Pacific Power

2010 Annual Report on Conservation Acquisition - Washington

3/31/2011

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Introduction

PacifiCorp (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 and activities, expenditures and Schedule 191 revenue for the performance period from January 1, 2010 through December 31, 2010. As shown in Table 1 below, in 2010 the Company acquired resources through its energy efficiency program activity totaling 41,727,271 kWh/year or 4.76 aMW in Washington (at generation). Overall, the programs achieved a total resource cost test result, adjusted by 10 percent and inclusive of quantifiable non-energy benefits of 2.889.

Table 1

2010 Total Portfolio Performance					
Total Revenues Collected			$ 8,745,941		
Expenditures (Includes NEEA and Company Initiatives)			$ 7,723,506		
kWh/Yr Savings (Gross - At Gen, includes NEEA Savings)			41,727,271		
aMW Savings (Gross - At Gen)			4.76		
	PTRC	TRC	UCT	RIM	PCT
Cost Effectiveness (Five Tests)	2.889	2.640	3.994	1.017	5.196
Levelized Cost ($/kWh)	0.1593	0.1593	0.0992		
Lifecycle Revenue Impact ($/kWh)	$(0.000009969)				

Advisory Group Meetings and Communications

PacifiCorp established the Washington Demand-side Management Advisory Group ("DSM Advisory Group") in 2000. The DSM Advisory Group includes representatives from a variety of constituent organizations and represents the interests of various customer segments. PacifiCorp met and/or communicated with the DSM Advisory Group on several occasions during 2010. Subject matter and meetings were as follows:

Date	Specific Topics
March 19	Schedule by which open issues regarding the Company's 10-year potential and biennial target would be addressed
April 8	Issues and open items raised by parties concerning the I-937 report
April 26	The revised version of the 2010 – 2011 biennial conservation target report reflecting comments received from parties since it was originally filed with the Commission on January 29, 2010
May 13	Adjustment to the distribution efficiency targets included in the Company's 2010 – 2011 biennial target
May 18	The Company's I-937 report and next steps
May 19 – June 28	Continue discussions on the Company's I-937 report and a conditions list
October 12	Review of the 2011 DSM Business Plan Update

Program change related meeting dates and topics

Date	Specific Topics
September 23	Planned changes to the FinAnswer Express program
October 12	Planned changes to the Home Energy Savings Program

Demand-side Management Filings

The Company made several DSM related filings with the Commission during calendar year 2010. The dates of the filings with descriptions are included below.

Date	Filing Information/Request
January 29	The Company's ten-year achievable conservation potential, its biennial conservation target for 2010 and 2011 and a description of the process used in the development of the targets and potential
February 12	Annual report for 2009 on DSM expenditures and SBC collections
July 2	Revised report reflecting the comments of parties which identified the Company's ten-year achievable conservation potential and its biennial conservation target for 2010 and 2011
August 13	Semi-annual report containing DSM expenditures and SBC collections from Jan 2010 to June 2010
November 1	Updated 2010/2011 Washington DSM business plan

Tariff modification occurring during 2010

Modifications to the FinAnswer Express program were discussed with the DSM Advisory Group on September 23. The notification of the changes was posted on the Company's website on October 6 and the changes became effective on November 20. The changes were primarily to update the program to align with changes in codes, standards, and specifications.

2010 Performance and Activity

In 2010, PacifiCorp achieved total savings of **41,727,271 kWh/year, or 4.76 aMW** in the State of Washington (at generation). Table 2 below shows savings by program and by sector[1].

Table 2 – 2010 Performance[2]

Washington System Benefits Charge
Report for 2010

Program	Units	kWh/Yr Savings (at site)	kWh/Yr Savings (at generator)	aMW Savings (at gen)	Systems Benefits Charge Expenditures
Low Income Weatherization (114)	100	184,000	200,315	0.02	$ 447,320
Energy Education in Schools (113)	4,127	2,400,316	2,613,152	0.30	$ 439,978
Refrigerator Recycling (107)	1,883	2,719,843	2,961,011	0.34	$ 356,450
Home Energy Savings (118)	27,627	9,815,128	10,685,435	1.22	$ 1,486,777
Northwest Energy Efficiency Alliance	0	4,380,000	4,768,375	0.54	$ 963,501
CFL Adjustment (See Note 2 Below)		(941,195)	(1,024,651)	(0.12)	$ -
Total Residential	**33,737**	**18,558,092**	**20,203,638**	**2.31**	**$ 3,694,027**
Energy FinAnswer (125)	8	858,682	933,636	0.11	$ 433,107
FinAnswer Express (115)	143	8,646,117	9,400,837	1.07	$ 1,155,031
Total Commercial	**151**	**9,504,799**	**10,334,473**	**1.18**	**$ 1,588,138**
Energy FinAnswer (125)	24	8,092,766	8,703,203	0.99	$ 1,896,292
FinAnswer Express (115)	18	2,311,593	2,485,956	0.28	$ 402,125
Total Industrial	**42**	**10,404,359**	**11,189,160**	**1.28**	**$ 2,298,418**
Total		**38,467,250**	**41,727,271**	**4.76**	**$ 7,580,583**
Additional residential expenditures for administration related to prior programs					$ 1,249
Company Initiatives (include Distribution Efficiency and Production Efficiency)					$ 141,674
	Total System Benefits Charge expenditures				**$ 7,723,506**

[1] 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.

[2] CFL Adjustment: The Energy Education Program savings reflect 941,195 kWh of savings 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.

Major Trends and Activities

In 2010, the Company realized a decrease in overall energy efficiency savings of 11 percent compared to 2009. At a sector level, the residential sector savings decreased 3 percent on a kWh/year basis compared to 2009. The commercial sector delivered approximately 88 percent more kWh/year savings than in 2009. The industrial savings decreased 44 percent in 2010 compared to 2009

Expenditures related to program delivery increased in 2010 as compared to 2009. Overall portfolio expenditures increased by 16 percent compared to 2009, energy efficiency programs increased 8 percent and NEEA expenditures increased 78 percent in 2010 compared to 2009. At a sector level, residential energy efficiency expenditures increased by 7 percent while expenditures for commercial increased by 70 percent and industrial decreased by 13 percent.

The increase in commercial savings and expenditures was primarily driven from one lighting project. The industrial savings decrease was impacted by the economic downturn.

Program Evaluations

In 2010, the Company completed process and impact evaluations for the Home Energy Savings, See ya later, refrigerator®, Energy FinAnswer and FinAnswer Express programs in Washington. The results of these evaluations are available on PacifiCorp's website at http://www.pacificorp.com/es/dsm/washington.html.

In 2010 the Company spent $671,890 on third-party program impact and process evaluations which represented 8.7 percent of the 2010 annual program expenditures. While the costs exceeded the targeted 4-6 percent spending on Evaluation, Measurement and Verification (EM&V), the 2010 evaluation activity represents multi-program and year evaluation work conducted to bring the Company's program evaluations up-to-date and current. The Company's scheduled 2011 EM&V activity reflects a more scheduled approach in EM&V planning and expenditures going forward.

2010 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 July 2010 business plan budget to actual 2010 program performance.

In 2010, the Company delivered 41,727,271 kWh in first year energy savings against the 2010 business plan forecast savings of 38,039,856 kWh, a positive variance of approximately 9.7 percent.

Table 3

Washington Business Plan Budget compared to Actual Report for 2010

	2010 PacifiCorp Washington Business Plan Budget				*2010 PacifiCorp Washington DSM Actual*			
Program	**kWh/Yr Savings (at site)**	**kWh/Yr Savings (at generator)**	**Gross aMW Savings (at gen)**	**Estimated Systems Benefit Expenditures**	**kWh/Yr Savings (at site)**	**kWh/Yr Savings (at generator)**	**Gross aMW Savings (at gen)**	**Systems Benefits Charge Expenditures**
Low Income Weatherization (114)	180,000	195,712	0.02	400,000	184,000	200,315	0.02	$ 447,320
Energy Education in Schools (113)	1,725,000	1,875,575	0.21	450,000	2,400,316	2,613,152	0.30	$ 439,978
Refrigerator Recycling (107)	2,325,000	2,527,949	0.29	400,000	2,719,843	2,961,011	0.34	$ 356,450
Home Energy Savings (118)	5,850,000	6,360,647	0.73	1,300,000	9,815,128	10,685,435	1.22	$ 1,486,777
CFL Adjustment	(750,000)	(815,468)	(0.09)		(941,195)	(1,024,651)	(0.12)	$ -
Total Residential	**9,330,000**	**10,144,416**	**1.16**	**2,550,000**	**14,178,092**	**15,435,263**	**1.76**	**$ 2,730,526**
Energy FinAnswer (125)	900,000	967,887	0.11	400,000	858,682	933,636	0.11	$ 433,107
FinAnswer Express (115)	2,400,000	2,581,032	0.29	800,000	8,646,117	9,400,837	1.07	$ 1,155,031
Total Commercial	**3,300,000**	**3,548,919**	**0.41**	**1,200,000**	**9,504,799**	**10,334,473**	**1.18**	**$ 1,588,138**
Energy FinAnswer (125)	11,250,000	12,247,538	1.40	2,600,000	8,092,766	8,703,203	0.99	$ 1,896,292
FinAnswer Express (115)	825,000	898,153	0.10	300,000	2,311,593	2,485,956	0.28	$ 402,125
Total Industrial	**12,075,000**	**13,145,690**	**1.50**	**2,900,000**	**10,404,359**	**11,189,160**	**1.28**	**$ 2,298,418**
Total	**24,705,000**	**26,839,025**	**3.06**	**$ 6,650,000**	**34,087,250**	**36,958,896**	**4.22**	**$ 6,617,082**
Northwest Energy Efficiency Alliance (NEEA)		11,200,831	1.28	$ 925,000		4,768,375	0.54	$ 963,501
Total including NEEA		**38,039,856**	**4.3**	**$ 7,575,000**		**41,727,271**	**4.76**	**$ 7,580,583**
Additional residential expenditures for administration related to prior programs				$ 1,000				$ 1,249
Company Initiatives								$ 141,674
Total System Benefits Charge expenditures				**$ 7,576,000**				**$ 7,723,506**

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 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 compact fluorescent lamps ("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 two ways: post-purchase delivery to the customer for the majority of measures 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 2010 are provided in Table 4 below.

Table 4

2010 Home Energy Savings Program Performance					
kWh/Yr Savings 2010 (Gross - At Gen)			10,685,435		
kWh/Yr Savings 2010 (At Site)			9,815,128		
Expenditures			$ 1,486,777		
Incentives Paid			$ 802,032		
	PTRC	TRC	UCT	RIM	PCT
Cost Effectiveness (Five Tests)	2.651	2.446	4.159	0.929	4.159
Levelized Cost ($/kWh)	0.0666	0.0666	0.0328		
Lifecycle Revenue Impact ($/kWh)	0.0000114812				
Discounted Participant Payback (years)	2.41				

2010 Program Performance

Details of 2010 measure level participation and savings are provided on the following table.

Table 5[3]

2010 Home Energy Savings Measure Performance

Home Energy Savings Measures	Unit Measurement	# of Units	Participants	kWh/Yr Savings (Gross - At Site)
Clothes Washer-Tier One (1.72 - 1.99 MEF)	Units	271	271	70,793
Clothes Washer-Tier Two (2.0 + MEF)	Units	2,118	2,118	606,442
Clothes Washer Recycling	Units	0	0	0
Dishwasher	Units	805	805	39,286
Electric Water Heater	Units	156	156	14,149
Evaporative Cooler	Units	0	0	0
Refrigerator	Units	1,145	1,145	111,638
Room AC	Units	62	62	5,673
Room AC Recycling	Units	0	0	0
Insulation: Attic	Sq Feet	171,423	132	144,080
Insulation: Floor	Sq Feet	75,619	74	114,380
Insulation: Wall	Sq Feet	42,019	52	33,206
Windows	Sq Feet	54,144	383	56,180
CAC/HP Tune up	Projects	10	10	2,218
CAC (15 SEER)	Units	39	39	8,200
CAC Install	Units	9	9	528
CAC Sizing	Units	10	10	1,440
Duct Sealing-Electric	Projects	17	21	15,768
Duct Sealing-Gas	Projects	7	7	280
Heat Pump Best Practices Installation	Units	16	17	10,112
Heat Pump Conversion	Units	176	188	686,765
Heat Pump Upgrade	Projects	101	110	152,347
Ceiling Fans	Units	18	13	1,926
Fixtures	Fixtures	286	84	26,312
CFLs-Twisters	Bulbs	125,261	12,526	4,265,723
CFLs-Specialty Bulbs	Bulbs	92,577	9,258	3,131,030
CAC w/install & sizing	Units	0	0	0
CFLs	Bulbs	26	26	24,211
Dishwasher	Units	27	27	1,080
Duct Sealing-Electric	Projects	0	0	0
Energy Star BOP Bundle (HP)	Projects	15	15	54,804
Heat Pump	Unit	0	0	0
Heat Pump Best Practices Installation	Units	0	0	0
Insulation: Attic	Sq Feet	18,534	15	2,004
Refrigerator	Units	27	27	2,646
Windows	Sq Feet	2,959	27	1,409
CFL Savings Reconciliation		0	0	230,499
Totals		**587,877**	**27,627**	**9,815,128**
kWh/Yr Savings at Generation				10,685,436

[3] CFL Savings Reconciliation: An error was found in the company's baseline for CFL savings. It was found in December and it was corrected in December.

Program Changes

No program changes were implemented in 2010. The Company is planning to propose several changes to the program in 2011. The expected changes include:

- Addition of ductless heat pumps (single-head) for existing homes and ductless heat pumps (multi-head) for new homes,
- Incentive and equipment modifications to several existing measures,
- Changing CFL offerings to remove multi-pack categories,
- Updating savings for several measures to reflect current Regional Technical Forum (RTF) savings, and
- Realigning some measures with Northwest Energy Efficiency Alliance (NEEA) specifications.

Program Evaluations

Process and impact evaluations were completed in 2010 for the Home Energy Savings program for years 2006-2008. The results of these evaluations are available on PacifiCorp's website at: http://www.pacificorp.com/es/dsm/washington.html

Refrigerator Recycling (Schedule 107)

The refrigerator recycling program, operated 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 is provided to each participating customer.

Program results for 2010 are provided in Table 6 below.

Table 6

2010 See ya later, refrigerator® Program Performance					
kWh Savings 2010 (Gross - At Gen)			2,961,011		
kWh Savings 2010 (At Site)			2,719,843		
Expenditures			$ 356,450		
Incentives Paid			$ 56,490		
	PTRC	TRC	UCT	RIM	PCT
Cost Effectiveness (Five Tests)	3.471	3.155	2.655	0.752	NA
Levelized Cost ($/kWh)	0.0319	0.0319	0.0379		
Lifecycle Revenue Impact ($/kWh)	$ 0.00001416				
Discounted Participants Payback (years)	NA				

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

Table 7

2010 See ya later, refrigerator® Results

Refrigerator Recycling Measure	**Unit Count**	**Savings (kWh/Yr)**	**Savings (kWh/Yr)**
Refrigerator	1,484	1,250	1,855,000
Freezer	399	1,853	739,347
Total Units Recycled	**1,883**		**2,594,347**
Energy Savings Kits	1,743	72	125,496
		Total (At Site)	**2,719,843**
		Total (At Generation)	**2,961,011**

In 2010, 1,883 units were recycled (79 percent refrigerators and 21 percent freezers) by 1,743 households. According to the program delivery vendor, the program recycled more than 120 tons of steel, 4 1/2 tons of aluminum and copper, 23 tons of plastics and prevented landfill deposits that would cover an entire football field more than two and a

half feet deep. In addition, the greenhouse gases (CFCs) collected and destroyed during recycling equates to approximately 5 tons of CO2e per unit, equivalent to the annual output of the average car. The average age of the units recycled was 29 years with consumption approximately three times more than new units purchased today.

Program Evaluations:

Process and impact evaluations were completed in 2010 for the See ya later, refrigerator® program for program years 2006 – 2008. The results of these evaluations are available on PacifiCorp's website at:
http://www.pacificorp.com/es/dsm/washington.html

Low Income Weatherization (Schedule 114)

PacifiCorp 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 area. The leveraging of PacifiCorp 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. Participants qualify if they are homeowners or renters residing in single-family homes, manufactured homes or apartments. Over 6,700 homes have been completed since the program began in the mid-1980s.

Program results for 2010 are provided in Table 8 below.

Table 8

Low Income Weatherization Performance - Washington		
kWh/Yr Savings (at Site)		184,000
kWh/Yr Savings (at Gen)		200,315
Expenditures - Total	$	447,320
Participation - Total # of Completed/Treated Homes		100
Number of Homes Receiving Specific Measures		
Ceiling Insulation		67
Floor Insulation		82
Wall Insulation		27
Weather-stripping/Caulking		34
Replacement Windows		12
Duct Insulation/Sealing		39
Insulated Doors		11
Attic Ventilation		71
Infiltration		80
Water Pipe Insulation and Sealing		73
Water Heater Repair/Replacement		12
Faucet Aerators		49
Showerheads		54
Programmable Thermostats		9
Furnace Repair/Tune-up/Filters		12
Furnace Replacement		3
Compact Fluorescent Light bulbs (CFL)		77
CFL Fixtures		4
Replacement Refrigerators		23
Ground Cover		43
Home Repair		37

	PTRC	TRC	UCT	RIM	PCT
Cost Effectiveness (Five Tests)	1.111	1.047	0.655	0.439	NA
Levelized Cost ($/kWh)	0.1068	0.1068	0.1068		
Lifecycle Revenue Impact ($/kWh)	$0.0000022				
Discounted Participants Payback (years)	NA				

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 3 one-hour energy education sessions on topics such as electricity generation, conservation, meter reading 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. In the 2009-2010 school year, 4,127 students completed the course with an estimated annual savings for measure installation of 633 kWh (at generator) per student. The Company believes the educational aspect of the program resulted in additional savings of approximately 1,444 kWh (at generator) per participating household as a result of behavioral changes in energy use. However, due to difficulty verifying these 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 2010 energy savings or towards the cost-effectiveness analysis of the program.

Table 9 includes savings from measure installations.

Table 9

Energy Education Performance - Washington (2009 -2010 School Year)						
kWh/Yr Savings (at Site)		2,400,316				
kWh/Yr Savings (Gross - At Gen)		2,613,152				
Expenditures - Total	$	439,978				
Participation - # of Students		4,127				
		PTRC	TRC	UCT	RIM	PCT
Cost Effectiveness (Five Tests)		4.405	4.128	2.332	0.749	NA
Levelized Cost ($/kWh)		0.0318	0.0318	0.0378		
Lifecycle Revenue Impact ($/kWh)	$	0.0000129				
Discounted Participants Payback (years)						

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 2010 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[4] to be approximately 1,024,651kWh (at generator) for the 2009-2010 school year.

[4] "Assessment of Washington Energy Education In Schools- 2009-2010 Program Year", September 21, 2010 by The Cadmus Group.

Non-Residential Energy Efficiency Programs and Activity

FinAnswer Express (Schedule 115)

The FinAnswer Express program is available to commercial, industrial, and agricultural customers in PacifiCorp'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 incentive 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, PacifiCorp 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.

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

Table 10

2010 FinAnswer Express Program Performance						
kWh/Yr Savings 2010 (Gross - At Gen)		11,886,793				
kWh/Yr Savings 2010 (At Site)		10,957,710				
Expenditures	$	1,557,157				
Incentives Paid	$	870,351				
		PTRC	TRC	UCT	RIM	PCT
Cost Effectiveness (Five Tests)		3.435	3.122	6.874	1.188	3.983
Levelized Cost ($/kWh)		0.0403	0.0403	0.0183		
Lifecycle Revenue Impact ($/kWh)	$	(0.00000632)				
Discounted Participant Payback (years)		2.97				

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

Table 11

FinAnswer Express kWh/Yr Savings by Measure Type (at Site)		
Building Shell	18,487	0.2%
Dairy & Farm	255,694	2.3%
Envelope	546	0.0%
Food Service	11,213	0.1%
HVAC	352,559	3.2%
Irrigation	5,060	0.0%
Lighting	10,153,022	92.7%
Motor	161,129	1.5%
Total	**10,957,710**	

Major Trends and Activities

Program changes were implemented upon completion of the program change process for FinAnswer Express as originally documented and approved in Advice 06-08 (Docket UE-061710). The notification of the changes was posted on the Company's website October 6 and the changes became effective on November 20. The Company's Business Plan update filed November 1 includes the program details for FinAnswer Express with the changes incorporated. The primary changes include:

Measure Category	Change	Reason for Change
Retrofit Lighting	Added new measure: Advanced/ Integrated Daylighting Control.	Because this new measure is added for new construction/major renovation lighting, it was also included in the changes for retrofits to have the option available for existing facilities as well.
New Construction/ Major Renovation Lighting	Reduced the incentive for T5 high output fixtures with 8 or more lamps.	A survey of market average costs in December 2009 indicated that fixture costs have decreased and incentive levels should be reduced commensurate with the change in incremental cost.
	Sunsetted existing lighting control measures coincident with the effective date of the 2009 (WSEC).	The 2009 Washington State Energy Code (WSEC), effective 1/1/2011, made the previous lighting control measures required in most new construction.
	Added new measure: Advanced/ Integrated Daylighting Control.	The planned new advanced daylighting controls measure exceeds the 2009 WSEC[5].
Premium Efficiency Motors	Added a December 19, 2010 sunset date for premium efficiency motor incentives. Added a note that motors either installed or placed in inventory may qualify for an incentive.	As of December 19, 2010, AC induction motors up to 200 horsepower are subject to new minimum full-load nominal efficiency requirements as authorized in the Energy Independence and Security Act of 2007 ("EISA"). NEMA Premium™ high-efficiency motors will be explicitly required by federal code for motors sized 1 – 200 hp. National Electrical Manufacturers Association (NEMA) Premium applies to motors from 1-500 horsepower. In preparation for the EISA 2007 change, vendor feedback indicates availability of NEMA Premium Efficiency Motors has increased for the full NEMA premium size range from 1-500 horsepower. The effect of the sunset date is to discontinue prescriptive incentives for 1-500 hp NEMA premium efficiency motors.

[5] Eligibility for Advanced/Integrated Daylighting Control is limited to daylight zones in spaces where integrated occupancy and/or daylighting controls are not required by the Washington State Energy Code.

Measure Category	Description of Change	Reason for Change
Other motor measures	Sunset the existing Electronically Commutated Motors measure for new construction/major renovation coincident with the effective date of the 2009 WSEC.	The 2009 WSEC makes electronically commutated motors required for new construction.
	Increased the maximum size for a Green Motor Rewind from 500 to 5,000 horsepower. Added a note that Green Motor Rewind motors either installed or placed in inventory may be eligible for an incentive. Updated deemed values for Green Motor Rewinds to align with current Regional Technical Forum values for rewinds up to 500 horsepower.	These changes align FinAnswer Express with the Northwest's regional Green Motor Rewind program.
HVAC	Added the new Integrated Energy Efficiency Ratio ("IEER") metric to the air conditioning equipment minimum efficiency requirements. These values are an alternative to the Integrated Part-Load Value ("IPLV") values used to determine equipment eligibility for some air conditioners and heat pumps.	IEER is a new part load cooling metric that replaces the previous IPLV metric. The planned change aligns with the new practice for some manufacturers of providing the IEER rating instead of IPLV rating for new equipment lines. For older models, the IPLV rating is available, but not an IEER rating. The addition of this IEER rating will permit the program to provide incentives for high efficiency equipment rated using either metric.
Food Service	Modified the minimum efficiency requirement for solid door refrigerators and freezers to state "ENERGY STAR®" so the requirements automatically match Energy Star standards as they evolve. Also added the word "Vertical" to the measure name.	The previous efficiency requirements for solid door refrigerators and freezers were based on Consortium for Energy Efficiency (CEE) specifications. CEE specifications changed effective 1/1/2010. The change aligns the program with current CEE specifications, which refer to Energy Star. Note Energy Star has four size categories whereas the CEE specification had three size categories.
Appliances	Aligned minimum efficiency requirements and incentive levels for residential appliances (used in a business) to the Home Energy Savings program.	This allows the program to remain consistent with the Home Energy Savings program as it evolves.

During 2010, the Company continued to support the Pacific Power Energy Efficiency Alliance, a trade ally network which provides support to lighting, motor, HVAC and other distributors and contractors who participate in offering the Company's energy efficiency programs. Distributors, contractors and others are recruited, approved and trained on the Company's programs. Upon approval, trade allies can promote the programs and are listed on the Company's program website as a participating vendor.

Each year, training events are held for trade allies working with the FinAnswer Express program. The events were held February 17 and 18 in Yakima and Walla Walla. The events were attended by over 65 trade allies and provided information about program changes, recognized outstanding trade allies, and provided sales training on energy efficiency. On March 3, lighting trade allies attended a regional technical training in the Tri-cities area sponsored by Bonneville Power Administration's Northwest Trade Ally Network and PacifiCorp 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.

In 2010, the Company added content to the web page specifically for trade allies at http://www.pacificpower.net/alliance. This page includes service area maps, a link to program information, announcements for upcoming events, resources (Light Emitting Diode policy), and current and past newsletters.

Program Evaluations

Process and impact evaluations were completed in 2010 for the FinAnswer Express program in Washington for program years 2005 – 2008. The results of these evaluations are available on PacifiCorp's website at:
http://www.pacificorp.com/es/dsm/washington.html

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 PacifiCorp 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 2010 are provided in Table 12 below.

Table 12

2010 Energy FinAnswer Program Performance						
kWh/Yr Savings 2010 (Gross - At Gen)		9,636,840				
kWh/Yr Savings 2010 (At Site)		8,951,448				
Expenditures	$	2,329,399				
Incentives Paid	$	1,010,751				
		PTRC	TRC	UCT	RIM	PCT
Cost Effectiveness (Five Tests)		2.380	2.163	3.420	1.079	3.735
Levelized Cost ($/kWh)		0.0557	0.0557	0.0353		
Lifecycle Revenue Impact ($/kWh)	$	(0.00000947)				
Discounted Participant Payback (years)		3.18				

Details of program savings by measure type are provided in Table 13 below.

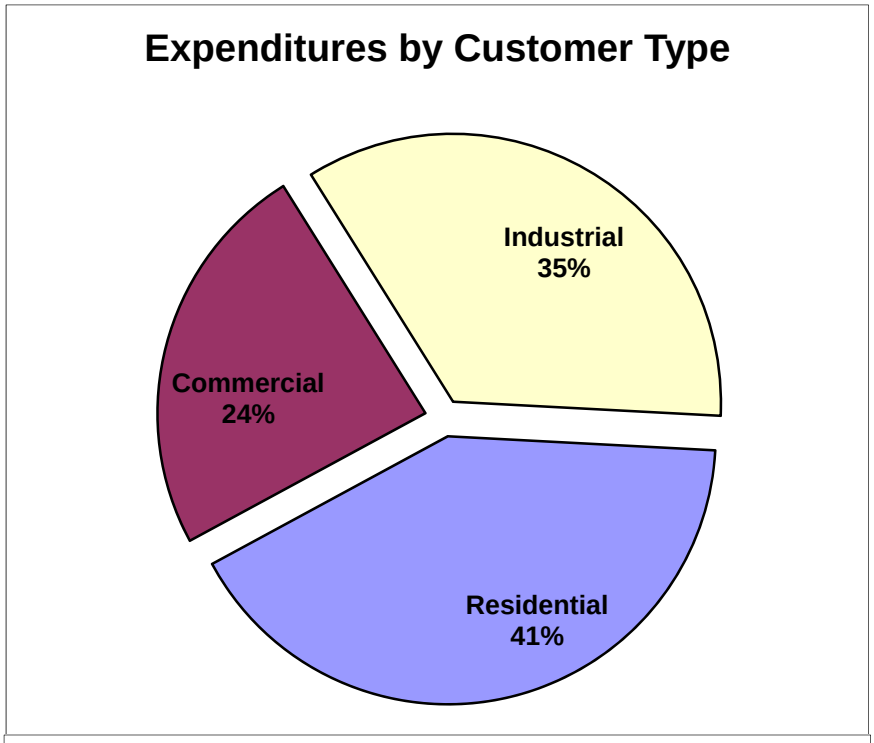
Table 13

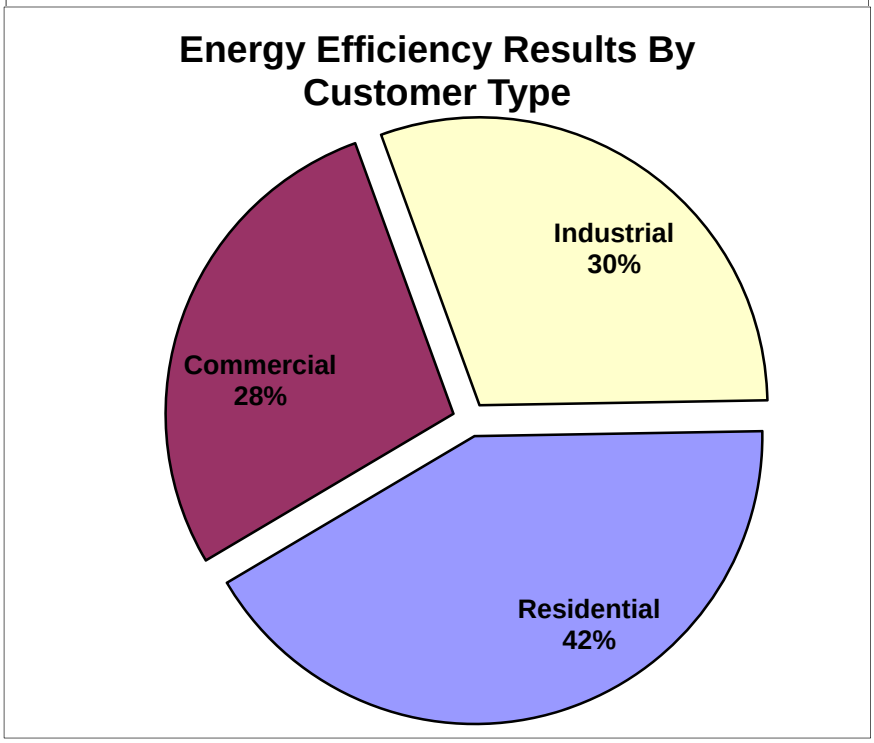
Energy FinAnswer kWh/Yr Savings by Measure Type (at Site)		
Additional Measures	798,765	9%
Building Shell	54,017	1%
HVAC	572,396	6%
Lighting	51,519	1%
Motors	1,281,979	14%
Refrigeration	6,192,772	69%
Total	**8,951,448**	

Program Evaluations

Process and impact evaluations were completed in 2010 for the Energy FinAnswer program for program years 2005 – 2008. The results of these evaluations are available on PacifiCorp's website at: http://www.pacificorp.com/es/dsm/washington.html

Overall Portfolio Expenditures and Results[6]





[6] 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.

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 2010 is included in this report consistent with Ordering Paragraph 8(c), Order 02, Docket UE-100170 and is outlined in Table 14 below.

Table 14

			carrying charge rate:	8.80%
State of Washington				
SBC Summary -- Balancing Account				Balance 12/31/09
				1,412,648
	Deferred Expenditures	Schedule 191 Revenue Collected	Carrying Charge	Accumulative Balance
Jan-10	585,893	(957,761)	0.00	1,040,781
Feb-10	217,031	(769,113)	0.00	488,699
Mar-10	524,060	(673,747)	0.00	339,011
Apr-10	624,888	(663,264)	0.00	300,635
May-10	291,291	(626,864)	0.00	(34,937)
Jun-10	855,266	(641,020)	(253)	179,056
Jul-10	817,589	(678,602)	0.00	318,044
Aug-10	580,544	(753,993)	0.00	144,595
Sep-10	599,485	(695,686)	0.00	48,394
Oct-10	407,795	(679,965)	0.00	(223,776)
Nov-10	457,161	(690,496)	0.00	(457,112)
Dec-10	1,762,502	(915,430)	0.00	389,961
Total 2010	7,723,506	(8,745,941)	(253)	

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.

During calendar year 2010, the under-collected balance in the System Benefits Charge account decreased by $1.02 million. Therefore, PacifiCorp collected approximately $1.02 million more in revenue than was spent for program delivery during the year.

Cost Effectiveness

Introduction

The cost effectiveness of individual programs operated by the Company for 2010 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 2008 Integrated Resource Plan ("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:

Assumption	Value	Source
Discount Rate	7.40%	2008 IRP - Company WACC after Tax
Line Losses (Washington Specific)		
Residential	8.87%	2007 MAC Line Loss Study
Commercial	8.73%	2007 MAC Line Loss Study
Industrial	7.54%	2007 MAC Line Loss Study

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 15

2010 Portfolio and Sector Cost Effectiveness Summary

	Cost Effectiveness				
	PTRC	TRC	UCT	RIM	PCT
2010 Total Portfolio including NEEA and CFL adjustments	2.735	2.486	3.994	1.017	4.827
2010 Total Portfolio including NEEA, CFL Adjustment, and Non-Energy Benefits	2.889	2.640	3.994	1.017	5.196
2010 Residential Energy Efficiency Portfolio (including NEEA and CFL adjustment)	2.519	2.290	3.141	0.867	7.054
2010 Residential Energy Efficiency with Non-Energy Benefits (including NEEA and CFL)	2.890	2.661	3.143	0.868	8.290
2010 Commercial and Industrial Energy Efficiency Portfolio	2.888	2.626	4.804	1.139	3.879
2010 Commercial and Industrial Energy Efficiency Portfolio with Non-Energy Benefits	2.923	2.658	4.862	1.142	3.928

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.

Appendices

Appendix 1 – Cost Effectiveness Details

Appendix 1

Cost Effectiveness
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Total Portfolio

Date: **March 23, 2011**

To: **Shawn Grant**

From: **Brian Hedman**

Re: **Washington 2010 DSM Portfolio Cost Effectiveness @ 100% NTG**

The tables below present the cost effectiveness analysis for the Washington Energy Efficiency Portfolio based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "WA 2010 Tables and Charts CE(Draftl 3_17_11)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan. Individual program cost effectiveness provided in separate memos.

The portfolio is cost effective cost effective from all perspectives.

Table 1: Common Inputs

Parameter	Value
Discount Rate	7.4%
Residential Line Loss	8.867%
Commercial Line Loss	8.729%
Industrial Line Loss	7.543%
Residential Energy Rate ($/kWh)	$0.0723
Commercial Energy Rate ($/kWh)	$0.0684
Industrial Energy Rate ($/kWh)	$0.0581

Table 2: CFL Adjustment

Program	Value
kWh	(941,195)
Incremental Cost	($30,687)

Table 3: NEEA

Program	Value
kWh	4,380,000
Incremental Cost	$963,501

Table 4: 2010 Total Portfolio Including NEEA and CFL Adjustment

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.1593	$12,177,833	$33,301,155	$21,123,323	2.735
Total Resource Cost Test (TRC) No Adder	0.1593	$12,177,833	$30,273,778	$18,095,945	2.486
Utility Cost Test (UCT)	0.0992	$7,580,583	$30,273,778	$22,693,195	3.994
Rate Impact Test (RIM)		$29,770,938	$30,273,778	$502,840	1.017
Participant Cost Test (PCT)		$4,597,250	$22,190,355	$17,593,105	4.827
Lifecycle Revenue Impacts ($/kWh)				($0.0000098438)	

Table 5: 2010 C&I Energy Efficiency Portfolio

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.7695	$7,110,850	$20,538,171	$13,427,321	2.888
Total Resource Cost Test (TRC) No Adder	0.7695	$7,110,850	$18,671,065	$11,560,214	2.626
Utility Cost Test (UCT)	0.4206	$3,886,556	$18,671,065	$14,784,509	4.804
Rate Impact Test (RIM)		$16,392,515	$18,671,065	$2,278,550	1.139
Participant Cost Test (PCT)		$3,224,295	$12,505,959	$9,281,664	3.879
Lifecycle Revenue Impacts ($/kWh)				($0.0000339937)	

Table 6: 2010 Residential Energy Efficiency Portfolio (including NEEA and CFL Adjustment)

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0708	$5,066,982	$12,762,984	$7,696,002	2.519
Total Resource Cost Test (TRC) No Adder	0.0708	$5,066,982	$11,602,713	$6,535,730	2.290
Utility Cost Test (UCT)	0.0516	$3,694,027	$11,602,713	$7,908,686	3.141
Rate Impact Test (RIM)		$13,378,423	$11,602,713	($1,775,710)	0.867
Participant Cost Test (PCT)		$1,372,955	$9,684,396	$8,311,441	7.054
Lifecycle Revenue Impacts ($/kWh)				$0.0000491792	

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

Table 7: 2010 Total Portfolio Including NEEA, CFL Adjustment, and Non-Energy Benefits

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.1593	$12,177,833	$35,180,416	$23,002,583	2.889
Total Resource Cost Test (TRC) No Adder	0.1593	$12,177,833	$32,153,038	$19,975,206	2.640
Utility Cost Test (UCT)	0.0992	$7,580,583	$30,280,178	$22,699,595	3.994
Rate Impact Test (RIM)		$29,770,938	$30,280,178	$509,240	1.017
Participant Cost Test (PCT)		$4,597,250	$23,888,008	$19,290,759	5.196
Lifecycle Revenue Impacts ($/kWh)				($0.0000099691)	

Table 8: 2010 C&I Energy Efficiency Portfolio with Non-Energy Benefits

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.7656	$7,110,850	$20,787,771	$13,676,920	2.923
Total Resource Cost Test (TRC) No Adder	0.7656	$7,110,850	$18,897,974	$11,787,123	2.658
Utility Cost Test (UCT)	0.4185	$3,886,556	$18,897,974	$15,011,418	4.862
Rate Impact Test (RIM)		$16,550,084	$18,897,974	$2,347,890	1.142
Participant Cost Test (PCT)		$3,224,295	$12,663,528	$9,439,233	3.928
Lifecycle Revenue Impacts ($/kWh)				($0.0000350282)	

Table 9: 2010 Residential Energy Efficiency Portfolio with Non-Energy Benefits (including NEEA and CFL Adjustment)

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0708	$5,066,982	$14,642,245	$9,575,263	2.890
Total Resource Cost Test (TRC) No Adder	0.0708	$5,066,982	$13,481,974	$8,414,991	2.661
Utility Cost Test (UCT)	0.0516	$3,694,027	$11,609,113	$7,915,086	3.143
Rate Impact Test (RIM)		$13,378,423	$11,609,113	($1,769,310)	0.868
Participant Cost Test (PCT)		$1,372,955	$11,382,049	$10,009,094	8.290
Lifecycle Revenue Impacts ($/kWh)				$0.0000490020	

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

Table 10. Low Income Weatherization Non-Energy Benefits

Non-Energy Benefit	Program Impact	Perspective Adjusted
Mobility	$14,000	TRC
Arrearage	$6,400	UCT, RIM, TRC
Economic	$161,207	TRC
Total	$181,607	

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

Non-Energy Benefit	Non-Energy Benefits per Measure	Total Installs	Measure Life	Total Present Value Benefits
Clothes Washer – Tier One (1.72 – 1.99 MEF)	$45.74	271	14	$105,854
Clothes Washer – Tier Two (2.0+ MEF)	$60.26	2,118	14	$1,089,882
Dishwasher	$0.31	832	9	$1,626
Total				$1,197,362

Table 12. Energy Education Non-Energy Benefits

Non-Energy Benefit	Non-Energy Benefits per Measure	Total Installs	Measure Life	Total Present Value Benefits
Energy Education	$24.92	4,127	6.25	$500,291

Home Energy Savings

Date: **March 23, 2011**

To: **Shawn Grant**

From: **Brian Hedman**

Re: **Washington Home Energy Savings 2010 Program Cost Effectiveness @ 100% NTG**

The tables below present the cost effectiveness findings of the Washington Home Energy Savings program based on 2010costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "WA 2010 Tables and Charts CE(Draftl 3_17_11)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan.
Cost effectiveness was tested using the 2008 IRP 35% west residential whole house load factor decrement. Table 1 lists modeling inputs.
The program is cost effective from all perspectives.

Table 1: Home Energy Savings
Inputs

Parameter	Value
Discount Rate	7.4%
Line Loss	8.867%
Residential Energy Rate ($/kWh)	$0.0723

Table 2: Home Energy Savings
Annual Program Costs and Savings

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Lighting	$87,257	$41,632	$0	$236,527	$365,416	$946,488
Appliance	$147,758	$70,498	$0	$274,110	$492,367	$685,615
Home Improvement	$60,611	$28,919	$0	$156,129	$245,659	$246,402
HVAC	$152,930	$72,966	$0	$117,850	$343,745	$405,558
New Construction	$15,012	$7,163	$0	$17,416	$39,591	$48,369
Total	$463,568	$221,177	$0	$802,032	$1,486,777	$2,332,431

Table 3: Home Energy Savings
Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Lighting	7,655,490	100%	7,655,490	100%	7,655,490	6.63
Appliance	847,980	99%	839,500	100%	839,500	14.79
Home Improvement	347,847	90%	313,062	100%	313,062	45.00
HVAC	877,658	99%	868,882	100%	868,882	18.00
New Construction	86,154	99%	85,292	100%	85,292.07	18.50
Total	9,815,128		9,762,226		9,762,226	

Table 4: IRP 35% Load Factor Decrement

All Measures				AC: IRP 35% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0666	$3,017,177	$6,802,153	$3,784,976	2.254
Total Resource Cost Test (TRC) No Adder	0.0666	$3,017,177	$6,183,775	$3,166,598	2.050
Utility Cost Test (UCT)	0.0328	$1,486,777	$6,183,775	$4,696,998	4.159
Rate Impact Test (RIM)		$6,654,472	$6,183,775	($470,696)	0.929
Participant Cost Test (PCT)		$1,530,400	$5,167,694	$3,637,295	3.377
Lifecycle Revenue Impacts ($/kWh)				$0.0000114812	
Discounted Participant Payback (years)				2.41	

Table 5: 2010- Lighting

2010-Lighting			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$1,075,377	$4,020,168	$2,944,791	3.738
Total Resource Cost Test (TRC) No Adder	$1,075,377	$3,654,698	$2,579,321	3.399
Utility Cost Test (UCT)	$365,416	$3,654,698	$3,289,283	10.001
Rate Impact Test (RIM)	$3,593,753	$3,654,698	$60,945	1.017
Participant Cost Test (PCT)	$709,961	$3,228,338	$2,518,377	4.547
Discounted Participant Payback (years)			NA	

Table 6: 2010- Appliance

2010-Appliance			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$903,872	$949,025	$45,154	1.050
Total Resource Cost Test (TRC) No Adder	$903,872	$862,750	($41,122)	0.955
Utility Cost Test (UCT)	$492,367	$862,750	$370,383	1.752
Rate Impact Test (RIM)	$1,155,702	$862,750	($292,952)	0.747
Participant Cost Test (PCT)	$411,505	$663,336	$251,831	1.612
Discounted Participant Payback (years)			NA	

Table 7: 2010– Home Improvement

2010-Home Improvement			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$335,932	$595,642	$259,710	1.773
Total Resource Cost Test (TRC) No Adder	$335,932	$541,493	$205,561	1.612
Utility Cost Test (UCT)	$245,659	$541,493	$295,834	2.204
Rate Impact Test (RIM)	$662,021	$541,493	($120,529)	0.818
Participant Cost Test (PCT)	$90,273	$416,362	$326,089	4.612
Discounted Participant Payback (years)			NA	

Table 8: 2010– HVAC

2010-HVAC			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$631,453	$1,126,712	$495,259	1.784
Total Resource Cost Test (TRC) No Adder	$631,453	$1,024,284	$392,831	1.622
Utility Cost Test (UCT)	$343,745	$1,024,284	$680,539	2.980
Rate Impact Test (RIM)	$1,126,560	$1,024,284	($102,276)	0.909
Participant Cost Test (PCT)	$287,708	$782,815	$495,107	2.721
Discounted Participant Payback (years)			-	

Table 9: 2010– New Construction

2010-New Construction			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$70,543	$110,606	$40,062	1.568
Total Resource Cost Test (TRC) No Adder	$70,543	$100,551	$30,007	1.425
Utility Cost Test (UCT)	$39,591	$100,551	$60,959	2.540
Rate Impact Test (RIM)	$116,435	$100,551	($15,884)	0.864
Participant Cost Test (PCT)	$30,952	$76,843	$45,891	2.483
Discounted Participant Payback (years)			-	

The results above do not reflect non-energy benefits. Appliances in this program have significant non-energy benefits (water). Those benefits, by measure, are outlined in the table below.

Table 10. Non-Energy Benefits

Non-Energy Benefit	Non-Energy Benefits per Measure	Total Installs	Measure Life	Total Present Value Benefits
Clothes Washer – Tier One (1.72 – 1.99 MEF)	$45.74	271	14	$105,854
Clothes Washer – Tier Two (2.0+ MEF)	$60.26	2,118	14	$1,089,882
Dishwasher	$0.31	832	9	$1,626
Total				$1,197,362

When these non-energy benefits are incorporated in the cost-effectiveness analysis for appliances, the TRC improves to 2.279, as shown in Table 11.

Table 11: 2010- Appliance with Non-Energy Benefits

2010-Appliance			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$903,872	$2,146,387	$1,242,516	2.375
Total Resource Cost Test (TRC) No Adder	$903,872	$2,060,112	$1,156,241	2.279
Utility Cost Test (UCT)	$492,367	$862,750	$370,383	1.752
Rate Impact Test (RIM)	$1,155,702	$862,750	($292,952)	0.747
Participant Cost Test (PCT)	$411,505	$1,860,698	$1,449,183	4.522
Discounted Participant Payback (years)			-	

Similarly, the overall program TRC improves to 2.446 when non-energy benefits are included, as shown in table 12.

Table 12: IRP 35% Load Factor Decrement with Non-Energy Benefits

All Measures				AC: IRP 35% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0666	$3,017,177	$7,999,515	$4,982,338	2.651
Total Resource Cost Test (TRC) No Adder	0.0666	$3,017,177	$7,381,138	$4,363,961	2.446
Utility Cost Test (UCT)	0.0328	$1,486,777	$6,183,775	$4,696,998	4.159
Rate Impact Test (RIM)		$6,654,472	$6,183,775	($470,696)	0.929
Participant Cost Test (PCT)		$1,530,400	$6,365,057	$4,834,657	4.159
Lifecycle Revenue Impacts ($/kWh)				$0.0000114812	
Discounted Participant Payback (years)				2.41	

See-Ya-Later-Refrigerator

Date: **March 23, 2011**

To: **Shawn Grant**

From: **Brian Hedman**

Re: **Washington See-Ya-Later Refrigerator 2010 Program Cost Effectiveness @ 100% NTG**

The tables below present the cost effectiveness findings of the Washington See-Ya-Later Refrigerator program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "WA 2010 Tables and Charts CE(3_17_11)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan.
Cost effectiveness was tested using the 2008 IRP 35% west residential whole house load factor decrement. Table 1 lists modeling inputs.
The program is cost effective from the TRC, UCT and PCT perspectives. The benefit/cost ratio for the RIM test is less than 1, indicating the program will have an upward influence on rates.

Table 1: See-Ya-Later
Inputs

Parameter	Value
Discount Rate	7.4%
Line Loss	8.867%
Residential Energy Rate ($/kWh)	$0.0723

Table 2: See-Ya-Later
Annual Program Costs and Savings

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Refrigerators	$198,197	$6,384	$0	$44,520	$249,100	$0
Freezers	$78,995	$2,544	$0	$11,970	$93,510	$0
Kits	$13,409	$432	$0	$0	$13,840	$0
Total	$290,600	$9,360	$0	$56,490	$356,450	$0

Table 3: See-Ya-Later
Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Refrigerators	1,855,000	100%	1,855,000	100%	1,855,000	5
Freezers	739,347	100%	739,347	100%	739,347	5
Kits	125,496	100%	125,496	100%	125,496	6.6
Total	2,719,843		2,719,843		2,719,843	

Table 4: IRP 35% Load Factor Decrement

All Measures				AC: IRP 35% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0319	$299,960	$1,041,115	$741,154	3.471
Total Resource Cost Test (TRC) No Adder	0.0319	$299,960	$946,468	$646,507	3.155
Utility Cost Test (UCT)	0.0379	$356,450	$946,468	$590,017	2.655
Rate Impact Test (RIM)		$1,258,268	$946,468	($311,800)	0.752
Participant Cost Test (PCT)		($56,490)	$901,818	$958,308	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0000141628	
Discounted Participant Payback (years)				NA	

Table 5: Refrigerators

			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$204,580	$705,452	$500,872	3.448
Total Resource Cost Test (TRC) No Adder	$204,580	$641,320	$436,740	3.135
Utility Cost Test (UCT)	$249,100	$641,320	$392,220	2.575
Rate Impact Test (RIM)	$861,222	$641,320	($219,902)	0.745
Participant Cost Test (PCT)	($44,520)	$612,122	$656,642	NA
Discounted Participant Payback (years)			NA	

Table 6: Freezers

			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$81,540	$281,172	$199,632	3.448
Total Resource Cost Test (TRC) No Adder	$81,540	$255,611	$174,071	3.135
Utility Cost Test (UCT)	$93,510	$255,611	$162,101	2.734
Rate Impact Test (RIM)	$337,483	$255,611	($81,872)	0.757
Participant Cost Test (PCT)	($11,970)	$243,973	$255,943	NA
Discounted Participant Payback (years)			(0.24)	

Table 7: Kits

			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$13,840	$54,490	$40,650	3.937
Total Resource Cost Test (TRC) No Adder	$13,840	$49,536	$35,696	3.579
Utility Cost Test (UCT)	$13,840	$49,536	$35,696	3.579
Rate Impact Test (RIM)	$59,563	$49,536	($10,026)	0.832
Participant Cost Test (PCT)	$0	$45,722	$45,722	NA
Discounted Participant Payback (years)			(0.05)	

Low Income Weatherization

Date: **March 23, 2011**

To: **Shawn Grant**

From: **Brian Hedman**

Re: **Washington Low Income Weatherization 2010 Program Cost Effectiveness @ 100% NTG**

The tables below present the cost effectiveness findings of the Washington Low Income Weatherization program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "WA 2010 Tables and Charts CE(3_17_11)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan.
Cost effectiveness was tested using the 2008 IRP 35% west residential whole house load factor decrement. Table 1 lists modeling inputs.
The program is not cost effective from the TRC, UCT, or RIM perspectives. The benefit/cost ratio for the RIM test is less than 1, indicating the program will have an upward influence on rates.

Table 1: Low Income Weatherization Inputs

Parameter	Value
Discount Rate	7.4%
Line Loss	8.867%
Residential Energy Rate ($/kWh)	$0.0723

Table 2: Low Income Weatherization Annual Program Costs and Savings

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Low Income weatherization	$50,026	$8,802	$0	$388,493	$447,320	$388,493

Table 3: Low Income Weatherization Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Low Income weatherization	184,000	100%	184,000	100%	184,000	30

Table 4: IRP 35% Load Factor Decrement

All Measures				AC: IRP 35% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.1068	$447,320	$315,212	($132,108)	0.705
Total Resource Cost Test (TRC) No Adder	0.1068	$447,320	$286,557	($160,764)	0.641
Utility Cost Test (UCT)	0.1068	$447,320	$286,557	($160,764)	0.641
Rate Impact Test (RIM)		$666,831	$286,557	($380,274)	0.430
Participant Cost Test (PCT)		$0	$219,510	$219,510	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0000022086	
Discounted Participant Payback (years)				NA	

However, these results do not incorporate the non-energy benefits that were analyzed in the 2006 program evaluation, including the Program's impact on forced mobility, arrearages, and economic impacts. These benefits are presented in Table 5.

Table 5. Total Program Non-Energy Benefits

Non-Energy Benefit	Program Impact	Perspective Adjusted
Mobility	$14,000	TRC
Arrearage	$6,400	UCT, RIM, TRC
Economic	$161,207	TRC
Total	$181,607	

When these benefits are included in the analysis the Program becomes more cost effective. As presented in Table 6, the Program passes TRC with a benefit cost ratio of 1.111.

Table 6: IRP 35% Load Factor Decrement with Non Energy Benefits

All Measures				AC: IRP 35% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.1068	$447,320	$496,820	$49,499	1.111
Total Resource Cost Test (TRC) No Adder	0.1068	$447,320	$468,164	$20,844	1.047
Utility Cost Test (UCT)	0.1068	$447,320	$292,957	($154,364)	0.655
Rate Impact Test (RIM)		$666,831	$292,957	($373,874)	0.439
Participant Cost Test (PCT)		$0	$219,510	$219,510	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0000021715	
Discounted Participant Payback (years)				NA	

Energy Education

Date: **March 23, 2011**

To: **Shawn Grant**

From: **Brian Hedman**

Re: **Washington Energy Education 2010 Program Cost Effectiveness @ 100% NTG**

The tables below present the cost effectiveness findings of the Washington Energy Education program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "WA 2010 Tables and Charts CE(Draftl 3_17_11)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan.

Cost effectiveness was tested using the 2008 IRP 35% west residential whole house load factor decrement. Table 1 lists modeling inputs.

The program is cost effective from the TRC, UCT and PCT perspectives. The benefit/cost ratio for the RIM test is less than 1, indicating the program will have an upward influence on rates.

Table 1: Energy Education
Inputs

Parameter	Value
Discount Rate	7.4%
Line Loss	8.867%
Residential Energy Rate ($/kWh)	$0.0723

Table 2: Energy Education
Annual Program Costs and Savings

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Energy Education	$366,466	$3,245	$0	$70,267	$439,978	$0

Table 3: Energy Education
Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Energy Education	2,400,316	100%	2,400,316	100%	2,400,316	6.25

Table 4: IRP 35% Load Factor Decrement

All Measures				AC: IRP 35% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0318	$369,711	$1,128,463	$758,752	3.052
Total Resource Cost Test (TRC) No Adder	0.0318	$369,711	$1,025,876	$656,165	2.775
Utility Cost Test (UCT)	0.0378	$439,978	$1,025,876	$585,898	2.332
Rate Impact Test (RIM)		$1,369,452	$1,025,876	($343,576)	0.749
Participant Cost Test (PCT)		($70,267)	$929,474	$999,741	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0000128995	
Discounted Participant Payback (years)				-	

The results above do not reflect non-energy benefits. Appliances in this program have significant non-energy benefits (water). Those benefits, by measure, are outlined in the table below.

Table 5. Non-Energy Benefits

Non-Energy Benefit	Non-Energy Benefits per Measure	Total Installs	Measure Life	Total Present Value Benefits
Energy Education	$24.92	4,127	6.25	$500,291

When these non-energy benefits are incorporated in the cost-effectiveness analysis for appliances, the TRC improves to 4.128, as shown in Table 11.

Table 6: IRP 35% Load Factor Decrement with Non-Energy Benefits

All Measures				AC: IRP 35% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0318	$369,711	$1,628,754	$1,259,043	4.405
Total Resource Cost Test (TRC) No Adder	0.0318	$369,711	$1,526,167	$1,156,456	4.128
Utility Cost Test (UCT)	0.0378	$439,978	$1,025,876	$585,898	2.332
Rate Impact Test (RIM)		$1,369,452	$1,025,876	($343,576)	0.749
Participant Cost Test (PCT)		($70,267)	$1,429,765	$1,500,032	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0000128995	
Discounted Participant Payback (years)				-	

FinAnswer Express

Date: **March 23, 2011**

To: **Shawn Grant**

From: **Brian Hedman**

Re: **Washington FinAnswer Express 2010 Program Cost Effectiveness @ 100% NTG**

The tables below present the cost effectiveness findings of the Washington FinAnswer Express program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "WA 2010 Tables and Charts CE(Draftl 3_17_11)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan.
Cost effectiveness was tested using the 2008 IRP 67% west system load factor decrement. Table 1 lists modeling inputs.
The program is cost effective from all perspectives.

Table 1: FinAnswer Express
Inputs

Parameter	Value
Discount Rate	7.4%
Commercial Line Loss	8.729%
Industrial Line Loss	7.543%
Commercial Energy Rate ($/kWh)	$0.0684
Industrial Energy Rate ($/kWh)	$0.0571

Table 2: FinAnswer Express
Annual Program Costs and Savings

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Building Shell	$657	$347	$0	$3,174	$4,178	$10,387
Dairy & Farm	$11,847	$4,925	$0	$47,720	$64,492	$121,220
Envelope	$19	$10	$0	$100	$129	$199
Food Service	$399	$210	$0	$1,290	$1,899	$5,076
HVAC	$9,304	$4,913	$0	$75,787	$90,004	$232,393
Lighting	$441,724	$196,048	$0	$731,804	$1,369,576	$2,342,248
Motor	$11,052	$4,891	$0	$10,200	$26,143	$28,701
Irrigation	$356	$103	$0	$276	$735	$1,164
Total	$475,359	$211,447	$0	$870,351	$1,557,157	$2,741,388

Table 3: FinAnswer Express
Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Building Shell	18,487	97%	17,932	100%	17,932	14
Dairy & Farm	255,694	97%	248,023	100%	248,023	14
Envelope	546	97%	529	100%	529	14
Food Service	11,213	97%	10,877	100%	10,877	14
HVAC	352,559	72%	253,842	100%	253,842	14
Lighting	10,153,022	98%	9,949,962	100%	9,949,962	14
Motor	161,129	154%	248,139	100%	248,139	14
Irrigation	5,060	97%	4,908	100%	4,908	14
Total	10,957,710		10,734,212		10,734,212	

Table 4: IRP 67% Load Factor Decrement

All Measures				AC: IRP 67% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0403	$3,428,193	$11,774,365	$8,346,172	3.435
Total Resource Cost Test (TRC) No Adder	0.0403	$3,428,193	$10,703,969	$7,275,775	3.122
Utility Cost Test (UCT)	0.0183	$1,557,157	$10,703,969	$9,146,812	6.874
Rate Impact Test (RIM)		$9,008,858	$10,703,969	$1,695,111	1.188
Participant Cost Test (PCT)		$1,871,037	$7,451,701	$5,580,664	3.983
Lifecycle Revenue Impacts ($/kWh)				($0.0000063158)	
Discounted Participant Payback (years)				2.97	

Table 5: Building Shell

			AC: IRP 67% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$11,391	$19,761	$8,370	1.735
Total Resource Cost Test (TRC) No Adder	$11,391	$17,964	$6,573	1.577
Utility Cost Test (UCT)	$4,178	$17,964	$13,786	4.299
Rate Impact Test (RIM)	$17,081	$17,964	$884	1.052
Participant Cost Test (PCT)	$7,213	$12,902	$5,689	1.789
Discounted Participant Payback (years)			NA	

Table 6: Dairy Farm

	AC: IRP 67% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$137,992	$252,179	$114,187	1.827
Total Resource Cost Test (TRC) No Adder	$137,992	$229,254	$91,262	1.661
Utility Cost Test (UCT)	$64,492	$229,254	$164,762	3.555
Rate Impact Test (RIM)	$233,808	$229,254	($4,554)	0.981
Participant Cost Test (PCT)	$73,500	$169,316	$95,816	2.304
Discounted Participant Payback (years)			5.43	

Table 7: Envelope

	AC: IRP 67% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$229	$583	354	2.546
Total Resource Cost Test (TRC) No Adder	$229	$530	301	2.314
Utility Cost Test (UCT)	$129	$530	401	4.098
Rate Impact Test (RIM)	$510	$530	20	1.039
Participant Cost Test (PCT)	$100	$381	281	3.818
Discounted Participant Payback (years)			NA	

Table 8: Food Service

	AC: IRP 67% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$5,685	$11,804	$6,119	2.076
Total Resource Cost Test (TRC) No Adder	$5,685	$10,731	$5,046	1.888
Utility Cost Test (UCT)	$1,899	$10,731	$8,832	5.650
Rate Impact Test (RIM)	$9,725	$10,731	$1,006	1.103
Participant Cost Test (PCT)	$3,786	$7,826	$4,040	2.067
Discounted Participant Payback (years)			-	

Table 9: HVAC

	AC: IRP 67% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$246,609	$279,726	33,117	1.134
Total Resource Cost Test (TRC) No Adder	$246,609	$254,297	7,687	1.031
Utility Cost Test (UCT)	$90,004	$254,297	164,293	2.825
Rate Impact Test (RIM)	$272,643	$254,297	-18,346	0.933
Participant Cost Test (PCT)	$156,606	$182,639	26,033	1.166
Discounted Participant Payback (years)			-	

Table 10: Lighting

	AC: IRP 67% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$2,980,020	$10,944,455	$7,964,435	3.673
Total Resource Cost Test (TRC) No Adder	$2,980,020	$9,949,505	$6,969,485	3.339
Utility Cost Test (UCT)	$1,369,576	$9,949,505	$8,579,928	7.265
Rate Impact Test (RIM)	$8,273,218	$9,949,505	$1,676,286	1.203
Participant Cost Test (PCT)	$1,610,443	$6,903,642	$5,293,198	4.287
Discounted Participant Payback (years)			2.75	

Table 11: Motor

	AC: IRP 67% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$44,644	$260,904	$216,260	5.844
Total Resource Cost Test (TRC) No Adder	$44,644	$237,186	$192,542	5.313
Utility Cost Test (UCT)	$26,143	$237,186	$211,043	9.073
Rate Impact Test (RIM)	$198,191	$237,186	$38,995	1.197
Participant Cost Test (PCT)	$18,501	$172,048	$153,547	9.299
Discounted Participant Payback (years)			1.23	

Table 12: Irrigation

			AC: IRP 67% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$1,623	$4,953	$3,330	3.052
Total Resource Cost Test (TRC) No Adder	$1,623	$4,503	$2,880	2.775
Utility Cost Test (UCT)	$735	$4,503	$3,768	6.127
Rate Impact Test (RIM)	$3,683	$4,503	$820	1.223
Participant Cost Test (PCT)	$888	$2,948	$2,060	3.321
Discounted Participant Payback (years)			-	

Energy FinAnswer

Date: **March 23, 2011**

To: **Shawn Grant**

From: **Brian Hedman**

Re: **Washington Energy FinAnswer 2010 Program Cost Effectiveness @ 100% NTG**

The tables below present the cost effectiveness findings of the Washington Energy FinAnswer program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "WA 2010 Tables and Charts CE(3_17_11)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan.

Cost effectiveness was tested using the 2008 IRP 67% west system load factor decrement. Table 1 lists modeling inputs.

The program is cost effective from all perspectives.

Table 1: Energy FinAnswer
Inputs

Parameter	Value
Discount Rate	7.4%
Commercial Line Loss	8.729%
Industrial Line Loss	7.543%
Commercial Energy Rate ($/kWh)	$0.0684
Industrial Energy Rate ($/kWh)	$0.0571

Table 2: Energy FinAnswer
Annual Program Costs and Savings

	Program Costs	Utility Admin	Engineering	Incentives	Total Utility Costs	Net Participant Incremental Cost
Additional Measures	$25,838	$12,710	$61,081	$53,494	$153,123	$94,589
HVAC	$29,021	$53,761	$75,269	$77,068	$235,119	$244,088
Lighting	$2,655	$4,964	$6,894	$6,245	$20,758	$8,845
Motors	$43,182	$67,137	$109,826	$192,349	$412,494	$442,576
Refrigeration	$208,581	$102,603	$493,085	$673,179	$1,477,449	$1,534,295
Building Shell	$3,577	$8,817	$9,646	$8,416	$30,455	$39,616
Total	$312,854	$249,992	$ 755,802	$1,010,751	$2,329,399	$2,364,009

Table 3: Energy FinAnswer
Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Additional Measures	798,765	97%	774,802	100%	774,802	14
Building Shell	572,396	100%	572,396	100%	572,396	14
HVAC	51,519	101%	52,034	100%	52,034	14
Lighting	1,281,979	74%	948,664	100%	948,664	14
Motors	6,192,772	101%	6,254,700	100%	6,254,700	14
Refrigeration	54,017	100%	54,017	100%	54,017	14
Total	8,951,448		8,656,613		8,656,613	

Table 4: IRP 67% Load Factor Decrement

All Measures				AC: IRP 67% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0557	$3,682,657	$8,763,806	$5,081,149	2.380
Total Resource Cost Test (TRC) No Adder	0.0557	$3,682,657	$7,967,096	$4,284,439	2.163
Utility Cost Test (UCT)	0.0353	$2,329,399	$7,967,096	$5,637,697	3.420
Rate Impact Test (RIM)		$7,383,657	$7,967,096	$583,439	1.079
Participant Cost Test (PCT)		$1,353,258	$5,054,258	$3,701,000	3.735
Lifecycle Revenue Impacts ($/kWh)				($0.0000094717)	
Discounted Participant Payback (years)				3.18	

Table 5: Additional Measures

			AC: IRP 67% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$194,218	$814,932	$620,714	4.196
Total Resource Cost Test (TRC) No Adder	$194,218	$740,847	$546,629	3.815
Utility Cost Test (UCT)	$153,123	$740,847	$587,724	4.838
Rate Impact Test (RIM)	$618,494	$740,847	$122,353	1.198
Participant Cost Test (PCT)	$41,095	$465,371	$424,276	11.324
Discounted Participant Payback (years)			NA	

Table 6: HVAC

			AC: IRP 67% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$402,139	$627,515	$225,376	1.560
Total Resource Cost Test (TRC) No Adder	$402,139	$570,468	$168,329	1.419
Utility Cost Test (UCT)	$235,119	$570,468	$335,349	2.426
Rate Impact Test (RIM)	$614,843	$570,468	($44,374)	0.928
Participant Cost Test (PCT)	$167,020	$379,723	$212,703	2.274
Discounted Participant Payback (years)			5.51	

Table 7: Lighting

			AC: IRP 67% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$23,358	$57,081	$33,723	2.444
Total Resource Cost Test (TRC) No Adder	$23,358	$51,892	$28,534	2.222
Utility Cost Test (UCT)	$20,758	$51,892	$31,134	2.500
Rate Impact Test (RIM)	$55,339	$51,892	($3,447)	0.938
Participant Cost Test (PCT)	$2,600	$34,581	$31,981	13.300
Discounted Participant Payback (years)			0.85	

Table 8: Motors

			AC: IRP 67% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$662,721	$628,310	($34,411)	0.948
Total Resource Cost Test (TRC) No Adder	$662,721	$571,191	($91,530)	0.862
Utility Cost Test (UCT)	$412,494	$571,191	$158,697	1.385
Rate Impact Test (RIM)	$791,436	$571,191	($220,245)	0.722
Participant Cost Test (PCT)	$250,227	$378,942	$128,715	1.514
Discounted Participant Payback (years)			8.91	

Table 9: Refrigeration

			AC: IRP 67% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$2,338,565	$6,578,655	$4,240,090	2.813
Total Resource Cost Test (TRC) No Adder	$2,338,565	$5,980,595	$3,642,030	2.557
Utility Cost Test (UCT)	$1,477,449	$5,980,595	$4,503,146	4.048
Rate Impact Test (RIM)	$5,234,224	$5,980,595	$746,371	1.143
Participant Cost Test (PCT)	$861,116	$3,756,776	$2,895,660	4.363
Discounted Participant Payback (years)			-	

Table 10: Building Shell

			AC: IRP 67% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$61,655	$57,313	($4,343)	0.930
Total Resource Cost Test (TRC) No Adder	$61,655	$52,102	($9,553)	0.845
Utility Cost Test (UCT)	$30,455	$52,102	$21,647	1.711
Rate Impact Test (RIM)	$69,321	$52,102	($17,218)	0.752
Participant Cost Test (PCT)	$31,200	$38,865	$7,665	1.246
Discounted Participant Payback (years)			-	