Rocky Mountain Power

2010 Annual Energy Efficiency and Peak Reduction Report - Utah

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Introduction and Executive Summary

Rocky Mountain Power (the "Company"), working in partnership with its retail customers and with the approval of the Public Service Commission of Utah (the "Commission"), acquires cost-effective demand-side resources as an alternative to the acquisition of supply-side resources. Demand-side resources assist the Company in most efficiently addressing load growth and contribute to the Company's ability to meet system peak requirements. Company demand-side management ("DSM") programs provide participating Utah customers with tools that enable them to reduce or assist in the management of their energy usage, while reducing the overall costs to Rocky Mountain Power's customers. Demand-side resources are a valuable component of Rocky Mountain Power's resource portfolio and are relied upon in resource planning as a least cost alternative to supply-side resources.

Rocky Mountain Power currently offers nine energy efficiency and two load control programs in Utah with costs associated with these programs recovered through a tariff-rider, which is administered through Schedule 193 (the "DSM tariff rider"). Rocky Mountain Power also contributes to the statewide Power Forward campaign and promotes its demand-side management programs to its Utah customers through a communications and outreach campaign intended to increase awareness of and participation in the Company's demand-side management programs, the costs of which are also recovered through Schedule 193.

The results of Rocky Mountain Power's Utah demand-side management activities for the reporting period of January 1, 2010 through December 31, 2010 are summarized in Table 1 on the following page.

Table 1[1]

2010 Total Portfolio Performance (Load Management, Energy Efficicency and Marketing)					
DSM Cost Adjustment Revenues Collected	$ 73,831,154				
Program Expenditures (Excludes Self Direction Credits)	$ 46,882,525				
Total Expenditures Including Self Direction Credits	$ 49,409,362				
MW Under Load Management (Gross at Generation)	172.8				
2010 Target for Load Management (Gross at Generation)	171.0				
Energy Efficiency First Year Savings MWh/Yr (Gross at Generation)	218,755				
Estimated MW Savings from 2010 Energy Efficiency Acquisitions (Gross at Generation)	36.5				
2008 Integrated Resource Plan Targets for 2010 - MWh	197,535				
Estimated MW Savings from Energy Efficiency and Load Management (Gross at Gen)	209.3				
Estimated Lifetime MWH Savings from 2010 Energy Efficiency Acquisitions	2,450,054				
	PTRC	TRC	UCT	RIM	PCT
Cost Effectiveness (Five Tests)	2.015	1.832	1.821	1.048	7.072
Levelized Cost ($/kWh)	NA	NA	NA		
Lifecycle Revenue Impact ($/kWh)	NA				

Participation in the load management programs increased between 2009 and 2010 by approximately 11 percent providing the Company with 173 megawatts (at generation) of load under management. First year energy savings between 2009 and 2010 achieved through energy efficiency programs decreased by 12 percent. In 2009 the Company offered CFL's for all 12 months. In 2010 the Company exited the CFL market for a 6 month period consistent with the tariff. During that period, the Company received approval to offer CFL's year round beginning in 2011.

Overall expenditures decreased by 15 percent between 2009 and 2010.

At the end of 2010, the DSM tariff rider balancing account had an unfunded balance of $2.2 million.

[1] Estimated MW Savings from Energy Efficiency reflects project level engineering estimates for MW contributions from Energy FinAnswer, FinAnswer Express, Self Direction and Re-Commissioning Programs. Estimates for MW savings for all other programs are estimated based on aMW contributions multiplied by a capacity contribution factor of 1.88 that is consistent with the DSM resource characteristics selected in the 2008 IRP. Estimated MW Savings from Energy Efficiency and Load Management programs is a maximum estimate. In order to achieve this level of reduction, both load management programs would have to be dispatched at the precise point in time when temperature and load conditions were at their highest point and assumes all energy efficiency savings had been achieved for the year prior to that point in time. Estimated lifetime savings of 2010 Energy Efficiency Acquisitions was calculated by multiplying First Year Acquisitions (At Gen) by the weighted average measure life of the portfolio of 11.2 years, no discount was assumed for possible savings degradation over the life of the measures. Cost Effectiveness Tests – Levelized costs and Lifecycle Revenue Impact calculations were not included at the overall portfolio level due to the inclusion of Load Management programs that do not assume any energy savings and therefore their costs would skew these calculations.

2010 Performance and Activity

Table 2[2]

Utah Demand Side Management Annual Results for 2010

Load Management Programs	Units	kW/Yr (at site)	kW/Yr Savings (at gen)	Program Expenditures
Cool Keeper (114)	104,921	110,044	120,878	$ 4,836,269
Irrigation Load Control (96 and 96A)	602	49,100	51,911	$ 2,512,712
Total Load Management	**105,523**	**159,144**	**172,790**	**$ 7,348,981**
Energy Efficiency Programs	**Units**	**kWh/Yr Savings (at site)**	**kWh/Yr Savings (at gen)**	**Program Expenditures**
Low Income Weatherization (118)	1,273	1,917,712	2,106,511	$ 258,422
Cool Cash (113)	5,210	2,521,763	2,770,031	$ 1,490,290
Energy Star New Homes (110)	2,275	5,931,957	6,515,958	$ 2,604,552
Refrigerator Recycling (117)	15,549	20,410,218	22,419,604	$ 2,369,803
Home Energy Savings (111)	209,098	59,711,660	65,590,273	$ 16,875,685
Total Residential	**233,405**	**90,493,310**	**99,402,376**	**$ 23,598,752**
Energy FinAnswer (125)	40	17,506,721	19,148,676	$ 3,246,075
FinAnswer Express (115)	720	27,399,416	29,969,207	$ 4,107,148
Recommissioning (126)	14	7,231,291	7,909,514	$ 986,414
Self Direction	5	1,164,050	1,273,226	$ 186,835
Total Commercial	**779**	**53,301,478**	**58,300,624**	**$ 8,526,473**
Energy FinAnswer (125)	51	33,191,521	35,092,067	$ 4,523,593
FinAnswer Express (115)	126	8,557,455	9,047,455	$ 1,019,080
Self Direction (192)	19	15,996,343	16,912,294	$ 330,072
Total Industrial	**196**	**57,745,319**	**61,051,816**	**$ 5,872,745**
Outreach & Communications + Class 4				
Power Forward				$ 50,092
Outreach and Communication Campaign				$ 1,485,482
Total Energy Efficiency		**201,540,107**	**218,754,816**	**$ 39,533,544**

Total System benefit Expenditures - All Programs		**$ 46,882,525**
Self Direction Credits		$ 2,526,837
Total Utah Program Expenditures		**$ 49,409,362**
Check Sum from Goals	201,540,107	$ 49,409,362

[2] 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 line losses by sector are 9.85 percent for residential, 9.38 percent for commercial and 5.73 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.

Major Trends and Activities

In 2010, the Company realized an increase in load management acquisitions. The load management programs delivered 11 percent more kW under control. Loads under management increased 7 percent for Cool Keeper and 17 percent for the Irrigation Load Control program during 2010. Energy efficiency savings decreased 12 percent when compared to 2009 which is mostly attributed to a decrease in 2010 CFL activity between the two years.

At a sector lever, the residential sector savings decreased 20 percent on a kWh/year basis compared to 2009. The commercial sector delivered approximately 3 percent more kWh/year savings than in 2009. The industrial savings decreased 9 percent in 2010 compared to 2009.

Expenditures related to program delivery decreased in 2010 compared to 2009. Overall portfolio expenditures decreased by 15 percent compared to 2009, with load management expenses decreasing 41 percent[3], energy efficiency programs decreased 9 percent and the implementation of Outreach and Communications campaign adding approximately $1,485,000 to overall expenditures. At a sector level, residential energy efficiency expenditures decreased by 21 percent while expenditures for commercial increased by 26 percent and industrial decreased by 3 percent.

[3] Reduction in load management program expenditures was driven by contractual price decrease within the Cool Keeper program delivery vendor agreement.

Cost Effectiveness

Consistent with the requirements outlined in the Commission orders in Docket No. 09-035-27, the Company provides cost effectiveness results utilizing the following five cost effectiveness tests;

1. PacifiCorp Resource Cost Test ("PTRC") which includes a 10% additional benefit for demand-side resources. This is consistent with the Northwest Power Planning and Conservation Act and other states that consider benefits from less quantifiable attributes of DSM resources.
2. Total Resource Cost Test ("TRC")
3. Utility Cost Test ("UCT")
4. Ratepayer Impact Test ("RIM").
5. Participant Cost Test ("PCT")

The results for each test are provided at several levels:

1. Overall portfolio level (combined look of all programs) i.e. energy efficiency and load management programs
2. At individual resource type levels i.e. combined energy efficiency programs and separately for the combined load management programs
3. At customer sector levels for the energy efficiency programs i.e. all residential programs and all non-residential energy efficiency program portfolios
4. Individual program level
5. Measure or measure group level within certain programs

All portfolios and programs had a UCT benefit/cost ratio of more than 1.0. Overall, the portfolio generated more than $90 million in Net Benefits on a UCT basis and more than $91 million in Net Benefits on a TRC basis. The entire program portfolio was cost effective across all five cost effectiveness tests. At the segment and program levels, four of the five tests produced a benefit/cost ratio greater than 1.0 (residential programs and residential portfolio did not pass the ratepayer impact test).

Results of the cost effectiveness tests are included in the summary overview for each program, including a cost effectiveness discussion in each program section. Further details including key inputs and assumptions for each of the cost effectiveness test as well as measure group cost effectiveness results are provided in Appendix 1 of this report.

Program Evaluation

Rocky Mountain Power provides a timeline for when evaluations will be completed for each program offered in the state. The Program Evaluation Timeline (Table 3) provides an outline of evaluations for each program in Rocky Mountain Power's Utah DSM portfolio.

Table 3

Program Evaluation Timeline

Program	Evaluation Type	Status	Anticipated Year Complete	Program Year(s) Evaluated	Evaluator
Low Income Weatherization	Impact	In Process	2011	2007-2009	Cadmus
Home Energy Savings	Process and Impact	Planning	2011	2009-2010	TBD
SYLR	Process and Impact	Planning	2011	2009-2010	TBD
Cool Cash	Process and Impact	Planning	2011	2009-2010	TBD
Energy Star New Homes	Process and Impact	Planning	2011	2009-2010	TBD
Cool Keeper	Process and Impact	Planning	2011	2009-2010	TBD
Energy FinAnswer	Process and Impact	Planning	2012	2009-2011	TBD
FinAnswer Express	Process and Impact	Planning	2012	2009-2011	TBD
Recommissioning	Process and Impact	Planning	2012	2009-2011	TBD
Self Direction	Process and Impact	Planning	2012	2009-2011	TBD
Irrigation Load Control	Process/Impact or analysis	Planning	2012	2011-2012	TBD

In 2010, process and impact evaluations were completed for the Cool Cash, Energy Star New Homes, Home Energy Savings, See ya later, refrigerator®, Energy FinAnswer, FinAnswer Express, Re-Commissioning and the Self Direction programs. The results of these evaluations are available on PacifiCorp's website at http://www.pacificorp.com/es/dsm/utah.html. Findings from these evaluations will be key inputs to on-going program design and modification as well as inputs to future cost effectiveness determinations.

Plans for 2011

Program design modifications are underway for Rocky Mountain Power's residential new construction program. The design modifications are intended to evolve the program requirements to align with Energy Star 2.5 and 3.0 guidelines; further influence efficiency in new construction practices; encourage the greater application of efficient lighting, appliance, and equipment technologies; and improve program economics. A non-Energy Star New Home effort is being consider, existing and future program modifications will be dependent on factors affecting the cost effectiveness.

With approval from the Public Service Commission of Utah, Rocky Mountain Power expanded the definition of premium evaporative cooling equipment in the Cool Cash program to include rigid media evaporative cooling systems. This technology is ideally suited for use in Utah; a climate with low humidity and large diurnal temperature swings.[4]

A review of the Home Energy Savings program will be completed in 2011 to ensure the program continues to effectively meet Rocky Mountain Power's Utah residential customer needs. Changes to the existing appliance and weatherization categories will be evaluated. Addition of a home electronics category will also be analyzed.

Program reviews of the Energy FinAnswer, FinAnswer Express and Re-Commissioning programs will be completed in 2011 to ensure the programs are working effectively at meeting the needs of Rocky Mountain Power's Utah business customers. Upon the completion of these reviews, the Company will propose changes as warranted.

The Company is considering proposing changes to the irrigation load management program, combining the two programs (Schedules 96 and 96a) into one tariff for ease of future administration.

Program impact and process evaluations for years 2009 and 2010 will be completed for the Company's suite of residential energy efficiency programs and a process evaluation of the Cool Keeper air conditioner load management program. The results of these evaluations will be included in the Company's 2011 annual report, to be filed by March 31, 2012.

Rocky Mountain Power is also investigating three new program offerings which may be proposed for introduction in 2011: a commercial and industrial load curtailment program, a commercial energy efficiency direct install program and a residential home comparison report program intended to educate customers on their energy usage and help them save energy and money.

[4] Refer to Docket No. 11-035-T01.

Advisory Group Meetings

On January 20, 2010, Rocky Mountain Power participated with the Demand-Side Management Advisory Group ("Advisory Group") and other interested parties in a technical conference to review and discuss modifications to Schedule 193 terms and conditions and to review and discuss modifications to the terms and processes of Schedule 193.

On February 23, 2010, Rocky Mountain Power met with the Advisory Group to discuss the plan and budget for the 2nd year of the outreach and communications campaign, the concept of Home Energy Reports, the Cool Cash program incentive structure and planned changes to the Home Energy Savings and FinAnswer Express programs.

On March 2, 2010, the Company met with the Advisory Group to discuss possible revisions to Schedule 193.

Outreach and Communications

***watt*smart**
On June 11, 2009, the Public Service Commission of Utah approved Rocky Mountain Power's proposal to implement an outreach and communications campaign in Utah. The overarching objective of the program is to promote energy efficiency and conservation through education and increase customer awareness of and participation in the Company's demand-side management programs.

During 2010, Rocky Mountain Power:

- developed and launched the ***watt***smart multimedia campaign (Spring 2010)
- developed the Cool Keeper testimonial campaign (Summer 2010)
- participated in the Utah Jazz/Salt Lake Bees Green Team sponsorship
- participated in the National Education Foundation "Take Action At Home" campaign

wattsmart advertising campaign
The ***watt***smart advertising campaign that began in April 2010 drives interest in all DSM campaign activities, including generating residential and business commitments to reduce energy use and increasing participation in Rocky Mountain Power's DSM programs.

Campaign messages included: ***watt***smart introduction, summer rates, Cool Keeper testimonials, peak usage times, ceiling fans/cooling, home improvement, turning off lights, cutting kilowatts, and how to operate your thermostat efficiently.

Television: The Company rotated a selection of ads, both 30-second and 15-second TV spots an average of 137 TV placements each week from April through September 2010. TV Stations on which campaign spots were aired include: KJZZ-TV, KSL-TV, KSTU-TV, KTVX-TV, KUCW-TV, KUTH-TV, and KUTV-TV.

Radio: Radio spots began airing during the week of April 25. The Company ran an average of 189 radio spots per week. Radio stations on which campaign spots were aired include: KBMG-

FM, KDUT-FM, KEGA-FM, KJMY-FM, KSFI-FM, KSL-AM, KSOP-FM, KUBL-FM, KUER-FM, KZHT-FM, and KKEX-FM

Print: Newspaper ads began running during the week of April 19. Business publication ads started in early April. Newspapers in which campaign ads were shown include: Salt Lake Tribune, Deseret News, The Standard Examiner, The Daily Herald, The Spectrum, Logan Herald Journal, Ahora Utah, Beaver Press, Blue Mountain Panorama, Emery County Progress Combo, Gunnison Valley Gazette, Millard County Chronicle Progress, Moab Times, Park City Record, Price Sun-Advocate, Richfield Reaper, Sanpete Messenger, Tooele Transcript, Vernal Express, and Wasatch Wave

Business publications in which campaign ads were shown include: The Enterprise, Utah County Business Journal, Wasatch North Business Journal and Utah Business magazine.

Transit: Advertising on UTA started in the Salt Lake metro area the week of May 3 and continued through mid October. These included graphic covers of the entire side of UTA busses, including some graphics on windows and graphic rectangular posters on the side of the bus.

Online: Advertisements started in early April and ran through September. The sites on which campaign ads ran included: KSTU (www.fox13now.com/), sltrib.com, heraldextra.com and Facebook. The Company also utilized Google AdWords for keyword searches in Utah. AdWords offers pay-per-click advertising and site-targeted advertising for text, banner, and rich-media ads.

Utah Jazz/Salt Lake Bees

The Green Team initiative with the Utah Jazz/Salt Lake Bees and Questar was promoted during 2010. For the sponsorship, the Company:

- Utilized ***watt***smart radio spots and television spots on Jazz game broadcasts.
- Developed and ran two *Voices* newsletter articles (January and March) in residential customer bills promoting the sponsorship.
- Print ad placement in Utah Jazz game programs.
- Green games: One Utah Jazz Game on April 6 and two Salt Lake Bees Games during which the Company promoted the ***watt***smart concept and energy efficiency tips and programs.

National Education Foundation

A total of 52 schools in Utah received the energy efficiency curriculum in spring 2010. A team of seasoned, professional presenters delivered the program presentations. A presenter training session was held on April 21 to familiarize presenters with specific program needs and requirements, educate presenters on program sponsors and delivery, and give presenters student and teacher materials to be delivered to recipients at each presentation site.

Social Media

Utilizing the existing Rocky Mountain Power Utah Twitter account (twitter.com/RMP_Utah), the Company developed a messaging plan to promote, recruit and inform customers about the ***watt***smart launch at the Utah Jazz Green Game as well as encouraging participation amongst fans to become part of the Utah Jazz Green Team.

Additionally, Rocky Mountain Power created a Facebook community page www.facebook.com/rockymountainpower.wattsmart to help promote the ***watt***smart programs and conservation ideas. The Company posted daily ***watt***smart tips on the Facebook page and provided weekly updates on the twitter account. The Company also ran a Facebook ad in May to generate additional ***watt***smart fans and doubled ***watt***smart fan participation.

Home Energy Savings
Several point-of-sale materials were produced to help customers choose high efficiency products.

Inserts were included in all residential customer bills in Utah four times covering the following topics:

- Light fixtures & CFLs, February
- Energy-efficient appliance incentives including Utah Appliance Rebate program and See ya later, refri*gerator*®, May
- Room air conditioners and ceiling fan incentives including Utah appliance rebates available within the Home Energy Savings program, July
- Specially priced CFLs, October

Specially priced CFLs were promoted from October through December 2010 through news releases, direct mail, in-store promotions, social media and on the website.

See ya later, refrigerator®
Television, newspaper and online ads for the See ya later, refrigerator® recycling program ran in the Salt Lake market from February through November. In addition inserts were included in March, May (joint with Home Energy Savings), July and September bills.

Load control
Cool Keeper and Irrigation Load Control program participants were acknowledged in an ad in Salt Lake Tribune, Deseret News, The Standard Examiner newspapers at the end of August.

Energy FinAnswer & FinAnswer Express
Radio, newspaper and online ads for our commercial efficiency programs were placed each quarter in Utah. This included a thank you ad in February recognizing Utah businesses for completing energy savings projects in the prior year, 2009.

Events
In addition to the program-specific advertising and overarching outreach and communications campaign, the Company is actively involved in event based outreach and communications to support programs and initiatives. Some of the events and activities from 2010 are listed below:

February 4th - Utah Energy Efficiency Alliance Workshop, Sandy

April 8th - Salt Lake Sustainable Building Conference, Salt Lake City

October 8-10th - ENERGY STAR® Summit and Deseret News Fall Home Show, Sandy
October 29th - American Institute of Architects (AIA) Utah Design Conference, Salt Lake City

Company Filings with the Public Service Commission of Utah

The Company made several filings with the Commission regarding demand-side management during 2010. The dates of the filings with brief descriptions are provided below:

Self Direction Credit Program Filing
Filed on February 23, 2010 to raise the annual caps of the Self Direction Credit Program in Docket No. 10-035-T03.

2010 Annual Report
Filed on March 31, 2010 in Docket No. 10-035-37.

Demand-side Management Communications Plan
Filed the 2nd year plan on April 1, 2010 in Docket No. 09-035-36 and filed the 1st year performance report on October 14 in the same docket.

Home Energy Savings Program Filing
Filed program modifications to the Home Energy Savings program on June 3, 2010 in Docket No. 10-035-T05.

FinAnswer Express Program Filing
Filed program modifications for the FinAnswer Express program on June 24, 2010 in Docket No. 10-035-T09.

Self Direction Program Administrator Reports
Filed on July 12, 2010 program administrator reports for the Self Direction Program for program years 2007, 2008 and 2009.

2011 Forecast
Filed on November 1, 2010 in Docket No. 10-035-57.

Schedule 193 Adjustment Filing
Filed on December 9, 2010 to reduce the demand-side management surcharge in Docket No. 10-035-T14.

Energy Star New Homes Program Filing
Filed on December 28, 2010 to adjust the Energy Star New Homes program tariff in Docket No. 10-035-T16.

2010 Performance Compared to Forecast

In 2010, the Company delivered against Utah targets of 197,535 MWh/year of energy efficiency and 171 MW of load management as contained in the 2008 IRP. These targets were filed with the commission on November 2, 2009.[5]

The Company exceeded these targets with energy efficiency acquisitions of 218,755 MWh/year and 172.8 MW of load management resources under program control.

Table 4

Rocky Mountain Power - Utah	**2010 Forecast (Gross - At Gen)**			**2010 actual (Gross - At Gen)**		
Programs	**MW**	**MWh**	**Costs**	**MW**	**MWh**	**Costs**
Cool Keeper	118		$5,994,772	120.9		$4,836,269
Irrigation Load Control	53		$2,331,375	51.9		$2,512,712
Total load control/management	**171**		**$8,326,147**	**172.8**		**$7,348,981**
Central A/C "Cool Cash"		1,628	$901,696		2,770	$1,490,290
Home Energy Savings		68,079	$20,600,000		65,590	$16,875,685
Refrig Recycle "SYLR"		22,351	$2,700,000		22,420	$2,369,803
Low Income Wx		1,214	$250,000		2,107	$258,422
Energy Star New Homes		2,523	$1,695,000		6,516	$2,604,552
Energy FinAnswer		45,030	$9,150,000		54,241	$7,769,668
FinAnswer Express		39,520	$5,725,000		39,017	$5,126,228
Self-Direction		9,990	$262,500		18,186	$516,907
Recommissioning		7,200	$1,268,600		7,910	$986,414
Total Energy Efficiency		**197,535**	**$42,552,796**		**218,755**	**$37,997,970**
Outreach and Communication Program			$ 1,524,000			$ 1,485,482
Power Forward	20-200		$50,000	20-200		$ 50,092
Total Expenditures (tariff rider)			**$52,452,943**			**$46,882,525**
Self-Direction Credits issued			$3,062,947			$2,526,837

[5] Refer to Docket No 09-035-T08

Load Management Programs and Activity

Rocky Mountain Power currently offers two load management programs, the Irrigation Load Control program for agricultural customers and the Cool Keeper air conditioner load management program for residential and small commercial customers. Through these programs the Company has the ability to manage end use loads during the summer peak load period helping balance system requirements as needed. The flexibility of the load management resources vary between programs and control options and range from fixed pre-scheduled and day ahead noticing or scheduling of participating irrigation loads to on-call day of dispatch control of air conditioner loads. The programs are designed to work in concert with customer needs, providing advance notice to business customers of when events are scheduled to occur and operation of the control in a manner that minimizes business disruptions and impacts to customer comfort. In addition to these direct load control programs, Rocky Mountain Power participates in the state of Utah's PowerForward program, a stoplight public plea demand reduction program that relies on public announcements to inform Utah customers when energy demand and costs are at acceptable levels (Green), are becoming an issue (Yellow), or have reached a critical point (Red). The warning encourages energy consumers in the state to take increasing conservation action when the local conditions are in Yellow or Red stages.

A summary of the load management portfolio results is included in the following table.

Table 5

2010 Load Management Portfolio Performance						
kW Under Control (Gross - At Gen)		172,790				
kW Under Control (At Site)		159,144				
Total Expenditures	$	7,348,981				
Incentives Paid	$	3,260,556				
		PTRC	TRC	UCT	RIM	PCT
Program Cost Effectiveness		2.216	2.015	1.491	1.491	NA
Levelized Cost ($/kWh)		NA	NA	NA		
Lifecycle Revenue Impact ($/kWh)		NA				

Note: No energy savings are associated with load management programs. Therefore it is not appropriate to calculate levelized costs or lifecycle revenue impact.

Irrigation Load Control (Schedule 96 and 96A)

Available since 2007, Utah's irrigation load management program provides participating agricultural customers on Schedule 10 load control service credits in exchange for growers curtailing irrigation pumping loads during summer afternoons, June 1st through August 31st annually. Curtailment schedules vary from one to four interruptions per week with each interruption lasting three to six hours. Participants are paid an annual load control service credit of $5.41 to $11.19 per kilowatt of curtailment loads depending on the curtailment schedule the customer selects.

Under the day-ahead dispatchable control option, irrigation equipment is set up with a two-way control system. Customers who participate are notified 24 hours in advance of control events and have the choice to opt-out of a limited number of dispatch events per season. Annual load service credits for this program are paid on a graduated basis depending on total program participation. In 2010, load control service credits were $28 per kilowatt of a grower's participating loads.

For the fixed scheduled control option, there are no customer costs to participate in the program for pump sizes of 25hp and above. Participating pumps less than or equal to 25hp in size incur a one-time $170 set-up fee upon initial enrollment.

For the on-call day ahead dispatchable control option, pump sizes generally must meet a minimum motor size requirement of 10hp to qualify and there are no customer costs to participate. Growers may, however, experience reductions in their participation credits for charges associated with opting out of a control event.

Summary program performance, expenditures, participation and cost effectiveness results are provided in the following table.

Table 6

2010 Irrigation Load Control Program Performance						
MW Under Control (Gross at Gen)	51.9					
MW Under Control (At Site)	49.1					
Expenditures - Total	$ 2,512,712					
Participation Credits	$ 1,321,171					
Program Operations Expense	$ 1,191,541					
Participation (Customers)	191					
Participation (Sites)	602					
	PTRC	TRC	UCT	RIM	PCT	
Program Cost Effectiveness	3.510	3.190	1.520	1.520	NA	
Levelized Cost ($/kWh)	NA	NA	NA			
Lifecycle Revenue Impact ($/kWh)	NA					

Program Reporting

Program results reflect the nominal impact on the system during load control events. The kilowatt level available for dispatch is based upon historical analysis of usage for each participating site. The program results reflect the combined nominal reductions from the fixed scheduled control option program and the day ahead dispatchable control option program.

Cost Effectiveness

The Irrigation Load Control program was cost effective from all cost benefits tests. Appendix 1 provides detailed inputs used in the cost effectiveness analysis of this program as well as the measure level cost effectiveness results.

Plans for 2011

The Company may propose changes to the irrigation load management program, including combining the two programs (Schedules 96 and 96a) into one tariff for ease of future administration.

Cool Keeper (Schedule 114)

The Cool Keeper program is an air conditioner direct load management program targeting Utah residential and qualifying commercial customers (equipment size equal to or less than 7.5 tons) who cool their homes and businesses with electric central air conditioners and heat pumps. On select summer weekday afternoons, when electricity demand is at its highest, the Cool Keeper control equipment installed on a participating customer's cooling equipment is sent a signal to cycle the operation of the air conditioners compressor "off and on" for brief periods each hour in coordination with the air conditioners of other participating customers. Over 70 percent of program participants do not notice these slight interruptions in cooling and 98 percent report no meaningful temperature changes. For their participation, customers receive an annual "thank you" bill credit of either $20 or $40 per air conditioner being controlled depending on the size of the air conditioner. Commercial customers have the option of receiving a programmable thermostat in lieu of the "thank you" bill credit as an incentive for their participation. Like the direct control unit or switch used to control equipment for the majority of the program, the programmable thermostat is capable of receiving remote signals used to initiate control events but also has the added feature of doubling as an intelligent programmable thermostat customers can use to effectively manage their heating and cooling systems year around.

Implemented in 2003, the pay-for-performance based program sought to acquire 90 megawatts (at site) of dispatchable residential and qualifying commercial air conditioning participation by 2007 and contractually maintain participation through 2013, at which time program delivery would be reviewed and competitively re-procured. The 90 megawatt objective was based on an initial assessment of qualifying equipment in the Utah marketplace and program penetration rates of other similar and successful air conditioner load management programs in other jurisdictions. Participation has exceeded the initial megawatt objective by 22 percent, with approximately 110 megawatts (at site) under management.

Program results for 2010 are provided in the following table:

Table 7

2010 Cool Keeper Program Performance						
kW Under Control (Gross - At Gen)		120,878				
kW Under Control (At Site)		110,044				
Total Expenditures	$	4,836,269				
Incentives Paid	$	1,939,385				
Total Participation		104,921				
Residential		104,398				
Commercial		523				
		PTRC	TRC	UCT	RIM	PCT
Program Cost Effectiveness		2.180	1.990	1.490	1.490	NA
Levelized Cost ($/kWh)		NA	NA	NA		
Lifecycle Revenue Impact ($/kWh)		NA				

Major Trends and Activities

At the end of 2010, participation was 7 percent higher than in 2009 with 104,921 units enrolled in the program providing more than 120 MW of temperature dependent load under control.

Cost Effectiveness

The Cool Keeper program was cost effective from four of the five cost effectiveness tests (there are no participant costs, so results of that test were not calculated). Appendix 1 provides detailed inputs used in the cost effectiveness analysis of this program as well as the calculation of reported savings.

Program Evaluation

The program is implemented by a third party delivery vendor under a pay-for-performance contract structure. The contract includes a robust measurement and verification protocol that includes annual evaluation of program delivery utilizing information derived from a statistically relevant and representative set of metered control units. The meter data is used to assess the performance of the control network at large. In addition, the program maintenance process assesses the proper installation and operation of 20 percent of all installations on an annual basis, ensuring that all load control equipment is site inspected on a rotational 5-year basis. Results of the measurement and verification and maintenance processes are utilized for annual contract management and program reporting and tracking.

Plans for 2011

Rocky Mountain Power will seek to increase the controllable load made available through the program by continuing to market the program to customers and by educating customers about the impact and benefits realized through program participation. Rocky Mountain Power intends to evaluate the Program's performance and customer processes using an independent evaluator in order to verify delivery compliance and ensure that the program's contractual measurement and verification protocol is being accurately administered and followed. .

In addition, on March 28, 2011, the Company filed administrative modifications to the program. The modifications are intended to 1) improve the content of the tariff from an organizational perspective; 2) add clarity to program delivery parameters and participation requirements; and 3) eliminate tariff language that is outdated and/or no longer relevant to the operation of the program.

PowerForward

Rocky Mountain Power, through Schedule 193, provides $50,000 annually in support to the state of Utah PowerForward program. PowerForward is a public-private partnership sponsored by the Utah Department of Environmental Quality and Utah's electric utilities. The mission of the PowerForward campaign is to promote an ethic of energy conservation and efficient use of electricity in Utah homes, businesses, and state-owned buildings.

At the heart of the campaign is the PowerForward alert system. This color-coded system notifies Utah citizens and businesses on days when additional conservation measures are needed. The graduated green, yellow to red condition alerts encourage energy consumers in the state to take increasing conservation action as energy capacity requirements and market costs for energy increase.

No savings are directly attributed to the Company’s participation in the program. However, program expenditures are funded from DSM tariff rider. The program costs are included as costs in the analysis of cost-effectiveness of the overall portfolio but are not included in either the load management or energy efficiency portfolio looks.

Energy Efficiency Programs and Activity

Energy efficiency programs deliver sustainable energy savings by improving the efficiency of equipment such as motors, lighting and cooling equipment. Energy efficiency is also delivered through improved weatherization of existing buildings, improving the design features of new facilities and ensuring they are constructed to exceed code. In the industrial sector, improvements in industrial equipment or processes can also improve energy utilization and deliver long term energy efficiency resources. Replacement of existing functional equipment, replacement of equipment at the end of its useful life and improvement opportunities all provide opportunities to deliver energy efficiency resources. While each type of opportunity has unique challenges, improvements in these areas all deliver long term energy savings over the life of the installed equipment.

To deliver resources from these different opportunities, the Company offers nine energy efficiency programs; five targeted to residential customers and four targeted to business customers. While customers may receive only one incentive per project or piece of equipment, the programs are designed to work in a coordinated fashion and provide complementary services (i.e. recycle an existing refrigerator after buying a new Energy Star model) or different incentive options (i.e., Energy FinAnswer incentives at the time a project is completed or Self Direction bill credits received over time). Some programs or program features are specifically designed to capture lost opportunities (Energy Star New Homes and the Design Assistance provision in Energy FinAnswer), while other programs target retrofit or replacement opportunities in existing structures (i.e., FinAnswer Express and Home Energy Savings).

Results for the 2010 Energy Efficiency Portfolio are presented in the following table:

Table 8

2010 Energy Efficiency Portfolio Performance					
System Benefit Expenditures (Excludes Self Direction Credits)	$39,533,544				
Total Expenditures Including Self Direction Credits	$42,060,381				
Energy Efficiency First Year Savings MWh/Yr (Gross at Generation)	218,754,816				
Energy Efficiency First Year Savings MWh/Yr (at Site)	201,540,107				
	PTRC	TRC	UCT	RIM	PCT
Portfolio Cost Effectiveness	1.844	1.676	2.356	0.804	6.032
Levelized Cost ($/kWh)	$ 0.0490	$0.0490	$ 0.0349		
Lifecycle Revenue Impact ($/kWh)	$0.0001299				

Residential Energy Efficiency Programs and Activity

Cool Cash (Schedule 113)

The residential Cool Cash program provides incentives for the purchase, best practice installation, and proper sizing of high-efficiency unitary electric and evaporative cooling equipment. Incentives are provided to both end use customers and installing contractors. The program has been in operation since 2003 and was relatively unique among Rocky Mountain Power's energy efficiency programs, requiring annual approval by the Commission. This design was originally employed to better manage expectations among installing dealers. Qualifying equipment and incentive levels are adjusted as needed to remain relevant with evolving equipment standards and further improve program performance. The program is delivered by a party program administrator under contract by the Company to manage trade ally education and participation, assist in the evolution of qualifying technologies, and process customer incentive applications.

Table 9

2010 Cool Cash Program Performance					
kWh Savings 2010 (Gross - At Gen)			2,770,031		
kWh Savings 2010 (At Site)			2,521,763		
Total Expenditures			$ 1,490,290		
Incentives Paid (Inlcudes Customer Incentives and Dealer Incentives)			$ 900,725		
	PTRC	TRC	UCT	RIM	PCT
Program Cost Effectiveness	NA	NA	1.253	0.758	NA
Levelized Cost ($/kWh)	$ (0.0150)	$ (0.0105)	$ 0.1517		
Lifecycle Revenue Impact ($/kWh)	$ 0.000008900				

Details of 2010 measure level participation are provided on the following table:

Table 10

Cool Cash Program Participation	Units	kWh/Year Savings (at Site)
Evaporative Cooling - Replacements	509	616,908
Evaporative Cooling - New	415	496,920
Evaporative Cooling - Premium Only	310	364,812
Evaporative Cooling - Premium whole house ducted system	22	24,240
Central Air Conditioning - Sizing + TXV	1,027	271,625
Central Air Conditioning - Properly Installed	1,247	110,538
Central Air Conditioning - 15+SEER/12.5EER	1,680	636,720
Totals	5,210	2,521,763

Major Trends and Activities

Participation increased by 130 percent and savings were 174 percent higher in 2010 than in 2009. Program expenses were also 198 percent higher than in 2009. There was a 400 percent increase in participation in the evaporative cooling measures. Increased focus on training existing equipment dealer and installers to influence the purchasing decision of end-use customer who are adding or replacing cooling equipment have significantly contributed to the program participation and savings.

Cost Effectiveness

The Cool Cash program was cost effective from only the UCT test perspective. Cost benefit ratios for PTRC and TRC are listed as NA since the customer cost per unit have a negative value, so a benefit cost ratio has no meaning. Appendix 1 provides detailed inputs used in the cost effectiveness analysis of this program as well as the measure level cost effectiveness results.

Program Evaluation

A process and impact evaluation was completed in 2010 for the Cool Cash program for years 2007-2008. The result of this evaluation is available on PacifiCorp's website at http://www.pacificorp.com/es/dsm/utah.html

Plans for 2011

Plans for 2011 include conducting a market assessment study to re-evaluate individual measures and their associated savings in order to accurately capture changes occurring in the central air conditioning and evaporative cooling industry and markets. In addition, a continued emphasis will be placed on increasing the participation in the evaporative cooling market as well as overall program participation.

Energy Star New Homes (Schedule 110)

The Energy Star New Homes program provides incentives for new homes and multi-family units meeting the Rocky Mountain Power specific program requirements outlined in the tariff. In its fourth year, the Energy Star New Homes program has shown success in helping improve building practices in the state of Utah. The program is delivered through a third party administrator hired by the Company. To help ensure homes are eligible for program incentives, a home must exceed current energy code by at least 15 percent. The program is typically re-assessed on an annual basis and any changes necessary are filed with the Commission for review and approval.

Program results for 2010 are provided in the following table.

Table 11

2010 Energy Star New Home Program Performance				
kWh Savings 2010 (Gross - At Gen)			6,515,958	
kWh Savings 2010 (At Site)			5,931,957	
Total Expenditures			$ 2,604,552	
Incentives Paid			$ 1,335,170	
	PTRC	TRC	UCT	RIM
Program Cost Effectiveness	1.010	0.918	0.918	0.498
Levelized Cost ($/kWh)	0.1160	0.1160	0.1160	
Lifecycle Revenue Impact ($/kWh)	$0.000052438			
Discounted Participant Payback (Years)	NA			

Details of 2010 measure level participation are provided in Table 12 on the following page:

Table 12

Energy Star New Homes Measure Participation		2010 Totals
Homes	**Units**	**kWh/Yr Savings (at Site)**
Tier 1	1,349	2,364,797
Tier 2	168	387,912
Tier 3	3	9,699
Multi Family Tier 1	408	408,816
Multi Family Tier 2	347	223,815
Total Homes	**2,275**	3,395,039
Plus Measures		
14 SEER HVAC - SF	107	12,840
14 SEER HVAC - MF	0	-
Lighting Upgrade to 90% CFL MF	439	215,110
Lighting Upgrade to 90% CFL SF	799	786,216
Duct Placement	953	72,428
ENERGY STAR Dishwasher	1,373	41,190
ENERGY STAR Light Fixtures - SF	10,056	1,025,712
ENERGY STAR Ceiling Fan	6	510
Whole House Fan System	5	1,800
Single Vent Evap Cooler	2	1,040
High Efficiency Evap Cooler	7	6,440
Ground Source Heat Pumps	24	373,632
Total Plus Measures	**13,771**	2,536,918
Total Homes and Plus Measure Savings		**5,931,957**

Major Trends and Activities

Participation increased by 9 percent in the Single-Family (Tier 1-3) category and energy savings were 15 percent higher in 2010 compared to 2009.

Multi-Family increased by 10 percent and energy savings were 109 percent higher in 2010 compared to 2009. The increase was a result of a tariff change in late 2009 which modified the tier structure and savings per measure for multi-family homes.

Participation in the Plus Measures category increased by 423 percent and energy savings increased by 284 percent due to activity in the Lighting and CFLs measure category. The ENERGY STAR light fixtures increased to 10,056 units in 2010 compared to 510 units in 2009.

Overall energy savings were 76 percent higher in 2010 compared to 2009; overall program expenditures were 80 percent higher.

In terms of program delivery, there were 152 builders with participation agreements in 2010 and all 152 submitted incentive applications during the year. In addition, the program provided training sessions and promotional support including:

- Builder and rater trainings, including the Energy Star Builder Summit, HVAC/duct sealing training, and quarterly training sessions for raters
- Co-operative advertising sponsorship including a television campaign
- Participation in building code workshops

The Company continued sponsorship (along with Questar Gas Company) of International Energy Conservation Code (IECC) code training delivered by the Utah State Energy Program. The 15 training sessions attracted 550 attendees.

Cost Effectiveness

Energy Star New Home program was only cost effective on PTRC. The program has several factors contributing to the lower benefit/cost ratios. Realization rates and Net-to-gross ratios were reduced based on recent program evaluation (2006-2008). Realization rates decreased from 100 to 95 percent and Net-to-gross decreased 80 to 74 percent. The decrease in Net-to-gross suggests that residential building practices continue to improve in Utah due to several influencing factors and changes are warranted to remain ahead of the improvements in standard building practice. Not captured in the program economics are the effects of program spillover or ancillary efficiency gains achieved as a result of the program but not captured in the program's reported savings. The recent program evaluation confirmed these savings were occurring based on customer and builder survey data however the savings were not quantified suggesting that if they had been this would have had a positive or offsetting impact than that of the decrease in Realization and Net-to-gross ratios. Also impacting the program cost-effectiveness in 2010 were higher than normal expenses associated the program's multi-year (2006-2008) third-party evaluation work.

Program Evaluation

A process and impact evaluation was completed in 2010 for the Energy Star New Homes program for years 2006-2008. The results of this evaluation is available on PacifiCorp's website at http://www.pacificorp.com/es/dsm/utah.html

Plans for 2011

The Program will be undergoing the adoption of the National ENERGY STAR New Home Program, Version 2.5 on July 1, 2011 and Version 3.0 on January 1, 2012. The Company is currently assessing the costs and savings of adopting the upcoming versions and developing a redesign of measures and savings to be adopted in 2011 prior to the Version 2.5 deadline. Based on the recent process and impact evaluation, changes will occur in the program administration, measure design and incentive levels to lower program costs and sustaining savings. The Program will also focus on builder retention through the transition period and looking for additional savings opportunities in the new homes market in 2011 and beyond.

Home Energy Savings Program (Schedule 111)

The Home Energy Savings program provides a broad framework to deliver incentives for more efficient products and services installed or received by Utah customers in new or existing homes, multi-family housing units and manufactured homes. The program is delivered through a third party administrator hired by the Company. Program information is available to the public at the Company's energy efficiency Web site at http://www.rockymountainpower.net/env/epi.html.

Eligible program measures include: washing machines, refrigerators, water heaters, dishwashers, lighting (both compact florescent lamps (CFLs) and fixtures), cooling equipment services, and home improvement measures such as insulation and window upgrades. Incentives are provided to customers through two methods: (1) post-purchase application process with incentives paid directly to participating customers, and (2) mid-market (i.e., retailers and manufacturers) buy-downs, for delivery of CFL incentives. Mid-market buy-downs result in lower retail prices for customers at point-of-purchase and involve no direct customer application process.

Program results for 2010 are provided in the following table:

Table 13

2010 Home Energy Savings Program Performance					
kWh/Yr Savings 2010 (Gross - At Gen)			65,590,273		
kWh/Yr Savings 2010 (At Site)			59,711,660		
Expenditures			$ 16,875,685		
Incentives Paid			$ 11,925,710		
	PTRC	TRC	UCT	RIM	PCT
Program Cost Effectiveness	1.197	1.088	1.407	0.586	5.926
Levelized Cost ($/kWh)	$ 0.0975	$ 0.0975	$ 0.0754		
Lifecycle Revenue Impact ($/kWh)	$ 0.00046424				
Discounted Participant Payback (Years)	1.06				

Details of 2010 measure level participation are provided in Table 14 on the following page:

Table 14

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	2,871	2,871	430,847
Clothes Washer-Tier Two (2.0 + MEF)	Units	17,056	17,056	2,902,621
Clothes Washer-Tier One (2.0 - 2.45 MEF)	Units	85	85	11,685
Clothes Washer-Tier Two (2.46 + MEF)	Units	102	102	16,337
CW Recycle	Units	403	403	55,544
Dishwasher	Units	7,085	7,085	148,140
Electric Water Heater	Units	23	23	2,183
Refrigerator	Units	9,314	9,314	812,889
Room AC	Units	247	247	22,553
Room AC Recycling	Units	0	0	0
Insulation: Attic-Tier One	Sq Feet	34,170,786	24,766	7,368,889
Insulation: Attic-Tier Two	Sq Feet	1,884,295	1,427	316,013
Insulation Spiff (Attic insulation + Floor/Wall)	Sq Feet	16	0	0
Insulation: Floor	Sq Feet	4,370	7	10,359
Insulation: Wall	Sq Feet	758,787	905	180,901
Windows	Sq Feet	740,296	5,233	192,274
CAC Tune up	Projects	3,467	3,467	208,498
Duct Sealing-Electric	Projects	38	38	66,498
Duct Sealing-Gas w/AC	Projects	397	397	33,348
Duct Insulation-Electric	Projects	0	0	0
Duct Insulation-Gas	Projects	227	227	98,672
Duct Sealing & Insulation - Electric	Projects	0	0	0
Duct Sealing & Insulation - Gas	Projects	0	0	0
Heat Pump Tune-Up	Projects	0	0	0
Ceiling Fans	Units	578	368	66,942
Fixtures	Units	5,931	2,465	499,182
CFLs-Twisters	Bulbs	1,018,643	101,864	36,665,116
CFLs-Specialty Bulbs	Bulbs	307,481	30,748	9,602,167
Totals		**38,932,498**	**209,098**	**59,711,660**
kWh/Yr Savings at Generation				65,590,273

(Note: CFL Participation is assumed at 10 CFLs per participant.)

Major Trends and Activities:

- On July 19, 2010 the Public Service Commission of Utah issued an order in Docket No. 10-035-T05 approving the Company's proposed changes to the Home Energy Savings program effective September 1, 2010.
- Partnered with Questar Gas for a co-branded advertorial that ran in the Deseret News. There was no cost to Rocky Mountain Power customers.
- Lighting retail partnerships grew from 4 in January 2010 to 14 in December 2010, types of bulbs available increased from 15 in January to 128 in December, and total retail locations went from 20 in January to 200 by December.
- Key strategic retail partnerships were formed with Lowe's, K-Mart, Fresh Market, Dollar Tree, Family Dollar, Smith's, Walgreens and Winco.
- Program tariff changes require proper notification to contractors performing work. A process for communicating these changes was undertaken that included an in-person meeting to exchange information prior to the tariff change and a stream of email and phone calls for on-going notification and support.
- Program moved from part-time to full-time inspectors, resulting in improved contractor relationships and quality of contacts. In addition, significant inspection process improvements were made allowing automated tracking and reporting capabilities to support multiple program needs.
- 42 HVAC contractors received program training in 2010.

Cost Effectiveness

The program was cost effective from all perspectives except the Ratepayer Impact Test. The cost effectiveness analysis utilized ex ante per unit deemed planning estimates for savings. Appendix 1 provides detailed inputs used in the cost effectiveness analysis of this program as well as measure group cost effectiveness results.

Program Evaluation

A process and impact evaluation was completed in 2010 for the Home Energy Savings program for years 2006 to 2008. The result of this evaluation is available on PacifiCorp's website at http://www.pacificorp.com/es/dsm/utah.html.

Plans for 2011

Build a stronger, localized, mid-market delivery

- Provide strong, localized merchandising
- Generate cross-sales of products
- Motivate partners (e.g. retailers, contractors and manufacturers, etc.) through ongoing evaluation and rewards

- Offer business development and sales support and materials
- Ensure 100 percent tariff compliance among trade partners

Make the customer the focal point

- Reach customers through community-specific messaging
- Engage customers through the Rocky Mountain Power partner programs
- Reduce participation barriers through online applications

Strategically manage the market

- Focus on lighting
- Manage the measure lifecycle

See ya later, refrigerator® (Schedule 117)

The Utah refrigerator recycling program See ya later, refrigerator® is available to Utah residential customers through a Company contract with a third-party program administrator. Older refrigerators and freezers which are less efficient, yet operational, are taken out of use permanently and recycled in an environmentally responsible manner. The program's objective is to permanently retire these older and less efficient refrigerators and freezers from the market and recycle the units in order to avoid their re-entry or resale in the secondary appliance market. Program awareness is generated through mass media advertising channels as well as Company channel communications such as the program's website, bill stuffers, and customer newsletters. In addition to free pick-up and a nominal cash incentive, participants receive an energy efficiency packet consisting of ENERGY STAR®-certified compact fluorescent light bulbs, a refrigerator/freezer thermometer, and energy education materials.

Program results and details of participation for 2010 are provided in the following tables:

Table 15

2010 See ya later, refrigerator® Program Performance					
kWh Savings 2010 (Gross - At Gen)			22,419,604		
kWh Savings 2010 (At Site)			20,410,218		
Expenditures			$ 2,369,803		
Incentives Paid			$ 466,470		
	PTRC	TRC	UCT	RIM	PCT
Program Cost Effectiveness	2.167	1.970	1.582	0.511	NA
Levelized Cost ($/kWh)	$ 0.0235	$ 0.0235	$ 0.0293		
Lifecycle Revenue Impact ($/kWh)	$ 0.000162993				
Discounted Participant Payback (years)	NA				

Table 16

2010 See ya later, refrigerator® Results

Refrigerator Recycling Measure	**Unit Count**	**Per Unit Savings (kWh/Yr)**	**Gross Savings (kWh/Yr)**
Refrigerator	12,490	1,149	14,351,010
Freezer	3,059	1,590	4,863,810
Total Units Recycled	**15,549**		**19,214,820**
Energy Savings Kits	14,758	81	1,195,398
		Total (At Site)	**20,410,218**
		Total (At Generation)	**22,419,604**

Major Trends and Activities

Participation for 2010 was 5 percent lower than in 2009, as the economic slowdown continued to impact program participation. However, the program did deliver more than 22,000 MWh of first year energy savings during the year, with program expenditures 1 percent higher than in 2009.

In terms of the impact of the program on the environment, processing the 15,549 units resulted in the recycling of more than 1.94 million pounds of metal, 388,700 pounds of plastics, 23.3 tons of tempered glass and the capture, recovery or destruction of more than 23,325 lbs of ozone depleting Chlorofluorocarbons ("CFC") and Hydrofluorocarbons ("HFC"), commonly used in refrigerants and blowing agents for polyurethane foam insulation. The Carbon Dioxide ("CO2") and Equivalent carbon dioxide ("CO2e") avoided from the atmosphere was in excess of 71,000 tons.

Cost Effectiveness

The 2010 See ya later, refrigerator® program was cost effective from all cost tests except the rate impact test. There are no participant costs, so results of that test were not calculated. The cost effectiveness analysis utilized evaluated results (ex-post) for net to gross ratios as well as reported kWh savings. Appendix 1 provides detailed inputs used in the cost effectiveness analysis of this program as well as measure level cost effectiveness results.

Program Evaluation

A process and impact evaluation was recently completed for the See ya later, refrigerator® program for years 2006-2008. The result of this evaluation is available on PacifiCorp's website at http://www.pacificorp.com/es/dsm/utah.html.

Plans for 2011

The marketing campaign will incorporate a four-pronged approach to reaching customers and promoting the program, each of which are discussed in further detail below:

- Mass media/advertising
- Utility marketing channels
- Public relations
- Retail marketing/promotions

Mass Media Tactics

Television, newspaper and digital media will be utilized to execute the 2011 media plan for the See ya later, refrigerator® program:

Utility Marketing Channels

Utility involvement is a crucial component to marketing a successful appliance recycling program. The program administrator will explore all viable utility marketing channels available in 2011, including:

- Bill inserts – Run bill inserts in March, April, June and August.
- eBill Messaging – Pilot providing a static image to be embedded in an ebill.
- Take One Tear Pads - Tear pads marketing the program will be developed for outreach events, retail stores, bill pay locations and other uses. The tear pads will provide details on the program, how to participate and contact information.

Public Relations

The third party administrators public relations activities for the See ya later, refrigerator® program will focus on the development of several key media opportunities strategically designed to stimulate interest in, and generate momentum for, the program.

Retail Partnerships

The third party administrator has developed partnerships with retail outlets in Utah and will continue to expand this strategy to target customers who are looking to purchase a new refrigerator and/or freezer while having their old one picked up at the same time the new one is delivered. These customers also receive the $30 program incentive.

Low Income Weatherization (Schedule 118)

The low income weatherization program provides weatherization and efficient appliance upgrades to income-qualified households on a no-cost basis. The program is administered by the Utah Department of Community and Culture ("DCC") who in addition to funding from the Company receives funds from the federal government. The federal monies can be used for household repairs as well as weatherization and other low income program services. This partnership allows for leveraging of Company funding with federal grants resulting in more comprehensive assistance to qualified households and a greater number of homes served.

The Company began working with local agencies in the delivery of program services in 1992. Recognizing that the majority of households in Rocky Mountain Power's service territory did not heat their homes with electricity, making the weatherization services component of the program less relevant to the Company's customers, the program was revised in 2005 to make it more applicable. Today, the majority of Company funding provided to DCC in support of program services is targeted towards the cost of electric efficiencies related to lighting and refrigerators. Since 1992, Rocky Mountain Power has provided funding on measures installed in over 4,300 homes.

The program is available to income qualifying customers who either own or rent single-family homes, manufactured homes or apartments.

Table 17 summarizes program activities in 2010. Expenditures of $258,422 were paid by Rocky Mountain Power in support of the program. Of those expenditures, $221,881 is attributed to agency incentives and administrative fees, with the balance of the costs attributable to utility administration of the program. Funds received by the agency from other sources are not included in Table 17. The program was cost effective on both a total resource cost basis and a utility cost basis. A program evaluation is in progress and will be finalized in 2011. The cost for this program was $203 per home.

Table 17

Low Income Weatherization Performance - Utah	
kWh/Yr Savings (at Site)	1,917,712
kWh/Yr Savings (at Gen)	2,106,511
Expenditures - Total	$ 258,422
Participation - Total # of Completed/Treated Home	1,273
Number of Homes Receiving Specific Measures	
Efficicent Furnace Fans	197
Compact Fluorescent Light bulbs	23,268
Replacement Refrigerators	495

	PTRC	TRC	UCT	RIM	PCT
Program Cost Effectiveness	5.887	5.352	5.352	0.824	NA
Levelized Cost ($/kWh)	$ 0.0138	$ 0.0138	$ 0.0138		
Lifecycle Revenue Impact ($/kWh)	$0.0000053				

Non-Residential Energy Efficiency Programs and Activity

Energy FinAnswer (Schedule 125)

The Energy FinAnswer program with the incentive offer has been available to Utah business customers since 2001.

The program provides Company-funded energy engineering, incentives of $0.12 per kWh of first year energy savings and $50 per kW of average monthly demand savings up to a cap of 50 percent of the approved project cost. The program is designed to target comprehensive projects requiring project specific energy savings analysis and operates as a complement to the more streamlined FinAnswer Express program. In addition to customer incentives, the program provides design team honorariums (a finder fee for new construction projects) and design team incentives for new construction projects exceeding current Utah energy code by at least 10 percent.

The summary program results are provided in the following table:

Table 18

2010 Energy FinAnswer Program Performance					
kWh/Yr Savings 2010 (Gross - At Gen)		54,240,744			
kWh/Yr Savings 2010 (At Site)		50,698,242			
Total Expenditures		$ 7,769,668			
Incentives Paid		$ 5,277,755			
	PTRC	TRC	UCT	RIM	PCT
Program Cost Effectiveness	2.384	2.167	4.365	1.096	3.460
Levelized Cost ($/kWh)	$ 0.0462	$ 0.0462	$ 0.0229		
Lifecycle Revenue Impact ($/kWh)	$ (0.00000833)				
Discounted Participant Payback (Years)	3.2				

Energy engineering for customer projects, supporting both projects with 2010 reported savings and projects that will generate savings in future periods, accounted for approximately $1,572,000 of the total program expenditures. Energy engineering is performed by third party firms with professional services contracts in place with the Company. In 2010, Rocky Mountain Power had contracts with 24 firms (several with multiple office locations) to deliver these services in Utah and throughout the Company territory. Firms are selected through a competitive process based on verifiable experience with specific technology and customer groups. Work assignments at customer locations align with a firm's demonstrated expertise.

Details of 2010 savings by type of measure are provided on the following table:

Table 19

Energy FinAnswer kWh Savings by Measure Type			
	# of Projects	kWh/ Yr. Savings (At Site)	% of kWh Savings
Additional Measures	13	5,514,684	10.9%
Building Shell	17	795,466	1.6%
Compressed Air	22	9,256,794	18.3%
Controls	11	234,373	0.5%
HVAC	70	12,221,008	24.1%
Lighting	43	7,128,270	14.1%
Motors	20	6,442,050	12.7%
Refrigeration	43	9,105,597	18.0%
Total	239	50,698,242	

Major Trends and Activities

A total of 239 Energy FinAnswer projects were completed in 2010 compared to 166 in 2009. Program specific energy savings decreased by approximately 14 percent compared to 2009, while program expenditures remained approximately the same.

In addition to the program marketing through Rocky Mountain Power customer and community managers, demand-side management program staff, trade allies in concert with the FinAnswer Express program energy consultants, program information was provided at the several energy efficiency events throughout the state in 2010.

Cost Effectiveness

The Energy FinAnswer program was cost effective from all perspectives. Appendix 1 provides inputs used in the cost effectiveness analysis of this program as well as the measure group cost effectiveness results. The appendix also provides more details on the reporting of kWh savings.

Program Evaluation

A process and impact evaluation was completed in 2010 for the Energy FinAnswer program for years 2005-2008. The results of this evaluation are available on PacifiCorp's website at http://www.pacificorp.com/es/dsm/utah.html.

Plans for 2011

- Continue to monitor actual and forecasted participation and assess the possible introduction of program modifications similar to those implemented in other markets.

- Benchmark other comprehensive program approaches to non-measure savings acquisition such as tune-ups or operation and maintenance savings.

- Closely coordinate program delivery at a customer and program level with additional incentives that become available, especially those available from federal stimulus funding.

- Provide outreach to ensure energy engineering firms providing program services are fully incorporating the impacts for projects required to meet the new code.

FinAnswer Express (Schedule 115)

The FinAnswer Express program is available to Utah business customers who receive electric service on an eligible general service rate schedule. The program is designed to help customers improve the efficiency of their new or replacement lighting, HVAC, and other equipment by providing prescriptive or pre-defined incentives for the most common efficiency measures. The program is designed to operate in conjunction with the Energy FinAnswer program. Although incentives available may vary, the FinAnswer Express program provides incentives for both new construction and retrofit projects.

The program is marketed through a combination of local trade allies who receive support from the Company, program advertising and other company outreach efforts, word of mouth, and through referrals between other business customer programs.

The summary program results are provided in the following table:

Table 20

2010 FinAnswer Express Program Performance					
kWh/Yr Savings 2010 (Gross - At Gen)		39,016,662			
kWh/Yr Savings 2010 (At Site)		35,956,871			
Total Expenditures		$ 5,126,228			
Incentives Paid		$ 3,185,147			
	PTRC	TRC	UCT	RIM	PCT
Program Cost Effectiveness	1.865	1.695	3.656	0.868	3.589
Levelized Cost ($/kWh)	$ 0.0571	$ 0.0571	$ 0.0265		
Lifecycle Revenue Impact ($/kWh)	$ 0.00000799				
Discounted Participant Payback (Years)	3.08				

Details of 2010 savings by type of measure are provided on the following table:

Table 21

FinAnswer Express kWh Savings by Measure Type			
	# of Projects	kWh/ Yr. Savings (At Site)	% of kWh Savings
Building Shell	23	319,563	0.9%
Compressed Air	1	20,856	0.1%
HVAC	162	3,387,306	9.4%
Lighting	732	31,370,303	87.2%
Motors	97	243,289	0.7%
Other	3	17,476	0.0%
Refrigeration	16	598,078	1.7%
Total	**1034**	**35,956,871**	

Major Trends and Activities

In 2010, 1,034 projects were completed compared to 690 in 2009. Program savings were lower than in 2009 but results in any given period are inextricably linked with multiple customer budget and construction cycles. The Energy FinAnswer and FinAnswer Express programs operate as complementary programs for commercial and industrial customers and despite downward economic pressures, the combined 2010 kWh savings from Energy FinAnswer and FinAnswer Express were comparable to the prior year.

Each year, a training event is held for trade allies working with the FinAnswer Express program. In 2010, the event was held on February 4th in Sandy, Utah at the Southtowne Exposition Center. The event was attended by over 300 trade allies and provided information about program updates and changes, recognized outstanding trade allies, and provided technology specific training in targeted breakout sessions.

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 a quarterly educational newsletter. The team also regularly interfaces with manufacturers and distributors of qualifying products to educate and train local dealers, contractors, and service technicians about the program.

In 2010, the Company added content to the web page specifically for trade allies at www.rockymountainpower.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.

In addition to referrals from other programs, marketing by demand-side department project managers and customer and community managers, and on-going sales efforts by vendors of high efficiency equipment, program information was also provided at several energy efficiency focused events throughout the state.

Cost Effectiveness

The program is cost effective from all perspectives except the rate impact test. Appendix 1 provides inputs and assumptions used in the cost effectiveness analysis of this program as well as the measure group cost effectiveness results. The appendix also provides a description of kWh savings estimates and tools used to support program implementation and reporting.

Program Evaluation

A process and impact evaluation was completed in 2010 for the FinAnswer Express program for years 2005-2008. The result of this evaluation is available on PacifiCorp's website at http://www.pacificorp.com/es/dsm/utah.html.

Plans for 2011

- Add new measures and measure categories
- Propose changes to comply with code standards and third party specifications
- Monitor actual and forecasted participation and assess the possible introduction of program modifications
- Further develop the trade-ally specific website to provide additional targeted information to trade allies
- Continue to build and expand relationships with key members of the HVAC, lighting, motors, architecture and engineering communities to continue to make the business case for energy efficiency equipment

Re-Commissioning (Schedule 126)

The Re-Commissioning program is designed to help owners target electric savings that can be achieved through a systematic tune-up of existing equipment (i.e., measures that deliver savings through no or low-cost improvements). The focus is on restoring building operations to their original design intent. The program trains and utilizes Re-Commissioning Service Providers ("RSP") to assist customers with their projects.

To maintain program cost-effectiveness, qualifying projects are screened based on electrical usage, building size, type and function, the existing capabilities of building control systems, and the owner's commitment to implement the operational efficiencies identified. If the owner does not implement the operational efficiencies identified through the collaborative process, repayment of some or all of the direct costs of the Re-Commissioning analysis may be required.

This program operates and is marketed in conjunction with the Energy FinAnswer, FinAnswer Express and Self-Direction programs. Projects or measures that do not meet the criteria for the Re-Commissioning program, (i.e. require a capital equipment investment) are referred to one of the other business programs. Conversely, operations and maintenance or tune-up type measures identified in the capital equipment programs are referred to the Re-Commissioning program for services. RSPs are also encouraged to market the program, but most of the leads to date are coming from other channels.

The summary program results are provided in the following table:

Table 22

2010 Recommisioning Program Performance					
kWh/Yr Savings 2010 (Gross - At Gen)		7,909,514			
kWh/Yr Savings 2010 (At Site)		7,231,291			
Total Expenditures		$ 986,414			
Incentives Paid		$ -			
	PTRC	TRC	UCT	RIM	PCT
Program Cost Effectiveness	3.223	2.930	3.486	1.036	15.252
Levelized Cost ($/kWh)	$ 0.0358	$ 0.0358	$ 0.0301		
Lifecycle Revenue Impact ($/kWh)	$ (0.00000073)				
Discounted Participant Payback (Years)	0.40				

Major Trends and Activities

The Re-Commissioning Program experienced a 27 percent decrease in kWh savings in 2010 compared to 2009. Project participation decreased from 31 to 14 projects. While a majority of the participants in the program are from the commercial building sector, there has been increasing participation from the industrial sector. Industrial customers have been interested specifically in compressed air leak reduction and process controls optimization measures.

Cost Effectiveness

The program is cost effective on all tests. Appendix 1 provides inputs and assumptions used in the cost effectiveness analysis of this program, as well as a description of the calculation of reported kWh savings.

Program Evaluation

A process and impact evaluation was completed in 2010 for the Re-Commissioning program for years 2007-2008. The result of this evaluation is available on PacifiCorp's website at http://www.pacificorp.com/es/dsm/utah.html.

Plans for 2011

- On-going project development and completion
- Informal research and needs assessment among industrial customers who have expressed interest in participating in the program
- Benchmarking the program against other similar programs (those delivering "non-measure" savings) across the country to identify best practices
- Evaluate the ongoing effectiveness of Re-Commissioning as a free-standing program
- Review the results of the benchmarking effort, industrial needs assessment and "free standing" analysis for possible program revisions as part of the scheduled process for re-procuring delivery services

Self Direction (Schedule 192)

The Self Direction credit program is available to Utah business customers who meet minimum usage requirements of 5,000,000 kWh per year or have a peak load of at least 1,000 kW in the prior 12 months. Customers are responsible for funding and providing the energy engineering work necessary to document the energy savings. This program is designed to provide another option for business customers who have projects similar to those qualifying for incentives from the Energy FinAnswer or FinAnswer Express programs. Incentives are provided in the form of credits used to offset the Schedule 193 DSM tariff rider charge appearing on the monthly bill and are available for both new construction and retrofit projects. In addition, there is a provision for customers with no cost effective projects at their location to qualify for a credit that may be used to offset a portion of their monthly charge.

The program is primarily marketed through customer and community managers and by referral between other programs for business customers. In addition, a few energy engineers market their services to large customers who may be interested in participating.

The summary program results are provided in the following table:

Table 23

2010 Self Direction Program Performance

kWh/Yr Savings 2010 (Gross - At Gen)		18,185,520			
kWh/Yr Savings 2010 (At Site)		17,160,393			
Expenditures (Does not include Credits)		$ 516,907			
Self Direction Credits Paid in 2010		$ 2,526,837			
Total Program Expenditures		$ 3,043,744			
	PTRC	TRC	UCT	RIM	PCT
Program Cost Effectiveness	3.180	2.890	3.104	1.056	31.209
Levelized Cost ($/kWh)	$ 0.0216	$ 0.0216	$ 0.0201		
Lifecycle Revenue Impact ($/kWh)	$ (0.00000169)				
Discounted Participant Payback (Years)	0.32				

Major Trends and Activities

Twenty four completed projects (projects eligible for 80 percent credits) were approved by the Self-Direction Credit Program Administrator in 2010, an 84 percent increase from 2009 with a 93 percent increase of kWh savings at generation. Participation remains strong from customers who have previously participated in Self Direct program. Credit utilization remains steady in 2010. Increased customer awareness combined with customers who have previously participated has resulted in an overall increase in developing new projects.

Cost Effectiveness

The program is cost effective from all perspectives. Appendix 1 provides inputs and assumptions used in the cost effectiveness analysis of this program. The appendix also provides an explanation of kWh savings estimation and reporting.

Program Evaluation

A process and impact evaluation was recently completed for the Self Direction program for years 2007-2008. The result of this evaluation is available on PacifiCorp's website at http://www.pacificorp.com/es/dsm/utah.html.

Plans for 2011

The Company plans to continue program marketing through customer and community managers and by referral between other programs available for business customers, primarily Energy FinAnswer and FinAnswer Express. In addition energy engineers offer their services directly to large customers who may be interested in participating.

Updated program collateral and program manuals are also planned for 2011.

Summary of 2010 Total Portfolio Results

Table 24

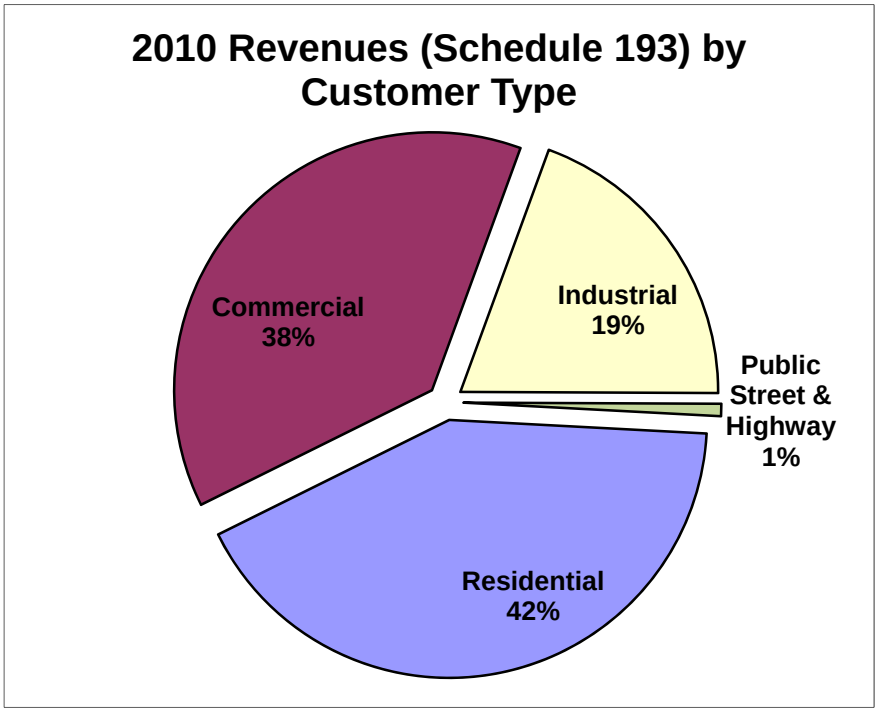
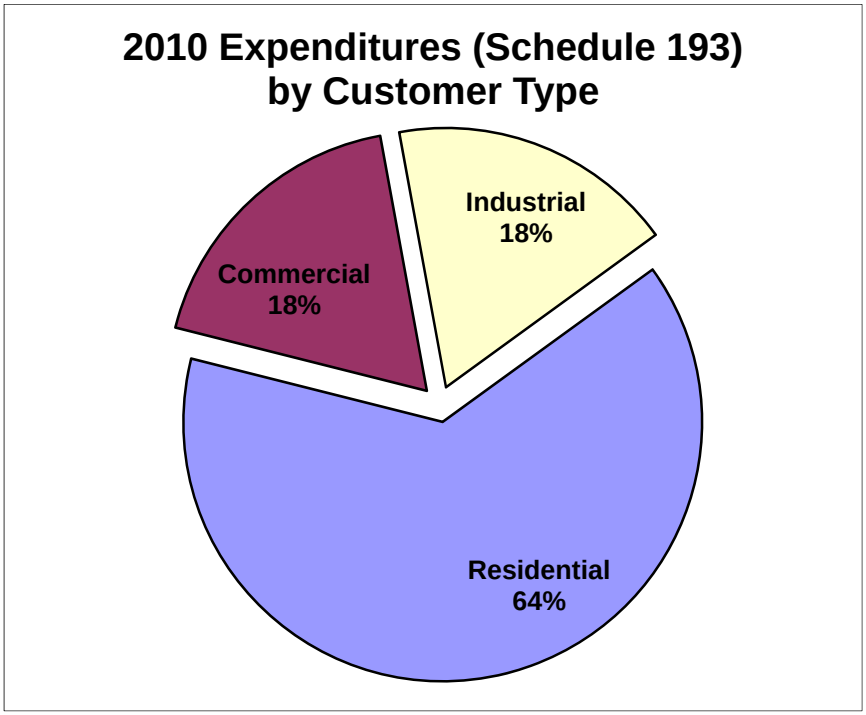
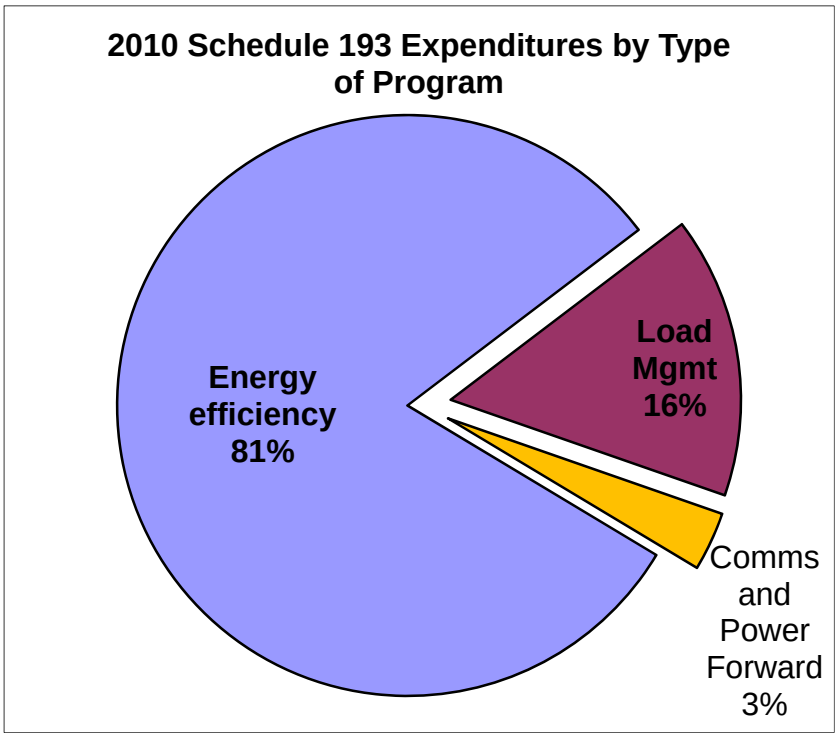


Table 25



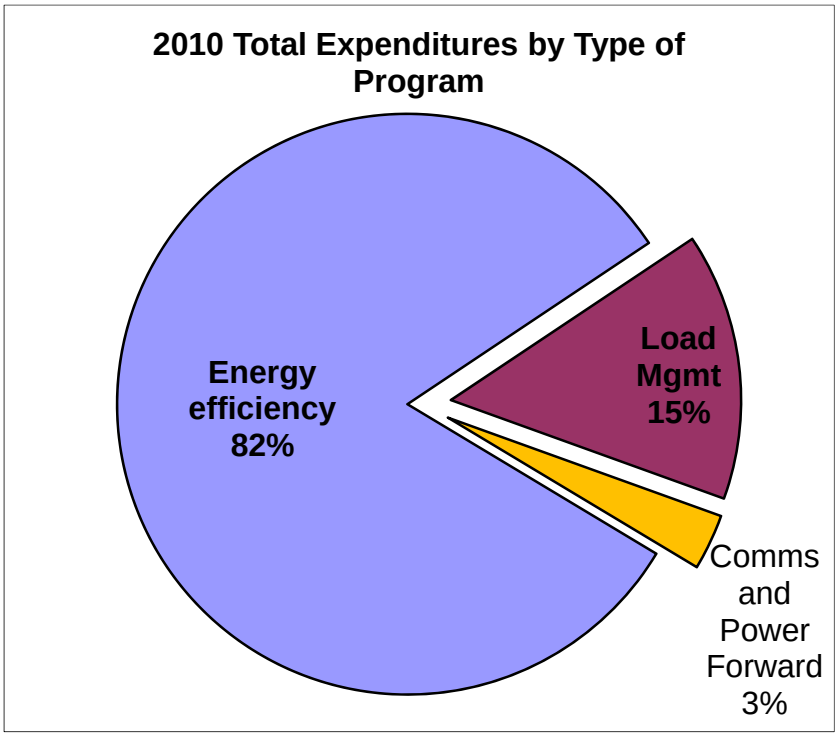
(Note – Table 25 does not include Self Direction Participation Credits but includes Load Management (Cool Keeper for residential and Irrigation Load Control for industrial), Outreach and Communications and Power Forward expenditures as residential costs).

Table 26



(Note – Table 26 does not include Self Direction Credits)

Table 27



(Note – Table 27 includes Schedule 193 expenditures and Self Direction Credits)

Table 28

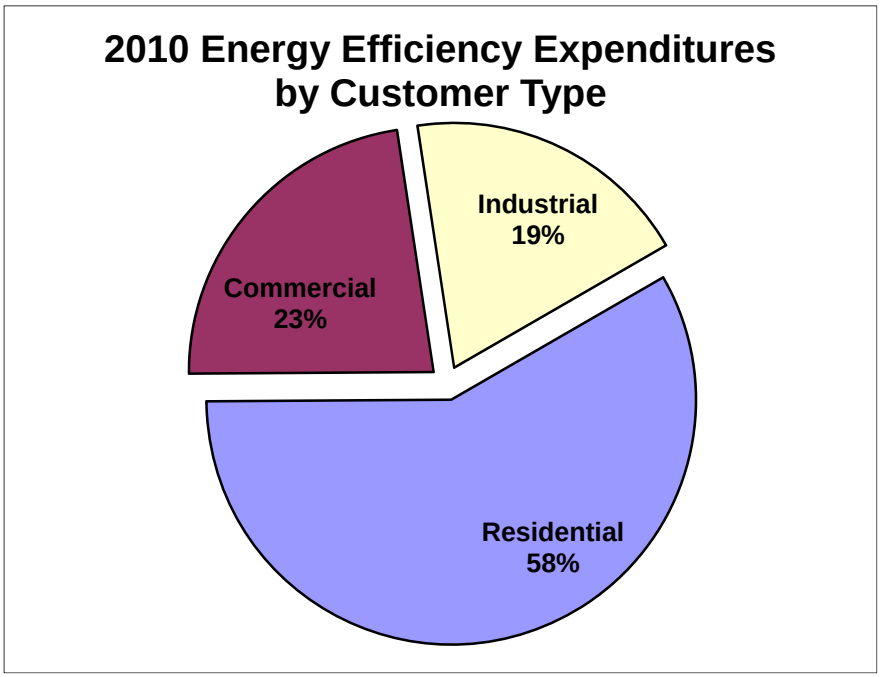
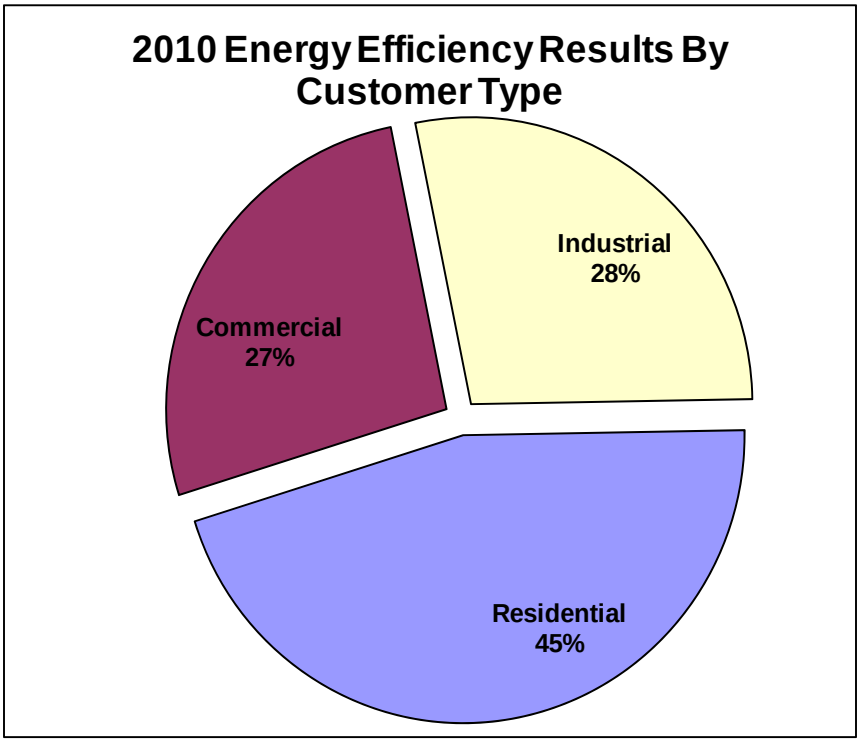


Table 29



Balancing Account Summary

Demand-side management activities are funded by revenue collected through the DSM tariff rider, which is administered through Schedule 193. Expenditures are charged as incurred. The balancing account is the mechanism used for managing the revenue collected and expenses incurred in the provision of DSM resources. The balancing account activity for 2010 is outlined in the following table:

Table 30[6]

	Accumulated Balance as of 12/31/2009	$ 28,379,393				
	Monthly Program Costs - Fixed Assets	Rate Recovery	**Carrying Charge**	Accumulated Balance	AFUDC Rate	Accumulated Balance Total Carrying Costs
January	3,485,418	(5,236,772)	186,796	26,814,835	8.12%	4,451,228
February	2,125,813	(15,519,088)	136,636	13,558,196	8.12%	4,587,864
March	2,855,581	(4,530,592)	86,395	11,969,580	8.12%	4,674,259
April	3,495,607	(4,421,268)	78,150	11,122,069	8.12%	4,752,409
May	3,276,506	(4,506,204)	71,362	9,963,732	8.12%	4,823,771
June	2,833,434	(5,064,297)	60,095	7,792,964	8.12%	4,883,866
July	3,843,360	(6,308,593)	44,556	5,372,287	8.12%	4,928,422
August	4,419,002	(7,149,629)	27,214	2,668,874	8.12%	4,955,636
September	5,243,760	(6,200,231)	14,878	1,727,282	8.12%	4,970,514
October	4,691,280	(5,183,174)	10,061	1,245,449	8.12%	4,980,575
November	4,876,581	(4,553,045)	6,748	1,575,732	8.12%	4,987,323
December	5,736,184	(5,158,262)	12,618	2,166,272	8.12%	4,999,941
2010 totals	46,882,525	(73,831,154)	735,509			
	Change in balancing account in 2010	$ (26,213,120)				

Column Explanations:

Monthly Program Costs – Fixed Assets: Monthly expenditures for all DSM program activities.

Rate Recovery: Revenue collected through Schedule 193, DSM tariff rider.

Carrying Charge: Monthly carrying charge based on "Accumulated Balance" of the account.

Accumulated 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.

AFUDC Rate: The carrying charge rate applied to the accumulated balance. AFUDC means Allowance for Funds Used During Construction.

Accumulated Balance Total Carrying Costs: Total net carrying charges paid on the account since inception of the balancing account.

[6] Amount recorded in February Rate Recovery consists of $4,669,087.75 DSM tariff rider recovery and $10,850,000 SMUD offset. Refer to Docket No. 09-035-T08.

At the beginning of 2010, the unfunded balance was approximately $28.4 million and the average collection rate was 4.6 percent. On December 9, 2010 the company issued a filing to propose a reduction to the Schedule 193 collection rate. At current rates, it was expected that the DSM tariff rider would collect approximately $70.5 million during the twelve months ended December 2011. The Company proposed through this filing to set Schedule 193 rates at a level that would collect approximately $57.0 million during the same time period; a reduction of $13.5 million, or 19.1 percent to Schedule 193. The current DSM tariff rider was approximately 4.6 percent of customer bills; the Company's proposal reduced the collection rate to approximately 3.7 percent of customer bills. On December 21, 2010 in Docket No. 10-035-T14, the Commission approved the Company's request to reduce the DSM tariff rider with an effective date of January 1, 2011.

The unfunded balance at the end of 2010 was $2.2 million.

Cost Effectiveness

Introduction

The cost effectiveness of individual programs operated by the Company for 2010 are calculated using actual expenditures and reported savings. Cost-effectiveness is provided at the individual program, load management portfolio, residential energy efficiency portfolio, non-residential energy efficiency portfolio, combined energy efficiency portfolio, and overall demand-side management program portfolio levels. Deemed savings estimates, where applicable, were the same as those used in the planning estimates, 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. Net-to-gross assumptions are consistent with planning estimates and/or program evaluations. 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 cost/benefit analysis of the load management programs are based on the avoided value of peak or capacity investments. For purposes of calculating program cost-effectiveness, no energy savings are included for the load management programs, only a shift of when the energy is used away from the peak load hours. The five California Standard Practice Manual cost effectiveness tests were utilized in the cost benefit analysis for both energy efficiency and load management programs.

Key Assumptions for Cost Effectiveness Calculations:

Cost effectiveness calculations for programs and measures (or measure groups) within each program will be detailed below.

Global assumptions used in all cost effectiveness calculations include:

Key Assumptions for All Cost Effectiveness Studies:

Assumption	Value	Source
Discount Rate	7.40%	2008 IRP
Line Losses (Utah Specific)		
Residential	9.845%	2007 MAC Line Loss Study
Commercial	9.379%	2007 MAC Line Loss Study
Industrial	5.726%	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 DSM portfolio and component sectors were all cost effective on a UCT and TRC basis. Only the Non-residential and Load Management portfolios generated Ratepayer Impact Test results greater than 1.0. 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
2010 Utah Energy Efficiency and Peak Reduction Annual Report

Rocky Mountain Power

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Cost Effectiveness and Program Evaluation

The cost effectiveness of individual programs operated by the Company for 2010 are calculated using actual expenditures and reported savings. Cost-effectiveness is provided at the individual program, load management portfolio, residential energy efficiency portfolio, non-residential energy efficiency portfolio, combined energy efficiency portfolio, and overall demand-side management program portfolio levels.

Energy savings shown in this report are gross savings and the impact of line losses is indicated through designations of the savings as being “at site” or “at generation”. Line losses are based on the Company’s 2007 line loss study. Net-to-gross assumptions are consistent with planning estimates and recent program evaluations. 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 cost/benefit analysis of the load management programs are based on the avoided value of peak or capacity investments. For purposes of calculating program cost-effectiveness, no energy savings are included for the load management programs, only a shift of when the energy is used away from the peak load hours. The five California Standard Practice Manual cost effectiveness tests were utilized in the cost benefit analysis for both energy efficiency and load management programs.

The resultant benefit cost ratios may be used to assess relative sensitivity of input assumptions. For example, benefit cost ratios that are close to 1.0 would be highly sensitive to changes in savings, different customer costs, higher estimates of free-ridership, and variations in avoided costs or a different discount rate.

The Company updates the cost effectiveness results annually based on actual results. Key inputs like net to gross ratios, measure life and deemed savings values will be updated as formal evaluations are completed and during the course of normal program management. Company program managers employ professional judgment informed by input from third-party delivery vendors when key cost effectiveness inputs are changed. Any changes will be noted in future DSM Annual Reports.

Key Assumptions for Cost Effectiveness Calculations:

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

Global assumptions used in all cost effectiveness calculations include:

Key Assumptions for All Cost Effectiveness Studies:

Assumption	Value	Source
Discount Rate	7.40%	2008 IRP
Line Losses (Utah Specific)		
Residential	9.845%	2007 MAC Line Loss Study
Commercial	9.379%	2007 MAC Line Loss Study
Industrial	5.726%	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 following Tables provide details for the key assumptions and inputs for cost effectiveness calculations for each program.

Portfolio and Sector Level Cost Effectiveness

The overall DSM portfolio and component sectors were all cost effective on a Total Resource Cost and Utility Cost basis. Only the Non-residential and Load Management portfolios generated Ratepayer Impact Test results greater than 1.0.

The following table provides the overall portfolio and sector results of all 5 cost effectiveness tests.

2010 Portfolio and Sector Cost Effectiveness Summary					
	Cost Effectiveness Test				
	PTRC	**TRC**	**UCT**	**RIM**	**PCT**
2010 Total Portfolio Including Load Management & Marketing	2.015	1.832	1.821	1.048	7.072
2010 Load Management Portfolio	2.216	2.015	1.491	1.491	NA
2010 Energy Efficiency Portfolio Including Marketing	1.844	1.676	2.356	0.804	6.032
2010 Residential Energy Efficiency Portfolio	1.376	1.251	1.404	0.584	15.295
2010 Non-residential Energy Efficiency Portfolio	2.324	2.113	3.859	1.012	4.152

Portfolio and Segment Level Cost Effectiveness Summaries:

The cost effectiveness results for the portfolio level and segment level are aggregations of the costs and benefits from the component programs. The inputs and assumptions that support these results are contained in the program level cost effectiveness results.

2010 Total Portfolio Including Marketing and Load Control

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	NA	$110,157,824	$222,011,812	$111,853,989	2.015
Total Resource Cost Test (TRC) No Adder	NA	$110,157,824	$201,828,920	$91,671,097	1.832
Utility Cost Test (UCT)	NA	$110,836,887	$201,828,920	$90,992,033	1.821
Rate Impact Test (RIM)		$192,513,554	$201,828,920	$9,315,366	1.048
Participant Cost Test (PCT)		$17,135,890	$121,182,681	$104,046,791	7.072
Lifecycle Revenue Impacts ($/kWh)				NA	

2010 Energy Efficiency Portfolio Including Marketing

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0490	$59,438,048	$109,608,485	$50,170,437	1.844
Total Resource Cost Test (TRC) No Adder	0.0490	$59,438,048	$99,644,077	$40,206,030	1.676
Utility Cost Test (UCT)	0.0349	$42,302,157	$99,644,077	$57,341,920	2.356
Rate Impact Test (RIM)		$123,978,824	$99,644,077	($24,334,747)	0.804
Participant Cost Test (PCT)		$17,135,890	$103,367,728	$86,231,837	6.032
Lifecycle Revenue Impacts ($/kWh)				$0.0001299036	

2010 C&I Energy Efficiency Portfolio

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0398	$31,479,735	$73,153,724	$41,673,989	2.324
Total Resource Cost Test (TRC) No Adder	0.0398	$31,479,735	$66,503,386	$35,023,650	2.113
Utility Cost Test (UCT)	0.0218	$17,235,285	$66,503,386	$49,268,101	3.859
Rate Impact Test (RIM)		$65,714,977	$66,503,386	$788,408	1.012
Participant Cost Test (PCT)		$14,244,451	$59,144,286	$44,899,835	4.152
Lifecycle Revenue Impacts ($/kWh)				($0.0000029375)	

2010 Residential Energy Efficiency Portfolio

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0613	$26,490,191	$36,454,761	$9,964,570	1.376
Total Resource Cost Test (TRC) No Adder	0.0613	$26,490,191	$33,140,692	$6,650,501	1.251
Utility Cost Test (UCT)	0.0546	$23,598,752	$33,140,692	$9,541,940	1.404
Rate Impact Test (RIM)		$56,795,726	$33,140,692	($23,655,034)	0.584
Participant Cost Test (PCT)		$2,891,440	$44,223,442	$41,332,002	15.295
Lifecycle Revenue Impacts ($/kWh)				$0.0001262752	

2010 Load Control Portfolio

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder		$50,719,776	$112,403,327	$61,683,551	2.216
Total Resource Cost Test (TRC) No Adder		$50,719,776	$102,184,843	$51,465,067	2.015
Utility Cost Test (UCT)		$68,534,730	$102,184,843	$33,650,113	1.491
Rate Impact Test (RIM)		$68,534,730	$102,184,843	$33,650,113	1.491
Participant Cost Test (PCT)		$0	$17,814,954	$17,814,954	NA
Lifecycle Revenue Impacts ($/kWh)				NA	

Program Level Cost Effectiveness

Irrigation Load Control Program – Schedules 96 and 96A

The following tables outline the primary inputs and assumptions utilized in the cost effectiveness calculations for the Irrigation Load Control program.

Program Inputs - Irrigation Load Control	Value	Source and Notes
Total kW Under Load Control (All contracts)	total KW	2010 UT Load Control Quantitative Review
Average kW Dispatched during irrigation season (At Site)	49,100	2010 Goals report
Average kW Dispatched during irrigation season (At Gen)	51,911	Calculation - Gross up for Line Losses at 5.73%
Benefit Value of Dispatched kW (At Gen)	$ 73.09	2010 Value as determined by agreed upon Valuation Methodology (see notes below) - 2008 IRP
Benefit Value = Avg kW Distpatched multiplied by $73.09	$ 3,794,209	Calculation ($73.09 $/kW * 51,911 kW-Yr)
Program Management and Administration Costs	$ 1,191,541	Annual costs 2010
Incentives	$ 1,321,171	Annual costs 2010
Total Utility Costs	$ 2,512,712	Annual costs 2010
Total Participant Costs	NA	There are no direct participant costs for the program.
Net To Gross Ratio	1.00	Assume 1.0 Net To Gross
Measure Life (Years)	10	Benefit value is NPV of 10 year benfits from avoided generation and market purchases.

Notes:
For cost effectiveness calculations, utilitzed Utah Industrial Line Losses of 5.73%.

2010 Irrigation Load Control

All Measures					
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder		$1,191,541	$4,187,537	$2,995,996	3.51
Total Resource Cost Test (TRC) No Adder		$1,191,541	$3,806,852	$2,615,311	3.19
Utility Cost Test (UCT)		$2,512,712	$3,806,852	$1,294,140	1.52
Rate Impact Test (RIM)		$2,512,712	$3,806,852	$1,294,140	1.52
Participant Cost Test (PCT)		$0	$1,321,171	$1,321,171	NA
Lifecycle Revenue Impacts ($/kWh)					
Discounted Participant Payback (years)					

Cost Effectiveness Inputs

Program kW savings are calculated based on the aggregation of individual meters with load control equipment (both scheduled and dispatchable). Baseline capacity under control at each participating site is calculated in accordance with the methodology stated in the applicable program tariff (Schedule 96 or Schedule 96A) and used in the

calculation of grower participation credits (site value) and in the calculation of the weighted average kW dispatch value or program performance achieved (value at generator). Curtailments/dispatch events are documented and time stamped by hour and month during the control season to arrive at total loads curtailed during each event for purposes of program analysis and reporting.

For benefit determination, the Company analyzed the value of kW savings from the program utilizing the 2008 IRP model. The valuation methodology is consistent with the valuation that was used for the initial program filing and with program valuation in other jurisdictions. The value for 2010 is $73.09/kW-yr at site.

The 2010 kW savings is the weighted average monthly dispatch for the irrigation season (49,100 kW at site or 51,911 kW at generation). This amount is then multiplied by the $73.09 value per kW to determine benefits for the current program year.

The tables below prepared by The Cadmus Group present the cost effectiveness findings of the Utah Irrigation Load Control program based on 2010 costs and savings estimates provided by PacifiCorp in an email dated 3/11/2011. The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan. Cost effectiveness was tested using $73.09/kW. Table 1 lists modeling inputs. The program is cost effective from all perspectives.

Table 1: Irrigation Load Control Inputs

Parameter	Value
Discount Rate	7.4%
Line Loss – Irrigation	5.73%

Table 2: Irrigation Load Control
Annual Program Costs and Savings

	2010
Costs	
Administrative support	$ 1,191,541.00
Participation credits	$ 1,321,171.00
Total program costs	$ 2,512,712.00
Avoided Cost Benefits	
Total avoided MW all days	49,100
Value- $/MW	$73.09
Line Loss	5.73%
Value with line loss	$77.53
Total value of Avoided kW	$3,806,852

Table 3: Avoided Capacity @ $73.09/kW

All Measures					
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder		$1,191,541	$4,187,537	$2,995,996	3.51
Total Resource Cost Test (TRC) No Adder		$1,191,541	$3,806,852	$2,615,311	3.19
Utility Cost Test (UCT)		$2,512,712	$3,806,852	$1,294,140	1.52
Rate Impact Test (RIM)		$2,512,712	$3,806,852	$1,294,140	1.52
Participant Cost Test (PCT)		$0	$1,321,171	$1,321,171	NA
Lifecycle Revenue Impacts ($/kWh)					
Discounted Participant Payback (years)					

Cool Keeper – Schedule 114

Savings Calculations and Reporting

Load under management reported for the Cool Keeper program is based on metered results from the previous program year, multiplied by the average number of participating units in the report year. Metered results are derived from a representative sample of participating sites, what is referred to as the measurement and verification (M&V) group. The M&V group is broken down into two groups, the control group and experimental groups. The control group equipment is allowed to operate in its normal duty cycle whereas the experimental group is controlled as if part of the general population of participating sites. The metered results from these two groups are compared and the delta kW is used in determining program performance for a given dispatch event and in aggregate are averaged to determine the performance during a given control year. The M&V group was constructed and is maintained to be representative of the larger participating network of sites, from average equipment tonnage and housing types to temperature zones. Twenty percent of the M&V sites are rotated each year to maintain robustness of the random sampling and to adjust for any changes needed to preserve a representative metered sample. While reported performance results are based on prior year M&V results multiplied by current participation (lag actual results one year) vendor payments are reconciled at the end of each control season based on the current year's M&V results to preserve the pay for performance nature of the resource.

Cost Effectiveness

Cost effectiveness analysis of the Cool Keeper program was conducted on a program lifecycle basis for program years 2003 to 2013 in order to remove the cost differences from year to year associated with the contractual payment schedule under the pay for performance contract with the program delivery vendor where the cost of the program varies by program year. Looking at the program from an overall contract period perspective is consistent with the method used to evaluate the program when initially approved.

The $/kW-year value used for program benefit determination was $100.62/kW-year in 2010 dollars. This value was determined based on a 10 year discounted 110 MW decrement to the 2008 IRP preferred portfolio. The value includes $23/kW-year associated with deferral of transmission and distribution infrastructure, consistent with the 2008 IRP findings and assumptions.

Annual costs and benefits (historic and future) were adjusted to 2010 dollars for the analysis. The program lifecycle costs and benefits are included in the table below. As a general rule load management programs do not perform as well from a UTC perspective as a result of how customer incentives are treated in the calculation.

The tables below prepared by The Cadmus Group present the cost effectiveness findings of the Utah Cool Keeper program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "Cool Keeper Expenses for 2010 Annual Report CE Analysis (3_15-11)" updated with 2010 information provided in an email dated 3/16/2011. The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan. Cost effectiveness was tested using $100.62/kW. Table 1 lists modeling inputs. The program is cost effective from all perspectives.

Table 1: Cool Keeper Inputs

Parameter	Value
Discount Rate	7.4%
Line Loss – Residential	9.85%
Line Loss – Commercial	9.38%

Table 2: Avoided Capacity @ $100.62/kW

All Measures					
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder		$49,528,235	$108,215,790	$58,687,555	2.18
Total Resource Cost Test (TRC) No Adder		$49,528,235	$98,377,991	$48,849,756	1.99
Utility Cost Test (UCT)		$66,022,018	$98,377,991	$32,355,974	1.49
Rate Impact Test (RIM)		$66,022,018	$98,377,991	$32,355,974	1.49
Participant Cost Test (PCT)			$16,493,783	$16,493,783	NA
Lifecycle Revenue Impacts ($/kWh)					
Discounted Participant Payback (years)					

Cool Cash – Schedule 113

The following tables outline the primary inputs and assumptions utilized in the cost effectiveness calculations for the Cool Cash program.

Reported kWh savings are calculated based on measure level evaluated savings values (ex post) multiplied by measure participation. Sources for the evaluated savings are included in the detailed table below.

Program Inputs - Cool Cash		
Gross kWh/Year Savings (at Site)	2,521,763	Annual results 2010 (Gross at Site) - Calculated as evaluated savings per unit (ex-post) * unit participation.
Program Management and Administration Costs	$ 589,565	Annual costs 2010
Incentives	$ 900,725	Annual costs 2010
Total Utility Costs	$ 1,490,290	Annual costs 2010
Total Participant Costs	$ (879,782)	Deemed incremental cost per unit is estimated by the program administrator - Nexant based on market data and available customer cost data.
Net To Gross Ratio		Varies by measure - see below.
Measure Life		Varies by measure - see below.

Cool Cash

All Measures				AC: IRP 7% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	(0.0105)	($103,642)	$2,054,649	$2,158,291	NA
Total Resource Cost Test (TRC) No Adder	(0.0105)	($103,642)	$1,867,862	$1,971,505	NA
Utility Cost Test (UCT)	0.1517	$1,490,290	$1,867,862	$377,573	1.253
Rate Impact Test (RIM)		$2,464,431	$1,867,862	($596,568)	0.758
Participant Cost Test (PCT)		($1,593,932)	$2,440,288	$4,034,220	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0000089002	
Discounted Participant Payback (years)				NA	

Cool Cash Program Measure Group Inputs and Assumptions

Evaporative Cooler - Replacements	**Value**	**Source and Notes**
Gross kWh/Year Savings (at Site)	616,908	Annual results 2010 (Gross at Site) - Calculated as evaluated savings per unit (ex-post) * unit participation. Unit value is 1,212 kWh/yr.
Program Management and Administration Costs	$ 144,227	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$ 61,675	Annual costs 2010
Total Utility Costs	$ 205,902	Annual costs 2010
Total Participant Costs	$ (1,106,057)	Deeemed incremental cost per unit is estimated by the program administrator - Nexant based on market data and available customer cost data. Value is ($2,173) per unit and is based on a baseline of code compliant compressor cooling system installation.
Net To Gross Ratio	0.223	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
Measure Life (Years)	15	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
2008 IRP Decrement Load Shape		East Side Residential Cooling
Evaporative Cooler - New	**Value**	**Source and Notes**
Gross kWh/Year Savings (at Site)	496,920	Annual results 2010 (Gross at Site) - Calculated as evaluated savings per unit (ex-post) * unit participation. Unit value is 1,212 kWh/yr.
Program Management and Administration Costs	$ 116,175	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$ 133,225	Annual costs 2010
Total Utility Costs	$ 249,400	Annual costs 2010
Total Participant Costs	$ (890,930)	Same deemed cost estimate and methodology as evaporative cooler replacement.
Net To Gross Ratio	0.469	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
Measure Life (Years)	15	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
2008 IRP Decrement Load Shape		East Side Residential Cooling
Evaporative Cooler - Premium Only	**Value**	**Source and Notes**
Gross kWh/Year Savings (at Site)	364,812	Annual results 2010 (Gross at Site) - Calculated as evaluated savings per unit (ex-post) * unit participation. Unit value is 1,212 kWh/yr.
Program Management and Administration Costs	$ 85,290	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$ 196,600	Annual costs 2010
Total Utility Costs	$ 281,890	Annual costs 2010
Total Participant Costs	$ (490,555)	Same deemed cost estimate and methodology as evaporative cooler replacement.
Net To Gross Ratio	0.469	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
Measure Life (Years)	15	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
2008 IRP Decrement Load Shape		East Side Residential Cooling

Evaporative Cooler - Premium Whole House (Ducted)	**Value**		**Source and Notes**
Gross kWh/Year Savings (at Site)		24,240	Annual results 2010 (Gross at Site) - Calculated as evaluated savings per unit (ex-post) * unit participation. Unit value is 1,212 kWh/yr.
Program Management and Administration Costs	$	5,667	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$	25,750	Annual costs 2010
Total Utility Costs	$	31,417	Annual costs 2010
Total Participant Costs	$	-	Deemed incremental cost per unit is estimated by the program administrator - Nexant based on market data and available customer cost data. Assumes installation is same cost as code compliant compressor based coolign system.
Net To Gross Ratio		0.694	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
Measure Life (Years)		15	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
2008 IRP Decrement Load Shape			East Side Residential Cooling
Central AC Sizing and TXV	**Value**		**Source and Notes**
Gross kWh/Year Savings (at Site)		271,625	Annual results 2010 (Gross at Site) - Calculated as evaluated savings per unit (ex-post) * unit participation. Unit value is 265 kWh/yr.
Program Management and Administration Costs	$	63,503	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$	76,850	Annual costs 2010
Total Utility Costs	$	140,353	Annual costs 2010
Total Participant Costs	$	-	Deemed value per unit based on program adminsitrator estimates. No additional participant costs for this measure
Net To Gross Ratio		0.47	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
Measure Life (Years)		15	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
2008 IRP Decrement Load Shape			East Side Residential Cooling
Central AC Charge and Airflow	**Value**		**Source and Notes**
Gross kWh/Year Savings (at Site)		110,538	Annual results 2010 (Gross at Site) - Calculated as evaluated savings per unit (ex-post) * unit participation. Unit value is 89 kWh/yr.
Program Management and Administration Costs	$	25,843	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$	154,625	Annual costs 2010
Total Utility Costs	$	180,468	Annual costs 2010
Total Participant Costs	$	-	Deemed value per unit based on program adminsitrator estimates. No additional participant costs for this measure
Net To Gross Ratio		0.459	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
Measure Life (Years)		10	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
2008 IRP Decrement Load Shape			East Side Residential Cooling

Central Air Conditioning - 15+SEER/12.5EER	Value	Source and Notes
Gross kWh/Year Savings (at Site)	636,720	Annual results 2010 (Gross at Site) - Calculated as evaluated savings per unit (ex-post) * unit participation. Unit value is 379 kWh/yr.
Program Management and Administration Costs	$ 148,859	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$ 252,000	Annual costs 2010
Total Utility Costs	$ 400,859	Annual costs 2010
Total Participant Costs	$ 1,607,760	Deemed incremental cost per unit is estimated by the program administrator - Nexant based on market data and available customer data. Value is $957 per unit.
Net To Gross Ratio	0.464	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
Measure Life (Years)	15	2007 - 2008 Evaporative Cooler and Central Air Conditioning Incentive Program - Cadmus 2010.
2008 IRP Decrement Load Shape		East Side Residential Cooling

The tables below prepared by The Cadmus Group present the cost effectiveness findings of the Utah Cool Cash program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled “UT 2010 Tables and Charts (Draft 3 _15_2011)”. The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan. Cost effectiveness was tested using the 2008 IRP 7% east residential cooling 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: Cool Cash Inputs

Parameter	Value
Discount Rate	7.4%
Line Loss	9.85%
Residential Energy Rate ($/kWh)	$0.0880

Table 2: Cool Cash
Annual Program Costs and Savings

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Evaporative Cooling - Replacements	$147,618	$7,384		$50,900	$205,902	($1,106,057)
Evaporative Cooling - New	$119,452	$5,948		$124,000	$249,400	($890,930)
Evaporative Cooling - Premium Only	$124,223	$4,367		$153,300	$281,890	($490,555)
Evaporative Cooling - Premium whole house ducted system	$10,627	$290		$20,500	$31,417	$0
Central Air Conditioning - Sizing + TXV	$85,802	$3,251.33		$51,300	$140,353	$0
Central Air Conditioning - Charge + Airflow	$116,995	$1,323.13		$62,150	$180,468	$0
Central Air Conditioning - 15+SEER/12.5EER	$141,238	$7,621.49		$252,000	$400,859	$1,607,760
Total	$745,954	$30,185	$0	$714,150	$1,490,290	($879,782)

Table 3: Cool Cash
Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Evaporative Cooling - Replacements	616,908	1.10	681,066	22%	151,877.81	15
Evaporative Cooling - New	496,920	1.10	548,600	47%	257,293.25	15
Evaporative Cooling - Premium Only	364,812	1.10	402,752	69%	279,510.20	15
Evaporative Cooling - Premium whole house ducted system	24,240	1.10	26,761	69%	18,572.11	15
Central Air Conditioning - Sizing + TXV	271,625	1.05	284,935	47%	133,919.27	15
Central Air Conditioning - Charge + Airflow	110,538	1.05	115,954	46%	53,223.05	10
Central Air Conditioning - 15+SEER/12.5EER	636,720	1.05	667,919	46%	309,914.55	15
Total	2,521,763		2,727,988		1,204,310	

Table 4: IRP 7% Load Factor Decrement

All Measures				AC: IRP 7% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	(0.0105)	($103,642)	$2,054,649	$2,158,291	NA
Total Resource Cost Test (TRC) No Adder	(0.0105)	($103,642)	$1,867,862	$1,971,505	NA
Utility Cost Test (UCT)	0.1517	$1,490,290	$1,867,862	$377,573	1.253
Rate Impact Test (RIM)		$2,464,431	$1,867,862	($596,568)	0.758
Participant Cost Test (PCT)		($1,593,932)	$2,440,288	$4,034,220	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0000089002	
Discounted Participant Payback (years)				NA	

Table 5: Evaporative Cooling - Replacements

			AC: IRP 7% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	($951,055)	$262,793	$1,213,848	NA
Total Resource Cost Test (TRC) No Adder	($951,055)	$238,903	$1,189,958	NA
Utility Cost Test (UCT)	$205,902	$238,903	$33,001	1.160
Rate Impact Test (RIM)	$329,089	$238,903	($90,186)	0.726
Participant Cost Test (PCT)	($1,156,957)	$616,026	$1,772,983	NA
Discounted Participant Payback (years)			NA	

Table 6: Evaporative Cooling - New

			AC: IRP 7% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	($765,530)	$445,193	$1,210,723	NA
Total Resource Cost Test (TRC) No Adder	($765,530)	$404,721	$1,170,250	NA
Utility Cost Test (UCT)	$249,400	$404,721	$155,320	1.623
Rate Impact Test (RIM)	$464,939	$404,721	($60,218)	0.870
Participant Cost Test (PCT)	($1,014,930)	$496,210	$1,511,140	NA
Discounted Participant Payback (years)			NA	

Table 7: Evaporative Cooling - Premium Only

			AC: IRP 7% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	($361,965)	$483,635	$845,600	NA
Total Resource Cost Test (TRC) No Adder	($361,965)	$439,668	$801,633	NA
Utility Cost Test (UCT)	$281,890	$439,668	$157,778	1.560
Rate Impact Test (RIM)	$515,285	$439,668	($75,617)	0.853
Participant Cost Test (PCT)	($643,855)	$364,291	$1,008,146	NA
Discounted Participant Payback (years)			NA	

Table 8: Evaporative Cooling - Premium whole house ducted system

			AC: IRP 7% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$10,917	$32,135	$21,218	2.944
Total Resource Cost Test (TRC) No Adder	$10,917	$29,214	$18,297	2.676
Utility Cost Test (UCT)	$31,417	$29,214	($2,203)	0.930
Rate Impact Test (RIM)	$46,051	$29,214	($16,837)	0.634
Participant Cost Test (PCT)	($20,500)	$24,205	$44,705	NA
Discounted Participant Payback (years)			NA	

Table 9: Central Air Conditioning - Sizing + TXV

			AC: IRP 7% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$89,053	$231,720	$142,666	2.602
Total Resource Cost Test (TRC) No Adder	$89,053	$210,654	$121,601	2.365
Utility Cost Test (UCT)	$140,353	$210,654	$70,301	1.501
Rate Impact Test (RIM)	$251,813	$210,654	($41,159)	0.837
Participant Cost Test (PCT)	($51,300)	$257,724	$309,024	NA
Discounted Participant Payback (years)			NA	

Table 10: Central Air Conditioning - Charge + Airflow

			AC: IRP 7% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$118,318	$62,930	($55,388)	0.532
Total Resource Cost Test (TRC) No Adder	$118,318	$57,209	($61,109)	0.484
Utility Cost Test (UCT)	$180,468	$57,209	($123,259)	0.317
Rate Impact Test (RIM)	$203,696	$57,209	($146,487)	0.281
Participant Cost Test (PCT)	($62,150)	$77,697	$139,847	NA
Discounted Participant Payback (years)			NA	

Table 11: Central Air Conditioning - 15+SEER/12.5EER

			AC: IRP 7% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$1,756,619	$536,243	($1,220,376)	0.305
Total Resource Cost Test (TRC) No Adder	$1,756,619	$487,494	($1,269,125)	0.278
Utility Cost Test (UCT)	$400,859	$487,494	$86,635	1.216
Rate Impact Test (RIM)	$653,558	$487,494	($166,064)	0.746
Participant Cost Test (PCT)	$1,355,760	$604,135	($751,625)	0.446
Discounted Participant Payback (years)			-	

Energy Star New Homes – Schedule 110

The following tables outline the primary inputs and assumptions utilized in the cost effectiveness calculations for the Energy Star New Homes program.

Reported kWh savings are calculated based on measure level deemed savings values (ex ante) multiplied by measure participation. Sources for the deemed savings estimates are consistent with the estimates used in past program filings (Advice 08-01 and Advice 09-09).

Program Inputs - Energy Star New Homes		
Gross kWh/Year Savings (at Site)	5,931,957	Annual results 2010 (Gross at Site). Calculated as deemed savings per unit * unit participation. Deemed savings per unit is consistent with the measure level estimates utilized in past filings (Advice 08-01 and Advice 09-09).
Program Management and Administration Costs	$ 1,269,382	Annual costs 2010
Incentives	$ 1,335,170	Annual costs 2010
Total Utility Costs	$ 2,604,552	Annual costs 2010
Total Participant Costs	$ 1,803,315	Deemed costs per unit * unit participation. Deemed costs per unit is from Ecotope Residential New Construction Version 45 - 2008.
Net To Gross Ratio	0.74	Cadmus 2010 Program Evaluation
Measure Life		At program level, it is a weighted average of the measure group inputs.

Energy Star New Homes

All Measures				AC: IRP 46% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.1160	$2,603,835	$2,630,218	$26,383	1.010
Total Resource Cost Test (TRC) No Adder	0.1160	$2,603,835	$2,391,107	($212,728)	0.918
Utility Cost Test (UCT)	0.1160	$2,604,552	$2,391,107	($213,445)	0.918
Rate Impact Test (RIM)		$4,802,538	$2,391,107	($2,411,431)	0.498
Participant Cost Test (PCT)		($717)	$3,212,760	$3,213,477	NA
Lifecycle Revenue Impacts ($/kW				$0.0000524378	
Discounted Participant Payback				NA	

For this cost effectiveness analysis, program savings were grouped into measure groups with similar characteristics and measure lives. The approach is consistent with the analysis provided with Advice Filing 09-09. The measure groups are Building Shell, Lighting, HVAC and Dishwashers. Savings from Whole House measures offered by the program (e.g., Tier 1, Tier 2, etc.) were distributed to Shell and Lighting based on the analysis completed by the program administrator for Advice Filing 09-09.

Energy Star New Homes Program Measure Group Inputs and Assumptions

Building Shell	**Value**	**Source and Notes**
Gross kWh/Year Savings (at Site)	509,256	Annual results 2010 (Gross at Site) for Whole House Measures attributable to Building Shell based on analysis by program administrator ECOS.
Program Management and Administration Costs	$ 108,976	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$ 87,278	Annual Incentives for 2010 for Whole House Measures attributable to Building Shell based on analysis by program administrator ECOS.
Total Utility Costs	$ 196,253	Sum of Program Management and Incentives
Total Participant Costs	$ 77,649	Incremental costs for 2010 for Whole House Measures attributable to Building Shell based on analysis by program administrator ECOS.
Net To Gross Ratio	0.74	Cadmus 2010 Program Evaluation
Measure Life (Years)	44	Consistent with Advice Filing 09-09
2008 IRP Decrement		East Side Residential Whole House

Lighting	**Value**	**Source and Notes**
Gross kWh/Year Savings (at Site)	4,913,331	Annual results 2010 (Gross at Site) for Whole House Measures attributable to Lighting based on analysis by program administrator ECOS plus Lighting specific measures.
Program Management and Administration Costs	$ 1,051,406	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$ 1,073,113	Annual Incentives for 2010 for Whole House Measures attributable to Lighting based on analysis by program administrator ECOS plus Lighting specific measure incentives.
Total Utility Costs	$ 2,124,518	Sum of Program Management and Incentives
Total Participant Costs	$ 1,043,131	Incremental costs for 2010 for Whole House Measures attributable to Lighting based on analysis by program administrator ECOS plus Lighting specific measure costs.
Net To Gross Ratio	0.74	Cadmus 2010 Program Evaluation
Measure Life (Years)	6	Consistent with Advice Filing 09-09
2008 IRP Decrement		East Side Residential Whole House

Air Conditioning	**Value**	**Source and Notes**
Gross kWh/Year Savings (at Site)	468,180	Annual results (# of units) * Deemed savings per unit (Gross At Site) for Air Conditioning specific measures for 2010.
Program Management and Administration Costs	$ 100,186	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$ 161,050	Annual AC Measure Incentives 2010
Total Utility Costs	$ 261,236	Sum of Program Management and Incentives
Total Participant Costs	$ 648,210	Deemed costs per unit * unit participation. Deemed costs per unit is from Ecotope Residential New Construction Version 45 - 2008.
Net To Gross Ratio	0.74	Cadmus 2010 Program Evaluation
Measure Life (Years)	15	Consistent with Advice Filing 09-09
2008 IRP Decrement		East Side Residential Whole House

Dishwasher	Value	Source and Notes
Gross kWh/Year Savings (at Site)	41,190	Annual results (# of units) * Deemed savings per unit (Gross At Site) for Energy Star Dishwasher measure for 2010.
Program Management and Administration Costs	$ 8,814	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$ 13,730	Annual costs 2010
Total Utility Costs	$ 22,544	Annual costs 2010
Total Participant Costs	$ 34,325	Deemed costs per unit * unit participation. Deemed costs per unit is from Ecotope Residential New Construction Version 45 - 2008.
Net To Gross Ratio	0.74	Cadmus 2010 Program Evaluation
Measure Life (Years)	12	Consistent with Advice Filing 09-09
2008 IRP Decrement		East Side Residential Whole House

The tables below prepared by The Cadmus Group present the cost effectiveness findings of the Utah Energy Star New Homes program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "UT 2010 Tables and Charts (Draft 3 _15_2011)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan. Cost effectiveness was tested using the 2008 IRP 46% east residential whole house load factor decrement. Table 1 lists modeling inputs. The program is cost effective from the TRC perspective. 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 Star New Homes
Inputs

Parameter	Value
Discount Rate	7.4%
Line Loss	9.85%
Residential Energy Rate ($/kWh)	$0.0880

Table 2: Energy Star New Homes
Annual Program Costs and Savings

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Shell	$102,615	$6,361		$87,278	$196,253	$57,460
AC	$94,338	$5,848		$161,050	$261,236	$479,675
Lighting	$990,034	$61,372		$1,073,113	$2,124,518	$771,917
Dishwasher	$8,300	$515		$13,730	$22,544	$25,401
Total	$1,195,286	$74,096	$0	$1,335,170	$2,604,552	$1,334,453

Table 3: Energy Star New Homes
Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Shell	509,256	0.95	483,793	74%	358,007	44
AC	468,180	0.95	444,771	74%	329,131	15
Lighting	4,913,331	0.95	4,667,665	74%	3,454,072	6
Dishwasher	41,190	0.95	39,131	74%	28,957	12
Total	5,931,957		5,635,359		4,170,166	

Table 4: IRP 46% Load Factor Decrement

All Measures				AC: IRP 46% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.1160	$2,603,835	$2,630,218	$26,383	1.010
Total Resource Cost Test (TRC) No Adder	0.1160	$2,603,835	$2,391,107	($212,728)	0.918
Utility Cost Test (UCT)	0.1160	$2,604,552	$2,391,107	($213,445)	0.918
Rate Impact Test (RIM)		$4,802,538	$2,391,107	($2,411,431)	0.498
Participant Cost Test (PCT)		($717)	$3,212,760	$3,213,477	NA
Lifecycle Revenue Impacts ($/kW				$0.0000524378	
Discounted Participant Payback				NA	

Table 5: Shell

			AC: IRP 46% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$166,436	$845,901	$679,465	5.082
Total Resource Cost Test (TRC) No Adder	$166,436	$769,001	$602,565	4.620
Utility Cost Test (UCT)	$196,253	$769,001	$572,748	3.918
Rate Impact Test (RIM)	$724,371	$769,001	$44,630	1.062
Participant Cost Test (PCT)	($29,818)	$731,946	$761,763	NA
Discounted Participant Payback (years)			NA	

Table 6: AC

	AC: IRP 46% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$579,861	$438,132	($141,729)	0.756
Total Resource Cost Test (TRC) No Adder	$579,861	$398,302	($181,560)	0.687
Utility Cost Test (UCT)	$261,236	$398,302	$137,066	1.525
Rate Impact Test (RIM)	$540,936	$398,302	($142,634)	0.736
Participant Cost Test (PCT)	$318,625	$402,296	$83,671	1.263
Discounted Participant Payback (years)			10.90	

Table 7: Lighting

	AC: IRP 46% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$1,823,323	$1,323,211	($500,112)	0.726
Total Resource Cost Test (TRC) No Adder	$1,823,323	$1,202,919	($620,404)	0.660
Utility Cost Test (UCT)	$2,124,518	$1,202,919	($921,599)	0.566
Rate Impact Test (RIM)	$3,493,930	$1,202,919	($2,291,011)	0.344
Participant Cost Test (PCT)	($301,195)	$2,048,370	$2,349,565	NA
Discounted Participant Payback (years)			(0.79)	

Table 8: Dishwasher

	AC: IRP 46% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$34,215	$22,973	($11,241)	0.671
Total Resource Cost Test (TRC) No Adder	$34,215	$20,885	($13,330)	0.610
Utility Cost Test (UCT)	$22,544	$20,885	($1,659)	0.926
Rate Impact Test (RIM)	$43,301	$20,885	($22,416)	0.482
Participant Cost Test (PCT)	$11,671	$30,148	$18,478	2.583
Discounted Participant Payback (years)			3.89	

Home Energy Savings Program – Schedule 111

The following tables outline the primary inputs and assumptions utilized in the cost effectiveness calculations for the Home Energy Savings program.

Reported kWh savings are calculated based on measure level deemed savings values (ex ante) multiplied by measure participation. Sources for the deemed savings estimates are included in the detailed table below.

Program Inputs - Home Energy Savings		
Gross kWh/Year Savings (at Site)	59,711,660	Annual results 2010 (Gross at Site). Calculated as deemed savings per unit * unit participation. Deemed savings per unit is from a variety of sources, including Regional Technical Forum, Energy Star and measure specific analysis performed by the program administrator. More detail is available at the measure group level.
Program Management and Administration Costs	$ 4,949,975	Annual costs 2010
Incentives	$11,925,710	Annual costs 2010
Total Utility Costs	$16,875,684	Annual costs 2010
Total Participant Costs	$19,974,282	Deemed costs per unit * unit participation. Deemed costs per unit is from a variety of sources, including Regional Technical Forum, Energy Star and analysis of invoices submitted with incentive applications. Developed and maintained by program administrator - PECI.
Net To Gross Ratio	0.845	Utah Homed Energy Savings Program Evaluation 2006-2008 Cadmus 2010
Measure Life		Consistent with 2010 advice filing

All Measures				AC: IRP 46% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0975	$21,828,243	$26,123,895	$4,295,652	1.197
Total Resource Cost Test (TRC) No Adder	0.0975	$21,828,243	$23,748,995	$1,920,752	1.088
Utility Cost Test (UCT)	0.0754	$16,875,684	$23,748,995	$6,873,311	1.407
Rate Impact Test (RIM)		$40,511,293	$23,748,995	($16,762,298)	0.586
Participant Cost Test (PCT)		$4,952,559	$29,347,178	$24,394,620	5.926
Lifecycle Revenue Impacts ($/kWh)				$0.0004642405	
Discounted Participant Payback (years)				1.06	

Home Energy Savings Program Measure Group Inputs and Assumptions:

Lighting (Includes CFLs, Fixtures and Ceiling Fans)	**Value**	**Source and Notes**
Gross kWh/Year Savings (at Site)	46,833,407	Annual results 2010 (Gross at Site) based on measure level savings from Energy Star savings calculator 2008 and RTF 2007
Program Management and Administration Costs	$ 584,438	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$ 1,554,383	Annual costs 2010
Total Utility Costs	$ 2,138,822	Annual costs 2010
Total Participant Costs	$ 5,219,505	Deemed based on RTF estimates developed and maintained by program administrator - PECI.
Net To Gross Ratio	0.845	Utah Homed Energy Savings Program Evaluation 2006-2008 Cadmus 2010
Measure Life (Years)	5	Consistent with 2010 advice filing
2008 IRP Decrement		East Side Residential Whole House

Appliances (Clothes Washers, Dishwasher, Water Heater, Refrigerator)	**Value**	**Source and Notes**
Gross kWh/Year Savings (at Site)	4,402,800	Annual results 2010 (Gross at Site) based on measure level savings from RTF PTR Software 2007
Program Management and Administration Costs	$ 1,492,484	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$ 1,781,140	Annual costs 2010
Total Utility Costs	$ 3,273,624	Annual costs 2010
Total Participant Costs	$ 5,519,450	Deemed based on RTF and Energy Star estimates developed and maintained by program administrator - PECI.
Net To Gross Ratio	0.845	Utah Homed Energy Savings Program Evaluation 2006-2008 Cadmus 2010
Measure Life (Years)	14	Consistent with 2010 advice filing
2008 IRP Decrement		East Side Residential Whole House

Shell Measures (Insulation and Windows)	**Value**	**Source and Notes**
Gross kWh/Year Savings (at Site)	8,068,437	Annual results 2010 (Gross at Site) based on measure level inputs. (RTF for insulation projects completed prior to June 1, 2010. For projects completed after June 1, 2010 savings based on revised modeling described in Advice 09-04 Home Energy Saver simulation tool analysis. Windows based on RTF data)
Program Management and Administration Costs	$ 2,735,080	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$ 8,047,915	Annual costs 2010
Total Utility Costs	$ 10,782,995	Annual costs 2010
Total Participant Costs	$ 8,360,093	Windows deemed based on RTF. Insulation based on application analysis.
Net To Gross Ratio	0.845	Utah Homed Energy Savings Program Evaluation 2006-2008 Cadmus 2010
Measure Life (Years)	30	Consistent with 2010 advice filing
2008 IRP Decrement		East Side Residential Whole House

HVAC (AC and Heat Tune ups, Duct Sealing, Duct Insulation)	Value	Source and Notes
Gross kWh/Year Savings (at Site)	407,016	Annual results 2010 (Gross at Site) based on measure level inputs based on program administrator research utilizing sources including Energy Trust of Oregon 2007, and RTF PTR Software Version 1.0 + Research by Gary Smith 2006.
Program Management and Administration Costs	$ 137,972	Allocated percentage (based on kWh contribution) of non -incentive costs for 2010.
Incentives	$ 542,272	Annual costs 2010
Total Utility Costs	$ 680,244	Annual costs 2010
Total Participant Costs	$ 875,234	Deemed incremental costs for HVAC measures from multiple sources. Tune-ups & heat pumps (average cost from customer application). Duct sealing & insulation - PTCS/RTF. Developed and maintained by program administrator - PECI.
Net To Gross Ratio	0.845	Utah Homed Energy Savings Program Evaluation 2006-2008 Cadmus 2010
Measure Life (Years)	14	Consistent with 2010 advice filing
2008 IRP Decrement		East Side Residential Whole House

The tables below prepared by The Cadmus Group present the cost effectiveness findings of the Utah Home Energy Savings program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "UT 2010 Tables and Charts (Draft 3 _15_2011)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan. Cost effectiveness was tested using the 2008 IRP 46% east 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: Home Energy Savings
Inputs

Parameter	Value
Discount Rate	7.4%
Line Loss	9.85%
Residential Energy Rate ($/kWh)	$0.0880

Table 2: Home Energy Savings
Annual Program Costs and Savings

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Lighting	$533,053	$51,385		$1,554,383	$2,138,822	$4,410,481
Appliance	$1,361,261	$131,223		$1,781,140	$3,273,624	$4,663,935
Shell	$2,494,604	$240,476		$8,047,915	$10,782,995	$7,064,279
HVAC	$125,841	$12,131		$542,272	$680,244	$739,573
Total	$4,514,759	$435,216	$0	$11,925,710	$16,875,684	$16,878,268

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	46,833,407	0.99	46,365,073	85%	39,178,487	5
Appliance	4,402,800	1.00	4,402,800	85%	3,720,366	14
Shell	8,068,437	0.72	5,809,275	85%	4,908,837	30
HVAC	407,016	1.00	407,016	85%	343,929	14
Total	59,711,660		56,984,164		48,151,618	

Table 4: IRP 46% Load Factor Decrement

All Measures				AC: IRP 46% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0975	$21,828,243	$26,123,895	$4,295,652	1.197
Total Resource Cost Test (TRC) No Adder	0.0975	$21,828,243	$23,748,995	$1,920,752	1.088
Utility Cost Test (UCT)	0.0754	$16,875,684	$23,748,995	$6,873,311	1.407
Rate Impact Test (RIM)		$40,511,293	$23,748,995	($16,762,298)	0.586
Participant Cost Test (PCT)		$4,952,559	$29,347,178	$24,394,620	5.926
Lifecycle Revenue Impacts ($/kWh)				$0.0004642405	
Discounted Participant Payback (years)				1.06	

Table 5: Lighting

Lighting			AC: IRP 46% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$4,994,919	$11,979,664	$6,984,745	2.398
Total Resource Cost Test (TRC) No Adder	$4,994,919	$10,890,604	$5,895,684	2.180
Utility Cost Test (UCT)	$2,138,822	$10,890,604	$8,751,782	5.092
Rate Impact Test (RIM)	$16,642,945	$10,890,604	($5,752,341)	0.654
Participant Cost Test (PCT)	$2,856,098	$17,339,042	$14,482,944	6.071
Discounted Participant Payback (years)			0.75	

Table 6: Appliance

Appliance			AC: IRP 46% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$6,156,419	$3,403,041	($2,753,378)	0.553
Total Resource Cost Test (TRC) No Adder	$6,156,419	$3,093,674	($3,062,746)	0.503
Utility Cost Test (UCT)	$3,273,624	$3,093,674	($179,950)	0.945
Rate Impact Test (RIM)	$6,254,608	$3,093,674	($3,160,934)	0.495
Participant Cost Test (PCT)	$2,882,795	$3,794,723	$911,927	1.316
Discounted Participant Payback (years)			9.72	

Table 7: Home Improvement

Home Improvement			AC: IRP 46% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$9,799,359	$10,309,735	$510,375	1.052
Total Resource Cost Test (TRC) No Adder	$9,799,359	$9,372,486	($426,873)	0.956
Utility Cost Test (UCT)	$10,782,995	$9,372,486	($1,410,509)	0.869
Rate Impact Test (RIM)	$16,683,939	$9,372,486	($7,311,453)	0.562
Participant Cost Test (PCT)	($983,636)	$7,862,611	$8,846,247	NA
Discounted Participant Payback (years)			(2.07)	

Table 8: HVAC

HVAC			AC: IRP 46% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$877,545	$431,455	($446,090)	0.492
Total Resource Cost Test (TRC) No Adder	$877,545	$392,232	($485,313)	0.447
Utility Cost Test (UCT)	$680,244	$392,232	($288,012)	0.577
Rate Impact Test (RIM)	$929,802	$392,232	($537,570)	0.422
Participant Cost Test (PCT)	$197,301	$350,802	$153,501	1.778
Discounted Participant Payback (years)			6.74	

Refrigerator Recycling (See ya later, refrigerator) – Schedule 117

The following tables outline the primary inputs and assumptions utilized in the cost effectiveness calculations for the See ya later, refrigerator program.

Reported kWh savings are calculated based on measure level evaluated savings values (ex post) multiplied by measure participation. Sources for the evaluated savings are included in the detailed table below.

Program Inputs - See ya later, refrigerator		
Gross kWh/Year Savings (at Site)	20,410,218	Annual results 2010 (Gross at Site) - Calculated as evaluated savings per unit (ex-post) * unit participation.
Utility Administration Costs	$ 47,866	Annual costs 2010
Program Management and Administration Costs	$ 1,855,467	Annual costs 2010
Incentives	$ 466,470	Annual costs 2010
Total Utility Costs	$ 2,369,803	Annual costs 2010
Total Participant Costs	NA	There are no participant costs for this program.
Net To Gross Ratio		Utilize measure specific savings and Net To Gross
Measure Life (Years)	5	*Utah Refrigerator and Freezer Recycling Program evaluation 2006-2008, Cadmus 2010*

See Ya Later Refrigerator – All Measures

All Measures				AC: IRP 46% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0235	$1,903,333	$4,124,545	$2,221,211	2.167
Total Resource Cost Test (TRC) No Adder	0.0235	$1,903,333	$3,749,586	$1,846,253	1.970
Utility Cost Test (UCT)	0.0293	$2,369,803	$3,749,586	$1,379,783	1.582
Rate Impact Test (RIM)		$7,337,960	$3,749,586	($3,588,374)	0.511
Participant Cost Test (PCT)		($466,470)	$7,784,328	$8,250,798	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0001629933	
Discounted Participant Payback (years)				NA	

See Ya Later, Refrigerator Program Measure Group Inputs and Assumptions:

Refrigerators	**Value**	**Source and Notes**
Number of Units	12,490	Annual results 2010
Gross kWh/Unit	1,149	*Evaluation of Utah Refrigerator Recycling Program* - Kema - July 31, 2007
Gross kWh/Year Savings (at Site)	14,351,010	Annual results 2010 (Gross at Site)
Net To Gross Ratio	0.66	Utah Refrigerator and Freezer Recycling Program evaluation 2006-2008. Cadmus 2010
Measure Life (Years)	5	Utah Refrigerator and Freezer Recycling Program evaluation 2006-2008. Cadmus 2010
2008 IRP Decrement Load Shape		East Side Residential Whole House

Freezers	**Value**	**Source and Notes**
Number of Units	3,059	Annual results 2010
Gross kWh/Unit	1,590	*Evaluation of Utah Refrigerator Recycling Program* - Kema - July 31, 2007
Gross kWh/Year Savings (at Site)	4,863,810	Annual results 2010 (Gross at Site)
Net To Gross Ratio	0.65	Utah Refrigerator and Freezer Recycling Program evaluation 2006-2008, Cadmus 2010
Measure Life (Years)	5	Utah Refrigerator and Freezer Recycling Program evaluation 2006-2008, Cadmus 2010
2008 IRP Decrement Load Shape		East Side Residential Whole House

Savings Kits	**Value**	**Source and Notes**
Number of Units	14,758	Annual results 2010
Gross kWh/Unit	81	Evaluation of Utah Refrigerator Recycling Program - Kema - July 31, 2007
Gross kWh/Year Savings (at Site)	1,195,398	Annual results 2010 (Gross at Site)
Net To Gross Ratio	0.68	Utah Refrigerator and Freezer Recycling Program evaluation 2006-2008, Cadmus 2010
Measure Life (Years)	6.6	Utah Refrigerator and Freezer Recycling Program evaluation 2006-2008, Cadmus 2010
2008 IRP Decrement Load Shape		East Side Residential Whole House

The tables below prepared by The Cadmus Group present the cost effectiveness findings of the Utah See-Ya-Later Refrigerator program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "UT 2010 Tables and Charts (Draft 3 _15_2011)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan. Cost effectiveness was tested using the 2008 IRP 46% east 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	9.85%
Residential Energy Rate ($/kWh)	$0.0880

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

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Refrigerators	$1,304,632	$33,656		$374,700	$1,712,988	
Freezers	$442,163	$11,407		$91,770	$545,339	
Kits	$108,672	$2,803		$0	$111,476	
Total	$1,855,467	$47,866		$466,470	$2,369,803	

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	14,351,010	1.00	14,351,010	66%	9,471,667	5
Freezers	4,863,810	1.00	4,863,810	65%	3,161,477	5
Kits	1,195,398	1.00	1,195,398	68%	812,871	6.6
Total	20,410,218		20,410,218		13,446,014	

Table 4: IRP 46% Load Factor Decrement

All Measures				AC: IRP 46% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0235	$1,903,333	$4,124,545	$2,221,211	2.167
Total Resource Cost Test (TRC) No Adder	0.0235	$1,903,333	$3,749,586	$1,846,253	1.970
Utility Cost Test (UCT)	0.0293	$2,369,803	$3,749,586	$1,379,783	1.582
Rate Impact Test (RIM)		$7,337,960	$3,749,586	($3,588,374)	0.511
Participant Cost Test (PCT)		($466,470)	$7,784,328	$8,250,798	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0001629933	
Discounted Participant Payback (years)				NA	

Table 5: Refrigerators

			AC: IRP 46% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$1,338,288	$2,812,602	$1,474,313	2.102
Total Resource Cost Test (TRC) No Adder	$1,338,288	$2,556,910	$1,218,622	1.911
Utility Cost Test (UCT)	$1,712,988	$2,556,910	$843,922	1.493
Rate Impact Test (RIM)	$5,137,059	$2,556,910	($2,580,149)	0.498
Participant Cost Test (PCT)	($374,700)	$5,366,815	$5,741,515	NA
Discounted Participant Payback (years)			(0.32)	

Table 6: Freezers

			AC: IRP 46% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$453,569	$938,797	$485,228	2.070
Total Resource Cost Test (TRC) No Adder	$453,569	$853,452	$399,882	1.882
Utility Cost Test (UCT)	$545,339	$853,452	$308,112	1.565
Rate Impact Test (RIM)	$1,690,055	$853,452	($836,603)	0.505
Participant Cost Test (PCT)	($91,770)	$1,818,908	$1,910,678	NA
Discounted Participant Payback (years)			NA	

Table 7: Kits

			AC: IRP 46% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$111,476	$373,146	$261,670	3.347
Total Resource Cost Test (TRC) No Adder	$111,476	$339,224	$227,748	3.043
Utility Cost Test (UCT)	$111,476	$339,224	$227,748	3.043
Rate Impact Test (RIM)	$510,846	$339,224	($171,622)	0.664
Participant Cost Test (PCT)	$0	$598,605	$598,605	NA
Discounted Participant Payback (years)			NA	

Low Income Weatherization – Schedule 118

The following tables outline the primary inputs and assumptions utilized in the cost effectiveness calculations for the Low Income Weatherization program.

Program Inputs - Low Income Weathization			
Gross kWh/Year Savings (at Site)		1,917,712	Annual results 2010 (Gross at Site) - Measure level evaluated (ex-post) savings * number of units installed.
Program Management and Administration Costs	$	52,630	Annual costs 2010
Incentives	$	205,792	Annual costs 2010
Total Utility Costs	$	258,422	Annual costs 2010
Total Participant Costs		NA	There are no participant costs for this program.
Net To Gross Ratio		1.00	Low income support. NTG assumed to be 1.0
Measure Life (Years)		12	Weighted average measure life from *Utah 2007 Low Income Weatherization Program Enahancements* analysis - Quantec 2007.
2008 IRP Decrement Load Shape			East Side Residential Whole House

Low Income Weatherization

All Measures				AC: IRP 46% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0138	$258,422	$1,521,455	$1,263,033	5.887
Total Resource Cost Test (TRC) No Adder	0.0138	$258,422	$1,383,141	$1,124,719	5.352
Utility Cost Test (UCT)	0.0138	$258,422	$1,383,141	$1,124,719	5.352
Rate Impact Test (RIM)		$1,679,504	$1,383,141	($296,363)	0.824
Participant Cost Test (PCT)		$0	$1,438,888	$1,438,888	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0000052657	
Discounted Participant Payback (years)				NA	

The tables below prepared by The Cadmus Group present the cost effectiveness findings of the Utah Low Income Weatherization program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "UT 2010 Tables and Charts (Draft 3 _15_2011)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan. Cost effectiveness was tested using the 2008 IRP 46% east 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: Low Income Weatherization Inputs

Parameter	Value
Discount Rate	7.4%
Line Loss	9.85%
Residential Energy Rate ($/kWh)	$0.0880

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	$37,887	$14,743		$205,792	$258,422	$205,792

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	1,917,712	100%	1,917,712	100%	1,917,712	12

Table 4: IRP 46% Load Factor Decrement

All Measures				AC: IRP 46% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0138	$258,422	$1,521,455	$1,263,033	5.887
Total Resource Cost Test (TRC) No Adder	0.0138	$258,422	$1,383,141	$1,124,719	5.352
Utility Cost Test (UCT)	0.0138	$258,422	$1,383,141	$1,124,719	5.352
Rate Impact Test (RIM)		$1,679,504	$1,383,141	($296,363)	0.824
Participant Cost Test (PCT)		$0	$1,438,888	$1,438,888	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0000052657	
Discounted Participant Payback (years)				NA	

Energy FinAnswer – Schedule 125

The following tables outline the primary inputs and assumptions utilized in the cost effectiveness calculations for the program.

Program Inputs - Energy FinAnswer		
Gross kWh/Year Savings (at Site)	50,698,242	Annual results 2010 (Gross at Site)
Engineering Costs	$ 1,572,027	Annual costs 2010
Utility Administration	$ 620,939	Annual costs 2010
Program Management and Administration Costs	$ 298,947	Annual costs 2010
Incentives	$ 7,769,668	Annual costs 2010
Total Utility Costs	$ 10,261,580	Annual costs 2010
Total Participant Costs	$ 15,122,365	Incremental costs incurred by customers based on invoices and any necessary adjustments.
Net To Gross Ratio	0.87	PacifiCorp Energy FinAnswer 2005-2008 Utah Program Evaluation, Cadmus 2010
Measure Life (Years)	14	PacifiCorp Energy FinAnswer 2005-2008 Utah Program Evaluation, Cadmus 2010
2008 IRP Decrement Load Shape		East Side System

Savings Calculations and Reporting:

Energy FinAnswer program savings reported for 2010 are calculated for each completed (installed) project. The savings calculations are project specific and performed at a measure level. Preliminary engineering savings and costs estimates are completed prior to project installation, during a scoping phase by a pre-qualified third party energy engineering firm working under contract with the Company. If the customer indicates an interest in proceeding with the project, savings and costs are further refined during the preparation of an energy analysis by the same firm that did the original scoping work. The energy analysis work undergoes a peer review or quality assurance process by another third party engineering firm prior to being provided to the customer. After the customer installs and commissions (if required) the project, a post-installation inspection is conducted by the same firm and the final as installed savings are calculated for each project. Measure costs are based on invoices from the installing contractors to the customer. Any necessary adjustments to customer provided costs occur at the final inspection stage and incentives are paid on final inspected savings and costs.

Program results were categorized by measure type for cost effectiveness analysis. Each measure type utilized the same Net To Gross ratio, same measure life and same load shape as outlined in the summary table above.

The tables below prepared by The Cadmus Group present the cost effectiveness findings of the Utah Energy FinAnswer program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "UT 2010 Tables and Charts (Draft 3 _15_2011)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan. Cost effectiveness was tested using the 2008 IRP 65% east 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	9.38%
Industrial Line Loss	5.73%
Commercial Energy Rate ($/kWh)	$0.0709
Industrial Energy Rate ($/kWh)	$0.0475

Table 2: Energy FinAnswer
Annual Program Costs and Savings

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Additional Measures	$33,897	$70,408	$178,251	$677,822	$960,379	$1,794,198
Building Shell	$4,841	$10,055	$25,457	$90,334	$130,688	$761,359
Compressed Air	$55,209	$114,674	$290,321	$971,277	$1,431,481	$1,803,266
Controls	$1,669	$3,466	$8,776	$22,181	$36,092	$48,095
HVAC	$73,632	$152,940	$387,198	$1,421,616	$2,035,387	$4,229,425
Lighting	$36,875	$76,592	$193,907	$757,206	$1,064,580	$1,610,055
Motors	$36,853	$76,548	$193,795	$568,985	$876,181	$1,313,228
Refrigeration	$55,970	$116,255	$294,321	$768,334	$1,234,879	$1,596,830
Total	$298,947	$620,939	$1,572,027	$5,277,755	$7,769,668	$13,156,458

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	5,514,684	1.01	5,569,831	87%	4,845,753	14
Building Shell	795,466	1.00	795,466	87%	692,055	14
Compressed Air	9,256,794	0.98	9,071,658	87%	7,892,343	14
Controls	234,373	1.17	274,216	87%	238,568	14
HVAC	12,221,008	0.99	12,098,798	87%	10,525,954	14
Lighting	7,128,270	0.85	6,059,030	87%	5,271,356	14
Motors	6,442,050	0.94	6,055,527	87%	5,268,308	14
Refrigeration	9,105,597	1.01	9,196,653	87%	8,001,088	14
Total	50,698,242		49,121,179		42,735,426	

Table 4: IRP 65% Load Factor Decrement

All Measures				AC: IRP 65% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0462	$15,648,370	$37,303,681	$21,655,311	2.384
Total Resource Cost Test (TRC) No Adder	0.0462	$15,648,370	$33,912,437	$18,264,067	2.167
Utility Cost Test (UCT)	0.0229	$7,769,668	$33,912,437	$26,142,770	4.365
Rate Impact Test (RIM)		$30,949,643	$33,912,437	$2,962,794	1.096
Participant Cost Test (PCT)		$7,878,703	$27,258,984	$19,380,281	3.460
Lifecycle Revenue Impacts ($/kWh)				($0.0000083272)	
Discounted Participant Payback (years)				3.20	

Table 5: Additional Measures

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$2,076,755	$4,016,645	1,939,890	1.934
Total Resource Cost Test (TRC) No Adder	$2,076,755	$3,651,496	1,574,740	1.758
Utility Cost Test (UCT)	$960,379	$3,651,496	2,691,117	3.802
Rate Impact Test (RIM)	$3,583,278	$3,651,496	68,218	1.019
Participant Cost Test (PCT)	$1,116,376	$3,090,885	1,974,509	2.769
Discounted Participant Payback (years)			4.08	

Table 6: Building Shell

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$801,713	$573,645	($228,068)	0.716
Total Resource Cost Test (TRC) No Adder	$801,713	$521,495	($280,217)	0.650
Utility Cost Test (UCT)	$130,688	$521,495	$390,807	3.990
Rate Impact Test (RIM)	$505,728	$521,495	$15,767	1.031
Participant Cost Test (PCT)	$671,025	$441,431	($229,594)	0.658
Discounted Participant Payback (years)			-	

Table 7: Compressed Air

	AC: IRP 65% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$2,263,471	$6,541,964	$4,278,493	2.890
Total Resource Cost Test (TRC) No Adder	$2,263,471	$5,947,240	$3,683,769	2.627
Utility Cost Test (UCT)	$1,431,481	$5,947,240	$4,515,759	4.155
Rate Impact Test (RIM)	$5,712,575	$5,947,240	$234,665	1.041
Participant Cost Test (PCT)	$831,989	$5,034,166	$4,202,177	6.051
Discounted Participant Payback (years)			1.77	

Table 8: Controls

	AC: IRP 65% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$62,006	$197,749	$135,743	3.189
Total Resource Cost Test (TRC) No Adder	$62,006	$179,772	$117,766	2.899
Utility Cost Test (UCT)	$36,092	$179,772	$143,680	4.981
Rate Impact Test (RIM)	$165,995	$179,772	$13,777	1.083
Participant Cost Test (PCT)	$25,914	$152,172	$126,258	5.872
Discounted Participant Payback (years)			1.83	

Table 9: HVAC

	AC: IRP 65% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$4,843,196	$9,936,153	$5,092,957	2.052
Total Resource Cost Test (TRC) No Adder	$4,843,196	$9,032,866	$4,189,670	1.865
Utility Cost Test (UCT)	$2,035,387	$9,032,866	$6,997,479	4.438
Rate Impact Test (RIM)	$7,736,350	$9,032,866	$1,296,516	1.168
Participant Cost Test (PCT)	$2,807,809	$6,714,027	$3,906,218	2.391
Discounted Participant Payback (years)			4.80	

Table 10: Lighting

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$1,917,429	$5,038,521	$3,121,092	2.628
Total Resource Cost Test (TRC) No Adder	$1,917,429	$4,580,473	$2,663,044	2.389
Utility Cost Test (UCT)	$1,064,580	$4,580,473	$3,515,893	4.303
Rate Impact Test (RIM)	$3,916,480	$4,580,473	$663,993	1.170
Participant Cost Test (PCT)	$852,849	$3,362,358	$2,509,509	3.943
Discounted Participant Payback (years)			2.78	

Table 11: Motors

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$1,620,425	$4,366,902	$2,746,477	2.695
Total Resource Cost Test (TRC) No Adder	$1,620,425	$3,969,911	$2,349,486	2.450
Utility Cost Test (UCT)	$876,181	$3,969,911	$3,093,729	4.531
Rate Impact Test (RIM)	$3,739,372	$3,969,911	$230,539	1.062
Participant Cost Test (PCT)	$744,243	$3,360,414	$2,616,171	4.515
Discounted Participant Payback (years)			2.41	

Table 12: Refrigeration

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$2,063,375	$6,632,103	$4,568,728	3.214
Total Resource Cost Test (TRC) No Adder	$2,063,375	$6,029,185	$3,965,809	2.922
Utility Cost Test (UCT)	$1,234,879	$6,029,185	$4,794,305	4.882
Rate Impact Test (RIM)	$5,589,866	$6,029,185	$439,319	1.079
Participant Cost Test (PCT)	$828,496	$5,103,530	$4,275,034	6.160
Discounted Participant Payback (years)			1.74	

FinAnswer Express – Schedule 115

The following tables outline the primary inputs and assumptions utilized in the cost effectiveness calculations for the FinAnswer Express program.

Program Inputs - FinAnswer Express		
Gross kWh/Year Savings (at Site)	35,956,871	Annual results 2010 (Gross at Site)
Utility Administration	$ 211,447	Annual costs 2010
Program Management and Administration Costs	$ 1,729,634	Annual costs 2010
Incentives	$ 3,185,147	Annual costs 2010
Total Utility Costs	$ 5,126,228	Annual costs 2010
Total Participant Costs	$11,538,329	Actual customer costs incurred based on project close-out documentation (invoices) - less any adjustments (if necessary) for baseline equipment.
Net To Gross Ratio	0.79	PacifiCorp FinAnswer Express 2005-2008 Utah Program Evaluation, Cadmus 2010
Measure Life	14	PacifiCorp FinAnswer Express 2005-2008 Utah Program Evaluation, Cadmus 2010
2008 IRP Decrement Load Shape		East Side System

Savings Calculations and Reporting:

There are several primary categories of FinAnswer Express measures that are eligible for prescriptive incentives. They include lighting, motors, HVAC equipment, mechanical and other energy efficiency measures. The “other” category includes; evaporative cooling, chillers, occupancy sensors for packaged HVAC units, solid door freezers, cool roofs, plug load occupancy sensors and beverage machine occupancy controls. In addition, the program includes a provision to calculate a custom incentive for measures without a prescriptive incentive.

Cost effectiveness inputs included in this section are the aggregations of savings and expenditures in several categories – Lighting, HVAC, Compressed Air, Refrigeration, Building Shell, Motors and Other.

Each measure type utilized the same Net To Gross ratio, same measure life and same load shape as outlined in the summary table above.

The tables below prepared by The Cadmus Group present the cost effectiveness findings of the Utah FinAnswer Express program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled “UT 2010 Tables and Charts (Draft 3 _15_2011)”. The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan. Cost effectiveness was tested using the 2008 IRP 65% east system 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: FinAnswer Express Inputs

Parameter	Value
Discount Rate	7.4%
Commercial Line Loss	9.38%
Industrial Line Loss	5.73%
Commercial Energy Rate ($/kWh)	$0.0709
Industrial Energy Rate ($/kWh)	$0.0475

Table 2: FinAnswer Express
Annual Program Costs and Savings

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Building Shell	$17,895	$2,188		$86,349	$106,432	$301,208
Compressed Air	$1,016	$124		$1,669	$2,809	$21,027
HVAC	$125,194	$15,305		$380,584	$521,083	$804,162
Lighting	$1,545,915	$188,987		$2,639,060	$4,373,963	$7,746,253
Motors	$11,172	$1,366		$28,814	$41,351	$40,254
Other	$979	$120		$1,407	$2,506	$7,221
Refrigeration	$27,464	$3,357		$47,263	$78,084	$195,154
Total	$1,729,634	$211,447	$0	$3,185,147	$5,126,228	$9,115,280

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	319,563	1.00	319,563	79%	252,455	14
Compressed Air	20,856	0.87	18,145	79%	14,334	14
HVAC	3,387,306	0.66	2,235,622	79%	1,766,141	14
Lighting	31,370,303	0.88	27,605,867	79%	21,808,635	14
Motors	243,289	0.82	199,497	79%	157,602	14
Other	17,476	1.00	17,476	79%	13,806	14
Refrigeration	598,078	0.82	490,424	79%	387,435	14
Total	35,956,871		30,886,593		24,400,409	

Table 4: IRP 65% Load Factor Decrement

All Measures				AC: IRP 65% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0571	$11,056,361	$20,617,271	$9,560,910	1.865
Total Resource Cost Test (TRC) No Adder	0.0571	$11,056,361	$18,742,974	$7,686,613	1.695
Utility Cost Test (UCT)	0.0265	$5,126,228	$18,742,974	$13,616,745	3.656
Rate Impact Test (RIM)		$21,585,498	$18,742,974	($2,842,524)	0.868
Participant Cost Test (PCT)		$5,930,132	$21,281,611	$15,351,479	3.589
Lifecycle Revenue Impacts ($/kWh)				$0.0000079892	
Discounted Participant Payback (years				3.08	

Table 5: Building Shell

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$321,291	$245,569	($75,722)	0.764
Total Resource Cost Test (TRC) No Adder	$321,291	$223,245	($98,046)	0.695
Utility Cost Test (UCT)	$106,432	$223,245	$116,812	2.098
Rate Impact Test (RIM)	$273,047	$223,245	($49,802)	0.818
Participant Cost Test (PCT)	$214,859	$220,187	$5,328	1.025
Discounted Participant Payback (years)			13.53	

Table 6: Compressed Air

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$22,167	$13,770	($8,397)	0.621
Total Resource Cost Test (TRC) No Adder	$22,167	$12,518	($9,649)	0.565
Utility Cost Test (UCT)	$2,809	$12,518	$9,709	4.456
Rate Impact Test (RIM)	$12,492	$12,518	$26	1.002
Participant Cost Test (PCT)	$19,358	$12,502	($6,855)	0.646
Discounted Participant Payback (years)			-	

Table 7: HVAC

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$944,661	$1,489,830	$545,169	1.577
Total Resource Cost Test (TRC) No Adder	$944,661	$1,354,391	$409,730	1.434
Utility Cost Test (UCT)	$521,083	$1,354,391	$833,308	2.599
Rate Impact Test (RIM)	$1,702,094	$1,354,391	($347,703)	0.796
Participant Cost Test (PCT)	$423,578	$1,540,398	$1,116,819	3.637
Discounted Participant Payback (years)			3.03	

Table 8: Lighting

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$9,481,156	$18,396,689	$8,915,534	1.940
Total Resource Cost Test (TRC) No Adder	$9,481,156	$16,724,263	$7,243,107	1.764
Utility Cost Test (UCT)	$4,373,963	$16,724,263	$12,350,300	3.824
Rate Impact Test (RIM)	$19,099,269	$16,724,263	($2,375,006)	0.876
Participant Cost Test (PCT)	$5,107,193	$19,021,111	$13,913,919	3.724
Discounted Participant Payback (years)			2.96	

Table 9: Motors

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$52,792	$132,946	$80,154	2.518
Total Resource Cost Test (TRC) No Adder	$52,792	$120,860	$68,068	2.289
Utility Cost Test (UCT)	$41,351	$120,860	$79,508	2.923
Rate Impact Test (RIM)	$147,094	$120,860	($26,235)	0.822
Participant Cost Test (PCT)	$11,440	$137,458	$126,018	12.015
Discounted Participant Payback (years)			0.88	

Table 10: Other

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$8,320	$11,646	$3,326	1.400
Total Resource Cost Test (TRC) No Adder	$8,320	$10,587	$2,268	1.273
Utility Cost Test (UCT)	$2,506	$10,587	$8,082	4.225
Rate Impact Test (RIM)	$11,846	$10,587	($1,258)	0.894
Participant Cost Test (PCT)	$5,814	$12,041	$6,227	2.071
Discounted Participant Payback (years)			5.65	

Table 11: Refrigeration

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$225,975	$326,821	$100,846	1.446
Total Resource Cost Test (TRC) No Adder	$225,975	$297,110	$71,135	1.315
Utility Cost Test (UCT)	$78,084	$297,110	$219,026	3.805
Rate Impact Test (RIM)	$339,656	$297,110	($42,546)	0.875
Participant Cost Test (PCT)	$147,891	$337,914	$190,023	2.285
Discounted Participant Payback (years)			5.05	

Re-Commissioning – Schedule 126

The following tables outline the primary inputs and assumptions utilized in the cost effectiveness calculations for the Re-Commissioning program.

Program Inputs - Recommissioning			
Gross kWh/Year Savings (at Site)		7,231,291	Annual results 2010 (Gross at Site)
Utility Administration	$	11,617	Annual costs 2010
Program Management and Administration Costs	$	974,797	Annual costs 2010
Incentives	$	-	Annual costs 2010
Total Utility Costs	$	986,414	Annual costs 2010
Total Participant Costs	$	223,167	Incremental costs incurred by consumers based on receipts provided.
Net To Gross Ratio		0.84	PacifiCorp Recommissioning 2007-2008 Utah Program Evaluation, Cadmus 2010
Measure Life (Years)		7	PacifiCorp Recommissioning 2007-2008 Utah Program Evaluation, Cadmus 2010
2008 IRP Decrement Load Shape			East Side Commercial Cooling

Savings Calculations and Reporting:

Savings reported for the Re-Commissioning program are calculated on a project specific basis. These calculations are completed by a Re-Commissioning Service Provider (RSP) in a manner similar to that outlined in the Energy FinAnswer section. For this program, the program administrator performs the quality assurance functions for each project prior to reporting savings.

The tables below prepared by The Cadmus Group present the cost effectiveness findings of the Utah Recommissioning program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "UT 2010 Tables and Charts (Draft 3 _15_2011)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan. Cost effectiveness was tested using the 2008 IRP 16% east commercial cooling 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: Recommissioning Inputs

Parameter	Value
Discount Rate	7.4%
Line Loss	9.38%
Commercial Energy Rate ($/kWh)	$0.0709

Table 2: Recommissioning Annual Program Costs and Savings

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Commercial	$974,797	$11,617		$0	$986,414	$187,460

Table 3: Recommissioning Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Commercial	7,231,291	0.98	7,086,665	84%	5,952,799	7

Table 4: IRP 16% Load Factor Decrement

All Measures				AC: IRP 16% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0358	$1,173,875	$3,782,823	$2,608,948	3.223
Total Resource Cost Test (TRC) No Adder	0.0358	$1,173,875	$3,438,930	$2,265,055	2.930
Utility Cost Test (UCT)	0.0301	$986,414	$3,438,930	$2,452,515	3.486
Rate Impact Test (RIM)		$3,320,113	$3,438,930	$118,816	1.036
Participant Cost Test (PCT)		$187,460	$2,859,124	$2,671,664	15.252
Lifecycle Revenue Impacts ($/kWh)				($0.0000007345)	
Discounted Participant Payback (years)				0.40	

Self Direction – Schedule 192

The following table outlines the primary inputs and assumptions utilized in the cost effectiveness calculations for the Self Direction program.

Program Inputs - Self Direction			
Gross kWh/Year Savings (at Site)		17,160,393	Annual results 2010 (Gross at Site) - Based on engineering evaluated savings for each project.
Engineering Costs	$	152,995	Annual costs 2010
Utility Administration	$	51,533	Annual costs 2010
Program Management and Administration Costs	$	312,379	Annual costs 2010
Incentives	$	2,836,067	Incentive costs for projects completed in 2010
Total Utility Costs	$	516,907	Annual costs 2010
Total Participant Costs	$	3,545,084	Incremental costs incurred by consumers based on receipts provided.
Net To Gross Ratio		0.87	Utah 2007-2008 Self-Direction Credit Program evaluation, Cadmus 2010
Measure Life (Years)		13	Utah 2007-2008 Self-Direction Credit Program evaluation, Cadmus 2010
2008 IRP Decrement Load Shape			East Side System

(Note: For cost effectiveness, only the incentives associated with projects completed in 2010 are included. Total incentives paid during 2010 were $2,526,837. This amount includes ongoing incentive credits from projects completed in prior years.)

Savings Calculations and Reporting

Savings reported for the Self Direction program are based on project and measure specifics as installed and validated savings. Savings estimates are provided by the customer typically using an outside firm, vendor analysis or their own staff. Customers provide this information to the program administrator who performs a quality assurance function including comparing baselines, analysis approaches and cost documentation with Energy FinAnswer and FinAnswer Express guidelines for the same work. Final reporting savings from the project are based on calculations approved by the program administrator, including a post installation inspection and review of the commissioning results (if commissioning is required). Reported measure costs are based on customer costs in a manner comparable to the Energy FinAnswer program.

The tables below prepared by The Cadmus Group present the cost effectiveness findings of the Utah Self Direction program based on 2010 costs and savings estimates provided by PacifiCorp in a spreadsheet entitled "UT 2010 Tables and Charts (Draft 3 _15_2011)". The Utility discount rate is from the 2008 PacifiCorp Integrated Resource Plan. Cost effectiveness was tested using the 2008 IRP 65% east system load factor decrement. Table 1 lists modeling inputs. The program is cost effective from all perspectives.

Table 1: Self Direction
Inputs

Parameter	Value
Discount Rate	7.4%
Commercial Line Loss	9.38%
Industrial Line Loss	5.73%
Commercial Energy Rate ($/kWh)	$0.0709
Industrial Energy Rate ($/kWh)	$0.0475

Table 2: Self Direction
Annual Program Costs and Savings

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Commercial	$121,636	$26,950	$38,249	$208,937	$395,772	$227,219
Industrial	$190,743	$24,583	$114,746	$2,627,130	$2,957,202	$2,857,004
Total	$312,379	$51,533	$152,995	$2,836,067	$3,352,975	$3,084,223

Table 3: Self Direction
Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Commercial	1,164,050	0.99	1,152,410	87%	1,002,596	13
Industrial	15,996,343	0.99	15,836,380	87%	13,777,650	13
Total	17,160,393		16,988,789		14,780,246	

Table 4: IRP 65% Load Factor Decrement

All Measures				AC: IRP 65% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0216	$3,601,130	$11,449,949	$7,848,819	3.180
Total Resource Cost Test (TRC) No Adder	0.0216	$3,601,130	$10,409,045	$6,807,915	2.890
Utility Cost Test (UCT)	0.0201	$3,352,975	$10,409,045	$7,056,070	3.104
Rate Impact Test (RIM)		$9,859,723	$10,409,045	$549,322	1.056
Participant Cost Test (PCT)		$248,155	$7,744,567	$7,496,411	31.209
Lifecycle Revenue Impacts ($/kWh)				($0.0000016859)	
Discounted Participant Payback (years)				0.32	

Table 5: Commercial

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$414,054	$914,575	$500,520	2.209
Total Resource Cost Test (TRC) No Adder	$414,054	$831,431	$417,377	2.008
Utility Cost Test (UCT)	$395,772	$831,431	$435,659	2.101
Rate Impact Test (RIM)	$1,028,646	$831,431	($197,214)	0.808
Participant Cost Test (PCT)	$18,282	$758,785	$740,503	41.505
Discounted Participant Payback (years)			0.24	

Table 6: Industrial

			AC: IRP 65% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$3,187,076	$10,535,375	$7,348,299	3.306
Total Resource Cost Test (TRC) No Adder	$3,187,076	$9,577,613	$6,390,537	3.005
Utility Cost Test (UCT)	$2,957,202	$9,577,613	$6,620,411	3.239
Rate Impact Test (RIM)	$8,831,078	$9,577,613	$746,536	1.085
Participant Cost Test (PCT)	$229,873	$6,985,782	$6,755,908	30.390
Discounted Participant Payback (years)			0.33	

Cost Effectiveness Results with Avoided Costs as Approved

The Commission order dated October 7, 2009 in Docket No. 09-035-27 directed that, "…the Company shall perform the tests assuming its most recent IRP avoided costs, subject to any Commission order with respect to the IRP avoided costs, in addition to the avoided costs used when the program was approved." (p. 14)

The results of the five cost effectiveness tests using the 2008 IRP avoided costs (the most recent values) have been provided in summary fashion in the body of the Demand-Side Management Annual Report and in further detail in Appendix 1. This section provides the results of the five cost effectiveness tests utilizing the avoided costs at the time each program was last modified and approved by the Commission.

No other assumptions or inputs were modified between the results provided in the Annual Report and previous sections of this Appendix 1 and the results in this section.

Approach to analysis:

The Company identified the appropriate avoided costs that were utilized at the time each program was last modified and approved. When specific analyses were included with the program filing, then the same avoided costs were used in this analysis.

This analysis used the 2010 avoided cost values from historic avoided cost analyses as the starting point for this analysis. For example, if the "as approved" avoided costs for a program utilized the 2007 IRP, the analyses provided in this section would utilize the 2010 avoided cost value from the 2007 IRP stream of avoided costs and subsequent values in the avoided cost stream for future years.

It is important to note that the cost effectiveness results will be different than those provided during the last program approval process. While the change in the avoided costs used in this analysis contributes to those changes, there are several other assumptions and inputs that may be different between the 2010 results and the last program approval process. Those differences include gross savings (both at a program level and on a measure level), incentive and non-incentive costs, retail energy rates, measure lives, net to gross ratios and discount rates.

Cool Cash
Last Approved Filing – Advice 09-05, Filed April 7, 2009.
Avoided Costs Used – 2007 IRP – 7% Residential Cooling Load Factor decrement

Results of the five cost effectiveness tests using 2010 program performance and utilizing the 2007 IRP avoided costs are included in the following table.

2007 IRP 7% Load Factor Decrement

All Measures				AC: IRP 7% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	(0.0105)	($103,642)	$1,966,216	$2,069,858	NA
Total Resource Cost Test (TRC) No Adder	(0.0105)	($103,642)	$1,787,469	$1,891,111	NA
Utility Cost Test (UCT)	0.1517	$1,490,290	$1,787,469	$297,179	1.199
Rate Impact Test (RIM)		$2,464,431	$1,787,469	($676,962)	0.725
Participant Cost Test (PCT)		($1,593,932)	$2,440,288	$4,034,220	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0000100996	
Discounted Participant Payback (years)				(7.13)	

Home Energy Savings
Last Approved Filing – Advice 10-05, Filed June 3, 2010.
Avoided Costs Used – 2007 IRP – 46% Residential Whole House Load Factor decrement.

Results of the five cost effectiveness tests using 2010 program performance and utilizing the 2007 IRP avoided costs are included in the following table.

2007 IRP 46% Load Factor Decrement

All Measures				AC: IRP 46% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0975	$21,828,243	$23,867,243	$2,039,000	1.093
Total Resource Cost Test (TRC) No Adder	0.0975	$21,828,243	$21,697,494	($130,749)	0.994
Utility Cost Test (UCT)	0.0754	$16,875,684	$21,697,494	$4,821,809	1.286
Rate Impact Test (RIM)		$40,511,293	$21,697,494	($18,813,800)	0.536
Participant Cost Test (PCT)		$4,952,559	$29,347,178	$24,394,620	5.926
Lifecycle Revenue Impacts ($/kWh)				$0.0005210579	
Discounted Participant Payback (years)				1.06	

Energy Star New Homes
Last Approved Filing – Advice 10-14, Filed December 28, 2010.
Avoided Costs Used – 2007 IRP – 46% Residential Whole House Load Factor decrement.

Results of the five cost effectiveness tests using 2010 program performance and utilizing the 2007 IRP avoided costs are included in the following table.

Table 4: 2007 IRP 46% Load Factor Decrement

All Measures				AC: IRP 46% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.1160	$2,603,835	$2,328,121	($275,714)	0.894
Total Resource Cost Test (TRC) No Adder	0.1160	$2,603,835	$2,116,473	($487,362)	0.813
Utility Cost Test (UCT)	0.1160	$2,604,552	$2,116,473	($488,079)	0.813
Rate Impact Test (RIM)		$4,802,538	$2,116,473	($2,686,064)	0.441
Participant Cost Test (PCT)		($717)	$3,212,760	$3,213,477	NA
Lifecycle Revenue Impacts ($/k				$0.0000584099	
Discounted Participant Payback				NA	

See ya later, refrigerator
Last Approved Filing – Advice 07-17, Filed June 29, 2007.
Avoided Costs Used – August 2007 update to the 2005 IRP 65% east residential system load factor decrement.

Results of the five cost effectiveness tests using 2010 program performance and utilizing the 2005 IRP Update avoided costs are included in the following table.

2005 Updated IRP 65% Load Factor Decrement

All Measures				AC: IRP 65% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0235	$1,903,333	$3,283,965	$1,380,632	1.725
Total Resource Cost Test (TRC) No Adder	0.0235	$1,903,333	$2,985,423	$1,082,090	1.569
Utility Cost Test (UCT)	0.0293	$2,369,803	$2,985,423	$615,620	1.260
Rate Impact Test (RIM)		$7,337,960	$2,985,423	($4,352,537)	0.407
Participant Cost Test (PCT)		($466,470)	$7,784,328	$8,250,798	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0001977035	
Discounted Participant Payback (years)				(0.28)	

Low Income Weatherization
Last Approved Filing – Advice 07-08, Filed February 14, 2007.
Avoided Costs Used – August 2005 updated to the 2004 IRP 65% east system load factor decrement.

Results of the five cost effectiveness tests using 2010 program performance and utilizing the 2004 IRP Update avoided costs are included in the following table.

2005 update to 2004 IRP 65% Load Factor Decrement

All Measures				AC: IRP 65% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0138	$258,422	$967,930	$709,508	3.746
Total Resource Cost Test (TRC) No Adder	0.0138	$258,422	$879,937	$621,515	3.405
Utility Cost Test (UCT)	0.0138	$258,422	$879,937	$621,515	3.405
Rate Impact Test (RIM)		$1,679,504	$879,937	($799,567)	0.524
Participant Cost Test (PCT)		$0	$1,438,888	$1,438,888	NA
Lifecycle Revenue Impacts ($/kWh)				$0.0000142065	
Discounted Participant Payback (years)				NA	

Energy FinAnswer
Last Approved Filing – Advice 06-15, Filed November 17, 2006.
Avoided Costs Used – August 2005 updated to the 2004 IRP 65% east system load factor decrement.

Results of the five cost effectiveness tests using 2010 program performance and utilizing the 2004 IRP Update avoided costs are included in the following table.

2005 Updated IRP 65% Load Factor Decrement

All Measures				AC: IRP 65% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0462	$15,648,370	$24,122,115	$8,473,745	1.542
Total Resource Cost Test (TRC) No Adder	0.0462	$15,648,370	$21,929,196	$6,280,826	1.401
Utility Cost Test (UCT)	0.0229	$7,769,668	$21,929,196	$14,159,528	2.822
Rate Impact Test (RIM)		$30,949,643	$21,929,196	($9,020,447)	0.709
Participant Cost Test (PCT)		$7,878,703	$27,258,984	$19,380,281	3.460
Lifecycle Revenue Impacts ($/kWh)				$0.0000253528	
Discounted Participant Payback (years)				3.20	

FinAnswer Express
Last Approved Filing – Advice 10-08, Filed June 24, 2010.
Avoided Costs Used – August 2005 updated to the 2004 IRP 65% east system load factor decrement.

Results of the five cost effectiveness tests using 2010 program performance and utilizing the 2004 IRP Update avoided costs are included in the following table.

2005 Updated IRP 65% Load Factor Decrement

All Measures				AC: IRP 65% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0571	$11,056,361	$13,361,516	$2,305,155	1.208
Total Resource Cost Test (TRC) No Adder	0.0571	$11,056,361	$12,146,833	$1,090,472	1.099
Utility Cost Test (UCT)	0.0265	$5,126,228	$12,146,833	$7,020,604	2.370
Rate Impact Test (RIM)		$21,585,498	$12,146,833	($9,438,665)	0.563
Participant Cost Test (PCT)		$5,930,132	$21,281,611	$15,351,479	3.589
Lifecycle Revenue Impacts ($/kWh)				$0.0000265282	
Discounted Participant Payback (years)				3.08	

Re-Commissioning
Last Approved Filing – Advice 05-04, Filed November 17, 2006.
Avoided Costs Used – 2004 IRP 12% east commercial cooling load factor decrement

Results of the five cost effectiveness tests using 2010 program performance and utilizing the 2004 IRP avoided costs are included in the following table.

Table 4: 2005 IRP 12% Load Factor Decrement

All Measures				AC: IRP 12% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0358	$1,173,875	$2,269,992	$1,096,117	1.934
Total Resource Cost Test (TRC) No Adder	0.0358	$1,173,875	$2,063,629	$889,754	1.758
Utility Cost Test (UCT)	0.0301	$986,414	$2,063,629	$1,077,215	2.092
Rate Impact Test (RIM)		$3,320,113	$2,063,629	($1,256,485)	0.622
Participant Cost Test (PCT)		$187,460	$2,859,124	$2,671,664	15.252
Lifecycle Revenue Impacts ($/kWh)				$0.0000077672	
Discounted Participant Payback (years)				0.40	

Self Direction
Last Approved Filing – Advice 10-03, Filed February 23, 2010.
Avoided Costs Used – 2003 IRP 300 MW 60% Load Factor Decrement

Results of the five cost effectiveness tests using 2010 program performance and utilizing the 2003 IRP avoided costs are included in the following table.

IRP 300 MW 60% Load Factor Decrement

All Measures				AC: IRP 60% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0216	$3,601,130	$8,062,260	$4,461,130	2.239
Total Resource Cost Test (TRC) No Adder	0.0216	$3,601,130	$7,329,327	$3,728,197	2.035
Utility Cost Test (UCT)	0.0201	$3,352,975	$7,329,327	$3,976,353	2.186
Rate Impact Test (RIM)		$9,859,723	$7,329,327	($2,530,396)	0.743
Participant Cost Test (PCT)		$248,155	$7,744,567	$7,496,411	31.209
Lifecycle Revenue Impacts ($/kWh)				$0.0000077661	
Discounted Participant Payback (years)				0.32	

Irrigation Load Control

Last Approved Filing – Advice 08-11, Filed December 17, 2008.
Avoided Costs Used – $/kW-year value of $59.43 based on estimate at time of filing.

Results of the five cost effectiveness tests using 2010 program performance and utilizing the $59.43 benefit value are included in the following table.

Irrigation Load control @ $59.43/kW

All Measures					
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder		$1,191,541	$3,404,916	$2,213,375	2.86
Total Resource Cost Test (TRC) No Adder		$1,191,541	$3,095,378	$1,903,837	2.60
Utility Cost Test (UCT)		$2,512,712	$3,095,378	$582,666	1.23
Rate Impact Test (RIM)		$2,512,712	$3,095,378	$582,666	1.23
Participant Cost Test (PCT)		$0	$1,321,171	$1,321,171	NA
Lifecycle Revenue Impacts ($/kWh)					
Discounted Participant Payback (years)					

Air Conditioner Load Management (Cool Keeper)

Last Approved Filing – Advice 03-03, Filed May 12, 2003.
Avoided Costs Used – 2003 IRP – 100 MW 1% Load Factor Decrement

Results of the five cost effectiveness tests using 2010 program performance and utilizing the 2003 IRP benefit value are included in the following table.

IRP 100 MW 1% Load Factor Decrement

All Measures					
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder		$49,528,235	$108,215,790	$58,687,555	2.18
Total Resource Cost Test (TRC) No Adder		$49,528,235	$98,377,991	$48,849,756	1.99
Utility Cost Test (UCT)		$66,022,018	$98,377,991	$32,355,974	1.49
Rate Impact Test (RIM)		$66,022,018	$98,377,991	$32,355,974	1.49
Participant Cost Test (PCT)			$16,493,783	$16,493,783	NA
Lifecycle Revenue Impacts ($/kWh)					
Discounted Participant Payback (years)					