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| Pacific Power |
| 2011 Annual Report on Conservation Acquisition - Washington |
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| 3/30/2012 |

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# Introduction

Pacific Power & Light Company (“Pacific Power” or 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.

The Company currently offers six energy efficiency programs in Washington approved by the Washington Utilities and Transportation Commission (“Commission”), as well as 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, Schedule 191 (“Schedule 191”).

This report provides details on program results, expenditures and Schedule 191 revenue for the performance period between January 1, 2011 through December 31, 2011. As shown in Table 1 below, in 2011 the Company acquired 49,983,694 kWh/year of resources through its energy efficiency program activity or a total of 5.71 aMWin Washington (at generation).[[1]](#footnote-1) Overall, the total portfolio performance was cost effective at a benefit to cost ratio of 2.74.[[2]](#footnote-2)

Table : 2011 Total Portfolio Performance



# Advisory Group Meetings and Communications

Consistent with the conditions set forth in Docket UE-100170, Order 02, Pacific Power seeks input regarding its energy efficiency programs from the Washington Demand-side Management Advisory Group (“DSM Advisory Group”). This group includes representatives from a variety of constituent organizations. Pacific Power met and/or communicated with the DSM Advisory Group throughout 2011 related to the following matters:

 On March 18, 2011:

* + The Company provided an overview of the performance of its energy efficiency programs in 2010;
	+ An overview of how the Company will deliver on its energy efficiency goals in Washington through a reorganization of the company’s Demand-side Management Group;
	+ An introduction to the Wattsmart energy efficiency communications campaign intended to increase awareness of, and participation in, the Company’s programs;
	+ A discussion of upcoming work as required by Initiative 937 (“I-937”);
	+ An update on the Distribution Efficiency Initiative (“DEI”) study being conducted by the Company to assess DEI potential in its Washington service territory.
	+ An update on the Company’s program evaluations for 2010;
	+ An overview of the Evaluation, Measurement and Verification (“EM&V”) framework the Company uses when evaluating its programs;
	+ A discussion of changes being assessed for the Home Energy Savings program and the Energy FinAnswer program; and
	+ A discussion of new energy efficiency programs being considered by the Company.

On August 4, 2011:

* + A discussion of the Energy Education in Schools program, stakeholder concerns and possible options for 2012 - 2013;
	+ An overview of proposed changes to the Home Energy Savings Program;
	+ A discussion of I-937 milestones and work schedules;
	+ An update on the evaluation, measurement, and verification (EM&V) framework outline describing how the Company intends to conduct its EM&V activities; and
	+ An overview of the potential assessment and Integrated Resource Plan (“IRP”) results.

On August 12, 2011:

* + A review of the measures and savings assumptions used in the development of the Company’s potential assessment continued from prior discussions;
	+ A comparison of potential assessment assumptions to regional assumptions;
	+ Additional detail on proposed adjustments related to the IRP selections and the magnitude and direction of each;
	+ A discussion on identification of additional energy efficiency opportunities; and
	+ An initial discussion on conservation and business plan documents and requirements.

On August 19, 2011:

* + Continued discussions on possible solutions to the Energy Education in Schools program EM&V concerns;
	+ Review of the draft EM&V framework document;
	+ Initial review of the 2011 IRP results and adjustments and the basis of the 2012 – 2021 conservation forecast and biennial target;
	+ A discussion of the Conservation Plan;
	+ An overview of the Business Plan contents and programs; and
	+ A discussion of the role Northwest Energy Efficiency Alliance (“NEEA”) plays towards the achievement of the biennial target savings.

On August 26, 2011:

* + A review of final adjustments (including compact florescent lamp (“CFL”) adjustments) and the impact the adjustments have on the conservation forecast and biennial targets (less DEI and production efficiency);
	+ A status update on the Company’s Conservation Plan filing;
	+ A discussion of the filing process, post September 15th amendments, and other procedural matters leading up to the revised forecast and Conservation Plan filed by January 31, 2012;
	+ A review of the Company’s EM&V framework; and
	+ A discussion on the Energy Education in Schools program for the 2011 - 2012 school year.

On August 31, 2011:

* + A final discussion of the EM&V framework document prior to its inclusion in the September 15, 2011 preliminary biennium conservation plan ;
	+ A discussion of the Company’s proposed plan for the Energy Education in School Programs for the 2011 - 2012 school year;
	+ A discussion of the 2012 - 2013 Biennial Conservation Plan; and
	+ A discussion of proposed changes and savings assumptions to the Home Energy Savings program.

On October 19, 2011:

* A discussion of planned modifications to the Home Energy Savings program.

On November 3, 2011:

* A discussion of the DEI conservation voltage regulation basics;
* A discussion to describe the method used to quantify DEI projects as they relate to the Biennial Conservation Potential;
* A discussion of the challenges the Company will face in evaluating DEI savings;
* A presentation of the initial DEI conservation forecast for 2012 - 2013; and
* A presentation of a draft DEI implementation timeline for the 2012 - 2013 Biennial Conservation Plan.

On November 22, 2011:

* A discussion of the planned modifications to the FinAnswer Express program.

On December 8, 2011:

An overview of DEI as follows:

* Updated potential results and economic screening of projects;
* Identified methodology used to study 2012 circuits; Reviewed challenges in measurement and verification;
* Revised ten-year forecast and biennial target, range concept/pilot plan discussed; and
* Revised project implementation timeline.

An overview of Production Efficiency as follows:

* Reviewed I-937 conservation definition in the context of production efficiency;
* Provided data on plants serving Company’s Washington customers;
* Reviewed method used to identify cost-effective production efficiency projects;
* Outlined typical plant efficiency conservation measures;
* Discussed plant by plant findings and potentials;
* Discussed challenges related to joint ownership and multi-state cost-recovery; and
* Provided estimate of production efficiency ten-year potential before adjustments.

On December 15, 2011:

* Discussed the refined ten-year conservation potential and 2012 - 2013 target for production efficiency to opportunities at plants wholly owned by Pacific Power;
* Provided revised conservation potential forecast for production efficiency;
* Discussed a plan to address joint ownership/cost recovery challenges before next biennium; and
* Reviewed proposed cost-recovery mechanisms/considerations.

The Company also participated in the Washington Conservation Working Group effort which occurred from February to June of 2011.

# Demand-side Management Filings

Following are dates and descriptions of DSM filings made by Pacific Power in the calendar year 2011:

|  |  |
| --- | --- |
| **Date** | **Filing Information/Request** |
| March 31, 2011 | 2010 Annual Report on Conservation Acquisition |
| April 29, 2011 | Schedule 191 System Benefits Charge Adjustment. Pacific Power did not propose an adjustment to the SBC in this filing  |
| August 12, 2011 | Semi-annual report containing DSM expenditures and SBC collections from January 2011 to June 2011 |
| September 1, 2011 | Projected cumulative ten-year conservation potential, excluding information related to DEI and production efficiency potential in non-hydro generation facilities, for the period of 2012 through 2021 |
| September 15, 2011 | Report on its Ten-year Achievable Conservation Potential and Biennial Conservation Target for 2012 and 2013 |
| December 29, 2011 | Projected cumulative ten-year conservation potential, for the period of 2012 through 2021 |

**Tariff modifications**

No tariff modifications occurred in calendar year 2011.

#

# 2011 Performance and Activity

In 2011, Pacific Power achieved total savings of49,983,694 kWh/year, or 5.71 aMWin the State of Washington (at generation).[[3]](#footnote-3) Table 2 below shows savings by program and by sector.[[4]](#footnote-4)

Table : 2011 Performance and Activity[[5]](#footnote-5)

****\* Northwest Energy Efficiency Alliance number is considered “preliminary”.

**Major Trends and Activities**

In 2011, the Company realized an increase in overall energy efficiency savings of 20 percent compared to 2010. At a sector level, the residential sector savings increased 42 percent on a kWh/year basis compared to 2010. The commercial sector savings delivered approximately 29 percent less kWh/year savings than in 2010. The industrial savings increased 24 percent in 2011 compared to 2010.

Expenditures related to program delivery increased in 2011 as compared to 2010. Overall portfolio expenditures increased by 18 percent compared to 2010, energy efficiency programs increased 2 percent and NEEA expenditures increased 5 percent in 2011 compared to 2010. At a sector level, residential energy efficiency expenditures increased by 2 percent while expenditures for commercial decreased by less than 1 percent and industrial increased by 4 percent. Other factors that impacted the overall increase from 2010 to 2011 is the cost associated with the Company Initiatives and Outreach and Communication.

The increase in residential savings was primarily driven from preliminary NEEA results.[[6]](#footnote-6)

**Program Evaluations**

In 2011, the Company hired an external evaluator to complete process and impact evaluations. The evaluation for the three residential programs; Home Energy Savings, See ya later, refrigerator**®**  and Energy Education in Schools were still being reviewed at the end of the year.

The Company spent $315,733 on third-party program impact and process evaluations which represented 3.5 percent of the 2011 annual program expenditures. In Docket UE-100170, Order 02, spending requirements were set for EM&V activities to ensure adequate attention and resources are expended to verify conservation program results. Consistent with the requirements of Order 02, Pacific Power was expected to spend between four (4) and six (6) percent of its conservation budget on these activities over the biennium. Consistent with the Company’s EM&V framework developed in 2011, that was developed in conjunction with the DSM Advisory Group, program evaluation costs will be treated as portfolio level costs in 2011 and will not be assigned to programs for purpose of determining the cost effectiveness.

In compliance with Docket UE-100170, Order 02, Pacific Power will perform EM&V activities on a rotation schedule of selected programs such that all programs are evaluated on a timely and relevant basis. Evaluations are scheduled to be performed every two years; there may be deviations from this schedule as a result of new or changing programs or external influence.

# 2011 Business Plan Budget Compared to Actual

The Company, consistent with requirements under Docket UE-100170, Order 02, Ordering Paragraph (8)(c), provides Table 3 which compares the Company’s 2011 business plan budget to actual 2011 program performance.

In 2011, the Company delivered preliminary results of 49,983,694 kWh in first year energy savings against the 2011 business plan forecast savings of 36,183,565 kWh, a positive variance of approximately 38 percent.

Table : Washington Business Plan Budget compared to Actual



# Residential Energy Efficiency Programs and Activity

**Home Energy Savings Incentive Program (Schedule 118)**

The Home Energy Savings program, Schedule 118 (“Schedule 118”) was first approved in 2006 and provides a broad framework to deliver incentives for more efficient products and services for Washington residential customers with a new or existing home, multi-family unit or manufactured home. The Company uses a third party to administer this program. Schedule 118 and the program web site at [www.homeenergysavings.net](http://www.homeenergysavings.net) operate in tandem to inform customers and contractors of the offerings and qualifications for incentives.

Measures eligible for incentives include clothes washers, clothes washer recycling, refrigerators, water heaters, dishwashers, lighting (both CFLs and fixtures), heating and cooling equipment and services, insulation, windows and miscellaneous equipment such as ceiling fans. In addition, the program includes a Builder Option Package as well as stand-alone measures for new homes.

Incentives are provided in three ways: post-purchase delivery to the customer for the majority of measures, post-purchase mid-market delivery to contractors after measure installation and through a manufacturer buy-down for CFLs. Buy-downs result in lower retail prices for customers at the point of purchase as opposed to post-purchase incentives that customers must submit an application to receive.

Program results for 2011 are provided in Table 4 below.

Table : 2011 Home Energy Savings Program Performance



**2011 Program Performance**

Measure level details and participation are included in the below table:

Table : 2011 Home Energy Savings Measure Performance



**Program Changes**

There were no Home Energy Savings program changes in 2011. Modifications to the Home Energy Savings program were discussed with the DSM Advisory Group on numerous occasions throughout the year with the final discussion on October 19, 2011. The modifications will become effective April 16, 2012.

**Program Evaluations**

A process and impact evaluation was completed in 2011 for the Home Energy Savings program for program years 2009 - 2010. The results of this evaluation are available on Pacific Power’s website at: <http://www.pacificorp.com/es/dsm/washington.html>

**Refrigerator Recycling (Schedule 107)**

The refrigerator recycling program, operating as the See ya later, refrigerator® program, was first approved effective April 1, 2005. This program aims to decrease residential refrigeration loads by reducing the number of inefficient secondary and primary refrigerator and freezer models in operation. With this program, the Company offers all residential customers in Washington the opportunity to receive a **$30** incentive in exchange for turning in their old but working refrigerators and/or freezers for recycling. Each customer can recycle up to two units, refrigerators and/or freezers, per household. In addition, a kit with instant energy saving measures from CFLs is provided to each participating customer. This kit includes two 13-watt CFLs, a refrigerator thermometer card, energy savings educational materials and information on other Pacific Power efficiency programs relevant to residential customers.

Program results for 2011 are provided in Table 6 below.

Table : See ya later, refrigerator® 2011 Program Performance



Details on participation and savings are provided in the table below.

Table : See ya later, refrigerator® 2011 Results

****

In 2011, the program recycled 2,016 units (81 percent refrigerators and 19 percent freezers) by 1,873 households. According to the program delivery vendor, the program recycled more than 126 tons (252,000 lbs) of steel, 4 tons (8,064 lbs)  tons of aluminum and copper, 20 tons (40,320 lbs) of plastics and prevented landfill deposits that would 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 5 tons of carbon dioxide equivalents per unit, equivalent to the annual emissions of the average car in the US. The average age of the units recycled was 29 years with electricity consumption approximately 3-4 times greater than new units purchased today.

**Program Evaluations**

A process and impact evaluation was completed in 2011 for the See ya later, refrigerator® program for program years 2009 – 2010. The results of this evaluation are available on Pacific Power’s website at:

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

**Low Income Weatherization (Schedule 114)**

Pacific Power partners with three local non-profit agencies, Blue Mountain Action Council in Walla Walla, Northwest Community Action Center in Toppenish and Opportunities Industrialization Center of Washington in Yakima to provide weatherization services to income-qualifying households throughout its Washington service territory. The leveraging of Pacific Power funding along with Washington MatchMaker 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 MatchMaker funds are available, and covers 100 percent of costs when these state funds are depleted. All homes were funded at the 50 percent level in 2011. Participants qualify if they are homeowners or renters residing in single-family homes, manufactured homes or apartments. Approximately 6,900 homes have been completed since the program began in the mid-1980s.

Program results for 2011 are provided in Table 8 below.

Table : Low Income Weatherization Performance



**Energy Education in Schools (Schedule 113)**

The energy education curriculum was developed for sixth grade classrooms by three partnering agencies (Blue Mountain Action Council in Walla Walla, Northwest Community Action Center in Toppenish and Opportunities Industrialization Center of Washington in Yakima). The agencies employ certified teachers to work with school administrators, teachers and students. They provide a minimum of three one-hour energy education sessions on topics such as electricity generation, conservation and efficiency tips. Students receive a kit of measures including a CFL, a refrigerator/freezer temperature card, an electroluminescent nightlight, a shower timer, a hot water temperature card, a kitchen faucet aerator and a wall plate thermometer. A low flow showerhead is provided to those students where a water flow test indicates this need.

During the 2010 - 2011 school year, 4,067 students completed the course of which 3,488 listed Pacific Power as their electric service provider. The estimated annual savings for measure installation of 644 at site kWh per household. The Company believes the educational aspect of the program resulted in additional savings of approximately 437 at site kWh per participating household as a result of behavioral changes in energy use. However, due to difficulty verifying the behavior savings, they have not been included in the results in Table 9 and are not being reported for the purpose of either the achievement of the Company’s 2011 energy savings or towards the cost-effectiveness analysis of the program.

Table 9 includes savings from measure installations.

Table : Energy Education Performance[[7]](#footnote-7)



Installed measure savings and the calculation of program cost-effectiveness in Table 9 above for the program include additional CFLs purchased by participating households. However, there is a high probability that these additional CFLs were purchased at retailers selling CFLs that were discounted as a result of the Home Energy Savings Incentive Program. To avoid double counting of these savings towards the Company’s 2011 program performance, the savings associated with the additional CFL purchases were removed from the residential portfolio results and related cost-effectiveness calculations. The savings associated with these additional CFL installations were identified in the Washington Energy Education program assessment[[8]](#footnote-8) to be approximately 594,829 at site kWh for the 2010 - 2011 school year.

# Non-Residential Energy Efficiency Programs and Activity

**FinAnswer Express (Schedule 115)**

The FinAnswer Express program is available to commercial, industrial, and agricultural customers in Pacific Power’s Washington service territory. The program includes an expedited energy analysis and offers incentives for qualifying high-efficiency measures based on the equipment installed and listed in the program incentive tables ($/fixture, $/motor, $/ton of cooling, etc.). 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 current program offers incentives for lighting, motors, heating ventilation and air conditioning (“HVAC”), building envelope, food service equipment, appliances, irrigation, dairy/farm equipment, small compressed air, and other measures. Incentives are available for both retrofit projects and new construction/major renovation projects. The program is marketed primarily via trade allies, Pacific Power staff, and a combination of other Company outreach efforts including print and radio advertising. This program began as Small Retrofit Incentive and Retrofit Incentive (Schedules 115 and 116) in November 2000 and was improved and renamed FinAnswer Express (Schedule 115) in May 2004. It was last modified November 20, 2010. *Note: February 24, 2012 is the next planned update.*

Program expenditures, kWh savings and incentives paid are outlined in the table below:

Table : 2011 FinAnswer Express Program Performance



Details of program savings by measure type are provided in the table below:

Table : FinAnswer Express Savings by Measure Type



**Major Trends and Activities**

During 2011, the Company continued to support the Pacific Power Energy Efficiency Alliance, a trade ally network which provides support to lighting, motor, HVAC and other contractors and distributors who participate in offering the Company’s energy efficiency programs. Contractors, distributors and others are recruited, approved and trained on the Company’s programs. Upon approval, trade allies are listed on the Company’s program website as a participating vendor and provided with training and program information to help them help Pacific Power customers.

Each year, training events are held for trade allies working with the FinAnswer Express program. The events were held February 15 and 16, 2011, in Yakima and Walla Walla locations. The events were attended by over 110 trade allies/participants and provided information about program changes, recognized outstanding trade allies, and provided sales training on energy efficiency incentives within their business models. Cascade Natural Gas attended and provided information on available incentives. On March 1, 2011, lighting trade allies attended a regional technical training in the Tri-cities area sponsored by Bonneville Power Administration’s Northwest Trade Ally Network and Pacific Power to further improve lighting energy efficiency knowledge.

A dedicated team of technical and outreach specialists support trade allies throughout the year by conducting on-site program trainings, responding to inquiries from customers and trade allies, and publishing an educational newsletter. The Company increased the focus on industrial and agricultural measures in 2011 by adding a technical outreach specialist for irrigation, dairy/farm and small compressed air trade allies.

In 2011, the Company added content to the web page specifically for trade allies at [www.pacificpower.net/alliance](http://www.pacificpower.net/alliance). This page includes service area maps, a link to program information, announcements for upcoming events, resources (updated Light Emitting Diode policy), and current and past newsletters. Of special note was an addition of a T12 information flyer for allies to provide to their customers on the pending 2012 federal standards change with linear fluorescent lamps and to help promote lighting upgrades with appropriate accurate information. This information is also contained on a customer facing page at [www.pacificpower.net/lightingstandards](http://www.pacificpower.net/lightingstandards).

Some of the Company’s program paid advertising in 2011 also focused on the topic of upgrading linear fluorescent lighting. The goal is to encourage customers to upgrade now rather than wait until after the standards change. By upgrading ahead of the standards change, customers can start saving money on their electric bills sooner and benefit from better lighting. The Company’s project management staff continued outreach and provided technical services and FinAnswer Express incentives for customer energy efficiency projects.

**Program Changes**

There were no FinAnswer Express program changes in 2011. Modifications to the FinAnswer Express program were discussed with the DSM Advisory Group on several occasions throughout the year with a final discussion occurring on November 22, 2011. The modifications became effective on February 24, 2012.

**Program Evaluations**

A process and impact evaluation will be completed during 2012 for FinAnswer Express program for program years 2009 – 2011.

**Energy FinAnswer (Schedule 125)**

The Energy FinAnswer program serves commercial, industrial, and agricultural customers for retrofits and new construction. The program includes a vendor neutral investment grade energy analysis and cash incentives equal to $0.15 per kWh annual energy savings plus $50 per kW average monthly demand savings (up to 60 percent of project costs). There is a cap to prevent incentives from bringing the payback for a project below one year and a cap for lighting energy savings per project because lighting-only projects are included in FinAnswer Express. The program includes a commissioning requirement and post-installation verification. There are design assistance services and special incentives available for new construction and major renovation projects where energy code applies. The program is marketed primarily via Pacific Power account managers, trade allies, Energy FinAnswer consultants and project staff. Other leads are received via word-of-mouth or past participants returning for additional projects and a combination of other Company outreach efforts.

Program results for 2011 are provided in Table 12 below.

Table : Energy FinAnswer Program Performance



Details of program savings by measure type (at site) are provided in Table 13 below.

Table : Energy FinAnswer Savings by Measure Type



**Major Trends or Activities**

Energy FinAnswer continues to experience strong participation from the fruit storage and processing industry. Energy FinAnswer program also saw an increase in program activity with K-12 schools across the service territory.

**Program Changes**

No program changes are planned at this time.

**Program Evaluations**

A process and impact evaluation will be completed during 2012 for the Energy FinAnswer program for program years 2009 – 2011.

# Overall Portfolio Expenditures and Results[[9]](#footnote-9)

# System Benefits Charge Balancing Account Summary

Demand-side Management activities are funded through Schedule 191, System Benefits Charge. 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 Demand-side Management programs. The balancing account activity for 2011 is included in this report consistent with Ordering Paragraph 8(g), Order 02, Docket UE-100170 and is outlined in Table 14 below.

Table : System Benefit Charge Balancing Account Summary



Column Explanations:

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

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

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 carrying charge on negative balances (balances owing to customers) be eliminated going forward.

Accumulative Balance: Current balance of the account. A running total of account activities. If more is collected in “Revenue” than is spent for a given month, the “Accumulated Balance” will be increased by the net amount. A negative accumulative balance means cumulative revenue exceeds cumulative expenditures; positive accumulative balance means cumulative expenditures exceed cumulative revenue.

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

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

During calendar year 2011, the under-collected balance in the System Benefits Charge account increased by $376,000 and with accrued costs, the account increased by approximately $907,000. Therefore, Pacific Power spent approximately $376,000 and with accrued costs $907,000 more than was collected for program delivery during the year.

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# Cost Effectiveness

The cost effectiveness of individual programs operated by the Company for 2011 is calculated using actual expenditures and reported savings. Cost effectiveness is provided at the individual program, residential energy efficiency portfolio, residential energy efficiency portfolio with non-energy benefits, non-residential energy efficiency portfolio, non-residential energy efficiency portfolio with non-energy benefits, overall demand-side management program portfolio levels, and overall demand-side management program portfolio with non-energy benefits. Deemed savings estimates, where applicable, were the same as those used in the planning estimates and filed forecasts, unless more recent estimates were available from evaluations.

Energy savings shown in this report are gross savings and the impact of line losses is indicated with an “at site” or “at generation” designation. Line losses are based on the Company’s 2007 line loss study. All cost effectiveness calculations will assume a Net-to-gross ratio of 1.0 consistent with the Council’s methodology. The energy savings attributed to each program are shaped according to specific end-use savings (the hourly calculation of when energy is used for the various end-use measures from which the savings are derived). Program costs and the value of the energy savings are then compared on a present value basis with the Company’s 2011 IRP calculated decrement values for demand-side resource savings and avoided capacity investments. The energy efficiency resource decrement values are fully shaped to represent the 8,760 hourly values that exist within a calendar year. By matching the hourly savings with the hourly avoided costs, both energy and capacity impacts of energy efficiency savings are recognized.

The five California Standard Practice Manual cost effectiveness tests as modified in the Northwest were utilized in the cost benefit analysis.

**Key Assumptions for Cost Effectiveness Calculations**

Cost effectiveness calculations for programs and measures (or measure groups) within each program will be detailed in the following tables.

Global assumptions used in all cost effectiveness calculations include:



Key elements that go into the cost effectiveness calculation for each program include:

* KW/kWh Savings at Gross
* Administrative expenses
* Incentives paid
* Total utility costs – including administration and evaluation
* Gross customer costs
* Net To Gross ratio
* Measure life
* IRP decrement value

The overall demand-side management portfolio and component sectors were all cost effective on all cost tests.

Table : Portfolio and Sector Cost Effectiveness Summary



Results of the cost effectiveness analysis, as conducted by The Cadmus Group are included Appendix 1. Please refer to the Cost Effectiveness Appendix 1 to this report for more information on the cost effectiveness tests and the assumptions and inputs.

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# Appendices

Appendix 1 – Cost Effectiveness Details

1. Savings reported are preliminary. Verified savings will be provided for the 2010 - 2011 calendar years as part of the Company’s 2010 - 2011 biennium report due June 1, 2012. [↑](#footnote-ref-1)
2. Cost effectiveness is determined by total resource cost test, adjusted by 10 percent and inclusive of quantifiable non-energy benefits. [↑](#footnote-ref-2)
3. Savings reported are preliminary. Verified savings will be provided for the 2010 - 2011 calendar years as part of the Company’s June 1, 2012, 2010 - 2011 biennium report. [↑](#footnote-ref-3)
4. To remain consistent with the Northwest Power and Conservation Council’s regional power plan, the savings values in this table are shown prior to any net-to-gross adjustment. The values at generation include line losses between the customer site and the generation source. The Company’s assumed line losses by sector are 8.87 percent for residential, 8.73 percent for commercial and 7.54 percent for industrial. These values are based on the Company’s 2007 Transmission and Distribution Loss Study by Management Applications Consulting published in October 2008. [↑](#footnote-ref-4)
5. CFL Adjustment: The Energy Education Program savings reflects 594,829 kWh of savings at site related to installation of additional CFLs that are purchased by participants. This amount is adjusted out of the Residential portfolio results to avoid potentially double counting the savings in both the Energy Education program and Home Energy Savings program. [↑](#footnote-ref-5)
6. NEEA savings for this report were calculated based on baseline assumptions in place when biennium targets were established. [↑](#footnote-ref-6)
7. Expenditures include only those related to the 2010 - 2011 school year. The Company is funding the 2011 - 2012 school year as referenced in Docket UE-100170 Order 02, paragraph (7), sub article (d). Related kWh savings for the 2011 - 2012 will not be claimed. [↑](#footnote-ref-7)
8. “Assessment of Washington Energy Education In Schools- 2010 - 2011 Program Year”, January 27, 2012 by The Cadmus Group. [↑](#footnote-ref-8)
9. In the Northwest regional power plan, savings potential for refrigerated warehouses is included in the industrial sector. This is consistent with the Company’s reporting for savings from this segment. Electric sales are identified as commercial. [↑](#footnote-ref-9)