



Washington Annual Report on Conservation Acquisition

January 1, 2015 – December 31, 2015

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List of Abbreviations and Acronyms

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

Executive Summary

PacifiCorp is a multi-jurisdictional electric utility providing retail service to customers in Washington, California, Idaho, Oregon, Utah, and Wyoming. Pacific Power & Light Company, a division of PacifiCorp (“Company”), serves approximately 134,000 customers in Washington. The 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 2015, the Company offered five energy efficiency programs in Washington approved by the Washington Utilities and Transportation Commission (“Commission”), and received energy savings and market transformation benefits through its affiliation with the Northwest Energy Efficiency Alliance (“NEEA”). The expenditures associated with these programs are recovered through the System Benefits Charge Adjustment, Schedule 191 (“Schedule 191”).

This report provides details on program results and activities, expenditures, and Schedule 191 revenue for the performance period from January 1, 2015, through December 31, 2015. The Company, on behalf of its customers, invested \$11.3m in energy efficiency information, services, and incentives during the reporting period. The investment yielded approximately 47.4 gigawatt-hours (“GWh”) in first year savings¹ and approximately 6.71 megawatts of energy efficiency savings related capacity reductions². Net benefits over the life of the individual measures are estimated at \$12 m³.

Overall, 2015 portfolio savings remained consistent with 2014 performance when excluding NEEA savings. With NEEA savings, the portfolio savings decreased 7%, from 50.6 GWh in 2014 to 47.4 GWh in 2015.

The portfolio was cost effective based on four of the five standard cost effectiveness tests for the reporting period. The ratepayer impact measure test was less than 1.0, indicating near-term upward pressure was placed on the price per kilowatt-hour (“kWh”) given a reduction in sales. The cost effectiveness of the Company’s Washington energy efficiency program portfolio from various perspectives is provided in Table 1 below.

¹ Gross reported savings at site.

² See Planning section for explanation on how the capacity contribution savings values are calculated.

³ See Appendix 1 – Total Resource Cost Test plus 10% Net Benefits including NEEA and Non-Energy Benefits.

Table 1
Cost Effectiveness for the Portfolio⁴ (includes non-energy benefits)

	B/C Ratio with NEEA	B/C Ratio without NEEA
PacifiCorp Total Resource Cost Test (PTRC) plus 10% ⁵	1.70	1.74
Total Resource Cost (TRC) Test ⁶	1.57	1.60
Utility Cost Test (UCT) ⁷	2.17	2.28
Participant Cost Test (PCT) ⁸	3.31	3.19
Ratepayer Impact Cost Test (RIM) ⁹	0.57	0.58

All cost effectiveness calculations assume a net-to-gross (“NTG”) of 1.0, consistent with the Northwest Power and Conservation Council’s methodology. Portfolio-level cost effectiveness includes portfolio costs such as the Process and Impact Evaluations, Class 2 DSM (demand side management) Potentials Assessment and the DSM system database. Consistent with the Northwest Power and Conservation Council’s methodology, the Company includes quantifiable non-energy benefits at the portfolio and residential level, as well as the Home Energy Savings and Low Income Weatherization program levels. Low Income Weatherization is not included in the portfolio or sector-level cost effectiveness analysis per WAC 480-109-100(10)(b). Appendix 1 provides 2015 cost effectiveness performance.

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 below lists the energy efficiency infrastructure.

⁴ Ratios include Non-Energy Benefits, but excludes costs as outlined in the Company’s EM&V Framework (e.g. Class 1 & 3 of the potential study).

⁵ The PTRC includes the 10% conservation benefit and risk adder in addition to quantifiable non-energy benefits. PTRC is consistent with the Northwest Power Council’s cost effectiveness methodology and complies with the cost effectiveness definition (RCW 80.52.030(7)).

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.

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

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

Table 2
Energy Efficiency Infrastructure

Sector	Type	No.
Residential	Lighting Retailers	17
	Appliances Retailers	21
	HVAC Contractors	60
	Plumbing Retailers	47
	Weatherization Contractors	29
	Low Income Agencies	3
Commercial and Industrial	Lighting Trade Allies	67
	HVAC Trade Allies	31
	Motors and VFD Trade Allies	49
	Small Business Approved Contractor	7
	LEDE Instant Incentive Approved Distributor	7
	Engineering Firms	21

Regulatory Activities

During the 2015 reporting period, the Company filed a number of compliance and/or informational reports, updates and requests with the Commission in support of Company DSM programs. The following is a list of those filings:

- March 31, 2015 – Washington Annual Report on Conservation Acquisition for 2014, related to docket number UE-132047. The report provided details on conservation program results, activities, expenditures, and systems benefits charge revenue amounts for calendar year 2014.
- June 1, 2015 – Washington Annual Report on Conservation Acquisition for 2014 (corrected version). A revised annual report was filed to include a copy of the conservation report filed with the Washington Department of Commerce and correct the allocation of project savings for the *wattsmart* business sector.
- June 1, 2015 – Schedule 191-System Benefits Charge adjustment, related to Advice 15-01, docket number UE-151157. An advice filing was submitted to adjust Schedule 191—Systems Benefits Charge Adjustment, which proposed an increase of \$0.5 million for an average increase to Washington customers of approximately 0.2 percent. The request was approved July 30, 2015 per the no action agenda and effective August 1, 2015.
- June 1, 2015 – PacifiCorp Conservation and Renewable Energy Target to Washington Department of Commerce for 2014 performance. The report detailed the Company's progress in meeting the targets established in RCW 19.285.040 (EIA requirements).
- July 10, 2015 – Supplemental filing-Schedule 191-System Benefits Charge adjustment, related to Advice 15-01, docket number UE-151157. The supplemental filing incorporated additional procedural information.
- August 14, 2015 – Revised PacifiCorp Conservation and Renewable Energy Target to Washington Department of Commerce.
- October 1, 2015 – Petition to Modify Order and Associated Conditions to Comply with WAC 480-109 (housekeeping activity), related to docket UE-132047. This filing was administrative and was driven by the need for Commission consideration in advance of the Company's submittal of the its new Ten-Year Conservation Potential and 2016-2017 Biennial Conservation Target (Ten-Year Conservation Plan) on October 30, 2015.
- October 30, 2015 – 2015 Biennial Conservation Plan which included the Company's Ten-Year Conservation Potential, 2016-2017 Biennial Conservation Target (Plan), and DSM Business Plan were filed pursuant to Docket UE-132047, Order 01. The DSM Business Plan was provided as Appendix 7 to the Plan. The Biennial Conservation Plan and 10-year conservation target was approved at the open meeting December 17, 2015.
- November 13, 2015 - Schedule 114-Residential Energy Efficiency Rider-Optional for Qualifying Low Income Customers, related to Advice 15-03, docket number UE-152173. The filing revised the Low Income Weatherization program (Schedule 114) in an effort to: a) better align eligibility and/or requirements with other sources of funding, b) match eligible efficiency measures with updated technologies, c) respond to requests from our partnering agencies, and d) update measure life information used to calculated savings to

investment ratios. The proposed changes were approved December 30, 2015 per the no action agenda and effective January 1, 2016.

- November 19, 2015 – Cancel Schedule 107-Refrigerator Recycling Program Service, related to Advice 15-04, docket number UE-152237. As part of the planning process for the 2016-2017 biennial period, the Company filed Advice No. 15-04 to cancel Schedule 107 effective January 1, 2016, based on forecasted sub-optimal cost effectiveness utilizing new (and lower) unit energy savings from the Company’s program evaluation. The Commission approved it at the December 30, 2015 open meeting.

Advisory Group Activities

At a minimum of four times per year, the Company seeks regular input regarding its energy efficiency programs from its Washington DSM Advisory Group. This group includes representatives from a variety of constituent organizations. The Company collaborated with its DSM Advisory Group throughout 2015 on the following matters:

March 18, 2015

- Commercial building benchmarking software;
- 2014 annual report summary;
- Cost recovery tariff;
- 2015 conservation potential study;
- 2015 IRP preferred portfolio and implementation plan;
- Program evaluation update;
- Tracked savings, frozen/flexible baselines, UES values;
- Home energy reports.

June 9, 2015

- Target setting and new rules;
- Review of preferred portfolio and adjustment process;
- NEEA;
- Scope/design for 2016 conservation potential assessment;
- Home energy reports expansion update;
- System benefits charge filing explanation;
- 2014 annual report;
- Program evaluations;
- Frozen/flexible UES – preliminary analysis.

August 20, 2015

- Forecast, proposed adjustments and target;
- Updated information on adjustments;
 - Residential lighting – August 18, 2015, regional technical forum meeting
 - Appliance recycling – draft evaluation results
- NEEA treatment;
- 2015 decrement values.

September 14, 2015

- 2015 home energy reports/Opower economics;
- 2016-2017 home energy reports /Opower forecast;
- Next/final round of adjustments to 10-year forecast;
- Proposed 2-year target;
- Proposed pilot measure (heat pump dryers);
- Low Income Program Evaluation for program years 2011-2012.

December 21, 2015

- Communications and outreach plan for 2016-2017;
 - Advertising;
 - *wattsmart* Business;
 - Education.

DSM Expenditures

System Benefits Charge Balancing Account Summary

DSM activities are funded through Schedule 191, the System Benefits Charge Adjustment collections. Expenditures are charged as incurred and collected through the Systems Benefit Charge. The balancing account is the mechanism used for managing the revenue collected and expenses incurred in the provision of DSM resources. The balancing account activity for 2015 is outlined in Table 3. The end of year balance in the balancing account, on an accrual basis, was an under-collection of expenses of \$1.9 million (monies owed the Company).

Table 3
System Benefit Charge Balancing Account Summary

Month	Deferred Expenditures	Schedule 191 Revenue Collected	Carrying Charge	Accumulative Balance	Monthly Net Accrued Costs	Accrual Basis Accumulative Balance
Dec-14				(\$265,547)	\$1,343,028	\$1,077,481
Jan-15	\$434,702	(\$1,021,573)	\$0	(\$852,418)	(\$243,936)	\$246,674
Feb-15	\$1,047,572	(\$886,776)	\$0	(\$691,622)	(\$35,690)	\$371,779
Mar-15	\$1,343,084	(\$765,986)	\$0	(\$114,524)	(\$397,444)	\$551,434
Apr-15	\$1,180,880	(\$716,950)	\$0	\$349,406	(\$275,697)	\$739,667
May-15	\$571,484	(\$735,223)	\$0	\$185,667	\$502,428	\$1,078,355
Jun-15	\$1,049,211	(\$805,634)	\$0	\$429,244	(\$65,455)	\$1,256,478
Jul-15	\$987,492	(\$1,013,351)	\$0	\$403,385	(\$52,828)	\$1,177,791
Aug-15	\$777,201	(\$934,307)	\$0	\$246,279	\$56,955	\$1,077,640
Sep-15	\$1,127,418	(\$952,828)	\$0	\$420,869	(\$104,042)	\$1,148,187
Oct-15	\$850,564	(\$809,876)	\$0	\$461,556	\$248,691	\$1,437,565
Nov-15	\$867,734	(\$831,156)	\$0	\$498,133	(\$58,924)	\$1,415,219
Dec-15	\$1,755,150	(\$1,057,448)	\$0	\$1,195,836	(\$192,096)	\$1,920,825
2015 Totals	\$11,992,491	(\$10,531,109)			\$724,990	*

* \$724,990 is December 2015 Accrual

Column Explanations:

Deferred Expenditures: Monthly expenditures for all program activities posted in 2015, including funding for the Northwest Energy Efficiency Alliance.

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

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

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

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

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

Planning Process

Integrated Resource Plan

The Company develops a biennial integrated resource plan (“IRP”) as a means of balancing cost, risk, uncertainty, supply reliability/deliverability and long-run public policy goals.¹¹ The plan presents a framework of future actions to ensure the Company continues to provide reliable, reasonable-cost service with manageable risks to the Company’s customers. Energy efficiency and peak management opportunities are incorporated into the IRP based on their availability, characteristics and costs.

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

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

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

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

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

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

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

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

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

Table 4
Washington Energy Efficiency Achievable Technical Potential by Sector

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

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

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

- Washington, Idaho and Oregon use the TRC test and consider the inclusion of quantifiable non-energy benefits.
- Oregon and Washington, in addition to considering quantifiable non-energy benefits, apply an additional 10% benefit to account for non-quantifiable externalities, consistent with the Northwest Power Act.
- Wyoming and California utilize the standard TRC test excluding quantifiable non-energy benefits and the 10% benefit adder Oregon and Washington consider.
- Utah utilizes the UCT as the primary determination of cost effectiveness.

¹³ Ibid, Volume 2, page 4-2.

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

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

The Company evaluates program implementation cost-effectiveness (both prospectively and retrospectively) under a variety of tests to identify the relative impact and/or value (e.g. near-term rate impact, program value to participants, etc.) to customers and the Company.

Estimated Peak Contributions

The reported capacity reduction of 6.71 MW (at generation) for energy efficiency programs during 2015 represents the estimated MW impact of the energy efficiency portfolio during PacifiCorp's system peak period. An energy-to-capacity conversion factor developed from Class 2 DSM selections in the 2015 IRP is used to translate 2015 energy savings to estimated demand reduction during the system peak. The utilization of this factor in the MW calculation assumes that the energy efficiency resources acquired through the Company's programs have the same average load profile as those energy efficiency resources selected in the 2015 IRP. Utilization of this factor in determining the MW contribution of energy efficiency programs for 2015 is detailed in Table 5 below.

Table 5
Estimated Peak Contribution

Description	Value
First year Energy Efficiency program MWh savings acquired during 2015	51,802
Conversion factor: Coincident MW/MWh	0.0001296
Estimated coincident peak MW contribution of 2015 Energy Efficiency acquisitions	6.71

Energy Efficiency Programs

Energy efficiency programs were offered to all major customer sectors: residential, commercial, industrial and agricultural. The overall energy efficiency portfolio included five programs: *Home Energy Savings*, Schedule 118; *Home Energy Reports*; *Residential Refrigerator Recycling*, Schedule 107; *Low Income Weatherization*, Schedule 114; and *Non-Residential Energy Efficiency (wattsmart Business)*, Schedule 140. In addition to the energy efficiency programs, the Company, on behalf of customers, invested in outreach and education for the purpose of promoting the efficient use of electricity and improving program performance. Results for 2015 are provided in Table 6.

Table 6
Washington Results January 1, 2015 – December 31, 2015

Program	kWh/Yr Savings (at site)	kWh/Yr Savings (at generator)	aMW Savings (at gen)	Systems Benefits Charge Expenditures
Low Income Weatherization	144,648	158,635	0.02	\$ 858,071
Refrigerator Recycling	788,344	864,568	0.10	\$ 150,597
Home Energy Savings	12,006,640	13,167,682	1.50	\$ 2,597,140
Home Energy Reporting	7,720,142	8,466,680	0.97	\$ 340,566
Total Residential Programs	20,659,773	22,657,565	2.59	\$ 3,946,375
wattsmart Business Agricultural	1,246,917	1,367,494	0.16	\$ 114,231
wattsmart Business Commercial	12,977,707	14,214,612	1.62	\$ 2,407,788
wattsmart Business Industrial	9,434,502	10,204,452	1.16	\$ 1,742,644
Wattsmart Business Portfolio				\$ 1,548,468
Total Business Programs	23,659,126	25,786,558	2.94	\$ 5,813,131
Northwest Energy Efficiency Alliance	3,063,405	3,357,471	0.38	\$ 884,208
Total	47,382,304	51,801,593	5.91	\$ 10,643,714
				Portfolio DSM Central \$ 37,749
				Portfolio Evaluation \$ 340,244
				Portfolio Potential Study \$ 18,007
				Portfolio Technical Reference Library \$ 10,056
				Portfolio Level Expenditures (DSM Central, TRL, Evaluation and Potential Study) \$ 406,057
				School Energy Education \$ 61,431
				Outreach and Communication \$ 208,268
				Total System Benefits Charge expenditures \$ 11,319,470

The Company, consistent with requirements under Docket UE-132047, Order 01, Attachment A Paragraph (8)(b), provides Table 7 which compares the Company's 2015 Business Plan Budget update filed on November 1, 2014 to the 2015 Biennial Conservation Plan, to actual 2015 program performance.

In 2015, the Company delivered preliminary results of 51,802 MWh in first year energy savings at generation against the 2015 business plan forecast savings of 59,306 MWh, a negative variance of approximately 13 percent. The largest variances from the plan were due to the following:

- Lower than forecasted participation from the Refrigerator Recycling program which was further amplified by the unavailability of program services in late November and December.
- Lower than expected savings from Home Energy Reports, including the expansion group.
- NEEA savings declined compared to the forecast when the baseline used to develop the Company's 2014-2015 biennial conservation target was used by NEEA for savings reporting.

Table 7: Washington Business Plan Budget¹⁶ compared to Actual¹⁷

Program	2015 PacifiCorp Washington Business Plan Budget				2015 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	150,000	164,505	0.02	\$ 900,000	144,648	158,635	0.02	\$ 858,071
Refrigerator Recycling	930,863	1,020,877	0.12	\$ 254,310	788,344	864,568	0.10	\$ 150,597
Home Energy Savings	11,877,460	13,026,010	1.49	\$ 2,305,015	12,006,640	13,167,682	1.50	\$ 2,597,140
Home Energy Reporting	10,931,580	11,988,664	1.37	\$ 478,288	7,720,142	8,466,680	0.97	\$ 340,566
Total Residential Programs	23,889,903	26,200,056	2.99	\$ 3,937,613	20,659,773	22,657,565	2.59	\$ 3,946,375
wattSmart Business - Agricultural	135,990	149,140	0.02	\$ 2,856,020	1,246,917	1,367,494	0.16	\$ 230,076
wattSmart Business - Commercial	11,277,055	12,351,871	1.41	\$ 3,133,060	12,977,707	14,214,612	1.62	\$ 3,648,592
wattSmart Business - Industrial	12,370,955	13,380,549	1.53	\$ 34,441	9,434,502	10,204,452	1.16	\$ 1,934,463
Total Business Programs	23,784,000	25,881,560	2.95	\$ 6,023,521	23,659,126	25,786,558	2.94	\$ 5,813,131
Production Efficiency								
Northwest Energy Efficiency Alliance	6,587,939	7,224,424	0.82	\$ 881,334	3,063,405	3,357,471	0.38	\$ 884,208
Total Other Conservation Initiatives	6,587,939	7,224,424	0.82	\$ 881,334	3,063,405	3,357,471	0.38	\$ 884,208
Be wattsmart, Begin at Home	-	-		\$ 59,000				\$ 61,431
Customer Outreach/Communication	-	-		\$ 250,000				\$ 208,268
Program Evaluations	-	-		\$ 302,000				\$ 340,244
Potential Study Update/Analysis	-	-		\$ 75,000				\$ 18,007
Measure Data Documentation	-	-		\$ 42,465				\$ 47,805
Admin of prior programs	-	-						\$ -
Total Portfolio-Level Expenses	-	-		\$ 728,465				\$ 675,756
Total PacifiCorp Conservation	47,673,903	52,081,616	5.95	\$ 10,689,599	44,318,899	48,444,122	5.53	\$ 10,435,261
Total System Benefits Charge Conservation	54,261,842	59,306,040	6.77	\$ 11,570,933	47,382,304	51,801,593	5.91	\$ 11,319,470
Total Conservation	54,261,842	59,306,040	6.77	\$ 11,570,933	47,382,304	51,801,593	5.91	\$ 11,319,470

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

¹⁷ SBC expenditures represents total program costs for savings claimed 2015.

Residential Programs

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

Table 8
Cost Effectiveness for Residential Portfolio¹⁸ (includes non-energy benefits)

	B/C Ratio with NEEA	B/C Ratio without NEEA
PacifiCorp Total Resource Test plus 10%	2.05	2.13
Total Resource Cost Test	1.93	2.00
Utility Cost Test	2.32	2.52
Participant Cost Test	3.71	3.56
Rate Payer Impact	0.55	0.57

Total Company residential savings increased 12%, from 18,252,521 kWh in 2014 to 20,659,773 kWh in 2015 excluding NEEA. Individual program performance, program management and program infrastructure is provided on the following pages.

¹⁸ Excludes Low Income Weatherization.

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. The program was cost effective as shown in Table 9.

Table 9
Cost Effectiveness for *Home Energy Savings* ¹⁹ (includes non-energy benefits)

	B/C Ratio
PacifiCorp Total Resource Test plus 10%	2.21
Total Resource Cost Test	2.08
Utility Cost Test	2.79
Participant Cost Test	3.31
Rate Payer Impact	0.60

Program participation by measure category is provided in Table 10.

Table 10
Eligible Program Measures (Units)

Measure Category	Total kWh/Yr Savings	Total Incentive	Total Quantity
Appliances	22,203	\$8,940	201
Building Shell	273,910	\$83,046	264,738 (sq ft)
Energy Kits	2,300,906	\$100,128	6,783
HVAC	2,108,185	\$670,739	1,205
Lighting	7,241,052	\$864,830	376,079
Water Heating	60,384	\$34,756	75
Total	12,006,640	\$1,762,438	649,081

Program Management

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

¹⁹ Includes Non-Energy Benefits.

Program Administration

The *Home Energy Savings* program is administered by CLEAResult. CLEAResult is responsible for the following:

- Retailer and trade ally engagement – CLEAResult identifies, recruits, supports and assists retailers to increase the sale of energy efficient lighting, appliances and electronics. CLEAResult enters into promotion agreements with each lighting manufacturer and retailer for the promotion of discounted CFL and LED bulbs. The agreements include specific retail locations, lighting products receiving incentives and not-to-exceed annual budgets. Weatherization and HVAC trade allies engaged with the program are provided with program materials, training, and regular updates.
- Inspections – CLEAResult recruits and hires inspectors to verify on an on-going basis the installation of measures. A summary of the inspection process is in Appendix 2.
- Incentive processing and call-center operations – CLEAResult receives all requests for incentives, determines whether the applications are completed, works directly with customers when information is incorrect and/or missing from the application and processes the application for payment.
- Program specific customer communication and outreach – A summary of the communication and outreach conducted by CLEAResult on behalf of the Company is outlined in the Communication, Outreach, and Education section.

The contract for *Home Energy Savings* program administration services for all states expires in early 2016. In 2015, the Company initiated a request for proposal and a new contract will be in place in early 2016.

Infrastructure

The total number of participating retailers participating in the program is currently 174. The current count of participating retailers by delivery channel and measure type is provided in Appendix 3.

Program Changes

There were no changes in program incentive offers or eligibility requirements in 2015. During the last two quarters of 2015, CLEAResult assisted the Company in identifying program changes for the 2016-2017 biennial period.

Evaluation

A process and impact evaluation for program years 2013-2014 is currently being conducted by a third party evaluator. The evaluation results will be available in 2016.

Home Energy Reports

The *Home Energy Reports* program is a behavioral program designed to decrease participant energy usage by providing comparative energy usage data for similar homes located in the same geographical area. Additionally, the report provides the participant with information on how to decrease their energy usage. Equipped with this information, participants can modify behavior and/or make structural equipment, lighting or appliance modifications to reduce their overall electric energy consumption.

Reports were initially provided to approximately 13,500 customers (referred to as “legacy” group). The number of participant’s decreases over time due to customer attrition from general customer churn (customer move-outs)²⁰ and customers requesting to be removed from the program. In 2014, program changes were approved extending the program through December 2017 and expanding the program to 38,500 additional customers (referred to as “expansion” group)²¹. These customers received their initial reports in October 2014. An additional expansion of 6,626 customers (referred to as “legacy refill” group) was added in January 2015 to offset attrition and lower energy savings than expected from the initial legacy group.

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

Due to the underachieved performance of the expansion group against the guaranteed savings per the negotiated contract terms, the combined program results was not cost effective as shown in Table 11 below. These results include a \$100,000 credit applied to the expansion group. Legacy and legacy refill was cost effective.

Table 11
Cost Effectiveness for Home Energy Reports

	B/C Ratio Combined	B/C Ratio Legacy + Refill Groups	B/C Ratio Expansion Group
PacifiCorp Total Resource Test plus 10%	0.94	1.30	0.69
Total Resource Cost Test	0.86	1.18	0.62
Utility Cost Test	0.86	1.18	0.62
Participant Cost Test	N/A	N/A	N/A
Rate Payer Impact Cost Test	0.28	0.31	0.25

²⁰ As of the end of 2015 approximately 10,100 customers in the legacy group were still participating and receiving home energy reports.

²¹ As of the end of 2015, approximately 32,000 customers in the expansion group were still participating and receiving home energy reports.

Program savings by group for January 1, 2015 – December 31, 2015 is provided in Table 12.

Table 12
Program Savings

Home Energy Reports Group	Total kWh/Yr Savings @ site
Legacy	4,360,298
Legacy Refill	96,035
Expansion Group	3,263,809
Total	7,720,142

Program Management

The program manager overseeing program activity in Washington is also responsible for *Home Energy Savings* program in California and Washington. For each program and in each state the program manager is responsible for the cost effectiveness of the program, identifying and contracting with the program administrator through a competitive bid process, establishing and monitoring program performance and compliance, and recommending changes in the terms and conditions set in each state's compliance requirements.

Program Administration

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

Opower is responsible for the following:

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

Evaluation

In 2015, a process and impact evaluation was initiated by a third party evaluator for the period of January 1, 2014 – December 31, 2015. The legacy, refill and expansion waves were evaluated. The primary objective of the evaluation report was to determine the extent to which participants

in the Home Energy Reports program reduced their energy consumption due to the program which would be applied to the 2014-2015 Conservation Report. Secondary objectives are to report on customer satisfaction with the program, and on behavioral and information effects of the program. Once published, the results of the evaluation can be viewed at www.pacificorp.com/es/dsm/washington.html.

Refrigerator Recycling

The *Refrigerator Recycling* (also known as “See ya later, refrigerator®”) program was designed to decrease electricity use (kWh) through voluntary removal and recycling of inefficient refrigerators and freezers. The program was available to residential, businesses and appliance retailers. Customers received a \$30 incentive for each qualifying refrigerator or freezer recycled through the program and an energy-saving kit which included two CFLs, a refrigerator thermometer card, energy-savings educational materials, and information on other efficiency programs relevant to residential customers. Retailers received an incentive up to \$20 for each recycled appliance. The program was cost effective in 2015 as shown in Table 13 based on planned 2014-2015 UES values.

Table 13
Cost Effectiveness for Refrigerator Recycling

	B/C Ratio
PacifiCorp Total Resource Test plus 10%	1.81
Total Resource Cost Test	1.65
Utility Cost Test	1.65
Participant Cost Test	N/A
Rate Payer Impact Cost Test	0.44

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

Table 14
Eligible Program Measures (Units)

Measure Category	Total kWh/Yr Savings @ Site	Total Incentive	Total Quantity
Energy Savings Kit	32,973	\$6,968	1,173
Freezer Recycling	125,730	\$7,620	254
Refrigerator Recycling	623,810	\$32,100	1,070
Refrigerator Recycling (residential used in a business)	5,830	\$300	10
Grand Total	788,343	\$46,988	2,507

In 2015, more than 70 tons (141,125 pounds) of steel, 2 tons (5,645 pounds) of aluminum and copper, 11 tons (22,508 pounds) of plastics were recycled as a result of the program, reducing landfill deposits by an amount sufficient to cover an entire football field more than two and a half feet deep. In addition, the chlorofluorocarbons (greenhouse gases) collected and destroyed during recycling equates to approximately 3.6 tons (4,113 metric tons for 1,129 units) of carbon dioxide equivalents per unit, equivalent to the annual emissions of the average car in the U.S.

Program Management

The program manager responsible for the program in Washington was also responsible for the program in California. 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.

In the fourth quarter of 2014, the program manager identified media placement expenditures were paid twice in all states between 2013 and 2014. The media placement expenditures were paid to JACO and the Company's media vendor. Accordingly, JACO issued a credit to the program in 2015 which was allocated to all states based upon the percentage of media expenditures incurred.

Program Administration

The *Refrigerator Recycling* program was administered by JACO Environmental ("JACO") in 2015. JACO was one of the largest recyclers of house-hold appliances in the United States until going out of business in the fourth quarter of 2015. The Company contracted with JACO to provide customer scheduling, pick-up, incentive processing and marketing services for the *See ya later, refrigerator* program.

JACO was responsible for the following:

- Appliance Pick-up – JACO handled all customer and field service operations for the program, including pick-up of refrigerators and freezers from customers and transporting 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 handled all the marketing for the program. The program was marketed through bill inserts, customer newsletters and TV, newspaper and online advertising.

As part of the program control process, the Company contracted with third-party independent inspectors to conduct ongoing oversight of the program's appliance recycling process, from verification that the units being recycled met the program eligibility criteria to verifying they were being recycled and that the program records were accurate.

A summary of the inspection process is included in Appendix 2.

Program Changes

As part of the planning process for the 2016-2017 biennial period, the Company filed Advice No. 15-04 to cancel Schedule 107 effective January 1, 2016 based on forecasted sub-optimal cost effectiveness utilizing new (and lower) unit energy savings from the Company's program evaluation. The Washington Utilities and Transportation Commission placed this request on the consent agenda and approved it at the December 30, 2015 open meeting.

In November 2015, the Company was notified by JACO that they entered into a voluntary receivership, pickups were cancelled and operations had ceased. The Company immediately posted this information on the program web site and utilized another vendor to contact the affected customers to inform them the pickup was cancelled. Initial data indicates this impacted 29 Washington customers. The Company also learned that JACO bank accounts had been closed impacting the cashing of checks and customers who were recent participants would experience delays in receiving their checks.

On November 30, 2015 the Company notified the DSM Advisory Group of the recent developments with JACO and the unavailability of the program offer ahead of the scheduled suspension of the program and the Company's plan to use the program change process to suspend the appliance recycling offer and allow time to evaluate the options.

The Company developed a process to pay outstanding incentives and any bank fees incurred by customers. The process was communicated to affected customers on December 9, 2015.

During December 2015, the Company began an expedited sole source procurement process to contract for remedial or "clean-up" appliance recycling services. This provider would contact customers who had pick-ups scheduled with JACO that were cancelled in late November and December and if the customer was still interested, offer the same removal service and incentive. A contract with Appliance Recycling Centers of America (ARCA) was executed in late December and customer outreach began in January 2016. Final costs and savings reported from the final recycled units will be included in the 2016 reporting period.

Evaluation

A process and impact evaluation for program years 2013-2014 was in process by a third party evaluator during 2015. The impact results were made available to the Company in 2015 to assist with the 2016-2017 planning process.

Low Income Weatherization

The *Low Income Weatherization* program provides energy efficiency services through a partnership between the Company and local non-profit agencies to residential customers who meet income-eligible guidelines. Services are at no cost to the program participants. Cost effectiveness for the Low Income Weatherization program was not included in the portfolio or sector-level analysis per WAC 480-109-100 (10)(b).

Total homes treated under the program in 2015, as well as the type and frequency of specific energy efficiency measures installed in each home, is provided in Table 15.

Table 15
Eligible Program Measures (Units)

	2015 Total
Participation – Total # of Completed/Treated Homes	98
Number of Homes Receiving Specific Measures	
Aerators	55
Attic Ventilation	63
Caulk/Weather-stripping	68
Ceiling Insulation	39
Compact Fluorescent Light bulbs	85
Duct Insulation	54
Floor Insulation	85
Fluorescent Light Fixture	16
Ground Cover	71
Infiltration	95
Repairs	34
Replacement Refrigerators	5
Showerheads	55
Thermal Doors	1
Timed Thermostat	14
Wall Insulation	15
Water Heater Replacement	4
Water Pipe Insulation and Sealing	76

Program Management

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

Program Administration

The Company partners with three local non-profit agencies to provide weatherization services to income-qualifying households throughout its Washington service territory. These agencies include Blue Mountain Action Council located in Walla Walla, Northwest Community Action Center in Toppenish, and Opportunities Industrialization Center of Washington in Yakima. The leveraging of Company funding along with Washington Match Maker Program funds allows the agencies to provide these energy efficiency services to more households at no cost to participating customers. The Company provides rebates to partnering agencies for 50 percent of the cost of services while Match Maker funds are available, and will cover 100 percent of costs when these state funds are depleted. In 2015, 45 homes were funded at 50 percent and 53 at 100 percent. Participants qualify if they are homeowners or renters residing in single-family homes, manufactured homes, or apartments. Over 7,300 homes have been completed since the program's inception in the mid-1980s.

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

- Income Verification – Agencies determine participants are income eligible based on Washington Department of Commerce guidelines. Households interested in obtaining weatherization services apply through the agencies. The 2015 income guidelines can be viewed on the Washington Department of Commerce website²².
- 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 2 for verification summary.
- Billing Notification – Agencies are required to submit a billing to Company within 90 days after job completion. A homeowner agreement and invoice form indicating the measures installed and associated cost is submitted on each completed home.

Evaluation

A process and impact evaluation was completed by a third party evaluator for program years 2011-2012 and can be found on the Company's website²³. Several key findings from this evaluation include:

- The program is operating as planned.
- The program exemplifies a utility best practice in that it is coordinated with United States Department of Energy, United States Department of Health and Human Services and Washington Department of Commerce. The partnership leverages each utility dollar to serve low income customers.
- The partnership between Low Income Home Energy Assistance and Weatherization Assistance Program is beneficial to both programs.

²² <http://www.commerce.wa.gov/Documents/HIP-Weatherization-2015-Income-Eligibility-Guidelines.pdf>

²³ <http://www.pacificorp.com/es/dsm/washington.html>

Northwest Energy Efficiency Alliance

The *Northwest Energy Efficiency Alliance* (“NEEA”) is a non-profit corporation that works collaboratively with its funders and other strategic market partners to accelerate the innovation and adoption of energy-efficient products, services, and practices. NEEA is supported by the Bonneville Power Administration, Energy Trust of Oregon, and more than 100 Northwest utilities, including Pacific Power. For the 2015-2019 funding cycle, NEEA forecasts the region will achieve 145 aMW²⁴ of total regional savings.

Program performance for 2015 is being reported based on NEEA’s preliminary results for Pacific Power of 3,063 MWh (at site) for the Company’s funding investment of \$884,208. Consistent with the reporting convention approved in Docket UE-132047, 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).

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.

²⁴ Northwest Energy Efficiency Alliance 2015-2019 Business Plan, July, 2014, <http://neea.org/docs/default-source/default-document-library/neea-2015-19-business-plan---board-approved.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.

Non-Residential Energy Efficiency

The *Non-Residential Energy Efficiency* program is promoted to the Company's commercial, industrial and agricultural customers as *wattsmart Business*²⁵.

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

The program was cost effective in 2015 as shown in Table 16 below.

Table 16
Cost Effectiveness for *wattsmart Business*

	Benefit/Cost Ratio
PacifiCorp Total Resource Test plus 10 percent	1.61
Total Resource Cost Test	1.47
Utility Cost Test	2.42
Participant Cost Test	2.93
Rate Payer Impact Test	0.61

Projects completed in the current period by customer sector are provided in Table 17.

Table 17
Projects Completed

Sector	Total kWh/Yr Savings @ Site	Total kW Savings @ Site	Total Incentive	Total Projects
Agricultural	1,246,917	354	\$107,568	34
Commercial	12,977,707	1,560	\$2,088,878	381
Industrial	9,434,502	518	\$970,771	45
Total	23,659,126	2,431	\$3,167,218	460

²⁵ The program brochure is available at https://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/WA_wattsmartBusiness_Brochure.pdf. Program detail (in addition to the program tariff, Schedule 140) maintained on the Company website is available at https://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/WA_wattsmartBusiness_Incentive_tables_information.pdf.

Program performance by measure category is provided in Table 18.

Table 18
Program Performance by Measure Category²⁶

Measure Category	Total kWh/Yr Savings @ Site	Total kW Savings @ Site	Total Incentive	Total Projects
Building Shell	18,041	-	\$12,530	11
Compressed Air	1,529,031	52	\$185,919	8
Electronics	223,304	48	\$15,176	3
Energy Management	1,200,710	46	\$24,014	3
Food Service Equipment	254,555	34	\$16,562	15
HVAC	503,203	35	\$43,530	19
Irrigation	1,141,041	351	\$91,416	32
Lighting	11,747,894	1,508	\$1,971,335	334
Motors	417,360	25	\$56,956	10
Refrigeration	6,623,987	333	\$749,780	25
Grand Total	23,659,126	2,431	\$3,167,218	460

Services and incentives offered through the *wattsmart* Business program include:

- Typical Upgrades: Incentives for lighting, HVAC, compressed air and other equipment upgrades that increase electrical energy efficiency and exceed energy code requirements.
- Custom analysis: Offers energy analysis studies, services and incentives for more complex projects.
- Energy Management: Provides expert facility and process analysis and incentives to help lower energy costs by optimizing customer's energy use.
- Energy Project Manager Co-funding: Available to customers who commit to an annual goal of completing energy projects resulting in at least 1,000,000 kWh/year in energy savings.
- Enhanced incentives for small businesses: Provides enhanced incentives for lighting upgrades installed by an approved *wattsmart* Small Business Contractor at an eligible existing small business customer facility.
- Midstream/LED Instant Incentive: Provides instant, point-of-purchase incentive for LED lamps and retrofit kits sold through qualifying participating distributors. Customers purchasing lamps from non-participating suppliers can apply for incentives after purchase.

Program Management

The program manager overseeing program activity in Washington is also responsible for the business energy efficiency programs in California. For each state the program manager is

²⁶ The total count of projects is less than the sum of the measure category counts because a project can have measures in more than one category.

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 program changes.

Program Administration

The program includes several delivery channels, including Trade Ally, Small Business Enhanced Incentive Offer, LED Instant Incentive and Project Manager delivery.

Trade Ally

In this channel, 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 and Cascade are responsible for the following:

- Trade ally engagement – 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 – handle incoming inquiries as assigned, process incentive applications, develop and maintain simplified analysis tools and provide program design services, evaluation and regulatory support upon request.
- Direct customer outreach and project facilitation for smaller customer projects
- Inspections – verify on an on-going basis the installation of measures²⁷. Summary of the inspection process is in Appendix 2.

Small Business Enhanced Incentive Offer

In this channel, the program is primarily marketed through local contractors approved specifically for this offer who receive support from the program administrator, Nexant. Nexant is responsible for the following:

- Management of approved contractors – identify, recruit, contract with, train, support, and assist contractors to increase sales and installation of energy efficient lighting equipment at qualifying small business customer facilities.
- Incentive processing and administrative support – handle incoming inquiries as assigned, process incentive applications, develop and maintain simplified analysis tool and provide program design services, evaluation and regulatory support upon request.
- Inspections – verify on an on-going basis the installation of measures. Summary of the inspection process is in Appendix 2 to this report.

²⁷ The Company contracts with firms from the energy engineering consultant list to perform required pre- and post-installation inspections for lighting projects.

Midstream/LED Instant Incentive Offer

In this channel, the program is primarily marketed through distributors approved specifically for this offer who receive support from the program administrator, Nexant. Nexant is responsible for the following:

- Management of approved distributors – identify, recruit, contract with, train, support, and assist distributors to increase sales of energy efficient lighting equipment at qualifying business customer facilities.
- Incentive processing and administrative support – handle incoming inquiries as assigned, process incentive applications, and provide program design services, evaluation and regulatory support upon request.
- Inspections – verify on an on-going basis the installation of measures at eligible customer facilities. Summary of the inspection process is in Appendix 2 to this report.

Project Manager

In this channel, the Company's project manager manages a subset of more complex projects. The project manager works directly with the customer or through the Company's regional business managers²⁸. The project manager provides customers with program services and incentives using a pre-contracted group of energy engineering consultants. A current list of these consultants is included in the Infrastructure section below.

The *wattsmart* Business program administration contracts expire in 2016 for all states. As a result, the Company initiated a request for proposal in 2015 and new contracts will be in place by mid-2016.

Infrastructure

To help increase and improve the supplier and installation contractor infrastructure for typical energy efficient equipment and services, the Company established and continues to develop and support trade ally networks for lighting, HVAC, motors/VFDs and irrigation. This work includes identifying and recruiting trade allies, providing program and technical training and providing sales support on an ongoing basis. The current lists of the trade allies who have applied and been approved as participating *wattsmart* Business vendors are posted on the Company website²⁹ and is included as Appendix 5 to this report. In most cases, customers are not required to select a vendor from these lists to receive an incentive³⁰.

The total number of participating trade allies is currently 80. The current counts of participating trade allies by technology are in Table 19.

²⁸ Regional business managers are responsible for directly working with Washington commercial and industrial/ag customers.

²⁹ Searchable participating vendor lists are available from the Company website. Direct link to the "Find a Vendor" search tool: http://pacificpower-tradeally.energyefficiencyalliance.net/tradeally/jsp/Contractor_Search/ContractorSearch.jsp

³⁰ For the *wattsmart* Small Business enhanced incentives, customers are required to choose one of the approved contractors for this offer.

Table 19
Participating Trade Allies³¹

Lighting	HVAC	Motors and VFD	Irrigation	Small Business – approved contractors	LED Instant Incentive – approved distributors
67	31	49	5	7	7

For the project manager delivery channel supporting larger customers, a pre-approved, pre-contracted group of engineering firms can be used to perform facility specific energy efficiency analysis, quality assurance and verification. Table 20 lists the engineering firms currently under contract with the Company and providing services in five states.

Table 20
Energy Engineering Firms

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

Program Changes

On October 1, 2014 a new Small Business Lighting incentive offer became effective for customers. This program offers enhanced incentives for up to 80 percent of the cost of lighting upgrades, and is available to small business customers on approved rate schedules. Approved Small Business lighting contractors are the primary means of marketing the incentive offer using a variety of approaches including door-to-door and co-branded marketing materials.

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

Effective June 1, 2015, the program added midstream lighting as a new delivery channel. This offering provided an instant, point-of-purchase discount for LEDs and retrofit kits sold through qualifying local distributors.

Evaluation

A process and impact evaluation was completed by a third party evaluator for program years 2012 - 2013 for the Energy FinAnswer and FinAnswer Express programs (program names prior to the consolidated *wattsmart* Business name change). The evaluations can be found on the Company's website³². Several key findings from this evaluation include:

- Program satisfaction was high for participants and near-participants.
- Program managers and administrators effectively used available resources and capacity to implement the program.
- Participants report experiencing non-energy benefits stemming from their projects.
- Trade allies were generally satisfied with the Energy Efficiency Alliance and the program's effect on their business.

³² <http://www.pacificorp.com/es/dsm/washington.html>

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 business 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 2015, the Company issued two newsletters focused entirely on seasonal energy efficiency information (in the fall and spring).

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

Paid Media/wattsmart campaign

In 2015 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 2015 customer awareness campaign research conducted by Marketing Decisions Corporation:

- Thirty-nine percent of customers surveyed in 2015 in Washington are aware that the Company offers energy efficiency programs.
- Top recalled messages: using energy wisely and energy efficiency programs.
- Seventy-four percent of customers surveyed in 2015 in Washington are aware of *wattsmart*.
- Three in ten customers report having taken action based on the Company's advertising (32 percent). The most frequently mentioned actions:

- Purchased/switched to energy-efficient appliances/lights.
- Turning off lights/appliances when not in use.
- More aware of power usage.
- Enlisting in utility incentive/rebate program.

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

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

The *wattsmart* advertising campaign is comprised of a multi-media mix designed to reach as many customers as possible with the greatest frequency. Various communications channels were utilized to optimize effectiveness, frequency and coverage and to build on the messages. Table 21 outlines the Washington media channels used, the value of each channel, and the impressions achieved to date.

Table 21
2015 Media Channels

Communication Channel	Value to Communication Portfolio	2015 Placements
Television	Television has the broadest reach and works as the most effective media channel	4,635,800 impressions
Radio	Given the cost relative to television, radio builds on communications delivered via television while providing for increased frequency of messages	2,472,100 impressions
Newspaper/Magazine	Supports broadcast messages and guarantees coverage in areas harder to reach with broadcast	987,958 impressions
Online advertising	Digital display and Google Search	3,935,132 impressions and 55,991 search impressions
Facebook Advertising	Advertising on Facebook	639,405 impressions
Twitter @PacificPower_WA	Awareness for early adopters regarding energy efficiency tips Tweets posted on a weekly basis	626 followers through December 2015
Facebook www.facebook.com/pacificpower.wattsmart	Awareness for early adopters regarding energy efficiency tips and a location to share information	16,741 fans through December 2015 (for all Pacific Power states)

The total number impressions for the campaign in 2015 were 12,726,386.

Links to the Company's current portfolio of advertisements is included in Appendix 4.

The audiences for these messages were prioritized as follows:

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

Program Specific

All energy efficiency program communications are branded under the *wattsmart* umbrella to reinforce the campaign and to link changes in behavior to actions customers can take by participating in specific programs. Separate marketing activities administered by and specific to the programs ran in conjunction with the *wattsmart* campaign in 2015.

Home Energy Savings

Information on the *Home Energy Savings* program is communicated to customers, retailers and trade allies through a variety of channels.

Using a strategic approach, the Company communicates select program measures during key selling seasons and promotes *wattsmart* Starter Kits to targeted customers throughout the year to achieve savings goals.

In April, the Company promoted specially priced LED bulbs, which were available in three-packs for \$5 at participating Washington retailers. The offer was communicated through an employee email, website and social media.

Messaging shifted to cooling as summer approached. The Company provided information on shopping for a new room air conditioner and highlighted discounts available at local retailers. In June and July, the Company promoted ductless heat pumps and provided detailed information on the website to educate customers about the benefits of these high-efficiency heating and cooling systems. Customers received information about incentives for ductless heat pumps and insulation through a bill insert, website and social media.

Throughout the year, targeted customer communications were distributed to promote *wattsmart* Starter kits through direct mail, email, bill insert, digital ads and Facebook ads. To reach a broader audience, the company sent a direct mail piece in English and Spanish.

In 2015, program communications delivered approximately 543,046 impressions. Breakdown of estimated impressions by channel are shown in Table 22 below. These estimates do not reflect all of the customer, retailer and trade ally touchpoints.

Table 22
Impressions by Channel

Communications Channel	2015 Estimated Impressions
Facebook ads	220,746
Bill inserts	273,000
Direct mail	22,300
Email	27,000

Home Energy Reports

Home Energy Reports were mailed to about 48,000 customers several times throughout 2015. Many of these customers also receive email reports with customized energy-saving tips. In addition, customers can access the program Web portal with additional tools, insights and ways to save energy.

Refrigerator Recycling

In 2015, *See ya later, refrigerator*[®] communications consisted of TV, print and digital advertising, bill inserts and social media.

On November 23, 2015, Pacific Power received notice that program vendor JACO was going out of business. The Company posted a notice on the website to let customers know the program was suspended until further notice. Affected customers also received a direct mail letter and an email to let them know about the situation and that the Company would have replacement incentive checks issued, if necessary.

wattsmart Business

In 2015, customer communications and outreach supported *wattsmart Business* utilizing radio, print, paid digital display and search advertising, direct mail, email and social media. This was in addition to customer direct contact by Company project managers and regional community managers, as well as trade ally partners; articles in the Company newsletters and content on the Company's website.

Working with the Sunnyside, Washington Chamber of Commerce and the Central Washington Hispanic Chamber, "lunch and learn" events focused on lighting were held in September to inform small and mid-size business customers about incentives for upgrades.

In June, a bill insert focused on energy savings and incentives for cooling systems was inserted in bills for business customers (excluding irrigation). During the same period, an email on cooling was sent.

During 2015, radio communications encouraged business customers to make energy efficiency upgrades and print ads featured case study examples from program participants which were repurposed in social media. Quarterly eblasts and digital search ads directed viewers to the company's website³³. Targeted direct mail was sent to irrigation and compressed air customers to encourage upgrades. In 2015, the program garnered 2,971,762 impressions. A breakdown of impressions by media type is shown in Table 23.

³³ www.pacificpower.net/wasave

Table 23
wattsmart Business

Communications Channel	2015 Impressions
Radio	1,727,000
Newspaper	824,126
Magazine	275,310
Digital Display	116,298
Google Search	10,360
Eblasts	7,400
Bill inserts	8,556
Direct Mail	2,712

Energy Education in Schools

The Company offers a *wattsmart* Schools education program through the National Energy Foundation (“NEF”). The program is designed to develop a culture of energy efficiency among teachers, students, and families. The centerpiece is a series of one hour presentations with hands-on, large group activities for 4th and 5th grade students. Teachers are provided instructional materials for use in their classrooms, and students are sent home with a Household Report Card to explore energy use in their homes and to encourage efficient behaviors.

In 2015, NEF conducted presentations in Washington schools in the fall.

- Between October 12 and November 13, 2015, the program met its outreach goals of reaching 4,127 students and 152 teachers in 50 schools with 62.73 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 2.

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

Information on evaluation activities completed or in progress during 2015 is summarized in the chart below. Summary of the recommendations are provided in Appendix 6. The evaluation reports are available at www.pacificorp.com/es/dsm/washington.html

Program / Activities	Years Evaluated	Evaluator	Progress Status
Low Income Weatherization	2011-2012	Smith and Lehmann	Completed
FinAnswer Express	2012-2013	Navigant Consulting	Completed
Energy FinAnswer	2012-2013	Navigant Consulting	Completed
Refrigerator Recycling	2013 - 2014	Cadmus	Completed early 2016
Home Energy Savings	2013 - 2014	Cadmus	In progress