



Washington Annual Report on Conservation Acquisition

January 1, 2012 – December 31, 2012

Revised June 4, 2013



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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
NAPEE	National Action Plan for Energy Efficiency
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, (“Pacific Power” or “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.

The Company currently offers six energy efficiency programs in Washington approved by the Washington Utilities and Transportation Commission (“Commission”), and receives 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, 2012, through December 31, 2012. The Company, on behalf of its customers invested \$10.1m in energy efficiency information, services, and incentives during the reporting period. The investment yielded approximately 49.8 gigawatt-hours in first year savings¹ and approximately 8 megawatts of capacity reduction². Net benefits over the life of the individual measures are estimated at \$21.9m³. The cost effectiveness of the portfolio from various perspectives is provided in Table 1.

Table 1
Long-term Cost Effectiveness for the Portfolio⁴

	B/C Ratio	Net Benefits
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits ⁵	2.24	\$21,889,314
Total Resource Cost Test – effects on both participants and non-participants ⁶	2.04	\$18,404,927
Utility Cost Test – effect on customers ⁷	3.51	\$24,926,282
Participant Cost Test – effect on participants ⁸	2.88	\$21,256,328
Ratepayer Impact – effect on the cost per kilowatt-hour of sales	0.93	(\$2,788,314)

All cost effectiveness calculations will assume a net-to-gross (“NTG”) of 1.0 consistent with the Council’s methodology. Annual performance information for 2012 is provided in detail in Appendix 2.

¹ Realized 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 Includes NEEA savings and Non-Energy Benefits. B/C ratios excludes portfolio level expenses i.e. the costs of the potential study and development of measure data 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 test⁹ was less than 1.0 indicating near-term upward pressure was placed on the price per kilowatt-hour given a reduction in sales.

During the reporting period, the Company, working with its third party administrators,¹⁰ has enlisted the following number of retailers, contractors, and vendors to support the energy efficiency programs in Washington:

Table 2
Energy Efficiency Infrastructure

Sector	Type	No.
Residential	Lighting Retailers	24
	Appliances Retailers	18
	HVAC Contractors	37
	Insulation Contractors	20
	Low Income Agencies	3
Commercial and Industrial	Lighting Trade Allies	51
	HVAC Trade Allies	28
	Motors Trade Allies	42
	Engineering Firms	24

As approved by the Commission, costs associated with the energy efficiency programs are recovered through Schedule 191.

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 sections 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
 - The Ten-year Achievable Conservation Potential and Biennial Conservation Target for 2012 and 2013 filed January 31, 2012
 - The 2011 Conservation Acquisition Annual Report filed March 30, 2012 pursuant to Docket UE-100170, Order 2, Paragraph 8(g)
 - The 2010-2011 Biennial Conservation Report filed on June 1, 2012 pursuant to RCW 19.285.070 and WAC 480-109-040 and consistent with Condition 8(h) UE-100170 Order 02
 - A revised Demand-Side Management Business Plan filed June 4, 2012 pursuant to Docket 111880 Order 1, Condition 5
 - Joint utility proposal on consistent forecasting and reporting of the Northwest Energy Efficiency Alliance savings pursuant to Docket UE-100170, Order 03, filed October 31, 2012
 - A second revised Demand-Side Management Business Plan filed November 1, 2012
- Modification to *FinAnswer Express* – Schedule 115, effective February 24, 2012¹¹
- Modification of *Home Energy Savings* – Schedule 118, effective April 16, 2012¹²
- Cancellation of the *Energy Education in Schools* – Schedule 113, effective June 30, 2012
- Implementation of a *Home Energy Report* pilot effective July 12, 2012¹³
- Modifications to *Energy FinAnswer* – Schedule 125, filed November 1, 2012, pursuant to Order 02 of Docket UE-111880

On April 26, 2012, the Commission issued Order 01 in Docket UE-111880 approving the Company's 2012-2021 Ten-Year Achievable Conservation Potential and 2012-2013 Biennial Conservation Target. On September 13, 2012, the Commission issued Order 03 in Docket UE-100170 acknowledging that the Company had met its 2010-2011 Biennial Conservation Target.

Advisory Group Activities

Consistent with the conditions set forth in Docket UE-111880, Order 01, Paragraph 3(a), Pacific Power 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. Pacific Power communicated with the DSM Advisory Group throughout 2012 in the follow matters:

On March 8, 2012:

- The Company made a proposal for a Home Energy Report Pilot Program;
- Provided an update on the Company's program evaluations for 2011;

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 Non-tariffed pilot program.

- Reviewed the Energy Education in Schools program and the decision to cancel the program; and
- Reviewed the savings verification evaluation to be conducted on 2012-13 reported savings and provided in the June, 2014, 2012-13 biennial report

On April 27, 2012:

- The Company held a conference call to discuss the planned adjustment to the Schedule 191 – System Benefits Charge Adjustment.

On May 4, 2012:

- The Company made a proposal for a Home Energy Report Pilot Program.

On September 10, 2012:

- Reviewed the results of the Low Income Weatherization evaluation.
- Provided an update on the Boise White Paper, LLC discussion.
- A review of the Company's EM&V framework; and
- A review of the new School Education Outreach program.

On November 6, 2012:

- An update on Distribution Efficiency study.
- An update on Home Energy Reporting.
- A discussion on Low Income evaluation recommendations on high usage households.
- Status on November Business Plan update.
- Review of Energy FinAnswer program change for Energy Project Manager co-funding; and
- An overview update on the EM&V Framework and Technical Reference Database.

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. On May 15, 2012, the Company requested an increase to Schedule 191 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 13, 2012. The balancing account activity for 2012 is included in this report consistent with Ordering Paragraph 8(g), Order 02, Docket UE-111880, 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		Balance 12/31/11				
	Deferred Expenditures	Schedule 191 Revenue Collected	Carrying Charge	Accumulative Balance	Accrued Costs	Accrual Basis Accumulative Balance
				765,949	530,996	1,296,944.38
Jan-12	269,147	(921,780)	0.00	113,316	201,803.21	846,114.92
Feb-12	966,516	(804,573)	0.00	275,259	(210,794.01)	797,263.97
Mar-12	1,193,463	(722,893)	0.00	745,829	80,080.96	1,347,914.79
Apr-12	535,597	(652,708)	0.00	628,718	114,267.53	1,345,071.63
May-12	747,334	(592,718)	0.00	783,334	55,877.89	1,555,565.21
Jun-12	887,017	(634,001)	0.00	1,036,350	106,170.48	1,914,752.14
Jul-12	540,616	(719,434)	0.00	857,532	109,323.27	1,845,257.36
Aug-12	857,295	(1,013,611)	0.00	701,216	(39,809.63)	1,649,131.67
Sep-12	676,952	(950,412)	0.00	427,756	(94,132.25)	1,281,539.20
Oct-12	1,251,104	(897,683)	0.00	781,177	(381,622.28)	1,253,337.90
Nov-12	581,199	(928,125)	0.00	434,251	45,363.17	951,774.69
Dec-12	1,480,119	(1,080,074)	0.00	834,296	106,487.26	1,458,307.31
Total 2012	9,986,359	(9,918,012)				

Column Explanations:

Deferred Expenditures: Monthly expenditures for all program activities posted in 2012, including funding for the Northwest Energy Efficiency Alliance.

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

Carrying Charge: Monthly charge based on "Accumulative Balance" of the account, accrued when cumulative revenue exceeds cumulative expenditures. 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 "Accumulative 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.

Accrued Costs: Program costs incurred during the period not yet posted in system.

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

During calendar year 2012, the under-collected balance in the System Benefits Charge balancing account increased by \$68,347, and with accrued costs, the account increased by approximately \$161,363. Therefore, the Company spent approximately \$68,347, and with accrued costs, \$161,363 more than what was collected for program delivery during the year.

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 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 has been on resources with sufficient reliability characteristics that are anticipated to be technically feasible and assumed achievable during the IRP’s 20-year planning horizon. The estimated achievable energy efficiency potential identified in the 2011 study for Washington was 122 average megawatts or 22 percent of forecasted retail sales in 2030.¹⁵ By definition this was 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.

¹⁴www.pacificcorp.com/content/dam/pacificcorp/doc/Energy_Sources/Demand_Side_Management/DSM_VolumeI_2011_Study.pdf

¹⁵Ibid.

The achievable technical potential for Washington by sector is shown in Table 4. The 2011 potential study indicates that 11 percent of the achievable technical potential for the Company, excluding Oregon¹⁶, is in Washington.¹⁷

Table 4
Washington Energy Efficiency Achievable Technical Potential by Sector

Sector	Average Megawatts in 2030	Percent of Retail Sales
Residential	68	28%
Commercial	35	18%
Industrial	17	15%
Irrigation	2	10%
Street Lights	0.5	36%

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 their weighted-average load shape, lives, and costs 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 tests¹⁸, 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.

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 (i.e. near-term rate impact, program value to participants, etc.).

Both the 2008 and 2011 Integrated Resource Plan preferred portfolios included the acquisition of energy efficiency resources. The action plan targets for the 2008 and 2011 Integrated Resource Plan updates¹⁹ are shown in Table 5.

¹⁶ Demand-side management potential studies for Oregon are performed by the Energy Trust of Oregon

¹⁷ Page 49 of the Assessment of Long-term, System-Wide Potential for Demand-Side and Other Supplemental Resources

¹⁸ The footnotes on page 6 provide explanations of cost effectiveness tests.

¹⁹ 2008 IRP update, March, 2010, and 2011 IRP LC 52 Revised IRP Action Plan, January, 2012.

Table 5
Preferred Portfolio Energy Efficiency Targets

2008 Preferred Portfolio	Acquire 468-525 average megawatts of energy efficiency by 2018
2011 Preferred Portfolio	Acquire a minimum of 517 average megawatts of energy efficiency resource savings by 2020

Energy Efficiency Programs

Energy efficiency programs are offered to all major customer sectors: residential, commercial, industrial and agricultural. The overall energy efficiency portfolio includes 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, invests in outreach and education regarding the efficient use of electricity. Results for 2012 are provided in Table 6.

Table 6
Washington Results January 1, 2012 – December 31, 2012

Program	kWh/Yr Savings (at site)	kWh/Yr Savings (at generator)	aMW Savings (at gen)	Systems Benefits Charge Expenditures
Low Income Weatherization (114)	206,080	226,008	0.03	\$ 606,108
Refrigerator Recycling (107)	1,075,254	1,179,231	0.13	\$ 247,055
Home Energy Savings (118)	6,051,410	6,636,581	0.76	\$ 1,135,181
Home Energy Reporting	1,778,482	1,950,461	0.22	\$ 100,257
Northwest Energy Efficiency Alliance	12,439,200	13,610,780	1.55	\$ 1,218,412
Total Residential	21,550,425	23,603,061	2.69	\$ 3,307,012
Energy FinAnswer (125)	2,190,303	2,399,061	0.27	\$ 473,104
FinAnswer Express (115)	9,982,986	10,934,464	1.25	\$ 2,092,466
Total Commercial	12,173,289	13,333,525	1.52	\$ 2,565,569
Energy FinAnswer (125)	9,890,551	10,697,719	1.22	\$ 1,900,245
FinAnswer Express (115)	1,886,703	2,040,677	0.23	\$ 550,878
Total Industrial	11,777,254	12,738,396	1.45	\$ 2,451,122
FinAnswer Express (115)	97,532	106,963	0.01	\$ 7,734
Total Agricultural	97,532	106,963	0.01	
Total	45,598,500	49,781,945	5.68	\$ 8,331,438
Additional residential expenditures for administration related to prior programs				
Company Initiatives - Distribution Efficiency				\$ 146,618
Company Initiatives - Production Efficiency				\$ 231,495
School Energy Education				\$ 252,946
New Programs				\$ (3,421)
Res. Admin of Prior Programs				\$ 1,586
Outreach and Communication				\$ 209,022
Portfolio Level Expenditures (evaluation, potential study & technical reference library)				\$ 885,332
Total System Benefits Charge expenditures				\$ 10,055,015

The cost effectiveness of the overall portfolio was provided in Table 1.

The Company, consistent with requirements under Docket UE-111880, Order 01, Ordering Paragraph (8)(c), provides Table 7 which compares the Company's revised 2012 business plan budget filed on June 4, 2012, to actual 2012 program performance.

In 2012, the Company delivered preliminary results of 49,781,945 kWh in first year energy savings against the 2012 business plan forecast savings of 39,456,915 kWh, a positive variance of approximately 26 percent.

Table 7: Washington Business Plan Budget compared to Actual²⁰

Program	2012 PacifiCorp Washington Business Plan Budget				2012 PacifiCorp Washington DSM Actual			
	kWh/Yr Savings (at site)	kWh/Yr Savings (at generator)	Gross aMW Savings (at gen)	Estimated Systems Benefit Expenditures	kWh/Yr Savings (at site)	kWh/Yr Savings (at generator)	Gross aMW Savings (at gen)	Systems Benefits Charge Expenditures
Low Income Weatherization (114)	270,480	294,463	0.03	\$ 824,000	206,080	226,008	0.03	\$ 606,108
Refrigerator Recycling (107)	1,423,390	1,549,602	0.18	\$ 300,000	1,075,254	1,179,231	0.13	\$ 247,055
Home Energy Savings (118)	7,371,151	8,024,751	0.92	\$ 1,570,825	6,051,410	6,636,581	0.76	\$ 1,135,181
Home Energy Reports	1,176,000	1,280,000	0.15	\$ 118,671	1,778,482	1,950,461	0.22	\$ 100,257
Total Residential	10,241,021	11,148,816	1.27	\$ 2,813,496	9,111,225	9,992,281	1.14	\$ 2,088,600
Energy FinAnswer (125)	1,463,143	1,590,861	0.18	\$ 498,000	2,190,303	2,399,061	0.27	\$ 473,104
FinAnswer Express (115)	4,978,230	5,412,780	0.62	\$ 1,057,000	9,982,986	10,934,464	1.25	\$ 2,092,466
Total Commercial	6,441,373	7,003,641	0.80	\$ 1,555,000	12,173,289	13,333,525	1.52	\$ 2,565,569
Energy FinAnswer (125)	8,422,543	9,057,855	1.03	\$ 2,276,000	9,890,551	10,697,719	1.22	\$ 1,900,245
FinAnswer Express (115)	1,944,427	2,091,095	0.24	\$ 413,000	1,984,235	2,147,640	0.24	\$ 558,612
Total Industrial	10,366,970	11,148,950	1.27	\$ 2,689,000	11,874,786	12,845,359	1.47	\$ 2,458,856
Energy Education in Schools (113)				\$ 250,000	-	-	-	\$ 252,946
Northwest Energy Efficiency Alliance	8,413,980	9,160,048	1.05	\$ 1,157,000	12,439,200	13,610,780	1.55	\$ 1,218,412
Distribution Efficiency	928,735	972,360	0.11	\$ 341,400	-	-	-	\$ 146,618
Production Efficiency	23,100	23,100	0.003	\$ 375,000	-	-	-	\$ 231,495
Total - Conservation Programs	36,415,179	39,456,915	4.50	\$ 9,180,896	45,598,500	49,781,945	5.68	\$ 8,962,496
Customer Outreach/Communication				\$ 250,000				\$ 209,022
Program Evaluations				\$ 779,000				\$ 751,468
Potential Study Update/Analysis				\$ 80,000				\$ 125,843
Measure Data Documentation				\$ 200,000				\$ 8,021
Res. Admin of Prior Programs				\$ 1,500				\$ 1,586
Total System Benefits Charge Expenses	36,415,179	39,456,915	4.50	\$ 10,491,396	45,598,500	49,781,945	5.68	\$ 10,058,436

²⁰ SBC expenditures represents total program costs for savings claimed 2012

Residential Programs

The residential energy efficiency portfolio is comprised of four 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
Long-term Cost Effectiveness for Residential Portfolio²¹

	B/C Ratio	Net Benefits
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	3.34	\$10,487,460
Total Resource Cost Test – effects on both participants and non-participants	3.06	\$9,243,446
Utility Cost Test – effect on customers	3.76	\$9,136,684
Participant Cost Test – effect on participants	7.01	\$10,999,034
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.88	\$(1,692,500)

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 is provided in Table 9.

²¹ Includes NEEA savings and Non-Energy Benefits

Table 9
Eligible Program Measures (Units)

Measures	2012 Total Units
Electric Water Heater	90
Ceiling Fan	12
Clothes Washer	1,309
Dishwasher	405
Freezer	32
Light Fixture	448
Refrigerator	409
Room Air Conditioner	31
Heat Pump Water Heater	1
Central Air Conditioner Best Practice Installation	9
Central Air Conditioner Equipment	27
Central Air Conditioner Proper Sizing	8
Duct Sealing	27
Duct Sealing & Insulation	6
Electric System to Heat Pump Conversion	56
Heat Pump Best Practice Installation	44
Heat Pump to Heat Pump Upgrade	48
Heat Pump Tune-up	6
Heat Pump, Single-Head, Ductless	7
Insulation-Attic	140,793
Insulation-Floor	47,928
Insulation-Wall	29,701
Windows	21,954
New Homes - Builder Option Package with Heat Pump	3
New Homes - Energy Efficient Dishwasher	11
New Homes - Energy Efficient Refrigerator	11
New Homes - Windows	1,392
Lighting - CFL's	224,378
Lighting - LED Downlights	736
Grand Total	469,882

Program performance results for January 1, 2012 – December 31, 2012 are provided in Table 10 below.

Table 10
Long-term Cost Effectiveness for Home Energy Savings²²

	B/C Ratio	Net Benefits
Total Resource Test plus 10% – total resource cost with the addition of environmental and non-energy benefits	2.03	\$2,431,407
Total Resource Cost Test – effects on both participants and non-participants	1.88	\$2,067,671
Utility Cost Test – effect on customers	3.20	\$2,502,178
Participant Cost Test – effect on participants	2.48	\$2,701,538
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.85	(\$633,867)

Program Management

The program manager is 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 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 (formerly Portland Energy Conservation, Inc.). PECI was incorporated by the City of Portland, Oregon in 1979 to carry out private sector aspects of the Portland Energy Conservation Policy. In 1984, the Company was spun-off from the City of Portland, becoming a private, non-profit corporation. PECI 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 compact fluorescent lights (“CFLs”). The agreements include specific retail locations, lighting products receiving incentives and not-to-exceed annual budgets. Weatherization and heating, ventilation, and air conditioning (“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

²² Includes Non-Energy Benefits

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 PECEI on behalf of the Company is outlined in the Communication, Outreach, and Education section.

Infrastructure

Through the program the Company has increased the number of retailers carrying CFLs to over 20. Table 11 lists the lighting retailers participating in the program.

Table 11²³
Retail Stores – Compact Fluorescent Lights

Retailer	City
Ace Hardware #14965	Walla Walla
Big Lots #4558	Yakima
Corner Grocery & Hardware	Yakima
Costco #1013	Union Gap
Habitat for Humanity ReStore #2	Yakima
Haggen #35 TOP Foods	Yakima
Home Depot #4727	Yakima
Home Depot #4735	College Place
Hometown Ace Hardware #11909	Yakima
Lowe's #160	Union Gap
Oak Creek Ace Hardware #14426	Naches
Platt Electric Supply #24	Grandview

Retailer	City
Platt Electric Supply #28	Walla Walla
Platt Electric Supply #37	Yakima
Roy's Ace Hardware #10640	Yakima
Stein's Ace Hardware #7047	Yakima
True Value Hardware - C&H	Yakima
True Value Hardware - Country Farm and Garden	Yakima
True Value Hardware - Helms	Selah
Walgreens #12053	Yakima
Walgreens #12275	Yakima
Walgreens #9911	Yakima
Wal-Mart - Supercenter #5078	Yakima
Wal-Mart #2269	Yakima

²³ To be considered for participation for discounted CFLs, sales coming from Pacific Power customers must be a significant majority of total sales.

Over a dozen 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	Fixture	Freezer	Refrigerator	Room AC
Inland Pipe & Supply	Yakima				✓				
Adams Quality Plumbing*	Walla Walla								
All Your Building Needs*	Pomeroy								
Bemis	Yakima		✓	✓			✓	✓	✓
Best Buy #831	Yakima		✓	✓			✓	✓	✓
Chris Johnson Plumbing	Walla Walla				✓				
Ferguson Enterprises, Inc.	Walla Walla		✓						
Helms True Value	Selah				✓	✓			
Home Depot #4727	Yakima	✓	✓	✓	✓	✓	✓	✓	✓
Home Depot #4735	College Place	✓	✓	✓	✓	✓	✓	✓	✓
Lowe's of Union Gap	Union Gap	✓	✓	✓	✓	✓	✓	✓	✓
Sears #2029	Union Gap		✓	✓	✓		✓	✓	✓
Sears #3088	Sunnyside		✓	✓		✓	✓	✓	
Sears #2599	Walla Walla		✓	✓	✓			✓	✓
Sears #6914**	Walla Walla								
Selah Lighting Company	Selah					✓			
Suffield Furniture Company	Dayton		✓				✓	✓	
TV Towne	Yakima		✓						

*These are participating stores who had no redemptions submitted to the program in 2012.

**This is a new store location, and had no redemptions in 2012. The previous Walla Walla Sears burned down. See Sears store #2599.

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
AccuTemp Heating and Air Conditioning	Yakima	✓	✓	✓	✓	✓	✓	✓	✓
All Phase Refrigeration & Heating	Kennewick							✓	
All Seasons Heating & Air Conditioning	Yakima	✓		✓	✓		✓		
Allard Enterprises	Yakima	✓	✓	✓	✓	✓	✓	✓	✓
Apollo Sheet Metal Inc.	Kennewick	✓	✓	✓	✓	✓	✓	✓	✓
Campbell and Company	Pasco	✓	✓	✓	✓	✓	✓	✓	✓
Central Mechanical Services	Yakima	✓	✓	✓	✓	✓	✓	✓	✓
CK Home Comfort Systems	Grandview	✓	✓	✓	✓	✓	✓	✓	✓
Clark County Mechanical	Vancouver	✓	✓	✓	✓	✓	✓	✓	✓
College Place Heating and AC	College Place	✓	✓	✓	✓	✓	✓	✓	✓
Comfort Pro's	Yakima	✓	✓	✓	✓	✓	✓	✓	✓
Darby Heating & Air	Richland	✓		✓	✓		✓		
Dave's Heating and Air Conditioning Inc.	Yakima	✓	✓	✓	✓	✓	✓	✓	✓
Dayco Heating	Kennewick	✓	✓	✓	✓	✓	✓	✓	✓
Delta Heating & Cooling Inc.	Richland	✓	✓	✓	✓	✓	✓	✓	✓
E-Star Northwest LLC	Sequim	✓	✓	✓	✓	✓	✓	✓	✓
Farwest Climate Control	Yakima	✓	✓	✓	✓	✓	✓	✓	✓
Four Season Heating and A/C	Yakima	✓	✓	✓	✓	✓	✓	✓	✓
Grassi Refrigeration	Walla Walla	✓		✓	✓		✓		
Intermountain West Insulation	Kennewick								✓
J and B Heating & AC	Yakima	✓		✓	✓		✓		
McCarl Heating & Air	Yakima	✓		✓	✓		✓		
Mike's Heating & Air	Pomeroy	✓	✓	✓	✓	✓	✓	✓	✓
Miller & Trujillo Heating and AC, LLC.	Zillah	✓	✓	✓	✓	✓	✓	✓	✓
Olmstead Electric	Walla Walla	✓	✓	✓	✓	✓	✓	✓	✓
One Hour Heating & Air Conditioning	Ellensburg	✓	✓	✓	✓	✓	✓	✓	✓

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
Platte Heating	Yakima	✓		✓	✓		✓	✓	
Quality Comfort	Yakima	✓		✓	✓		✓		
Schaefer Refrigeration Inc.	Walla Walla	✓		✓	✓		✓		
Smith Insulation	Walla Walla								✓
The Ductologist	Renton								✓
ThermalWise Heating and Refrigeration, LLC.	Walla Walla		✓			✓		✓	✓
Thermex Valley Heating and AC	Yakima	✓	✓	✓	✓	✓	✓	✓	✓
TJ's Refrigeration Heating and Air	Sunnyside	✓		✓	✓		✓		
TNG Heating and Refrigeration, LLC.	Toppenish	✓	✓	✓	✓	✓	✓	✓	✓
Total Comfort Solutions, LLC.	Walla Walla	✓		✓	✓	✓	✓	✓	
Vance Heating and AC	Yakima	✓		✓	✓		✓		

Table 14
Weatherization Contractors

Contractor Name	City	Insulation Attic	Insulation Floor	Insulation Wall	Windows
Allard Enterprises	Yakima	✓	✓	✓	
Central Valley Glass	Yakima				✓
Chon Insulation and Drywall	Walla Walla	✓	✓	✓	
Comfort Pro's	Yakima	✓	✓	✓	✓
Dave's Heating & AC	Yakima	✓	✓	✓	
Don Jordan Energy Systems	Yakima	✓	✓	✓	
E-Star Northwest LLC	Sequim	✓	✓	✓	
Farwest Climate Control	Yakima				✓
High Desert Glass	Prosser				✓
Intermountain West Insulation	Kennewick	✓	✓	✓	✓
Jackson Siding and Windows	Walla Walla				✓
McCarl Heating & Air	Yakima	✓	✓	✓	✓
McKinney Glass	Yakima				✓
Miller Glass	Yakima				✓
Patrick Construction	Naches	✓	✓	✓	✓
Pro Build	Yakima	✓	✓	✓	
Smith Insulation	Walla Walla	✓	✓	✓	✓
The Ductologist	Renton	✓	✓	✓	
West Valley Glass and Window	Yakima				✓
Windows Walla Walla	Walla Walla				✓

Demographics

Approximately 63 percent of all *Home Energy Savings* incentive applications for the reporting period (January 1, 2012 – December 31, 2012) 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	49.0%	42.8%	42.9%	47.9%
Walla Walla	14.1%	17.8%	25.9%	15.7%
Selah	9.0%	9.1%	11.0%	9.2%
Sunnyside	3.3%	3.8%	1.1%	3.1%
College Place	2.5%	5.3%	3.2%	2.8%
Wapato	3.0%	1.0%	0.7%	2.6%
Zillah	2.6%	1.9%	2.5%	2.6%
Moxee	2.4%	1.0%	1.4%	2.2%
Toppenish	2.4%	0.5%	0.7%	2.0%
Grandview	1.8%	3.8%	1.4%	1.9%
Union Gap	1.8%	1.9%	1.4%	1.8%
Dayton	1.2%	1.9%	1.8%	1.3%
Naches	1.4%	1.0%	0.7%	1.3%
Tieton	1.0%	1.0%	0.7%	1.0%
Granger	1.0%		0.7%	0.9%
Waitsburg	0.6%	0.5%	2.1%	0.7%
Cowiche	0.7%	0.5%	0.4%	0.6%
Touchet	0.4%	1.9%		0.5%
Pomeroy	0.4%	1.0%		0.4%
Burbank	0.0%	2.9%	1.1%	0.4%
Outlook	0.3%			0.3%
Prescott	0.2%			0.2%
Harrah	0.2%			0.2%
Mabton	0.1%		0.4%	0.2%
Parker	0.2%			0.2%
Buena	0.1%			0.1%
Dixie	0.1%			0.1%
White Swan	0.05%	0.5%		0.1%

Evaluation

In January 2012, a process and impact evaluation was completed by a third party evaluator for program years 2009-2010. The impact evaluation provided data on the gross realized savings and the NTG ratio²⁴. The process evaluation investigated participant satisfaction, implementation and delivery processes, marketing methods and quality assurance. The Company's response to the recommendations and web link to the evaluation report are included in Appendix 4.

Home Energy Reports

The *Home Energy Reports* program began in August 2012. *Home Energy Reports* 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.

Starting with the July 2012 billing cycle, customers received a monthly *Home Energy Report* for the first three months and thereafter the report delivery cycle became bi-monthly. Paper reports are mailed out following the customers' billing cycle, which is a five-week period. Customers may opt-out of the mailed paper copy of the report and request an electronic version delivered via email.

The report provides a clear, graphical representation of energy use over time and provides the comparison to the energy usage of similar homes within a one mile radius. The program is covering a 41-month period (through December 2015) to assess the performance of the program in the Company's service territory. Each participating customer will receive 21 reports over the term of the program. Reports were provided to approximately 13,500 customers. This count will decrease (due opt-out/move-out rate) over the program's 41-month term.

A total of 13,500 customers were randomly selected to receive the reports. Program participants are made up of customers with an annual average electrical energy usage of 20,000 kilowatt hours ("kWh"). To achieve this, the upper bound annual average is approximately 29,000 kWh and the lower bound annual average is 13,500 kWh. As degradation occurs over the program period, the average usage of the population may also change. The change in average usage will be measured and verified in the program evaluation (program month 18 and 36). Participating customers have access to a Web portal containing the same information about their usage and past usage. The Web portal has other functions such as a home energy audit tool and suggestions to improve energy conservation and efficiency of their home.

Reported program savings are included below in Table 16. The long-term cost effectiveness of the *Home Energy Reports* program is detailed in Table 17.

²⁴ NTG is a factor representing net program savings divided by gross program savings that is applied to gross program impacts. This ratio is most often calculated as $NTG = 1 - \text{freeridership rate} + \text{spillover rate}$.

Table 16
Reported 2012 Program Savings (kWh savings at site)

Month	July ²⁵	August	September	October	November	December	Total
Savings (kWh)	145,878	160,226	296,771	361,663	435,033	378,910	1,778,482

Table 17
Long-term 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	1.56	\$56,603
Total Resource Cost Test – effects on both participants and non-participants	1.42	\$42,343
Utility Cost Test – effect on customers	1.42	\$42,343
Participant Cost Test – effect on participants	N/A	\$153,483
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.56	(\$111,140)

Program Management

The program manager is responsible for the *Home Energy Reports* program in Washington and Utah. The program manager is also responsible for 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 US 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, guaranteed 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 randomly selected into the treatment and control groups (verified by a third party).

²⁵ Due to company billing cycles, a portion of the reports were mailed to participating customers in July. Therefore, a corresponding amount of savings were verified and reported by Opower prior to August 2012.

- Customer Comparison Analysis– Opower conducts statistical analysis to perform pattern recognition in order to derive actionable insights to selected customers.
- Energy Report Delivery – Provide statistical analysis to customers via Home Energy Assessment report via mail hardcopy and email (to limited customers.)
- Web Portal Delivery – 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 at 18-months (February 2014) and at 36-months (December 2015.) The results from the 18-month evaluation will be incorporated in the 2012-2013 Conversation Report filed by 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 compact fluorescent lamps (“CFLs”), a refrigerator thermometer card, energy-savings educational materials, and information on other efficiency programs relevant to residential customers.

Program participation by measure is provided in Table 18.

Table 18
Eligible Program Measures (Units)

Measures	2012 Total
Refrigerator Recycling	1,229
Freezer Recycling	282
Energy Savings Kit	1,418

Program performance results for January 1, 2012 – December 31, 2012 are provided in the Table 19 below.

Table 19
Long-term 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	3.07	\$400,984
Total Resource Cost Test – effects on both participants and non-participants	2.79	\$346,938
Utility Cost Test – effect on customers	2.19	\$293,398
Participant Cost Test – effect on participants	NA	\$570,510
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.71	(\$223,571)

²⁶ Also known as “See ya later, refrigerator®” (“SYLR”)

In 2012, more than 93 tons (186,750 lbs) of steel, 3 tons (5,976 lbs) of aluminum and copper, 15 tons (29,880 lbs) of plastics were recycled, reducing landfill deposits by an amount sufficient to cover an entire football field more than two and a half feet deep. In addition, the chlorofluorocarbons (greenhouse gases) collected and destroyed during recycling equates to approximately 3.5 tons (5,337.4 metric tons for 1,494 units) of carbon dioxide equivalents per unit, equivalent to the annual emissions of the average car in the US.

Program Management

The program manager is 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. The Company contracts with JACO to provide customer scheduling, pick-up, incentive processing and marketing services for the See ya later, refrigerator® program.

JACO also 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:

- Customer and field services – JACO handles all customer and field service operations for the program. Pick-up of refrigerators and freezers from customers and transporting the units to the de-manufacturing facility is done by JACO.
- Incentive processing and call-center operations – All customer service calls, pick-up scheduling and incentive processing are handled by JACO.
- 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.

Separate third party contractors are employed to ensure JACO’s performance. The summary of the inspection process is included in Appendix 3.

Infrastructure

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

Evaluation

In January 2012, a process and impact evaluation was completed by a third party evaluator for program years 2009-2010. 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 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 is provided in Table 20.

Table 20
Eligible Program Measures (Units)

	2012 Total
Participation – Total # of Completed/Treated Homes	112
Number of Homes Receiving Specific Measures	
Ceiling Insulation	67
Floor Insulation	97
Infiltration	107
Water Pipe Insulation and Sealing	106
Compact Fluorescent Light bulbs	105
Replacement Refrigerators	13
Caulk/Weather-stripping	65
Wall Insulation	36
Attic Ventilation	45
Duct Insulation	58
Dehumidifier	1
Showerheads	66
Water Heater Repair	12
Ground Cover	93
Aerators	81
Timed Thermostat	14
Fluorescent Light Fixture	1
Repairs	52

Program performance results for January 1, 2012 – December 31, 2012 are provided in Table 21.

Table 21
Long-term 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	1.37	\$227,075
Total Resource Cost Test – effects on both participants and non-participants	1.32	\$195,994
Utility Cost Test – effect on customers	0.52	(\$291,735)
Participant Cost Test – effect on participants	NA	\$811,147
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.36	(\$552,066)

Program Management

The program manager 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

Pacific Power partners with three local non-profit agencies to provide weatherization services to income-qualifying households throughout its Washington service territory. The leveraging of Pacific Power 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 2012. Participants qualify if they are homeowners or renters residing in single-family homes, manufactured homes, or apartments. Over 7,000 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 3.
- 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 45 days after job completion. A homeowner agreement and invoice form indicating the measures installed and associated cost is submitted on each completed home.

Infrastructure

Pacific Power 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 entire Pacific Power Washington service area.

Evaluation

In September 2012, a process and impact evaluation was completed by a third party evaluator for March 2009 – February 2011. The impact evaluation provided data on the gross realized savings and the net-to-gross (NTG) ratio. The process evaluation investigated participant satisfaction, implementation and delivery processes, marketing methods, and quality assurance. The Company's response to the recommendations and web link to the evaluation report are included in Appendix 4.

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 PacifiCorp).

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 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.

Program performance for 2012 are being reported based on NEEA's preliminary results for Pacific Power of 13,611 megawatt hours for the Company's funding investment of approximately \$1.2m. 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 2012 reported savings by sector is as follows in Table 22:

Table 22
Preliminary 2012 Reported Savings by Sector

Sector	Megawatt Hours	Percent
Residential	8,838	65%
Commercial	2,783	20%
Industrial	1,990	15%

The primary initiatives generating savings by sector as a percent of total savings is as follows in Table 23:

Table 23
Initiatives Savings by Sector

Initiative/Measures	Residential	Commercial	Industrial
Televisions	65%		
Appliances	21%		
Lighting	10%		
Efficient Homes	2%		
Ductless Heat Pumps	1%		
Codes	1%	16%	
Desktop		60%	
Building Operators Certification		10%	
Real Estate		7%	
Health Care		7%	
Drive Power			52%
Food Processors			33%
Evaporative Fans			10%
Pneu-Logic (SAV_AIR)			5%
Total	100%	100%	100%

Program Administration

The Company has a member on the NEEA board of directors as well as representatives on each of the sector advisory boards, residential, commercial and industrial. The Company also has representation on NEEA's broader Regional Portfolio 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 is comprised of two programs, *FinAnswer Express* and *Energy FinAnswer*. The commercial and industrial portfolio was cost effective based on five of the five standard cost effectiveness tests for 2012 as provided in Table 24 below.

Table 24
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	2.11	\$12,991,567
Total Resource Cost Test – effects on both participants and non-participants	1.92	\$10,751,193
Utility Cost Test – effect on customers	4.46	\$17,379,310
Participant Cost Test – effect on participants	2.08	\$10,257,294
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	1.02	\$493,899

FinAnswer Express

The *FinAnswer Express* program is 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.²⁷ 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 is provided in Table 25.

Table 25
Installed Program Measures (applications)

Measure Groups	2012 Total
Appliance	1
Envelope	4
Food Service	3
HVAC	4
Lighting	265
Motor	9
Office	1
Compressed Air	3
Farm & Dairy	3
Irrigation	14
Program Totals	307

²⁷ Incentive tables can be found online at <http://www.pacificpower.net/bus/se/epi/washington/sc.html>

Program savings by measure group is provided in Table 26.

Table 26
Installed Program Measures (kWh/year savings at site)

Measure Groups	2012 Total
Appliance	42
Envelope	5,020
Food Service	57,454
HVAC	15,783
Lighting	11,069,397
Motor	340,459
Office	216,580
Compressed Air	108,899
Farm & Dairy	41,385
Irrigation	112,202
Program Totals	11,967,220

Program performance results for January 1, 2012 – December 31, 2012 are provided in Table 27 below.

Table 27
Long-term 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	1.88	\$5,919,156
Total Resource Cost Test – effects on both participants and non-participants	1.71	\$4,769,671
Utility Cost Test – effect on customers	4.34	\$8,843,772
Participant Cost Test – effect on participants	1.91	\$4,911,385
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	0.99	(\$141,714)

Program Management

The program manager is responsible for the program in Washington, California, Idaho, Utah, and Wyoming. 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. The Company contracts with Nexant, Inc. (“Nexant”) and Cascade Energy (“Cascade”) for trade ally coordination, training and application processing services for commercial measures and industrial/agricultural measures respectively.

Nexant services include design, implementation, and evaluation of commercial, industrial, and residential energy efficiency programs in the United States. The Company contracts with Nexant to provide trade ally coordination and application processing services for the commercial measures in the FinAnswer Express program.

Cascade is an industrial energy efficiency consulting firm providing both retrofit and new construction capital studies; tune-ups and retro-commissioning; utility demand-side management program design and administration; research and development; and energy management services. The Company contracts with Cascade Energy to provide trade ally coordination and application processing services for the industrial and agricultural measures in the FinAnswer Express program.

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 4.

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 developed 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 5 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 85. The current counts of participating trade allies by technology are in the Table 28.

Table 28
Participating Trade Allies²⁸

	Lighting trade allies	HVAC trade allies	Motors trade allies
List dated 2/4/2013	51	28	42

Evaluation

In December 2012, a process and impact evaluation was completed by a third party evaluator for program years 2009-2011. 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 Company's response to the recommendations and web link to the evaluation report are included in Appendix 4.

Energy FinAnswer

The *Energy FinAnswer* program is offered to commercial (buildings 20,000 square feet and larger) and industrial customers. The program is designed to target comprehensive projects requiring project specific energy savings analysis and operates in concert with the more streamlined FinAnswer Express program. The program provides Company-funded energy engineering, incentives of \$0.15 per kWh for first year energy savings and \$50 per kW of average monthly demand savings, up to a cap of 60 percent of the approved project cost. In addition to customer incentives, the program provides design team honorariums (a finder fee for new construction projects) and design team incentives for new construction projects exceeding Washington State Building Code Chapter 51-50 WAC International Building Code 2009 Edition code by at least 10 percent.

Projects completed in the report years are provided in Table 29.

Table 29
Projects Completed

	2012 Total
Energy FinAnswer Commercial	10
Energy FinAnswer Industrial	25
Total Projects Completed	35

Program participation by measure group is provided in Table 30.

²⁸ 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.

Table 30
Installed Program Measures

Measure Groups	2012 Total Applications	2012 Totals kWh savings at site
Additional Measure	2	569,034
Building Shell	1	6,704
Compressed Air	1	35,887
Controls	3	175,238
HVAC	7	2,222,154
Irrigation	1	122,197
Lighting	2	493,512
Motors	6	799,774
Refrigeration	11	7,656,354
Program Totals	35	12,080,854

Program performance results for January 1, 2012 – December 31, 2012 are provided in Table 31 below.

Table 31
Long-term 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	2.44	\$7,072,411
Total Resource Cost Test – effects on both participants and non-participants	2.21	\$5,981,522
Utility Cost Test – effect on customers	4.60	\$8,535,538
Participant Cost Test – effect on participants	2.32	\$5,345,909
Rate Payer Impact – effect on the cost per kilowatt-hour of sales	1.06	\$635,613

Program Management

The program manager is responsible for the *Energy FinAnswer* program in Washington, California, Idaho, Utah, and Wyoming; the *Self-Direction Credit* program in Utah and Wyoming; the *Agricultural Energy Services* program in Idaho; and the *Commercial & Industrial Re-Commissioning* program in Utah. The Company employs four full-time project managers²⁹ 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

²⁹ Based on the volume of projects, temporary project managers and/or support staff are employed from time-to-time.

- 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 savings³⁰

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 appropriate community and customer account manager located in Washington. Table 32 lists the engineering firms currently under contract with the Company.

Table 32
Engineering Firms

Engineering Firm	Main Office Location
Abacus Resource Management Company	Beaverton, OR
BacGen Technologies	Seattle, WA
Cascade Energy	Cedar Hills, UT
Compression Engineering Corp	Salt Lake City, UT
Eaton – EMC Engineers	Salt Lake City, UT
EMP2 Inc	Richland, WA
ETC Group	Salt Lake City, UT
Evergreen Consulting Group	Beaverton, OR
Fazio Engineering	Milton-Freewater, OR
Glumac	Portland, OR
Group 14 Engineering	Denver, CO
GSBS Architects	Salt Lake City, UT
Interface Engineering	Portland, OR
kW Engineering Inc	Oakland, CA
PAE Consulting Engineers Inc	Portland, OR
Nexant Inc	Salt Lake City, UT
PCD Engineering Services Inc	Longmont, CO
QEI Energy Management Inc	Beaverton, OR
RHT Energy Solutions	Medford, OR
RM Energy Consulting	Pleasant Grove, UT
SBW Consulting Inc	Bellevue, WA
Sharpe Energy Solutions Inc	Ashland, OR
Solarc Architecture & Engineering Inc	Eugene, OR
Van Boerum & Frank Associates	Salt Lake City, UT

³⁰ Summary of inspection process is in Appendix 3.

Evaluation

In December 2012, a process and impact evaluation was completed by a third party evaluator for program years 2009-2011. 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 Company's response to the recommendations and web link to access the evaluation report are included in Appendix 4.

A combination of in-depth project file reviews, interviews with facility staff, and on-site measurement and verification activities involving spot measurements and end-use metering of incented equipment informed the evaluated savings estimates for each project sampled during the evaluation.

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 Pacific Power'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. A list of the news stories, date of publication or airing, media outlet, and web links (where available) is included in Appendix 6.

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 2012, 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 2012, Pacific Power implemented its DSM communication and outreach campaign called *wattsmart*. This communications campaign was designed to create awareness of the importance of being energy efficient and to help increase participation in the Company's DSM programs.

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

- Moving all energy efficiency programs, tips, and resources under the *wattsmart* program umbrella.
- Implementing an advertising campaign featuring *wattsmart* energy efficiency messaging.
- Promoting customer conservation (behavioral changes) and increasing participation and savings through Pacific Power *wattsmart* DSM programs.

- Motivating customers to reduce consumption independently or to do so by participating in at least one of Pacific Power'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 Pacific Power 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 33 outlines the media channels used, the value of each channel, and the impressions achieved to date.

Table 33
2012 Media Channels

Communication Channel	Value to Communication Portfolio	2012 Placements
Television	Television has the broadest reach and works as the most effective media channel	Rotation of advertisements Both 30 and 15 seconds spots. 8,237 placements (2,026 network and 6,211 cable) 4,969,900 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 912 placements 1,036,360 impressions
Newspaper	Supports broadcast messages and guarantees coverage in areas harder to reach with broadcast	83 placements in 6 papers 977,478 impressions
Online advertising		2,054,300 impressions
Web Site www.pacificpower.net Promote <i>bewattsmart.com</i> in advertising, which goes directly to DSM/energy efficiency program page	Supports all other forms of communications by serving as a source for detailed information regarding the Company's program and other energy efficiency opportunities	<i>bewattsmart.com</i> had more than 25,700 visits in 2012
Twitter @PacificPower_WA	Awareness for early adopters regarding energy efficiency tips Tweets posted on a weekly basis	306 followers through December 2012
FaceBook www.facebook.com/pacificpower.wattsmart	Awareness for early adopters regarding energy efficiency tips and a location to share information	464 fans through December 2012

The total number impressions for the campaign in 2012 were 9,038,038.

Links to the Company's current portfolio of advertisements is included in Appendix 6.

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 *wattsmart* umbrella to reinforce the campaign and to link changes in behavior to actions customers can take by participating in specific programs. Separate marketing activities administered by and specific to the programs ran in conjunction with the *wattsmart* campaign in 2012.

Home Energy Savings

The *Home Energy Savings* program communicates to customers, retailers and trade allies through a variety of channels. In January and February 2012, new heat pump sales pieces were developed and a retailer resource manual was distributed. Communications promoting online application processing were provided to retailers during the first part of the year.

In March, *Home Energy Savings* program staff sponsored a booth at the Central Washington Home & Garden Show. Discounted admission coupons were inserted in customer bills in advance of the show.

Program changes were implemented and communicated in April. This provided an opportunity to promote new incentive measures and increased incentive amounts to customers in Washington through print ads, bill messages and social media.

In the summer, program communications focused on cooling measures. The cooling campaign included:

- Room air conditioner point of purchase material
- Handout material for retailers and trade allies to use in their sales to customers
- Web features
- Online and print ads
- Bill insert

Results from the campaign indicate increased savings from cooling measures in 2012 compared to the previous year.

A case study brochure was created to showcase the 60-unit affordable housing project with Walla Walla Housing Authority. This piece was distributed to multi-family property owners, trade allies and industry stakeholders.

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
- Social media

Results from the campaign will be compiled after the heating season in 2013.

In November 2012, the Company launched a Black Friday campaign to promote efficient equipment purchases during the holiday shopping season and encourage participation in the program.

Residential Refrigerator Recycling

The Company promotes the *See ya later, refrigerator*® program through informational advertisements and other customer communications. In 2012, the program garnered 12,285,366 impressions. Breakdown of impressions by media type is shown in Table 34.

Table 34
See ya later, refrigerator® Program

Communications Channel	2012
TV	10,755,733
Newspaper	1,515,800
Digital	13,833

In fall 2012, new outreach materials were developed including point of purchase materials, magnets and Web features.

FinAnswer Express and Energy FinAnswer

In 2012, customer communications and outreach supported *FinAnswer Express* and *Energy FinAnswer* utilizing radio, print and digital display 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 website.

Communications emphasized the change in federal lighting standards that took place July 14, 2012. This standard applied to manufacturers of general service fluorescent lamps. Customers were encouraged to retrofit their older linear fluorescent lighting ahead of the standards change and remind them that incentives were still available after the standards change. The Company maintained a page³¹ on the website dedicated to this topic.

Energy Education in Schools

Effective June 30, 2012, the Energy Education in School – Schedule 113 was canceled. This request was made by the Company and supported by the Washington DSM Advisory Group and the Commission. The primary concerns of the program were with measurement and verification of savings, declining savings from the energy efficiency kits, and the availability of less expensive energy education alternatives. Prior to cancelation, 4,634 sixth grade students participated in the energy education curriculum in the 2011-2012 school year.

³¹ www.pacificpower.net/lightingstandards

In the latter half of 2012, the Company issued a competitive Request for Proposal for a *wattsmart* Schools education program and awarded the contract to the National Energy Foundation (NEF). The new 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, 5th, or 6th 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.

The costs reported at the beginning of the report in Table 8 include the Energy Education in Schools program during the first half of 2012 as well as the costs associated with planning and development of the new program. The costs for this education program falls under Docket UE-111880, Order 01, Condition (7)(d) Conservation Efforts without Approved EM&V Protocol.

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 ("NAPEE") Program Impact Evaluation and the California Evaluation Framework guides.

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

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

Evaluation, measurement and verification ("EM&V") 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.

In June 2011, Pacific Power awarded multi-year contracts to evaluate the Company's energy efficiency programs for all states. The contracts awarded were completed through a competitive bid process.

The Washington *Home Energy Savings*, *See ya later, refrigerator*®, *Low Income Weatherization*, *FinAnswer Express*, and *Energy FinAnswer* program evaluations summary of recommendations and web link to reports are provided in Appendix 4.

Outlined below is a list of the programs, the program years completed during 2012 and the third party evaluator who performed the evaluation.

Program	Years Evaluated	Evaluator
Home Energy Savings	2009-2010	The Cadmus Group
See ya later, refrigerator	2009-2010	The Cadmus Group
Low- Income Weatherization	March 2009- February 2011	The Cadmus Group
Energy FinAnswer	2009-2011	Navigant Consulting, Inc.
FinAnswer Express	2009-2011	Navigant Consulting, Inc.