	
	Int. Full Fixture Replacement w/ No Controls - Retrofit - ID	controls. LED and control system must be listed on qualified equipment lists.	5/24/2018	RMP Calculation	Site-Specific	
	Interior Lighting - Retrofit - ID	Lighting Retrofits Interior- ID	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	LED - Exterior Fixture - Wall Pack - Small Business Direct Install - ID	LED Fixture. Must be on the Qulified List	10/1/2016		Savings vary by Deemed Hours of Operation	Site-specific
	LED - Exterior Fixture - Area Flood - Small Business Direct Install - ID	LED Fixture. Must be on the Qulified List	10/1/2016		Savings vary by Deemed Hours of Operation	Site-specific
	LED - Exterior Fixture - Entryway Wall Pack - Small Business Direct Install - ID	LED Fixture. Must be on the Qulified List	10/1/2016		Savings vary by Deemed Hours of Operation	Site-specific
	LED A-19 Lamp < 8 W, Medium Base - MID - ID	LED must be listed on qualified equipment list	1/20/2018	RMP Deemed	35.3	
	LED A-19 Lamp < 8 W, Medium Base - Retrofit - ID	LED must be listed on qualified equipment list	1/20/2018	RMP Calculation	Site-Specific	
	LED A-19 Lamp >= 8 W, Medium Base - MID - ID	A-19 Lamp >= 8 W. LED must be listed on qualified equipment lists.	1/20/2018	RMP Deemed	46.1	
	LED A-19 Lamp >= 8 W, Medium Base - Retrofit - ID	LED lighting system upgrades, a 19 Lamp. A must be advanced dimming controls.	1/20/2018	RMP Calculation	Site-Specific	
	LED A-21 Lamp >= 12 W, Medium Base - MID - ID	A-21 Lamp >= 12 W. LED must be listed on qualified equipment lists.	1/20/2018	RMP Deemed	59.3	
	LED A-21 Lamp >= 12 W, Medium Base - Retrofit - ID	LED lighting system upgrades, a 21 Lamp. A must be advanced dimming controls.	1/20/2018	RMP Calculation	Site-Specific	
	LED BR Reflector Lamp - MID - ID	LED must be listed on qualified equipment list	1/20/2018	RMP Deemed	56.8	
	LED BR Reflector Lamp - MID - ID	LED must be listed on qualified equipment list	9/23/2019	RMP Deemed	56.8	Measure
	LED BR Reflector Lamp - Retrofit - ID	LED must be listed on qualified equipment list	9/23/2019	RMP Calculation	Savings vary by	Site-Specific
	LED BR Reflector Lamp - Retrofit - ID	LED must be listed on qualified equipment list	1/20/2018	RMP Calculation	Site-Specific	
	LED Decorative Lamp - MID - ID	LED must be listed on qualified equipment list	1/20/2018	RMP Deemed	41	
	LED Decorative Lamp - Retrofit - ID	LED must be listed on qualified equipment list	1/20/2018	RMP Calculation	Site-Specific	
	LED Fixture - Retrofit - High and Low Bay - Small Business Direct Install -	High and Low Bay LED Fixture, High and Low Bay	10/1/2016		Savings vary by	Site-specific
	LED Fixture - Retrofit - Troffer Kit - 4 Lamp 48" Prismatic - Small Business Direct Install - ID	LED Fixture. Must be on the Qulified List	10/1/2016		Savings vary by Deemed Hours of Operation	Site-specific
	LED Fixture - Retrofit for HO and VHO Fixture Kit - Small Business Direct Install - ID	Energy E fficient Light Emitting Diode Lamps-General Purpose	10/1/2016		Savings vary by Deemed Hours of Operation	Site-specific
	LED HID Replacement Lamp < 40 W - MID - ID	Corn cob relamp < 40 Watts; LED must be listed on qualified equipment list	9/23/2019	RMP Deemed	300.6	Measure
	LED HID Replacement Lamp < 40 W - MID - ID	Corn cob relamp < 40 Watts; LED must be listed on qualified equipment list	1/20/2018	RMP Deemed	300.6	
	LED HID Replacement Lamp < 40 W - Retrofit - ID	Corn cob relamp < 40 Watts; LED must be listed on qualified equipment list	1/20/2018	RMP Calculation	Site-Specific	

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	LED HID Replacement Lamp < 40 W - Retrofit - ID	Corn cob relamp < 40 Watts; LED must be listed on qualified equipment list	9/23/2019	RMP Calculation	Savings vary by install configuration	Site-Specific
	LED HID Replacement Lamp >= 150 W - MID - ID	HID Replacement Lamp >= 150 Lamp. LED must be listed on qualified equipment lists.	1/20/2018	RMP Deemed	2213.5	
	LED HID Replacement Lamp >= 150 W - MID - ID	HID Replacement Lamp >= 150 Lamp. LED must be listed on qualified equipment lists.	9/23/2019	RMP Deemed	2213.5	Measure
	LED HID Replacement Lamp >= 150 W - Retrofit - ID	LED lighting system upgrades, hid replacement lamp >= 150w Retrofit. HID Replacement Lamp >= 150W must be advanced dimming controls.	9/23/2019	RMP Calculation	Savings vary by install configuration	Site-Specific
	LED HID Replacement Lamp >= 150 W - Retrofit - ID	LED lighting system upgrades, hid replacement lamp >= 150w Retrofit. HID Replacement Lamp >= 150W must be advanced dimming controls.	1/20/2018	RMP Calculation	Site-Specific	
	LED HID Replacement Lamp >= 40 and < 80 W - MID - ID	Corn cob relamp >= 40 W and <80 W; LED must be listed on qualified equipment list	9/23/2019	RMP Deemed	518	Measure
	LED HID Replacement Lamp >= 40 and < 80 W - MID - ID	Corn cob relamp >= 40 W and <80 W; LED must be listed on qualified equipment list	1/20/2018	RMP Deemed	518	
	LED HID Replacement Lamp >= 40 and < 80 W - Retrofit - ID	HID Replacement Lamp >= 80W and < 150 Lamp. LED must be listed on qualified equipment lists.	1/20/2018	RMP Calculation	Site-Specific	
	LED HID Replacement Lamp >= 40 and < 80 W - Retrofit - ID	HID Replacement Lamp >= 80W and < 150 Lamp. LED must be listed on qualified equipment lists.	9/23/2019	RMP Calculation	Savings vary by install configuration	Site-Specific
	LED HID Replacement Lamp >= 80 and < 150 W - MID - ID	LED lighting system upgrades, hid replacement lamp >= 80w and < 150w Replacement. HID Replacement Lamp >= 80W and < 150W must be advanced dimming controls.	9/23/2019	RMP Deemed	1247.8	Measure
	LED HID Replacement Lamp >= 80 and < 150 W - MID - ID	LED lighting system upgrades, hid replacement lamp >= 80w and < 150w Replacement. HID Replacement Lamp >= 80W and < 150W must be advanced dimming controls.	1/20/2018	RMP Deemed	1247.8	
	LED HID Replacement Lamp >= 80 W and < 150 W - Retrofit - ID	Corn cob relamp >= 40 W and <80 W; LED must be listed on qualified equipment list	1/20/2018	RMP Deemed	Site-Specific	
	LED HID Replacement Lamp >= 80 W and < 150 W - Retrofit - ID	Corn cob relamp >= 40 W and <80 W; LED must be listed on qualified equipment list	9/23/2019	RMP Calculation	Savings vary by install configuration	Site-Specific
	LED MR16 Reflector Lamp - MID - ID	LED must be listed on qualified equipment list	1/20/2018	RMP Deemed	62.7	
	LED MR16 Reflector Lamp - Retrofit - ID	LED must be listed on qualified equipment list	1/20/2018	RMP Calculation	Site-Specific	
	LED PAR Reflector Lamp - MID - ID	LED must be listed on qualified equipment list	9/23/2019	RMP Deemed	92.9	Measure
	LED PAR Reflector Lamp - MID - ID	LED must be listed on qualified equipment list	1/20/2018	RMP Deemed	92.9	
	LED PAR Reflector Lamp - Retrofit - ID	LED must be listed on qualified equipment list	1/20/2018	RMP Calculation	Site-Specific	

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	LED PAR Reflector Lamp - Retrofit - ID	LED must be listed on qualified equipment list	9/23/2019	RMP Calculation	Savings vary by install configuration	Site-Specific
	LED PLC Pin-based Lamp < 10 W - MID - ID	PLC Pin-based L10 based Lamp. LED must be listed on qualified equipment lists.	1/20/2018	RMP Deemed	50.8	
	LED PLC Pin-based Lamp < 10 W - Retrofit - ID	LED lighting system upgrades, plc pin Pin. PLC Pin must be advanced dimming controls.	1/20/2018	RMP Calculation	Site-Specific	
	LED PLC Pin-based Lamp >= 10 W - MID - ID	PLC Pin-based Lamp >= 10 based. LED must be listed on qualified equipment lists.	1/20/2018	RMP Deemed	48	
	LED PLC Pin-based Lamp >= 10 W - Retrofit - ID	LED lighting system upgrades, plc pin Pin. PLC Pin must be advanced dimming controls.	1/20/2018	RMP Calculation	Site-Specific	
	LED PLL Pin-based Lamp - MID - ID	PLL Pin-based LED based Lamp. LED must be listed on qualified equipment lists.	1/20/2018	RMP Deemed	56.4	
	LED PLL Pin-based Lamp - Retrofit - ID	LED lighting system upgrades, pll pin based Lamp. PLL Pin must be advanced dimming controls.	1/20/2018	RMP Calculation	Site-Specific	
	LED Recessed Downlight Kit - MID - ID	LED must be listed on qualified equipment list	1/20/2018	RMP Deemed	47.2	
	LED Recessed Downlight Kit - Retrofit - ID	LED must be listed on qualified equipment list	1/20/2018	RMP Calculation	Site-Specific	
	LED Tubular - Retrofit - Small Business Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	10/1/2016		Savings vary by Deemed Hours of Operation	Site-specific
	LED Wall Pack Fixture < 50 W - MID - ID	LED Wall Pack 15W-50W; LED must be listed on qualified equipment list	1/20/2018	RMP Deemed	577.1	
	LED Wall Pack Fixture < 50 W - MID - ID	LED Wall Pack 15W-50W; LED must be listed on qualified equipment list	9/23/2019	RMP Deemed	577.1	Measure
	LED Wall Pack Fixture < 50 W - Retrofit - ID	LED Wall Pack 15W-50W; LED must be listed on qualified equipment list	9/23/2019	RMP Calculation	Savings vary by install configuration	Site-Specific
	LED Wall Pack Fixture < 50 W - Retrofit - ID	LED Wall Pack 15W-50W; LED must be listed on qualified equipment list	1/20/2018	RMP Calculation	Site-Specific	
	LED Wall Pack Fixture < 50 W with Occupancy Sensor - MID - ID	LED wall pack fixture. LED must be listed on qualified equipment lists.	1/20/2018	RMP Deemed	692.5	
	LED Wall Pack Fixture < 50 W with Occupancy Sensor - Retrofit - ID	LED wall pack fixture. LED must be listed on qualified equipment lists.	1/20/2018	RMP Calculation	Site-Specific	
	LED Wall Pack Fixture >= 50 W - MID - ID	LED Wall Pack 15W-50W; LED must be listed on qualified equipment list	9/23/2019	RMP Deemed	577.1	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	LED Wall Pack Fixture >= 50 W - MID - ID	LED Wall Pack 15W-50W; LED must be listed on qualified equipment list	1/20/2018	RMP Deemed	577.1	
	LED Wall Pack Fixture >= 50 W - Retrofit - ID	LED Wall Pack 15W-50W; LED must be listed on qualified equipment list	9/23/2019	RMP Calculation	Savings vary by install configuration	Site-Specific
	LED Wall Pack Fixture >= 50 W - Retrofit - ID	LED Wall Pack 15W-50W; LED must be listed on qualified equipment list	1/20/2018	RMP Calculation	Site-Specific	
	LED Wall Pack Fixture >= 50 W with Occupancy Sensor - MID - ID	LED wall pack fixture. LED must be listed on qualified equipment lists.	1/20/2018	RMP Deemed	692.5	
	LED Wall Pack Fixture >= 50 W with Occupancy Sensor - Retrofit - ID	LED wall pack fixture. LED must be listed on qualified equipment lists.	1/20/2018	RMP Calculation	Site-Specific	
	Non-eligible fixture - New Construction/ Major Renovation - ID	Any installed fixture not eligible for incentives and does not contribute to project savings.	1/20/2018	RMP Calculation	Savings vary by install configuration	Site-specific
	Non-eligible fixture - Retrofit - ID	Any installed fixture not eligible for incentives, but that contributes to reported project savings.	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	Street/Pole - ID		5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	T5 HO Fluorescent Lamp - MID - Reduced Wattage - ID	< = 51W T5HO Replacement Lamp	1/20/2018	RMP Deemed	21.2	
	T5 HO Fluorescent Lamp - Retrofit - Reduced Wattage - ID	< = 51W T5HO Replacement Lamp	1/20/2018	RMP Calculation	Site-Specific	
	T5 TLED Lamp - Type A, A/B Dual Mode - MID - ID	TLED Lamp T5 Type A. LED must be listed on qualified equipment lists.	5/24/2018	RMP Calculation	97.8	
	T5 TLED Lamp - Type A, A/B Dual Mode - Retrofit - ID	TLED Lamp T5 Type A. LED must be listed on qualified equipment lists.	5/24/2018	RMP Calculation	Site-Specific	
	T8 Fluorescent Lamp - MID - Reduced Wattage - ID	< = 28W CEE Replacement Lamp	1/20/2018	RMP Deemed	11.9	
	T8 Fluorescent Lamp - Retrofit - Reduced Wattage - ID	< = 28W CEE Replacement Lamp	1/20/2018	RMP Calculation	Site-Specific	
	T8 TLED Lamp - Type A, A/B Dual Mode - MID - ID	TLED Lamp T8 Type C. LED must be listed on qualified equipment lists.	5/24/2018	RMP Deemed	48.9	
	T8 TLED Lamp - Type A, A/B Dual Mode - Retrofit - ID	TLED Lamp T8 Type C. LED must be listed on qualified equipment lists.	5/24/2018	RMP Calculation	Site-Specific	
	T8 TLED Lamp - Type B - MID - ID	12W-22W; LED must be listed on qualified equipment list	5/24/2018	RMP Deemed	65.4	

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	T8 TLED Lamp - Type B - Retrofit - ID	12W-22W; LED must be listed on qualified equipment list	5/24/2018	RMP Calculation	Site-Specific	
	T8 TLED Lamp - Type C - MID - ID	TLED Lamp T8 Type B. LED must be listed on qualified equipment lists.	5/24/2018	RMP Deemed	76.4	
	T8 TLED Lamp - Type C - Retrofit - ID	TLED Lamp T8 Type B. LED must be listed on qualified equipment lists.	5/24/2018	RMP Calculation	Site-Specific	
	LED General Purpose - Small Business Direct Install - ID	Energy efficient Light Emitting Diode Lamps-General Purpose	10/1/2016		Savings vary by Deemed Hours of Operation	Site-specific
	LED Pin Based - Small Business Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Pin based Horizontal Mount	10/1/2016		Savings vary by Deemed Hours of Operation	Site-specific
	Interior Lighting - New Construction/Major Renovation - Custom - ID	Custom Lighting, interior lighting not subject to energy code.	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	Interior Lighting and Lighting Control - NCMR - ID	Offers prescriptive and/or custom incentives for qualifying lighting equipment	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	Package Lighting NCMR - ID	Offers prescriptive and/or custom incentives for qualifying lighting equipment	11/13/2014	RMP Calculation	Savings vary by install configuration	Site-specific
	Package Lighting Retrofit - ID	Offers prescriptive and/or custom incentives for qualifying lighting equipment	11/13/2014	RMP Calculation	Savings vary by install configuration	Site-specific
	Exterior Dimming Control - Retrofit - ID	integral to LED fixture or fix-mounted and reduce fix power by 75% or more for a min of 6 hrs per night or when the space has been unoccupied for 15 min or less.	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	LED Case Lighting Freezer Case (Retrofit Only) - ID	LED replacing fluorescent lamp in refrigerated cases. LED must be listed on qualified equipment list.	1/20/2018	RMP Deemed	75.66	Linear ft.
	LED Case Lighting Refrigerated Case (Retrofit Only) - ID	LED replacing fluorescent lamp in refrigerated cases. LED must be listed on qualified equipment list.	1/20/2018	RMP Deemed	54.93	Linear ft.
	LED Channel Letter Sign - Retrofit - ID	LED replacing existing neon or fluorescent lamps in a channel letter sign	5/14/2016	RMP Deemed	17	Linear ft.
	LED Exit Sign - Retrofit - ID	LED or photoluminecent exit sign replacing incandescent of fluorescent exit sign	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific
	LED Marquee/Cabinet Sign - Retrofit - ID	LED replacing existing fluorescent lighting in a marquee or cabinet sign	5/14/2016	RMP Deemed	21	Linear ft.
	LED Message Center Sign - Retrofit - ID	LED replacing existing incandescent lamps in a message center sign	5/14/2016	RMP Deemed	47	Measure
	Non General Illuminance Lighting - Retrofit - Custom - ID	Custom Non-General Illumination Lighting, fixture or lamp not listed in tariff incentive tables	5/14/2016	RMP Calculation	Savings vary by install configuration	Site-specific

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Refrigerated Case Occupancy Sensor (Retrofit Only) - ID	Installed in existing refrigerated case with LED lighting.	1/20/2018	RMP Deemed	18	Linear ft.
	LED PAR - Small Business Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	10/1/2016		Savings vary by Deemed Hours of Operation	Site-specific
	LED Pin-based - Reflector Lamp - Small Buiness Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	10/1/2016		Savings vary by	Site-specific
	LED Specialty - Candelabra - Small Business Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	10/1/2016		Savings vary by	Site-specific
	LED Specialty - MR 16 - Small Business Direct Install - ID	Energy efficient Light Emitting Diode Lamps-Specialty	10/1/2016		Savings vary by Deemed Hours of Operation	Site-specific
Motors	Electronically Commutated Motor (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Electronically Commutated Motor (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Other Motors (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Other Motors (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Pump Motors (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Pump Motors (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Pump with VFD (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Pump with VFD (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	VFD Motors (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	VFD Motors (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	VSD (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	VSD (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Electronically Commutated Motor: <= 1 horsepower: Refrigeration application - ID	Electronically Commutated Motor (ECM) used in a refrigeration application	5/14/2016	RMP Deemed	9.3	Watt
	Electronically Commutated Motor: <=1 horsepower: HVAC application - ID	Electronically Commutated Motor (ECM) used in an HVAC application	5/14/2016	RMP Deemed	2895	Hp
	Green Motor Rewinds (Agriculture): 100 hp - ID	100 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	1040	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Green Motor Rewinds (Agriculture): 1000 hp - ID	1000 hp Green Motor Rewind for motor used in agriculture, returning	1/20/2018	RTF Deemed	10192	Measure
	Green Motor Rewinds (Agriculture): 125 hp - ID	125 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	1157	Measure
	Green Motor Rewinds (Agriculture): 1250 hp - ID	1250 hp Green Motor Rewind for motor used in agriculture, returning	1/20/2018	RTF Deemed	10590	Measure
	Green Motor Rewinds (Agriculture): 15 hp - ID	15 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	317	Measure
	Green Motor Rewinds (Agriculture): 150 hp - ID	150 hpGreen Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	1376	Measure
	Green Motor Rewinds (Agriculture): 1500 hp - ID	1500 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	12681	Measure
	Green Motor Rewinds (Agriculture): 1750 hp - ID	1750 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	14732	Measure
	Green Motor Rewinds (Agriculture): 20 hp - ID	20 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	425	Measure
	Green Motor Rewinds (Agriculture): 200 hp - ID	200 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	1821	Measure
	Green Motor Rewinds (Agriculture): 2000 hp - ID	2000 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	16766	Measure
	Green Motor Rewinds (Agriculture): 2250 hp - ID	2250 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	18744	Measure
	Green Motor Rewinds (Agriculture): 25 hp - ID	25 hpGreen Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	595	Measure
	Green Motor Rewinds (Agriculture): 250 hp - ID	250 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	2823	Measure
	Green Motor Rewinds (Agriculture): 2500 hp - ID	2500 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	20783	Measure
	Green Motor Rewinds (Agriculture): 30 hp - ID	30 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	640	Measure
	Green Motor Rewinds (Agriculture): 300 hp - ID	300 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	3370	Measure
	Green Motor Rewinds (Agriculture): 3000 hp - ID	3000 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	24784	Measure
	Green Motor Rewinds (Agriculture): 350 hp - ID	350 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	3929	Measure
	Green Motor Rewinds (Agriculture): 3500 hp - ID	3500 hp Green Motor Rewind for motor used in agriculture, returning	1/20/2018	RTF Deemed	28854	Measure
	Green Motor Rewinds (Agriculture): 40 hp - ID	40 hp Green Motor Rewind for motor used in agriculture, returning motor	1/20/2018	RTF Deemed	746	Measure
	Green Motor Rewinds (Agriculture): 400 hp - ID	400 hp Green Motor Rewind for motor used in agriculture, returning motor	1/20/2018	RTF Deemed	4456	Measure
	Green Motor Rewinds (Agriculture): 4000 hp - ID	4000 hp Green Motor Rewind for motor used in agriculture, returning	1/20/2018	RTF Deemed	32976	Measure
	Green Motor Rewinds (Agriculture): 450 hp - ID	450 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	5003	Measure
	Green Motor Rewinds (Agriculture): 4500 hp - ID	4500 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	37021	Measure
	Green Motor Rewinds (Agriculture): 50 hp - ID	50 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	802	Measure
	Green Motor Rewinds (Agriculture): 500 hp - ID	500 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	5567	Measure
	Green Motor Rewinds (Agriculture): 5000 hp - ID	5000 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	41049	Measure
	Green Motor Rewinds (Agriculture): 60 hp - ID	60 hp Green Motor Rewind for motor used in agriculture, returning motor	1/20/2018	RTF Deemed	765	Measure
	Green Motor Rewinds (Agriculture): 600 hp - ID	600 hp Green Motor Rewind for motor used in agriculture, returning motor	1/20/2018	RTF Deemed	6193	Measure
	Green Motor Rewinds (Agriculture): 700 hp - ID	700 hp Green Motor Rewind for motor used in agriculture, returning motor	1/20/2018	RTF Deemed	7195	Measure
	Green Motor Rewinds (Agriculture): 75 hp - ID	75 hp Green Motor Rewind for motor used in agriculture, returning motor	1/20/2018	RTF Deemed	788	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Green Motor Rewinds (Agriculture): 800 hp - ID	800 hp Green Motor Rewind for motor used in agriculture, returning motor	1/20/2018	RTF Deemed	8205	Measure
	Green Motor Rewinds (Agriculture): 900 hp - ID	900 hp Green Motor Rewind for motor used in agriculture, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	9211	Measure
	Green Motor Rewinds (Industrial): 100 hp - ID	100 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	2005	Measure
	Green Motor Rewinds (Industrial): 1000 hp - ID	1000 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	24172	Measure
	Green Motor Rewinds (Industrial): 125 hp - ID	125 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	2598	Measure
	Green Motor Rewinds (Industrial): 1250 hp - ID	1250 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	29973	Measure
	Green Motor Rewinds (Industrial): 15 hp - ID	15 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	601	Measure
	Green Motor Rewinds (Industrial): 150 hp - ID	150 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	3089	Measure
	Green Motor Rewinds (Industrial): 1500 hp - ID	1500 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	35891	Measure
	Green Motor Rewinds (Industrial): 1750 hp - ID	1750 hp Green Motor Rewind for motor used in an industrial application,	1/20/2018	RTF Deemed	41697	Measure
	Green Motor Rewinds (Industrial): 20 hp - ID	20 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	804	Measure
	Green Motor Rewinds (Industrial): 200 hp - ID	200 hp Green Motor Rewind for motor used in an industrial application,	1/20/2018	RTF Deemed	4088	Measure
	Green Motor Rewinds (Industrial): 2000 hp - ID	2000 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	47454	Measure
	Green Motor Rewinds (Industrial): 2250 hp - ID	2250 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	53051	Measure
	Green Motor Rewinds (Industrial): 25 hp - ID	25 hp Green Motor Rewind for motor used in an industrial application,	1/20/2018	RTF Deemed	1052	Measure
	Green Motor Rewinds (Industrial): 250 hp - ID	250 hp Green Motor Rewind for motor used in an industrial application,	1/20/2018	RTF Deemed	4972	Measure
	Green Motor Rewinds (Industrial): 2500 hp - ID	2500 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	58823	Measure
	Green Motor Rewinds (Industrial): 30 hp - ID	30 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	1133	Measure
	Green Motor Rewinds (Industrial): 300 hp - ID	300 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	5935	Measure
	Green Motor Rewinds (Industrial): 3000 hp - ID	3000 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	70147	Measure
	Green Motor Rewinds (Industrial): 350 hp - ID	350 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	6919	Measure
	Green Motor Rewinds (Industrial): 3500 hp - ID	3500 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	81667	Measure
	Green Motor Rewinds (Industrial): 40 hp - ID	40 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	1319	Measure
	Green Motor Rewinds (Industrial): 400 hp - ID	400 hp Green Motor Rewind for motor used in an industrial application,	1/20/2018	RTF Deemed	7848	Measure
	Green Motor Rewinds (Industrial): 4000 hp - ID	4000 hp Green Motor Rewind for motor used in an industrial application,	1/20/2018	RTF Deemed	93334	Measure
	Green Motor Rewinds (Industrial): 450 hp - ID	450 hp Green Motor Rewind for motor used in an industrial application,	1/20/2018	RTF Deemed	8811	Measure
	Green Motor Rewinds (Industrial): 4500 hp - ID	4500 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	104783	Measure
	Green Motor Rewinds (Industrial): 50 hp - ID	50 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	1418	Measure
	Green Motor Rewinds (Industrial): 500 hp - ID	500 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	9804	Measure

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	Green Motor Rewinds (Industrial): 5000 hp - ID	5000 hp Green Motor Rewind for motor used in an industrial application,	1/20/2018	RTF Deemed	116183	Measure
	Green Motor Rewinds (Industrial): 60 hp - ID	60 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	1476	Measure
	Green Motor Rewinds (Industrial): 600 hp - ID	600 hp Green Motor Rewind for motor used in an industrial application,	1/20/2018	RTF Deemed	14689	Measure
	Green Motor Rewinds (Industrial): 700 hp - ID	700 hp Green Motor Rewind for motor used in an industrial application,	1/20/2018	RTF Deemed	17065	Measure
	Green Motor Rewinds (Industrial): 75 hp - ID	75 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	1519	Measure
	Green Motor Rewinds (Industrial): 800 hp - ID	800 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	19461	Measure
	Green Motor Rewinds (Industrial): 900 hp - ID	900 hp Green Motor Rewind for motor used in an industrial application, returning motor to best possible efficiency using controlled rewind process	1/20/2018	RTF Deemed	21847	Measure
Refrigeration	Adaptive Refrigeration Controller (Retrofit) - ID	Replace conventional controls with adaptive controls and, in some instances, electric expansion valves.	11/13/2014	RMP Calculation	Savings vary by install configuration	Site-specific
	2-Stage Ammonia (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	2-Stage Ammonia (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Box Insulation (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Box Insulation (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Case/Point of Sale Lighting (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Case/Point of Sale Lighting (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	CO2 Scrubber (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	CO2 Scrubber (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Compressor VFD (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Compressor VFD (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Condenser Fan VFDs (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Condenser Fan VFDs (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Condensing Press Cont (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Condensing Press Cont (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Controls Refrigeration (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Controls Refrigeration (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	EE Evaporator Coils (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	EE Evaporator Coils (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Evap & AirCool Condense (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Evap & AirCool Condense (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Evaporator Fan VFD (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Evaporator Fan VFD (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Evaporator System (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Evaporator System (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Fan VFDs (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Fan VFDs (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Floating Head Press Cont (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Floating Head Press Cont (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Floating Suction Control (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Floating Suction Control (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	HE Evaporative Fan (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	HE Evaporative Fan (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Heat Pump Desuper (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Heat Pump Desuper (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	High Speed Doors (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	High Speed Doors (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific

Program/Measure Category	Measure Name	Measure Description	Effective Date	Energy savings calculation method	Gross electric savings (kWh/yr)	Savings unit
	High-Effic. Cases (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	High-Effic. Cases (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Humidistat / Anti-Sweat (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Humidistat / Anti-Sweat (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Other Refrigeration (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Other Refrigeration (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Package Refrigeration (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Package Refrigeration (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Plate Cooler (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Plate Cooler (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Solid Door Refrigerator (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Solid Door Refrigerator (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by install configuration	Site-specific
	Warm Gas Defrost (New Construction wCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Warm Gas Defrost (Retrofit & NCMR woCode) Custom - ID	Custom engineering for industrial and large commercial	1/1/2017	RMP Calculation	Savings vary by	Site-specific
	Fast Acting Door (Retrofit) - ID	Replace manually operated door, automatic door with long cycle time, strip	11/13/2014	RMP Calculation	Savings vary by	Site-specific
Wastewater	Extended Range Circulator (Retrofit) - ID	Address excess aeration with extended range circulator.	11/13/2014	RMP Calculation	Savings vary by	Site-specific

ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

Appendix 7
National Energy Foundation Idaho Report

2019

NEF

BE *WATT*SMART, BEGIN AT HOME

IDAHO

Program Report

Prepared for:

wattsmart.com

Michael S. Snow

Manager, Regulatory Affairs

Rocky Mountain Power 1407

W. North Temple Suite 330

Salt Lake City, UT 84116

Prepared by:

Patti Clark

Program Director

National Energy Foundation

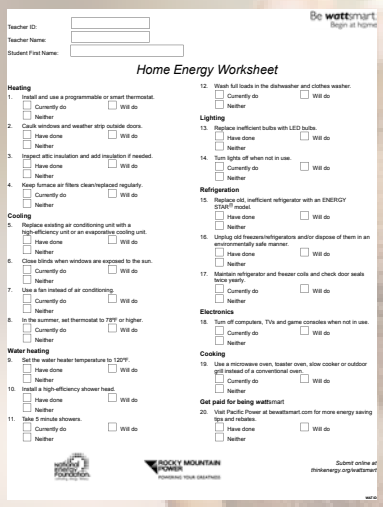
4516 South 700 East

Suite 100

Salt Lake City, UT 84107

February 28, 2020

Savings



Be wattsmart
Begin at home

Teacher ID:
Teacher Name:
Student First Name:

Home Energy Worksheet

Heating

1. Install and use a programmable or smart 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. In the summer, set thermostat to 78°F or higher.
   Currently do / Will do / Neither

Water heating

9. Set the water heater temperature to 120°F.
   Have done / Will do / Neither
10. Install a high-efficiency shower head.
    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 inefficient bulbs with 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, slow cooker or outdoor grill instead of a conventional oven.
    Currently do / Will do / Neither

Get paid for being wattsmart

20. Visit Pacific Power at bewattsmart.com for more energy saving tips and rebates.
    Have done / Will do / Neither

ROCKY MOUNTAIN POWER
POWERING YOUR GREATNESS

Submit online at thinkenergy.org/wattsmart

Home Energy Worksheets

– Returned: 1,304 –

– 77% –

Teacher Packets

– Returned: 61 –

– 86% –

Participants

Students
– 1,696 –

Teachers
– 71 –

Schools
– 24 –

Table of Contents

Program Overview

Program Description

Be *watt*smart, Begin at home, an energy efficiency education program, is a collaborative partnership between Rocky Mountain Power and the National Energy Foundation (NEF). This unique and interactive program teaches the importance of energy and natural resources and their impact on the environment. The objective is to expand and promote energy awareness through a school-based education program which encourages Idaho students and teachers to change behaviors which will impact the energy consumption in their homes and community. Teachers are also provided teaching materials to support further classroom instruction on this valuable message.

Program Administration

Be *watt*smart, Begin at home is administered by NEF, a non-profit organization (established in 1976) dedicated to increasing energy literacy through the development, distribution and implementation of educational programs and materials. These resources relate primarily to energy, natural resources, energy efficiency and energy safety. Concepts are taught through science, math, art, technology and writing. Our mission remains constant, to cultivate and promote an energy literate society. NEF is pleased to report on activities of the Be *watt*smart, Begin at home energy efficiency education program conducted during the 2019 - 2020 school year.

Anne Lowe, Vice President – Operations, oversees program organization. Gary Swan, Vice President – Development, oversees contract accounting. Patti Clark, Program Director, is responsible for overseeing and implementing the scope of work and Megan Hirschi was responsible for scheduling the presentations. A team of trained and seasoned presenters brought the interactive, hands-on program to Idaho schools the week of September 16th and again the week of October 14, 2019.

Building Collaborations

The Idaho State Office of Education's Core Curriculum for fourth grade correlates well to the content of Be *watt*smart, Begin at home. Teachers appreciated the collaborative efforts to align program components to their learning standards. Curriculum correlations were provided to teacher participants in the *Teacher Guide* delivered to each teacher prior to the presentation date.

Program Implementation

During the month of May 2019 an invitation to register for the fall 2019 program was sent via email to all teachers that had participated in the 2018 program. In August and September, the program coordinator made phone calls to all unregistered schools. Teacher questions were addressed and highlights of the program content with an emphasis on how the program aligns with Idaho content standards were reviewed.

Program Registration

Registration for the program was online at *wattsmart.com/begin*. Registered schools were checked against the qualified schools list before email and phone communications were made with teachers to determine optimum presentation dates and student numbers.

After registration was qualified, a series of email communications with teachers, was 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 participating teachers. Later communications were customized through programming to be sent only to teachers needing a reminder to return their program documents.

Be *watt*smart, Begin at home Presentation

Be *watt*smart, Begin at home presentations were given during one week in September and again for one week in October to accommodate the fall harvest in Idaho. The presentation featured a custom Keynote slideshow that brought energy concepts to the forefront of Idaho 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 viewed "Caitlynn Power" energy efficiency video vignettes produced by PacifiCorp. The videos are always well received by both teachers and students. At the end of each short video, students learned a rhyme about Caitlyn's wise energy choices to help them remember the efficiency concept.

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.

Program 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 an LED nightlight featuring the Rocky Mountain Power logo as a reward.

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

A program *Implementation Steps Flier* assisted teachers in carrying out the program. It also gave simple steps for successfully returning *Home Energy Worksheets* 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 gift card teacher participants would 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 1, 2019 deadline.

Program Accomplishments – Fall 2019

- 24 Be *watt*smart, Begin at home presentations
- 1,696 students and families reached
- 71 Idaho teachers reached
- 77% student *Home Energy Worksheet* surveys return
- $50 gift cards delivered to 56 Idaho teachers
- $25 gift cards delivered to 5 Idaho teachers

Program Improvements - Fall 2019

- Updated all program materials
- Added a *Parent Letter* in Spanish
- New video vignettes entitled "Caitlin Power" produced by sponsor for presentation
- Added online *Home Energy Worksheet* option to program

- Created a program website for teachers and students *thinkenergy.org/wattsmart/*
- Uploaded "Caitlin Power" videos to website for teachers to access and use in the classroom

Program Attachments – Fall 2019

- Fall 2019 Participating Schools
- Program Promotions
- Program Documents
    - Keynote Presentation
    - *Teacher Implementation Steps Flier*
    - *Rewarding Results Flier*
    - *Student Guide*
    - *Teacher Guide*
    - Lingo Card
    - *Parent Letter*
- *Teacher Evaluation* Compilation
- *Home Energy Worksheet*
- *Home Energy Worksheet* Summary – Rocky Mountain Power
- Wise Energy Behaviors in Rocky Mountain Power Idaho Homes
- Sampling of Thanks a "Watt" Cards

Attachments

Fall 2019 Participating Schools

Participating Schools	Address	City	State	Zip
Adams Elementary	110 North 2nd East	Rexburg	ID	83440
AJ Winters Elementary	535 Clay Street	Montpelier	ID	83254
Ammon Elementary	2900 Central Ave.	Ammon	ID	83406
Arco Elementary	250 S Water Street	Arco	ID	83213
Georgetown Elementary	142 Stringtown Road	Georgetown	ID	83239
Grace Elementary school	114 4th South	Grace	ID	83241
Harold B. Lee Elementary	4726 W. Highway 36	Weston	ID	83286
Harwood Elementary	200 West 3rd North	Rigby	ID	83442
Hibbard Elementary	2413 North 3000 West	Rexburg	ID	83440
Hillview Elementary	3075 Teton	Ammon	ID	83406
Iona Elementary	5338 Owens Ave.	Iona	ID	83427
Kennedy Elementary	60 South 5th West	Rexburg	ID	83440
Kershaw Intermediate	610 East 3rd North	Sugar City	ID	83448
Lincoln Elementary	358 East 2nd South	Rexburg	ID	83440
Mountain View Elem	704 Center	McCammon	ID	83250
Oakwood Elementary	525 South 4th East	Preston	ID	83263
Paris Elementary	39 Fielding Street	Paris	ID	83261
Parker-Egin Elementary	221 North Street	St Anthony	ID	83445
Philo T Farnsworth Elementary	305 North 3700 East	Rigby	ID	83442
Rim Rock Elementary School	4855 Brennan Bend	Idaho Falls	ID	83401
Riverview Elementary	1463 North 800 East	Shelley	ID	83274
Roberts Elementary	682 North 2858 East	Roberts	ID	83444
South Fork Elementary	7163 South 2000 West	Rexburg	ID	83440
Thatcher Elementary	6007 E. Thatcher Rd	Preston	ID	83263

Waitlist Schools	Address	City	State	Zip
Downey Elementary*	99 4th Street	Downey	ID	83234

*School not on qualified list

Program Promotions

Subscribe | Past Issues | Translate

We invite you to reserve your school's participation in the Be ***watts***mart, Begin at home program for fall 2019. Click on "Yes, register me" below and you will be linked directly to the registration site. After you have registered, a coordinator will reach out to you with additional information.

"Yes, register me"

Questions or concerns?
Contact Patti Clark

patti@nefl.org | 1-801-327-9515

Offer available for teachers within the Rocky Mountain Power service area. Teachers must submit 80 percent or more of *Home Energy Worksheets* to earn the $50 Visa gift card.

ROCKY MOUNTAIN POWER
POWERING YOUR GREATNESS

You have the *power* to be **watt**smart

Enroll your fourth-grade science students in our free, engaging energy education program.

Be *watt*smart, Begin at home

National Energy Foundation

ROCKY MOUNTAIN POWER
POWERING YOUR GREATNESS

Be **watt**smart Begin at home

reinforces electricity learning standards in an engaging and interactive assembly. Participating teachers receive free energy education posters, activities and student materials as well as the chance to receive a Visa® gift card of up to $50, depending on participation.

Presentations begin in September 2019. Reserve your classroom's spot today at **wattsmart.com/begin**.

National Energy Foundation

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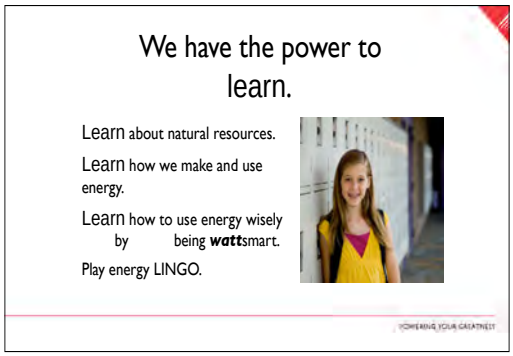
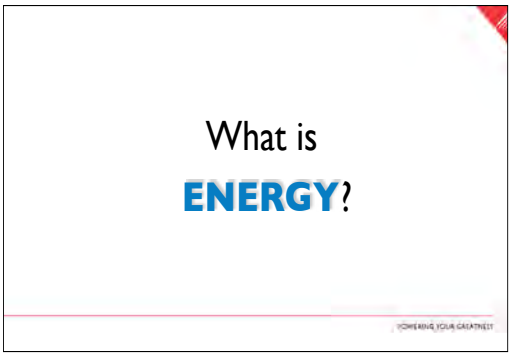
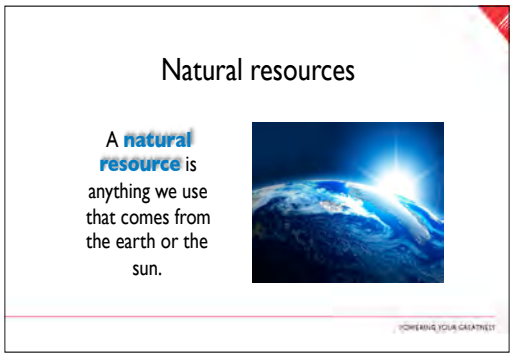
Program Documents

Keynote Presentation







energy

There are many forms of e_____.

natural gas

The blue flame of n_____ g_____ is a nonrenewable resource.

natural resource

Anything we use that comes from the earth or the sun is a n_____ r_____.

Electricity

- The electricity we use is not a natural resource.
- It is made from natural resources.

Rocky Mountain Power

Electric generation by energy source

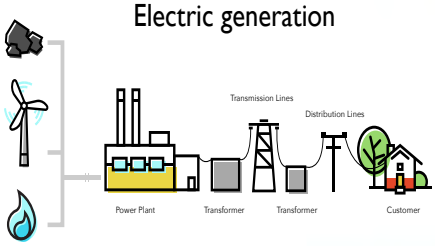
Coal 56%

Renewables 19%

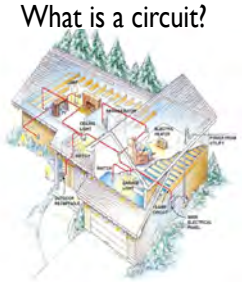
Natural gas 15%

Other sources 10%

Electric generation



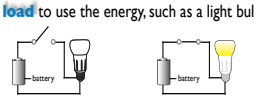
What is a circuit?



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

Energy efficiency

Using less energy to accomplish the same amount of work

Technology + Behaviors

to reduce energy use

It's time to play Lingo!

Energy efficiency

E_____ e_____ is to do the same amount of work.

Renewable

R_____ naturally replaced.

Nonrenewable

N_____ or not at all.

Oil

rce used to produce . O__

Caitlynn Power

Caitlynn Power

Home efficiencies

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

- Decide what you want before opening the refrigerator.
- Use a fan instead of turning up the air conditioner

Remind your parents to:

- Install a smart or programmable thermostat.
- Change furnace filters.
- Insulate your home and seal air leaks.

Water efficiencies

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

- Take shorter showers.
- Turn off the **water** when brushing teeth.
- Set your water heater to 120°F.
- Install an energy-efficient shower head.
- Make sure your dishwasher has a **full load** before you push the start button.

Caitlynn Power

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

It's time to play Lingo!

LED

A light that can last 25 times longer than an incandescent. L _ _

Phantom Load

Electricity consumed by an electronic device when it is turned off or in standby mode. P_ _ _ _ _ _ L _ _ _

full load

Make sure you have a full load before starting your dishwasher.

water

Turn off the w_ _ _ _ when brushing your teeth.

What have we done today?

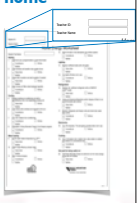
- Learned why energy is important.
- **Discussed** energy and where it comes from.

Engage in energy efficiency

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

Complete the *Home Energy Worksheet.*

Sign the *Thanks A "Watt" Card.*



YOU have the power to be ***watt***smart!

Visit **thinkenergy.org/wattsmart** for further information about the program.

Implementation Steps

1 Verify you have received:

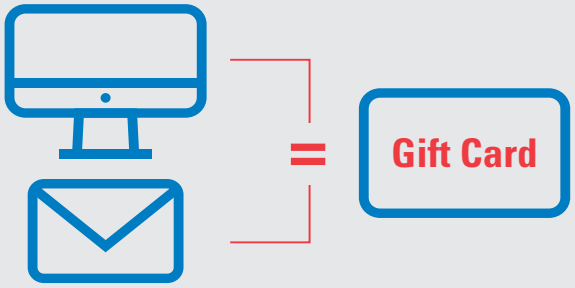
- *Teacher Materials Folder*
- Your **Be *watt*smart, Begin at home** *Teacher Guide*
- *Home Energy Worksheets* for you and your students
- **Be *watt*smart, Begin at home** student booklets
- Set of *Parent Letters*
- Wattsmart nightlights (student incentive for completing the *Home Energy Worksheet*)

2 After the presentation, distribute to each student a:

- **Be *watt*smart, Begin at home** student booklet
- *Home Energy Worksheet*
- *Parent Letter*

3 Final steps:

- Reward students with a wattsmart nightlight when they complete their worksheet on paper or online at **thinkenerg.org/wattsmart**.
- Have each student sign the *Thank You Card* to Rocky Mountain Power.
- *Home Energy Worksheets* submitted online can be verified through the teacher portal (nef1.org/programs/teacher-lookup) with your Teacher ID.
- Mail completed paper *Home Energy Worksheets* and the *Thank You Card* in the postage-paid envelope (found in your materials folder) by November 29, 2019.



National Energy Foundation
cultivating energy literacy

ROCKY MOUNTAIN POWER
POWERING YOUR GREATNESS

UT , ID, WY


Attention Teachers
Return your student *Home Energy Worksheets* and receive a **$25 – $50** Visa® gift card for classroom use, depending upon participation. Students may submit worksheets online or return the completed survey to you. See the *Implementation Steps* flier for additional *Home Energy Worksheet* online information.
80% or greater return of registered students' *Home Energy Worksheets* = $50
50 – 79% return of registered students' *Home Energy Worksheets* = $25
Postmark due date:
November 29, 2019
Offer open only to teachers participating in Be *watt*smart, 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 Megan Hirschi at megan@nef1.org.
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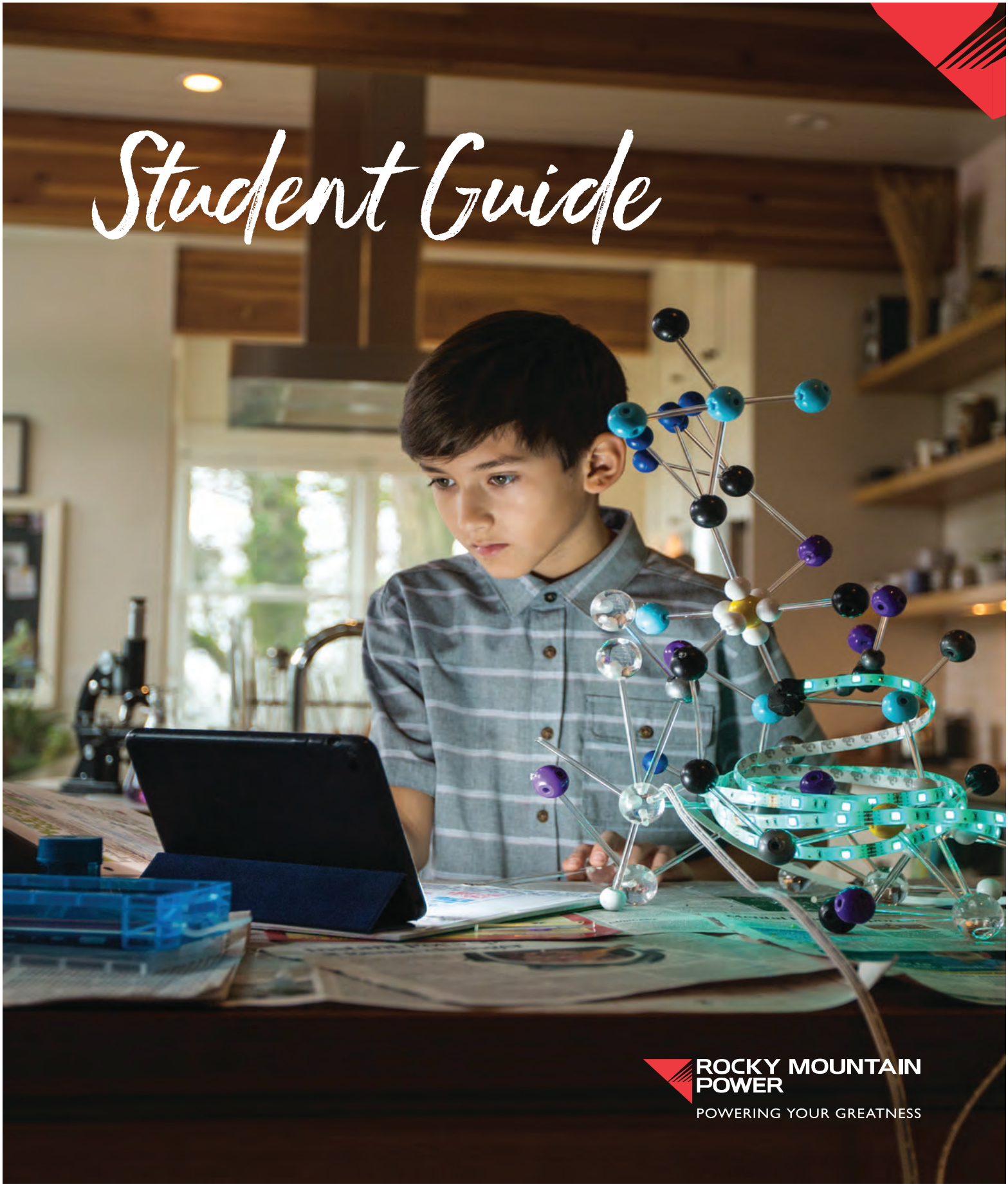


Dear Parents,

The **Be *watt*smart, 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 *watt*smart, Begin at home** booklet with your child.
- Assist your child with completing the activities on Page 7.
- Have your child complete the ***Home Energy Worksheet*** online or return it to your child's teacher.

Thank you for being *watt*smart and for your participation!

What's inside?

This booklet is divided into three sections that will give you the power to:

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 committed to the delivery of reliable electric service that's safe, low-cost and increasingly from clean, renewable resources. Serving more than 1 million customers in Utah, Idaho and Wyoming, the company is one of the lowest cost energy producers in the nation. Rocky Mountain Power is moving toward a sustainable energy future that includes increased use of solar, wind and other renewable resources; and provides customers with more choices to meet their energy needs.

About the National Energy Foundation

The National Energy Foundation (NEF) is a 501 (c)(3) nonprofit organization, founded in 1976. It is dedicated to increasing energy literacy through the development, distribution and implementation of educational programs and materials. These resources relate primarily to energy, natural resources, energy efficiency, energy safety and the environment. Concepts are taught through science, math, art, technology and writing. NEF recognizes the importance of educating individuals about energy so they can make informed decisions about energy issues and use.

I have the *power* to be ***watt***smart.

- Being wattsmart is all about taking steps to save energy – which in turn can help you save money.
- You have the power to become more energy efficient. Rocky Mountain Power can help with wattsmart programs and incentives for homes and businesses. Saving energy also saves money and is good for the environment.

I have the power to *learn.*

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
- 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.

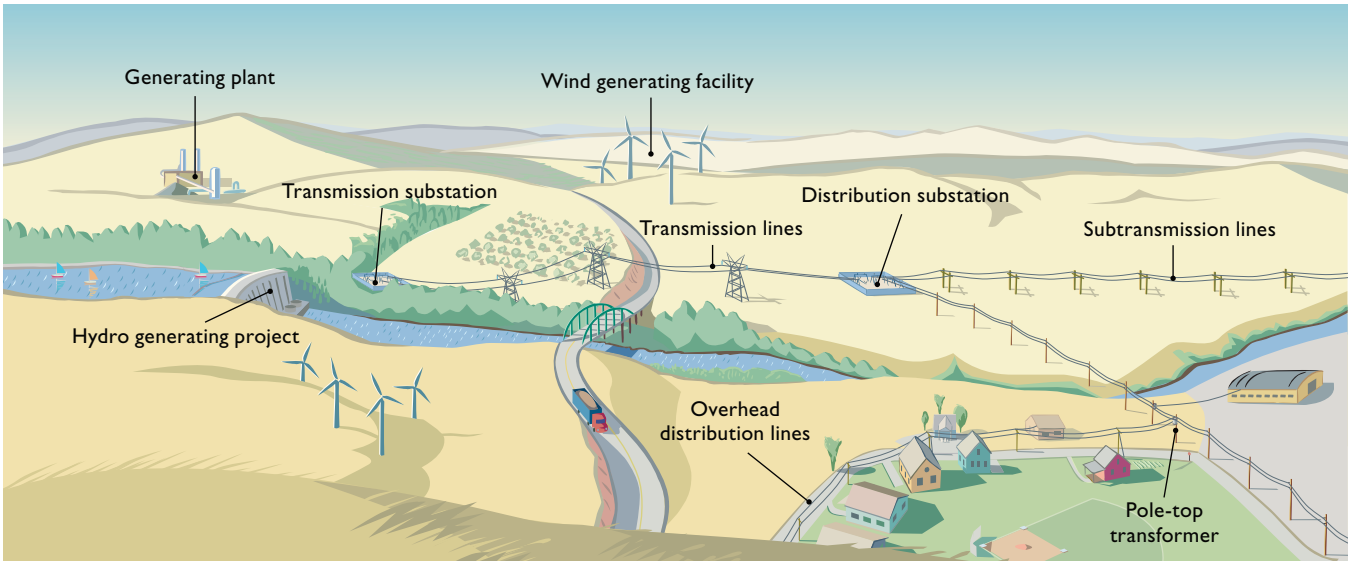
Electricity is the most abundant secondary energy resource used. It is the flow of electrical power or charge. It occurs in nature as lightning and static electricity. A generator uses energy resources to create mechanical energy that is then converted into electrical energy.

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 Source	Rocky Mountain Power (2018 Basic Fuel Mix)*	United States (U.S. EPA, data)
Natural Gas	15.44%	35.1%
Coal	56.39%	27.4%
Nuclear	0.00%	19.3%
Petroleum	0.00%	.6%
Other/misc.	9.75%	.5%
Renewables (total)	18.42%	17.1%
Hydropower	5.15%	7%
Wind	8.80%	6.6%
Biomass	0.34%	1.5%
Solar	3.79%	1.6%
Geothermal	0.34%	0.4%

**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.*

4

I have the power to *discuss* energy use to 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 or smart 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% 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.
- 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 shower head and save as much as $145 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.

- Replace your incandescent bulbs with LEDs (light-emitting diodes) and save $5 to $8 per year per bulb. These bulbs use up to 80% 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.

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% 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 advanced power strips for household electronics. One button will turn off multiple appliances, which conserves electricity.

Refrigerators and freezers

- When looking to replace your old refrigerator, do so with an ENERGY STAR® model, which requires approximately 40% less energy than conventional models and provides energy savings without sacrificing the features you want.
- Clean door gaskets with warm water or a detergent that leaves no residue.

Dishwashers

- Only run dishwashers when full and use the "air dry" or "no heat dry" settings.
- ENERGY STAR® dishwashers use at least 41% 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 drying rack whenever possible.

Cooking

- Use a microwave oven, toaster oven or slow cooker 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.

I have the power to *engage* in energy efficiency.

Parents, be *watt*smart 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% 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.

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.
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 2

	A	B	C
	Number of bulbs from Table 1	Annual cost of electricity for one bulb	Annual cost of electricity for lighting
Incandescent		× $5.16	
CFL		× $1.08	
LED		× $0.60	
TOTAL			

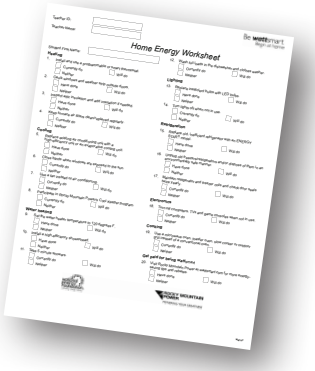
TABLE 3

	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 (7.5 Watts) each used for 2 hours each day for 30 days. EEI Typical Bills and Rates Report, Winter 2019 (12 months ending 2018).

I have the *power* to be **watt**smart.

Together with your parent(s), complete the separate *Home Energy Worksheet*. Return the completed *Home Energy Worksheet* to your teacher or submit it online at thinkenergy.org/wattsmart to 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.

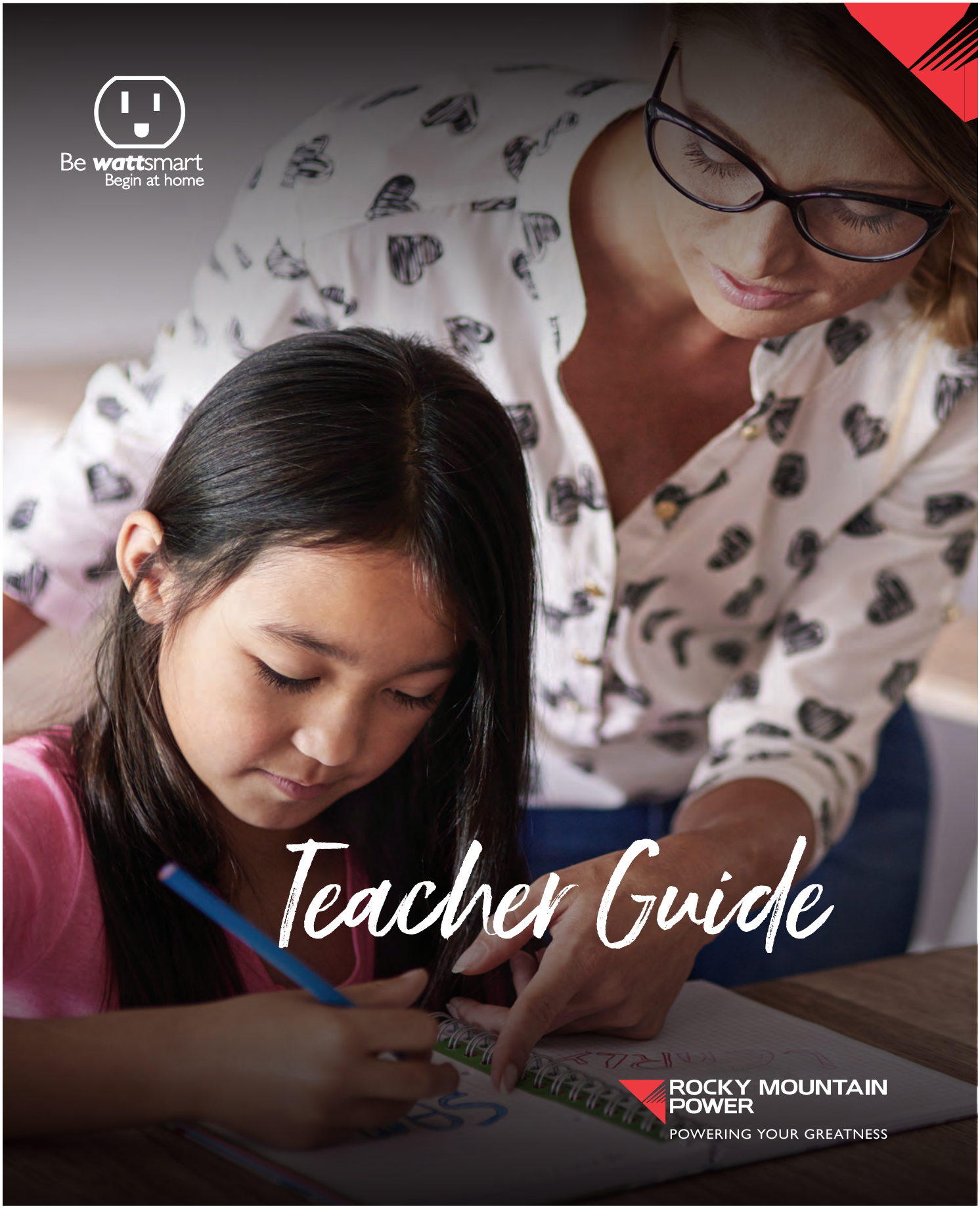
Be *watt*smart

Begin at home

National Energy Foundation
cultivating energy literacy

*watt*smart.com

ROCKY MOUNTAIN POWER
POWERING YOUR GREATNESS



Welcome to Be ***watts***mart, 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 ***watts***mart, 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 ***watts***mart, 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

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About the National Energy Foundation

The National Energy Foundation (NEF) 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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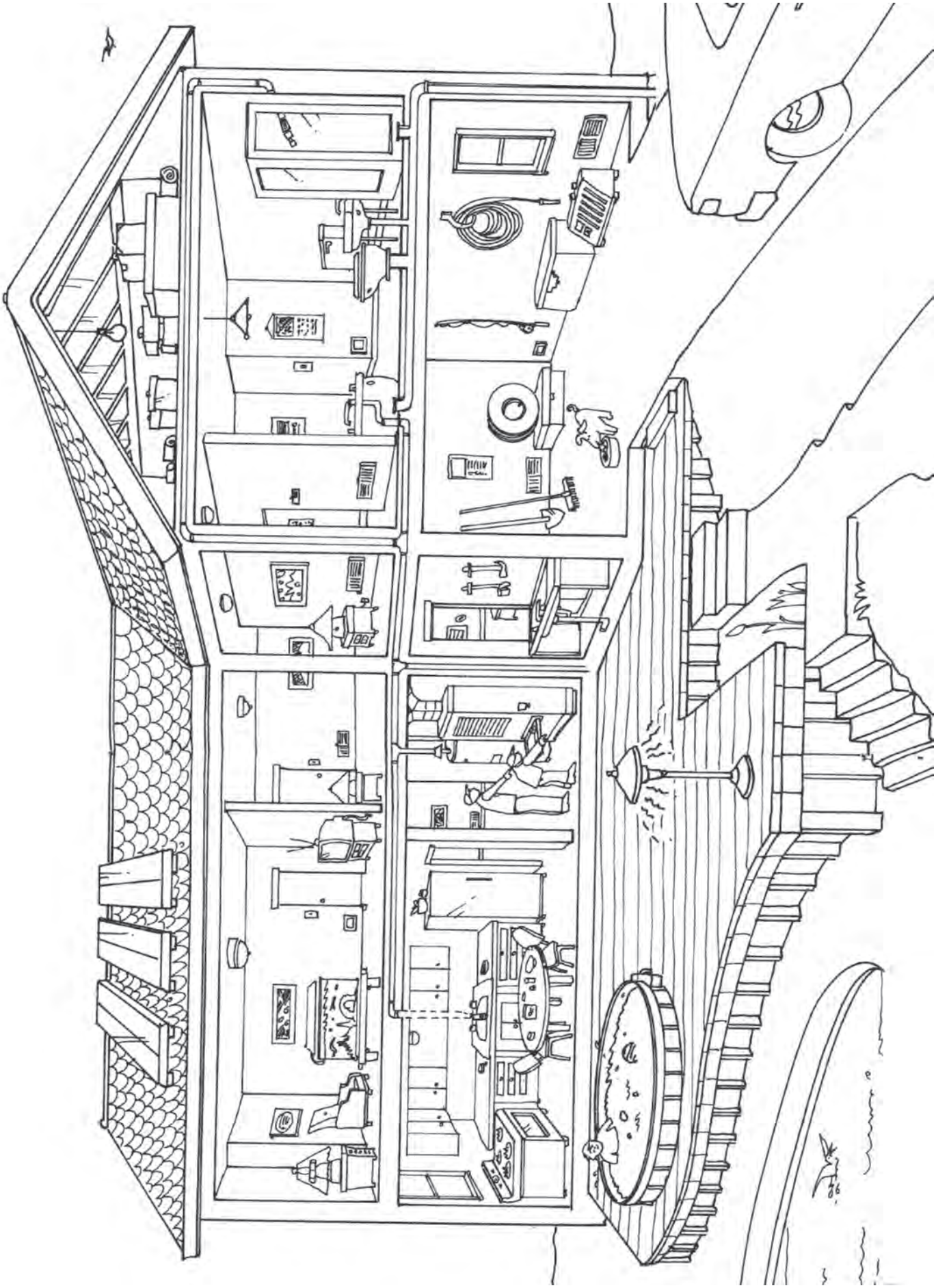

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STEM Connections

Activity	Science				Technology				Engineering					Math			
	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
Pass the Sack		•		•													
The Search for Energy	•	•	•	•										•		•	•
A Bright Idea!	•	•	•	•	•	•	•	•	•	•	•	•	•				
The Art of Circuits	•	•	•					•		•	•	•					•
Shine a Light on History		•	•	•		•	•	•	•		•						
Layered Lunch	•		•							•							
How Do You Rate?	•	•		•		•	•					•	•		•		•
Energy in Math														•	•	•	•
Be wattsmart, Begin at home Poster		•		•			•	•									•

Activity: Pass the Sack

Objective
Students will demonstrate the difference between renewable and nonrenewable resources and the need for conservation of resources.

Curriculum Focus
Science
Social Studies

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

Key Vocabulary
Nonrenewable resource
Renewable resource

Next Generation Science Correlations
4-ETS1 – 2
4-ESS3 – 1-2
4-ESS3.A
5-ETS1 – 2
5-ETS1 – 1
5-ESS3 – 1
MS-ESS3 – 4
MS-ESS3.A

Introduction

Statistical research confirms world consumption of natural resources is increasing every year. Continued population growth ensures that demand for renewable and nonrenewable energy resources necessary to maintain our way of life will continue to increase. This creates problems for future availability of nonrenewable resources. Nonrenewable resources are just that, resources that cannot be renewed. For example, a resource used at our present rate might last about 100 years. Factor in population growth and increasing reliance on technology, and that resource may last only 79 years.

In this activity, two different types of candy (or other objects students would like) will represent resources. One type of candy will represent renewable resources and the other will represent nonrenewable resources.

Procedure

1. Before class, count out enough candy so there is one piece per student (some of each type of candy – 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 contents to run out before everyone gets candy!**
2. Tell students you will be demonstrating how resources get used over time by playing "Pass the Sack." Show students the sack and explain that 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** type 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 who 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 or 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 the 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 periodically to renew it.)
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.
8. Point out that renewable resources can also have limitations. They may not generate electricity as reliably as nonrenewable sources and the amount of energy produced may vary with weather and location.
9. Plan how to pass out the remaining candy.

Discussion

- Should rules be established to determine how the candy is distributed?
- Do oil, coal and natural gas companies have rules/regulations that must be followed to find resources?
- Should there be rules and regulations on how much oil, coal and natural gas people use?
- How do the class' social decisions influence the availability of candy?

To Know and Do More

Go to *eia.gov/kids* to access games, tips and facts for kids to learn about renewable energy and energy efficiency.

Discuss whether or not it is possible to run out of a renewable resource. Wood and fresh water are examples of renewable resources that can be used faster than nature can replace them.

Activity: The Search for Energy

Objective

Students will learn the difference between renewable and nonrenewable resources.

Curriculum Focus

Math
Science
Social Studies

Materials

- 1/2 bag popcorn or other small item to represent solar energy
- Small pieces of ripped paper to represent approximate U.S. nonrenewable energy reserves
  - 164 black - coal
  - 22 red - uranium
  - 8 green - natural gas
  - 2 blue - oil
- Large sheet or tarp to place paper and popcorn on for easy clean up (optional)
- Copies of "Data Table and Graph"

Key Vocabulary

Nonrenewable resources
Renewable resources

Next Generation Science Correlations

4-ESS3-1
4-ESS3.A
5-ESS3 - 1
MS-PS1 - 2
MS-LS2 - 1
MS-ESS3.A

Introduction

Fossil fuels are extremely useful energy sources. Our society has adopted them because they can be readily available and economical. In the early part of the 20th century, a fledgling solar industry took root but was ultimately displaced by less expensive energy sources such as fossil fuels. Today some fossil fuels are harder to find and increasingly more costly. The sun, on the other hand, is just as plentiful as it was 100 years ago. It is a renewable resource that could become our most widely used source of energy.

The following activity is a simulation game in which students learn the difference between renewable and nonrenewable resources. The game reflects society's use and exhaustion of nonrenewable fuels and the eventual transition to renewable technologies.

Procedure

1. Divide the class into five equal groups. Each group will be a company going after a particular resource (coal, uranium, natural gas, oil or the sun). The paper and popcorn represent reserves of the various energy resources. Pass out copies of the student sheet "Data Table and Graph" to each group or have students create their own data tables on paper.
2. Have students gather in a large circle. Scatter the papers plus a handful of "solar" popcorn so they are well spread out in the center of the circle. You can do this on a sheet for easier clean up. Explain that this exercise demonstrates how the availability of 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 resources that are available change after each trial. Tell each group that they will have 30 seconds to pick up as many papers or popcorn as they can of their assigned type. Start timing.

   After 30 seconds have the groups stop and count the items they have gathered. Have each group announce their results to the class and record every count in their data table. If some groups have collected all of their available resource, point out that the resource is now depleted and they are unemployed.

4. Scatter another handful of "solar energy," helping students realize that since the sun is a renewable resource, there is the same amount of it each time you look, whereas the nonrenewable fuels are being depleted. Repeat the search period so students can get more papers or popcorn.

5. Stop after 30 seconds and have the group count and record the papers and popcorn collected again. Note that there are fewer nonrenewable fuels found in the second round. Students have to look harder to find what is left. The solar count is slowly catching up with the nonrenewable fuels. Repeat with additional trials as needed.

6. Have groups create a bar chart or, for more advanced students, a multiline graph of the number of papers and popcorn collected each trial.

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 a resource? Why do some deposits go unused?

To Know and Do More

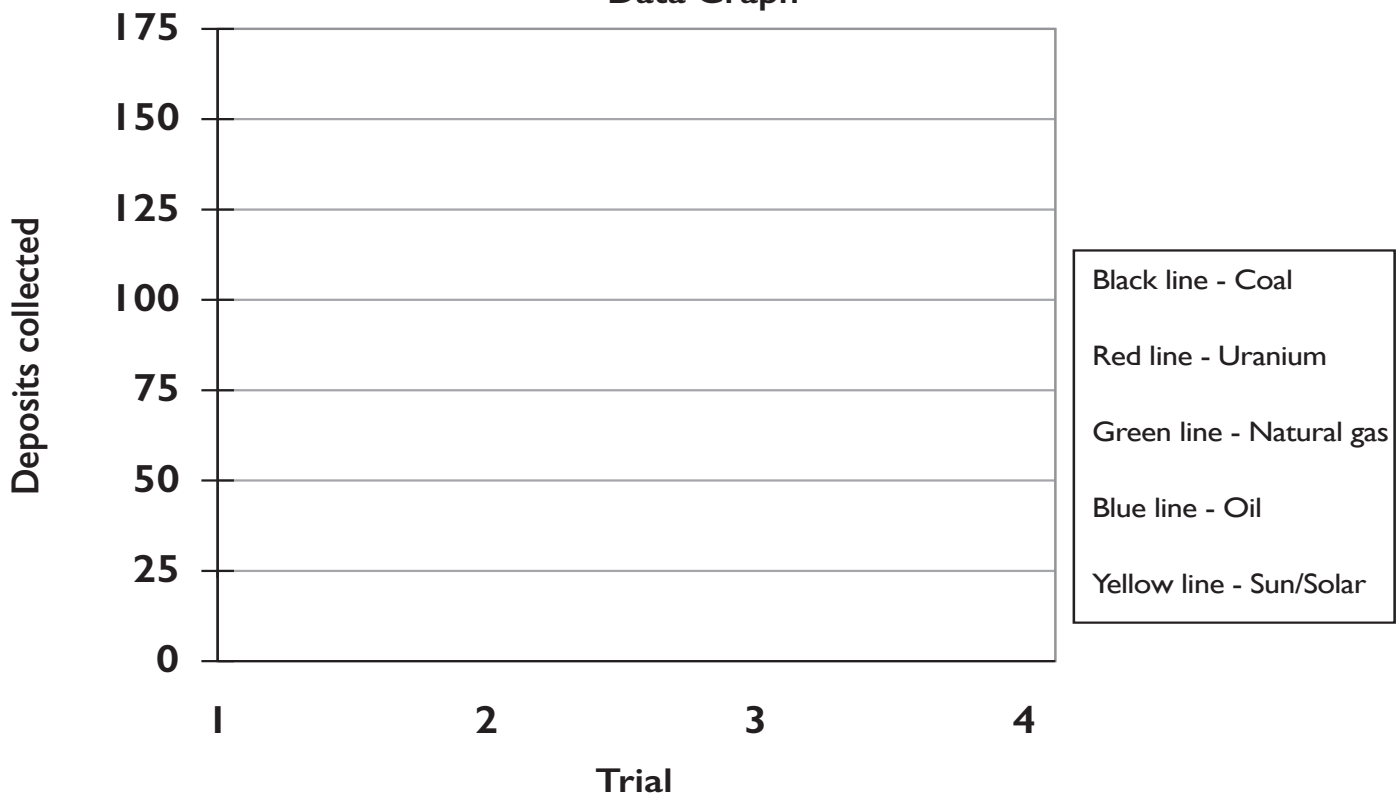
Add wind and water to the activity. Lead a discussion to be sure the students understand why you continued adding more sun, wind and/or water after each trial, but did not add more of the other papers. As a class, come up with a general outline of how to more effectively manage the resources that are available to us.

Student Sheet: Data Table and Graph

Data Table

Search Period	Coal (Black)	Uranium (Red)	Natural Gas (Green)	Oil (Blue)	Sun/Solar (Popcorn)
1					
2					
3					
4					
Totals					

Data Graph



Be wattsmart Begin at home

Activity: A Bright Idea!

Objective
Students will study an example of potential energy converted to energy in the forms of heat and light.

Curriculum Focus
Science

Materials
- Several general purpose C dry cell batteries
- A string of holiday lights, cut apart and stripped at the ends or small bulbs and sockets with wires
- Battery operated toy and batteries
- Small flashlight bulbs and sockets
- Copies of "A Bright Idea!"

Key Vocabulary
chemical energy, circuit, closed circuit, current, electrode, electrolyte, kinetic energy, open circuit, parallel circuit, potential energy, radiant energy, series circuit, thermal energy, transformation, voltage

Next Generation Science Correlations
4-ETS1 – 1-2
4-PS3 – 2-4
4-ESS3 – 1
5-PS1.B
5-ESS3 – 1
5-ESS3.C
MS-PS3 – 3
MS-PS3.B
MS-LS2 – 1
MS-ESS3.A

Introduction

Alessandro Volta, an Italian physicist, made the first battery in 1799. Volta placed two different metal electrodes in an electrolyte solution (a chemical mixture which will conduct an electrical current). The chemical reaction caused an electromotive force. A common misconception is that batteries store electrical energy. This is not really true; batteries convert chemical energy to electrical energy. They store chemical energy that can be released during a chemical reaction. By using metals or carbons that have different chemical properties and an acid or base that will allow the movement of electrical charges, an electric current can be produced.

Procedure

1. Demonstrate a battery operated toy with and without the battery. Explain that energy is the ability to do work or cause change, such as moving the toy or powering a light bulb.
2. Discuss:
   - How do we know the energy from the battery is working?
   - What kind of energy is the toy giving off? (possible answers include kinetic energy, mechanical, light, sound and heat)
   - The battery converts chemicals (chemical energy) to electricity (electrical energy) and the toy converts electricity to many possible forms of energy, including mechanical energy, heat (thermal energy), light and sound.
3. Have students use the materials provided to experiment with simple circuits by following the guided inquiry activity on the student sheet. As the students do the activity, have them note the light and heat energy given off.
4. Give students examples of types of potential and kinetic energy.

   Kinetic energy – a person riding a bike, a fire in a woodburning stove, a person running

   Potential energy – a lump of coal, a sandwich, a rock at the top of a hill

Discussion

Write the word choices on the board. Read the statements to the students and have them fill in the blanks using the words.

1. A battery converts chemical energy into _____ energy.
2. Electricity is a form of _____ energy.
3. The light bulb converts electrical energy into _____ and _____ energy.
4. A battery contains _____ energy.

Word choices:

potential electrical heat kinetic light

Answers:

1. electrical 2. kinetic 3. light, heat 4. potential

To Know and Do More

Ask students if they believe batteries are important to our way of life today. Have students make a list of all the items they used yesterday that contained a battery. Their list might include:

Wristwatch	Tablet
Automobile	Video game controller
Cell phone	TV remote control

To continue this, have students add to the list all of the items they can think of that use batteries. Are your students surprised at how many items today depend on batteries to operate and how many battery operated items they depend on daily?

Career Awareness Activity

Search the internet for a company that produces batteries. Discover the various job opportunities and careers within that company. Your list might include: scientists, chemists, research analysts, accountants, purchasing agents and administrative assistants.

Student Sheet: A Bright Idea!

Alessandro Volta, an Italian physicist, made the first battery in 1799. Volta put sheets of two different types of metal in a jar of water with a chemical that could carry electricity (an electrolyte). The chemical reaction between the electrolyte and the metal plates caused electrons to move when the plates were connected with a wire. The flow of electrons moving in a wire is called an electric current, or electricity.

Using one battery and one light, make the bulb light up. Congratulations, you have made an electrical circuit!

1. What did you have to do to get the light to come on and complete the circuit? How was it touching the battery?

2. What do you have to do to make the light bulb turn off and then back on?

3. What do you think the electrical terms "open circuit" and "closed circuit" mean?

4. How do you think a light switch works?

5. What type and form of energy is in the battery?

6. The battery's energy was transformed into what other forms of energy?

Using one battery, try to light up two lights.

1. Sketch how the wires are connected to the battery when you light two lights.

2. Are the lights the same brightness as when you lit only one or are they dimmer?

3. A series circuit has only one path that electrons can follow as they are pushed from one side of the battery to the other. A parallel circuit has more than one path and the electrons can go more than one way to get from one end of the battery to the other. Which type of circuit did you make and draw?

4. Experiment with multiple batteries connected together, placing the positive end of one battery touching the negative end of another battery. What effect does the number of batteries have on the brightness of the bulbs?

5. If you leave the battery connected to a bulb long enough, you will feel the wire and the ends of the battery getting warm. What do you think is causing this?

6. Can that heat be useful? Can it be dangerous? Give an example to prove your point.

7. Wash your hands when you are finished.

Activity: The Art of Circuits

Objective

Students will learn about conservation of energy and energy transfer by experimenting with electrical circuits.

Curriculum Focus

Science
Social Studies
Language Arts
Art

Materials

- Playdough® or homemade salt dough
- 9V batteries
- 9V battery clips with red and black cables
- 2V LED miniature light bulbs
- Insulating material - cardboard, packaging plastic or dough made from sugar, not salt (optional)

Key Vocabulary

Energy transfer
Electric current
LED (light-emitting diode)
Electric circuit
Insulator
Conductor

Next Generation Science Correlations

4-PS3 - 2
4-PS3 - 4
4-PS3.A-B, D
4-ETS1 - 1
4-ETS1.A
5-ETS1 - 1
5-ETS1.A
MS-PS3 - 3
MS-PS3.A-B
MS-ETS1 - 1
MS-ETS1.A

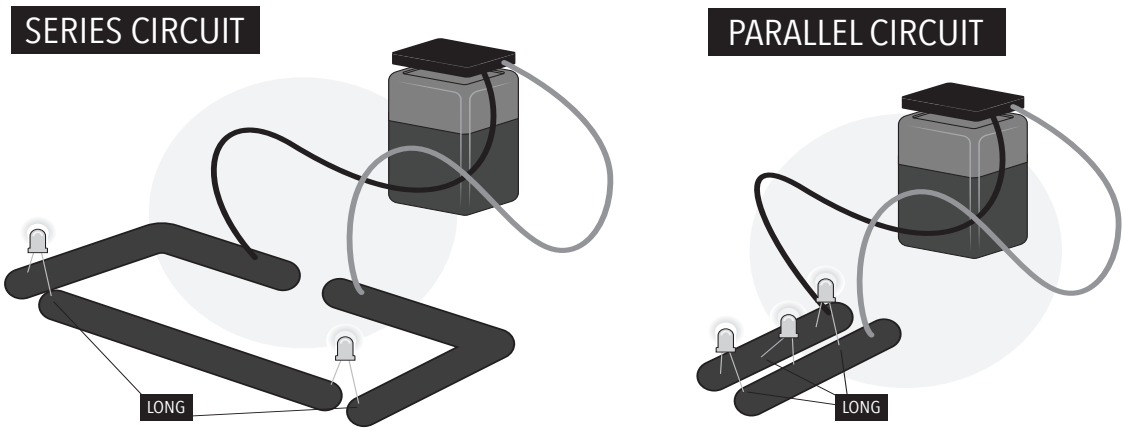
Introduction

Materials that allow a flow of electric current to pass through them more easily are called conductors. Aluminum, silver, copper and water are examples. Insulators block the flow of electricity. Nonmetallic materials, such as rubber, plastic, wood, cloth and dry air are insulators. An electrical circuit is a path of conductors through which electric current flows. Energy can be transferred from place to place by electric current.

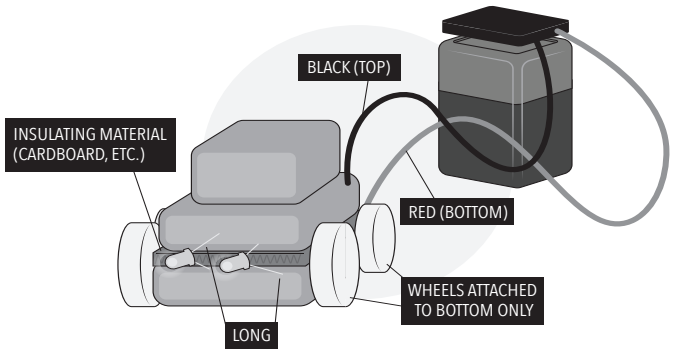
In this activity, students will use salt dough, which is a conductor, to design circuits which will transfer electrical energy. If they are successful, the electricity will be transformed to light and heat energy in a miniature LED bulb.

Procedure

1. Introduce students to their materials:
   a. Attach the battery to a battery clip with red and black cables. The red lead is the positive terminal and the black lead is the negative terminal.
   b. Examine the LED bulb. Two wires (or legs) extend from the bulb. The longer wire is the positive side of the LED and the short wire is the negative side. The LED should only be connected to dough, never directly to the battery terminals, which will cause the bulb to burn out.
2. Tell students that electricity can only go through the circuits they will create in one way. The positive terminal of the battery (red lead on battery clip) must be nearest a positive (long) leg of the LED. A battery pushes electricity around the circuit through the positive leg and out the negative (short) leg, then repeating through the next positive leg (if there is more than one LED in the circuit).
3. Explain that electricity will take the path of least resistance. It is easier for electricity to travel through the dough than through the LED, so if two pieces of dough are touching, the LED will not light.
4. Challenge students to design a simple circuit like the ones on the next page.



If time allows, have students create a circuit work of art like the one below. Since the conductive dough cannot touch, use insulating material between layers.

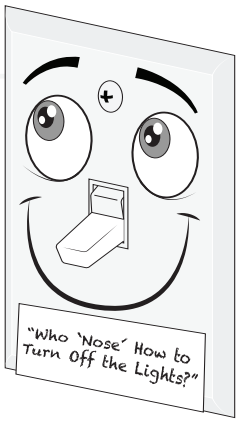


Discussion

- How does your dough circuit light the LED compared to the circuits at your home?
- In a series circuit with multiple LEDs, what happens to the brightness of the LEDs that are further from the battery? Why?

To Know and Do More

When a light switch is off, the electrical pathway to a bulb is not complete and electricity cannot flow to light that bulb. When you flip the switch on, you close the circuit and the light turns on. If light is not needed, it is important not to waste the natural resources used to generate the electrical power that is being transformed to light. Have students create characters without noses to put over light switches at school or home. The art should help remind them to turn lights off!



Activity: Shine a Light on History

Objective

Students will gather details and make inferences from text to explain historical events related to electricity. They will use their knowledge to write information text to support an opinion.

Curriculum Focus

Language Arts
Social Studies
Science

Materials per student group

- Copies of "Edison v. Holonyak"

Key Vocabulary

LED (light-emitting diode)
Incandescent bulb
Filament
Electric meter
Inference
Persuasive
Lumen
Watt

Next Generation Science Correlations

4-PS3 - 2
4-PS3.A-B
MS-PS3 - 3

Introduction

Thomas Edison and Nick Holonyak are two famous lighting inventors. They both made major contributions that changed the way people lived. Thomas Edison patented the incandescent bulb in the late 1870s. Since that time, people have enjoyed the convenience of using electricity for light. Nick Holonyak created the first practical, visible spectrum LED which revamped lighting as we know it.

In this activity, students will study the contributions of these two inventors. They will gather details to form an opinion about which man was more influential in history.

Procedure

1. Pass out copies of "Edison v. Holonyak" and have students read about each. If time allows, they can use the internet, or other sources, to find additional information.
2. Have students fill out the research cards for each inventor. Using that information, they should decide which inventor was more influential in history and write a persuasive paragraph, with details from their research to support their opinion.
3. Challenge students to practice reciting their paragraph and then present it to another student(s) in an attempt to change a differing opinion.

Discussion

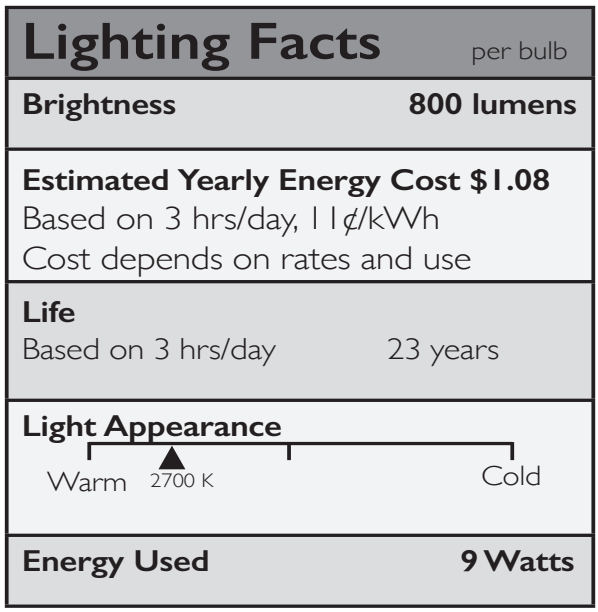
- What kinds of light bulbs are used in your home? How do they affect the way you live and work?
- What do you think the next great electrical invention will be?
- Thomas Edison said, "Genius is one percent inspiration and ninety-nine percent perspiration." What did he mean? How does his quote apply to you?

To Know and Do More

A light bulb package has a lighting facts label that contains different numbers.

- The light output in lumens.
- The power used by the bulbs, measured in Watts. The higher the wattage, the more energy the bulb uses.
- A measure of how warm or cool the light from that bulbs looks, measured in Kelvin (K). Low numbers are warmer light hues (orange or yellow). High numbers are cooler hues (blue or green).

When buying new bulbs, we should shop by lumens, not wattage. We save energy by finding bulbs with the lumens we need, then choosing the lowest wattage possible for that number of lumens.



Activity: Layered Lunch

Objective

Students will understand that natural gas deposits are trapped and held by certain types of geologic formations.

Curriculum Focus

Science
Art

Materials

- Slices of bread
- Almond butter or other thick spread (e.g. cream cheese)
- Honey
- Plastic wrap or wax paper
- Plastic knife

Key Vocabulary

Permeable
Impermeable
Source rock

Next Generation Science Correlations

4-ETS1 - 1
4-ETS1.A
5-ETS1 - 1
5-ETS1.A
MS-LS4 - 1
MS-LS4.A
MS-ESS1 - 4
MS-ESS1.C
MS-ETS1 - 4
MS-ETS1.B

Introduction

How do we find natural gas? Try this activity to get an idea of the type of rock formations and characteristics geologists look for when locating natural gas deposits.

As natural gas molecules form, they migrate from shale "source rock" into more porous areas such as sandstone. Porous or permeable layers are much like a sponge with little pockets throughout the rock. The natural gas continues to move to either the earth's surface (where it escapes into the atmosphere) or it is trapped when nonporous or impermeable rock layers block its path.

Procedure

Using bread, almond butter and honey, create some edible models of rock layers.

1. Spread thick layers of almond butter then honey on a slice of bread. Top it with another slice of bread.
2. Make a second sandwich just like the first, or gently cut the sandwich in half.
3. Now put one sandwich (or one half) with the almond butter layer above the honey and the other sandwich (or other half) with the honey on top of the almond butter.
4. Next spread a thick layer of only honey on a slice of bread, adding another slice on top.
5. Cover your sandwiches with wax paper or plastic wrap and gently press down on them for about three seconds, representing millions of years of pressure.
6. Cut the sandwiches in half and observe what has happened.

Discussion

1. What do you think the honey represents?

2. Which layer do you think represents porous rock?

3. Which layer is the nonporous rock?

4. Did the honey seep into both slices of bread? Why or why not?

5. What do you predict would happen with a sandwich made with only almond butter?

6. How might the ingredients you used affect your results?

7. Draw the layers of your sandwich and use colored pencils or crayons to distinguish the different layers and write labels for each layer that includes: impermeable, permeable, natural gas, nonporous rock and porous rock.

Answers

The honey represented natural gas or a fossil fuel. The bread was the porous rock where the honey or natural gas gets into the little pockets or air spaces. Almond butter acted like a nonporous rock layer blocking the honey from seeping into the slice of bread above the almond butter. The results may be different depending on your ingredients: denser bread – less seepage, creamier almond butter may be less impermeable or thicker honey may not fill the little pockets as easily.

To Know and Do More

Assign students to further investigate how natural gas is trapped in rock formations. Have them draw pictures of a formation and the trapping of oil and natural gas in the earth.

Visit a natural history museum and look for prehistoric life forms and rock formations.

Activity: How Do You Rate?

Objective
Students will conduct a home survey to determine how they can use energy more efficiently by changing their habits and improving conditions and thereby improve the environment in which they live.

Curriculum Focus
Language Arts
Science
Social Studies

Materials
- Copies of "How Do You Rate?"

Key Vocabulary
Conservation
Efficiency
Environment
Natural resources
Quality of life

Next Generation Science Correlations
4-ESS3 – 1
5-ESS3 – 1
5-ESS3.C
MS-LS2 – 1
MS-ESS3 – 3
MS-ESS3.A

Introduction

We use natural resources every day. Sometimes we use them just as they come from earth or the atmosphere. At other times we alter their makeup to fit our needs. For instance, we use the sun just as it is to dry clothes, but we use photovoltaic cells to capture the sun's energy and convert it to electricity, a secondary energy source. We use coal just as it comes to us from the earth to make electricity, or we use coal to provide coke for steel manufacturing. Many natural resources we use every day are nonrenewable, once we use them they are gone; others are renewable, they can be replaced through natural and/or human processes.

It is responsible to use all resources efficiently and wisely. When we do, we reduce energy use, save money and preserve the environment. Making wise decisions today will have a positive impact on our future.

Imagine the difference we could make if we all used energy more efficiently. We would conserve natural resources for the future and enjoy better air quality and a better life. Each one of us can truly make a difference. All it takes is knowledge and action.

Procedure

Using energy efficiently and conserving our natural resources are responsible and easy actions that students can take today to show they respect the environment and have a desire to protect and preserve it.

1. Pass out "How Do You Rate?" Discuss the actions that may apply to the school (e.g., windows and doors have weather stripping; drapes or blinds are open on cold, sunny days and closed on hot days; thermostats are adjusted at night; lawns are only watered early or late in the day). As you discuss each action, write a T for true or F for false on the board to see how the school rates. What can the students do to improve energy use at school?
2. Decide on several actions the students can take at school to help save energy and protect the environment. One action might be to use both sides of their paper and then recycle. If a room is empty during lunch or at other times, they can be sure lights are turned off and computers are on sleep mode.
3. Have the students take the survey home and complete it with their parent's or guardian's help. Explain to students that it is important to record their true energy use and not mark what they think they should be doing.
4. How did the students' homes rate? Discuss the results of the home survey. Help students to become enthusiastic about conserving natural resources and using energy more efficiently.

5. Prepare a graph to show the results of the energy efficiency survey. Which efficiency tips are already practiced by most students? Which were least used? Graph the number of students marking "yes" for each item.
6. Find the mean, median, mode and range of the data on the home survey.

Discussion

Discuss the benefits of energy conservation. How will our energy use impact our future? Compare the benefits and possible inconveniences and their correlation to our quality of life.

To Know and Do More

Why do you think people do not practice all of the energy efficiency tips on the survey? Are there false assumptions that affect people's behavior? (Believing that turning things on and off uses more energy than leaving them on, for example.)

Discuss how people in other geographic areas and cultures would rate. Does everyone have a car, dishwasher or an air conditioner?

Career Awareness Activity

Have the students think of some careers that could have a big impact on your community's energy usage. Some areas to consider: teachers — impact energy usage through education and by example; utility workers — through education and incentives; government regulators — through restrictions and rewards, such as financial benefits or tax breaks.

Be wattsmart
Begin at home

Student Sheet: How Do You Rate?

How energy efficient is the building you live in? Together with your parents or guardians, answer the following questions to rate your home or apartment.

Circle T if the statement is true, F if the statement is false or NA if the statement does not apply to your living situation.

Heating and Cooling

Windows and doors have good weather stripping.	T F NA	Ducts are insulated in unheated/uncooled areas.	T F NA
Window coverings are open on cold, sunny days and closed on hot days.	T F NA	Garage is insulated.	T F NA
Window coverings are closed at night when heat is on.	T F NA	Air filters on furnace and air conditioner are cleaned and changed regularly.	T F NA
Thermostat is set at 68° F (20° C) or lower in winter.	T F NA	Thermostat is adjusted at night.	T F NA
Air conditioning is set at 78° F (26° C) or higher in summer.	T F NA	Fireplace damper is closed when fireplace is not in use.	T F NA

Water

A pitcher of water is kept in the refrigerator for drinking.	T F NA	Hot water heater is set at 120° F (49° C). • If someone in your household has a compromised immune system, consult your physician.	T F NA
Faucets and toilets do not leak.	T F NA	Hot water pipes from water heater are insulated.	T F NA
Showers and faucets are fitted with energy-efficient shower heads and aerators.	T F NA	If located in an unheated area, hot water heater is wrapped in an insulation blanket.	T F NA
Showers last no longer than 5 minutes.	T F NA	Broom, not hose, is used to clean driveways and sidewalks.	T F NA
Toilets are low flow, or tanks use water displacement devices.	T F NA	Faucet is shut off while brushing teeth and shaving.	T F NA

Appliances

Dishwasher is usually run with a full load.	T F NA	Clothes dryer is usually run with a full load.	T F NA
Automatic air-dry is used with the dishwasher.	T F NA	Clothes are often hung up to dry.	T F NA
Washing machine is usually run with a full load.	T F NA	Refrigerator is set no lower than 37° F (3° C).	T F NA
Cold water is used in washing machine most of the time and is always used for rinses.	T F NA	Lids are usually put on pots when boiling water.	T F NA
		Oven is preheated for only 10 minutes (if at all).	T F NA

Lighting

Lights are turned off when not in use.	T F NA	Light bulbs are kept dusted and clean.	T F NA
LED bulbs are used in at least one room.	T F NA	Sunlight is used whenever possible.	T F NA
Security and decorative lighting is powered by solar energy.	T F NA		

Trash

Glass, cans and newspapers are recycled.	T F NA	Overpackaged products are usually avoided.	T F NA
Plastic is separated and recycled.	T F NA	Reusable bags are used for groceries, or bags are recycled.	T F NA
Old clothes are often given to charities, secondhand clothing stores, etc.	T F NA	Rechargeable batteries are used when possible.	T F NA
Food scraps and organic waste are composted.	T F NA	Food is often bought in bulk.	T F NA
		Products made of recycled materials are favored.	T F NA

Transportation

Car is properly tuned and tires properly inflated.	T F NA	Public transportation is used when possible.	T F NA
Family drivers obey speed limit on the highway.	T F NA	Family members often walk or ride a bike for short trips.	T F NA
Family drives an electric vehicle	T F NA	Kids and parents carpool when possible.	T F NA

Environment

Trees and bushes are maintained for wildlife shelter and food.	T F NA	Bird feeders or bird houses are maintained.	T F NA
		Native plants are used to decrease water use.	T F NA

Yard and Workshop

Lawns are watered early or late in the day.	T F NA	Cutting edges on tools are kept sharp.	T F NA
Grass is mowed to a height of 2 to 3 inches (5 to 8 cm).	T F NA	Electrical tools are maintained and gas equipment is kept tuned and serviced.	T F NA
Hand tools, like pruners and clippers (rather than power tools) are used whenever possible.	T F NA		

Score 1 point for True, 0 points for False and 0 points for Not Applicable (NA).

Total Points: _____

Discuss the results of this survey with your family.
What can you and your family do to raise your score?

Be wattsmart
Begin at home

Activity: Energy in Math

Objective
Students will interpret and evaluate numerical expressions as they solve word problems.

Materials
- Student Worksheet
- Individual White Boards (optional)

Key Vocabulary
Watt

Common Core Correlations
Numbers and Operations

Data Analysis and Probability

Connection to the Real World

Measurement

Introduction:

In this activity, students will complete the problem set found on the bottom of Page 22 within an allotted time (10 minutes). Students will solve the mathematical problems making connections to real world situations.

Procedure:

1. Instruct students on the importance of learning to solve real world problems using their math skills. You may want to review some steps to solving word problems before beginning the first problem. The following questions might be useful to review:
   - Can you draw something to help you?
   - What can you draw?
   - What conclusions can you make from your drawing?
2. Pass out the worksheet.
3. Model the problem.

   Have a pair of students work at the board while the others work independently or in pairs at their seats.

   As students work, circulate. Reiterate the questions above. After several minutes, have the demonstrating students receive and respond to feedback and questions from their peers if necessary.
4. Calculate to solve and write a statement.

   Give everyone two minutes to finish work on that question, sharing their work and thinking with a peer. All should write their equations and statements of the answer.
5. Assess the solution for reasonableness.

   Give students one to two minutes to assess and explain the reasonableness of their solution.

Discussion/Debrief

The student debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the problem set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed. Then guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

- What did you notice about this word problem?
- What is different in the problem?
- What are we trying to find out?
- How can we represent this part of the story? (draw, write a number, use manipulatives)
- What would help us organize our thinking and our work? (answers may vary: draw it out, act it out, write an equation, etc.)
- What strategies can we use to solve this problem?

To Know and Do More

Have your students turn in their worksheet showing their work to solve each problem. This will help you to assess your students' understanding of the math concepts presented in the lesson.

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 own bedroom 4 hours a day, and there are three people living there, how many Watts will be used a day to light the bedrooms?
   - 20 Watts
   - 240 Watts
   - 650 Watts
   - 720 Watts
4. For every 10 degrees the water heater setting is turned down, you can save 6% 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%

Answers: 1. Maggie, Michael, Jessie, Karen; 2. $284; 3. 720 Watts; 4. 9%

Be *watt*smart
Begin at h⌂me

Activity: Be *watt*smart, Begin at home Poster

Objective
Students will make their own energy- efficient choices that can be practiced at home to help future societies.

The students will also learn how they can be part of the solution to save energy and natural resources.

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

Key Vocabulary
Carbon footprint
Recycle
Energy efficient

Common Core Correlations
Energy Sources, Forms and Transformation

Personal and Social Perspectives

Research Tools

Problem-solving and Decision-making Tools

Connection to the Real World

Introduction:

This is a fun project for students to create after they have studied energy, energy efficiency and renewable and nonrenewable resources. Using the poster given, students will add or color the items listed below to create a house that is eco-friendly and energy efficient. You can help your students answer questions about what types of energy they can use and how it will work in the house to create efficiency and save energy.

Procedure:

1. Add or color the items listed below. You may want to do different items each day as you cover different topics: electricity, natural gas, water, etc.
    - Add a bicycle.
    - Add recycling bins in the garage.
    - Add 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, red.
    - 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.

To Know and Do More

- Have your students write a brief description of the things their family has done to improve energy efficiency at home. Have your students add any items that will encourage their families to be energy efficient in the future.
- Choose a natural resource used for energy and create a Venn diagram comparing the positive and negative effects of the use of this resource on the physical environment.


National
Energy
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cultivating energy literacy

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	Programmable or Smart 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
Programmable or Smart 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
Programmable or Smart Thermostat	Incandescent	Recycle	Uranium	Natural Resource
Reduce	78 Degrees	Embodied Energy	LED	Energy Efficiency

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L	I	N	G	O
Natural Resource	Water Heater	Natural Gas	Programmable or Smart 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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Dear Parents,

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

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

- **Be *watt*smart, Begin at home** booklet
- *Home Energy Worksheet*

Please take a moment to read through this informative booklet with your child. Then, fill out the *Home Energy Worksheet* in one of two ways:

- Visit thinkenergy.org/wattsmart and fill out an online worksheet. You will need to enter the teacher ID found on the paper worksheet.

  or

- Fill out the paper worksheet and return it to your child's teacher. To thank you, Rocky Mountain Power will provide your child with a wattsmart nightlight.

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

National Energy Foundation®
cultivating energy literacy

ROCKY MOUNTAIN POWER
POWERING YOUR GREATNESS

UT-ID-WY

Estimados padres,

Su hijo ha participado en el programa **Ser *watt*smart, Empieza en casa**, patrocinado por Rocky Mountain Power. En esta presentación atractiva, su hijo aprendió conceptos claves de su plan de estudios de ciencias, así como formas importantes para ser más eficiente con el uso de energía en el hogar.

Como parte del programa de **Ser *watt*smart, Empieza en casa**, su hijo recibirá:

- El folleto de **Ser *watt*smart, Empieza en casa**
- *Verificación de Energía Doméstica*

Tome un momento para leer el folleto informativo con su hijo. Luego, complete la *Verificación de Energía Doméstica* de una de estas maneras:

- Visite thinkenergy.org/wattsmart para rellenar el formulario en línea. Necesitará entrar el número de identificación de su profesor que se encuentra en el formulario de papel.

  o

- Rellenar el formulario y devolverlo al profesor de su hijo. Para agradecerle, Rocky Mountain Power le proporcionará a su hijo una luz de noche.

Apreciamos sus esfuerzos para reforzar la importancia del **Ser *watt*smart, Empieza en casa** de la energía y los acciónes eficientes en el hogar.

National Energy Foundation®
cultivating energy literacy

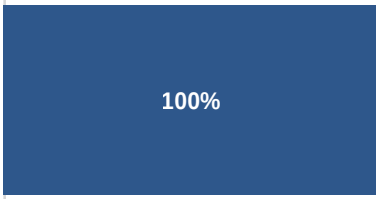
ROCKY MOUNTAIN POWER
POWERING YOUR GREATNESS

UT-ID-WY

*Watt*smart Rocky Mountain Power Idaho program

Program Evaluation Summary

Educators' impressions of the program from 10 educators.

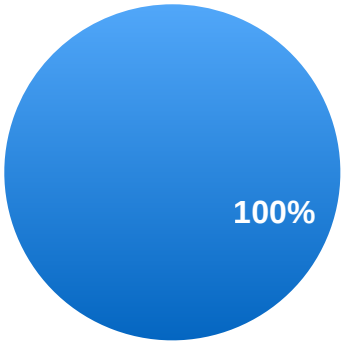
	Strongly Agree	Agree	Disagree	Strongly Disagree	
Materials were attractive and easy to use.	8	2	0	0	
Materials and activities were well received by students.	9	1	0	0	
Materials were clearly written and well organized.	10	0	0	0	
Presenters were able to keep students engaged and attentive.	10	0	0	0	
Overall program	9	1	0	0	

Program Evaluation Summary

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

Yes	No
10	0

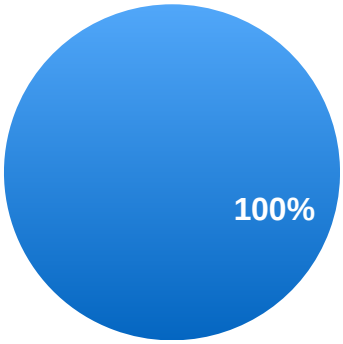
Yes No



Would you recommend this program to other colleagues?

Yes	No
10	0

Yes No



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

The videos were very well done this year, and incorporating more students in the lighting the bulb was fun!!
the night lights
Lively presentation and engaging Lingo
They loved the circuit made with a human circle.
Making the completed electrical circuit
lingo game and hands on activities
The students learned a lot in an interesting way.
Hands on activities
The kids really liked the current activity when they held hands to determine if aluminum foil was a conductor.
How interactive and engaging it is.

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

It's perfect! Thank you
Nothing
I liked it in small groups better.
fewer students in the presentation
nothing
Smaller groups...
Length of presentation- this was my fault though because we only have a short amount of time in which to present.
When talking about how power is generated, help students understand that magnetism and a coil of wire (one of the forementioned spinning) must be present to generate electricity.

Home Energy Worksheet (English)

Be *watt*smart
Begin at h⊙me

Teacher ID: _____

Teacher Name: _____

Student First Name: _____

Home Energy Worksheet

Heating

1. Install and use a programmable or smart 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. In the summer, set thermostat to 78ºF or higher.
   ☐ Currently do ☐ Will do
   ☐ Neither

Water heating

9. Set the water heater temperature to 120ºF.
   ☐ Have done ☐ Will do
   ☐ Neither
10. Install a high-efficiency shower head.
    ☐ 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 inefficient bulbs with 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, slow cooker or outdoor grill instead of a conventional oven.
    ☐ Currently do ☐ Will do
    ☐ Neither

Get paid for being *watt*smart

20. Visit Pacific Power at bewattsmart.com for more energy saving tips and rebates.
    ☐ Have done ☐ Will do
    ☐ Neither

National Energy Foundation
cultivating energy literacy

ROCKY MOUNTAIN POWER
POWERING YOUR GREATNESS

Submit online at thinkenergy.org/wattsmart

WAT ID

Home Energy Worksheet (Spanish)

Ser *watt*smart
Empieza en casa

Identificación del profesor(a): _____

Nombre del profesor(a): _____

Primer nombre del estudiante: _____

Verificación de Energía Doméstica

Calefacción

1. Instalar y usar un termostato programable o termostato inteligente.
   ☐ 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 están expuestas al sol.
   ☐ Lo hago ☐ Lo haré ☐ Ninguno
7. Usar un ventilador en lugar del aire acondicionado.
   ☐ Lo hago ☐ Lo haré ☐ Ninguno
8. En el verano, ajustar el termostato a 78ºF o más.
   ☐ Lo hago ☐ Lo haré ☐ Ninguno

Calentadores de agua

9. Ajustar el calentador de agua a 120ºF.
   ☐ Lo he hecho ☐ Lo haré ☐ Ninguno
10. Instalar un 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 ineficientes con focos LED.
    ☐ Lo he hecho ☐ Lo haré ☐ Ninguno
14. Apagar las luces cuando no estén en uso.
    ☐ Lo hago ☐ Lo haré ☐ Ninguno

Refrigerador

15. Reemplazar el refrigerador viejo e ineficiente con un modelo de ENERGY STAR®.
    ☐ Lo he hecho ☐ Lo haré ☐ Ninguno
16. Desenchufar refrigeradores/congeladores viejos y/o desecharlos de una manera ambientalmente segura.
    ☐ Lo he hecho ☐ Lo haré ☐ Ninguno
17. Mantener las bobinas del refrigerador y del congelador e inspeccionar el sello de las puertas 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 una parrilla de aire libre en lugar del horno convencional.
    ☐ Lo hago ☐ Lo haré ☐ Ninguno

Reciba paga siendo *watt*smart

20. Visite Pacific Power en bewattsmart.com para obtener consejos adicionales y rebajas de ahorro de energía.
    ☐ Lo he hecho ☐ Lo haré ☐ Ninguno

National Energy Foundation
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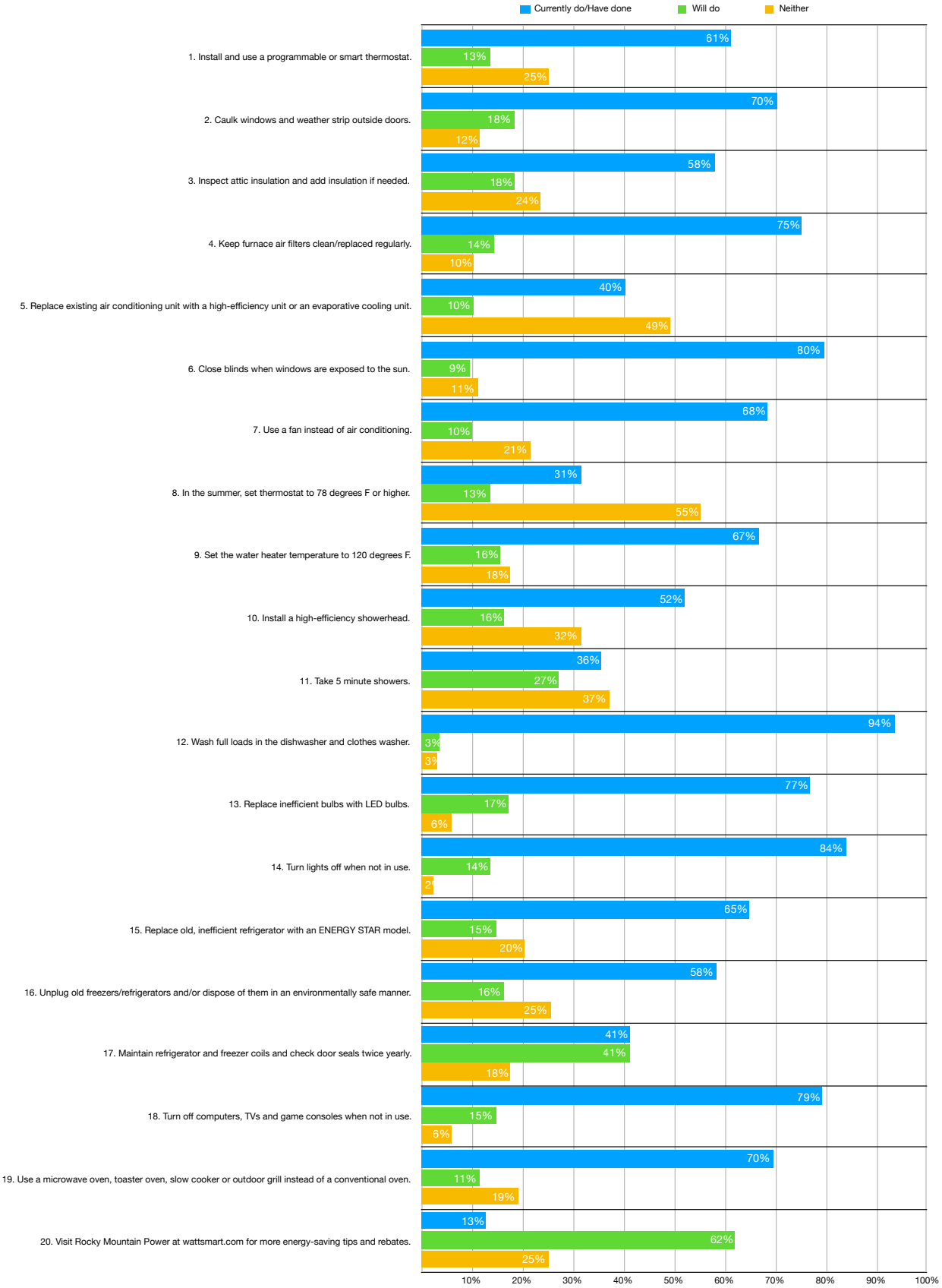
ROCKY MOUNTAIN POWER
POWERING YOUR GREATNESS

Enviar en línea a thinkenergy.org/wattsmart

WAT ID

Home Energy Worksheet Summary – Rocky Mountain Power

Energy Efficient Activity	Currently do/Have done	Will do	Neither
1. Install and use a programmable or smart thermostat.	61%	13%	25%
2. Caulk windows and weather strip outside doors.	70%	18%	12%
3. Inspect attic insulation and add insulation if needed.	58%	18%	24%
4. Keep furnace air filters clean/replaced regularly.	75%	14%	10%
5. Replace existing air conditioning unit with a high-efficiency unit or an evaporative cooling unit.	40%	10%	49%
6. Close blinds when windows are exposed to the sun.	80%	9%	11%
7. Use a fan instead of air conditioning.	68%	10%	21%
8. In the summer, set thermostat to 78 degrees F or higher.	31%	13%	55%
9. Set the water heater temperature to 120 degrees F.	67%	16%	18%
10. Install a high-efficiency showerhead.	52%	16%	32%
11. Take 5 minute showers.	36%	27%	37%
12. Wash full loads in the dishwasher and clothes washer.	94%	3%	3%
13. Replace inefficient bulbs with LED bulbs.	77%	17%	6%
14. Turn lights off when not in use.	84%	14%	2%
15. Replace old, inefficient refrigerator with an ENERGY STAR model.	65%	15%	20%
16. Unplug old freezers/refrigerators and/or dispose of them in an environmentally safe manner.	58%	16%	25%
17. Maintain refrigerator and freezer coils and check door seals twice yearly.	41%	41%	18%
18. Turn off computers, TVs and game consoles when not in use.	79%	15%	6%
19. Use a microwave oven, toaster oven, slow cooker or outdoor grill instead of a conventional oven.	70%	11%	19%
20. Visit Rocky Mountain Power at wattsmart.com for more energy-saving tips and rebates.	13%	62%	25%


Currently do/Have done
Will do
Neither
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61%
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18%
12%
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24%
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14%
10%
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10%
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9%
11%
7. Use a fan instead of air conditioning.
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21%
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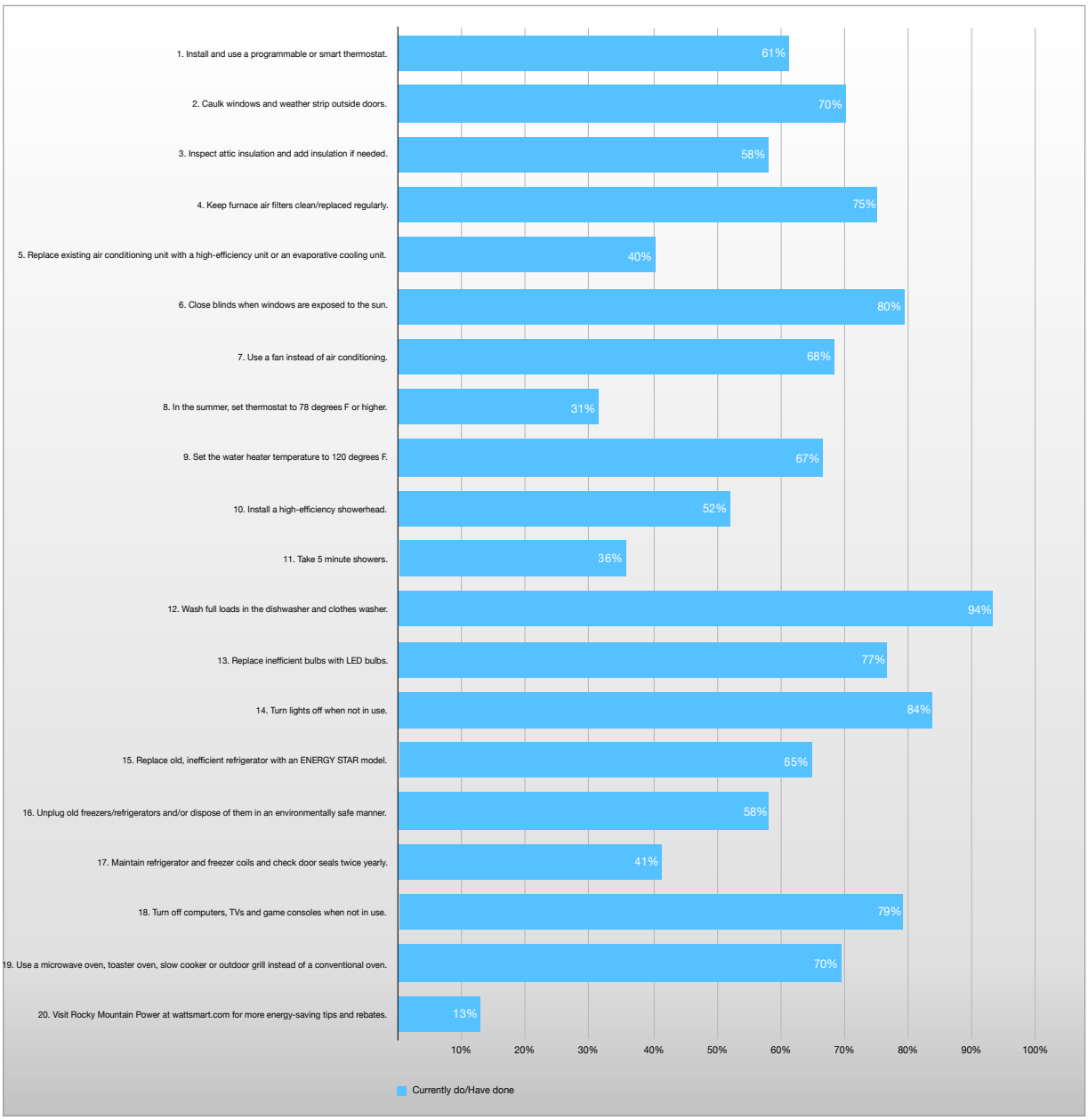
13%
62%
25%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

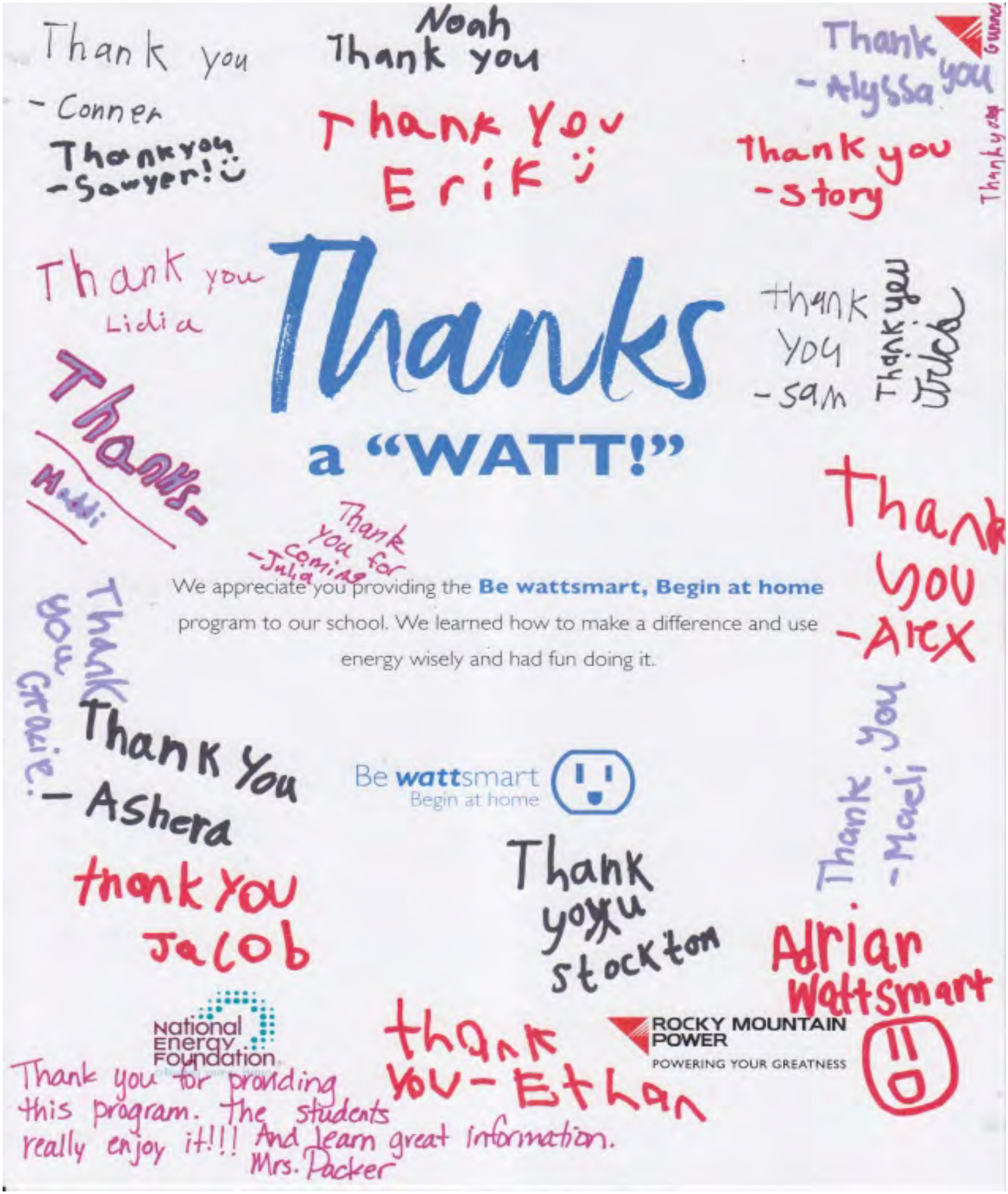
Data Numbers

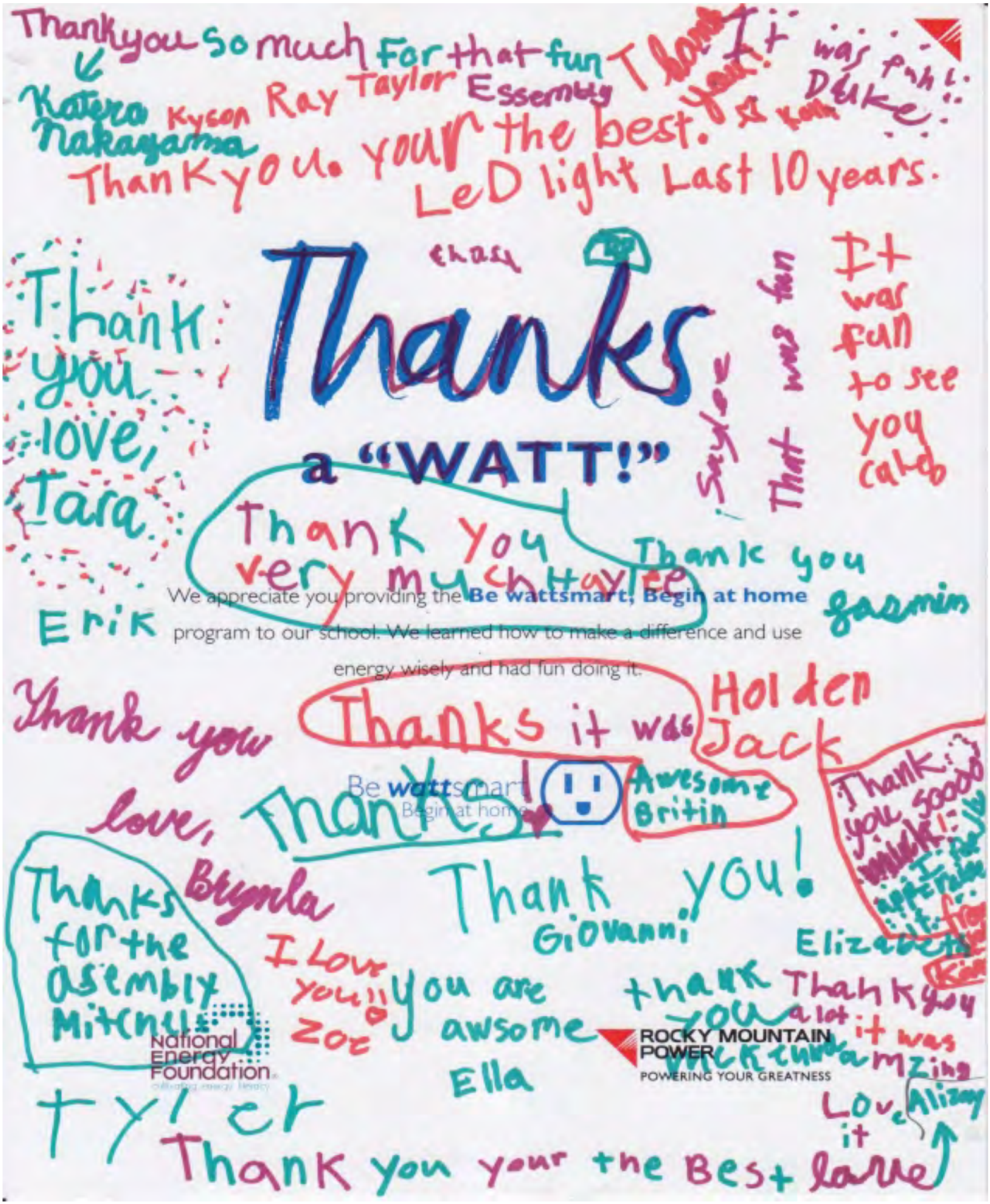
Energy Efficient Activity	Currently do/Have done	Will do	Neither	Total Responses
1. Install and use a programmable or smart thermostat.	793	174	328	1295
2. Caulk windows and weather strip outside doors.	906	234	149	1289
3. Inspect attic insulation and add insulation if needed.	741	236	301	1278
4. Keep furnace air filters clean/replaced regularly.	970	183	134	1287
5. Replace existing air conditioning unit with a high-efficiency unit or an evaporative cooling unit.	515	132	630	1277
6. Close blinds when windows are exposed to the sun.	1024	121	142	1287
7. Use a fan instead of air conditioning.	880	129	276	1285
8. In the summer, set thermostat to 78 degrees F or higher.	399	171	703	1273
9. Set the water heater temperature to 120 degrees F.	861	203	228	1292
10. Install a high-efficiency showerhead.	673	212	407	1292
11. Take 5 minute showers.	462	354	482	1298
12. Wash full loads in the dishwasher and clothes washer.	1214	44	40	1298
13. Replace inefficient bulbs with LED bulbs.	990	223	76	1289
14. Turn lights off when not in use.	1075	175	32	1282
15. Replace old, inefficient refrigerator with an ENERGY STAR model.	840	189	264	1293
16. Unplug old freezers/refrigerators and/or dispose of them in an environmentally safe manner.	751	209	328	1288
17. Maintain refrigerator and freezer coils and check door seals twice yearly.	533	529	227	1289
18. Turn off computers, TVs and game consoles when not in use.	1028	189	79	1296
19. Use a microwave oven, toaster oven, slow cooker or outdoor grill instead of a conventional oven.	897	147	245	1289
20. Visit Rocky Mountain Power at wattsmart.com for more energy-saving tips and rebates.	166	803	323	1292

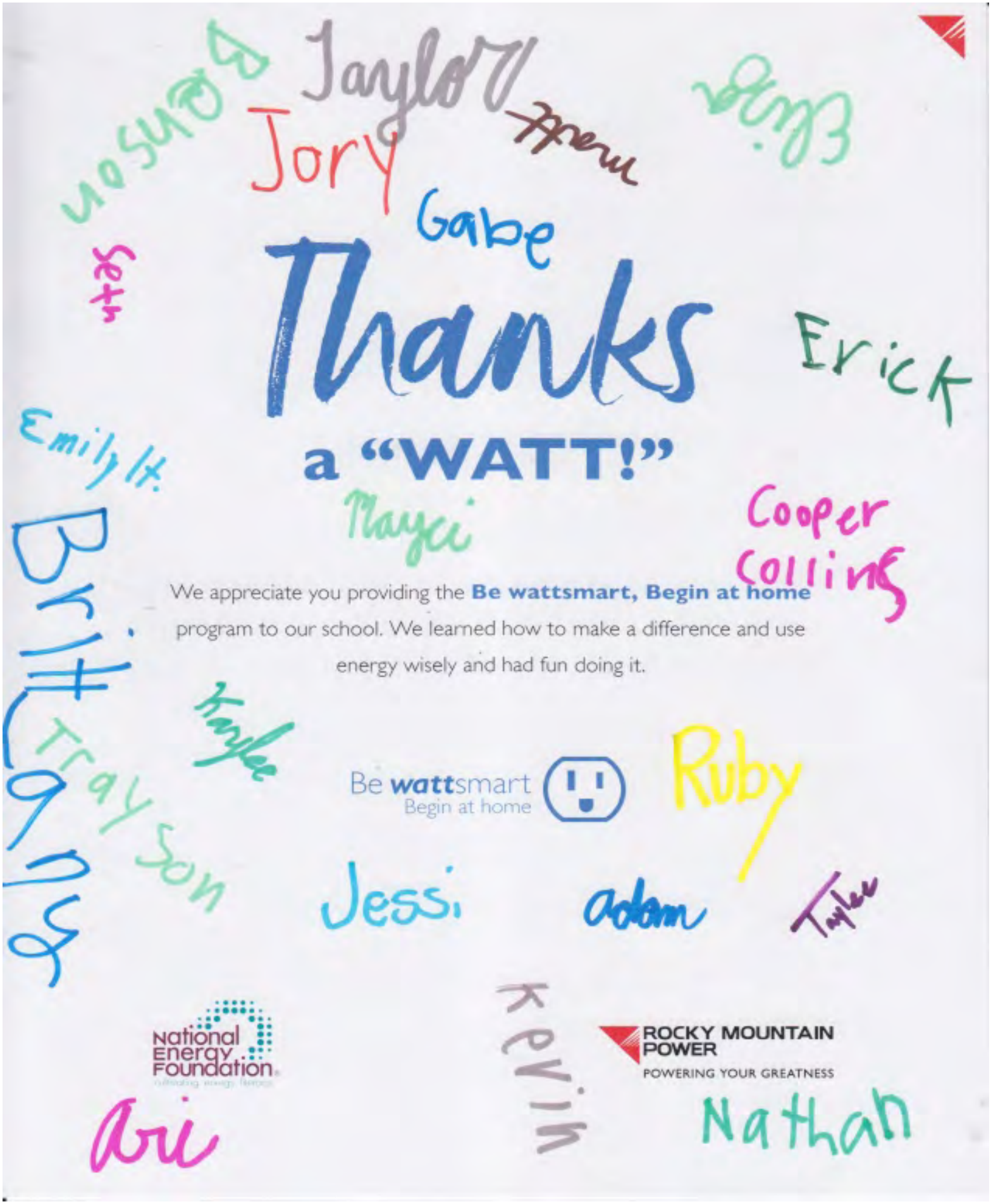
Wise Energy Behaviors in Rocky Mountain Power Idaho Homes

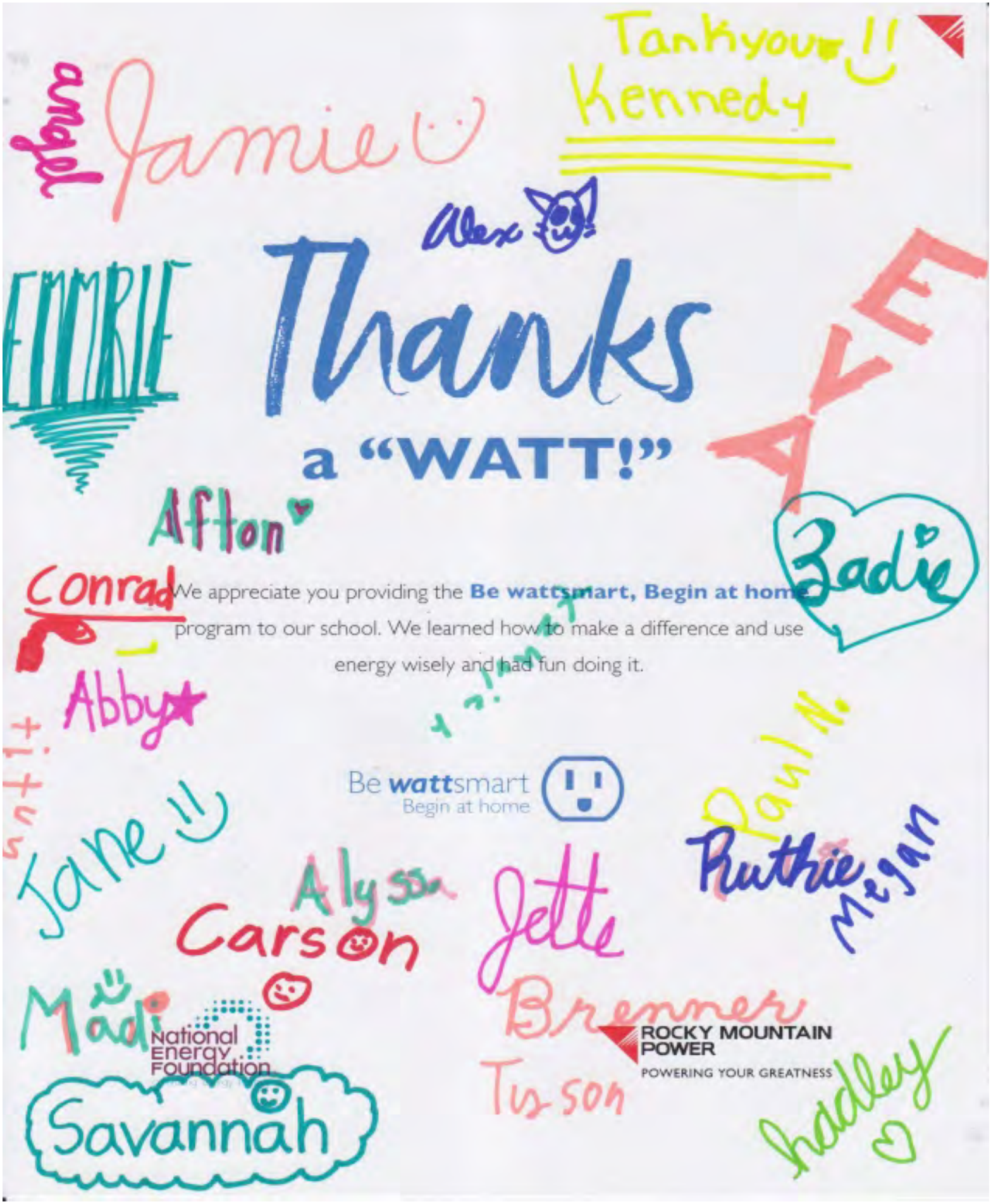


Sampling of *Thanks a "WATT" Cards*








Tankyou!!
Kennedy
angel
Jamie
Alex
Thanks
a "WATT!"
AVE
Afton
Conrad
Sadie
We appreciate you 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.
Abby
Be wattsmart
Begin at home
Jane
Paul N.
Ruthie
Megan
Alyssa
Carson
Jette
Madi
National Energy Foundation
Brenner
ROCKY MOUNTAIN POWER
POWERING YOUR GREATNESS
Tyson
Savannah
Hadley