

March 31, 2015

***VIA ELECTRONIC FILING
AND OVERNIGHT DELIVERY***

Washington Utilities and Transportation Commission
1300 S. Evergreen Park Drive SW
P.O. Box 47250
Olympia, WA 98504-7250

Attn: Steven V. King
Executive Director and Secretary

RE: 2014 Annual Report on Conservation Acquisition

Dear Mr. King:

Pacific Power & Light Company, a division of PacifiCorp (Pacific Power), submits for filing an original and two copies of the 2014 Annual Report on Conservation Acquisition for the year ended December 31, 2014.

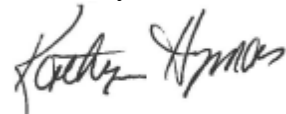
Pacific Power respectfully requests that all data requests regarding this matter be addressed to:

By email (preferred): datarequest@pacificorp.com

By regular mail: Data Request Response Center
PacifiCorp
825 NE Multnomah Street, Suite 2000
Portland, OR 97232

Informal questions should be directed to Natasha Siores, Director Regulatory Affairs & Revenue Requirement, at (503) 813-6583.

Sincerely,



Kathryn Hymas
Vice President of Finance and Demand Side Management

Enclosures



Washington Annual Report on Conservation Acquisition



January 1, 2014 – December 31, 2014

Issued March 31, 2015



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List of Abbreviations and Acronyms

CFL	Compact Fluorescent Lighting
DSM	Demand-side Management
Schedule 191	Schedule 191 System Benefits Charge Adjustment
EM&V	Evaluation, Measurement & Verification
EPA	Environmental Protection Agency
GWh	Gigawatt-hour(s)
HVAC	Heating, Ventilation and Air Conditioning
IRP	Integrated Resource Plan
kWh	Kilowatt-hour
LEDs	Light-emitting Diode
NEEA	Northwest Energy Efficiency Alliance
NEF	National Energy Foundation
NTG	Net-to-Gross
PCT	Participant Cost Test
PTRC	PacifiCorp Total Resource Cost test
RIM	Ratepayer Impact Measure test
SBC	System Benefit Charge
SYLR	See ya later, refrigerator®
TRC	Total Resource Cost test
TRL	Technical Resource Library
UCT	Utility Cost Test
VFD	Variable-Frequency Drive

Executive Summary

Pacific Power & Light Company, a division of PacifiCorp (“Company”), works with its customers to reduce the need for investment in supply side resources and infrastructure by reducing energy and peak consumption through cost-effective energy efficiency programs.

In 2014, the Company offered five energy efficiency programs in Washington approved by the Washington Utilities and Transportation Commission (“Commission”), and received energy savings and market transformation benefits through its affiliation with the Northwest Energy Efficiency Alliance (“NEEA”). The expenditures associated with these programs are recovered through the System Benefits Charge Adjustment, Schedule 191 (“Schedule 191”).

This report provides details on program results and activities, expenditures, and Schedule 191 revenue for the performance period from January 1, 2014, through December 31, 2014. The Company, on behalf of its customers, invested \$11.6m in energy efficiency information, services, and incentives during the reporting period. The investment yielded approximately 55.3 gigawatt-hours (“GWh”) in first year savings¹ and approximately 8.5 megawatts of energy efficiency savings related capacity reductions². Net benefits over the life of the individual measures are estimated at \$13.5m³. The cost effectiveness of the Company’s Washington energy efficiency program portfolio from various perspectives is provided in Table 1.

Table 1
Cost Effectiveness for the Portfolio⁴

	B/C Ratio with NEEA	B/C Ratio without NEEA
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits ⁵	1.73	1.66
Total Resource Cost Test – effects on both participants and non-participants ⁶	1.58	1.51
Utility Cost Test – effect on customers ⁷	2.47	2.53
Participant Cost Test – effect on participants ⁸	3.10	2.84
Ratepayer Impact – effect on the cost per kilowatt-hour of sales	0.67	0.68

¹ Gross reported savings at generation.

² See Appendix 1 for explanation on how the capacity contribution savings values are calculated.

³ See Appendix 2 – Total Resource Cost Test plus 10% Net Benefits including NEEA and Non-Energy Benefits.

⁴ Ratios include NEEA’s savings and Non-Energy Benefits but excludes portfolio level expenses i.e. the costs of the potential study and development of measure assumption database consistent with the Company’s EM&V Framework.

⁵ The PTRC includes the 10% Northwest Regional Credit allowed in Washington.

⁶ The TRC compares the total cost of a supply side resource to the total cost of energy efficiency resources, including costs paid by the customer in excess of the program incentives. The test is used to determine if an energy efficiency program is cost effective from a total cost perspective.

⁷ The UCT compares the total cost incurred by the utility to the benefits associated with displacing or deferring supply side resources.

⁸ The PCT compares the portion of the resource paid directly by participants to the savings realized by the participants.

All cost effectiveness calculations will assume a net-to-gross (“NTG”) of 1.0 consistent with the Northwest Power and Conservation Council’s methodology. Annual performance information for 2014 is provided in detail in Appendix 2.

The portfolio was cost effective based on four of the five standard cost effectiveness tests for the reporting period. The ratepayer impact measure test⁹ was less than 1.0 indicating near-term upward pressure was placed on the price per kilowatt-hour given a reduction in sales.

The Company, working with its third-party program delivery administrators,¹⁰ collaborated with the following number of retailers, contractors and vendors in the delivery of its energy efficiency programs in the state of Washington:

Table 2
Energy Efficiency Infrastructure

Sector	Type	No.
Residential	Lighting Retailers	20
	Appliances Retailers	17
	HVAC Contractors	58
	Weatherization Contractors	23
	Low Income Agencies	3
Commercial and Industrial	Lighting Trade Allies	55
	HVAC Trade Allies	24
	Motors Trade Allies	34
	Engineering Firms	22

⁹ The RIM examines the impact of energy efficiency expenditures on non-participating ratepayers overall. Unlike supply-side investments, energy efficiency programs reduce energy sales. Reduced energy sales can lower revenue requirements (see UCT) while putting upward pressure on rates as the remaining fixed costs are spread over fewer kilowatt-hours.

¹⁰ See program specific information for backgrounds on third party administrators.

Regulatory Activities

During the reporting period the Company requested and received Commission approval and/or submitted to regulatory or reporting entities the following:

- Initiative 937 compliance plans and reports from Order 01, Docket No. UE-111880
 - 2013 Annual Report on Conservation Acquisition, filed March 31, 2014.
 - System Benefit Charge Adjustment increasing annual revenue by approximately \$60,000, filed May 1, 2014 in Docket No. UE-140761 requesting an effective date of July 1, 2014. On June 19, 2014 the Company filed a letter and revised tariff sheets requesting no change to the current approved rates given the small magnitude of the originally proposed rate change with an effective date of July 1, 2014.
 - 2012-2013 Conservation Achievement and Commerce Report submitted May 30, 2014 and a revised report which corrected minor errors submitted July 1, 2014.
- Modification to Home Energy Savings Program – Schedule 118, effective January 1, 2014, utilizing the program’s flexible tariff and 45 day change noticing provision, no filing was required. The modifications were for alignment with the Company’s 2014-2015 Business Plan, to align measures, savings, and incentives with current industry standards, and to clarify requirements for incentive application submission deadlines.
- Tariff updates to expand the Residential Refrigerator Recycling Program – Schedule 107, to include all customer classes, was filed February 28, 2014 and approved effective April 1, 2014.
- Washington Conservation Hearing on July 25, 2014 in Docket UE-111880 on Pacific Power’s compliance with requirements pursuant to WAS 480-109-040 and Order 01 in docket UE-111880 and to recognize the achievement of 111,923 megawatt-hours of conservation during the 2012 - 2013 biennium.
- Request filed on August 20, 2014 to expand and extend the Home Energy Reports Program. Filed a letter on August 28, 2014 to move the effective date included in the original filing from September 5, 2014 to September 12, 2014. The filing was approved September 11, 2014 with an effective date of September 12, 2014.
- Modification to Non-Residential Energy Efficiency Program – Schedule 140, effective October 1, 2014, utilizing the program’s flexible tariff and 45 day change noticing provision, no filing was required. Modifications included expanding the program to include an enhanced incentive offer for small business customers, updating the retrofit lighting incentive table, and other minor improvements.
- 2014-2015 Washington Business Plan Update was filed October 31, 2014 in Docket No. UE-132047. The Business Plan Update was acknowledged pursuant to the No Action Agenda during the December 30, 2014 open meeting.

Advisory Group Activities

Consistent with the conditions set forth in Docket No. UE-132047, Order 01, Paragraph 3(a), the Company seeks input regarding its energy efficiency programs from its Washington Demand-Side Management Advisory Group (“DSM Advisory Group”). This group includes

representatives from a variety of constituent organizations. The Company collaborated with its DSM Advisory Group throughout 2014 on the following matters:

February 10, 2014

- Reviewed the See ya later, refrigerator® and Home Energy Savings program evaluations;
- Provided an overview of the upcoming evaluation schedule;
- Provided a development review and requested input on the Company's Conservation Potential Assessment;
- Presented proposed changes and sought input to small business lighting offering;
- Presented proposed expansion options for the Home Energy Reports program;
- Discussed the proposed 2014 outreach plan;
- Provided miscellaneous updates on:
 - DSM Central
 - Business Plan Updates
 - Savings Verification Report.

April 28, 2014

- Reviewed the 2013 Annual Report;
- Presented the May 1st System Benefits Charge analysis;
- Reviewed the preliminary verification results of the 2012-2013 Biennial Report;
- Discussed updates and requested feedback on the Company's EM&V Framework;
- Provided a status update of the evaluation, expansion, and extension of the Home Energy Reports program; sought advice and recommendation on proposed expansion;
- Provided an update and solicited feedback on the 2014 Conservation Potential Study.

July 31, 2014

- Presented the 2012-2013 Biennial Conservation Report results;
- Provided an update of EPA 111(d);
- Reviewed the Home Energy Reports Evaluation;
- Provided a status update of the Home Energy Reports Expansion;
- Reviewed Third Party Verification of Savings for 2012-2013;
- Reviewed SOW for 2014-2015 Verification of Savings;
- Presented proposal for and solicited feedback on proposed Small Business Lighting offer;
- Discussed proposed changes to the See ya later, refrigerator® program;
- Reviewed proposed methodology and solicited feedback for reporting against a frozen and floating baseline for 2014-2015 biennial period;
- Provided update on development of the 2015 Conservation Potential Assessment including review of scope of work and initial findings;
- Provided an update on EMV Framework.

October 30, 2014

- Provided a demo of TRL and DSM Central;
- Provided an update evolving EPA 111(d) learnings;
- Reviewed the Production Efficiency Work Plan and Progress Report;
- Presented and requested feedback on the proposed 2015 outreach plan;

- Presented and requested feedback on the midstream commercial LED lamp offer;
- Discussed proposed changes to the See ya later, refrigerator® program;
- Reviewed the November 1 Business Plan Update;
- Provided an updated on the 2013 IRP Action Plan;
- Discussed need to reinstate provision for the re-payment of incentives from customers that leave service;
- Provided an update on DSM organization personnel.

System Benefits Charge Balancing Account Summary

Demand-side management activities are funded through Schedule 191, the System Benefits Charge Adjustment collections. Expenditures are charged as incurred and collected through the Systems Benefit Charge. The balancing account is the mechanism used for managing the revenue collected and expenses incurred in the provision of DSM resources. As noted in the Regulatory Section of this report, the Company requested no change to the current approved rates in 2014. The balancing account activity for 2014 is outlined in Table 3. The end of year balance in the balancing account, on an accrual basis, was an under-collection of expenses of \$1.1 million (monies owed the Company).

Table 3
System Benefit Charge Balancing Account Summary

State of Washington					
SBC Summary -- Balancing Account					
	Deferred	Schedule 191	Accumulative	Monthly Net	Accrual Basis
	Expenditures	Revenue	Balance	Accrued Costs	Accumulative
		Collected			Balance
Balance as of 12/31/13			(\$787,468)	\$290,118	(\$497,350)
Jan-14	\$546,882	(\$1,199,506)	(\$1,440,092)	\$50,684	(\$1,099,290)
Feb-14	\$553,801	(\$852,251)	(\$1,738,542)	\$91,479	(\$1,306,261)
Mar-14	\$918,815	(\$846,267)	(\$1,665,994)	\$6,846	(\$1,226,866)
Apr-14	\$546,585	(\$721,911)	(\$1,841,320)	(\$52,825)	(\$1,455,017)
May-14	\$550,919	(\$708,222)	(\$1,998,623)	\$49,038	(\$1,563,282)
Jun-14	\$1,067,563	(\$781,528)	(\$1,712,588)	(\$33,651)	(\$1,310,899)
Jul-14	\$587,135	(\$829,681)	(\$1,955,134)	\$121,941	(\$1,431,504)
Aug-14	\$716,476	(\$987,637)	(\$2,226,295)	\$209,893	(\$1,492,772)
Sep-14	\$948,745	(\$869,698)	(\$2,147,247)	\$64,255	(\$1,349,469)
Oct-14	\$799,504	(\$785,294)	(\$2,133,037)	\$25,574	(\$1,309,685)
Nov-14	\$1,190,243	(\$830,779)	(\$1,773,574)	\$62,166	(\$888,055)
Dec-14	\$2,558,602	(\$1,050,575)	(\$265,546)	\$457,509	\$1,077,481
Total 2014	\$10,985,271	(\$10,463,349)		\$1,343,028 *	

* December 2014 accrual

Column Explanations:

Deferred Expenditures: Monthly expenditures for all program activities posted in 2014, including funding for the Northwest Energy Efficiency Alliance.

Revenue Collected: Revenue collected through Schedule 191, System Benefits Charge Adjustment.

Carrying Charge: On July 29, 2010 in Docket UE-001457, the Commission ordered that the one-way carrying charge on negative balances (balances owing to customers) be eliminated going forward.

Accumulative Balance: A running total of account activities on a “cash” basis. A negative accumulative balance means cumulative revenue exceeds cumulative expenditures; positive accumulative balance means cumulative expenditures exceed cumulative revenue.

Monthly Net Accrued Costs: Two accrual entries are made each month for expenditures of energy efficiency programs. One estimates the incurred cost not yet processed, and the other reverses the estimate from the previous month. The amount shown here is the net of the two entries.

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.¹¹ The plan presents a framework of future actions to ensure the Company continues to provide reliable, reasonable-cost service with manageable risks to the Company’s customers. Energy efficiency and peak management opportunities are incorporated into the IRP based on their availability, characteristics and costs.

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

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

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

As technical support for the IRP, a third-party demand-side resource potential assessment (Potentials Assessment) is conducted to estimate the magnitude, timing and cost of energy efficiency and peak management resources.¹² The main focus of the Potentials Assessment is on resources with sufficient reliability characteristics that are anticipated to be technically feasible and assumed achievable during the IRP’s 20-year planning horizon. The estimated achievable energy efficiency potential identified in the 2015 Potentials Assessment for Washington is 948

¹¹ Information on the Company’s integrated resource planning process can be found at the following address:

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

¹² PacifiCorp Demand-Side Resource Potential Assessment For 2015-2034, <http://www.pacificorp.com/es/dsm.html>.

GWh by 2034, or 21 percent of projected baseline loads.¹³ By definition this is the energy efficiency potential that may be achievable to acquire during the 20-year planning horizon; prior to screening for cost-effectiveness through the Company's integrated resource planning process.

The achievable technical potential of Class 2 (energy efficiency) resources for Washington by sector is shown in Table 4. The 2015 Potentials Assessment indicates that approximately 9 percent of the achievable technical potential for the Company, excluding Oregon,¹⁴ is available within its Washington service area.¹⁵

Table 4
Washington Energy Efficiency Achievable Technical Potential by Sector

Sector	Cumulative GWh in 2034	Percent of Baseline Sales
Residential	392	21%
Commercial	395	26%
Industrial	145	13%
Irrigation	13	9%
Street Lighting	3	30%

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

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

- Utah utilizes the Utility Cost Test (UCT) as the primary determination of cost effectiveness.
- Idaho, Oregon, and Washington utilize the Total Resource Cost (TRC) test and consider the inclusion of quantifiable non-energy benefits.
- Oregon and Washington, in addition to considering quantifiable non-energy benefits, apply an additional 10% benefit to account for non-quantifiable externalities, consistent with the Northwest Power Act.

Unless specified, the Total Resource Cost test is utilized as the primary determination of cost effectiveness in the resource planning process. However, the Company evaluates program implementation cost-effectiveness (both prospectively and retrospectively) under a variety of

¹³ Ibid, Volume 2, page 4-2.

¹⁴ Oregon energy efficiency potentials assessments are performed by the Energy Trust of Oregon.

¹⁵ Volume 1, Page 4-2, PacifiCorp Demand-Side Resource Potential Assessment for 2015-2034.

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.

Energy Efficiency Programs

Energy efficiency programs were offered to all major customer sectors: residential, commercial, industrial and agricultural. The overall energy efficiency portfolio included five programs: *Home Energy Savings*, Schedule 118; *Home Energy Reports*; *Residential Refrigerator Recycling*, Schedule 107; *Low Income Weatherization*, Schedule 114; and *Non-Residential Energy Efficiency (wattsmart® Business)*, Schedule 140. In addition to the energy efficiency programs, the Company, on behalf of customers, invested in outreach and education for the purpose of promoting the efficient use of electricity and improving program performance. Results for 2014 are provided in Table 6.

Table 6
Washington Results January 1, 2014 – December 31, 2014

Program	kWh/Yr Savings (at site)	kWh/Yr Savings (at generator)	aMW Savings (at gen)	Systems Benefits Charge Expenditures
Low Income Weatherization (114)	156,456	171,585	0.02	\$ 698,964
Refrigerator Recycling (107)	667,926	732,514	0.08	\$ 173,384
Home Energy Savings (118)	12,757,968	13,991,663	1.60	\$ 2,243,020
Home Energy Reporting	4,670,171	5,121,777	0.58	\$ 274,248
Total Residential Programs	18,252,521	20,017,540	2.29	\$ 3,389,616
wattsmart Business Agricultural (140)	878,485	963,434	0.11	\$ 108,898
wattsmart Business Commercial (140)	9,409,037	10,305,812	1.18	\$ 1,684,912
wattsmart Business Industrial (140)	15,684,832	16,964,871	1.94	\$ 2,816,814
Wattsmart Business Portfolio				\$ 1,180,687
Total Business Programs	25,972,354	28,234,118	3.22	\$ 5,791,311
Northwest Energy Efficiency Alliance	6,400,566	7,015,950	0.80	\$ 1,174,914
Total	50,625,441	55,267,608	6.31	\$ 10,355,841
School Energy Education				\$ 58,260
Outreach and Communication				\$ 249,791
Portfolio Level Expenditures (DSM Central, evaluation, potential study & TRD)				\$ 901,637
Portfolio DSM Central - \$48,091				
Portfolio Evaluation - \$786,875				
Portfolio Potential Study - \$57,029				
Portfolio Technical Reference Library - \$9,642				
Total System Benefits Charge expenditures				\$ 11,565,528

The Company, consistent with requirements under Docket UE-132047, Order 01, Attachment A Paragraph (8)(b), provides Table 7 which compares the Company's 2014 Business Plan budget filed on November 1, 2013 as Appendix 7 to the 2014 Biennial Conservation Plan, to actual 2014 program performance.

In 2014, the Company delivered preliminary results of 55,267,608 kWh in first year energy savings against the 2013 business plan forecast savings of 44,936,318 kWh, a positive variance of approximately 23 percent. The largest variances from plan were due to the following:

- Higher than planned savings from Home Energy Savings program due to the *wattsmart*[®] starter kits, and
- Higher than planned industrial sector participation.

Table 7: Washington Business Plan Budget¹⁶ compared to Actual¹⁷

Program	2014 PacifiCorp Washington Business Plan Budget				2014 PacifiCorp Washington DSM Actual			
	kWh/Yr Savings (at site)	kWh/Yr Savings (at generator)	Gross aMW Savings (at gen)	Estimated Systems Benefit Expenditures	kWh/Yr Savings (at site)	kWh/Yr Savings (at generator)	Gross aMW Savings (at gen)	Systems Benefits Charge Expenditures
Low Income Weatherization (114)	267,156	292,990	0.03	\$ 919,500	156,456	171,585	0.02	\$ 698,964
Refrigerator Recycling (107)	900,915	988,033	0.11	\$ 238,382	667,926	732,514	0.08	\$ 173,384
Home Energy Savings (118)	7,312,374	8,019,481	0.92	\$ 1,772,063	12,757,968	13,991,663	1.60	\$ 2,243,020
Home Energy Reporting (N/A)	5,078,730	5,569,843	0.64	\$ 144,000	4,670,171	5,121,777	0.58	\$ 274,248
Total Residential Programs	13,559,175	14,870,347	1.70	\$ 3,073,945	18,252,521	20,017,540	2.29	\$ 3,389,616
wattSmart Business (140) - Commercial	10,206,531	11,179,315	1.28	\$ 2,352,790	9,409,037	10,305,812	1.18	\$ 2,380,163
wattSmart Business (140) - Industrial	10,776,511	11,655,982	1.33	\$ 2,484,180	15,684,832	16,964,871	1.94	\$ 3,250,447
wattSmart Business (140) - Agricultural	126,203	138,407	0.02	\$ 29,092	878,485	963,434	0.11	\$ 160,700
Total Business Programs	21,109,245	22,973,704	2.62	\$ 4,866,062	25,972,354	28,234,118	3.22	\$ 5,791,311
Production Efficiency	3,371	3,371	0.00	\$ 962			0.00	
Northwest Energy Efficiency Alliance	6,468,181	7,088,896	0.81	\$ 1,249,843	6,400,566	7,015,950	0.80	\$ 1,174,914
Total Other Conservation Initiatives	6,471,552	7,092,267	0.81	\$ 1,250,805	6,400,566	7,015,950	0.80	\$ 1,174,914
Be wattsmart, Begin at Home	-	-	-	\$ 60,000				\$ 58,260
Customer Outreach/Communication	-	-	-	\$ 250,000				\$ 249,791
Program Evaluations	-	-	-	\$ 640,000				\$ 786,875
Potential Study Update/Analysis	-	-	-	\$ 75,000				\$ 57,029
Measure Data Documentation	-	-	-	\$ 5,200				\$ 57,733
Admin of prior programs	-	-	-	\$ 1,500				\$ -
Total Portfolio-Level Expenses	-	-	-	\$ 1,031,700				\$ 1,209,688
Total PacifiCorp Conservation	34,671,791	37,847,422	4.32	8,972,669	44,224,875	48,251,658	5.51	\$ 10,390,614
Total System Benefits Charge Conservation	41,136,601	44,932,947	5.13	10,221,550	50,625,441	55,267,608	6.31	\$ 11,565,528
Total Conservation	41,139,972	44,936,318	5.13	10,222,512	50,625,441	55,267,608	6.31	\$ 11,565,528

¹⁶ Budget from 2014-2015 Business Plan filed November 1, 2013

¹⁷ SBC expenditures represents total program costs for savings claimed 2014

Residential Programs

The residential energy efficiency portfolio is comprised of five programs; *Home Energy Savings*, *Home Energy Reports*, *Residential Refrigerator Recycling*, *Low Income Weatherization*, and *NEEA*. As shown in Table 8, the residential portfolio was cost effective based on four of the five standard cost effectiveness tests for the reporting period. The ratepayer impact test was less than 1.0 indicating that there is near term upward pressure placed on the price per kilowatt-hour given a reduction in sales.

Table 8
Cost Effectiveness for Residential Portfolio¹⁸

	B/C Ratio with NEEA	B/C Ratio without NEEA
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	2.11	1.95
Total Resource Cost Test – effects on both participants and non-participants	1.93	1.78
Utility Cost Test – effect on customers	2.54	2.69
Participant Cost Test – effect on participants	4.56	3.79
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.66	0.68

Home Energy Savings

The *Home Energy Savings* program is designed to provide access to and incentives for more efficient products and services installed or received by customers in new or existing homes, multi-family housing units or manufactured homes.

Program participation by measure for the current period is provided in Table 9.

Table 9
Eligible Program Measures (Units)

Measures	2014 Total Units	2014 kWh @ site
Air Sealing	1,242	571
New Homes Builder Option Package	68	126,412
New Home - Heat Pump	1	388
New Homes - Ductless Heat Pump	1	2,837
New Homes - Attic Insulation	1,166	70
Central Air Conditioner Equipment	39	8,897
Duct Sealing - Manufactured Homes	171	229,907
Duct Sealing	326	1,069,887
Heat Pump	184	495,743

¹⁸ Includes NEEA savings and Non-Energy Benefits

Measures	2014 Total Units	2014 kWh @ site
Ductless Heat Pump	106	372,379
Electric Water Heater	165	22,086
Heat Pump Water Heater	31	31,065
Clothes Washer	264	38,190
Dishwasher	46	1,821
Freezer	44	1,405
Refrigerator	105	5,955
Evaporative Cooler	5	3,477
Insulation - Attic	375,125	325,571
Insulation - Floor	36,480	78,855
Insulation - Wall	32,802	62,519
Windows	22,597	12,980
Light Fixture	6,403	313,572
CFL Bulbs	274,565	4,519,782
LED Bulbs	28,125	734,959
<i>wattsmart</i> [®] Starter Kits	12,357	4,298,641
Grand Total	792,418	12,757,968

Program cost-effectiveness results for 2014 are provided in Table 10.

Table 10
Cost Effectiveness for Home Energy Savings¹⁹

	B/C Ratio
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	2.31
Total Resource Cost Test – effects on both participants and non-participants	2.10
Utility Cost Test – effect on customers	3.74
Participant Cost Test – effect on participants	3.29
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.74

Program Management

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

¹⁹ Includes Non-Energy Benefits

Program Administration

The *Home Energy Savings* program is administered by CLEAResult.

CLEAResult is responsible for the following:

- Retailer and trade ally engagement – CLEAResult identifies, recruits, supports and assists retailers to increase the sale of energy efficient lighting, appliances and electronics. CLEAResult enters into promotion agreements with each lighting manufacturer and retailer for the promotion of discounted CFL and LED bulbs. The agreements include specific retail locations, lighting products receiving incentives and not-to-exceed annual budgets. Weatherization and HVAC trade allies engaged with the program are provided with program materials, training, and regular updates.
- Inspections – CLEAResult recruits and hires inspectors to verify on an on-going basis the installation of measures. A summary of the inspection process is in Appendix 3.
- Incentive processing and call-center operations – CLEAResult receives all requests for incentives, determines whether the applications are completed, works directly with customers when information is incorrect and/or missing from the application and processes the application for payment.
- Program specific customer communication and outreach – A summary of the communication and outreach conducted by CLEAResult on behalf of the Company is outlined in the Communication, Outreach, and Education section.

Infrastructure

The total number of participating retailers participating in the program is currently 34. The current count of participating retailers by measure group is provided in the Table 11. Detail of participating retailers is available in Appendix 6.

Table 11
Participating Retailers²⁰

Lighting Retailers	Appliance Retailers	HVAC Contractors	Weatherization
20	17	58	23

Program Changes

In 2014, the *Home Energy Savings* program was modified to include:

- **wattsmart**® Starter Kits with ENERGY STAR® lighting and WaterSense® products, depending on the customers' water heating type.
- Direct install duct sealing for customers in manufactured homes with forced air electric furnaces.
- Added incentives for comprehensive whole home upgrades including heating and cooling systems, air sealing, insulation, duct sealing and duct insulation.

²⁰ Some retailers/contractors may participate in the promotion of more than one measure group so the count of unique participating firms is less than the total count provide above.

- Realigned incentives for new homes to a whole home performance approach.

Evaluation

In January 2014, a process and impact evaluation was completed by a third party evaluator for program years 2011-2012. The primary objective of the evaluation report is to determine the extent to which participants in the Home Energy Savings program reduced their energy consumption due to the program. Secondary objectives are to report on customer satisfaction, program awareness and motivations for participation in the program. The results of the evaluation can be viewed at www.pacificorp.com/es/dsm/washington.html. The Company's response to the recommendations and web link to the evaluation report are included in Appendix 4.

Home Energy Reports

The *Home Energy Report* program is designed to better inform residential customers about their energy usage by providing comparative energy usage data for similar homes located in the same geographical area. In addition, the report provides the customer with information on how to decrease their energy usage. Equipped with this information, customers can modify behavior and/or make structural equipment, lighting or appliance changes to reduce their overall electric energy consumption.

Reports were initially provided to approximately 13,500 customers; however this number has decreased due to customer attrition from general customer churn (customer move-outs)²¹ and customers requesting to be removed from the program. In 2014, program changes were approved extending the program time period through December 2017 and expanding the program to 38,500²² additional customers. These customers received their initial reports in October 2014. An additional expansion of 6,626 customers was added in January 2015 to offset attrition and lower energy savings than expected from the initial pilot group.

Monthly reports are mailed to all new program participants for the initial three months in order to build program awareness. Following this initial three month period, report frequency is moved to a bi-monthly schedule for the remainder of the program. All participating customers may request an electronic version delivered via email and have access to a web portal containing the same information about their usage and past usage provided in the report. The web portal also contains other functions such as a home energy audit tool, the ability for customers to update their home profile (for more accurate comparisons) and suggestions on more ways to save energy around their home.

Program savings by group for January 1, 2014 – December 31, 2014 is provided in Table 12.

²¹ As of the end of 2014 approximately 10,800 customers were still participating and receiving home energy reports.

²² An expansion group of 35,000 customers was approved, but the program expansion was for 38,500 customers to offset expected attrition.

Table 12
Program Savings

Home Energy Reports Group	2014 kWh @ site
Original Pilot Group	4,324,956
October 2014 Expansion Group	345,215
Total	4,670,171

Program performance results for the current period are provided in Table 13.

Table 13
Cost Effectiveness for Home Energy Reporting

	B/C Ratio Combined	B/C Ratio Initial Pilot Group	B/C Ratio October 2014 Expansion Group
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	1.23	2.26	0.18
Total Resource Cost Test – effects on both participants and non-participants	1.12	2.06	0.17
Utility Cost Test – effect on customers	1.12	2.06	0.17
Participant Cost Test – effect on participants	NA	NA	NA
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.45	0.56	0.14

Program Management

The program manager overseeing program activity in Washington is also responsible for the *Home Energy Reports* program in Idaho, Utah, and Wyoming as well as the *See ya later, refrigerator®* program in Washington, California, Idaho, 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 recommending changes in the terms and conditions set in each state's compliance requirements.

Program Administration

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

Opower is responsible for the following:

- Selecting Qualifying Customers – Opower conducts an analysis to identify qualifying customers. An independent, third party administrator then randomly assigns qualifying

customers into the program's treatment (those who will receive reports) and control groups (for measurement and verification).

- Customer Comparison Analysis – Opower conducts statistical analysis to perform pattern recognition in order to derive actionable insights to selected customers.
- Energy Report Delivery – By mail and/or email.
- Web Portal Design and Support – Opower operates and maintains a customer Web portal that participants may visit for additional information about their energy usage and saving opportunities.

Evaluation

In June 2014, a process and impact evaluation was completed by a third party evaluator for the period of August 1, 2012 – January 31, 2014. The primary objective of the evaluation report was to determine the extent to which participants in the Home Energy Reports program reduced their energy consumption due to the program. Secondary objectives are to report on customer satisfaction with the program, and on behavioral and information effects of the program. The results of the evaluation can be viewed at www.pacificorp.com/es/dsm/washington.html. The Company's response to the recommendations and web link to the evaluation report are included in Appendix 4.

Refrigerator Recycling

The *Refrigerator Recycling*²³ (“See ya later, refrigerator®”) program is designed to decrease electricity use (kWh) through voluntary removal and recycling of inefficient refrigerators and freezers. Participants receive a \$30 incentive for each qualifying refrigerator or freezer recycled through the program and an energy-saving kit which includes two CFLs, a refrigerator thermometer card, energy-savings educational materials, and information on other efficiency programs relevant to residential customers. In the second quarter, the program was expanded to include pickups from business customers and retailers.

Program participation by measure for the current period is provided in Table 14.

Table 14
Eligible Program Measures (Units)

Measures	2014 Total Units	2014 kWh @ site
Refrigerator Recycling	893	522,452
Freezer Recycling	236	116,820
Energy Savings Kit	1,016	28,654
Total	2,145	667,926

Program performance results for January 1, 2014 – December 31, 2014 are provided in the Table 15.

²³ Also known as “See ya later, refrigerator®” (“SYLR”)

Table 15
Cost Effectiveness for Refrigerator Recycling

	B/C Ratio
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	1.66
Total Resource Cost Test – effects on both participants and non-participants	1.51
Utility Cost Test – effect on customers	1.51
Participant Cost Test – effect on participants	N/A
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.52

In 2014, more than 70 tons (141,125 pounds) of steel, 2 tons (5,645 pounds) of aluminum and copper, 11 tons (22,508 pounds) of plastics were recycled as a result of the program, reducing landfill deposits by an amount sufficient to cover an entire football field more than two and a half feet deep. In addition, the chlorofluorocarbons (greenhouse gases) collected and destroyed during recycling equates to approximately 3.6 tons (4,113 metric tons for 1,129 units) of carbon dioxide equivalents per unit, equivalent to the annual emissions of the average car in the U.S.

Program Management

The program manager responsible for the program in Washington is also responsible for the *Refrigerator Recycling* program in California, Idaho, Utah and Wyoming and the *Home Energy Reports* program in Washington, Idaho, 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 recommending changes in the terms and conditions set out in the tariff.

Program Administration

The *Refrigerator Recycling* program is administered by JACO Environmental (“JACO”). JACO is one of the largest recyclers of household appliances in the United States. The Company contracts with JACO to provide customer scheduling, pick-up, incentive processing and marketing services for the *See ya later, refrigerator®* program.

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

JACO is responsible for the following:

- Appliance Pick-up - JACO handles all customer and field service operations for the program including pick-up of refrigerators and freezers from customers and transporting the units to the de-manufacturing facility.

- Incentive processing and call-center operations – Customer service calls, pick-up scheduling and incentive processing.
- Program specific customer communication and outreach – Working in close coordination with the Company, JACO handles all the marketing for the program. The program is marketed through bill inserts, customer newsletters and TV, newspaper and online advertising.

As part of the program control process, the Company contracts with a third-party independent inspector to conduct ongoing oversight of the program’s appliance recycling process, from verification that the units being recycled meet the program eligibility criteria to verifying they are being recycled and that the program records are accurate. A summary of the inspection process is included in Appendix 3.

Infrastructure

Refrigerators and freezers collected through the program are trucked to a JACO facility in Everett, Washington, for disassembly and recycling.

Evaluation

No program evaluation activities occurred during 2014.

Low Income Weatherization

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

Total homes treated under the program in 2014, as well as the type and frequency of specific energy efficiency measures installed in each home, is provided in Table 16.

Table 16
Eligible Program Measures (Units)

	2014 Total
Participation – Total # of Completed/Treated Homes	107
Number of Homes Receiving Specific Measures	
Aerators	81
Attic Ventilation	41
Caulk/Weather-stripping	81
Ceiling Insulation	67
Compact Fluorescent Light bulbs	105
Duct Insulation	50
Floor Insulation	99
Fluorescent Light Fixture	19
Ground Cover	74

Infiltration	107
Repairs	44
Replacement Refrigerators	8
Showerheads	85
Timed Thermostat	28
Wall Insulation	31
Water Heater Replacement	2
Water Pipe Insulation and Sealing	74

Program performance results for January 1, 2014 – December 31, 2014, are provided in Table 17.

Table 17
Cost Effectiveness for Low Income Weatherization with Non Energy Benefits

	B/C Ratio
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	1.06
Total Resource Cost Test – effects on both participants and non-participants	1.03
Utility Cost Test – effect on customers	0.24
Participant Cost Test – effect on participants	NA
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.18

Program Management

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

Program Administration

The Company partners with three local non-profit agencies to provide weatherization services to income-qualifying households throughout its Washington service territory. These agencies include Blue Mountain Action Council located in Walla Walla, Northwest Community Action Center in Toppenish, and Opportunities Industrialization Center of Washington in Yakima. The leveraging of Company funding along with Washington Match Maker Program funds allows the agencies to provide these energy efficiency services to more households at no cost to participating customers. The Company provides rebates to partnering agencies for 50 percent of the cost of services while Match Maker funds are available, and will cover 100 percent of costs when these state funds are depleted. In 2014, 90 homes were funded at 50 percent and 17 at 100 percent. Participants qualify if they are homeowners or renters residing in single-family homes, manufactured homes, or apartments. Over 7,200 homes have been completed since the program's inception in the mid-1980s.

By contract with the Company, the agencies are responsible for the following:

- Income Verification – Agencies determine participants are income eligible based on Washington Department of Commerce guidelines. Households interested in obtaining weatherization services apply through the agencies. The 2014 income guidelines can be viewed at www.commerce.wa.gov/Documents/HIP-Weatherization-2014-WA-Eligibility-Guidelines.pdf.
- Energy Audit – Agencies use a U.S. Department of Energy approved audit tool or priority list 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. A sample of 5 -10 percent are inspected by a Pacific Power inspector. See Appendix 3 for verification summary.
- Billing Notification – Agencies are required to submit a billing to Company within 90 days after job completion. A homeowner agreement and invoice form indicating the measures installed and associated cost is submitted on each completed home.

Evaluation

During 2014, a process and impact evaluation was in the process of being completed by a third party evaluator for program years 2012-2013. The evaluation results will be available in 2015.

Northwest Energy Efficiency Alliance

The *Northwest Energy Efficiency Alliance* (“NEEA”) is a non-profit corporation supported by, and working in collaboration with, the Bonneville Power Administration, Energy Trust of Oregon, and more than 100 Northwest utilities (including Pacific Power).

NEEA works in collaboration with its funders and other strategic market partners to accelerate the innovation and adoption of energy-efficient products, services, and practices.

For the 2010-2014 funding cycle, NEEA and the region strove to achieve 200 aMW²⁴ of total regional savings. PacifiCorp's Washington funding of NEEA's work represented 3.04 percent of the region's funding; approximately \$5.7 million over the five year period with expected savings attributed to PacifiCorp's Washington service area of roughly 6 aMW²⁵.

Program performance for 2014 is being reported based on NEEA's preliminary results for Pacific Power of 7,016 megawatt hours²⁶ for the Company's funding investment of \$1.17m. Consistent with the reporting convention approved in Docket UE-132047, the savings represent

²⁴ Northwest Energy Efficiency Alliance 2010-2014 Business Plan, April, 2009, <http://neea.org/docs/marketing-tookits/neea-business-plan-2010-2014.pdf?sfvrsn=2>. This is in addition to the estimated 750 aMW of total regional savings expected to be delivered during the same period of time as a result of prior market transformation investments made in NEEA.

²⁵ 3.04 percent of 200 aMW total regional savings target for 2010-2014, actual results may vary.

²⁶ At generation

Pacific Power's portion of Total Regional Savings less the Company's local program savings (adjustment to total movement in the market baseline for measures impacted by NEEA's efforts to account for savings already captured and reported through Pacific Power's Washington programs).

Program Administration

The Company has a representative on the NEEA board of directors as well as representatives on each of the sector advisory committees, residential, commercial and industrial. The Company also has representation on NEEA's broader Regional Portfolio Advisory Committee and participants in the regional Northwest Research Group. Collectively the representatives work collaboratively with the other funders, advisory group members, and NEEA to direct the efforts of NEEA in the best interest of the region in the achievement of the region's market transformation objectives.

Non-Residential Energy Efficiency

The commercial and industrial energy efficiency program portfolio was consolidated into a single *Non-Residential Energy Efficiency* program, Schedule 140, which became effective January 1, 2014. The programs that were consolidated were FinAnswer Express and Energy FinAnswer. The *Non-Residential Energy Efficiency* program is promoted to the Company's customers as *wattsmart*® Business.

Projects completed in the current period by customer sector are provided in Table 18.

Table 18
Projects Completed

Sector	2014 Total
Commercial	30
Industrial	290
Agricultural	57
Total Projects Completed	377

Program participation by measure group in the current period is provided in Table 19.

Table 19
Participation by Measure Group

Measure Groups	2014 Total Count by Measure Group	2014 Totals kWh Savings (at site)
Additional Measures	5	1,519,883
Building Shell	13	189,444
Compressed Air	18	1,022,146
Dairy Farm Equipment	2	69,440
Energy Management	1	539,546
Fast Acting Doors	6	210,162
Food Services	13	28,436
HVAC	35	2,512,837
Irrigation	60	818,086
Lighting	1,169	9,745,683
Motors	17	482,249
Office Equipment	1	110,322
Refrigeration	61	8,724,120
Program Totals	1,401	25,972,354

Program performance results for January 1, 2014 – December 31, 2014 are provided in Table 20 below.

Table 20
Cost Effectiveness for Non-Residential Energy Efficiency

	Benefit/Cost Ratio
Total Resource Test plus 10 percent	1.70
Total Resource Cost Test	1.54
Utility Cost Test	2.94
Participant Cost Test	2.48
Rate Payer Impact	0.71

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

Services offered through the *Non-Residential Energy Efficiency* program are:

- **Typical Upgrades:** Provides incentives for lighting, HVAC, compressed air and other equipment upgrades that increase electrical energy efficiency and exceed code requirements.
- **Custom analysis:** Offers energy analysis studies and services for more complex projects.
- **Energy management:** Provides expert facility and process analysis to help lower energy costs by optimizing customer's energy use. (This offer was added in January 2014.)
- **Energy project manager co-funding:** Available to customers who can commit to an annual goal of completing energy projects resulting in at least 1,000,000 kWh/year in energy savings. (This offer was added in January 2014.)
- **Paid Commissioning:** Helps customers (and the Company) verify the energy savings associated with the efficiency upgrades and/or changes in operations.

Program Management

The program managers overseeing program activity in Washington are also responsible for the business energy efficiency programs in California, Idaho, Utah, and Wyoming. For each state the program managers are responsible for the cost effectiveness of the program, identifying and contracting with the program administrators through a competitive bid process, program marketing, establishing and monitoring program performance and compliance, and recommending changes in the terms and conditions of the program.

Program Administration

Typical measure work within the program is primarily marketed through local trade allies who receive support from one of two program delivery contractors. The Company contracts with Nexant, Inc. (“Nexant”) and Cascade Energy (“Cascade”) for trade ally coordination, training, application processing services and direct customer outreach for commercial and industrial/agricultural measures respectively.

Nexant and Cascade are responsible for the following:

- Trade ally engagement – includes identification, recruiting, training, supporting and assisting trade allies to increase sales and installation of energy efficient equipment at qualifying business customer facilities.
- Incentive processing and administrative support – includes handling incoming inquiries as assigned, processing incentive applications, developing and maintaining standardized analysis tools and providing program design services, evaluation and regulatory support upon request.
- Direct customer outreach and project facilitation for smaller customer projects
- Inspections – includes verifying on an on-going basis the installation of measures. Summary of the inspection process is in Appendix 3.

Project work requiring custom analysis is primarily administered by the Company using in-house project managers and a network of energy engineering consultants.

Infrastructure

To help increase and improve the supplier and installation contractor infrastructure for energy-efficient equipment and services, the Company established and developed trade ally networks for lighting, HVAC and motors/VFDs. This work includes identifying and recruiting trade allies, providing program and technical training and providing sales support on an ongoing basis. The current list of the trade allies who have applied and been approved as participating vendors are posted on the Company website and is included as Appendix 6 to this report. In most cases, customers are not required to select a vendor from these lists to receive an incentive.

The total number of participating trade allies is currently 76. The current counts of participating trade allies by technology are in the Table 21.

Table 21
Participating Trade Allies²⁷

Lighting trade allies	HVAC trade allies	Motors and VFD trade allies
55	24	34

Given the diversity of the non-residential customers served by the Company, a pre-approved, pre-contracted group of engineering firms are used to perform facility specific energy efficiency analysis, quality assurance and verification services. Each customer's project is directly managed by one of the Company's in-house project managers. The project manager works directly with the customer or through the appropriate Company account manager located in Washington. Table 26 lists the engineering firms currently under contract with the Company.

Table 22
Energy Engineering Firms

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

Program Changes

On October 1, 2014 a new Small Business Lighting incentive offer became effective for customers. This program offers enhanced incentives for up to 80 percent of the cost of lighting upgrades, and is available to small business customers on approved rate schedules. Approved

²⁷ Some trade allies may participate in more than one technology so the count of unique participating firms is less than the total count provided above.

Small Business lighting contractors are the primary means of marketing the incentive offer using a variety of approaches including door-to-door and co-branded marketing materials.

Evaluation

During 2014, an independent third-party process and impact evaluation of the Company's non-residential programs for program years 2012-2013 was in the process of being completed. The results of this evaluation work will be available in 2015.

Communications, Outreach and Education

The Company utilizes earned media, customer communications, paid media and program specific media in an effort 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 in reducing their energy usage through behavioral changes as well as changes in equipment, appliances and structures.

Earned Media

Earned media is managed by the Company's external communications department in cooperation with the regional community managers located in Washington. "Earned media" generally refers to favorable television, radio, newspaper, or internet news coverage gained through press releases, media events, opinion pieces, story pitches, or other communication with news editors and reporters.

Customer Communications

As part of the Company's regular communications to its customers, newsletters across all customer classes promote energy efficiency initiatives and case studies on a regular basis. Inserts and outer envelopes featuring energy efficiency messages have also been used on a consistent basis. In 2014, the Company issued two newsletters focused entirely on seasonal energy efficiency information (in the fall and spring).

The Company uses its website and social media, such as Twitter and Facebook to communicate and engage customers on DSM offers and incentives.

Paid Media/wattsmart campaign

In 2014 the Company continued with the multi-faceted campaign with programs aimed at specific customer groups, but all share the common theme: Pacific Power wants to help you save money and energy by being *wattsmart*®. This communication campaign aims to create awareness of the importance of being energy efficient, and to help increase participation in the Company's DSM programs.

Based on 2014 customer awareness campaign research conducted by Marketing Decisions Corporation:

- Thirty-five percent of customers surveyed in 2014 in Washington are aware that the Company offers energy efficiency programs.
- Top recalled messages: using energy wisely and energy efficiency programs
- Three in ten customers report having taken action based on the Company's advertising (31 percent). The most frequently mentioned actions:
 - Purchased/switched to energy-efficient appliances/lights

- Turning off lights/appliances when not in use
- More aware of power usage
- Enlisting in utility incentive/rebate program

Key strategies with this plan, keeping objectives and budgets in the forefront included:

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

The *wattsmart*[®] advertising campaign is comprised of a multi-media mix designed to reach as many customers as possible with the greatest frequency. Various communications channels were utilized to optimize effectiveness, frequency and coverage and to build on the messages. Table 23 outlines the media channels used, the value of each channel, and the impressions achieved to date.

Table 23
2014 Media Channels

Communication Channel	Value to Communication Portfolio	2014 Placements
Television	Television has the broadest reach and works as the most effective media channel	Rotation of advertisements Both 30 and 15 seconds spots. 2,424 placements 5,637,100 impressions
Radio	Given the cost relative to television, radio builds on communications delivered via television while providing for increased frequency of messages	Rotation of advertisements 1,183 placements 2,030,900 impressions
Newspaper/Magazine	Supports broadcast messages and guarantees coverage in areas harder to reach with broadcast	45 placements 443,594 impressions
Online advertising		3,573,600 impressions and 191,421 search impressions
Website www.pacificpower.net Promote <i>bewattsmart.com</i> in advertising, is our energy efficiency landing page.	Supports all other forms of communications by serving as a source for detailed information regarding the Company's program and other energy efficiency opportunities	<i>bewattsmart.com</i> 39,493 page views (April 17 - December 31, 2014)
Twitter @PacificPower_WA	Awareness for early adopters regarding energy efficiency tips Tweets posted on a weekly basis	518 followers through December 2014

Communication Channel	Value to Communication Portfolio	2014 Placements
Facebook www.facebook.com/pacificpower.wattsmart	Awareness for early adopters regarding energy efficiency tips and a location to share information	12,254 fans through December 2014

The total number impressions for the campaign in 2014 were 11,876,615.

Links to the Company's current portfolio of advertisements is included in Appendix 7.

The audiences for these messages were prioritized as follows:

- Primary: Households in Pacific Power's service area
- Secondary: Small and large business in Pacific Power's service area

Program Specific

All energy efficiency program communications are branded under the **wattsmart**[®] umbrella to reinforce the campaign and to link changes in behavior to actions customers can take by participating in specific programs. Separate marketing activities administered by and specific to the programs ran in conjunction with the **wattsmart**[®] campaign in 2014.

Home Energy Savings

The *Home Energy Savings* program communicates to customers, retailers and trade allies through a variety of channels. Three main areas of focus in 2014 included new incentive offerings, website enhancements and the new **wattsmart**[®] Starter Kit offering for customers.

In January, communications focused on incentive increases and new incentives for measures such as duct sealing, ductless heat pumps, heat pump conversion, heat pump water heater and whole-home upgrade package.

Program website enhancements in April improved navigation, streamlined content and made it easier for customers on mobile devices and tablets to find information and apply for incentives.

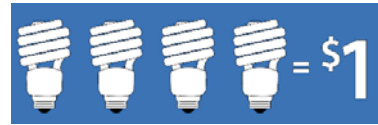
In June, the program launched the **wattsmart**[®] Starter Kits in Washington. These kits come with ENERGY STAR[®] lighting and WaterSense[®] products, depending on the customers' water heating type. Customer communications for the kits included direct mail, email, website, social media, newsletters and bill inserts.



Other bill inserts, newsletter articles, social media and website content throughout the year focused on measures such as insulation and evaporative coolers.

In July and September, a small group of targeted customers living in manufactured homes received a mailing with information on free duct sealing offered through a local participating trade ally.

The program ran ads on Facebook toward the end of the year to promote specially priced CFLs (4 CFLs for \$1). This effort generated 81,000 impressions.



Residential Refrigerator Recycling

The Company promotes the See ya later, refrigerator® program through informational television and digital display advertisements and other customer communications. In 2014, the program garnered 1,133,355 impressions. Breakdown of impressions by media type is shown in Table 24.

The Company developed a new creative campaign with a magic theme to highlight the convenience of having your old fridge recycled. For maximum exposure, these same messages and artwork were used in digital advertising, social media, website, bill inserts and newsletter articles.



Table 24
See ya later, refrigerator® Program

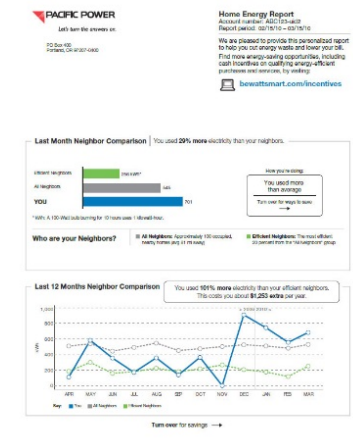
Communications Channel	2014 Impressions
TV	301,000
Digital Display	832,355

Home Energy Reports

In October 2014, the Company expanded its Home Energy Reports program to reach an additional 38,500 customers in Washington. Many of these customers also receive email reports with customized energy-saving tips.

Existing Home Energy Report participants received a door hanger in the fall report with a reminder to set their thermostats to 68 degrees.

A sample report is included in Appendix 7.



wattsmart® Business

In 2014, customer communications and outreach supported wattsmart® Business utilizing radio, print, paid digital search advertising, direct mail, email and social media. This was in addition to customer direct contact by Company project managers and regional community managers, as well as trade ally partners; articles in the Company newsletters and content on the Company’s website.

During 2014, radio communications encouraged business customers to make energy efficiency upgrades and print ads featured case study examples from program participants which were repurposed in social media. Quarterly eblasts and digital search ads directed viewers to the company's website²⁸. Targeted direct mail was sent to irrigation customers to encourage irrigation retrofits. In 2014, the program garnered 2,045,138 impressions. Breakdown of impressions by media type is shown in Table 25.

Table 25
wattsmart[®] Business

Communications Channel	2014 Impressions
Radio	1,234,540
Newspaper	608,924
Magazine	143,800
Digital Paid Search	55,277
Irrigation Direct Mail	2,597

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 and 5th 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 2014, NEF conducted presentations in Washington schools in the fall.

- Between October 13 and November 14, 2014, the program met its outreach goals of reaching 3,970 students and 155 teachers in 50 schools with 65.69 percent of "Household Report Cards", which are used as part of a home energy audit activity, completed and returned.

²⁸ www.pacificpower.net/wasave

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

Verification of the potential to achieve savings involves regular inspection and commissioning of equipment. The Company engages in programmatic verification activities, including inspections, quality assurance reviews, and tracking checks and balances as part of routine program implementation and may rely upon these practices in the verification of installation information for the purposes of savings verifications in advance of more formal impact evaluation results. A summary of the inspection process is included in Appendix 3.

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

Information on evaluation activities completed or in progress during 2014 is summarized in the chart below. Summary of the recommendations are provided in Appendix 4. The evaluation report is available at www.pacificorp.com/es/dsm/washington.html

Program / Activities	Years Evaluated	Evaluator	Progress Status
Home Energy Savings	2011-2012	The Cadmus Group	Completed
Home Energy Reporting	8/1/2012 – 1/31/2014	Navigant Consulting	Completed
Low Income Weatherization	2011-2012	Smith and Lehmann	Q2 of 2015
FinAnswer Express	2012-2013	Navigant Consulting	Q2 of 2015
Energy FinAnswer	2012-2013	Navigant Consulting	Q2 of 2015



Appendix 1

Estimated Peak Contributions 2014

Pacific Power

Energy Efficiency Programs

The MW reported savings of 8.49 (at generation) for energy efficiency programs during 2014 represents the summation of estimated MW values made available through the Company's business and residential energy efficiency programs; calculations for the business and residential programs differ.

The Company's business programs MW contributions are based on engineering estimates of capacity values for installed measures; project unique factors are individually calculated for custom projects while deemed factors are utilized for prescriptive measures. These calculations are based on actual installed measures in the reported year. For 2014, it is calculated that 3.12 MW of capacity contribution were made available through business program energy efficiency acquisitions. Specific hours during which business program measures contribute MW capacity are dependent upon several factors including specific business operations and general economic conditions.

For the residential programs, energy to capacity factor is utilized to calculate the MW savings made available through these programs. The energy to capacity factor utilized in the calculation (1.74 MW in 2014 for each average MWh of energy efficiency acquired) is the same as the average load profile factor of energy efficiency resources selected in the 2013 IRP, i.e. the average peak contribution of the energy efficiency resource selections across all measures and sectors. The utilization of this factor in the MW calculation assumes that the energy efficiency resources acquired through the Company's residential programs and NEEA savings have the same average load profile as those energy efficiency resources selected in the 2013 IRP. Utilization of this factor in determining the MW contribution of energy efficiency programs for 2014 is detailed in the table below.

Line	Description	Value
1	First year MWh EE program savings acquired during 2014	27,033
2	Average MWh value (line 1 / 8760 hours)	3.09
3	Peak MW contribution of 2014 EE acquisitions	5.37

As demonstrated, it is estimated that the residential energy efficiency program acquisitions along with savings associated with NEEA in 2014 contributed 5.37 MW of capacity contribution. As with the business programs, when these savings occur on an hourly basis is dependent upon several factors including energy usage patterns of residential customers.

Together, the 3.12 MW's estimated for the business programs and the 5.37 MW's estimated for residential programs make up the 8.49 MW savings value of energy efficiency programs.



Appendix 2

Energy Efficiency Cost Effectiveness

Pacific Power

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Portfolio and Sector Level Cost Effectiveness

The overall energy efficiency portfolio and component sectors were cost effective on a PacifiCorp Total Resource Cost Test (PTRC), Total Resource Cost Test (TRC), Utility Cost Test (UCT), and Participant Cost Test (PCT) basis.

The tables below present the cost-effectiveness analysis for the Washington Energy Efficiency Portfolio based on 2014 costs and savings estimates. The utility discount rate is from the 2013 PacifiCorp Integrated Resource Plan.

Cost-effectiveness inputs and results for the 2014 Portfolio presented for the total portfolio, residential sector, commercial and industrial (C&I) sector, and the total portfolio, commercial and industrial and residential portfolio including NEEA savings. This report includes the following tables:

Table 1- Utility Inputs

Table 2 - Portfolio Level Costs 2014

Table 3 - Portfolio Level Costs 2014

Table 4- Benefit/Cost Ratios by Portfolio Type

Table 5 - 2014 Total Portfolio Cost-Effectiveness Results

Table 6 - 2014 Total Portfolio Cost-Effectiveness Results (Including NEEA)

Table 7- 2014 Total Portfolio Cost-Effectiveness Results (Including NEEA and NEBs)

Table 8 - 2014 C&I Energy Efficiency Portfolio Cost-Effectiveness Results

Table 9 - 2014 C&I Energy Efficiency Portfolio Cost-Effectiveness Results (Including NEEA)

Table 10- 2014 Residential Energy Efficiency Portfolio Cost-Effectiveness Results

Table 11 - 2014 Residential Energy Efficiency Portfolio Cost-Effectiveness Results (Including NEEA)

Table 12 - 2014 Residential Energy Efficiency Portfolio Cost-Effectiveness Results (Including NEEA and NEBs)

Table 13 - Low Income Weatherization Non-Energy Benefits

Table 14 - Home Energy Savings (Appliance) Non-Energy Benefits

Table 1 - Utility Inputs

Parameter	Value
Discount Rate	6.88%
Residential Line Loss	9.67%
Commercial Line Loss	9.53%
Industrial Line Loss	8.16%
Irrigation Line Loss	9.67%
Residential Energy Rate (\$/kWh)(base year 2014)	\$0.0841
Commercial Energy Rate (\$/kWh)(base year 2014)	\$0.0778
Industrial Energy Rate (\$/kWh)(base year 2014)	\$0.0655
Irrigation Energy Rate (\$/kWh)(base year 2014)	\$0.0815
Inflation Rate ¹	1.90%

¹ Future rates determined using a 1.9% annual escalator.

Table 2 – Portfolio Level Costs 2014

Cost	Value
School Energy Education	\$58,260
Outreach and Communication	\$249,791
Portfolio Level Expenditures	\$834,966
Total Costs	\$1,143,017

Table 3 – NEEA 2014

Value	Savings at Meter (kWh)	NEEA Expenses (\$)
Commercial	4,864,430	\$892,935
Residential	1,536,136	\$281,979
Total	6,400,566	\$1,174,914

Table 4 - Benefit/Cost Ratios by Portfolio Type

Measure Group	PTRC	TRC	UCT	RIM	PCT
Total Portfolio	1.66	1.51	2.53	0.68	2.84
Total Portfolio (Including NEEA)	1.69	1.54	2.47	0.67	3.08
Total Portfolio (Including NEEA & NEBs)	1.73	1.58	2.47	0.67	3.10
C&I Programs	1.70	1.54	2.94	0.71	2.48
C&I Programs (Including NEEA)	1.71	1.55	2.89	0.71	2.56
Residential Programs	1.95	1.78	2.69	0.68	3.79
Residential Programs (Including NEEA)	1.99	1.80	2.54	0.65	4.48
Residential Programs (Including NEEA & NEBs)	2.11	1.93	2.54	0.66	4.56

Table 5 – 2014 Total Portfolio Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0495	\$17,305,734	\$28,755,664	\$11,449,930	1.66
Total Resource Cost Test (TRC) No Adder	\$0.0495	\$17,305,734	\$26,141,513	\$8,835,779	1.51
Utility Cost Test (UCT)	\$0.0295	\$10,323,943	\$26,141,513	\$15,817,570	2.53
Rate Impact Test (RIM)		\$38,472,615	\$26,141,513	-\$12,331,101	0.68
Participant Cost Test (PCT)		\$11,870,968	\$33,664,407	\$21,793,439	2.84
Lifecycle Revenue Impacts (\$/kWh)					\$0.000260720

Table 6 - 2014 Total Portfolio Cost-Effectiveness Results (Including NEEA)

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0484	\$18,480,648	\$31,296,369	\$12,815,720	1.69
Total Resource Cost Test (TRC) No Adder	\$0.0484	\$18,480,648	\$28,451,244	\$9,970,596	1.54
Utility Cost Test (UCT)	\$0.0301	\$11,498,857	\$28,451,244	\$16,952,387	2.47
Rate Impact Test (RIM)		\$42,525,436	\$28,451,244	-\$14,074,192	0.67
Participant Cost Test (PCT)		\$11,870,968	\$36,542,315	\$24,671,347	3.08
Lifecycle Revenue Impacts (\$/kWh)					\$0.000324767

Table 7 - 2014 Total Portfolio Cost-Effectiveness Results (Including NEEA and NEBs)

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0484	\$18,480,648	\$32,054,696	\$13,574,048	1.73
Total Resource Cost Test (TRC) No Adder	\$0.0484	\$18,480,648	\$29,209,572	\$10,728,924	1.58
Utility Cost Test (UCT)	\$0.0301	\$11,498,857	\$28,454,649	\$16,955,792	2.47
Rate Impact Test (RIM)		\$42,525,436	\$28,454,649	-\$14,070,788	0.67
Participant Cost Test (PCT)		\$11,870,968	\$36,791,821	\$24,920,854	3.10
Lifecycle Revenue Impacts (\$/kWh)					\$0.000324689

Table 8 – 2014 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) + Conversation Adder	\$0.0464	\$11,023,444	\$18,712,128	\$7,688,684	1.70
Total Resource Cost Test (TRC) No Adder	\$0.0464	\$11,023,444	\$17,011,025	\$5,987,581	1.54
Utility Cost Test (UCT)	\$0.0244	\$5,791,310	\$17,011,025	\$11,219,715	2.94
Rate Impact Test (RIM)		\$23,828,030	\$17,011,025	-\$6,817,005	0.71
Participant Cost Test (PCT)		\$8,646,853	\$21,451,439	\$12,804,586	2.48
Lifecycle Revenue Impacts (\$/kWh)					\$0.000122651

Table 9 - 2014 C&I Energy Efficiency Portfolio Cost-Effectiveness Results (Including NEEA)

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0461	\$11,305,424	\$19,321,309	\$8,015,886	1.71
Total Resource Cost Test (TRC) No Adder	\$0.0461	\$11,305,424	\$17,564,827	\$6,259,403	1.55
Utility Cost Test (UCT)	\$0.0247	\$6,073,290	\$17,564,827	\$11,491,537	2.89
Rate Impact Test (RIM)		\$24,760,665	\$17,564,827	-\$7,195,838	0.71
Participant Cost Test (PCT)		\$8,646,853	\$22,102,094	\$13,455,241	2.56
Lifecycle Revenue Impacts (\$/kWh)					\$0.000139550

Table 10 – 2014 Residential Energy Efficiency Portfolio Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0459	\$5,139,273	\$10,043,536	\$4,904,263	1.95
Total Resource Cost Test (TRC) No Adder	\$0.0459	\$5,139,273	\$9,130,488	\$3,991,215	1.78
Utility Cost Test (UCT)	\$0.0303	\$3,389,616	\$9,130,488	\$5,740,872	2.69
Rate Impact Test (RIM)		\$13,501,568	\$9,130,488	-\$4,371,080	0.68
Participant Cost Test (PCT)		\$3,224,115	\$12,212,968	\$8,988,853	3.79
Lifecycle Revenue Impacts (\$/kWh)					\$0.000123080

Table 11 - 2014 Residential Energy Efficiency Portfolio Cost-Effectiveness Results (Including NEEA)

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0442	\$6,032,208	\$11,975,059	\$5,942,851	1.99
Total Resource Cost Test (TRC) No Adder	\$0.0442	\$6,032,208	\$10,886,417	\$4,854,209	1.80
Utility Cost Test (UCT)	\$0.0314	\$4,282,551	\$10,886,417	\$6,603,867	2.54
Rate Impact Test (RIM)		\$16,621,755	\$10,886,417	-\$5,735,338	0.65
Participant Cost Test (PCT)		\$3,224,115	\$14,440,221	\$11,216,106	4.48
Lifecycle Revenue Impacts (\$/kWh)					\$0.000182034

Table 12 - 2014 Residential Energy Efficiency Portfolio Cost-Effectiveness Results (Including NEEA and NEBs)

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0442	\$6,032,208	\$12,733,387	\$6,701,179	2.11
Total Resource Cost Test (TRC) No Adder	\$0.0442	\$6,032,208	\$11,644,745	\$5,612,537	1.93
Utility Cost Test (UCT)	\$0.0314	\$4,282,551	\$10,889,822	\$6,607,271	2.54
Rate Impact Test (RIM)		\$16,621,755	\$10,889,822	-\$5,731,933	0.66
Participant Cost Test (PCT)		\$3,224,115	\$14,689,727	\$11,465,613	4.56
Lifecycle Revenue Impacts (\$/kWh)					\$0.000181926

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

Table 13 – Low Income Weatherization Non-Energy Benefits

Non-Energy Benefit	Program Impact	Perspective Adjusted
Arrearage Reduction	\$3,177	TRC, PTRC, UCT, RIM
Capital Cost Savings	\$228	TRC, PTRC, UCT, RIM
Economic Impact	\$505,417	TRC, PTRC
Home Repair Costs	\$48,080	TRC, PTRC, PCT
Total	\$556,901	-

Table 14 – Home Energy Savings (Appliance) Non-Energy Benefits

Non-Energy Benefits	Non-Energy Benefits per Measure	Total Installs	Measure Life	Total Present Value Benefits
Clothes Washer (MEF \geq 2.46 & WF \leq 4)	\$81.00	264	14	\$201,305
Dishwasher	\$0.31	46	12	\$122
New Homes Dishwashers	\$0.31	0	12	\$0
Total	-	-	-	\$201,427

Program Level Cost Effectiveness

Home Energy Savings Program

Navigant estimated the cost-effectiveness results for the Washington Home Energy Savings Program, based on 2014 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program and for the 7 measure categories.

Cost-effectiveness was tested using the 2013 IRP West Residential Whole House 49% and West Residential Lighting 48% load factor decrements. The program passes the cost-effectiveness for all the tests except the RIM test. The memo consists of the following tables.

- Table 15 - Home Energy Savings Inputs
- Table 16 - Home Energy Savings Annual Program Costs
- Table 17 - Home Energy Savings – Savings by Measure Category
- Table 18 - Benefit/Cost Ratios by Measure Category
- Table 19 - Home Energy Savings Program Level Cost-Effectiveness Results
- Table 20 - Home Energy Savings Appliances Cost-Effectiveness Results
- Table 21 - Home Energy Savings Building Shell Cost-Effectiveness Results
- Table 22 - Home Energy Savings Energy Kits Cost-Effectiveness Results
- Table 23 - Home Energy Savings HVAC Cost-Effectiveness Results
- Table 24 - Home Energy Savings Lighting Cost-Effectiveness Results
- Table 25 - Home Energy Savings Water Heating Cost-Effectiveness Results
- Table 26 - Home Energy Savings Whole Home Cost-Effectiveness Results
- Table 27 - Home Energy Savings Appliances Non-Energy Benefits
- Table 28 - Home Energy Savings Appliances (with NEBs) Cost-Effectiveness Results
- Table 29 - Home Energy Savings Program Cost-Effectiveness Results with Non-Energy Benefits

Table 15 – Home Energy Savings Inputs

Parameter	Value
Discount Rate	6.88%
Residential Line Loss	9.67%
Residential Energy Rate (\$/kWh)(base year 2014)	\$0.0841
Inflation Rate ¹	1.90%

¹ Future rates determined using a 1.9% annual escalator.

Table 16 – Home Energy Savings Annual Program Costs

Measure Group	Engineering Costs	Utility Admin	Program Delivery	Program Dev.	Incentives	Total Utility Costs	Gross Customer Costs
Appliance	\$0	\$437	\$6,327	\$0	\$18,675	\$25,440	\$82,040
Building Shell	\$0	\$4,437	\$64,190	\$0	\$146,093	\$214,720	\$374,448
Energy Kits	\$0	\$15,906	\$230,125	\$0	\$159,890	\$405,922	\$186,762
HVAC	\$0	\$20,159	\$291,655	\$0	\$612,991	\$924,805	\$1,122,624
Lighting	\$0	\$7,091	\$102,592	\$0	\$435,959	\$545,642	\$1,378,548
Water Heating	\$0	\$491	\$7,099	\$0	\$32,849	\$40,439	\$39,572
Whole Home	\$0	\$1,167	\$16,885	\$0	\$68,000	\$86,052	\$40,120
Total	\$0	\$49,689	\$718,874	\$0	\$1,474,457	\$2,243,020	\$3,224,115

Table 17 – 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
Appliance	47,371	100%	47,371	100%	47,371	15
Building Shell	480,565	100%	480,565	100%	480,565	45
Energy Kits	4,298,641	100%	4,298,641	100%	4,298,641	9
HVAC	2,183,515	100%	2,183,515	100%	2,183,515	19
Lighting	5,568,312	100%	5,568,312	100%	5,568,312	7
Water Heating	53,151	100%	53,151	100%	53,151	15
Whole Home	126,412	100%	126,412	100%	126,412	45
Total	12,757,968	100%	12,757,968	100%	12,757,968	12

Table 18 - Benefit/Cost Ratios by Measure Category

Measure Group	PTRC	TRC	UCT	RIM	PCT
Appliance	0.47	0.42	1.48	0.54	0.77
Appliance (with NEBs)	2.73	2.69	1.48	0.54	3.23
Building Shell	1.94	1.76	3.63	0.78	2.47
Energy Kits	5.68	5.16	5.50	0.71	15.63
HVAC	2.10	1.91	2.97	0.83	2.68
Lighting	1.78	1.61	4.40	0.70	2.43
Water Heating	1.02	0.92	1.08	0.48	2.09
Whole Home	2.90	2.64	1.78	0.53	6.81
Total	2.31	2.10	3.74	0.74	3.29
Total (with NEBs)	2.36	2.15	3.74	0.74	3.36

Table 19 – Home Energy Savings Program Level Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0395	\$3,992,677	\$9,234,875	\$5,242,198	2.31
Total Resource Cost Test (TRC) No Adder	\$0.0395	\$3,992,677	\$8,395,341	\$4,402,664	2.10
Utility Cost Test (UCT)	\$0.0222	\$2,243,020	\$8,395,341	\$6,152,321	3.74
Rate Impact Test (RIM)		\$11,384,727	\$8,395,341	-\$2,989,386	0.74
Participant Cost Test (PCT)		\$3,224,115	\$10,616,164	\$7,392,050	3.29
Lifecycle Revenue Impacts (\$/kWh)					\$0.000062866
Discounted Participant Payback (years)					1.62

Table 20 through Table 26 provides cost-effectiveness results for all 7 measures.

**Table 20 - Home Energy Savings Appliances Cost-Effectiveness Results
(2013 IRP West Residential Whole House 49%)**

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.1804	\$88,805	\$41,396	-\$47,409	0.47
Total Resource Cost Test (TRC) No Adder	\$0.1804	\$88,805	\$37,632	-\$51,172	0.42
Utility Cost Test (UCT)	\$0.0517	\$25,440	\$37,632	\$12,193	1.48
Rate Impact Test (RIM)		\$69,970	\$37,632	-\$32,338	0.54
Participant Cost Test (PCT)		\$82,040	\$63,206	-\$18,834	0.77
Lifecycle Revenue Impacts (\$/kWh)					\$0.000000542
Discounted Participant Payback (years)					27.27

**Table 21 - Home Energy Savings Building Shell Cost-Effectiveness Results
(2013 IRP West Residential Whole House 49%)**

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0517	\$443,075	\$858,045	\$414,970	1.94
Total Resource Cost Test (TRC) No Adder	\$0.0517	\$443,075	\$780,041	\$336,966	1.76
Utility Cost Test (UCT)	\$0.0251	\$214,720	\$780,041	\$565,321	3.63
Rate Impact Test (RIM)		\$995,131	\$780,041	-\$215,090	0.78
Participant Cost Test (PCT)		\$374,448	\$926,504	\$552,056	2.47
Lifecycle Revenue Impacts (\$/kWh)					\$0.000001189
Discounted Participant Payback (years)					6.28

**Table 22 - Home Energy Savings Energy Kits Cost-Effectiveness Results
(2013 IRP West Residential Whole House 49%)**

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0142	\$432,794	\$2,457,289	\$2,024,496	5.68
Total Resource Cost Test (TRC) No Adder	\$0.0142	\$432,794	\$2,233,899	\$1,801,106	5.16
Utility Cost Test (UCT)	\$0.0133	\$405,922	\$2,233,899	\$1,827,978	5.50
Rate Impact Test (RIM)		\$3,165,964	\$2,233,899	-\$932,064	0.71
Participant Cost Test (PCT)		\$186,762	\$2,919,932	\$2,733,170	15.63
Lifecycle Revenue Impacts (\$/kWh)					\$0.000026245
Discounted Participant Payback (years)					0.07

**Table 23 - Home Energy Savings HVAC Cost-Effectiveness Results
(2013 IRP West Residential Whole House 49%)**

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0543	\$1,434,438	\$3,017,942	\$1,583,504	2.10
Total Resource Cost Test (TRC) No Adder	\$0.0543	\$1,434,438	\$2,743,584	\$1,309,146	1.91
Utility Cost Test (UCT)	\$0.0350	\$924,805	\$2,743,584	\$1,818,779	2.97
Rate Impact Test (RIM)		\$3,318,390	\$2,743,584	-\$574,806	0.83
Participant Cost Test (PCT)		\$1,122,624	\$3,006,575	\$1,883,951	2.68
Lifecycle Revenue Impacts (\$/kWh)					\$0.000007590
Discounted Participant Payback (years)					2.85

**Table 24 - Home Energy Savings Lighting Cost-Effectiveness Results
(2013 IRP West Residential Lighting 48%)**

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0462	\$1,488,231	\$2,643,323	\$1,155,091	1.78
Total Resource Cost Test (TRC) No Adder	\$0.0462	\$1,488,231	\$2,403,021	\$914,789	1.61
Utility Cost Test (UCT)	\$0.0169	\$545,642	\$2,403,021	\$1,857,378	4.40
Rate Impact Test (RIM)		\$3,453,532	\$2,403,021	-\$1,050,511	0.70
Participant Cost Test (PCT)		\$1,378,548	\$3,343,849	\$1,965,300	2.43
Lifecycle Revenue Impacts (\$/kWh)					\$0.000038202
Discounted Participant Payback (years)					2.02

**Table 25 - Home Energy Savings Water Heating Cost-Effectiveness Results
(2013 IRP West Residential Whole House 49%)**

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0854	\$47,162	\$47,952	\$789	1.02
Total Resource Cost Test (TRC) No Adder	\$0.0854	\$47,162	\$43,592	-\$3,570	0.92
Utility Cost Test (UCT)	\$0.0732	\$40,439	\$43,592	\$3,153	1.08
Rate Impact Test (RIM)		\$90,403	\$43,592	-\$46,811	0.48
Participant Cost Test (PCT)		\$39,572	\$82,813	\$43,241	2.09
Lifecycle Revenue Impacts (\$/kWh)					\$0.000000785
Discounted Participant Payback (years)					1.50

**Table 26 - Home Energy Savings Whole Home Cost-Effectiveness Results
(2013 IRP West Residential Whole House 49%)**

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0258	\$58,172	\$168,929	\$110,756	2.90
Total Resource Cost Test (TRC) No Adder	\$0.0258	\$58,172	\$153,571	\$95,399	2.64
Utility Cost Test (UCT)	\$0.0382	\$86,052	\$153,571	\$67,519	1.78
Rate Impact Test (RIM)		\$291,338	\$153,571	-\$137,767	0.53
Participant Cost Test (PCT)		\$40,120	\$273,286	\$233,166	6.81
Lifecycle Revenue Impacts (\$/kWh)					\$0.000000762
Discounted Participant Payback (years)					n/a

In addition to the energy benefits reported above, appliances in the Home Energy Savings program offer significant non-energy benefits (NEBs) in the form of water savings. Table 27 details the non-energy benefits for appliances.

Table 27 – Home Energy Savings Appliances Non-Energy Benefits

Non-Energy Benefits	Non-Energy Benefits per Measure	Total Installs	Measure Life	Total Present Value Benefits
Clothes Washer (MEF ≥ 2.46 & WF ≤ 4)	\$81.00	264	14	\$201,305
Dishwasher	\$0.31	46	12	\$122
New Homes Dishwashers	\$0.31	0	12	\$0
Total	-	-	-	\$201,427

**Table 28 - Home Energy Savings Appliances (with NEBs) Cost-Effectiveness Results
(2013 IRP West Residential Whole House 49%)**

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.1804	\$88,805	\$242,823	\$154,018	2.73
Total Resource Cost Test (TRC) No Adder	\$0.1804	\$88,805	\$239,060	\$150,255	2.69
Utility Cost Test (UCT)	\$0.0517	\$25,440	\$37,632	\$12,193	1.48
Rate Impact Test (RIM)		\$69,970	\$37,632	-\$32,338	0.54
Participant Cost Test (PCT)		\$82,040	\$264,633	\$182,593	3.23
Lifecycle Revenue Impacts (\$/kWh)					\$0.000000542
Discounted Participant Payback (years)					27.27

Table 29 - Home Energy Savings Program Cost-Effectiveness Results with Non-Energy Benefits

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0395	\$3,992,677	\$9,436,303	\$5,443,625	2.36
Total Resource Cost Test (TRC) No Adder	\$0.0395	\$3,992,677	\$8,596,769	\$4,604,091	2.15
Utility Cost Test (UCT)	\$0.0222	\$2,243,020	\$8,395,341	\$6,152,321	3.74
Rate Impact Test (RIM)		\$11,384,727	\$8,395,341	-\$2,989,386	0.74
Participant Cost Test (PCT)		\$3,224,115	\$10,817,592	\$7,593,477	3.36
Lifecycle Revenue Impacts (\$/kWh)					\$0.000062866
Discounted Participant Payback (years)					1.62

Home Energy Reporting

Navigant estimated the cost-effectiveness results for the Washington Home Energy Reporting Program, based on 2014 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program and for Legacy and Expansion options.

Cost-effectiveness was tested using the 2013 IRP West Residential Whole House 49% load factor decrement. The program passes the cost-effectiveness for all the tests except the RIM test. The memo consists of the following tables.

Table 30 - Home Energy Reporting Inputs

Table 31 - Home Energy Reporting Annual Program Costs

Table 32 - Home Energy Reporting Savings by Measure Category

Table 33 - Benefit/Cost Ratios by Measure Category

Table 34 - Home Energy Reporting Level Cost-Effectiveness Results

Table 35 - Home Energy Reporting Legacy Cost-Effectiveness Results

Table 36 - Home Energy Reporting Expansion Cost-Effectiveness Results

Table 30 – Home Energy Reporting Inputs

Parameter	Value
Discount Rate	6.88%
Residential Line Loss	9.67%
Residential Energy Rate (\$/kWh)(base year 2014)	\$0.0841
Inflation Rate ¹	1.90%

¹ Future rates determined using a 1.9% annual escalator.

Table 31 – Home Energy Reporting Annual Program Costs

Measure Group	Engineering Costs	Utility Admin	Program Delivery	Program Dev.	Incentives	Total Utility Costs	Gross Customer Costs
HER Legacy	\$0	\$15,409	\$5,629	\$117,000	\$0	\$138,039	\$0
HER Expansion	\$0	\$32,644	\$23,178	\$80,388	\$0	\$136,210	\$0
Total	\$0	\$48,053	\$28,807	\$197,388	\$0	\$274,248	\$0

Table 32 – Home Energy Reporting Savings by Measure Category

Measure Group	Gross kWh Savings	Realization Rate	Adjusted Gross kWh Savings	Net to Gross Ratio	Net kWh Savings	Measure Life
HER Legacy	4,324,956	100%	4,324,956	100%	4,324,956	1
HER Expansion	345,215	100%	345,215	100%	345,215	1
Total	4,670,171	100%	4,670,171	100%	4,670,171	1

Table 33 - Benefit/Cost Ratios by Measure Category

Measure Group	PTRC	TRC	UCT	RIM	PCT
HER Legacy	2.26	2.06	2.06	0.56	n/a
HER Expansion	0.18	0.17	0.17	0.14	n/a
Total	1.23	1.12	1.12	0.45	n/a

Table 34 – Home Energy Reporting Level Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0616	\$274,248	\$337,413	\$63,165	1.23
Total Resource Cost Test (TRC) No Adder	\$0.0616	\$274,248	\$306,739	\$32,491	1.12
Utility Cost Test (UCT)	\$0.0616	\$274,248	\$306,739	\$32,491	1.12
Rate Impact Test (RIM)		\$674,472	\$306,739	-\$367,733	0.45
Participant Cost Test (PCT)		\$0	\$400,224	\$400,224	n/a
Lifecycle Revenue Impacts (\$/kWh)					\$0.000091621
Discounted Participant Payback (years)					n/a

Table 35 and Table 36 provide cost-effectiveness results for the Legacy and Expansion options.

**Table 35 – Home Energy Reporting Legacy Cost-Effectiveness Results
(2013 IRP West Residential Whole House 49%)**

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0335	\$138,039	\$312,472	\$174,433	2.26
Total Resource Cost Test (TRC) No Adder	\$0.0335	\$138,039	\$284,065	\$146,027	2.06
Utility Cost Test (UCT)	\$0.0335	\$138,039	\$284,065	\$146,027	2.06
Rate Impact Test (RIM)		\$508,678	\$284,065	-\$224,613	0.56
Participant Cost Test (PCT)		\$0	\$370,640	\$370,640	n/a
Lifecycle Revenue Impacts (\$/kWh)					\$0.000055962
Discounted Participant Payback (years)					n/a

**Table 36 – Home Energy Reporting Expansion Cost-Effectiveness Results
(2013 IRP West Residential Whole House 49%)**

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.4142	\$136,210	\$24,941	-\$111,268	0.18
Total Resource Cost Test (TRC) No Adder	\$0.4142	\$136,210	\$22,674	-\$113,536	0.17
Utility Cost Test (UCT)	\$0.4142	\$136,210	\$22,674	-\$113,536	0.17
Rate Impact Test (RIM)		\$165,794	\$22,674	-\$143,120	0.14
Participant Cost Test (PCT)		\$0	\$29,584	\$29,584	n/a
Lifecycle Revenue Impacts (\$/kWh)					\$0.000035658
Discounted Participant Payback (years)					n/a

See ya later, refrigerator®

Navigant estimated the cost-effectiveness results for the Washington See ya later, refrigerator® (SYLR) Program, based on 2014 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program and for the 3 measure categories.

Cost-effectiveness was tested using the 2013 IRP West Residential Whole House 49% and West Residential Lighting 48% load factor decrements. The program passes the cost-effectiveness for all the tests except the RIM and PCT tests. The memo consists of the following tables.

Table 37 - SYLR Inputs

Table 38 - SYLR Annual Program Costs

Table 39 - SYLR Savings by Measure Category

Table 40 - Benefit/Cost Ratios by Measure Category

Table 41 - SYLR Level Cost-Effectiveness Results

Table 42 - SYLR Refrigerators Cost-Effectiveness Results

Table 43 - SYLR Freezers Cost-Effectiveness Results

Table 44 - SYLR Kits Cost-Effectiveness Results

Table 37 – SYLR Inputs

Parameter	Value
Discount Rate	6.88%
Residential Line Loss	9.67%
Residential Energy Rate (\$/kWh)(base year 2014)	\$0.0841
Inflation Rate ¹	1.90%

¹ Future rates determined using a 1.9% annual escalator.

Table 38 – SYLR Annual Program Costs

Measure Group	Engineering Costs	Utility Admin	Admin	Program Dev.	Incentives	Total Utility Costs	Gross Customer Costs
Refrigerators	\$0	\$24,106	\$80,301	\$0	\$26,790	\$131,197	\$0
Freezers	\$0	\$5,390	\$17,955	\$0	\$7,080	\$30,425	\$0
Kits	\$0	\$1,322	\$4,404	\$0	\$6,035	\$11,761	\$0
Total	\$0	\$30,818	\$102,660	\$0	\$39,905	\$173,384	\$0

Table 39 – SYLR Savings by Measure Category

Measure Group	Gross kWh Savings	Realization Rate	Adjusted Gross kWh Savings	Net to Gross Ratio	Net kWh Savings	Measure Life
Refrigerators	522,452	100%	522,452	100%	522,452	7
Freezers	116,820	100%	116,820	100%	116,820	5
Kits	28,654	100%	28,654	100%	28,654	6
Total	667,926	100%	667,926	100%	667,926	7

Table 40 - Benefit/Cost Ratios by Measure Category

Measure Group	PTRC	TRC	UCT	RIM	PCT
Refrigerators	1.81	1.64	1.64	0.53	n/a
Freezers	1.29	1.18	1.18	0.47	n/a
Kits	1.01	0.92	0.92	0.43	n/a
Total	1.66	1.51	1.51	0.52	n/a

Table 41 – SYLR Level Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0472	\$173,384	\$288,574	\$115,190	1.66
Total Resource Cost Test (TRC) No Adder	\$0.0472	\$173,384	\$262,340	\$88,956	1.51
Utility Cost Test (UCT)	\$0.0472	\$173,384	\$262,340	\$88,956	1.51
Rate Impact Test (RIM)		\$504,941	\$262,340	-\$242,602	0.52
Participant Cost Test (PCT)		\$0	\$371,462	\$371,462	n/a
Lifecycle Revenue Impacts (\$/kWh)					\$0.000008822
Discounted Participant Payback (years)					n/a

Table 42 through Table 44 provides cost-effectiveness results for all 3 measures.

**Table 42 – SYLR Refrigerators Cost-Effectiveness Results
(2013 IRP West Residential Whole House 49%)**

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0434	\$131,197	\$237,323	\$106,126	1.81
Total Resource Cost Test (TRC) No Adder	\$0.0434	\$131,197	\$215,749	\$84,552	1.64
Utility Cost Test (UCT)	\$0.0434	\$131,197	\$215,749	\$84,552	1.64
Rate Impact Test (RIM)		\$404,032	\$215,749	-\$188,284	0.53
Participant Cost Test (PCT)		\$0	\$299,625	\$299,625	n/a
Lifecycle Revenue Impacts (\$/kWh)					\$0.000006847
Discounted Participant Payback (years)					n/a

**Table 43 – SYLR Freezers Cost-Effectiveness Results
(2013 IRP West Residential Whole House 49%)**

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0601	\$30,425	\$39,365	\$8,939	1.29
Total Resource Cost Test (TRC) No Adder	\$0.0601	\$30,425	\$35,786	\$5,361	1.18
Utility Cost Test (UCT)	\$0.0601	\$30,425	\$35,786	\$5,361	1.18
Rate Impact Test (RIM)		\$76,028	\$35,786	-\$40,242	0.47
Participant Cost Test (PCT)		\$0	\$52,682	\$52,682	n/a
Lifecycle Revenue Impacts (\$/kWh)					\$0.000002067
Discounted Participant Payback (years)					n/a

**Table 44 - SYLR Kits Cost-Effectiveness Results
(2013 IRP West Residential Lighting 48%)**

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0808	\$11,761	\$11,885	\$124	1.01
Total Resource Cost Test (TRC) No Adder	\$0.0808	\$11,761	\$10,805	-\$956	0.92
Utility Cost Test (UCT)	\$0.0808	\$11,761	\$10,805	-\$956	0.92
Rate Impact Test (RIM)		\$24,881	\$10,805	-\$14,076	0.43
Participant Cost Test (PCT)		\$0	\$19,155	\$19,155	n/a
Lifecycle Revenue Impacts (\$/kWh)					\$0.000000600
Discounted Participant Payback (years)					n/a

Low-Income Weatherization

Navigant estimated the cost-effectiveness results for the Washington Low Income Weatherization Program, based on 2014 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program.

Cost-effectiveness was tested using the 2013 IRP West Residential Whole House 49% load factor decrement. The program passes the cost-effectiveness for the PTRC and TRC tests but does not pass the UCT, RIM and PCT tests. The memo consists of the following tables.

Table 45 - Low Income Weatherization Inputs

Table 46 - Low Income Weatherization Annual Program Costs

Table 47 - Low Income Weatherization Savings by Measure Category

Table 48 - Low Income Weatherization Level Cost-Effectiveness Results

Table 49 - Low Income Weatherization Non-Energy Benefits

Table 50 - Low Income Weatherization Level Cost-Effectiveness Results with NEBs

Table 45 – Low Income Weatherization Inputs

Parameter	Value
Discount Rate	6.88%
Residential Line Loss	9.67%
Residential Energy Rate (\$/kWh)(base year 2014)	\$0.0841
Inflation Rate ¹	1.90%

¹ Future rates determined using a 1.9% annual escalator.

Table 46 – Low Income Weatherization Annual Program Costs

Measure Group	Engineering Costs	Utility Admin	Program Delivery	Program Admin	Incentives	Total Utility Costs	Gross Customer Costs
Low Income	\$0	\$0	\$27,992	\$84,318	\$586,654	\$698,964	\$0

Table 47 – 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	156,456	100%	156,456	100%	156,456	37

Table 48 – Low Income Weatherization Level Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.2667	\$698,964	\$182,674	-\$516,290	0.26
Total Resource Cost Test (TRC) No Adder	\$0.2667	\$698,964	\$166,067	-\$532,896	0.24
Utility Cost Test (UCT)	\$0.2667	\$698,964	\$166,067	-\$532,896	0.24
Rate Impact Test (RIM)		\$937,427	\$166,067	-\$771,360	0.18
Participant Cost Test (PCT)		\$0	\$825,117	\$825,117	n/a
Lifecycle Revenue Impacts (\$/kWh)					\$0.000005194
Discounted Participant Payback (years)					n/a

Table 49 summarizes the non-energy benefits for the Low Income Weatherization program.

Table 49 – Low Income Weatherization Non-Energy Benefits

Non-Energy Benefit	Program Impact	Perspective Adjusted
Arrearage Reduction	\$3,177	TRC, PTRC, UCT, RIM
Capital Cost Savings	\$228	TRC, PTRC, UCT, RIM
Economic Impact	\$505,417	TRC, PTRC
Home Repair Costs	\$48,080	TRC, PTRC, PCT
Total	\$556,901	-

Table 50 details the increase in cost-effectiveness when the non-energy benefits are included in the analysis.

Table 50 – Low Income Weatherization Level Cost-Effectiveness Results with Non-Energy Benefits

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.2667	\$698,964	\$739,575	\$40,611	1.06
Total Resource Cost Test (TRC) No Adder	\$0.2667	\$698,964	\$722,968	\$24,004	1.03
Utility Cost Test (UCT)	\$0.2667	\$698,964	\$169,472	-\$529,492	0.24
Rate Impact Test (RIM)		\$937,427	\$169,472	-\$767,956	0.18
Participant Cost Test (PCT)		\$0	\$873,197	\$873,197	n/a
Lifecycle Revenue Impacts (\$/kWh)					\$0.000005171
Discounted Participant Payback (years)					n/a

wattsmart® Business

Navigant estimated the cost-effectiveness results for the Washington *wattsmart*® Business Program, based on 2014 costs and savings estimates provided by PacifiCorp. This memo provides the cost-effectiveness results for the overall program and for the 13 measure categories.

Cost-effectiveness was tested using the 2013 IRP west system 71% load factor decrement. The program passes the cost-effectiveness for all the tests except the RIM test. The memo consists of the following tables.

- Table 51 - Utility Inputs
- Table 52 - Annual Commercial and Industrial Program Costs by Measure Type
- Table 53 - Annual Commercial and Industrial Savings by Measure Type
- Table 54 - Benefit/Cost Ratios by Measure Category
- Table 55 - *wattsmart*® Business Program Level Cost-Effectiveness Results
- Table 56- *wattsmart*® Business Additional Measures Cost-Effectiveness Results
- Table 57 - *wattsmart*® Business Building Shell Cost-Effectiveness Results
- Table 58 - *wattsmart*® Business Compressed Air Cost-Effectiveness Results
- Table 59 - *wattsmart*® Business Dairy Farm Equipment Cost-Effectiveness Results
- Table 60 - *wattsmart*® Business Energy Management Cost-Effectiveness Results
- Table 61 - *wattsmart*® Business Fast Acting Doors Cost-Effectiveness Results
- Table 62 - *wattsmart*® Business Food Services Cost-Effectiveness Results
- Table 63 - *wattsmart*® Business HVAC Cost-Effectiveness Results
- Table 64 - *wattsmart*® Business Irrigation Cost-Effectiveness Results
- Table 65 - *wattsmart*® Business Lighting Cost-Effectiveness Results
- Table 66 - *wattsmart*® Business Motors Cost-Effectiveness Results
- Table 67 - *wattsmart*® Business Office Equipment Cost-Effectiveness Results
- Table 68 - *wattsmart*® Business Refrigeration Cost-Effectiveness Results

Table 51 - Utility Inputs

Parameter	Value
Discount Rate	6.88%
Residential Line Loss	9.67%
Commercial Line Loss	9.53%
Industrial Line Loss	8.16%
Irrigation Line Loss	9.67%
Residential Energy Rate (\$/kWh)(base year 2014)	\$0.0841
Commercial Energy Rate (\$/kWh)(base year 2014)	\$0.0778
Industrial Energy Rate (\$/kWh)(base year 2014)	\$0.0655
Irrigation Energy Rate (\$/kWh)(base year 2014)	\$0.0815
Inflation Rate ¹	1.90%

¹ Future rates determined using a 1.9% annual escalator.

Table 52 - Annual Commercial and Industrial Program Costs by Measure Category

Measure Group	Engineering Costs	Utility Admin	Program Admin	Program Dev.	Incentives	Total Utility Costs	Gross Customer Costs
Additional Measures	\$47,430	\$21,015	\$67,984	\$7,842	\$229,032	\$373,303	\$559,424
Building Shell	\$5,912	\$2,619	\$8,474	\$977	\$52,079	\$70,062	\$447,140
Compressed Air	\$31,897	\$14,133	\$45,720	\$5,274	\$152,664	\$249,688	\$385,710
Dairy Farm Equipment	\$2,167	\$960	\$3,106	\$358	\$16,450	\$23,041	\$151,284
Energy Management	\$16,490	\$7,306	\$23,636	\$2,726	\$10,791	\$60,950	\$24,037
Fast Acting Doors	\$6,356	\$2,816	\$9,110	\$1,051	\$31,730	\$51,062	\$181,935
Food Services	\$887	\$393	\$1,272	\$147	\$3,600	\$6,299	\$13,103
HVAC	\$58,206	\$25,789	\$83,430	\$9,623	\$355,814	\$532,863	\$943,570
Irrigation	\$25,530	\$11,311	\$36,593	\$4,221	\$97,470	\$175,124	\$377,495
Lighting	\$304,127	\$134,749	\$435,923	\$50,282	\$1,309,730	\$2,234,811	\$3,340,448
Motors	\$15,049	\$6,668	\$21,571	\$2,488	\$64,587	\$110,363	\$154,467
Office Equipment	\$3,443	\$1,525	\$4,935	\$569	\$4,767	\$15,239	\$8,172
Refrigeration	\$263,828	\$116,894	\$378,159	\$43,619	\$1,086,006	\$1,888,506	\$2,060,067
Total	\$781,323	\$346,179	\$1,119,913	\$129,177	\$3,414,719	\$5,791,310	\$8,646,853

Table 53 - Annual Commercial and Industrial Savings by Measure Category

Measure Group	Gross kWh Savings	Realization Rate	Adjusted Gross kWh Savings	Net to Gross Ratio	Net kWh Savings	Measure Life
Additional Measures	1,519,883	97%	1,474,287	100%	1,474,287	14
Building Shell	189,444	97%	183,761	100%	183,761	20
Compressed Air	1,022,146	97%	991,482	100%	991,482	15
Dairy Farm Equipment	69,440	97%	67,357	100%	67,357	14
Energy Management	539,546	95%	512,569	100%	512,569	3
Fast Acting Doors	210,162	94%	197,552	100%	197,552	15
Food Services	28,436	97%	27,583	100%	27,583	12
HVAC	2,512,837	72%	1,809,243	100%	1,809,243	15
Irrigation	818,086	97%	793,543	100%	793,543	12
Lighting	9,745,683	97%	9,453,313	100%	9,453,313	14
Motors	482,249	97%	467,782	100%	467,782	15
Office Equipment	110,322	97%	107,012	100%	107,012	5
Refrigeration	8,724,120	94%	8,200,673	100%	8,200,673	14
Total	25,972,354	94%	24,286,155	100%	24,286,155	14

Table 54 - Benefit/Cost Ratios by Measure Category

Measure Group	PTRC	TRC	UCT	RIM	PCT
Additional Measures	1.60	1.45	2.73	0.70	2.34
Building Shell	0.42	0.38	2.52	0.67	0.55
Compressed Air	1.65	1.50	2.89	0.70	2.42
Dairy Farm Equipment	0.33	0.30	2.04	0.60	0.48
Energy Management	1.31	1.19	1.45	0.56	4.52
Fast Acting Doors	0.79	0.72	2.83	0.68	1.07
Food Services	1.17	1.07	2.68	0.63	1.84
HVAC	1.38	1.25	2.63	0.71	1.90
Irrigation	1.33	1.21	3.13	0.70	1.87
Lighting	1.73	1.57	3.00	0.69	2.62
Motors	1.87	1.70	3.08	0.73	2.72
Office Equipment	1.77	1.61	1.97	0.56	5.31
Refrigeration	2.22	2.02	3.06	0.75	3.33
Total	1.70	1.54	2.94	0.71	2.48

Table 55 - wattsmart® Business Program Level Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0464	\$11,023,444	\$18,712,128	\$7,688,684	1.70
Total Resource Cost Test (TRC) No Adder	\$0.0464	\$11,023,444	\$17,011,025	\$5,987,581	1.54
Utility Cost Test (UCT)	\$0.0244	\$5,791,310	\$17,011,025	\$11,219,715	2.94
Rate Impact Test (RIM)		\$23,828,030	\$17,011,025	-\$6,817,005	0.71
Participant Cost Test (PCT)		\$8,646,853	\$21,451,439	\$12,804,586	2.48
Lifecycle Revenue Impacts (\$/kWh)					\$0.000122651

Table 56 through Table 68 provides cost-effectiveness results for all 13 measures.

Table 56 - wattsmart® Business Additional Measures Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0482	\$703,695	\$1,122,513	\$418,818	1.60
Total Resource Cost Test (TRC) No Adder	\$0.0482	\$703,695	\$1,020,467	\$316,772	1.45
Utility Cost Test (UCT)	\$0.0256	\$373,303	\$1,020,467	\$647,164	2.73
Rate Impact Test (RIM)		\$1,453,655	\$1,020,467	-\$433,189	0.70
Participant Cost Test (PCT)		\$559,424	\$1,309,385	\$749,961	2.34
Lifecycle Revenue Impacts (\$/kWh)					\$0.000007794
Discounted Participant Payback (years)					3.39

Table 57 - wattsmart® Business Building Shell Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.2028	\$465,123	\$194,044	-\$271,078	0.42
Total Resource Cost Test (TRC) No Adder	\$0.2028	\$465,123	\$176,404	-\$288,719	0.38
Utility Cost Test (UCT)	\$0.0305	\$70,062	\$176,404	\$106,342	2.52
Rate Impact Test (RIM)		\$262,294	\$176,404	-\$85,890	0.67
Participant Cost Test (PCT)		\$447,140	\$244,311	-\$202,829	0.55
Lifecycle Revenue Impacts (\$/kWh)					\$0.000001077
Discounted Participant Payback (years)					n/a

Table 58 - wattsmart® Business Compressed Air Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0469	\$482,735	\$794,888	\$312,153	1.65
Total Resource Cost Test (TRC) No Adder	\$0.0469	\$482,735	\$722,625	\$239,891	1.50
Utility Cost Test (UCT)	\$0.0242	\$249,688	\$722,625	\$472,937	2.89
Rate Impact Test (RIM)		\$1,032,238	\$722,625	-\$309,613	0.70
Participant Cost Test (PCT)		\$385,710	\$935,214	\$549,504	2.42
Lifecycle Revenue Impacts (\$/kWh)					\$0.000005194
Discounted Participant Payback (years)					3.47

Table 59 - wattsmart® Business Dairy Farm Equipment Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.2365	\$157,875	\$51,760	-\$106,115	0.33
Total Resource Cost Test (TRC) No Adder	\$0.2365	\$157,875	\$47,055	-\$110,821	0.30
Utility Cost Test (UCT)	\$0.0345	\$23,041	\$47,055	\$24,013	2.04
Rate Impact Test (RIM)		\$78,879	\$47,055	-\$31,824	0.60
Participant Cost Test (PCT)		\$151,284	\$72,287	-\$78,996	0.48
Lifecycle Revenue Impacts (\$/kWh)					\$0.000000573
Discounted Participant Payback (years)					n/a

Table 60 - wattsmart® Business Energy Management Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0531	\$74,196	\$97,221	\$23,025	1.31
Total Resource Cost Test (TRC) No Adder	\$0.0531	\$74,196	\$88,383	\$14,187	1.19
Utility Cost Test (UCT)	\$0.0437	\$60,950	\$88,383	\$27,433	1.45
Rate Impact Test (RIM)		\$158,874	\$88,383	-\$70,491	0.56
Participant Cost Test (PCT)		\$24,037	\$108,715	\$84,678	4.52
Lifecycle Revenue Impacts (\$/kWh)					\$0.000006161
Discounted Participant Payback (years)					0.39

Table 61 - wattsmart® Business Fast Acting Doors Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0980	\$201,267	\$158,878	-\$42,389	0.79
Total Resource Cost Test (TRC) No Adder	\$0.0980	\$201,267	\$144,435	-\$56,833	0.72
Utility Cost Test (UCT)	\$0.0249	\$51,062	\$144,435	\$93,373	2.83
Rate Impact Test (RIM)		\$213,749	\$144,435	-\$69,315	0.68
Participant Cost Test (PCT)		\$181,935	\$194,417	\$12,482	1.07
Lifecycle Revenue Impacts (\$/kWh)					\$0.000001163
Discounted Participant Payback (years)					13.40

Table 62 - wattsmart® Business Food Services Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0646	\$15,802	\$18,554	\$2,752	1.17
Total Resource Cost Test (TRC) No Adder	\$0.0646	\$15,802	\$16,868	\$1,065	1.07
Utility Cost Test (UCT)	\$0.0257	\$6,299	\$16,868	\$10,568	2.68
Rate Impact Test (RIM)		\$26,756	\$16,868	-\$9,888	0.63
Participant Cost Test (PCT)		\$13,103	\$24,057	\$10,954	1.84
Lifecycle Revenue Impacts (\$/kWh)					\$0.000000208
Discounted Participant Payback (years)					n/a

Table 63 - wattsmart® Business HVAC Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0596	\$1,120,619	\$1,541,491	\$420,873	1.38
Total Resource Cost Test (TRC) No Adder	\$0.0596	\$1,120,619	\$1,401,356	\$280,737	1.25
Utility Cost Test (UCT)	\$0.0283	\$532,863	\$1,401,356	\$868,493	2.63
Rate Impact Test (RIM)		\$1,965,455	\$1,401,356	-\$564,099	0.71
Participant Cost Test (PCT)		\$943,570	\$1,788,406	\$844,836	1.90
Lifecycle Revenue Impacts (\$/kWh)					\$0.000009463
Discounted Participant Payback (years)					4.95

Table 64 - wattsmart® Business Irrigation Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0646	\$455,150	\$603,908	\$148,759	1.33
Total Resource Cost Test (TRC) No Adder	\$0.0646	\$455,150	\$549,008	\$93,858	1.21
Utility Cost Test (UCT)	\$0.0249	\$175,124	\$549,008	\$373,883	3.13
Rate Impact Test (RIM)		\$783,625	\$549,008	-\$234,617	0.70
Participant Cost Test (PCT)		\$377,495	\$705,970	\$328,475	1.87
Lifecycle Revenue Impacts (\$/kWh)					\$0.000004934
Discounted Participant Payback (years)					4.71

Table 65 - wattsmart® Business Lighting Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0455	\$4,265,529	\$7,368,404	\$3,102,875	1.73
Total Resource Cost Test (TRC) No Adder	\$0.0455	\$4,265,529	\$6,698,549	\$2,433,020	1.57
Utility Cost Test (UCT)	\$0.0239	\$2,234,811	\$6,698,549	\$4,463,738	3.00
Rate Impact Test (RIM)		\$9,676,684	\$6,698,549	-\$2,978,135	0.69
Participant Cost Test (PCT)		\$3,340,448	\$8,751,603	\$5,411,155	2.62
Lifecycle Revenue Impacts (\$/kWh)					\$0.000053583
Discounted Participant Payback (years)					2.99

Table 66 - wattsmart® Business Motors Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0412	\$200,243	\$373,969	\$173,726	1.87
Total Resource Cost Test (TRC) No Adder	\$0.0412	\$200,243	\$339,972	\$139,729	1.70
Utility Cost Test (UCT)	\$0.0227	\$110,363	\$339,972	\$229,609	3.08
Rate Impact Test (RIM)		\$465,155	\$339,972	-\$125,183	0.73
Participant Cost Test (PCT)		\$154,467	\$419,379	\$264,912	2.72
Lifecycle Revenue Impacts (\$/kWh)					\$0.000002100
Discounted Participant Payback (years)					2.91

Table 67 - wattsmart® Business Office Equipment Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0402	\$18,644	\$32,964	\$14,320	1.77
Total Resource Cost Test (TRC) No Adder	\$0.0402	\$18,644	\$29,967	\$11,323	1.61
Utility Cost Test (UCT)	\$0.0329	\$15,239	\$29,967	\$14,728	1.97
Rate Impact Test (RIM)		\$53,883	\$29,967	-\$23,916	0.56
Participant Cost Test (PCT)		\$8,172	\$43,411	\$35,239	5.31
Lifecycle Revenue Impacts (\$/kWh)					\$0.000001229
Discounted Participant Payback (years)					0.40

Table 68 - *wattsmart*® Business Refrigeration Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized \$/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conversation Adder	\$0.0352	\$2,862,567	\$6,353,533	\$3,490,966	2.22
Total Resource Cost Test (TRC) No Adder	\$0.0352	\$2,862,567	\$5,775,939	\$2,913,372	2.02
Utility Cost Test (UCT)	\$0.0232	\$1,888,506	\$5,775,939	\$3,887,433	3.06
Rate Impact Test (RIM)		\$7,656,784	\$5,775,939	-\$1,880,845	0.75
Participant Cost Test (PCT)		\$2,060,067	\$6,854,283	\$4,794,216	3.33
Lifecycle Revenue Impacts (\$/kWh)					\$0.000033840
Discounted Participant Payback (years)					1.80



Appendix 3

Washington Measure Installation Verifications

Pacific Power

Washington Measure Installation Verifications

Low Income Weatherization

All projects

- All measures are qualified through US Department of Energy approved audit tool or priority list.
- 100 percent inspection by agency inspector of all homes treated, reconciling work completed and quality (corrective action includes measure verification) prior to invoicing Company.
- State inspector follows with random inspections.
- Company hires independent inspector to inspect between 5-10 percent of homes treated (post treatment and payment).

Home Energy Savings

Site inspections by Program Administrator staff for the following retrofit and/or new homes measures. Inspections are performed on ≥ 5 percent of single family homes, ≥ 5 percent of manufactured homes, 100 percent of multifamily projects, and 100 percent of new homes projects.

- Air sealing
- Central air conditioning best practices installation and sizing
- Duct sealing
- Duct sealing and insulation
- Heat pump performance tested comfort systems, commissioning, controls, and sizing
- Heat pump water heaters
- Insulation
- Windows

No site inspections are 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
- Electric water heaters
- Evaporative coolers
- Freezers
- Light fixtures (post-purchase)
- Heat pumps
- Refrigerators

No site inspections are 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.

- CFL bulbs
- LED bulbs
- Light fixtures (upstream)
- Room air conditioners

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

Refrigerator Recycling

Company hires an independent inspector to phone survey ≥ 5 percent program participants and to site inspect ≥ 5 percent of program participants in order to verifying program participation, eligibility of equipment, that vendor pick-up procedures are followed (equipment is disabled at site, kits distributed, etc.) and to survey customer experience.

wattsmart Business

For projects delivered by third part program administrator

Lighting projects

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

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

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

For Company in-house project manager delivered projects

Lighting and non-lighting

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

All Programs

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

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



Appendix 4

Washington Program Evaluations

Pacific Power

Washington 2014 Evaluations

Program Evaluation Recommendations and Company Responses

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

Outlined below is a list of the programs, the years that were evaluated during 2014 and the third party evaluator who completed the evaluation. Program evaluations are available for review at www.pacificorp.com/es/dsm/washington.html

Program	Years Evaluated	Evaluator
Home Energy Savings	2011-2012	The Cadmus Group
Home Energy Reports	8/1/2012 – 1/31/2014	Navigant Consulting

Company responses to the program recommendations contained in the evaluations are provided below.

The third party evaluator’s recommendations and Company’s responses are provided in Table 1 and 2:

Table 1
Home Energy Savings Evaluation Recommendations

Evaluation Recommendations	Pacific Power Action Plan
Standardize the measure naming conventions across years and states to improve the ability to replicate and compare program data.	Program continuously strives to harmonize data and naming conventions; process is ongoing.
To further enhance the program administrator’s methodology for calculating and minimizing CFL leakage, review the confidence surrounding geocoded addresses to ensure that store locations are accurately mapped. Also, consider using Pacific Power’s actual service area territory boundary to refine the model (as opposed to identifying the service area territory boundary by ZIP codes).	Refining the methodology is ongoing.

Evaluation Recommendations	Pacific Power Action Plan
<p>Review options for how best to understand and track the impact of EISA for 60- and 40- watt bulbs in 2014. Some states have allowed utilities to stagger changing the baseline for bulbs impacted by EISA. Specific knowledge of bulb stocking practices (or sales) in Pacific Power’s service territory could help make a case to stagger the 2013 and 2014 baselines impacted by EISA.</p>	<p>Consistent with the Company’s 2014-2015 Biennial Conservation Target, the program is claiming savings using RTF UES values, which account for the expected effects of EISA.</p>
<p>In order to reduce the number of rejected applications, incorporate as many of the best practices stated in Appendix I into the HES incentive forms as deemed cost-effective. Cadmus suggests prioritizing the following:</p> <ul style="list-style-type: none"> – Keep the incentive form length to a minimum. – Encourage trade allies to fill out the paperwork through training or bonuses to decrease the number of rejected applications. – Utilize a paperless application process for all incentive applications. 	<p>All incentive applications were updated as part of the January 1, 2014 program changes; online incentive applications are in place for high volume applications for light fixtures and appliances.</p>

Table 2
Home Energy Reports Evaluation Recommendations

Evaluation Recommendations	Pacific Power Action Plan
<p>Expand the program, especially to high usage customers. If the program is expanded, Navigant (or another third party) should receive the billing data for the new treatment and control households for the year before these households are added to the program, <i>before</i> the home energy reports are initially sent to the new treatment households. Navigant (or another third party) can verify that the allocation of households across the two groups is consistent with a randomized controlled trial.</p>	<p>Company action plan – The Company expanded the program adding 38,500 customers to the initial 2012 launch of 13,500 customers. In compliance with the evaluation recommendation and Commission requirements, a third party vendor performed the randomized control selection process for this expansion.</p>
<p>Consider evaluation of program demand savings. It is possible that customer energy savings are greater than average during peak demand hours. If the interval data necessary to estimate these savings is available, a fairly simple statistical analysis that takes advantage of the experimental design of the program could be used to estimate peak demand savings.</p>	<p>The Company currently does not have interval data for the residential customer group to track the demand savings however will consider collecting general data from customers during evaluation related surveys capable of helping us understand the most typical actions taken and the associated demand impacts.</p>



Appendix 5

Home Energy Savings Retailers

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The Company worked with 20 retailers in 2014 in the promotion of efficient lighting technologies i.e. CFLs, LEDs and efficient lighting fixtures. Table 1 lists the upstream retailers helping promote these technologies in the program.

Table 1¹

Retail Stores – Upstream

Retailer	City	CFLs	LEDs	Fixtures
Ace Hardware	Yakima	√		
Ace Hardware	Naches	√		
Bed Bath & Beyond	Union Gap	√		
Big Lots	Yakima	√		
Corner Grocery & Hardware	Yakima	√		
Costco	Union Gap	√	√	√
Dollar Tree	Yakima	√		
Habitat for Humanity ReStore	Yakima	√		
Home Depot	Yakima	√	√	√
Hometown Ace Hardware	Yakima	√		
Lowe's	Yakima	√	√	√
Roy's Ace Hardware	Yakima	√		
True Value Hardware - C&H	Yakima	√	√	
True Value Hardware - Country Farm and Garden	Yakima	√	√	
True Value Hardware	Selah	√	√	
Walgreens	Yakima	√		
Walgreens	Yakima	√		
Walgreens	Yakima	√		

¹ To be considered as a participating retailer for discounted lighting products, the retailer's sales coming from Pacific Power customers must be a significant majority of their total sales.

Retailer	City	CFLs	LEDs	Fixtures
Wal-Mart - Supercenter	Yakima	√	√	√
Wal-Mart	Yakima	√	√	√

Seventeen local and national retailers now consistently promote high efficiency appliances on behalf of the program. Table 2 lists the appliance retailers participating in the program.

Table 2

Retail Stores – Appliances

Retailer	City	Clothes Washer	Dishwasher*	Electric Water Heater	Evaporative Cooler	Fixture	Freezer	Refrigerator	Room Air Conditioner	No Redemptions in 2014
All Your Building Needs	Pomeroy									√
Bemis Home Appliance & Tv Ctr	Yakima	√	√				√	√		
Best Buy	Yakima	√						√		
Ferguson Enterprises	Yakima									√
Ferguson Enterprises, Inc	Walla Walla									√
Home Depot	Yakima	√	√	√	√	√	√	√		
Home Depot	College Place	√	√	√		√	√	√		
Inland Lighting Centre	Yakima									√
Inland Pipe & Supply	Yakima									√
Lowe's	Yakima	√	√	√		√	√	√		
Sears	Union Gap	√	√	√			√	√		
Sears	Sunnyside	√					√	√		

Retailer	City	Clothes Washer	Dishwasher*	Electric Water Heater	Evaporative Cooler	Fixture	Freezer	Refrigerator	Room Air Conditioner	No Redemptions in 2014
Sears	Toppenish									√
Sears	Walla Walla	√	√				√	√		
Suffield Furniture Company	Dayton						√	√		
True Value Hardware	Selah									√
TV Towne	Yakima									√

* Measure retired with tariff change effective 1/1/2014

Table 3 and Table 4 list the HVAC contractors and weatherization (window and insulation) contractors.

Table 3

HVAC Contractors

Trade Ally Name	City	Central Air Conditioner (CAC) Equipment	CAC Best Practice Installation & Sizing	Duct Sealing	Duct Sealing & Insulation	Evaporative Cooler	Heat Pump - PTCS Commissioning, Controls, and Sizing	Heat Pump Best Practice Installation	HP Tune-up*	Heat Pump Conversion	Heat Pump Upgrade	Heat Pump, Ductless	No Redemptions in 2014
A & N Heating and Cooling LLC	Walla Walla											√	
Absolute Comfort Technology, LLC.	Selah											√	
Absolute Comfort, LLC.	Yakima												√
Access Electric & Heating Inc	Kennewick												√
AccuTemp Heating & Air Conditioning	Yakima											√	
Ackerman Heating & Air Conditioning	Colfax									√			
Air F/X LLC	Yakima												√
All Assured Heating, Cooling, Air Conditioning &	Kennewick												√

Trade Ally Name	City	Central Air Conditioner (CAC) Equipment	CAC Best Practice Installation & Sizing	Duct Sealing	Duct Sealing & Insulation	Evaporative Cooler	Heat Pump - PTCS Commissioning, Controls, and Sizing	Heat Pump Best Practice Installation	HP Tune-up*	Heat Pump Conversion	Heat Pump Upgrade	Heat Pump, Ductless	No Redemptions in 2014
Electric													
All Phase Refrigeration & Heating, Inc.	Kennewick												√
All Seasons Heating & Air Conditioning	Yakima									√	√		
Allard Enterprises	Yakima												√
A-One Refrigeration & Heating	Kennewick												√
Apollo Sheet Metal	Kennewick											√	
Aztec Heating & Air Conditioning	Grandview												√
Bid Mechanical Inc.	Kittitas												√
Blaze to Blizzard Heating & Cooling	Walla Walla												√
Bob Rhodes Heating and Air	Kennewick												√

Trade Ally Name	City	Central Air Conditioner (CAC) Equipment	CAC Best Practice Installation & Sizing	Duct Sealing	Duct Sealing & Insulation	Evaporative Cooler	Heat Pump - PTCS Commissioning, Controls, and Sizing	Heat Pump Best Practice Installation	HP Tune-up*	Heat Pump Conversion	Heat Pump Upgrade	Heat Pump, Ductless	No Redemptions in 2014
Conditioning													
Campbell & Company, Inc.	Pasco	√		√	√		√			√	√	√	
Central Mechanical Services	Yakima												√
Chapman Heating & Air Conditioning	Dayton									√		√	
CK Home Comfort Systems	Grandview				√							√	
Clark County Mechanical	Vancouver												√
College Place Heating & Air Conditioning	College Place	√	√	√	√		√	√		√	√	√	
CP Mechanical LLC	Lynnwood											√	
Darby Heating and Air	Richland												√
Dave's Heating and Air Conditioning Inc	Yakima												√

Trade Ally Name	City	Central Air Conditioner (CAC) Equipment	CAC Best Practice Installation & Sizing	Duct Sealing	Duct Sealing & Insulation	Evaporative Cooler	Heat Pump - PTCS Commissioning, Controls, and Sizing	Heat Pump Best Practice Installation	HP Tune-up*	Heat Pump Conversion	Heat Pump Upgrade	Heat Pump, Ductless	No Redemptions in 2014
Dayco Heating & Air Conditioning	Kennewick				√							√	
Delta Heating and Cooling Inc	Richland						√			√			
Ductz of WA & ID/Ductz of Post Falls	Post Falls												√
Elite Energy Solutions- WA	Seatac												√
E-Star Northwest LLC	Sequim												√
Four Seasons Heating and AC	Yakima											√	
Grassi Refrigeration	Walla Walla												√
Intermountain West Insulation	Kennewick				√								
J & B Heating & AC	Yakima												√
Jacobs & Rhodes Heating & Air Conditioning	Kennewick												√

Trade Ally Name	City	Central Air Conditioner (CAC) Equipment	CAC Best Practice Installation & Sizing	Duct Sealing	Duct Sealing & Insulation	Evaporative Cooler	Heat Pump - PTCS Commissioning, Controls, and Sizing	Heat Pump Best Practice Installation	HP Tune-up*	Heat Pump Conversion	Heat Pump Upgrade	Heat Pump, Ductless	No Redemptions in 2014
Johnny's Heating and Cooling	Walla Walla												√
Miller & Trujillo Heating and AC LLC	Zillah									√		√	
Nico Enterprises, LLC	Walla Walla											√	
Olmstead Electric LLC	Walla Walla												√
One Hour Heating & AC	Yakima			√							√	√	
Platte Heating and Air Conditioning	Yakima												√
Polar Heating And Air Conditioning LLC	Selah												√
Quality Comfort Heating & A/C	Yakima									√			
Rainwater, Inc.	Grandview												√
Richart Family, Inc	Vancouver												√

Trade Ally Name	City	Central Air Conditioner (CAC) Equipment	CAC Best Practice Installation & Sizing	Duct Sealing	Duct Sealing & Insulation	Evaporative Cooler	Heat Pump - PTCS Commissioning, Controls, and Sizing	Heat Pump Best Practice Installation	HP Tune-up*	Heat Pump Conversion	Heat Pump Upgrade	Heat Pump, Ductless	No Redemptions in 2014
Roger L Gibson	Richland												✓
Schaefer Refrigeration Inc	Walla Walla	✓											
Smith Insulation, Inc.	Walla Walla			✓	✓								
ThermalWise Heating and Refrigeration LLC	Walla Walla												✓
Thermex Valley Heating and AC	Yakima										✓		
TJ's Refrigeration	Sunnyside												✓
TNG Heating & Refrigeration	Toppenish											✓	
Total Comfort Solutions, LLC	Walla Walla									✓	✓	✓	
Total Energy Management	Richland												✓
Total Quality Air	Pasco												✓
Vance Heating & Air Conditioning,	Yakima	✓								✓		✓	

Trade Ally Name	City	Central Air Conditioner (CAC) Equipment	CAC Best Practice Installation & Sizing	Duct Sealing	Duct Sealing & Insulation	Evaporative Cooler	Heat Pump - PTCS Commissioning, Controls, and Sizing	Heat Pump Best Practice Installation	HP Tune-up*	Heat Pump Conversion	Heat Pump Upgrade	Heat Pump, Ductless	No Redemptions in 2014
Inc.													
Young's Heating and Cooling LLC	Walla Walla									✓	✓	✓	

* Measure retired with tariff change effective 1/1/2014

Table 4

Weatherization Contractors

Trade Ally Name	City	Air Sealing	Attic Insulation	Floor Insulation	Wall Insulation	Windows	No Redemptions in 2014
Allard Enterprises	Yakima						√
Benko Enterprises	Walla Walla						√
Bi-State Siding & Window- WA	Pasco						√
Central Valley Glass, Inc.	Yakima					√	
Chon Insulation & Drywall LLC	Walla Walla		√		√		
Dave's Heating and Air Conditioning Inc	Yakima						√
Don Jordan Energy Systems	Yakima		√		√		
Ductz of WA & ID/Ductz of Post Falls	Post Falls						√
Elite Energy Solutions- WA	Seatac						√
E-Star Northwest LLC	Sequim						√
Farwest Climate Control Inc.	Yakima						√
High Desert Glass, LLC	Prosser						√
Home Improvement Products, Inc.	Moxee					√	
Intermountain West Insulation	Kennewick		√	√	√		
Jackson Siding and Windows	Walla Walla					√	
McKinney Glass	Yakima					√	
Miller Glass Co.	Yakima						√
Perfection Glass, Inc.	Kennewick						√
Richart Family, Inc	Vancouver						√

Trade Ally Name	City	Air Sealing	Attic Insulation	Floor Insulation	Wall Insulation	Windows	No Redemptions in 2014
Smith Insulation, Inc.	Walla Walla	√	√	√	√	√	
Vineyard Creek Construction	Walla Walla					√	
West Valley Glass and Window	Yakima					√	
Windows Walla Walla	Walla Walla					√	

Demographics

Approximately 58 percent of all *Home Energy Savings* incentive applications in 2014 were received from customers located in Yakima and Walla Walla. Table 5 summarizes customer applications by community.

Table 5

Customer Applications by City

Customer City	% of All Applications	% of Appliance & Fixture Applications	% of HVAC Applications	% of Manufactured Homes Applications	% of Weatherization Applications	% of Kits Applications
YAKIMA	41.95%	43.68%	41.52%	0.56%	46.50%	42.35%
WALLA WALLA	15.50%	24.63%	19.70%	56.18%	30.77%	13.89%
SELAH	7.48%	5.99%	7.27%	0.56%	5.24%	7.72%
SUNNYSIDE	5.22%	2.40%	4.24%	0.00%	1.40%	5.58%
COLLEGE PLACE	3.33%	3.86%	2.73%	41.57%	2.80%	2.78%

Customer City	% of All Applications	% of Appliance & Fixture Applications	% of HVAC Applications	% of Manufactured Homes Applications	% of Weatherization Applications	% of Kits Applications
TOPPENISH	3.29%	2.26%	1.52%	0.00%	0.35%	3.51%
GRANDVIEW	3.06%	1.20%	0.91%	0.00%	1.05%	3.32%
UNION GAP	2.53%	1.60%	1.52%	0.00%	1.40%	2.67%
ZILLAH	2.23%	2.40%	4.85%	0.00%	3.85%	2.14%
DAYTON	2.09%	1.73%	2.12%	0.56%	0.35%	2.17%
NACHES	1.90%	0.80%	3.33%	0.00%	1.40%	1.97%
MOXEE	1.81%	1.60%	1.52%	0.00%	0.35%	1.89%
WAPATO	1.78%	1.60%	1.21%	0.00%	1.05%	1.85%
GRANGER	1.58%	0.93%	0.30%	0.00%	0.70%	1.70%
TIETON	0.88%	0.93%	0.61%	0.00%	0.00%	0.92%
BURBANK	0.86%	0.53%	1.21%	0.56%	0.00%	0.91%
WAITSBURG	0.75%	0.67%	1.21%	0.00%	1.75%	0.73%
POMEROY	0.69%	0.13%	0.30%	0.00%	0.00%	0.76%
COWICHE	0.51%	0.80%	0.30%	0.00%	0.35%	0.51%
MABTON	0.45%	0.00%	0.61%	0.00%	0.00%	0.49%
OUTLOOK	0.43%	0.67%	0.91%	0.00%	0.00%	0.42%
TOUCHET	0.38%	0.40%	0.61%	0.00%	0.00%	0.39%
BUENA	0.25%	0.27%	0.61%	0.00%	0.00%	0.25%
WHITE SWAN	0.23%	0.00%	0.00%	0.00%	0.00%	0.26%
HARRAH	0.22%	0.27%	0.00%	0.00%	0.35%	0.22%
WALLULA	0.14%	0.13%	0.00%	0.00%	0.35%	0.15%
DIXIE	0.14%	0.00%	0.30%	0.00%	0.00%	0.15%
PRESCOTT	0.14%	0.40%	0.00%	0.00%	0.00%	0.13%
PARKER	0.09%	0.00%	0.00%	0.00%	0.00%	0.11%

Customer City	% of All Applications	% of Appliance & Fixture Applications	% of HVAC Applications	% of Manufactured Homes Applications	% of Weatherization Applications	% of Kits Applications
PROSSER	0.05%	0.00%	0.61%	0.00%	0.00%	0.04%
HUNTSVILLE	0.02%	0.13%	0.00%	0.00%	0.00%	0.02%
LOWDEN	0.01%	0.00%	0.00%	0.00%	0.00%	0.02%



Appendix 6

Washington Energy Efficiency Alliance

Pacific Power

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

An asterisk (*) indicates Pacific Power Outstanding Contribution Award winning trade allies in 2009, 2010, 2011, 2012 and/or 2013.

Search Criteria:

Selected State(s): Washington
Specialties: Lighting
 HVAC - unitary
 HVAC - evaporative
 Motors and VFDs
 Controls
 Building envelope
 Appliances
 Office equipment
 Food Service
 Compressed Air
 Farm and Dairy
 Irrigation
 Other
Business Type: --ANY--

Search Results: 76 - Date and Time: 03/03/2015 06:08:28 PM

Company Name	Specialties	Business Type	Join Date	Projects Completed
A & T Quality Electric LLC 4271 N Wenas Rd Selah, WA - 98942 Phone: 509-985-9890	HVAC - unitary Lighting Motors and VFDs	Contractor	07/15/2009	5
Absolute Software, Inc. 430-11401 Century Oaks Terrace Austin, TX - 78758 Phone: 512-600-7455 Website: www.absolute.com	Other: Other Specialty	Manufacturer - Rep Other: Software Company	02/11/2014	Completed
All Seasons Heating & Air Conditioning* 302 S. 3rd Ave. Yakima, WA - 98902 Phone: 509-248-6380 Website: www.allseasonsheating.com	HVAC - unitary	Contractor	06/01/2004	3
All-Phase Electric, Inc.* 2500 S 12th Ave Union Gap, WA - 98903 Phone: 509-454-5093 Website: allphaseelectric.org	Lighting	Contractor	06/08/2006	34
All-State Electric Co.* 310 S. 1st Street Selah, WA - 98942 Phone: 509-941-8739 Website: telkonet.com	Lighting Motors and VFDs Other: Other Specialty	Contractor	01/20/2009	35
Allard Enterprises 4506 Maple Ave. Yakima, WA - 98901 Phone: 509-575-0955	HVAC - unitary Motors and VFDs	Contractor	04/01/2006	Completed
Apollo Sheet Metal 1207 W. Columbia Dr. Kennewick, WA - 99336 Phone: 509-586-1104 Website: apollosm.com	HVAC - unitary Motors and VFDs	Distributor	04/01/2006	14

Applied Industrial Technologies - Yakima 909 N. Front St. Yakima, WA - 98901 Phone: 509-457-1600 Website: www.applied.com	Specialties Motors and VFDs	Business Type Distributor	Join Date 10/01/2004	Projects Completed 7
Batteries Plus Bulbs - Walla Walla 632 S 9TH AVE Walla Walla, WA - 99362 Phone: 509-529-7001	Specialties Lighting Other: Other Specialty	Business Type Distributor	Join Date 07/23/2014	Projects Completed 2
C-Mation LLC 3565 S West Temple Salt Lake City, UT - 84115 Phone: 801-268-1425 Website: cmation.com	Specialties HVAC - unitary Motors and VFDs	Business Type Distributor	Join Date 04/01/2009	Projects Completed 1
Central Mechanical Services 2601 Business Lane Yakima, WA - 98901 Phone: 509-248-5944	Specialties HVAC - unitary	Business Type Contractor	Join Date 08/01/2004	Projects Completed 1
Champion Lighting, Inc. 4523 S. Saint Andrews Ln Spokane, WA - 99223 Phone: 509-448-4477	Specialties Lighting	Business Type Other: Other	Join Date 01/20/2007	Projects Completed 10
College Place Heating and Air Conditioning 970 NE Rose College Place, WA - 99324 Phone: 509-525-8073 Website: www.cpheat.com	Specialties HVAC - unitary	Business Type Contractor	Join Date 03/01/2010	Projects Completed 1
Columbia Electric Supply - Pasco 1913 Washington Street Pasco, WA - 99301 Phone: 509-547-9733 Website: www.columbiaelectricsupplypasco.com	Specialties Controls Lighting Motors and VFDs	Business Type Distributor	Join Date 09/09/2014	Projects Completed 1
Columbia Electric Supply - Sunnyside 2580 Yakima Valley Hwy Sunnyside, WA - 98944 Phone: 509-837-6033	Specialties Controls Lighting Motors and VFDs	Business Type Distributor	Join Date 10/23/2014	Projects Completed 1
Columbia Electric Supply - Walla Walla 932 N 13TH AVE Walla Walla, WA - 99362 Phone: 509-522-1419	Specialties HVAC - unitary Lighting Motors and VFDs	Business Type Distributor	Join Date 01/01/2008	Projects Completed 2
Consolidated Electrical Distributors - Yakima 131 S. 1st Ave. Yakima, WA - 98902 Phone: 509-248-0872	Specialties Lighting	Business Type Distributor	Join Date 01/01/2008	Projects Completed 10
Cooper Lighting 1121 Highway 74 South Peachtree City, GA - 30269 Phone: 770-486-3092 x 3092 Website: www.cooperlighting.com	Specialties Controls Lighting	Business Type Manufacturer - Rep	Join Date 11/20/2012	Projects Completed null
Current Electric Solution 11979 W. Hwy 12 Lowden, WA - 99360 Phone: 509-526-0161 Website: www.currentelectricsolutions.com	Specialties Controls Irrigation Lighting Motors and VFDs Other: Other Specialty	Business Type Contractor	Join Date 12/14/2012	Projects Completed 2

Dayco Heating & Air 11 N. Auburn Kennewick, WA - 99337 Phone: 509-586-9464	Specialties HVAC - unitary	Business Type Contractor	Join Date 04/01/2006	Projects Completed 7
Dilbeck Electric, Inc.* 517 S. 2nd Avenue Yakima, WA - 98902 Phone: 509-575-4666	Specialties Lighting Motors and VFDs	Business Type Contractor	Join Date 06/01/2005	Projects Completed 7
Doyle Electric Inc. 1421 Dell Avenue Walla Walla, WA - 99362 Phone: 509-529-2500 Website: doyleelectric.com	Specialties Lighting	Business Type Contractor	Join Date 10/15/2006	Projects Completed 8
ecomodus 5110 Tieton Drive Yakima, WA - 98908 Phone: 509-307-4363	Specialties Lighting	Business Type Contractor	Join Date 02/01/2012	Projects Completed 66
Electrical Frontier Inc. 4240 Thorp Road Moxee, WA - 98936 Phone: 509-945-5703	Specialties Lighting	Business Type Contractor	Join Date 07/01/2012	Projects Completed 1
Evolve Guest Controls 85 Denton Avenue New Hyde Park, NY - 11040 Phone: 516-448-1862 Website: eguestcontrols.com	Specialties Other: Other Specialty	Business Type Manufacturer - Rep Other: Other	Join Date 06/01/2012	Projects Completed 1
Extra Effort Consulting & Supply 14530 SW 144th Ave. Tigard, OR - 97224 Phone: 503-780-2359 Website: www.ExtraEffortLLC.com	Specialties Lighting Motors and VFDs	Business Type Distributor	Join Date 04/01/2012	Projects Completed 1
FGI, llc 932 W. 32nd Avenue Spokane, WA - 99203 Phone: 800-630-7345 Website: www.fgillumination.com	Specialties Lighting	Business Type Other: Consultant	Join Date 03/12/2013	Projects Completed 1
Grassi Refrigeration 1445 W. Rose Walla Walla, WA - 99362 Phone: 509-529-9700	Specialties HVAC - unitary Motors and VFDs	Business Type Contractor	Join Date 06/01/2006	Projects Completed 1
Greenwalt Electric LLC PO Box 850 Naches, WA - 98937 Phone: 509-949-8223	Specialties Lighting Motors and VFDs	Business Type Contractor	Join Date 10/28/2008	Projects Completed 12
HanitaTek Window Film 4010 La Reunion Pkwy, #100 Dallas, TX - 75212 Phone: 800-660-5559 Website: www.HanitaTek.com	Specialties Building envelope	Business Type Engineering Firm	Join Date 08/06/2013	Projects Completed 1
Hendon Electric 82075 Hwy 395 N Umatilla, OR - 97882 Phone: 541-922-3844	Specialties Lighting	Business Type Contractor	Join Date 03/01/2005	Projects Completed 5
Hoydar-Buck Inc. 210 West Orchard Ave Selah, WA - 98942 Phone: 509-697-8800	Specialties Lighting	Business Type Contractor	Join Date 09/28/2009	Projects Completed 2

Hutchinson Electric Inc. 3660 Washout Rd. Sunnyside, WA - 98944 Phone: 509-391-0770	Specialties Lighting	Business Type Contractor	Join Date 02/26/2007	Projects Completed 13
K&N Electric Motors, Inc. 9933 N.E. Kinder Rd. Moses Lake, WA - 98837 Phone: 509-765-3399 Website: knelectric.com	Specialties Motors and VFDs	Business Type Distributor	Join Date 05/01/2004	Projects Completed 3
KAPCO LLC 4207 Ahtanum Rd. Yakima, WA - 98903 Phone: 509-966-4540	Specialties Controls Lighting Motors and VFDs	Business Type Contractor	Join Date 03/04/2014	Projects Completed 28
Kinter Electric* 2761 E. Edison Rd. PO Box 1058, Sunnyside, WA - 98944 Phone: 509-839-3900 Website: www.kinterelectric.com	Specialties Lighting	Business Type Contractor	Join Date 10/31/2009	Projects Completed 59
Knobel's Electric Inc. 801 Tenant Lane yakima, WA - 98901 Phone: 509-452-9157 Website: knobelselectric.com	Specialties Controls Lighting Motors and VFDs	Business Type Contractor	Join Date 12/30/2014	Projects Completed 7
Lake Shore Electric, Inc.* 9702 Tieton Dr. Yakima, WA - 98908 Phone: 509-965-4281	Specialties Lighting Motors and VFDs Other: Other Specialty	Business Type Contractor	Join Date 05/12/2009	Projects Completed 12
Linden Electric, Inc. 9401 Mieras Rd Yakima, WA - 98901 Phone: 509-575-1191	Specialties Lighting	Business Type Contractor	Join Date 07/06/2006	Projects Completed 9
M & R Electric Inc. 3806 OAK AVE. YAKIMA, WA - 98903 Phone: 509-965-1706	Specialties Lighting	Business Type Contractor	Join Date 09/08/2014	Projects Completed 1
M. Campbell & Company, Inc.* 2828 W Irving St Pasco, WA - 99301 Phone: 509-545-9848 Website: www.callcampbell.com	Specialties HVAC - unitary	Business Type Contractor	Join Date 06/01/2004	Projects Completed 1
Mantey Heating & Air 3703 W. Nobhill Blvd. Yakima, WA - 98902 Phone: 509-966-5520	Specialties HVAC - unitary Motors and VFDs	Business Type Contractor	Join Date 10/01/2005	Projects Completed 1
Meier Architecture & Engineering 8697 W. Gage Blvd. Kennewick, WA - 99336 Phone: 509-735-1589 Website: meierinc.com	Specialties HVAC - unitary Lighting Motors and VFDs Other: Other Specialty	Business Type Architect	Join Date 02/01/2012	Projects Completed 1
MH Electric Inc.* Po Box 11224 Yakima, WA - 98909 Phone: 509-452-6039	Specialties Lighting Motors and VFDs	Business Type Contractor	Join Date 01/06/2010	Projects Completed 132
Micro Computer Systems 12631 Beverly Park Road Lynnwood, WA - 98087 Phone: 800-658-1000 x 9889 Website: www.microk12.com	Specialties Office equipment Other: Other Specialty	Business Type Other: Other	Join Date 04/01/2012	Projects Completed 1

Nico Electrical Contracting P.O. Box 476 Walla Walla, WA - 99362 Phone: 509-526-9658	Specialties Lighting	Business Type Contractor	Join Date 09/21/2012	Projects Completed 2
Norstar Electric 11780 Mieras Rd. Yakima, WA - 98901 Phone: 509-961-8161	Specialties Lighting	Business Type Contractor	Join Date 01/01/2006	Projects Completed 5
North Coast Electric - Pasco 1928 West A Street Pasco, WA - 99301 Phone: 509-547-9514 Website: www.northcoastelectric.com	Specialties Lighting	Business Type Distributor	Join Date 09/21/2012	Projects Completed 4
North Coast Electric - Seattle 2424 8th Ave. So. Seattle, WA - 98134 Phone: 206-436-4444 x 4444 Website: www.ncelec.com	Specialties Lighting Motors and VFDs	Business Type Distributor	Join Date 06/27/2014	Projects Completed null
North Coast Electric - Spokane 4216 E. Main Avenue Spokane, WA - 99202 Phone: 509-951-3726	Specialties Lighting	Business Type Distributor	Join Date 03/28/2013	Projects Completed null
North Coast Electric - Wenatchee 1415 N Miller Wenatchee, WA - 98801 Phone: 509-663-8603 Website: www.northcoastelectric.com	Specialties Lighting	Business Type Distributor	Join Date 09/21/2012	Projects Completed null
Northwest Electrical Supply Company (NESCO) 111 S. 3rd Ave. Yakima, WA - 98902 Phone: 509-575-0354	Specialties HVAC - unitary Lighting Motors and VFDs	Business Type Distributor	Join Date 09/21/2012	Projects Completed 10
Parsons Electric 415 Viewmont Pl. Yakima, WA - 98908 Phone: 509-930-1292	Specialties Lighting	Business Type Contractor	Join Date 08/03/2007	Projects Completed 23
Performance Lighting Solutions PO Box 1626 Kalama, WA - 98625 Phone: 360-431-5112	Specialties Lighting	Business Type Other: General Contractor	Join Date 10/11/2013	Projects Completed 1
Picatti Brothers Inc. 105 S. 3rd St. Yakima, WA - 98902 Phone: 509-248-2540	Specialties Lighting Motors and VFDs	Business Type Contractor	Join Date 06/18/2009	Projects Completed 2
Platt Electric Supply - Walla Walla 415 West Main Walla Walla, WA - 99362 Phone: 509-522-0611 Website: platt.com	Specialties Lighting	Business Type Distributor	Join Date 04/07/2007	Projects Completed 24
Platt Electric Supply - Yakima 16 S. 1st Avenue Yakima, WA - 98902 Phone: 509-452-6444 Website: platt.com	Specialties Lighting	Business Type Distributor	Join Date 08/16/2006	Projects Completed 96
Pro Controls Inc. 1312 Gordon Rd Yakima, WA - 98901 Phone: 509-388-4186 Website: procontrolsyakima.com	Specialties Controls HVAC - unitary Lighting Motors and VFDs	Business Type Contractor	Join Date 07/01/2012	Projects Completed 1

Rainbow Electric, Inc. 1312 Dazet Rd Yakima, WA - 98908 Phone: 509-972-2558 x 105	Specialties Building envelope Food Service Lighting Other: Other Specialty	Business Type Contractor	Join Date 06/11/2014	Projects Completed 1
Rexel - Capitol Light - Hartford, CT 270 Locust Street Hartford, CT - 06141 Phone: 866-520-2388 Website: www.capitolight.com	Specialties Controls Lighting	Business Type Distributor	Join Date 06/13/2014	Projects Completed 1
Roberts Electrical Inc. 13761 US Highway 12 Naches, WA - 98937 Phone: 509-930-3803	Specialties HVAC - unitary Lighting Motors and VFDs	Business Type Contractor	Join Date 05/01/2012	Projects Completed 2
Rucker Electric, LLC 9001 Roza Hill Drive Yakima, WA - 98901 Phone: 509-949-5156	Specialties Lighting Motors and VFDs	Business Type Contractor	Join Date 01/25/2015	Projects Completed 8
S & S Electric 315 White Walla Walla, WA - 99362 Phone: 509-525-7720	Specialties Lighting	Business Type Contractor	Join Date 05/31/2005	Projects Completed 3
Schaefer Refrigeration, Inc. 2929 E. Isaacs Walla Walla, WA - 99362 Phone: 509-525-2076	Specialties HVAC - unitary Motors and VFDs	Business Type Contractor	Join Date 06/01/2004	Projects Completed 2
Schneider Electric Buildings Americas, Inc. 95 S. Jackson Street, Suite 300 Seattle, WA - 98104 Phone: 360-823-3040 Website: www.schneider-electric.com	Specialties HVAC - unitary Lighting Motors and VFDs	Business Type Engineering Firm	Join Date 10/10/2010	Projects Completed 4
Stoneway Electric - Walla Walla 44 S Palouse Street Walla Walla, WA - 99362 Phone: 509-522-1550 Website: stoneway.com	Specialties Lighting	Business Type Distributor	Join Date 06/08/2006	Projects Completed 4
Stoneway Electric - Yakima 23 N. 3rd Ave Yakima, WA - 98902 Phone: 509-469-6154	Specialties Controls HVAC - unitary Motors and VFDs	Business Type Distributor	Join Date 02/26/2008	Projects Completed 1
Stusser Electric Company 116 N. 2nd Ave. Yakima, WA - 98902 Phone: 509-453-0378	Specialties HVAC - unitary Lighting Motors and VFDs	Business Type Distributor	Join Date 04/28/2007	Projects Completed 22
T&M Heating PO Box 3120 2711 S. 5th Ave, Union Gap, WA - 98903 Phone: 509-575-1088	Specialties HVAC - unitary	Business Type Contractor	Join Date 07/01/2004	Projects Completed 1
Thermex Valley Heating & AC 1916 Fruitvale Blvd. Yakima, WA - 98902 Phone: 509-965-0630 Website: thermexvalley.com	Specialties HVAC - unitary Motors and VFDs	Business Type Contractor	Join Date 07/01/2004	Projects Completed 1
Thunder Electric Inc. 704 River Road Yakima, WA - 98902 Phone: 509-575-8362	Specialties Lighting	Business Type Contractor	Join Date 09/11/2014	Projects Completed 1

Tolman Electric 380 Canyon Road Grandview, WA - 98930 Phone: 509-830-1164	Specialties HVAC - unitary Lighting Motors and VFDs	Business Type Contractor	Join Date 04/10/2010	Projects Completed 3
Total Control Electric Inc. 5 East F Street Yakima, WA - 98902 Phone: 509-453-1021	Specialties Lighting Motors and VFDs	Business Type Contractor	Join Date 06/08/2006	Projects Completed 11
Total Energy Management 1975 Butler Loop Richland, WA - 99352 Phone: 509-946-4500	Specialties HVAC - unitary	Business Type Contractor	Join Date 08/01/2004	Projects Completed 2
Walla Walla Electric* 1225 W. Poplar Walla Walla, WA - 99362 Phone: 509-525-8672 Website: wwelectric.com	Specialties Lighting	Business Type Contractor	Join Date 04/09/2001	Projects Completed 97
Ziegler Electric* 202 Country Crest Rd Yakima, WA - 98901 Phone: 509-930-3300	Specialties Lighting	Business Type Contractor	Join Date 04/01/2001	Projects Completed 82



Appendix 7

Communications

Pacific Power

Energy Efficiency Communications 2014 (only showing new creative)

Creative (click on the hyperlinks below to see the creative)

TV
Wattsmart, WA Dishes (appliance incentives)
Wattsmart, WA Apple Pie (insulation)
Wattsmart, WA Caulk Gun (weatherization)
wattsmart, WA 78 Degrees/Veggies (energy efficiency)
Math Girl - Spanish
RADIO
Radio
2014 will be better – new cash incentives
Wattsmart, WA Good Place – winter efficiency
Wattsmart, WA Festival – winter efficiency
Wattsmart, WA non-season – energy efficiency
Dream Business – not Alaska
Dream Business – not Switzerland
Print
English
New Incentives - hook
Wattsmart WA, Generic
Wattsmart WA, Insulation
Wattsmart WA, Caulking
HES

<u>wattsmart Business Thank You</u>
<u>wattsmart Business</u> – watch your savings grow
<u>John I Haas Case Study ad</u>
<u>Port of Columbia Case Study ad</u>

Digital Ads:

- [Wattsmart, Washington - energy efficiency \(animated\)](#)
- [Wattsmart, Washington - weatherization \(static\)](#)
- [Wattsmart, Washington - weatherization \(animated\)](#)
- [See ya later, refrigerator \(animated, 300x250\)](#)
- [See ya later, refrigerator \(animated, 728x90\)](#)

Inserts:

- February – [Insulation incentives](#)
- April – [Cooling incentives](#)
- August – [See ya later, refrigerator](#)
- September – [wattsmart starter kits](#)
- September – [Conservation report](#)

Newsletters:

- [January Voices](#)
- [February Energy Insights](#)
- [March Voices](#)
- [April Voices](#)
- [May wattsup insert](#)
- [May Energy Insights](#)
- [July Voices](#)
- [August Energy Insights](#)
- [September Voices](#)
- [October wattsup insert](#)
- [November Voices](#)
- [November Energy Insights](#)

Outer Envelope:

- [March](#) – be wattsmart

- [October](#) – weatherize

Direct mail:

- Home Energy Reports - [sample](#)
- [wattsmart Starter Kit \(6/5\)](#)
- [Home Energy Savings Manufactured Home Duct Sealing Letter \(5/30\)](#)
- [wattsmart Starter Kit mailing \(9/11 & 9/24\)](#)
- [wattsmart Business irrigation mailing to nearly 2,600 irrigation customers](#)

Emails:

- [eVoices \(1/13\)](#)
- [Energy Update for managed accounts and opinion leaders \(2/3\)](#)
- [Energy Connections for midsize business customers \(2/18\)](#)
- [Energy Update for managed accounts and opinion leaders \(3/4\)](#)
- [Energy Connections for midsize business customers \(3/18\)](#)
- [eVoices \(3/20\)](#)
- [Energy Update for managed accounts and opinion leaders \(4/1\)](#)
- [Energy Connections for midsize business customers \(4/15\)](#)
- [Energy Update for managed accounts and opinion leaders \(5/1\)](#)
- [eVoices \(5/1\)](#)
- [Energy Connections for midsize business customers \(5/15\)](#)
- [Residential load forecast survey email \(5/15-5/16\)](#)
- [Energy Insights for managed accounts and opinion leaders \(5/22\)](#)
- [Energy Update for managed accounts and opinion leaders \(6/3\)](#)
- [Energy Connections for midsize business customers \(6/17\)](#)
- [Energy Update for managed accounts and opinion leaders \(7/1\)](#)
- [eVoices \(7/7\)](#)
- [Energy Update for managed accounts and opinion leaders \(8/5\)](#)
- [Energy Connections for midsize business customers \(8/19\)](#)
- [Energy Update for managed accounts and opinion leaders \(9/2\)](#)
- [Energy Connections for midsize business customers \(9/16\)](#)
- [eVoices \(9/24\)](#)

- [wattsmart Starter Kit \(9/19\)](#)
- [Energy Update for managed accounts and opinion leaders \(10/1\)](#)
- [Home Energy Report email template](#)
- [eVoices \(11/21\)](#)
- [Energy Connections for midsize business customers \(12/16\)](#)
- [Energy Insights for communities and managed accounts \(12/2\)](#)
- [Heating tips and information on incentives for mid-size business \(12/9\)](#)

Collateral:

- [ENERGY STAR Guide for Restaurants](#)
- [Winter wattsmart handout - Washington](#)
- [Summer wattsmart handout](#)
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