PACIFIC POWER
A DIVISION OF PACIFICORP

825 NE Multnomah, Suite 2000
Portland, Oregon 97232

March 31, 2014

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: 2013 Annual Report on Conservation Acquisition

Dear Mr. King:

Pacific Power & Light Company (Pacific Power) submits for filing an original and two copies of the company's 2013 Annual Report on Conservation Acquisition for the year ended December 31, 2013.

Pacific Power respectfully requests that all data requests regarding this matter be added 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 Gary Tawwater, Manager, Regulatory Affairs, at (503) 813-6805.

Sincerely,

Kathryn Hymas/GWT

Kathryn Hymas
Vice President of Finance and Demand Side Management

Enclosures

Washington Annual Report on Conservation Acquisition

January 1, 2013 – December 31, 2013

Issued March 31, 2014

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A DIVISION OF PACIFICORP

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Table of Contents

List of Abbreviations and Acronyms

CFLs	Compact Fluorescent Lights
DSM	Demand-Side Management
Schedule 191	Schedule 191 System Benefits Charge Adjustment
EM&V	Evaluation, Measurement & Verification
HVAC	Heating, Ventilation and Air Conditioning
IRP	Integrated Resource Plan
kWh	Kilowatt hour
LEDs	Light-emitting Diode lights
NEEA	Northwest Energy Efficiency Alliance
NTG	Net-to-Gross
PCT	Participant Cost Test
PTRC	PacifiCorp Total Resource Cost test
RCW	Revised Code of Washington
RIM	Ratepayer Impact Measure test
SBC	System Benefit Charge
SYLR	See ya later, refrigerator®
TRC	Total Resource Cost test
UCT	Utility Cost Test
WAC	Washington Administrative Code

Executive Summary

PacifiCorp d/b/a Pacific Power & Light Company, ("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 2013, the Company offered six 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, 2013, through December 31, 2013. The Company, on behalf of its customers, invested $9.4m in energy efficiency information, services, and incentives during the reporting period. The investment yielded approximately 62.7 gigawatt-hours in first year savings[1] and approximately 10.2 megawatts of capacity reduction[2]. Net benefits over the life of the individual measures are estimated at $22.5m [3]. The cost effectiveness of the portfolio from various perspectives is provided in Table 1.

Table 1
Cost Effectiveness for the Portfolio[4]

	B/C Ratio	Net Benefits
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits[5]	2.37	$22,479,496
Total Resource Cost Test – effects on both participants and non-participants[6]	2.16	$19,047,409
Utility Cost Test – effect on customers[7]	3.70	$25,043,325
Participant Cost Test – effect on participants[8]	3.96	$32,470,055
Ratepayer Impact – effect on the cost per kilowatt-hour of sales	0.72	($13,299,145)

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 2013 is provided in detail in Appendix 2.

[1] Gross reported savings at generation.
[2] See Appendix 1 for explanation on how the capacity contribution savings values are calculated.
[3] See Table 1 – Total Resource Cost Test plus 10% Net Benefits.
[4] Ratios include NEEA's savings and Non-Energy Benefits but exclude portfolio level expenses i.e. the costs of the potential study and development of measure assumption database consistent with handling as described in 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.

The portfolio was cost effective based on four of the five standard cost effectiveness tests for the reporting period. The ratepayer impact measure test[9] 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	45
	Weatherization Contractors	23
	Low Income Agencies	3
Commercial and Industrial	Lighting Trade Allies	54
	HVAC Trade Allies	30
	Motors Trade Allies	43
	Engineering Firms	22

[9] The RIM examines the impact of energy efficiency on utility rates. 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 approval of the following:

- Initiative 937 compliance plans and reports from Order 01, Docket UE-111880
  - 2012 Annual Report on Conservation Acquisition, filed March 31, 2013.
  - System Benefit Charge Adjustment reducing annual revenue by approximately $1.4m, filed May 1, 2013 in Docket UE -130668 and effective July 1, 2013.
  - Semi-annual DSM Expenditures and System Benefit Charge collections report. Filed late on October 4, 2013 to bring the Company back into compliance with Order 01 in Docket UE-111880 which required filing by August 15, 2013.
  - PacifiCorp's Ten-Year Conservation Potential and 2014-2015 Biennial Conservation Target, and Demand Side Management Business Plan, filed November 1, 2013.
- Tariff updates to *Low Income Weatherization Program* – Schedule 114, effective July 1, 2013.
- Modification to *FinAnswer Express* – Schedule 115, effective September 6, 2013[11]
- Modification of *Home Energy Savings* – Schedule 118, effective September 19, 2013[12]
- Modification of *Home Energy Savings* – Schedule 118, effective January 1, 2014[13]
- Filed request to cancel Energy FinAnswer – Schedule 118 and FinAnswer Express – Schedule 115 programs and permission to consolidate and expand business sector program services under proposed *Non-Residential Energy Efficiency* – Schedule 140. Filing was approved December 18, 2013, effective January 1, 2014.

On April 15, 2013, the Commission issued an Order amending the required filing date for the 2014-2015 Biennial Conservation Plan from September 15, 2013 to November 1, 2013. The modification was made to align the Biennial Conservation Plan filings for the state's investor-owned utilities, promote a consistent approach to tracking and reporting conservation savings associated with NEEA activity, and facilitates NEEA's ability to create a consistent conservation forecast and track savings from a single set of market baseline assumptions.

Advisory Group Activities

Consistent with the conditions set forth in Docket UE-111880, Order 01, Paragraph 3(a), the Company seeks input regarding its energy efficiency programs from the Washington Demand-Side Management Advisory Group. This group includes representatives from a variety of constituent organizations. The Company collaborated with the DSM Advisory Group throughout 2013 on the follow matters:

<u>On February 19, 2013</u>

- Reviewed the key milestones contained in Docket No. UE-111880, Order 01;
- Reviewed distribution and production efficiency potential;

[11] Utilizing the program's flexible tariff and 45 day change noticing provision, no filing was required.
[12] Utilizing the program's flexible tariff and 45 day change noticing provision, no filing was required.
[13] Utilizing the program's flexible tariff and 45 day change noticing provision, no filing was required

- Reviewed the target setting process of the Conservation Potential Assessment and the Integrated Resource Plan;
- Provided an update on the development of the Technical Resource Library, per item 6(h) of Order 01, Docket UE-111880;
- Reviewed the savings verification evaluation to be conducted on 2012-13 reported savings and provided in June 2014, per item 6(f) of Order 01, Docket UE-111880.

On March 28, 2013

- Provided an overview of the Technical Resource Library, per item 6(h) of Order 01, Docket UE-111880.

On April 18, 2013

- Reviewed the recently completed commercial and industrial program evaluations;
- Provided an overview of 2012 Annual Report findings;
- Provided an update on System Benefits Charge adjustment;
- Reviewed the 2013 IRP / Forecast Development;
- Provided miscellaneous updates on:
    - third party verification review
    - Technical Reference Library.

On July 15, 2013

- Reviewed production efficiency study including: how it was used and efforts to validate inputs for economic evaluation (i.e. costs, operating assumptions and expected savings);
- Reviewed adjustments to the Conservation Forecast 2014-2023;
- Provided a status update on the Technical Resource Library;
- Provided a status update on the 2014 Conservation Potential Assessment.

On September 6, 2013

- Production Efficiency overview
    - Follow-up on cost-effectiveness methodology;
    - Review of 2012-2023 forecast;
    - Progression of studies and results;
    - 2014-2023 conservation forecast.
- Energy Efficiency overview
    - Adjustments to IRP selections;
    - Preliminary 2014-2023 conservation forecast.
- Update on Biennial Target Considerations

On October 14, 2013

- Reviewed the Production efficiency revised forecast;
- Reviewed the NEEA methodology & forecast;
- Provided update on the Home Energy Reports program;
- Presented proposed changes to Home Energy Savings;
- Presented proposal to consolidate the Energy FinAnswer/FinAnswer Express programs;
- Overview on Final 2014-2015 forecast.

System Benefits Charge Balancing Account Summary

Demand-side management activities are funded through Schedule 191, the System Benefits Charge Adjustment. Expenditures are charged as incurred and collected from the Systems Benefit Charge. The balancing account is the mechanism used for managing the revenue collected and expenses incurred in the provision of DSM programs. As noted in the Regulatory Section of this report, on May 1, 2013, the Company requested to reduce Schedule 191 collection to align the Company's recovery of its costs associated with acquiring and administering cost effective conservation in its Washington service territory. The Commission approved the Company's request effective July 1, 2013. The balancing account activity for 2013 is included in this report consistent with Docket UE-111880, Order 01, Paragraph 8(g), and is outlined in Table 3 on the following page.

Table 3
System Benefit Charge Balancing Account Summary

State of Washington
SBC Summary -- Balancing Account

	Deferred Expenditures	Schedule 191 Revenue Collected	Carrying Charge	Accumulative Balance	Monthly Net Accrued Costs	Accrual Basis Accumulatiive Balance
Balance as of 12/31/12				**834,296**	**624,011**	**1,458,307**
Jan-13	894,626	(931,431)	0.00	797,491	112,427	1,533,929
Feb-13	785,020	(1,336,182)	0.00	246,329	(126,244)	856,523
Mar-13	869,657	(929,471)	0.00	186,516	(78,323)	718,387
Apr-13	787,337	(835,051)	0.00	138,801	27,964	698,636
May-13	662,111	(826,203)	0.00	(25,291)	(92,084)	442,460
Jun-13	961,497	(832,399)	0.00	103,807	44,355	615,913
Jul-13	845,997	(906,595)	0.00	43,209	75,954	631,269
Aug-13	569,103	(947,290)	0.00	(334,977)	(13,328)	239,755
Sep-13	819,430	(891,047)	0.00	(406,594)	(20,052)	148,086
Oct-13	628,894	(791,683)	0.00	(569,383)	(11,915)	(26,619)
Nov-13	501,740	(822,609)	0.00	(890,252)	26,094	(321,394)
Dec-13	1,193,072	(1,090,288)	0.00	(787,468)	(278,740)	(497,350)
Total 2013	9,518,485	(11,140,249)			290,118 *	

* December 2013 accrual

Column Explanations:

Deferred Expenditures: Monthly expenditures for all program activities posted in 2013, 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. If more is collected in "Revenue" than is spent for a given month, the "Accumulated Balance" will be increased by the net amount. 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. This accounting principle was applied to the balancing account but would not be included when calculating the carrying charges.

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

Energy efficiency and peak management resources can be divided into four general classes based on their relative characteristics, the classes are:

- 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. Once 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.

As technical support for the IRP, a third party analysis is conducted to estimate the magnitude, timing and cost of alternative energy efficiency and peak management options.[14] The main focus of the study is on resources with sufficient reliability characteristics 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 2013 study for Washington was 75 average megawatts or 15 percent of forecasted retail sales in 2032.[15] By definition this is the energy efficiency potential that may be achievable during the 20-year planning horizon if determined least cost and cost-effective compared to supply-side alternatives within the Company's integrated resource planning process.

[14] Assessment of Long-term, System-Wide Potential for Demand-Side and Other Supplemental Resources, www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Demand_Side_Management/DSM_Potential_Study/PacifiCorp_DSMPotential_FINAL_Vol%20I.pdf

[15] Ibid, page 75.

The achievable technical potential for Washington by sector is shown in Table 4. The 2013 potential study indicates that nearly 12 percent of the achievable technical potential for the Company, excluding Oregon[16], is in Washington.[17]

Table 4
Washington Energy Efficiency Achievable Technical Potential by Sector

Sector	Average Megawatts in 2032	Percent of Retail Sales
Residential	33	17%
Commercial	28	18%
Industrial	11	10%
Irrigation	2	10%
Street Lights	0.3	30%

Energy efficiency resources vary in their reliability, load reduction, and persistence over time. Based on the significant number of measures identified in the potential study it is difficult to incorporate each measure as a stand-alone resource in the IRP. To address this issue, energy efficiency measures are bundled by cost to reduce the number of combinations to a more manageable number.

The evaluation of energy efficiency resources within the IRP is also informed by state specific evaluation criteria. While all states generally use commonly accepted cost effectiveness tests, some states require variations in calculating or prioritizing the tests.

- Washington and Oregon utilize the total resource cost test adjusted for environmental and non-energy benefits (10 percent additional benefits) as the primary determination of cost effectiveness.
- Utah utilizes the utility cost test as the primary determination of cost effectiveness.

Unless specified as above, 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 variation of five tests to identify the relative impact and/or value to customers and the Company (e.g. near-term rate impact, program value to participants, etc.).

The 2013 Integrated Resource Plan preferred portfolio includes the acquisition of energy efficiency resources. The plan seeks opportunities to accelerate these acquisitions as evidenced by the range of the savings target and expanded set of demand side management related Action Plan activities. The action plan savings targets for the 2013 Integrated Resource Plan [18] are shown in Table 5.

[16] Demand-side management potential studies for Oregon are performed by the Energy Trust of Oregon
[17] Page 75, Table 52 of the Assessment of Long-term, System-Wide Potential for Demand-Side and Other Supplemental Resources
[18] 2013 IRP, April, 2013, www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Integrated_Resource_Plan/2013IRP/PacifiCorp-2013IRP_Vol1-Main_4-30-13.pdf, page 248.

Table 5
Preferred Portfolio Energy Efficiency Targets

2013 Preferred Portfolio	Acquire 1,425-1,876 gigawatt hours (GWh) of cost-effective Class 2 (energy efficiency) resources by the end of 2015 and 2,034-3,180 GWh by the end of 2017.

The economic selections of Class 2 or conservation resources from the 2013 IRP were the basis for the Company's 2014-2023 conservation forecast and 2014-2015 biennial target filed in compliance with Washington's RCW 19.285.040 and WAC 480-109-010 in November, 2013. The IRP selections were adjusted based on additional information and analysis completed between the time the 2013 IRP was filed in April, 2013 and the November filing[19].

[19] PacifiCorp's Ten-Year Conservation Potential and 2014-2015 Biennial Conservation Target for its Washington Service Area, November 1, 2013, Docket No. UE-132047.

Energy Efficiency Programs

Energy efficiency programs were offered to all major customer sectors: residential, commercial, industrial and agricultural. The overall energy efficiency portfolio included six programs: *Home Energy Savings,* Schedule 118*; Home Energy Reports; Residential Refrigerator Recycling,* Schedule 107*; Low Income Weatherization,* Schedule 114*; Energy FinAnswer*, Schedule 125*; and FinAnswer Express,* Schedule 115. 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. Results for 2013 are provided in Table 6.

Table 6
Washington Results January 1, 2013 – December 31, 2013[20]

Program	kWh/Yr Savings (at site)	kWh/Yr Savings (at generator)	aMW Savings (at gen)	Systems Benefits Charge Expenditures
Low Income Weatherization (114)	255,760	280,492	0.03	$ 700,365
Refrigerator Recycling (107)	939,354	1,030,190	0.12	$ 210,149
Home Energy Savings (118)	8,401,465	9,213,887	1.05	$ 1,353,196
Home Energy Reporting	5,515,554	6,048,908	0.69	$ 139,002
Northwest Energy Efficiency Alliance	15,384,000	16,871,633	1.93	$ 1,266,576
Total Residential	**30,496,133**	**33,445,109**	**3.82**	**$ 3,669,287**
Energy FinAnswer (125)	410,224	449,322	0.05	$ 77,948
FinAnswer Express (115)	6,942,914	7,604,643	0.87	$ 1,944,506
Total Commercial	**7,353,138**	**8,053,966**	**0.92**	**$ 2,022,455**
Energy FinAnswer (125)	14,827,847	16,037,948	1.83	$ 1,965,548
FinAnswer Express (115)	4,202,728	4,545,713	0.52	$ 804,282
Total Industrial	**19,030,575**	**20,583,660**	**2.35**	**$ 2,769,830**
FinAnswer Express (115)	599,752	657,748	0.08	$ 72,675
Total Agricultural	**599,752**	**657,748**	**0.08**	
Total	**57,479,598**	**62,740,483**	**7.16**	**$ 8,534,246**
School Energy Education				$ 76,104
Outreach and Communication				$ 241,213
Portfolio Level Expenditures (DSM Central, evaluation, potential study & TRD)				$ 554,951
Portfolio DSM Central - $36,559				
Portfolio Evaluation - $430,407				
Portfolio Potential Study - $40,704				
Portfolio Technical Reference Library - $47,281				
Total System Benefits Charge expenditures				**$ 9,406,514**

[20] During 2013, the Company was implementing a technical reference library ("TRL") database to store the measures, savings assumptions and data sources for estimating savings as well as upgrading the tracking system, DSM Central, to store information on completed projects. This is Washington's allocated portion.

The Company, consistent with requirements under Docket UE-111880, Order 01, Ordering Paragraph (8)(c), provides Table 7 which compares the Company's 2013 Biennial Conservation Plan budget filed on January 31, 2012, to actual 2013 program performance.

In 2013, the Company delivered preliminary results of 62,740,261 kWh in first year energy savings against the 2013 business plan forecast savings of 41,139,679 kWh, a positive variance of approximately 53 percent. The largest variances from plan were due to the following:

- Lower than expected savings from Refrigeration Recycling
- The addition of residential Home Energy Reports
- Higher than planned industrial sector project closures
- Higher than planned savings from the Northwest Energy Efficiency Alliance

Table 7: Washington Business Plan Budget compared to Actual[21]

	2013 PacifiCorp Washington Business Plan Budget				*2013 PacifiCorp Washington DSM Actual*			
Program	**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)	270,480	294,463	0.03	824,000	255,760	280,492	0.03	$ 700,365
Refrigerator Recycling (107)	1,423,390	1,549,602	0.18	300,000	939,354	1,030,190	0.12	$ 210,149
Home Energy Savings (118)	9,211,718	10,028,521	1.14	1,830,215	8,401,465	9,213,887	1.05	$ 1,353,196
Home Energy Reporting					5,515,554	6,048,908	0.69	$ 139,002
Total Residential	**10,905,588**	**11,872,586**	**1.35**	**2,954,215**	**15,112,133**	**16,573,476**	**1.89**	**$ 2,402,711**
Energy FinAnswer (125)	1,530,000	1,663,554	0.19	480,000	410,224	449,318	0.05	$ 77,948
FinAnswer Express (115)	5,137,506	5,585,959	0.64	1,063,241	6,942,914	7,604,574	0.87	$ 1,944,506
Total Commercial	**6,667,506**	**7,249,513**	**0.83**	**1,543,241**	**7,353,138**	**8,053,892**	**0.92**	**$ 2,022,455**
Energy FinAnswer (125)	8,801,400	9,465,290	1.08	2,720,000	14,827,847	16,037,799	1.83	$ 1,965,548
FinAnswer Express (115)	1,943,544	2,090,146	0.24	402,229	4,802,480	5,203,461	0.59	$ 876,957
Total Industrial	**10,744,944**	**11,555,436**	**1.32**	**3,122,229**	**19,630,327**	**21,241,260**	**2.42**	**$ 2,842,505**
Energy Education in Schools (113)				436,000				$ 76,104
Northwest Energy Efficiency Alliance	7,669,380	8,349,424	0.95	1,212,456	15,384,000	16,871,633	1.93	$ 1,266,576
Distribution Efficiency	1,966,620	2,058,600	0.235					
Production Efficiency	54120	54,120	0.006	$ 213,800				$ -
Total - Conservation Programs	**38,008,158**	**41,139,679**	**4.7**	**9,481,941**	**57,479,598**	**62,740,261**	**7.16**	**8,610,350**
Customer Outreach/Communication				$ 250,000				$ 241,213
Program Evaluations				$ 400,000				$ 430,407
Potential Study Update/Analysis				$ 15,000				$ 40,704
Measure Data Documentation				$ 50,000				$ 83,840
Res. Admin of Prior Programs				$ 1,500				
Total System Benefits Charge Expenses	**38,008,158**	**41,139,679**	**4.7**	**$ 10,198,441**				**$ 9,406,514.10**

[21] SBC expenditures represents total program costs for savings claimed 2013

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 Portfolio[22]

	B/C Ratio	Net Benefits
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	3.26	$13,379,957
Total Resource Cost Test – effects on both participants and non-participants	2.98	$11,726,864
Utility Cost Test – effect on customers	4.51	$12,866,070
Participant Cost Test – effect on participants	7.22	$19,107,067
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.69	($7,256,703)

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	2013 Total Units	2013 kWh @ site
Attic Insulation	286,872	187,405
Ceiling Fan	1	107
Central A/C Equipment	44	15,180
Clothes Washer	728	129,964
Dishwasher	278	11,198
Duct Sealing and Insulation	40	110,055
Electric Water Heater	29	3,811
Evaporative Cooler	2	3,662
Fixture	825	40,303
Floor Insulation	59,763	237,605
Freezer	41	1,722

[22] Includes NEEA savings and Non-Energy Benefits

Measures	2013 Total Units	2013 kWh @ site
Heat Pump Best Practice	26	20,072
Heat Pump System Conversion	37	397,306
Heat Pump Upgrade	32	75,168
Heat Pump Water Heater	2	1,762
Proper CAC Install	5	520
Refrigerator	125	8,918
Room Air Conditioner	53	2,491
Single Head Ductless Heat Pump	29	107,213
Wall Insulation	69,963	168,224
Windows	12,227	9,350
New Homes - Builder Option Package 1 w/Heat Pump	3	8,619
New Homes - CFL - Spiral	1	931
New Homes - Energy Efficient Dishwasher	1	47
New Homes - Energy Efficient Refrigerator	1	54
New Homes - Attic Insulation	3,089	402
New Homes - Windows	340	173
Lighting - CFL General	207,395	3,687,518
Lighting - CFL Specialty	100,282	2,451,129
Lighting - LED Downlight	19,960	720,556
Grand Total	**762,194**	**8,401,465**

Program performance results for January 1, 2013 – December 31, 2013, are provided in Table 10.

Table 10
Cost Effectiveness for Home Energy Savings[23]

	B/C Ratio	Net Benefits
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	1.20	$719,315
Total Resource Cost Test – effects on both participants and non-participants	1.09	$325,237
Utility Cost Test – effect on customers	2.91	$2,587,576
Participant Cost Test – effect on participants	1.82	$2,508,626
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.64	($2,183,389)

Program Management

The program manager overseeing program activity in Washington was responsible for the *Home Energy Savings* program and *Refrigerator Recycling* 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

[23] Includes Non-Energy Benefits

through a competitive bid process, establishing and monitoring program performance and compliance, and recommending changes in the terms and conditions set out in the tariff.

Program Administration

The *Home Energy Savings* program is administered by PECI. PECI, a private non-profit corporation, has been designing and implementing energy efficiency programs since 1990.

PECI is responsible for the following:

- Retailer and trade ally engagement – PECI identifies, recruits, supports and assists retailers to increase the sale of energy efficient lighting, appliances and electronics. PECI enters into promotion agreements with each lighting manufacturer and retailer for the promotion of discounted CFLs. The agreements include specific retail locations, lighting products receiving incentives and not-to-exceed annual budgets. Weatherization and HVAC contractors engaged with the program are provided with program materials, training, and regular updates.
- Inspections – PECI 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 – PECI 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 PECI on behalf of the Company is outlined in the Communication, Outreach, and Education section.

Infrastructure

The Company worked with 20 retailers promoting CFLs and LEDs in 2013. Table 11 lists the lighting retailers participating in the program.

Table 11[24]
Retail Stores – Lighting Retailers

Retailer	City	CFLs	LEDs
Ace Hardware - Stein's #7047	Yakima	√	
Ace Hardware #14426	Naches	√	
Ace Hardware #14965	Walla Walla	√	
Bed Bath & Beyond #1332	Union Gap	√	

[24] To be considered for participation for discounted CFLs and LEDs, sales coming from Pacific Power customers must be a significant majority of total sales.

Retailer	City	CFLs	LEDs
Big Lots #4558	Yakima	√	
Costco #1013	Union Gap	√	√
Dollar Tree #2387	Yakima	√	
Habitat for Humanity ReStore #2	Yakima	√	
Home Depot #4727	Yakima	√	√
Hometown Ace Hardware #11909	Yakima	√	
Lowe's #160	Union Gap	√	√
Platt #24	Grandview	√	√
Platt #28	Walla Walla	√	√
Platt #37	Yakima	√	√
Roy's Ace Hardware #10640	Yakima	√	
True Value Hardware - C&H	Yakima	√	√
True Value Hardware - Country Farm and Garden	Yakima	√	√
True Value Hardware #5353	Selah	√	√
Wal-Mart - Supercenter #5078	Yakima	√	
Walmart #2269	Yakima	√	

Seventeen local and national retailers now consistently promote high efficiency appliances on behalf of the program. Table 12 lists the appliance retailers participating in the program.

Table 12
Retail Stores – Appliances

Retailer	City	Ceiling Fan	Clothes Washer	Dishwasher	Electric Water Heater	Light Fixture	Refrigerator	Room Air Conditioner
All Your Builiding Needs *	Pomeroy							
Bemis Home Appliance & Tv Ctr	Yakima		√	√			√	√
Best Buy #831	Yakima		√	√			√	
Chris Johnson Plumbing *	Walla Walla							
Fergispm Enterprises *	Yakima							
Home Depot #4727	Yakima		√	√	√	√	√	√
Home Depot #4735	College Place		√	√		√	√	√
Inland Lighting Centre *	Yakima							
Inland Pipe & Supply	Yakima		√		√			
Lowe's #160	Union Gap		√	√	√	√	√	√
Mantey Plumbing Inc *	Yakima							

Retailer	City	Ceiling Fan	Clothes Washer	Dishwasher	Electric Water Heater	Light Fixture	Refrigerator	Room Air Conditioner
Sears #2029	Union Gap		√	√	√		√	√
Sears #3088	Sunnyside		√	√			√	√
Sears #6914	Walla Walla		√	√	√		√	√
Selah Lighting Company	Selah	√	√					
Suffield Furniture Company	Dayton		√	√			√	
True Value Hardware #5353	Selah					√		

* These are participating stores who had no redemptions submitted to the program in 2013.

Table 13 and Table 14 list the HVAC contractors and weatherization (window and insulation) contractors.

Table 13
HVAC Contractors

Contractor Name	City	Central Air Conditioner (CAC)	CAC Best Practices Installation	Heat Pump (HP) Upgrade	HP Conversion	HP Best Practices Installation	Single-head Ductless HP	HP Tune-up	Duct Sealing and Duct Insulation
A & N Heating and Cooling, LLC. *	Walla Walla								
Absolute Comfort Technology, LLC *	Selah								
AccuTemp Heating and Air Conditioning	Yakima			√	√		√		
Ackerman Heating & Air	Colfax						√		
All Assured Electric, Inc. *	Pasco								
All Phase Refrigeration & Heating Inc. *	Kennewick								
All Seasons Heating & Air Conditioning	Yakima			√	√		√		
Allard Enterprises	Yakima	√		√					
Apollo Sheet Metal Inc. *	Kennewick								
Campbell & Company	Pasco	√		√	√				
Central Mechanical Services *	Yakima								
CK Home Comfort Systems	Grandview				√		√		
Clark County Mechanical *	Vancouver								

Contractor Name	City	Central Air Conditioner (CAC)	CAC Best Practices Installation	Heat Pump (HP) Upgrade	HP Conversion	HP Best Practices Installation	Single-head Ductless HP	HP Tune-up	Duct Sealing and Duct Insulation
College Place Heating & Air Conditioning	College Place	√	√	√	√	√	√		√
Comfort Pro's	Yakima				√	√			√
Darby Heating & Air *	Richland								
Dave's Heating & AC *	Yakima								
Dayco Inc	Kennewick			√	√	√			
Delta Heating and Cooling, Inc.	Richland				√				
Ductz of ID & WA/Talon Systems Inc. *	Post Falls								
E-Star Northwest LLC *	Sequim								
Farwest Climate Control	Yakima			√	√				
Four Seasons HVAC	Yakima			√	√				
Grassi Refrigeration	Walla Walla						√		
Intermountain West Insulation *	Kennewick								
J and B Heating and AC *	Yakima								
Jacobs & Rhodes	Kennewick						√		
Johnny's Heating & Cooling *	Walla Walla								
McCarl Heating and Air *	Yakima								
Nico Enterprises, LLC *	Walla Walla								
Olmstead Electric/ CGO Inc *	Walla Walla								
One Hour Heating and A/C	Ellensburg				√	√			
Platte Heating & AC *	Yakima								
Quality Comfort *	Yakima								
R&L Home Services	Walla Walla			√			√		
Schaefer Refrigeration	Walla Walla	√			√				
Smith Insulation	Walla Walla								√
ThermalWise Heating and Refrigeration *	Walla Walla								
Thermex Valley Heating and AC	Yakima	√					√		
TJ's Refrigeration, Heating & Air *	Sunnyside								
TNG Heating & Refrigeration *	Toppenish								
Total Comfort Solutions	Walla Walla	√		√	√		√		
Total Energy Management	Richland				√				
Vance Heating and AC	Yakima	√		√	√		√		
Young's Heating & Cooling, LLC	Walla Walla			√					

Contractor Name	City	Central Air Conditioner (CAC)	CAC Best Practices Installation	Heat Pump (HP) Upgrade	HP Conversion	HP Best Practices Installation	Single-head Ductless HP	HP Tune-up	Duct Sealing and Duct Insulation

* These are participating HVAC contractors who had no redemptions submitted to the program in 2013.

Table 14
Weatherization Contractors

Contractor Name	City	Insulation Attic	Insulation Floor	Insulation Wall	Windows
Allard Enterprises *	Yakima				
Benko Enterprises *	Walla Walla				
Bi-State Siding & Window, Inc.	Pasco				
Central Valley Glass	Yakima				√
Chon Insulation and Drywall	Walla Walla	√	√	√	
Comfort Pro's *	Yakima				
Dave's Heating & AC *	Yakima				
Don Jordan Energy Systems	Yakima	√	√		√
Ductz of ID & WA/Talon Systems Inc. *	Post Falls				
E-Star Northwest LLC *	Sequim				
Farwest Climate Control *	Yakima				
Intermountain West Insulation	Kennewick	√	√	√	
Jackson Siding and Windows *	Walla Walla				
McCarl Heating and Air *	Yakima				
McKinney Glass Inc.	Yakima				√
Miller Glass Co.	Yakima				√
Patrick Construction *	Naches				
Perfection Glass, Inc.	Kennewick				√
Smith Insulation	Walla Walla	√	√	√	√
The Ductologist *	Renton				
Vineyard Creek Construction *	Walla Walla				

Contractor Name	City	Insulation Attic	Insulation Floor	Insulation Wall	Windows
West Valley Glass & Window	Yakima				√
Windows Walla Walla	Walla Walla				√

* These are participating weatherization contractors who had no redemptions submitted to the program in 2013.

Demographics

Approximately 62 percent of all *Home Energy Savings* incentive applications in 2013 were received from customers located in Yakima and Walla Walla. Table 15 summarizes customer applications by community.

Table 15
Customer Applications by City

City	Percent of Total Appliance & Fixture Applications	Percent of Total HVAC Applications	Percent of Total Weatherization Applications	Percent of Total: All Applications
Yakima	45.6%	32.7%	27.1%	42.0%
Walla Walla	15.9%	32.2%	42.8%	20.9%
Selah	9.3%	6.0%	5.5%	8.5%
Zillah	4.0%	1.5%	1.7%	3.5%
College Place	2.2%	6.5%	7.2%	3.2%
Sunnyside	3.5%	4.0%	0.7%	3.2%
Moxee	3.1%	3.0%	0.7%	2.8%
Grandview	2.0%	2.0%	2.1%	2.0%
Toppenish	2.3%	1.0%	0.3%	1.9%
Dayton	1.3%	2.5%	2.4%	1.6%
Union Gap	1.5%	0.5%	1.4%	1.4%
Wapato	1.6%	0.5%	0.7%	1.4%
Naches	1.2%	1.0%	0.7%	1.1%
Tieton	1.3%	0.5%	0.3%	1.1%
Touchet	0.6%	1.5%	2.4%	0.9%
Waitsburg	0.8%	1.0%	1.7%	0.9%
Granger	0.9%	0.0%	0.3%	0.7%

City	Percent of Total Appliance & Fixture Applications	Percent of Total HVAC Applications	Percent of Total Weatherization Applications	Percent of Total: All Applications
Cowiche	0.6%	0.0%	0.0%	0.5%
Prescott	0.5%	0.0%	0.7%	0.5%
Burbank	0.3%	1.5%	0.3%	0.4%
Mabton	0.4%	0.5%	0.0%	0.4%
Pomeroy	0.2%	1.0%	0.7%	0.4%
Outlook	0.3%	0.5%	0.0%	0.3%
Harrah	0.3%	0.0%	0.0%	0.2%
Dixie	0.1%	0.0%	0.3%	0.1%
Buena	0.1%	0.0%	0.0%	0.1%
Parker	0.06%	0.00%	0.00%	0.05%
White Swan	0.06%	0.00%	0.00%	0.05%

Evaluation

During 2013, a process and impact evaluation was in the process of being completed by a third party evaluator for program years 2011-2012. The process and impact evaluation was completed in first quarter of 2014.

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 is expected to decrease over the 41 month pilot period due to customer attrition related to customers requesting to be removed from the program and general customer churn (customer move-outs)[25].

The customer population selected to participate is made up of customers with an annual average electrical energy usage of 20,000 kilowatt hours. To achieve this, the upper bound annual average is approximately 29,000 kilowatt hours and the lower bound annual average is 13,500 kilowatt hours. As degradation occurs over the pilot period, the average usage of the population may also change. The change in average usage will be measured and verified in the pilot evaluation.

[25] As of the end of 2013 approximately 11,500 customers were still participating and receiving home energy reports.

Reports were mailed monthly for the initial three months the reports were provided in order to build program awareness. Following this initial three month period report frequency was moved to a bi-monthly schedule for the remainder of the pilot. Each participating customer will receive 21 reports over the term of the pilot. Customers were given the right to opt-out of the mailed paper copy of the report and request an electronic version delivered via email. Participating customers also 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 and suggestions to improve energy conservation and efficiency of their home.

Savings are being tracked and reported annually based on reporting from the vendor. Savings reported against the Company's 2012 and 2013 Biennial Conservation Plan target will be based on an ex-post evaluation of the program performance.

Program performance results for January 1, 2013 – December 31, 2013, are provided in Table 16.

Table 16
Cost Effectiveness for Home Energy Reporting

	B/C Ratio	Net Benefits
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	2.89	$262,439
Total Resource Cost Test – effects on both participants and non-participants	2.63	$225,944
Utility Cost Test – effect on customers	2.63	$225,944
Participant Cost Test – effect on participants	N/A	$482,059
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.59	($256,115)

Program Management

The program manager overseeing program activity in Washington was responsible for the *Home Energy Reports* program in Washington and Utah as well as the *New Homes* and *Cool Keeper* programs in Utah. For each program and in each state the program manager is responsible for the cost effectiveness of the program, identifying and contracting with the program administrator through a competitive bid process, establishing and monitoring program performance and compliance, and recommending changes in the terms and conditions set in each state's compliance requirements.

Program Administration

The *Home Energy Reports* program is administered by Opower. Opower is a privately held Software-as-a-Service company that partners with utility providers around the world to promote energy efficiency. Opower works with more than 75 utility companies in 31 U.S. states and five other countries. Opower's software creates individualized energy reports for utility customers that analyze their energy usage and offers recommendations on how to save energy and money by making small changes to their energy consumption. The Company contracts with Opower to provide energy savings, software services, and printing and delivery of energy reports to customers.

Opower is responsible for the following:

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

A third party contractor will evaluate Opower's reported savings after 18-months of report distribution (January 2014) and after 36-months (December 2015). The results from the 18-month evaluation will be incorporated in the 2012-2013 Biennial Conservation Report to be filed on or before June 1, 2014.

Refrigerator Recycling

The *Refrigerator Recycling*[26] ("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.

Program participation by measure for the current period is provided in Table 17.

Table 17
Eligible Program Measures (Units)

Measures	2013 Total	2013 kWh @ site
Refrigerator Recycling	1,039	752,236
Freezer Recycling	265	143,630
Energy Savings Kit	1,208	43,488

Program performance results for January 1, 2013 – December 31, 2013 are provided in the Table 18.

[26] Also known as "See ya later, refrigerator®" ("SYLR")

Table 18
Cost Effectiveness for Refrigerator Recycling

	B/C Ratio	Net Benefits
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	1.87	$183,222
Total Resource Cost Test – effects on both participants and non-participants	1.70	$147,461
Utility Cost Test – effect on customers	1.70	$147,461
Participant Cost Test – effect on participants	N/A	$508,753
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.53	($315,178)

In 2013, more than 81 tons (163,000 lbs) of steel, 3 tons (6,520 lbs) of aluminum and copper, 13 tons (26,080 lbs) 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 4 tons (5,273 metric tons for 1,304 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 who is responsible for Washington's program is also responsible for the *Refrigerator Recycling* program and *Home Energy Savings* 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 out in the tariff.

Program Administration

The *Refrigerator Recycling* program is administered by JACO Environmental ("JACO"). JACO started over 20 years ago in Snohomish County, north of Seattle, Washington. JACO has grown to become one of the largest recyclers of house-hold appliances in the United States.

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 Environmental 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

In October 2013, a process and impact evaluation was completed by a third party evaluator for program years 2011-2012. The impact evaluation provided data on the gross realized savings and the NTG ratio. The process evaluation investigated participant satisfaction, implementation and delivery processes, marketing methods and quality assurance. 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.

Low Income Weatherization

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

Program participation and number of homes receiving specific measures in the current period is provided in Table 19.

Table 19
Eligible Program Measures (Units)

	2013 Total
Participation – Total # of Completed/Treated Homes	139
Number of Homes Receiving Specific Measures	
Aerators	99
Attic Ventilation	48
Caulk/Weather-stripping	100
Ceiling Insulation	77
Compact Fluorescent Light bulbs	131
Duct Insulation	70
Floor Insulation	128
Fluorescent Light Fixture	5
Ground Cover	98

Infiltration	131
Repairs	47
Replacement Refrigerators	10
Showerheads	81
Thermal Doors	2
Timed Thermostat	24
Wall Insulation	35
Water Heater Replacement	5
Water Pipe Insulation and Sealing	120

Program performance results for January 1, 2013 – December 31, 2013, are provided in Table 20.

Table 20
Cost Effectiveness for Low Income Weatherization with Non Energy Benefits

	B/C Ratio	Net Benefits
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	1.32	$220,656
Total Resource Cost Test – effects on both participants and non-participants	1.27	$188,953
Utility Cost Test – effect on customers	0.46	($378,922)
Participant Cost Test – effect on participants	N/A	$992,826
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.31	($726,486

Program Management

The program manager overseeing program activity in Washington is responsible for the *Low Income Weatherization* programs in Washington, 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. 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. All homes were funded at the 50 percent level in 2013. Participants qualify if they are homeowners or renters residing in single-family homes, manufactured homes, or apartments. Over 7,100 homes have been completed since the program began 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 current income guidelines are included in Appendix 5.
- 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.

Infrastructure

The Company has agreements in place with three non-profit weatherizing agencies. 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. These three agencies serve the Company's Washington service area.

Evaluation

No program evaluation activities occurred during 2013.

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 are striving to achieve 200 aMW[27] of total regional savings. PacifiCorp's Washington funding of NEEA's work represents 3.01 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 aMW[28].

[27] 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.

[28] 3.01 percent of 200 aMW total regional savings target for 2010-2014, actual results may vary.

Program performance for 2013 is being reported based on NEEA's preliminary results for Pacific Power of 16,872 megawatt hours for the Company's funding investment of approximately $1.27m. Consistent with the reporting convention approved in Docket UE-111880, the savings represent 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). The breakdown of the preliminary 2013 reported savings by sector is provided in Table 21.

Table 21
Preliminary 2013 Reported Savings by Sector (at site)

Sector	Megawatt Hours	Percent
Residential	11,310	74%
Commercial	1,968	13%
Industrial	2,107	14%

The primary initiatives generating savings by sector as a percent of total savings is as follows in Table 22.

Table 22
Initiatives Savings by Sector

Initiative/Measures	Residential	Commercial	Industrial
Televisions	50%		
Appliances	14%		
Lighting	35%		
Codes	1%	20%	
Desktop		61%	
Building Operators Certification		16%	
Commissioning		2%	
Health Care		1%	
Drive Power			50%
Food Processors			35%
Strategic Energy Management			8%
Pneu-Logic (SAV_AIR)			6%
MagnaDrive Coupling			1%
Total	**100%**	**100%**	**100%**

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.

Commercial and Industrial Programs

The commercial and industrial energy efficiency portfolio was comprised of two programs, *FinAnswer Express* and *Energy FinAnswer*. The commercial and industrial portfolio was cost effective based on four of the five standard cost effectiveness tests for 2013 as provided in Table 23.

Table 23
Cost Effectiveness for Commercial and Industrial Portfolio

	B/C Ratio	Net Benefits
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	2.01	$9,847,263
Total Resource Cost Test – effects on both participants and non-participants	1.83	$8,068,269
Utility Cost Test – effect on customers	3.66	$12,924,979
Participant Cost Test – effect on participants	2.69	$13,362,988
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.77	($5,294,718)

FinAnswer Express[29]

The *FinAnswer Express* program was designed to assist commercial, industrial, and agricultural customers improve the efficiency of their new or replacement lighting, HVAC, motors, irrigation, building envelope, and other equipment by providing prescriptive or pre-defined incentives for the most common efficiency measures listed in the program incentive tables.[30] The program also includes custom incentives and technical analysis services for measures not listed in the program incentive tables that improve electric energy efficiency. The program provides incentives for both new construction and retrofit projects, and is designed to operate in conjunction with the Energy FinAnswer program.

Program participation by measure group for the current period is provided in Table 24.

Table 24
Installed Program Measures (applications)

Measure Groups	2013 Total
Building Shell	7
Compressed Air	8
Dairy Farm Equipment	1
Food Service	6
HVAC	3
Irrigation	31
Lighting	264
Motors	6
Refrigeration	13
Total	339

[29] 2013 will be the last year with reporting for FinAnswer Express. Effective in 2014, FinAnswer Express and Energy FinAnswer are consolidated as wattsmart Business.
[30] Incentive tables can be found online at https://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/WA_wattsmart_Business_Incentive_Lists.pdf

Program savings by measure group for the current period is provided in Table 25.

Table 25
Installed Program Measures (kWh/year at site)

Measure Groups	2013 Total kWh at site
Building Shell	126,578
Compressed Air	502,263
Dairy Farm Equipment	27,776
Food Service	66,099
HVAC	36,356
Irrigation	571,207
Lighting	10,327,470
Motors	22,583
Refrigeration	65,062
Program Totals	11,745,394

Program performance results for January 1, 2013 – December 31, 2013, are provided in Table 26.

Table 26
Cost Effectiveness for FinAnswer Express

	B/C Ratio	Net Benefits
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	1.50	$2,887,253
Total Resource Cost Test – effects on both participants and non-participants	1.37	$2,104,877
Utility Cost Test – effect on customers	2.77	$5,002,292
Participant Cost Test – effect on participants	2.22	$5,476,898
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.70	($3,372,021)

Program Management

The program manager overseeing program activity in Washington is responsible for the program in Washington, California, Idaho, Utah, and Wyoming as well as the *Agricultural Energy Services* program in Idaho. For each state the program manager is 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

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

Nexant and Cascade are responsible for the following:

- Trade ally engagement – Nexant and Cascade identify, recruit, train, support and assist trade allies to increase sales and installation of energy efficient equipment at qualifying business customer facilities.
- Incentive processing and administrative support – Nexant and Cascade handle incoming inquiries as assigned, process FinAnswer Express incentive applications, develop and maintain simplified analysis tools and provide program design services, evaluation and regulatory support upon request.
- Inspections – Nexant and Cascade verify on an on-going basis the installation of measures. Summary of the inspection process is in Appendix 3.

In addition, the Company's project managers coordinate FinAnswer Express projects and provide customers with program services and incentives using the energy engineering consultants described further in the Energy FinAnswer program section.

Infrastructure

To help increase and improve the supplier and installation contractor infrastructure for energy-efficient equipment and services, the Company established and continues to develop and support trade ally networks for lighting, HVAC, motors and irrigation. This work includes identifying and recruiting trade allies, providing program and technical training and providing sales support on an ongoing basis. The current lists 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. Customers are not required to select a vendor from these lists to receive an incentive.

The total number of participating trade allies is currently 92. The current counts of participating trade allies by technology are in the Table 27.

Table 27
Participating Trade Allies[31]

	Lighting trade allies	HVAC trade allies	Motors trade allies
List dated 2/24/2014	54	30	43

Evaluation

During 2013, a program evaluation was not completed. A process and impact evaluation is scheduled to be completed by end of 2014.

[31] Some trade allies may participate in more than one technology so the count of unique participating firms is less than the total count provide above.

Energy FinAnswer[32]

The *Energy FinAnswer* program was designed to serve qualifying commercial, industrial, and agricultural customers for retrofits and new construction. The program includes a vendor neutral investment grade energy analysis and cash incentives equal to $0.15 per kWh of annual energy savings plus $50 per kW of average monthly demand savings (up to 60 percent of project costs).[33] Caps are in place to prevent incentives from bringing the payback for a project below one year and for lighting energy savings per project since lighting-only projects are included in FinAnswer Express. The program includes a post-installation verification and may require commissioning of dynamic measures. Commissioning requirements are provided as a component of the energy analysis. There are design assistance services and special incentives available for new construction and major renovation projects where energy code applies. The program provides energy project manager ("EPM") co-funding to increase end user management and engineering manpower devoted to electrical energy projects/activities increasing the number of commercial and industrial projects that can be completed. EPM co-funding is performance based and contingent on customer's commitment to and delivery of an energy savings goal over a prescribed timeframe; typically 12-24 months.

Projects completed in the current period are provided in Table 28.

Table 28
Projects Completed

	2013 Total
Energy FinAnswer Commercial	2
Energy FinAnswer Industrial	35
Total Projects Completed	37

Program participation by measure group in the current period is provided in Table 29.

Table 29
Participation by Measure Group

Measure Groups	2013 Total	2013 Totals
	Count	kWh Savings (at site)
Additional Measure	4	1,610,808
Building Shell	1	42,510
Compressed Air	3	551,167
HVAC	12	4,697,087
Lighting	2	25,236
Motors	4	2,364,192
Refrigeration	12	5,947,071
Program Totals	38	15,238,071

[32] 2013 will be the last year with reporting for Energy FinAnswers. Effective in 2014, Energy FinAnswer and FinAnswer Express are consolidated as wattsmart Business.
[33] Note there are no incentive caps for new construction design assistance projects.

Program performance results for January 1, 2013 – December 31, 2013 are provided in Table 30.

Table 30
Cost Effectiveness for Energy FinAnswer

	B/C Ratio	Net Benefits
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	2.74	$6,960,010
Total Resource Cost Test – effects on both participants and non-participants	2.49	$5,963,392
Utility Cost Test – effect on customers	4.88	$7,922,687
Participant Cost Test – effect on participants	3.31	$7,886,090
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.84	($1,922,698)

Program Management

The program manager overseeing program activity in Washington is responsible for the *Energy FinAnswer* program in Washington, California, Idaho, Utah, and Wyoming; the *Self-Direction Credit* program in Utah and Wyoming; and the *Commercial & Industrial Re-Commissioning* program in Utah. The Company employs five full-time project managers[34] in support of the program manager.

Energy FinAnswer program is administered by the Company. Consequently, the program manager is responsible for the following:

- Program cost effectiveness and performance
- Ensuring the program is operated in compliance with commission tariffs and Company guidelines including but not limited to qualification of customers
- Customer communication and outreach
- Monitoring code and standard changes
- Qualification of materials and equipment
- Engineering analysis of customer opportunities
- Quality control and assurance
- Customer service, including the delivery of services and incentive
- Verification of installation and savings[35]

The program is marketed primarily via Pacific Power account managers, trade allies, Energy FinAnswer consultants and project staff. Other leads come via advertising in business publications, company newsletters, word-of-mouth, past participants returning for additional projects and a combination of other Company outreach efforts.

[34] Based on the volume of projects, temporary project managers and/or support staff are employed from time-to-time.
[35] Summary of inspection process is in Appendix 3.

Infrastructure

Given the diversity of the commercial and industrial 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. This being said, the individual projects are directly managed by one of the Company's project manager. The project manager works directly with the customer or through the Company's assigned community and customer account manager located in Washington. Table 31 lists the engineering firms currently under contract with the Company.

Table 31
Engineering Firms

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

Evaluation

During 2013, a program evaluation was not completed. A process and impact evaluation is scheduled to be completed by December 31, 2014.

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 2013, the Company also issued two newsletters focused entirely on seasonal energy efficiency information (in the fall and spring).

The Company also 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 2013 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 2013 customer awareness campaign research conducted by Marketing Decisions Corporation:

- 44 percent of customers in Washington are aware that the Company offers energy efficiency programs. This is an increase from 24 percent awareness in 2012.
- Ad aware customers are more likely to recall "Being wattsmart" (62 percent vs. 25 percent)

- 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 Company 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 32 outlines the media channels used, the value of each channel, and the impressions achieved to date.

Table 32
2013 Media Channels

Communication Channel	Value to Communication Portfolio	2013 Placements
Television	Television has the broadest reach and works as the most effective media channel	Rotation of advertisements Both 30 and 15 seconds spots. 5,866 placements (1,268 network and 4,598 cable) 5,637,565 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 1,722 placements 1,936,800 impressions
Newspaper	Supports broadcast messages and guarantees coverage in areas harder to reach with broadcast	42 placements 347,995 impressions
Online advertising		7,355,075impressions and 50,348 search impressions
Web Site www.pacificpower.net Promote *bewattsmart.com* in advertising, which goes directly to	Supports all other forms of communications by serving as a source for detailed information regarding the Company's program and other energy efficiency opportunities	*bewattsmart.com* had more than 38,800 visits in 2013

DSM/energy efficiency program page		
Twitter @PacificPower_WA	Awareness for early adopters regarding energy efficiency tips Tweets posted on a weekly basis	405followers through December 2013
FaceBook www.facebook.com/pacificpower.wattsmart	Awareness for early adopters regarding energy efficiency tips and a location to share information	1,667 fans through December 2013

The total number impressions for the campaign in 2013 were 15,327,783.

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

Program Specific

All energy efficiency program communications are branded under the ***watt***smart 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 2013.

Home Energy Savings

The *Home Energy Savings* program communicates to customers, retailers and trade allies through a variety of channels. A new program brochure was developed, which highlights the benefits of energy-efficient appliances and equipment and lists the incentives available in Washington. In addition, a sales kit folder with marketing materials was used by program field staff as a resource for retailer and trade ally engagement.

In the summer, program communications focused on cooling measures. The cooling campaign included:
- Point of purchase material
- Handout material for retailers and trade allies to use in their sales to customers
- Web features
- Bill insert
- Social media

In the fall, the *Home Energy Savings* program developed a heating campaign (similar to the cooling campaign), including:
- Web features
- Sales handout and outreach to trade allies
- Bill insert and incentive check insert
- Social media

To make it easier for customers to submit and track online applications, program staff worked to enhance the system to allow customers to upload electronic receipts and other documents. Other improvements were also made to the online system for appliances and lighting applications.

Late in 2013, work took place to implement January 1, 2014, *Home Energy Savings* program tariff changes with increased incentives and new measures.

Residential Refrigerator Recycling

The Company promotes the *See ya later, refrigerator®* program through informational advertisements and other customer communications. In 2013, the program garnered 1,360,181 impressions. Breakdown of impressions by media type is shown in Table 33.

Inserts promoting the *See ya later, refrigerator®* program went out in February, April and September bills. In addition, a postcard was sent in February to customers who had recently purchased a new refrigerator and received an incentive through the *Home Energy Savings* program.

From August through October, the Company promoted the "refrigerator roundup" to Washington customers and reported the communities that recycled the most refrigerators and freezers during this time through news releases, social media and on the website. A new educational collateral piece for refrigerator and freezer recycling was distributed to schools with National Energy Foundation program materials.

Table 33
See ya later, refrigerator® Program

Communications Channel	2013
TV	614,000
Digital	746,181

FinAnswer Express and Energy FinAnswer

In 2013, customer communications and outreach supported *FinAnswer Express* and *Energy FinAnswer* utilizing radio, print, digital display, paid digital search advertising and social media. This was in addition to customer direct contact by Company project managers and regional community managers, articles in the Company newsletters and content on the Company's website.

During 2013 communications continued to emphasize the change in federal lighting standards that took place July 14, 2012. This standard applies to manufacturers of general service fluorescent lamps. Customers were encouraged to retrofit their older linear fluorescent lighting because the standards changed. The Company maintained a dedicated webpage[36] including a link to a video on the topic. In 2013, the program garnered 3,639,785 impressions. Breakdown of impressions by media type is shown in Table 34.

[36] www.pacificpower.net/lightingstandards

Table 34
FinAnswer Express and Energy FinAnswer

Communications Channel	2013
Radio	864,540
Newspaper	421,771
Magazine	151,000
Digital Display	2,192,931
Digital Paid Search	9,543

Energy Education in Schools

In late 2012, the Company awarded its ***watt***smart Schools education program contract to 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 2013, NEF conducted presentations in Washington schools in both the spring and fall.

- Between March 4 and May 23, 2013, the program met its outreach goals of reaching 3,957 students and 158 teachers with 70 percent of "Household Report Cards" which are used as part of a home energy audit activity completed and returned.
- Between October 15 and November 22, 2013, the program also met its outreach goals of reaching 3,781 students, 153 teachers and 50 schools with 65 percent of "Household Report Cards" which are used as part of a home energy audit activity completed and returned.

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's organization to ensure they are performed and managed by personnel who have a neutral interest in the benefits associated with anticipated savings.

Information on evaluation activities completed or in progress during 2013 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
See ya later, refrigerator®	2011-2012	The Cadmus Group	Completed
Home Energy Savings	2011-2012	The Cadmus Group	Q1 of 2014
Independent Review of Energy Savings	2012-2013	SBW Consulting Inc.	May 2014

Appendix 1
Estimated Peak Contributions
2013

Pacific Power

Energy Efficiency Programs

The MW reported savings of 10.22 (at generation) for energy efficiency programs during 2013 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 2013, it is calculated that 3.23 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 (1.83 MW in 2013 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 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 2013 is detailed in the table below.

Line	Description	Value
1	First year MWH EE program savings acquired during 2013	33,445
2	Average MWh value (line 1 / 8760 hours)	3.82
3	Peak MW contribution of 2013 EE acquisitions	6.99

As demonstrated, it is estimated that the residential energy efficiency program acquisitions in 2013 contributed 6.99 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 3.23 MW's estimated for the business programs and the 6.99 MW's estimated for residential programs make up the 10.22 MW savings value of energy efficiency programs.

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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 2013 costs and savings estimates provided by PacifiCorp. The utility discount rate is from the 2013 PacifiCorp Integrated Resource Plan.

Cost-effectiveness inputs and results for the 2013 Portfolio presented for the total portfolio, residential sector, commercial and industrial (C&I) sector, and the total portfolio and residential portfolio including non-energy benefits. This report includes the following tables:

Table 1: Common Inputs

Parameter	Value
Discount Rate	6.88%
Residential Line Loss	9.67%
Commercial Line Loss	9.53%
Industrial Line Loss	8.16%
Residential Energy Rate ($/kWh) (base year 2013)	$0.0874
Commercial Energy Rate ($/kWh) (base year 2013)	$0.0772
Industrial Energy Rate ($/kWh) (base year 2013)	$0.0653
Inflation Rate[1]	1.90%

Table 2: Portfolio Level Costs 2013

Cost	Value
School Energy Education	$76,104
Outreach and Communication	$241,213
Portfolio Level Expenditures	$430,407
Total	**$747,724**

Table 3: NEEA kWh Savings and Costs

Cost	Value
kWh at Meter	15,384,000
Incremental Cost	$1,266,576

Table 4 Benefit/Cost Ratios by Portfolio Type

Measure	PTRC	TRC	UCT	RIM	PCT
Total (Including NEEA)	2.30	2.09	3.70	0.72	3.91
Total (Including NEEA & NEBs)	*2.37*	*2.16*	*3.70*	*0.72*	*3.96*
C&I Programs	2.01	1.83	3.66	0.77	2.69
Residential Programs (Including NEEA)	3.07	2.79	4.51	0.69	7.02
Residential Programs (Including NEEA & NEBs)	*3.26*	*2.98*	*4.51*	*0.69*	*7.22*

[1] Used to escalate future year energy rates.

Table 5: 2013 Total Portfolio Cost-Effectiveness Results (Including NEEA)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.033	$16,401,018	$37,752,960	$21,351,942	2.30
Total Resource Cost Test (TRC) No Adder	$0.033	$16,401,018	$34,320,873	$17,919,855	2.09
Utility Cost Test (UCT)	$0.019	$9,281,970	$34,320,873	$25,038,903	3.70
Rate Impact Test (RIM)		$47,624,440	$34,320,873	($13,303,568)	0.72
Participant Cost Test (PCT)		$10,961,384	$42,813,724	$31,852,340	3.91
Lifecycle Revenue Impacts ($/kWh)	$0.000228740				
Discounted Participant Payback (years)	1.54				

Table 6: 2013 C&I Energy Efficiency Portfolio Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.037	$9,721,669	$19,568,932	$9,847,263	2.01
Total Resource Cost Test (TRC) No Adder	$0.037	$9,721,669	$17,789,938	$8,068,269	1.83
Utility Cost Test (UCT)	$0.019	$4,864,959	$17,789,938	$12,924,979	3.66
Rate Impact Test (RIM)		$23,084,657	$17,789,938	($5,294,718)	0.77
Participant Cost Test (PCT)		$7,889,268	$21,252,256	$13,362,988	2.69
Lifecycle Revenue Impacts ($/kWh)	$0.000114074				
Discounted Participant Payback (years)	2.86				

Table 7: 2013 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) + Conservation Adder	$0.026	$5,931,625	$18,184,028	$12,252,403	3.07
Total Resource Cost Test (TRC) No Adder	$0.026	$5,931,625	$16,530,934	$10,599,310	2.79
Utility Cost Test (UCT)	$0.016	$3,669,287	$16,530,934	$12,861,648	4.51
Rate Impact Test (RIM)		$23,792,060	$16,530,934	($7,261,125)	0.69
Participant Cost Test (PCT)		$3,072,116	$21,561,468	$18,489,352	7.02
Lifecycle Revenue Impacts ($/kWh)	$0.000124847				
Discounted Participant Payback (years)	0.75				

The following tables reflect the cost-effectiveness analysis with non-energy benefits.

Table 8: 2013 Total Portfolio Cost-Effectiveness Results (Including NEEA and Non-Energy Benefits)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.033	$16,401,018	$38,880,514	$22,479,496	2.37
Total Resource Cost Test (TRC) No Adder	$0.033	$16,401,018	$35,448,427	$19,047,409	2.16
Utility Cost Test (UCT)	$0.019	$9,281,970	$34,325,295	$25,043,325	3.70
Rate Impact Test (RIM)		$47,624,440	$34,325,295	($13,299,145)	0.72
Participant Cost Test (PCT)		$10,961,384	$43,431,439	$32,470,055	3.96
Lifecycle Revenue Impacts ($/kWh)	$0.000228664				
Discounted Participant Payback (years)	1.50				

Table 9: 2013 Residential Energy Efficiency Portfolio Cost-Effectiveness Results (Including NEEA and Non-Energy Benefits)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.026	$5,931,625	$19,311,582	$13,379,957	3.26
Total Resource Cost Test (TRC) No Adder	$0.026	$5,931,625	$17,658,489	$11,726,864	2.98
Utility Cost Test (UCT)	$0.016	$3,669,287	$16,535,357	$12,866,070	4.51
Rate Impact Test (RIM)		$23,792,060	$16,535,357	($7,256,703)	0.69
Participant Cost Test (PCT)		$3,072,116	$22,179,183	$19,107,067	7.22
Lifecycle Revenue Impacts ($/kWh)	$0.000124771				
Discounted Participant Payback (years)	0.73				

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

Table 10: Low Income Weatherization Non-Energy Benefits

Non-Energy Benefit	Program Impact	Perspective Adjusted
Arrearage Reduction	$4,127	TRC, PTRC, UCT, RIM
Capital Cost Savings	$296	TRC, PTRC, UCT, RIM
Economic Impact	$505,417	TRC, PTRC
Home Repair Costs	$62,458	TRC, PTRC, PCT
Total	**$572,298**	

Table 11: Home Energy Savings (Appliance) Non-Energy Benefits

Non-Energy Benefit	Non-Energy Benefits per Measure	Total Installs	Measure Life	Total Present Value Benefits
Clothes Washer-Tier Two (2.0 + MEF)	$60.26	3	14	$1,702
Clothes Washer (MEF ≥ 2.46 & WF ≤ 4)	$81.00	725	14	$552,828
Dishwasher	$0.31	278	12	$725
New Homes Dishwashers	$0.31	1	12	$3
Total				**$555,257**

Program Level Cost Effectiveness

Home Energy Savings Program

The tables below present the cost-effectiveness findings of the Washington Home Energy Savings program based on 2013 costs and savings estimates. The utility discount rate is from the 2013 PacifiCorp Integrated Resource Plan.

Cost-effectiveness inputs and results for the 2013 Home Energy Savings program are presented for the program overall and individually for the five measure categories with two additional tables showing the cost-effectiveness for the appliance measure category and program overall when non-energy benefits (NEBs) are included. The following tables are included in this report:

Cost-effectiveness was tested using the 2013 IRP west residential lighting, or whole house load factor decrements, depending on the measure category. The Home Energy Savings program was cost-effective from all perspectives except for the RIM.

Table 12: Home Energy Savings
Inputs

Parameter	Value
Discount Rate	6.88%
Line Loss	9.67%
Residential Energy Rate ($/kWh)	$0.0874
Inflation Rate[2]	1.90%

Table 13: Home Energy Savings
Annual Program Costs

	Utility Admin	Program Management	Incentives	Total Utility Costs	Gross Customer Costs
Appliances	$14,490	$48,102	$68,040	$130,632	$306,433
HVAC	$53,352	$177,114	$93,000	$323,466	$384,626
Lighting	$13,228	$43,913	$512,593	$569,734	$2,017,972
New Homes	$746	$2,478	$3,319	$6,544	$3,172
Weatherization	$43,983	$146,012	$132,826	$322,821	$359,913
Total	**$125,799**	**$417,619**	**$809,778**	**$1,353,196**	**$3,072,116**

Table 14: Home Energy Savings
Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Appliances	198,514	100%	198,514	100%	198,514	14
HVAC	730,938	100%	730,938	100%	730,938	18
Lighting	6,859,204	100%	6,859,204	100%	6,859,204	5
New Homes	10,226	100%	10,226	100%	10,226	41
Weatherization	602,584	100%	602,584	100%	602,584	45
Total	**8,401,465**	**100%**	**8,401,465**	**100%**	**8,401,465**	**10**

[2] Future rates determined using a 1.9% annual escalator

Table 15: Home Energy Savings Benefit/Cost Ratios by Measure Category

Measure	PTRC	TRC	UCT	RIM	PCT
Appliances	0.45	0.41	1.16	0.48	0.82
Appliances (with NEBs)	*1.96*	*1.92*	*1.16*	*0.48*	*2.64*
HVAC	1.23	1.12	2.12	0.61	2.33
Lighting	1.20	1.09	3.98	0.65	1.70
New Homes	2.40	2.18	2.13	0.66	5.65
Weatherization	1.64	1.49	2.54	0.69	2.76
Total	**1.20**	**1.09**	**2.91**	**0.64**	**1.82**
Total (with NEBs)	***1.35***	***1.24***	***2.91***	***0.64***	***2.00***

Table 16: Home Energy Savings Program Level Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.065	$3,615,534	$4,334,848	$719,315	1.20
Total Resource Cost Test (TRC) No Adder	$0.065	$3,615,534	$3,940,771	$325,237	1.09
Utility Cost Test (UCT)	$0.024	$1,353,196	$3,940,771	$2,587,576	2.91
Rate Impact Test (RIM)		$6,124,160	$3,940,771	($2,183,389)	0.64
Participant Cost Test (PCT)		$3,072,116	$5,580,742	$2,508,626	1.82
Lifecycle Revenue Impacts ($/kWh)	$0.000037541				
Discounted Participant Payback (years)	3.25				

Table 17: Home Energy Savings Appliance Cost-Effectiveness Results (2013 West Res Whole House 49%)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.177	$369,025	$166,781	($202,244)	0.45
Total Resource Cost Test (TRC) No Adder	$0.177	$369,025	$151,619	($217,406)	0.41
Utility Cost Test (UCT)	$0.063	$130,632	$151,619	$20,987	1.16
Rate Impact Test (RIM)		$315,339	$151,619	($163,720)	0.48
Participant Cost Test (PCT)		$306,433	$252,747	($53,686)	0.82
Discounted Participant Payback (years)	N/A				

Table 18: Home Energy Savings HVAC Cost-Effectiveness Results (2013 West Res Whole House 49%)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.070	$615,091	$755,323	$140,231	1.23
Total Resource Cost Test (TRC) No Adder	$0.070	$615,091	$686,657	$71,566	1.12
Utility Cost Test (UCT)	$0.037	$323,466	$686,657	$363,192	2.12
Rate Impact Test (RIM)		$1,125,928	$686,657	($439,271)	0.61
Participant Cost Test (PCT)		$384,626	$895,463	$510,837	2.33
Discounted Participant Payback (years)	5.01				

Table 19: Home Energy Savings Lighting Cost-Effectiveness Results (2013 West Res Lighting 48%)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.059	$2,075,113	$2,494,020	$418,907	1.20
Total Resource Cost Test (TRC) No Adder	$0.059	$2,075,113	$2,267,291	$192,178	1.09
Utility Cost Test (UCT)	$0.016	$569,734	$2,267,291	$1,697,557	3.98
Rate Impact Test (RIM)		$3,478,688	$2,267,291	($1,211,397)	0.65
Participant Cost Test (PCT)		$2,017,972	$3,421,547	$1,403,575	1.70
Discounted Participant Payback (years)	2.61				

Table 20: Home Energy Savings New Homes Cost-Effectiveness Results (2013 West Res Whole House 49%)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.040	$6,396	$15,330	$8,934	2.40
Total Resource Cost Test (TRC) No Adder	$0.040	$6,396	$13,937	$7,540	2.18
Utility Cost Test (UCT)	$0.041	$6,544	$13,937	$7,393	2.13
Rate Impact Test (RIM)		$21,142	$13,937	($7,205)	0.66
Participant Cost Test (PCT)		$3,172	$17,917	$14,745	5.65
Discounted Participant Payback (years)	0.75				

Table 21: Home Energy Savings Weatherization Cost-Effectiveness Results (2013 West Res Whole House 49%)

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.059	$549,908	$903,394	$353,486	1.64
Total Resource Cost Test (TRC) No Adder	$0.059	$549,908	$821,268	$271,360	1.49
Utility Cost Test (UCT)	$0.034	$322,821	$821,268	$498,447	2.54
Rate Impact Test (RIM)		$1,183,063	$821,268	($361,795)	0.69
Participant Cost Test (PCT)		$359,913	$993,068	$633,155	2.76
Discounted Participant Payback (years)	4.71				

In addition to the energy benefits reported above, appliances in this program have significant non-energy benefits (water savings). Those benefits, by measure, are outlined in the table below (non-energy benefits per measure values are from the Sixth Power Plan).

Table 22: Home Energy Savings Appliances Non-Energy Benefits

Non-Energy Benefit	Non-Energy Benefits per Measure	Total Installs	Measure Life	Total Present Value Benefits
Clothes Washer-Tier Two (2.0 + MEF)	$60.26	3	14	$1,702
Clothes Washer (MEF ≥ 2.46 & WF ≤ 4)	$81.00	725	14	$552,828
Dishwasher	$0.31	278	12	$725
New Homes Dishwashers	$0.31	1	12	$3
Total				**$555,257**

When these non-energy benefits are incorporated in the PTRC, TRC, and PCT cost-effectiveness analysis for appliances, the TRC improves to 1.92, as shown in Table 11.

Table 23: Home Energy Savings Appliance Cost-Effectiveness Results with Non-Energy Benefits

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.177	$369,025	$722,037	$353,013	1.96
Total Resource Cost Test (TRC) No Adder	$0.177	$369,025	$706,875	$337,851	1.92
Utility Cost Test (UCT)	$0.063	$130,632	$151,619	$20,987	1.16
Rate Impact Test (RIM)		$315,339	$151,619	($163,720)	0.48
Participant Cost Test (PCT)		$306,433	$808,004	$501,571	2.64
Discounted Participant Payback (years)	3.36				

Similarly, the overall program TRC improves to 1.24 when non-energy benefits are included, as shown in Table 12.

Table 24: 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) + Conservation Adder	$0.065	$3,615,534	$4,890,105	$1,274,571	1.35
Total Resource Cost Test (TRC) No Adder	$0.065	$3,615,534	$4,496,028	$880,494	1.24
Utility Cost Test (UCT)	$0.024	$1,353,196	$3,940,771	$2,587,576	2.91
Rate Impact Test (RIM)		$6,124,160	$3,940,771	($2,183,389)	0.64
Participant Cost Test (PCT)		$3,072,116	$6,135,999	$3,063,883	2.00
Lifecycle Revenue Impacts ($/kWh)	$0.000037541				
Discounted Participant Payback (years)	2.99				

Home Energy Reporting

The tables below present the cost-effectiveness findings of the Washington Home Energy Reporting program based on 2013 costs and savings estimates. The utility discount rate is from the 2013 PacifiCorp Integrated Resource Plan.

Cost-effectiveness was tested using the 2013 IRP west whole house 49% load factor decrements (medium carbon). Table 1 lists modeling inputs, tables 2-3 list program costs and savings and table 4 lists cost-effectiveness results.

The Home Energy Reporting program was cost-effective from all test perspectives except for the RIM.

Table 1: Home Energy Reporting Inputs

Parameter	Value
Discount Rate	6.88%
Line Loss	9.67%
Residential Energy Rate ($/kWh)	$0.0874
Inflation Rate[3]	1.90%

Table 2: Home Energy Reporting Annual Program Costs

	Utility Admin	Program Development	Program Admin	Total Utility Costs
Home Energy Reporting	$13,121	$2,881	$123,000	$139,002

Table 3: Home Energy Reporting Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Home Energy Reporting	5,515,554	100%	5,515,554	100%	5,515,554	1

[3] Future rates determined using a 1.9% annual escalator

Table 4: Home Energy Reporting Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.023	$139,002	$401,441	$262,439	2.89
Total Resource Cost Test (TRC) No Adder	$0.023	$139,002	$364,946	$225,944	2.63
Utility Cost Test (UCT)	$0.023	$139,002	$364,946	$225,944	2.63
Rate Impact Test (RIM)		$621,061	$364,946	($256,115)	0.59
Participant Cost Test (PCT)		$0	$482,059	$482,059	N/A
Lifecycle Revenue Impacts ($/kWh)	$0.000063699				
Discounted Participant Payback (years)	N/A				

See ya later, refrigerator®

The tables below present the cost-effectiveness findings of the Washington See Ya Later Refrigerator (SYLR) program based on 2013 costs and savings estimates. The utility discount rate is from the 2013 PacifiCorp Integrated Resource Plan.

Cost-effectiveness was tested using the 2013 IRP west residential whole house 49% load factor decrement (medium carbon). Table 1 lists modeling inputs, tables 2-3 list program costs and savings and tales 4-7 list cost-effectiveness results.

The program is cost-effective from all perspectives except for the RIM.

Table 1: SYLR Inputs

Parameter	Value
Discount Rate	6.88%
Line Loss	9.67%
Residential Energy Rate ($/kWh)	$0.0874
Inflation Rate[4]	1.90%

Table 2: SYLR Annual Program Costs

	Utility Admin	Program Admin	Incentives	Total Utility Costs
Refrigerators	$35,941	$95,418	$31,170	$162,529
Freezers	$6,862	$18,219	$7,950	$33,031
Kits	$2,078	$5,516	$6,994	$14,588
Total	**$44,881**	**$119,154**	**$46,114**	**$210,149**

[4] Used to escalate future year energy rates.

Table 3: SYLR Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Refrigerators	752,236	100%	752,236	100%	752,236	6
Freezers	143,630	100%	143,630	100%	143,630	9
Kits	43,488	100%	43,488	100%	43,488	5
Total	**939,354**	**100%**	**939,354**	**100%**	**939,354**	**6**

Table 4: SYLR Program Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.038	$210,149	$393,370	$183,222	1.87
Total Resource Cost Test (TRC) No Adder	$0.038	$210,149	$357,609	$147,461	1.70
Utility Cost Test (UCT)	$0.038	$210,149	$357,609	$147,461	1.70
Rate Impact Test (RIM)		$672,788	$357,609	($315,178)	0.53
Participant Cost Test (PCT)		$0	$508,753	$508,753	N/A
Lifecycle Revenue Impacts ($/kWh)	$0.000011165				
Discounted Participant Payback (years)	N/A				

Table 5: Refrigerators Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.039	$162,529	$298,020	$135,491	1.83
Total Resource Cost Test (TRC) No Adder	$0.039	$162,529	$270,927	$108,398	1.67
Utility Cost Test (UCT)	$0.039	$162,529	$270,927	$108,398	1.67
Rate Impact Test (RIM)		$513,800	$270,927	($242,873)	0.53
Participant Cost Test (PCT)		$0	$382,441	$382,441	N/A
Discounted Participant Payback (years)	N/A				

Table 6: Freezers Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.030	$33,031	$80,522	$47,490	2.44
Total Resource Cost Test (TRC) No Adder	$0.030	$33,031	$73,202	$40,170	2.22
Utility Cost Test (UCT)	$0.030	$33,031	$73,202	$40,170	2.22
Rate Impact Test (RIM)		$127,086	$73,202	($53,884)	0.58
Participant Cost Test (PCT)		$0	$102,005	$102,005	N/A
Discounted Participant Payback (years)	N/A				

Table 7: Kits Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.070	$14,588	$14,829	$240	1.02
Total Resource Cost Test (TRC) No Adder	$0.070	$14,588	$13,481	($1,108)	0.92
Utility Cost Test (UCT)	$0.070	$14,588	$13,481	($1,108)	0.92
Rate Impact Test (RIM)		$31,902	$13,481	($18,421)	0.42
Participant Cost Test (PCT)		$0	$24,308	$24,308	N/A
Discounted Participant Payback (years)	N/A				

Low-Income Weatherization

The tables below present the cost-effectiveness findings of the Washington Low Income Weatherization program based on 2013 costs and savings estimates. The utility discount rate is from the 2013 PacifiCorp Integrated Resource Plan.

Cost-effectiveness was tested using the 2013 IRP west residential whole house 49% load factor decrements. Table 1 lists modeling inputs, Tables 2-3 list program costs and savings, and Table 4 shows cost-effectiveness based only on energy benefits, Table 5 shows program non-energy benefits, and Table 6 shows cost-effectiveness based on both energy and non-energy benefits.

When only including energy benefits the program is only cost-effective from the PCT perspective. When non-energy benefits are included the program is cost-effective from the PTRC, TRC and PCT perspectives.

Table 1: Low Income Weatherization Inputs

Parameter	Value
Discount Rate	6.88%
Line Loss	9.67%
Residential Energy Rate ($/kWh)	$0.0874
Inflation Rate[5]	1.90%

[5] Future rates determined using a 1.9% annual escalator

Table 2: Low Income Weatherization
Annual Program Costs

	Utility Admin	Program Admin	Incentives	Total Utility Costs
Low Income Weatherization	$32,333	$85,229	$582,803	$700,365

Table 3: Low Income Weatherization
Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Low Income Weatherization	255,760	100%	255,760	100%	255,760	30

Table 4: Low Income Weatherization Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.186	$700,365	$348,723	($351,642)	0.50
Total Resource Cost Test (TRC) No Adder	$0.186	$700,365	$317,021	($383,344)	0.45
Utility Cost Test (UCT)	$0.186	$700,365	$317,021	($383,344)	0.45
Rate Impact Test (RIM)		$1,047,929	$317,021	($730,908)	0.30
Participant Cost Test (PCT)		$0	$930,367	$930,367	N/A
Lifecycle Revenue Impacts ($/kWh)	$0.000013337				
Discounted Participant Payback (years)	N/A				

Cadmus evaluated the 2009-10 low income program's impact on arrearages, capital costs, home repair costs, and economic impacts. These benefits are presented in Table 5.

Table 5: Total Program Non-Energy Benefits

Non-Energy Benefit	Program Impact	Perspective Adjusted
Arrearage Reduction	$4,127	TRC, PTRC, UCT, RIM
Capital Cost Savings	$296	TRC, PTRC, UCT, RIM
Economic Impact	$505,417	TRC, PTRC
Home Repair Costs	$62,458	TRC, PTRC, PCT
Total	**$572,298**	

When these benefits are included in the analysis the PTRC test increases to a benefit/cost ratio of 1.32.

Table 6: Low Income Weatherization Cost-Effectiveness Results with Non Energy Benefits

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.186	$700,365	$921,021	$220,656	1.32
Total Resource Cost Test (TRC) No Adder	$0.186	$700,365	$889,319	$188,953	1.27
Utility Cost Test (UCT)	$0.186	$700,365	$321,443	($378,922)	0.46
Rate Impact Test (RIM)		$1,047,929	$321,443	($726,486)	0.31
Participant Cost Test (PCT)		$0	$992,826	$992,826	N/A
Lifecycle Revenue Impacts ($/kWh)	$0.000013256				
Discounted Participant Payback (years)	N/A				

FinAnswer Express

The tables below present the cost-effectiveness findings of the WA FinAnswer Express program based on 2013 costs and savings estimates. The utility discount rate is from the 2013 PacifiCorp Integrated Resource Plan.

Cost-effectiveness inputs and results for the 2013 FinAnswer Express program are presented for the program overall and individually for the nine measure categories. The following tables are included in this report:

Cost-effectiveness was tested using the 2013 IRP west system 71% load factor decrement. The program is cost-effective from all perspectives except for the RIM perspective.

Table 25: FinAnswer Express Inputs

Parameter	Value
Discount Rate	6.88%
Commercial Line Loss	9.53%
Industrial Line Loss	8.16%
Commercial Energy Rate ($/kWh) (base year 2013)	$0.0772
Industrial Energy Rate ($/kWh) (base year 2013)	$0.0653
Inflation Rate[6]	1.90%

Table 26: FinAnswer Express
Annual Commercial and Industrial Program Costs by Measure Type

	Engineering Costs	Utility Admin	Program Admin	Program Development	Incentives	Total Utility Costs	Gross Customer Costs
Building Shell	$1,923	$1,178	$9,093	$1,062	$87,906	$101,162	$274,654
Compressed Air	$7,631	$4,673	$36,082	$4,215	$74,478	$127,079	$190,946
Dairy Farm Equipment	$422	$258	$1,995	$233	$6,580	$9,489	$28,561
Food Service	$1,004	$615	$4,748	$555	$6,339	$13,261	$25,184
HVAC	$410	$251	$1,939	$226	$10,525	$13,351	$58,435
Irrigation - Ag	$8,679	$5,315	$41,035	$4,793	$64,702	$124,524	$186,483
Lighting	$158,535	$97,078	$749,565	$87,557	$1,319,832	$2,412,567	$3,661,150
Motors	$545	$334	$2,576	$301	$2,950	$6,705	$4,418
Refrigeration	$989	$605	$4,674	$546	$6,511	$13,325	$47,406
Total	**$180,139**	**$110,307**	**$851,708**	**$99,488**	**$1,579,822**	**$2,821,463**	**$4,477,237**

[6] Future rates determined using a 1.9% annual escalator

Table 27: FinAnswer Express
Annual Commercial and Industrial Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Building Shell	126,578	97%	122,781	100%	122,781	20
Compressed Air	502,263	97%	487,195	100%	487,195	9
Dairy Farm Equipment	27,776	97%	26,943	100%	26,943	10
Food Service	66,099	97%	64,116	100%	64,116	12
HVAC	36,356	72%	26,176	100%	26,176	15
Irrigation	571,207	97%	554,071	100%	554,071	5
Lighting	10,327,470	98%	10,120,921	100%	10,120,921	14
Motors	22,583	154%	34,778	100%	34,778	15
Refrigeration	65,062	97%	63,110	100%	63,110	14
Total	**11,745,394**	**98%**	**11,500,090**	**100%**	**11,500,090**	**13**

Table 28: FinAnswer Express Benefit/Cost Ratios by Measure Category

Measure	PTRC	TRC	UCT	RIM	PCT
Building Shell	0.43	0.40	1.12	0.52	0.75
Compressed Air	0.99	0.90	1.72	0.56	1.77
Dairy Farm Equipment	0.47	0.43	1.41	0.53	0.79
Food Service	1.36	1.24	2.99	0.70	1.97
HVAC	0.35	0.32	1.48	0.58	0.54
Irrigation	0.67	0.61	1.20	0.49	1.33
Lighting	1.67	1.51	2.98	0.72	2.45
Motors	3.28	2.98	3.63	0.71	6.91
Refrigeration	0.89	0.81	3.28	0.72	1.14
Total	**1.50**	**1.37**	**2.77**	**0.70**	**2.22**

Table 29: FinAnswer Express Program Level Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.050	$5,718,879	$8,606,131	$2,887,253	1.50
Total Resource Cost Test (TRC) No Adder	$0.050	$5,718,879	$7,823,756	$2,104,877	1.37
Utility Cost Test (UCT)	$0.025	$2,821,463	$7,823,756	$5,002,292	2.77
Rate Impact Test (RIM)		$11,195,776	$7,823,756	($3,372,021)	0.70
Participant Cost Test (PCT)		$4,477,237	$9,954,135	$5,476,898	2.22
Lifecycle Revenue Impacts ($/kWh)	$0.000072650				
Discounted Participant Payback (years)	3.72				

Table 30: FinAnswer Express Building Shell Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.188	$287,911	$125,127	($162,784)	0.43
Total Resource Cost Test (TRC) No Adder	$0.188	$287,911	$113,751	($174,159)	0.40
Utility Cost Test (UCT)	$0.066	$101,162	$113,751	$12,589	1.12
Rate Impact Test (RIM)		$218,353	$113,751	($104,601)	0.52
Participant Cost Test (PCT)		$274,654	$205,096	($69,558)	0.75
Discounted Participant Payback (years)	N/A				

Table 31: FinAnswer Express Compressed Air Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.066	$243,547	$239,921	($3,627)	0.99
Total Resource Cost Test (TRC) No Adder	$0.066	$243,547	$218,110	($25,438)	0.90
Utility Cost Test (UCT)	$0.034	$127,079	$218,110	$91,030	1.72
Rate Impact Test (RIM)		$391,114	$218,110	($173,005)	0.56
Participant Cost Test (PCT)		$190,946	$338,513	$147,567	1.77
Discounted Participant Payback (years)	3.51				

Table 32: FinAnswer Express Dairy Farm Equipment Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.142	$31,470	$14,743	($16,727)	0.47
Total Resource Cost Test (TRC) No Adder	$0.142	$31,470	$13,403	($18,067)	0.43
Utility Cost Test (UCT)	$0.043	$9,489	$13,403	$3,914	1.41
Rate Impact Test (RIM)		$25,359	$13,403	($11,956)	0.53
Participant Cost Test (PCT)		$28,561	$22,450	($6,111)	0.79
Discounted Participant Payback (years)	N/A				

Table 33: FinAnswer Express Food Service Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.054	$32,107	$43,634	$11,527	1.36
Total Resource Cost Test (TRC) No Adder	$0.054	$32,107	$39,667	$7,560	1.24
Utility Cost Test (UCT)	$0.022	$13,261	$39,667	$26,406	2.99
Rate Impact Test (RIM)		$56,648	$39,667	($16,980)	0.70
Participant Cost Test (PCT)		$25,184	$49,725	$24,541	1.97
Discounted Participant Payback (years)	4.41				

Table 34: FinAnswer Express HVAC Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.219	$61,262	$21,728	($39,534)	0.35
Total Resource Cost Test (TRC) No Adder	$0.219	$61,262	$19,752	($41,509)	0.32
Utility Cost Test (UCT)	$0.048	$13,351	$19,752	$6,402	1.48
Rate Impact Test (RIM)		$34,120	$19,752	($14,368)	0.58
Participant Cost Test (PCT)		$58,435	$31,294	($27,141)	0.54
Discounted Participant Payback (years)	N/A				

Table 35: FinAnswer Express Irrigation Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.093	$246,305	$164,499	($81,806)	0.67
Total Resource Cost Test (TRC) No Adder	$0.093	$246,305	$149,544	($96,761)	0.61
Utility Cost Test (UCT)	$0.047	$124,524	$149,544	$25,020	1.20
Rate Impact Test (RIM)		$307,085	$149,544	($157,541)	0.49
Participant Cost Test (PCT)		$186,483	$247,263	$60,780	1.33
Discounted Participant Payback (years)	3.20				

Table 36: FinAnswer Express Lighting Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.046	$4,753,885	$7,921,631	$3,167,746	1.67
Total Resource Cost Test (TRC) No Adder	$0.046	$4,753,885	$7,201,483	$2,447,598	1.51
Utility Cost Test (UCT)	$0.023	$2,412,567	$7,201,483	$4,788,916	2.98
Rate Impact Test (RIM)		$10,067,738	$7,201,483	($2,866,256)	0.72
Participant Cost Test (PCT)		$3,661,150	$8,975,003	$5,313,854	2.45
Discounted Participant Payback (years)	3.39				

Table 37: FinAnswer Express Motors Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.022	$8,173	$26,807	$18,634	3.28
Total Resource Cost Test (TRC) No Adder	$0.022	$8,173	$24,370	$16,197	2.98
Utility Cost Test (UCT)	$0.018	$6,705	$24,370	$17,665	3.63
Rate Impact Test (RIM)		$34,299	$24,370	($9,929)	0.71
Participant Cost Test (PCT)		$4,418	$30,544	$26,126	6.91
Discounted Participant Payback (years)	0.81				

Table 38: FinAnswer Express Refrigeration Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.084	$54,220	$48,043	($6,177)	0.89
Total Resource Cost Test (TRC) No Adder	$0.084	$54,220	$43,675	($10,544)	0.81
Utility Cost Test (UCT)	$0.021	$13,325	$43,675	$30,350	3.28
Rate Impact Test (RIM)		$61,060	$43,675	($17,384)	0.72
Participant Cost Test (PCT)		$47,406	$54,246	$6,840	1.14
Discounted Participant Payback (years)	11.33				

Energy FinAnswer

The tables below present the cost-effectiveness findings of the Washington Energy FinAnswer program based on 2013 costs and savings estimates. The utility discount rate is from the 2013 PacifiCorp Integrated Resource Plan.

Cost-effectiveness inputs and results for the 2013 Energy FinAnswer program are presented for the program overall and individually for the eight measure categories. The following tables are included in this report:

Cost-effectiveness was tested using the 2013 IRP west system 71% load factor decrement. The program is cost-effective from all perspectives except for the RIM.

Table 39: Energy FinAnswer Inputs

Parameter	Value
Discount Rate	6.88%
Commercial Line Loss	9.53%
Industrial Line Loss	8.16%
Commercial Energy Rate ($/kWh) (base year 2013)	$0.0772
Industrial Energy Rate ($/kWh) (base year 2013)	$0.0653
Inflation Rate[7]	1.90%

Table 40: Energy FinAnswer
Annual Commercial and Industrial Program Costs by Measure Type

	Engineering Costs	Utility Admin	Program Development	Incentives	Total Utility Costs	Gross Customer Costs
Additional Measures	$37,992	$18,978	$5,479	$55,612	$118,061	$306,729
Building Shell	$1,003	$501	$145	$6,485	$8,133	$58,945
Compressed Air	$13,000	$6,494	$1,875	$61,976	$83,344	$113,343
Controls	$39	$19	$6	$260	$324	$800
HVAC	$110,746	$55,319	$15,971	$464,584	$646,620	$1,345,384
Lighting	$595	$297	$86	$4,025	$5,003	$13,336
Motors	$55,762	$27,854	$8,041	$239,286	$330,943	$333,756
Refrigeration	$140,267	$70,065	$20,228	$620,508	$851,068	$1,239,738
Total	**$359,403**	**$179,527**	**$51,829**	**$1,452,736**	**$2,043,496**	**$3,412,031**

[7] Future rates determined using a 1.9% annual escalator

Table 41: Energy FinAnswer
Annual Commercial and Industrial Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Additional Measures	1,610,808	94%	1,516,761	100%	1,516,761	14
Building Shell	42,510	94%	40,028	100%	40,028	14
Compressed Air	551,167	94%	518,987	100%	518,987	14
Controls	1,647	94%	1,551	100%	1,551	14
HVA	4,695,440	94%	4,421,298	100%	4,421,298	14
Lighting	25,236	94%	23,763	100%	23,763	14
Motors	2,364,192	94%	2,226,159	100%	2,226,159	14
Refrigeration	5,947,071	94%	5,599,853	100%	5,599,853	14
Total	**15,238,071**	**94%**	**14,348,400**	**100%**	**14,348,400**	**14**

Table 42: Energy FinAnswer
Benefit/Cost Ratios by Measure Category

Measure	PTRC	TRC	UCT	RIM	PCT
Additional Measures	3.19	2.90	9.08	0.92	3.57
Building Shell	0.51	0.47	3.48	0.79	0.58
Compressed Air	2.90	2.64	4.26	0.81	3.69
Controls	1.35	1.23	3.28	0.76	1.66
HVAC	2.25	2.04	4.83	0.85	2.60
Lighting	1.29	1.17	3.36	0.79	1.52
Motors	3.94	3.58	4.60	0.82	5.29
Refrigeration	2.88	2.62	4.52	0.82	3.60
Total	**2.74**	**2.49**	**4.88**	**0.84**	**3.31**

Table 43: Energy FinAnswer Program Level Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.027	$4,002,791	$10,962,801	$6,960,010	2.74
Total Resource Cost Test (TRC) No Adder	$0.027	$4,002,791	$9,966,183	$5,963,392	2.49
Utility Cost Test (UCT)	$0.014	$2,043,496	$9,966,183	$7,922,687	4.88
Rate Impact Test (RIM)		$11,888,881	$9,966,183	($1,922,698)	0.84
Participant Cost Test (PCT)		$3,412,031	$11,298,121	$7,886,090	3.31
Lifecycle Revenue Impacts ($/kWh)	$0.000050485				
Discounted Participant Payback (years)	2.14				

Table 44: Energy FinAnswer Additional Measures Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.024	$369,178	$1,178,557	$809,379	3.19
Total Resource Cost Test (TRC) No Adder	$0.024	$369,178	$1,071,416	$702,238	2.90
Utility Cost Test (UCT)	$0.008	$118,061	$1,071,416	$953,355	9.08
Rate Impact Test (RIM)		$1,158,811	$1,071,416	($87,395)	0.92
Participant Cost Test (PCT)		$306,729	$1,096,362	$789,633	3.57
Discounted Participant Payback (years)	2.63				

Table 45: Energy FinAnswer Building Shell Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.149	$60,593	$31,103	($29,491)	0.51
Total Resource Cost Test (TRC) No Adder	$0.149	$60,593	$28,275	($32,318)	0.47
Utility Cost Test (UCT)	$0.020	$8,133	$28,275	$20,142	3.48
Rate Impact Test (RIM)		$35,599	$28,275	($7,324)	0.79
Participant Cost Test (PCT)		$58,945	$33,951	($24,994)	0.58
Discounted Participant Payback (years)	N/A				

Table 46: Energy FinAnswer Compressed Air Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.025	$134,711	$390,475	$255,764	2.90
Total Resource Cost Test (TRC) No Adder	$0.025	$134,711	$354,977	$220,266	2.64
Utility Cost Test (UCT)	$0.016	$83,344	$354,977	$271,633	4.26
Rate Impact Test (RIM)		$439,455	$354,977	($84,478)	0.81
Participant Cost Test (PCT)		$113,343	$418,087	$304,745	3.69
Discounted Participant Payback (years)	1.53				

Table 47: Energy FinAnswer Controls Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.055	$864	$1,167	$303	1.35
Total Resource Cost Test (TRC) No Adder	$0.055	$864	$1,061	$197	1.23
Utility Cost Test (UCT)	$0.021	$324	$1,061	$737	3.28
Rate Impact Test (RIM)		$1,388	$1,061	($327)	0.76
Participant Cost Test (PCT)		$800	$1,324	$524	1.66
Discounted Participant Payback (years)	5.95				

Table 48: Energy FinAnswer HVAC Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.034	$1,527,420	$3,435,446	$1,908,026	2.25
Total Resource Cost Test (TRC) No Adder	$0.034	$1,527,420	$3,123,133	$1,595,713	2.04
Utility Cost Test (UCT)	$0.014	$646,620	$3,123,133	$2,476,513	4.83
Rate Impact Test (RIM)		$3,680,365	$3,123,133	($557,232)	0.85
Participant Cost Test (PCT)		$1,345,384	$3,498,329	$2,152,944	2.60
Discounted Participant Payback (years)	3.20				

Table 49: Energy FinAnswer Lighting Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.059	$14,314	$18,467	$4,153	1.29
Total Resource Cost Test (TRC) No Adder	$0.059	$14,314	$16,788	$2,474	1.17
Utility Cost Test (UCT)	$0.021	$5,003	$16,788	$11,785	3.36
Rate Impact Test (RIM)		$21,308	$16,788	($4,520)	0.79
Participant Cost Test (PCT)		$13,336	$20,330	$6,995	1.52
Discounted Participant Payback (years)	6.84				

Table 50: Energy FinAnswer Motors Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.019	$425,413	$1,674,914	$1,249,501	3.94
Total Resource Cost Test (TRC) No Adder	$0.019	$425,413	$1,522,649	$1,097,236	3.58
Utility Cost Test (UCT)	$0.015	$330,943	$1,522,649	$1,191,706	4.60
Rate Impact Test (RIM)		$1,858,457	$1,522,649	($335,809)	0.82
Participant Cost Test (PCT)		$333,756	$1,766,801	$1,433,045	5.29
Discounted Participant Payback (years)	0.87				

Table 51: Energy FinAnswer Refrigeration Cost-Effectiveness Results

Cost-Effectiveness Test	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.026	$1,470,298	$4,232,673	$2,762,375	2.88
Total Resource Cost Test (TRC) No Adder	$0.026	$1,470,298	$3,847,884	$2,377,586	2.62
Utility Cost Test (UCT)	$0.015	$851,068	$3,847,884	$2,996,816	4.52
Rate Impact Test (RIM)		$4,693,497	$3,847,884	($845,612)	0.82
Participant Cost Test (PCT)		$1,239,738	$4,462,937	$3,223,199	3.60
Discounted Participant Payback (years)	2.14				

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 measures (>=5 percent)

- Insulation
- Windows
- Heat Pump Tune-ups
- Duct Sealing and Insulation
- Heat Pump Best Practices Installation
- Heat Pump Water Heater
- Central Air Conditioning Best Practices Installation

Site inspections of 100 percent by Program Administrator staff of all contractor installed measures in new homes such as insulation, windows, heating and cooling system installs or sizing, duct sealing and CFLs.

No site inspections are conducted for the following measures (unless part of new homes inspection process). However all post-purchase incented measures undergo a quality assurance review prior to the issuance of the customer/dealer incentive and recording of savings (i.e. 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.

- Refrigerators
- Dishwasher
- Light fixtures
- Clothes washers
- Water heaters
- Evaporative coolers
- Air conditioners
- Freezers
- Electric Water Heaters

Other measures

- CFLs and LEDs – retail channel, manufacturer agreements and program administrator sales record reviews of qualifying equipment. Invoicing and retail pricing is administered by program administrator.

Refrigerator Recycling

Company hires an independent inspector to phone survey >=5 percent program participants and to site inspect >= 10 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.

FinAnswer Express

For projects delivered by third party 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 project manager delivered projects (lighting and non-lighting)

Lighting and non-lighting

- 100 percent pre/post-installation site inspections by third party consulting engineering firms, invoice reconciled to inspection results.

Energy FinAnswer

All projects

- 100 percent pre and/or post-site inspections by third party engineering consultant, inspection is reconciled with project invoice for energy efficiency retrofit measures provided by customers. No pre-inspection for new construction.
- Most projects have a commissioning requirement.

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 2013 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 2013 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
See ya later, refrigerator®	2011-2012	The Cadmus Group

Company responses to the program recommendations contained in the 2011 – 2012 evaluation are provided below.

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

Table 1
Home Energy Savings Evaluation Recommendations

Evaluation Recommendations	Pacific Power Action Plan
Pacific Power should consider adjusting its expected per-unit savings at the beginning of the next biennial period to reflect the evaluated per-unit net savings values of 583 kWh for refrigerators, 495 kWh for freezers, and 56 kWh for kits, as found in this evaluation.	Program updated refrigerator and freezer savings per the evaluation. Kit savings were updated using the evaluated per-unit savings methodology with an updated baseline wattage to account for the 2014 provisions of EISA.
Pacific Power should consider revising the measures provided in the kits, as the EISA standards in 2014 will lead to decreased savings for 60-Watt replacement CFLs. If kit measures are revised, Pacific Power should update expected per-unit savings for kits accordingly.	Kit savings were updated using the evaluated per-unit savings methodology with updated baseline wattage to account for the 2014 provisions of EISA.
The program administrator and Pacific Power should continue with improved tracking of energy saving kit delivery, including recording whether or not a kit was delivered to each participant. This change has already been implemented beginning in 2013.	As noted, improved kit tracking was put in place at the beginning of 2013.
For future cost-effectiveness calculations, Cadmus recommends that Pacific Power update measure lives to	Measure lives have been implemented into the TRL effect January 1, 2014.

Evaluation Recommendations	Pacific Power Action Plan
align them with the values adopted in the most recent Regional Technical Forum (RTF) measure workbooks: Refrigerators: 7 years; Freezers: 5 years; CFLs (kits): 6 years.	

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Appendix 5
Washington Low-Income

Pacific Power

Washington State Low-Income Weatherization Program
2013 Income Eligibility Guidelines

The Federal guidance for the Washington State Low-Income Weatherization Program Eligibility Guidelines is 200 percent of federally established poverty guidelines. It is acceptable to consider total household income at or below 200 percent Federal poverty or 60 percent State median income, whichever is greater. However the priority remains at 125 percent of federal poverty guidelines.

Columns A and B show that maximum income allowed at 125 percent of the poverty guidelines. Income limits are determined by multiplying the current Poverty Guidelines by 125 percent.

Columns C & D show maximum monthly and annual income for households with income 100 percent from wages.

Further income documentation testing must be done to determine actual eligibility.

INCOME ELIGIBILITY GUIDELINES				
Effective January 24, 2013 for Low-Income Weatherization				
Household	**Column A**	**Column B**	**Column C**	**Column D**
Size	**Average Monthly Income**	**Annual Income**	**Monthly Income for Wage Earners**	**Annual Income for Wage Earners**
1	$1,197	$14,363	$1,496	$17,953
2	$1,616	$19,388	$2,020	$24,234
3	$2,034	$24,413	$2,543	$30,516
4	$2,453	$29,438	$3,066	$36,797
5	$2,872	$34,463	$3,590	$43,078
6	$3,291	$39,488	$4,113	$49,359
7	$3,709	$44,513	$4,637	$55,641
8	$4,128	$49,538	$5,160	$61,922
9	$4,547	$54,563	$5,684	$68,203
10	$4,966	$59,588	$6,207	$74,484
11	$5,384	$64,613	$6,730	$80,766
12	$5,803	$69,638	$7,254	$87,047
13	$6,222	$74,663	$7,777	$93,328
14	$6,641	$79,688	$8,301	$99,609
15	$7,059	$84,713	$8,824	$105,891
16	$7,478	$89,738	$9,348	$112,172
17	$7,897	$94,763	$9,871	$118,453
18	$8,316	$99,788	$10,395	$124,734
19	$8,734	$104,813	$10,918	$131,016
20	$9,153	$109,838	$11,441	$137,297

Appendix 6
Washington Energy Efficiency Alliance

Pacific Power

Energy Efficiency Alliance

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 2006, 2007, 2008, 2009, 2010, 2011 and/or 2012

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: 92 - Date and Time: 03/27/2014 11:27:16 AM

Evolve Guest Controls 85 Denton Avenue New Hyde Park, NY Phone: 516-448-1862 Website: eguestcontrols.com	**Specialties** Other: Other Specialty	**Business Type** Manufacturer - Rep Other: Other	**Join Date** 06/01/2012	**Projects Completed**
M. Campbell & Company, Inc.* 2828 W Irving St Pasco, WA 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 Phone: 509-966-5520	**Specialties** HVAC - unitary Motors and VFDs	**Business Type** Contractor	**Join Date** 10/01/2005	**Projects Completed**
Dayco Heating & Air 11 N. Auburn Kennewick, WA Phone: 509-586-9464	**Specialties** HVAC - unitary	**Business Type** Contractor	**Join Date** 04/01/2006	**Projects Completed**
Thermex Valley Heating & AC 1916 Fruitvale Blvd. Yakima, WA Phone: 509-965-0630 Website: thermexvalley.com	**Specialties** HVAC - unitary Motors and VFDs	**Business Type** Contractor	**Join Date** 07/01/2004	**Projects Completed**
Northwest Electrical Supply Company (NESCO) 111 S. 3rd Ave. Yakima, WA Phone: 509-575-0354	**Specialties** HVAC - unitary Lighting Motors and VFDs	**Business Type** Distributor	**Join Date** 09/21/2012	**Projects Completed** 10
Ziegler Electric* 202 Country Crest Rd Yakima, WA Phone: 509-930-3300	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 04/01/2001	**Projects Completed** 74
Integrated Controls & Electric Inc 3920 S 3750 W West Haven, UT Phone: 801-719-0540	**Specialties** HVAC - unitary	**Business Type** Distributor	**Join Date** 03/01/2009	**Projects Completed**

Energy Efficiency Alliance

PACIFIC POWER

DeLaval Direct Distribution Sunnyside, WA Phone: 509-837-7254	**Specialties** Motors and VFDs	**Business Type** Distributor Other: Other	**Join Date** 06/01/2004	**Projects Completed**
Doyle Electric Inc. 1421 Dell Avenue Walla Walla, WA Phone: 509-529-2500 Website: doyleelectric.com	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 10/15/2006	**Projects Completed** 8
Total Control Electric Inc. 5 East F Street Yakima, WA Phone: 509-453-1021	**Specialties** Lighting Motors and VFDs	**Business Type** Contractor	**Join Date** 06/08/2006	**Projects Completed** 10
Stusser Electric Company 116 N. 2nd Ave. Yakima, WA Phone: 509-453-0378	**Specialties** HVAC - unitary Lighting Motors and VFDs	**Business Type** Distributor	**Join Date** 04/28/2007	**Projects Completed** 12
Greenwalt Electric LLC 191 Mini Pines Road Yakima, WA Phone: 509-966-7083	**Specialties** Lighting Motors and VFDs	**Business Type** Contractor	**Join Date** 10/28/2008	**Projects Completed** 12
Parsons Electric 415 Viewmont Pl. Yakima, WA Phone: 509-930-1292	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 08/03/2007	**Projects Completed** 23
Excel Dairy Service 4100 Outlook Rd. Sunnyside, WA Phone: 509-643-1773	**Specialties** Farm and Dairy Lighting Other: Other Specialty	**Business Type** Contractor	**Join Date** 06/18/2009	**Projects Completed**
Tolman Electric 160 Linderman Road Maben, WA Phone: 509-830-1164	**Specialties** HVAC - unitary Lighting Motors and VFDs	**Business Type** Contractor	**Join Date** 04/10/2010	**Projects Completed** 2
North Coast Electric - Spokane 4216 E. Main Avenue Spokane, WA Phone: 509-951-3726	**Specialties** Lighting	**Business Type** Distributor	**Join Date** 03/28/2013	**Projects Completed**
Freeburg's Supply 324 East Dr. Sunnyside, WA Phone: 509-830-2828	**Specialties** Motors and VFDs	**Business Type** Contractor	**Join Date** 06/01/2004	**Projects Completed**
Schneider Electric Buildings Americas, Inc. 95 S. Jacson Seattle, WA Phone: 360-823-3040 Website: www.schneider-electric.com	**Specialties** HVAC - unitary Lighting Motors and VFDs	**Business Type** Contractor	**Join Date** 10/10/2010	**Projects Completed** 1
Current Electric Solution 11979 W. Hwy 12 Lowden, WA 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**
Dykman Electrical, Inc. - Portland, OR 3030 NW 29th Ave Portland, OR Phone: 503-223-2992	**Specialties** Motors and VFDs	**Business Type** Distributor	**Join Date** 07/01/2004	**Projects Completed**

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Total Energy Management 1975 Butler Loop Richland, WA Phone: 509-946-4500	**Specialties** HVAC - unitary	**Business Type** Contractor	**Join Date** 08/01/2004	**Projects Completed** 2
Extra Effort Consulting & Supply 14530 SW 144th Ave. Tigard, OR Phone: 503-780-2359 Website: www.ExtraEffortLLC.com	**Specialties** Lighting Motors and VFDs	**Business Type** Distributor	**Join Date** 04/01/2012	**Projects Completed**
North Coast Electric - Pasco 1928 West A Street Pasco, WA Phone: 509-547-9514 Website: www.northcoastelectric.com	**Specialties** Lighting	**Business Type** Distributor	**Join Date** 09/21/2012	**Projects Completed** null
Applied Industrial Technologies - Spokane 301 N. Fancher Rd. Spokane, WA Phone: 509-535-2955 Website: www.applied.com	**Specialties** Motors and VFDs	**Business Type** Distributor	**Join Date** 10/01/2004	**Projects Completed**
Lake Shore Electric, Inc.* 9702 Tieton Dr. Yakima, WA Phone: 509-965-4281	**Specialties** Lighting Motors and VFDs Other: Other Specialty	**Business Type** Contractor	**Join Date** 05/12/2009	**Projects Completed** 9
CED 131 S. 1st Ave. Yakima, WA Phone: 509-248-0872	**Specialties** Lighting	**Business Type** Distributor	**Join Date** 01/01/2008	**Projects Completed** 6
Ameresco Inc 639 Isbell Rd. Suite 360 Reno, NV Phone: 508-598-4506 Website: ameresco.com	**Specialties** HVAC - unitary Motors and VFDs Other: Other Specialty	**Business Type** Other: Other	**Join Date** 05/01/2009	**Projects Completed**
Champion Lighting, Inc. 4523 S. Saint Andrews Ln Spokane, WA Phone: 509-448-4477	**Specialties** Lighting	**Business Type** Other: Other	**Join Date** 01/20/2007	**Projects Completed** 9
T&M Heating 2711 S. 5th Ave Union Gap, WA Phone: 509-575-1088	**Specialties** HVAC - unitary	**Business Type** Contractor	**Join Date** 07/01/2004	**Projects Completed**
ecomodus 7100 Willow Place #1 Yakima, WA Phone: 509-307-4363	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 02/01/2012	**Projects Completed** 50
Platt Electric Supply - Walla Walla 415 West Main Walla Walla, WA Phone: 509-522-0611 Website: platt.com	**Specialties** Lighting	**Business Type** Distributor	**Join Date** 04/07/2007	**Projects Completed** 23
HanitaTek Window Film 4010 La Reunion Pkwy, #100 Dallas, TX Phone: 800-660-5559 Website: www.HanitaTek.com	**Specialties** Building envelope	**Business Type** Engineering Firm	**Join Date** 08/06/2013	**Projects Completed**

Energy Efficiency Alliance

PACIFIC POWER

Applied Industrial Technologies - Yakima 909 N. Front St. Yakima, WA Phone: 509-457-1600 Website: www.applied.com	**Specialties** Motors and VFDs	**Business Type** Distributor	**Join Date** 10/01/2004	**Projects Completed**
Hoydar-Buck Inc. 210 West Orchard Ave Selah, WA Phone: 509-697-8800	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 09/28/2009	**Projects Completed** 2
Bailey Electric, Inc. PO Box 10622 Yakima, WA Phone: 509-452-1128 Website: Baileyelectric.com	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 01/11/2011	**Projects Completed** 21
Tanko Lighting 903 Palou Ave. San Francisco, CA Phone: 415-407-5608	**Specialties** Lighting	**Business Type** Other: Energy Services Company	**Join Date** 09/21/2012	**Projects Completed** null
Schaefer Refrigeration, Inc. 2929 E. Isaacs Walla Walla, WA Phone: 509-525-2076	**Specialties** HVAC - unitary Motors and VFDs	**Business Type** Contractor	**Join Date** 06/01/2004	**Projects Completed** 1
North Coast Electric - Wenatchee 1415 N Miller Wenatchee, WA Phone: 509-663-8603 Website: www.northcoastelectric.com	**Specialties** Lighting	**Business Type** Distributor	**Join Date** 09/21/2012	**Projects Completed** null
Kapco LLC / Parsons Electric 415 Viewmont Pl. Yakima, WA Phone: 509-930-1292	**Specialties** Motors and VFDs	**Business Type** Contractor	**Join Date** 07/01/2007	**Projects Completed**
Central Chain & Transmission 702 S. 2nd Street Yakima, WA Phone: 509-457-6188	**Specialties** Motors and VFDs	**Business Type** Distributor	**Join Date** 12/01/2004	**Projects Completed**
Linden Electric, Inc. 9401 Mieras Rd Yakima, WA Phone: 509-575-1191	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 07/06/2006	**Projects Completed** 6
Telkonet Inc 10200 Innovation Dr Suite 300 Milwaukee, WI Phone: 480-652-6814 Website: telkonet.com	**Specialties** HVAC - unitary	**Business Type** Distributor	**Join Date** 08/01/2008	**Projects Completed**
Kinter Electric* 2761 E. Edison Rd. PO Box 1058, Sunnyside, WA Phone: 509-839-3900 Website: www.kinterelectric.com	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 10/31/2009	**Projects Completed** 57
Stoneway Electric - Walla Walla 44 S Palouse Street Walla Walla, WA Phone: 509-522-1550 Website: stoneway.com	**Specialties** Lighting	**Business Type** Distributor	**Join Date** 06/08/2006	**Projects Completed** 3

Energy Efficiency Alliance

PACIFIC POWER

Envirofficiency, Inc. 270 Summers Circle Walla Walla, WA Phone: 509-540-0094 Website: envirofficiencyinc.com	**Specialties** Lighting Other: Other Specialty	**Business Type** Distributor	**Join Date** 11/03/2011	**Projects Completed** 1
A & T Quality Electric LLC 4271 N Wenas Rd Selah, WA Phone: 509-985-9890	**Specialties** HVAC - unitary Lighting Motors and VFDs	**Business Type** Contractor	**Join Date** 07/15/2009	**Projects Completed** 5
College Place Heating and Air Conditioning 970 NE Rose College Place, WA Phone: 509-525-8073 Website: www.cpheat.com	**Specialties** HVAC - unitary	**Business Type** Contractor	**Join Date** 03/01/2010	**Projects Completed**
qatestpcp 650 edgewater blvd fostercity, CA Phone: 444-444-4444 x 4444	**Specialties** Appliances	**Business Type** Architect	**Join Date** 04/02/2013	**Projects Completed** 650
APC Sales and Service Corp. 132 Fairgrounds Road West Kingston, RI Phone: 714-513-7371 Website: www.schneider-electric.com	**Specialties** HVAC - unitary Lighting	**Business Type** Distributor Other: Other	**Join Date** 03/01/2012	**Projects Completed**
Columbia Electric Supply 932 N 13TH AVE Walla Walla, WA Phone: 509-522-1419	**Specialties** HVAC - unitary Lighting Motors and VFDs	**Business Type** Distributor	**Join Date** 01/01/2008	**Projects Completed** 2
K&N Electric Motors, Inc. 9933 N.E. Kinder Rd. Moses Lake, WA 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 Phone: 509-966-4540	**Specialties** Controls Lighting Motors and VFDs	**Business Type** Contractor	**Join Date** 03/04/2014	**Projects Completed**
Performance Lighting Solutions PO Box 1626 Kalama, WA Phone: 360-431-5112	**Specialties** Lighting	**Business Type** Other: General Contractor	**Join Date** 10/11/2013	**Projects Completed** 1
Hendon Electric 82075 Hwy 395 N Umatilla, OR Phone: 541-922-3844	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 03/01/2005	**Projects Completed** 5
PermaCold Engineering, Inc. 2945 NW Argyle St Portland, OR Phone: 503-249-8190	**Specialties** Motors and VFDs	**Business Type** Contractor	**Join Date** 09/01/2005	**Projects Completed**
Beckstead Electric Inc 92 9th Street Wenatchee, WA Phone: 509-663-1148	**Specialties** Motors and VFDs	**Business Type** Contractor	**Join Date** 03/01/2008	**Projects Completed**
Energy Industries 10220 N Nevada, STE 60 Spokane, WA Phone: 208-859-6713 Website: energy-industries.com	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 10/03/2003	**Projects Completed** 7

Energy Efficiency Alliance

PACIFIC POWER

Apollo Sheet Metal 1207 W. Columbia Dr. Kennewick, WA Phone: 509-586-1104 Website: apollosm.com	**Specialties** HVAC - unitary Motors and VFDs	**Business Type** Distributor	**Join Date** 04/01/2006	**Projects Completed** 14
Engineering Economics, Inc. 780 Simms Street, Suite 210 Golden, CO Phone: 800-869-6902 Website: www.eeiengineers.com	**Specialties** HVAC - evaporative HVAC - unitary Other: Other Specialty	**Business Type** Engineering Firm	**Join Date** 09/13/2013	**Projects Completed**
Absolute Software, Inc. 430-11401 Century Oaks Terrace Austin, TX Phone: 512-600-7455 Website: www.absolute.com	**Specialties** Other: Other Specialty	**Business Type** Manufacturer - Rep Other: Software Company	**Join Date** 02/11/2014	**Projects Completed**
Hutchinson Electric Inc. 3660 Washout Rd. Sunnyside, WA Phone: 509-391-0770	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 02/26/2007	**Projects Completed** 13
Roberts Electrical Inc. 13761 US Highway 12 Naches, WA Phone: 509-930-3803	**Specialties** HVAC - unitary Lighting Motors and VFDs	**Business Type** Contractor	**Join Date** 05/01/2012	**Projects Completed** 2
MH Electric Inc.* Po Box 11224 Yakima, WA Phone: 509-452-6039	**Specialties** Lighting Motors and VFDs	**Business Type** Contractor	**Join Date** 01/06/2010	**Projects Completed** 106
Real Green LED 4280 W. 200 N. Cedar City, UT Phone: 951-235-0382 Website: www.realgreen.net	**Specialties** Lighting	**Business Type** Distributor	**Join Date** 08/01/2011	**Projects Completed**
Central Mechanical Services 619 W. J St. Yakima, WA Phone: 509-248-5944	**Specialties** HVAC - unitary	**Business Type** Contractor	**Join Date** 08/01/2004	**Projects Completed**
Power Motion & Industrial Supply 215 S. 14th Ave. Yakima, WA Phone: 509-248-8220	**Specialties** Motors and VFDs	**Business Type** Distributor	**Join Date** 05/01/2006	**Projects Completed**
Rucker Electric LLC 9001 Roza Hill Drive Yakima, WA Phone: 509-952-8339	**Specialties** Lighting Motors and VFDs	**Business Type** Contractor	**Join Date** 10/16/2006	**Projects Completed** 4
Electrical Frontier Inc. 4240 Thorp Road Moxee, WA Phone: 509-945-5703	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 07/01/2012	**Projects Completed** 1
Norstar Electric 11780 Mieras Rd. Yakima, WA Phone: 509-961-8161	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 01/01/2006	**Projects Completed** 5
Cooper Lighting 1121 Highway 74 South Peachtree City, GA 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

Energy Efficiency Alliance

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Nico Electrical Contracting P.O. Box 476 Walla Walla, WA Phone: 509-526-9658	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 09/21/2012	**Projects Completed** 2
C-Mation LLC 3565 S West Temple Salt Lake City, UT Phone: 801-268-1425 Website: cmation.com	**Specialties** HVAC - unitary Motors and VFDs	**Business Type** Contractor	**Join Date** 04/01/2009	**Projects Completed**
Stoneway Electric - Yakima 23 N. 3rd Ave Yakima, WA Phone: 509-469-6154	**Specialties** Controls HVAC - unitary Motors and VFDs	**Business Type** Distributor	**Join Date** 02/26/2008	**Projects Completed**
All-State Electric Co.* 1305 Heritage Hills Drive Selah, WA Phone: 509-941-8739 Website: telkonet.com	**Specialties** Lighting Motors and VFDs Other: Other Specialty	**Business Type** Contractor	**Join Date** 01/20/2009	**Projects Completed** 29
Picatti Brothers Inc. 105 S. 3rd St. Yakima, WA Phone: 509-248-2540	**Specialties** Lighting Motors and VFDs	**Business Type** Contractor	**Join Date** 06/18/2009	**Projects Completed** 2
Meier Architecture & Engineering 8697 W. Gage Blvd. Kennewick, WA 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**
Allard Enterprises 4506 Maple Ave. Yakima, WA Phone: 509-575-0955	**Specialties** HVAC - unitary Motors and VFDs	**Business Type** Contractor	**Join Date** 04/01/2006	**Projects Completed**
Micro Computer Systems 12631 Beverly Park Road Lynnwood, WA 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**
Dilbeck Electric, Inc.* 517 S. 2nd Avenue Yakima, WA Phone: 509-575-4666	**Specialties** Lighting Motors and VFDs	**Business Type** Contractor	**Join Date** 06/01/2005	**Projects Completed** 6
All-Phase Electric, Inc.* 2500 S 12th Ave Union Gap, WA Phone: 509-454-5093 Website: allphaseelectric.org	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 06/08/2006	**Projects Completed** 34
FGI, llc 932 W. 32nd Avenue Spokane, WA Phone: 800-630-7345 Website: www.fgillumination.com	**Specialties** Lighting	**Business Type** Other: Consultant	**Join Date** 03/12/2013	**Projects Completed**
Platt Electric Supply - Yakima 16 S. 1st Avenue Yakima, WA Phone: 509-452-6444 Website: platt.com	**Specialties** Lighting	**Business Type** Distributor	**Join Date** 08/16/2006	**Projects Completed** 44

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PACIFIC POWER

Dykman Electrical, Inc. - Kennewick 425 N. Columbia Center Blvd #N104 Kennewick, WA Phone: 509-781-0525 Website: www.dykman.com	**Specialties** Motors and VFDs	**Business Type** Distributor	**Join Date** 11/01/2006	**Projects Completed**
Walla Walla Electric* 1225 W. Poplar Walla Walla, WA Phone: 509-525-8672 Website: wwelectric.com	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 04/09/2001	**Projects Completed** 91
Orange Dairy Service, Inc.* 2225 E Edison Sunnyside, WA Phone: 509-837-5078	**Specialties** Farm and Dairy HVAC - unitary Lighting Motors and VFDs Other: Other Specialty	**Business Type** Contractor	**Join Date** 12/01/2005	**Projects Completed** 3
Pro Controls Inc. 1312 Gordon Rd Yakima, WA 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**
Twice The Light, Inc. 7714 NE Hazel Dell Ave./P.O. Box 65279 Vancouver, WA Phone: 360-901-7710	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 01/01/2012	**Projects Completed** 2
S & S Electric 315 White Walla Walla, WA Phone: 509-525-7720	**Specialties** Lighting	**Business Type** Contractor	**Join Date** 05/31/2005	**Projects Completed** 3
Davis Pumps PO Box 566 Sunnyside, WA Phone: 509-837-5303	**Specialties** Motors and VFDs	**Business Type** Contractor	**Join Date** 03/01/2006	**Projects Completed**
Grassi Refrigeration 1445 W. Rose Walla Walla, WA Phone: 509-529-9700	**Specialties** HVAC - unitary Motors and VFDs	**Business Type** Contractor	**Join Date** 06/01/2006	**Projects Completed**
All Seasons Heating & Air Conditioning* 302 S. 3rd Ave. Yakima, WA Phone: 509-248-6380 Website: www.allseasonsheating.com	**Specialties** HVAC - unitary	**Business Type** Contractor	**Join Date** 06/01/2004	**Projects Completed** 3

Appendix 7
Communications

Pacific Power

Energy Efficiency Communications 2013

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

TV
:15s
Ceiling Fan
Home Sweet Home
Lightbulb
Kilowatts
Bathroom
Dog
See Ya Later, refrigerator
:30s
Tuba
Math Girl
Weatherman
Lineman in yard
Restaurant
RADIO
Radio
Save Energy
Better Insulation
Close the fridge
Answers Lori – energy efficiency

Answers Phil – energy efficiency
Answers Jess – energy efficiency
Answers Marty – energy efficiency
Raise Your Thermostat
Wattsmart Décor
Wattsmart Drain
Wattsmart Newspaper
Wattsmart Sweater
Business Radio - Spring
Business Radio - Fall
Print
English
Fantasy
Inefficient
Goofy/Dog
Thermostat/Cocoa
Warm/Hat
Watt smart kids
Energy Savings
Business print - wattsmart (Picatti Brothers)
Business Print – wattsmart (Marcus Whitman)
Business Thank you ad
Business – Agricultural –

farm/dairy/irrigation
Spanish
Goofy/Dog
Thermostat/Cocoa
Warm/Hat
Wattsmart handouts
Summer handout
Winter handout - residential
Wattsmart homebuyer checklist

Digital Ads:

- wattsmart - fan (moving)
- wattsmart - fan (static)
- wattsmart - pool (moving)
- wattsmart - pool (static)
- wattsmart Goofy dog (300x250)
- wattsmart Power strip (160x600)
- wattsmart Power strip (300x250)
- wattsmart Warm/hat (300x600)
- Business – Lighting (160x600)
- Business – Lighting (450x100)
- *See ya later, refrigerator* (spring)
- *See ya later, refrigerator* (fall)

Inserts:

- February – *See ya later, refrigerator*
- April – *See ya later, refrigerator*
- April/May/June – Outer envelope
- June – HES cooling insert
- September – *See ya later, refrigerator*
- Fall/winter – Home Energy Savings incentive check insert

Newsletters:

- January *Voices*
- March *Voices*
- April *Voices*
- May wattsup insert
- July *Voices*
- September *Voices*
- October wattsup insert
- November *Voices*

Direct mail:

- February – *See ya later, refrigerator*
- October – *See ya later, refrigerator*

Emails:

- *See ya later, refrigerator*
- Heat pump water heater incentives
- Winter heating and weatherization incentives
- Business eblast – Lighting
- Business eblast - Food Service

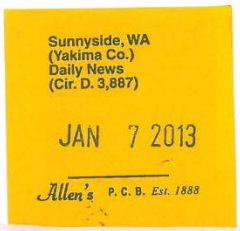
Collateral:

- Home Energy Savings retail point-of-purchase (cooling)
- Home Energy Savings retail application sleeve
- Home Energy Savings contractor sales sheet
- Home Energy Savings brochure
- *See ya later, refrigerator* school outreach handout

Energy efficiency in the news

- 1/7/13—Daily Sun (Sunnyside, Wash.) Energy savings tips for winter
- 1/31/13—Daily Sun (Sunnyside, Wash.) Pacific Power offers incentives

- 6/28/13--Walla Walla Union Bulletin. Pacific Power program gives businesses, conservation a boost
- 6/30/13—Yakima Herald Republic. Pacific Power program gives businesses, conservation a boost
- 7/2/13—Daily Sun (Sunnyside, Wash.) Pacific Power offers incentives to help businesses reduce costs



Energy-saving tips offered for winter months

S130

When temperatures drop area residents are likely to see their electricity bills rise.

It's often times the inevitable truth, but with a few simple tips from area power companies, residents may be able to stay warm without burning away the contents of their pocketbooks.

In its monthly magazine Benton REA says folks can simply resolve to turning off lights of unoccupied rooms and unplugging electronics and appliances that are not in use.

Even when turned off, most electronics draw electricity if they are still plugged in. Experts say that nearly 10 percent of a home's total electric use is consumed by these types of "phantom power."

In addition to simply turning off lights and unplugging electronics, choosing the right light bulb for your home is a must if you'd like to save a few bucks. Many light bulb packages include information such as the bulb's brightness, its estimated early cost, the life of the bulb itself and its wattage.

Experts say in the past, shopping for a bulb a consumer would pick one with the wattage they desire. But wattage doesn't necessarily mean the light is bright. Companies use the term, lumens to measure the bulb's brightness. For example, a traditional 60-watt bulb produces nearly 800 lumens of light, while a CFL bulb produces the same amount of lumens with just 15 watts.

Also to save on the electric bill, Pacific Power and Light officials say if the home's water heater is set at 120 degrees, residents are likely to see less of a bill at the month's end. It's not really necessary for the heater to be set any hotter, and if it's not allowing temperatures to reach hotter than 120, it's using less energy to operate.

Washing clothes in cold water and running only full loads in the washing machine is a tip both local power companies believe residents will see benefit their bottom lines.

In addition to that, power professionals also recommend setting refrigerator temperatures between 37 and 40 degrees, and the freezer at 0 degrees.

For additional information on how to conserve energy in your home visit www.pacificpower.net or bentonrea.org.

Sunnyside, WA
(Yakima Co.)
Daily News
(Cir. D. 3,887)

JAN 3 1 2013

Allen's P. C. B. Est. 1888

Pacific Power offers incentives

If one of your New Year's resolutions is to improve your home's energy efficiency, you can check it off your list by investigating Pacific Power's wattsmart incentives by visiting www.bewattsmart.com.

The wattsmart program offers customers cash back for a variety of energy-efficient products and services.

"This is simple: we want to pay you to save money," said Bill Clemens, Pacific Power regional community manager.

He said, "If energy efficiency slipped down your priority list last year, there is no time like now to take advantage of this double benefit. First, you save on the purchase of energy-efficient products and services, and again on your monthly bill through reduced electricity use."

To emphasize what you can do in your home, Pacific Power broadened the incentives in its wattsmart program last year to now include:

- Weatherization – up to 45 cents per square foot cash back to install or upgrade your home's insulation.
- Water heating –$150 cash back for purchasing a qualifying heat pump water heater.
- Heat pumps – $600 cash back.
- Portable evaporative coolers - $100 cash back.
- Ductless heat pumps - $750 cash back.

Homeowners are not the only ones who benefit. Contractors who do the installation work on high-efficiency heating and air conditioning equipment and services can also receive incentives in some cases.

Working with Pacific Power provides increased visibility for contractors, training opportunities and technical assistance.

For a complete list of qualifying products and services, visit www.bewattsmart.com or call toll free 1-800-942-0266.

Walla Walla Union Bulletin

June 28, 2013

Pacific Power program gives businesses, conservation a boost

By Vicki Hillhouse

A Pacific Power program for business customers has been a bright spot for savings.

More than 300 Washington businesses saved enough electricity last year to power about 1,000 homes through an incentive program that paid them to do it.

The energy company said businesses in Yakima and Walla Walla received more than $1.3 million in incentives from Pacific Power's FinAnswer — pronounced "financer" — Express program. The program exists to help eligible customers upgrade to energy-efficient lighting, heating and cooling systems, premium efficiency motors and more. It includes technical expertise and a streamlined application process, Pacific Power said.

"Business customers can quickly put FinAnswer Express to work for them," said Bill Clemens, Pacific Power regional community manger, in a prepared statement. "You start with a phone call or an email request and soon you can be saving energy and money—and have brighter lighting to work by as well."

A Yakima company was used as an example to illustrate the benefits. Picatti Brothers Inc. has serviced wells and pumps, performed electrical contracting, repaired electrical equipment, and supplied electrical tools and materials since 1928. But the company needed some work of its own to improve lighting at the machine shop where more than 50 employees are based. The business turned to the FinAnswer program to replace the 1970s-era T12 fluorescents with magnetic ballasts and metal halide lighting. In their place now are premium T8 fluorescents with electronic ballasts and passive infrared sensors to shut off lighting when no one is working. The improvements are saving 11,470 kilowatt hours in electricity for a total of about $880 in energy costs a year.

"We are a family-owned business and are very prudent with our investments. We look to get a quick return on what we spend and Pacific Power's program helped us with that," said Douglas Picatti, vice president of business development, in a release. "We now have a better work environment for our employees and customers, and are getting continued savings on our energy costs."

Lighting upgrades are a key part of the FinAnswer program, but there is more. Businesses can receive incentives to improve heating and cooling systems, industrial, food processing or office equipment. For details, visit: pacificpower.net/wasave.

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Yakima Herald-Republic
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Pacific Power gives businesses, conservation a boost

5130

VICKI HILLHOUSE
WALLA WALLA UNION-BULLETIN

WALLA WALLA — A Pacific Power program for business customers has been a bright spot for savings.

More than 300 Washington businesses saved enough electricity last year to power about 1,000 homes through an incentive program that paid them to do it.

The energy company said businesses in Yakima and Walla Walla received more than $1.3 million in incentives from Pacific Power's FinAnswer — pronounced "financer" — Express program. The program exists to help eligible customers upgrade to energy-efficient lighting, heating and cooling systems, premium efficiency motors and more. It includes technical expertise and a streamlined application process, Pacific Power said.

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Lighting upgrades are a key part of the FinAnswer program, but there is more. Businesses can receive incentives to improve heating and cooling systems, industrial, food processing or office equipment. For details, visit pacificpower.net/wasave.

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Pacific Power offers incentives to businesses that will aid in reducing their energy costs

More than 300 Washington businesses saved enough electricity in 2012 to power approximately 1,000 average residential homes. And they got paid to do it.

Businesses in the Yakima and Walla Walla areas received more than $1.3 million in incentives from Pacific Power's FinAnswer (pronounced "financer") Express program for everything from heating and cooling systems to new light bulbs.

"Business customers can quickly put FinAnswer Express to work for them," said Bill Clemens, Pacific Power regional community manager.

"You start with a phone call or an email request and soon you can be saving energy and money—and have brighter lighting to work by as well," Clemens explained.

FinAnswer helps eligible customers upgrade to energy-efficient lighting, heating and cooling systems and premium efficiency motors. The program includes both technical expertise and a streamlined application process for financial incentives from Pacific Power.

A good example of how this works happened at Picatti Brothers, Inc. of Yakima.

Since 1928, homeowners and businesses around the Northwest have trusted Picatti Brothers to service wells and pumps, perform electrical contracting, repair electrical equipment, and supply electrical tools and materials. But when the need came up to improve lighting at the 50-plus employees shop, Picatti Brothers turned to Pacific Power's FinAnswer Express program.

"We are a family-owned business and are very prudent with our investments. We look to get a quick return on what we spend and Pacific Power's program helped us with that," said Douglas Picatti, vice president of business development.

"We now have a better work environment for our employees and customers, and are getting continued savings on our energy costs."

For Picatti Brothers, the biggest need was lighting in the company's machine shop. Company managers could see that the 1970s-era T12 fluorescents with magnetic ballasts and metal halide lighting were no longer getting the job done. "Especially in our work area, we needed better lighting," said Picatti.

With Pacific Power's FinAnswer Express program, the company replaced the existing fixtures with premium T8 fluorescents that have electronic ballasts and added passive infrared sensors to shut off lighting when no one is working.

The upgrades gave Picatti Brothers improved illumination along with a significant reduction in energy use. The improvements are saving the Picatti Brothers approximately 11,470 kilowatt-hours in electricity—$880 in energy costs annually.

Lighting upgrades are a key part of FinAnswer Express, but there is much more to the program. Businesses can receive incentives to improve heating and cooling systems, industrial, food processing or office equipment. For details, visit: pacificpower.net/wasave.