Appendix 1

Cost Effectiveness
2011 Utah Energy Efficiency and Peak Reduction
Annual Report

Rocky Mountain Power

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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.

Decrement values are considered confidential on load control programs. Cost effectiveness ratios and inputs will be available under a protective agreement. A "Pass" designation equates to a benefit to cost ratio of 1 or better.

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

2011 Portfolio and Sector Cost Effectiveness Summary					
	Cost Effectiveness Test				
	PTRC	**TRC**	**UCT**	**RIM**	**PCT**
2011 Total Portfolio Including Load Management & Marketing	2.293	2.085	2.173	1.174	2.88
2011 Load Management Portfolio	Pass	Pass	Pass	Pass	NA
2011 Energy Efficiency Portfolio Including Marketing	2.147	1.951	3.193	0.907	2.552
2011 Residential Energy Efficiency Portfolio	2.048	1.862	2.280	0.702	3.730
2011 Non-residential Energy Efficiency Portfolio	2.291	2.082	4.380	1.092	1.985

Sector and Program 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.

2011 Energy Efficiency Portfolio

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0428	$60,089,786	$128,989,049	$68,899,263	2.147
Total Resource Cost Test (TRC) No Adder	0.0428	$60,089,786	$117,262,772	$57,172,986	1.951
Utility Cost Test (UCT)	0.0261	$36,719,401	$117,262,772	$80,543,370	3.193
Rate Impact Test (RIM)		$129,295,956	$117,262,772	($12,033,185)	0.907
Participant Cost Test (PCT)		$55,832,869	$142,458,964	$86,626,095	2.552
Lifecycle Revenue Impacts ($/kWh)				$0.000026096	

2011 C&I Energy Efficiency Portfolio

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0389	$36,995,456	$84,738,629	$47,743,174	2.291
Total Resource Cost Test (TRC) No Adder	0.0389	$36,995,456	$77,035,117	$40,039,662	2.082
Utility Cost Test (UCT)	0.0185	$17,586,957	$77,035,117	$59,448,161	4.380
Rate Impact Test (RIM)		$70,518,854	$77,035,117	$6,516,263	1.092
Participant Cost Test (PCT)		$37,715,034	$74,879,905	$37,164,871	1.985
Lifecycle Revenue Impacts ($/kWh)				($0.000024036)	

2011 Residential Energy Efficiency Portfolio

	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0475	$21,608,428	$44,250,420	$22,641,992	2.048
Total Resource Cost Test (TRC) No Adder	0.0475	$21,608,428	$40,227,654	$18,619,226	1.862
Utility Cost Test (UCT)	0.0388	$17,646,542	$40,227,654	$22,581,112	2.280
Rate Impact Test (RIM)		$57,291,200	$40,227,654	($17,063,546)	0.702
Participant Cost Test (PCT)		$18,117,834	$67,579,058	$49,461,224	3.730
Lifecycle Revenue Impacts ($/kWh)				$0.000037005	

Program Level Cost Effectiveness

Cool Cash – Schedule 113

The tables below present the cost effectiveness findings of the Cool Cash program based on Rocky Mountain Power's 2011 costs and savings estimates. The Utility discount rate is from the 2011 Integrated Resource Plan.

Cost effectiveness was tested using the 2011 IRP 10% east residential cooling load factor decrement.

Table 1: Cool Cash
Annual Program Costs

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Evaporative Cooling - Replacements	$99,568	$8,201	$0	$58,000	$165,769	-$594,880
Evaporative Cooling - New	$50,213	$4,136	$0	$76,050	$130,399	-$386,446
Evaporative Cooling - Premium Only	$104,074	$8,572	$0	$315,250	$427,896	-$624,439
Evaporative Cooling - Premium whole house ducted system	$6,223	$513	$0	$37,700	$44,436	$0
Central Air Conditioning - Sizing + TXV	$46,121	$3,799	$0	$73,725	$123,645	$0
Central Air Conditioning - Charge + Airflow	$18,625	$1,534	$0	$147,750	$167,909	$0
Central Air Conditioning - 15+SEER/12.5EER	$96,359	$7,937	$0	$215,400	$319,696	$1,016,946
Total	$421,184	$34,690	$0	$923,875	$1,379,749	-$588,819

Table 2: 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	562,368	121%	680,465	59%	401,475	15
Evaporative Cooling - New	283,608	126%	357,346	76%	271,583	15
Evaporative Cooling - Premium Only	587,820	127%	746,531	79%	589,760	15
Evaporative Cooling - Premium whole house ducted system	35,148	133%	46,747	79%	36,930	15
Central Air Conditioning - Sizing + TXV	260,495	90%	234,446	74%	173,490	15
Central Air Conditioning - Charge + Airflow	105,198	90%	94,678	74%	70,062	10
Central Air Conditioning - 15+SEER/12.5EER	544,244	90%	489,820	74%	362,467	15
Total	2,378,881		2,650,033		1,905,765	

Table 3: IRP 10% Load Factor Decrement

All Measures				AC: IRP 10% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	(0.0066)	($132,945)	$3,233,738	$3,366,683	NA
Total Resource Cost Test (TRC) No Adder	(0.0066)	($132,945)	$2,939,762	$3,072,707	NA
Utility Cost Test (UCT)	0.0688	$1,379,749	$2,939,762	$1,560,013	2.131
Rate Impact Test (RIM)		$3,194,121	$2,939,762	($254,359)	0.920
Participant Cost Test (PCT)		($932,931)	$3,447,488	$4,380,418	NA
Lifecycle Revenue Impacts ($/kWh)				$0.000000890	
Discounted Participant Payback (years)				NA	

Table 4: Evaporative Cooling - Replacements

			AC: IRP 10% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	(487,111)	688,127	1,175,238	NA
Total Resource Cost Test (TRC) No Adder	(487,111)	625,570	1,112,681	NA
Utility Cost Test (UCT)	165,769	625,570	459,801	3.77
Rate Impact Test (RIM)	551,567	625,570	74,003	1.13
Participant Cost Test (PCT)	(1,008,272)	711,895	1,720,167	NA
Discounted Participant Payback (years)			NA	

Table 5: Evaporative Cooling - New

	AC: IRP 10% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	(332,097)	465,493	797,591	NA
Total Resource Cost Test (TRC) No Adder	(332,097)	423,176	755,273	NA
Utility Cost Test (UCT)	130,399	423,176	292,777	3.25
Rate Impact Test (RIM)	391,378	423,176	31,798	1.08
Participant Cost Test (PCT)	(508,482)	419,443	927,925	NA
Discounted Participant Payback (years)			NA	

Table 6: Evaporative Cooling - Premium Only

	AC: IRP 10% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	(511,793)	1,010,849	1,522,641	NA
Total Resource Cost Test (TRC) No Adder	(511,793)	918,953	1,430,746	NA
Utility Cost Test (UCT)	427,896	918,953	491,057	2.15
Rate Impact Test (RIM)	994,628	918,953	(75,674)	0.92
Participant Cost Test (PCT)	(790,429)	1,032,632	1,823,061	NA
Discounted Participant Payback (years)			NA	

Table 7: Evaporative Cooling - Premium whole house ducted system

	AC: IRP 10% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	6,736	63,298	56,562	9.40
Total Resource Cost Test (TRC) No Adder	6,736	57,544	50,807	8.54
Utility Cost Test (UCT)	44,436	57,544	13,107	1.29
Rate Impact Test (RIM)	79,924	57,544	(22,380)	0.72
Participant Cost Test (PCT)	0	82,621	82,622	NA
Discounted Participant Payback (years)			NA	

Table 8: Central Air Conditioning - Sizing + TXV

	AC: IRP 10% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	49,920	297,361	247,442	5.96
Total Resource Cost Test (TRC) No Adder	49,920	270,329	220,409	5.42
Utility Cost Test (UCT)	123,645	270,329	146,684	2.19
Rate Impact Test (RIM)	290,360	270,329	(20,032)	0.93
Participant Cost Test (PCT)	0	299,016	299,016	NA
Discounted Participant Payback (years)			NA	

Table 9: Central Air Conditioning - Charge + Airflow

	AC: IRP 10% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	20,159	87,342	67,183	4.33
Total Resource Cost Test (TRC) No Adder	20,159	79,402	59,243	3.94
Utility Cost Test (UCT)	167,909	79,402	(88,507)	0.47
Rate Impact Test (RIM)	218,256	79,402	(138,854)	0.36
Participant Cost Test (PCT)	0	215,786	215,786	NA
Discounted Participant Payback (years)			NA	

Table 10: Central Air Conditioning - 15+SEER/12.5EER

	AC: IRP 10% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	1,121,242	621,268	(499,97)	0.55
Total Resource Cost Test (TRC) No Adder	1,121,242	564,789	(556,453)	0.50
Utility Cost Test (UCT)	319,696	564,789	245,093	1.77
Rate Impact Test (RIM)	668,009	564,789	(103,220)	0.85
Participant Cost Test (PCT)	1,374,252	686,094	(688,158)	0.50
Discounted Participant Payback (years)			NA	

Energy Star New Homes – Schedule 110

The tables below present the cost effectiveness findings of the ENERGY STAR New Homes program based on Rocky Mountain Power's 2011 costs and savings estimates. The Utility discount rate is from the 2011 Integrated Resource Plan.

Cost effectiveness was tested using the 2011 IRP 35% east residential whole house load factor decrement.

Cost effectiveness calculations utilized realization rates based on the 2009-2010 program evaluation. In addition, the cost effectiveness analysis used a weighted average measure life applied at the program level based on measure lifetimes. The measure lifetimes were weighted by savings and frequency of measure installation.

During 2011, the program incurred costs related to program redesign to meet Energy Star 3.0 standards. This cost will be allocated over a three year period of time, between 2011 through2013.

The cost effectiveness calculations were also re-run without evaluation cost to see the impact on the TRC test. This resulted in TRC increasing from .910 to .917.

Table 1: Energy Star New Homes
Annual Program Costs

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Energy Star New Homes	$1,249,303	$142,404	$0	$1,686,830	$3,078,537	$2,054,099

Table 2: Energy Star New HomesSavings

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Energy Star New Homes	5,355,081	51%	2,731,091	100%	2,731,091	20

Table 3: IRP 35% Load Factor Decrement

All Measures				AC: IRP 35% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.103	$3,445,806	$3,447,393	$1,587	1.000
Total Resource Cost Test (TRC) No Adder	$0.103	$3,445,806	$3,133,994	($311,812)	0.910
Utility Cost Test (UCT)	$0.092	$3,078,537	$3,133,994	$55,457	1.018
Rate Impact Test (RIM)		$6,214,848	$3,133,994	($3,080,854)	0.504
Participant Cost Test (PCT)		$2,054,099	$4,823,141	$2,769,042	2.348
Lifecycle Revenue Impacts ($/kWh)				$0.000008756	
Discounted Participant Payback (years)				1.53	

Home Energy Savings Program – Schedule 111

The tables below present the cost effectiveness findings of the Home Energy Savings program based on Rocky Mountain Power's 2011 costs and savings estimates. The Utility discount rate is from the 2011 Integrated Resource Plan.

Cost effectiveness was tested using the 2011 IRP 35% east residential whole house load factor decrement.

Table 1: Home Energy Savings
Annual Program Costs

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Lighting	$483,458	$44,872	$0	$3,428,327	$3,956,656	$6,208,963
Appliance	$515,103	$47,810	$0	$254,837	$817,749	$359,881
Home Improvement	$1,849,414	$171,654	$0	$1,883,389	$3,904,458	$2,988,361
HVAC	$1,559,112	$144,710	$0	$679,720	$2,383,542	$2,188,328
Total	$4,407,087	$409,046	$0	$6,246,273	$11,062,405	$11,745,533

Table 2: 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	91,463,062	99%	90,548,431	58%	52,518,090	5
Appliance	670,960	163%	1,093,665	88%	962,425	14
Home Improvement	2,409,002	162%	3,902,582	88%	3,434,273	30
HVAC	2,030,861	85%	1,726,232	88%	1,519,084	14
Total	96,573,885		97,270,911		58,433,872	

Table 3: IRP 35% Load Factor Decrement

All Measures				AC: IRP 35% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0507	$16,561,666	$31,373,338	$14,811,671	1.894
Total Resource Cost Test (TRC) No Adder	0.0507	$16,561,666	$28,521,216	$11,959,550	1.722
Utility Cost Test (UCT)	0.0338	$11,062,406	$28,521,216	$17,458,811	2.578
Rate Impact Test (RIM)		$39,446,988	$28,521,216	($10,925,772)	0.723
Participant Cost Test (PCT)		$16,996,666	$51,010,292	$34,013,626	3.001
Lifecycle Revenue Impacts ($/kWh)				$0.000023694	
Discounted Participant Payback (years)				1.25	

Table 4: Lighting

Lighting			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$6,737,293	$21,097,472	$14,360,178	3.13
Total Resource Cost Test (TRC) No Adder	$6,737,293	$19,179,520	$12,442,226	2.85
Utility Cost Test (UCT)	$3,956,657	$19,179,520	$15,222,863	4.85
Rate Impact Test (RIM)	$25,238,315	$19,179,520	($6,058,795)	0.76
Participant Cost Test (PCT)	$10,705,109	$40,120,842	$29,415,732	3.75
Discounted Participant Payback (years)			0.90	

Table 5: Appliance

Appliance			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$922,794	$931,320	$8,526	1.01
Total Resource Cost Test (TRC) No Adder	$922,794	$846,654	($76,140)	0.92
Utility Cost Test (UCT)	$817,750	$846,654	$28,905	1.04
Rate Impact Test (RIM)	$1,700,636	$846,654	($853,982)	0.50
Participant Cost Test (PCT)	$408,956	$1,258,117	$849,161	3.08
Discounted Participant Payback (years)			1.60	

Table 6: Home Improvement

Home Improvement			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$5,009,429	$7,332,968	$2,323,539	1.46
Total Resource Cost Test (TRC) No Adder	$5,009,429	$6,666,335	$1,656,906	1.33
Utility Cost Test (UCT)	$3,904,457	$6,666,335	$2,761,878	1.71
Rate Impact Test (RIM)	$8,730,987	$6,666,335	($2,064,652)	0.76
Participant Cost Test (PCT)	$3,395,865	$7,368,082	$3,972,217	2.17
Discounted Participant Payback (years)			4.76	

Table 7: HVAC

HVAC			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$3,892,150	$2,011,578	($1,880,572)	0.52
Total Resource Cost Test (TRC) No Adder	$3,892,150	$1,828,707	($2,063,442)	0.47
Utility Cost Test (UCT)	$2,383,542	$1,828,707	($554,835)	0.77
Rate Impact Test (RIM)	$3,777,050	$1,828,707	($1,948,343)	0.48
Participant Cost Test (PCT)	$2,486,736	$2,263,252	($223,484)	0.91
Discounted Participant Payback (years)			NA	

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

The tables below present the cost effectiveness findings of the See-Ya-Later Refrigerator program based on Rocky Mountain Power's 2011 costs and savings estimates. The Utility discount rate is from the 2011 Integrated Resource Plan.

Cost effectiveness was tested using the 2011 IRP 35% east residential whole house load factor decrement.

Table 1: See-Ya-Later
Annual Program Costs

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Refrigerators	$1,147,751	$47,464	$0	$317,160	$1,512,375	$0
Freezers	$194,333	$8,036	$0	$74,790	$277,159	$0
Kits	$87,146	$3,604	$0	$0	$90,750	$0
Total	$1,429,229	$59,104	$0	$391,950	$1,880,284	$0

Table 2: 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	12,147,228	106%	12,876,062	78%	10,094,832	5
Freezers	3,963,870	55%	2,180,129	66%	1,445,425	5
Kits	1,007,883	97%	977,647	100%	977,647	6.6
Total	17,118,981		16,033,837		12,517,904	

Table 3: IRP 35% Load Factor Decrement

All Measures				AC: IRP 35% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0242	$1,488,334	$5,021,200	$3,532,866	3.374
Total Resource Cost Test (TRC) No Adder	0.0242	$1,488,334	$4,564,727	$3,076,393	3.067
Utility Cost Test (UCT)	0.0305	$1,880,284	$4,564,727	$2,684,443	2.428
Rate Impact Test (RIM)		$7,085,030	$4,564,727	($2,520,303)	0.644
Participant Cost Test (PCT)		$0	$7,021,474	$7,021,474	NA
Lifecycle Revenue Impacts ($/kWh)				$0.000016366	
Discounted Participant Payback (years)				NA	

Table 4: Refrigerators

			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$1,195,215	$3,920,171	$2,724,956	3.28
Total Resource Cost Test (TRC) No Adder	$1,195,215	$3,563,792	$2,368,576	2.98
Utility Cost Test (UCT)	$1,512,375	$3,563,792	$2,051,416	2.36
Rate Impact Test (RIM)	$5,603,150	$3,563,792	-$2,039,359	0.64
Participant Cost Test (PCT)	$0	$5,534,985	$5,534,985	NA
Discounted Participant Payback (years)			NA	

Table 5: Freezers

			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$202,369	$561,308	$358,939	2.77
Total Resource Cost Test (TRC) No Adder	$202,369	$510,280	$307,911	2.52
Utility Cost Test (UCT)	$277,159	$510,280	$233,121	1.84
Rate Impact Test (RIM)	$862,896	$510,280	-$352,615	0.59
Participant Cost Test (PCT)	$0	$958,253	$958,253	NA
Discounted Participant Payback (years)			NA	

Table 6: Kits

			AC: IRP 35% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$90,750	$539,721	$448,971	5.95
Total Resource Cost Test (TRC) No Adder	$90,750	$490,655	$399,906	5.41
Utility Cost Test (UCT)	$90,750	$490,655	$399,906	5.41
Rate Impact Test (RIM)	$618,984	$490,655	-$128,329	0.79
Participant Cost Test (PCT)	$0	$528,235	$528,235	NA
Discounted Participant Payback (years)			NA	

Low Income Weatherization – Schedule 118

The tables below present the cost effectiveness findings of the Low Income Weatherization program based on Rocky Mountain Power's 2011 costs and savings estimates. The Utility discount rate is from the 2011 Integrated Resource Plan.

Cost effectiveness was tested using the 2011 IRP 35% east residential whole house load factor decrement.

Table 1: Low Income Weatherization
Annual Program Costs

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Low Income weatherization	$57,852	$15,696	$0	$172,018	$245,567	$0

Table 2: Low Income Weatherization
Savings

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Low Income weatherization	1,677,625	80%	1,342,100	100%	1,342,100	11.7

Table 3: IRP 35% Load Factor Decrement

All Measures				AC: IRP 35% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0197	$245,566	$1,174,751	$929,185	4.78
Total Resource Cost Test (TRC) No Adder	$0.0197	$245,566	$1,067,955	$822,389	4.35
Utility Cost Test (UCT)	$0.0197	$245,566	$1,067,955	$822,389	4.35
Rate Impact Test (RIM)		$1,350,212	$1,067,955	-$282,257	0.79
Participant Cost Test (PCT)		$0	$1,276,664	$1,276,664	NA
Lifecycle Revenue Impacts ($/kWh)				$0.000001174	
Discounted Participant Payback (years)				NA	

Energy FinAnswer – Schedule 125

Savings Calculations and Reporting:

Energy FinAnswer program savings reported for 2011 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.

The tables below present the cost effectiveness findings of the Energy FinAnswer program based on Rocky Mountain Power's 2011 costs and savings estimates. The Utility discount rate is from the 2011 Integrated Resource Plan.

Cost effectiveness was tested using the 2011 IRP 69% east system load factor decrement.

Table 1: Energy FinAnswer
Annual Program Costs

	Program Costs	Utility Admin	Engineering Costs	Incentives	Total Utility Costs	Net Participant Incremental Cost
Additional Measures	$106,730	$232,476	$677,737	$2,593,807	$3,610,750	$5,047,354
Building Shell	$2,520	$5,489	$16,003	$93,706	$117,718	$910,128
Compressed Air	$16,520	$35,984	$104,905	$500,609	$658,018	$917,400
Controls	$2,091	$4,555	$13,280	$57,739	$77,665	$145,643
HVAC	$53,666	$116,892	$340,777	$1,861,594	$2,372,929	$7,247,311
Lighting	$18,319	$39,901	$116,323	$678,230	$852,772	$1,250,631
Motors	$9,305	$20,268	$59,088	$309,657	$398,319	$729,304
Refrigeration	$11,715	$25,518	$74,393	$310,262	$421,888	$999,679
Total	$220,867	$481,084	$1,402,504	$6,405,604	$8,510,059	$17,247,451

Table 2: 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	29,122,993	101%	29,414,223	87%	25,590,374	14
Building Shell	694,540	100%	694,540	87%	604,250	14
Compressed Air	4,645,846	98%	4,552,929	87%	3,961,048	14
Controls	492,599	117%	576,341	87%	501,417	14
HVAC	14,939,319	99%	14,789,926	87%	12,867,235	14
Lighting	5,939,401	85%	5,048,491	87%	4,392,187	14
Motors	2,728,164	94%	2,564,474	87%	2,231,093	14
Refrigeration	3,196,725	101%	3,228,692	87%	2,808,962	14
Total	61,759,587		60,869,616		52,956,566	

Table 3: IRP 69% Load Factor Decrement

All Measures				AC: IRP 69% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0368	$19,351,906	$47,207,926	$27,856,020	2.439
Total Resource Cost Test (TRC) No Adder	0.0368	$19,351,906	$42,916,296	$23,564,390	2.218
Utility Cost Test (UCT)	0.0162	$8,510,059	$42,916,296	$34,406,237	5.043
Rate Impact Test (RIM)		$38,941,665	$42,916,296	$3,974,631	1.102
Participant Cost Test (PCT)		$19,824,656	$41,384,461	$21,559,805	2.088
Lifecycle Revenue Impacts ($/kWh)				($0.000014661)	
Discounted Participant Payback (years)				4.27	

Table 4: Additional Measures

			AC: IRP 69% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$6,064,297	$21,863,200	$15,798,904	3.61
Total Resource Cost Test (TRC) No Adder	$6,064,297	$19,875,637	$13,811,340	3.28
Utility Cost Test (UCT)	$3,610,750	$19,875,637	$16,264,887	5.50
Rate Impact Test (RIM)	$16,281,878	$19,875,637	$3,593,758	1.22
Participant Cost Test (PCT)	$5,801,556	$17,158,323	$11,356,767	2.96
Discounted Participant Payback (years)			2.34	

Table 5: Building Shell

			AC: IRP 69% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$934,140	$516,242	-$417,898	0.55
Total Resource Cost Test (TRC) No Adder	$934,140	$469,311	-$464,829	0.50
Utility Cost Test (UCT)	$117,718	$469,311	$351,593	3.99
Rate Impact Test (RIM)	$416,914	$469,311	$52,398	1.13
Participant Cost Test (PCT)	$1,046,124	$437,609	-$608,515	0.42
Discounted Participant Payback (years)			NA	

Table 6: Compressed Air

			AC: IRP 69% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$1,074,809	$3,384,132	$2,309,322	3.15
Total Resource Cost Test (TRC) No Adder	$1,074,809	$3,076,483	$2,001,674	2.86
Utility Cost Test (UCT)	$658,018	$3,076,483	$2,418,465	4.68
Rate Impact Test (RIM)	$2,619,340	$3,076,483	$457,144	1.17
Participant Cost Test (PCT)	$1,054,483	$2,755,002	$1,700,519	2.61
Discounted Participant Payback (years)			2.63	

Table 7: Controls

	AC: IRP 69% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$165,569	$428,386	$262,817	2.59
Total Resource Cost Test (TRC) No Adder	$165,569	$389,442	$223,873	2.35
Utility Cost Test (UCT)	$77,665	$389,442	$311,777	5.01
Rate Impact Test (RIM)	$325,942	$389,442	$63,500	1.19
Participant Cost Test (PCT)	$167,406	$343,115	$175,709	2.05
Discounted Participant Payback (years)			4.28	

Table 8: HVAC

	AC: IRP 69% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$7,758,646	$12,419,956	$4,661,310	1.60
Total Resource Cost Test (TRC) No Adder	$7,758,646	$11,290,869	$3,532,223	1.46
Utility Cost Test (UCT)	$2,372,929	$11,290,869	$8,917,940	4.76
Rate Impact Test (RIM)	$11,882,841	$11,290,869	-$591,972	0.95
Participant Cost Test (PCT)	$8,330,243	$12,792,528	$4,462,285	1.54
Discounted Participant Payback (years)			7.04	

Table 9: Lighting

	AC: IRP 69% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$1,425,174	$4,290,025	$2,864,851	3.01
Total Resource Cost Test (TRC) No Adder	$1,425,174	$3,900,023	$2,474,849	2.74
Utility Cost Test (UCT)	$852,773	$3,900,023	$3,047,250	4.57
Rate Impact Test (RIM)	$4,098,949	$3,900,023	-$198,926	0.95
Participant Cost Test (PCT)	$1,437,507	$4,409,467	$2,971,960	3.07
Discounted Participant Payback (years)			2.15	

Table 10: Motors

			AC: IRP 69% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$817,965	$1,906,140	$1,088,174	2.33
Total Resource Cost Test (TRC) No Adder	$817,965	$1,732,854	$914,889	2.12
Utility Cost Test (UCT)	$398,318	$1,732,854	$1,334,536	4.35
Rate Impact Test (RIM)	$1,503,048	$1,732,854	$229,806	1.15
Participant Cost Test (PCT)	$838,281	$1,579,462	$741,181	1.88
Discounted Participant Payback (years)			4.68	

Table 11: Refrigeration

			AC: IRP 69% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$1,111,305	$2,399,844	$1,288,539	2.16
Total Resource Cost Test (TRC) No Adder	$1,111,305	$2,181,676	$1,070,372	1.96
Utility Cost Test (UCT)	$421,888	$2,181,676	$1,759,788	5.17
Rate Impact Test (RIM)	$1,812,752	$2,181,676	$368,925	1.20
Participant Cost Test (PCT)	$1,149,056	$1,908,956	$759,900	1.66
Discounted Participant Payback (years)			6.10	

FinAnswer Express – Schedule 115

Savings Calculations and Reporting:
There are several primary categories of FinAnswer Express measures that are eligible for prescriptive incentives. They include HVAC, Building Shell, Lighting, Motors, Refrigeration and other energy efficiency measures. 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 – HVAC, Building Shell, Lighting, Motors, Refrigeration 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.

The tables below present the cost effectiveness findings of the FinAnswer Express program based on Rocky Mountain Power's 2011 costs and savings estimates. The Utility discount rate is from the 2011 Integrated Resource Plan.

Cost effectiveness was tested using the 2011 IRP 69% east system load factor decrement.

Table 1: FinAnswer Express
Annual Program Costs

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
HVAC	$107,558	$13,751	$0	$340,155	$461,464	$800,889
Building Shell	$23,710	$3,031	$0	$105,371	$132,112	$332,549
Lighting	$1,941,378	$248,198	$0	$3,000,751	$5,190,327	$8,846,036
Motors	$5,016	$641	$0	$9,742	$15,399	$16,213
Refrigeration	$24,719	$3,160	$0	$39,339	$67,218	$142,337
Other	$79	$10	$0	$150	$239	$711
Total	$2,102,459	$268,791	$0	$3,495,509	$5,866,759	$10,138,736

Table 2: FinAnswer Express
Savings by Measure Type

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
HVAC	2,658,412	66%	1,754,552	79%	1,386,096	14
Building Shell	386,771	100%	386,771	79%	305,549	14
Lighting	35,987,528	88%	31,669,025	79%	25,018,529	14
Motors	99,777	82%	81,817	79%	64,636	14
Refrigeration	491,738	82%	403,225	79%	318,548	14
Other	1,290	100%	1,290	79%	1,019	14
Total	39,625,516		34,296,680		27,094,377	

Table 3: IRP 69% Load Factor Decrement

All Measures				AC: IRP 69% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0459	$12,509,987	$23,682,465	$11,172,478	1.893
Total Resource Cost Test (TRC) No Adder	0.0459	$12,509,987	$21,529,514	$9,019,527	1.721
Utility Cost Test (UCT)	0.0215	$5,866,760	$21,529,514	$15,662,754	3.670
Rate Impact Test (RIM)		$19,714,423	$21,529,514	$1,815,091	1.092
Participant Cost Test (PCT)		$12,833,843	$21,024,196	$8,190,354	1.638
Lifecycle Revenue Impacts ($/kWh)				($0.000006695)	
Discounted Participant Payback (years				6.22	

Table 4: Building Shell

			AC: IRP 69% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$359,290	$299,106	-$60,185	0.83
Total Resource Cost Test (TRC) No Adder	$359,290	$271,914	-$87,376	0.76
Utility Cost Test (UCT)	$132,112	$271,914	$139,802	2.06
Rate Impact Test (RIM)	$283,405	$271,914	-$11,491	0.96
Participant Cost Test (PCT)	$420,949	$296,882	-$124,067	0.71
Discounted Participant Payback (years)			NA	

Table 5: HVAC

	AC: IRP 69% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$922,198	$1,373,034	$450,836	1.49
Total Resource Cost Test (TRC) No Adder	$922,198	$1,248,213	$326,014	1.35
Utility Cost Test (UCT)	$461,464	$1,248,213	$786,749	2.70
Rate Impact Test (RIM)	$1,485,899	$1,248,213	-$237,687	0.84
Participant Cost Test (PCT)	$1,013,784	$1,636,909	$623,125	1.61
Discounted Participant Payback (years)			6.03	

Table 6: Lighting

	AC: IRP 69% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$11,035,612	$21,677,431	$10,641,820	1.96
Total Resource Cost Test (TRC) No Adder	$11,035,612	$19,706,756	$8,671,144	1.79
Utility Cost Test (UCT)	$5,190,327	$19,706,756	$14,516,428	3.80
Rate Impact Test (RIM)	$17,578,306	$19,706,756	$2,128,450	1.12
Participant Cost Test (PCT)	$11,197,514	$18,681,737	$7,484,223	1.67
Discounted Participant Payback (years)			6.08	

Table 7: Motors

	AC: IRP 69% LF Decrement			
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$21,870	$56,004	$34,134	2.56
Total Resource Cost Test (TRC) No Adder	$21,870	$50,913	$29,042	2.33
Utility Cost Test (UCT)	$15,399	$50,913	$35,514	3.31
Rate Impact Test (RIM)	$63,170	$50,913	-$12,257	0.81
Participant Cost Test (PCT)	$20,523	$70,211	$49,688	3.42
Discounted Participant Payback (years)			1.87	

Table 8: Other

			AC: IRP 69% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$800	$883	$83	1.10
Total Resource Cost Test (TRC) No Adder	$800	$803	$3	1.00
Utility Cost Test (UCT)	$239	$803	$564	3.36
Rate Impact Test (RIM)	$992	$803	-$189	0.81
Participant Cost Test (PCT)	$900	$1,103	$203	1.23
Discounted Participant Payback (years)			10.06	

Table 9: Refrigeration

			AC: IRP 69% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$170,216	$276,007	$105,791	1.62
Total Resource Cost Test (TRC) No Adder	$170,216	$250,916	$80,700	1.47
Utility Cost Test (UCT)	$67,218	$250,916	$183,698	3.73
Rate Impact Test (RIM)	$302,650	$250,916	-$51,734	0.83
Participant Cost Test (PCT)	$180,174	$337,354	$157,181	1.87
Discounted Participant Payback (years)			5.41	

Re-Commissioning – Schedule 126

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 present the cost effectiveness findings of the Re-Commissioning program based on Rocky Mountain Power's 2011 costs and savings estimates. The Utility discount rate is from the 2011 Integrated Resource Plan.

Cost effectiveness was tested using the 2011 IRP 20% east commercial cooling load factor decrement.

Table 1: Re-Commissioning
Annual Program Costs and Savings

	Program Costs	Utility Admin	Evaluation	Incentives	Total Utility Costs	Net Participant Incremental Cost
Commercial	$352,444	$14,712	$0	$0	$367,156	$51,996

Table 2: Re-Commissioning
Savings

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Commercial	3,520,821	98%	3,450,405	84%	2,898,340	7

Table 3: IRP 20% Load Factor Decrement

All Measures				AC: IRP 20% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$0.0230	$419,152	$2,098,249	$1,679,097	5.01
Total Resource Cost Test (TRC) No Adder	$0.0230	$419,152	$1,907,499	$1,488,347	4.55
Utility Cost Test (UCT)	$0.0202	$367,156	$1,907,499	$1,540,343	5.20
Rate Impact Test (RIM)		$1,628,861	$1,907,499	$278,638	1.17
Participant Cost Test (PCT)		$61,900	$1,502,030	$1,440,130	24.27
Lifecycle Revenue Impacts ($/kWh)				$(0.000001809)	
Discounted Participant Payback (years)				0.25	

Self Direction – Schedule 192

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 present the cost effectiveness findings of the Self Direction program based on Rocky Mountain Power's 2011 costs and savings estimates. The Utility discount rate is from the 2011 Integrated Resource Plan.

Cost effectiveness was tested using the 2011 IRP 69% east system load factor decrement.

Table 1: Self Direction
Annual Program Costs

	Program Costs	Utility Admin	Engineering Costs	Customer Credits	Total Utility Costs	Net Participant Incremental Cost
Commercial	$82,440	$23,439	$36,422	$631,049	$773,350	$1,130,575
Industrial	$201,925	$16,704	$8,148	$1,842,855	$2,069,633	$3,214,758
Total	$284,365	$40,144	$44,570	$2,473,904	$2,842,983	$4,345,333

Table 2: Self Direction
Savings

	Gross kWh Savings	Realization Rate	Adjusted Gross Savings	Net to Gross Percentage	Net kWh Savings	Measure Life
Commercial	3,645,179	99%	3,608,727	87%	3,139,593	13
Industrial	12,802,602	99%	12,674,576	87%	11,026,881	13
Total	16,447,781		16,283,303		14,166,474	

Table 3: IRP 69% Load Factor Decrement

All Measures				AC: IRP 69% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0352	$4,714,411	$11,749,990	$7,035,579	2.492
Total Resource Cost Test (TRC) No Adder	0.0352	$4,714,411	$10,681,809	$5,967,398	2.266
Utility Cost Test (UCT)	0.0212	$2,842,982	$10,681,809	$7,838,827	3.757
Rate Impact Test (RIM)		$10,233,905	$10,681,809	$447,903	1.044
Participant Cost Test (PCT)		$4,994,636	$10,969,218	$5,974,583	2.196
Lifecycle Revenue Impacts ($/kWh)				($0.000001750)	
Discounted Participant Payback (years)				3.04	

Table 4: Commercial

			AC: IRP 69% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$1,272,876	$2,960,058	$1,687,182	2.33
Total Resource Cost Test (TRC) No Adder	$1,272,876	$2,690,962	$1,418,086	2.11
Utility Cost Test (UCT)	$773,350	$2,690,962	$1,917,612	3.48
Rate Impact Test (RIM)	$2,977,604	$2,690,962	-$286,643	0.90
Participant Cost Test (PCT)	$1,299,511	$3,164,675	$1,865,164	2.44
Discounted Participant Payback (years)			2.68	

Table 5: Industrial

			AC: IRP 69% LF Decrement	
	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	$3,441,535	$8,789,932	$5,348,397	2.55
Total Resource Cost Test (TRC) No Adder	$3,441,535	$7,990,847	$4,549,312	2.32
Utility Cost Test (UCT)	$2,069,632	$7,990,847	$5,921,215	3.86
Rate Impact Test (RIM)	$7,256,301	$7,990,847	$734,546	1.10
Participant Cost Test (PCT)	$3,695,125	$7,804,544	$4,109,419	2.11
Discounted Participant Payback (years)			3.20	

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 2011 IRP avoided costs (the most recent values) have been provided in summary fashion in the body of the Energy Efficiency and Peak Reduction 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 2011 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 2011 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 2011 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 2011 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	(0.0066)	($132,945)	$3,568,744	$3,701,689	NA
Total Resource Cost Test (TRC) No Adder	(0.0066)	($132,945)	$3,244,313	$3,377,258	NA
Utility Cost Test (UCT)	0.0688	$1,379,749	$3,244,313	$1,864,564	2.351
Rate Impact Test (RIM)		$3,194,121	$3,244,313	$50,192	1.016
Participant Cost Test (PCT)		($932,931)	$3,447,488	$4,380,418	NA
Lifecycle Revenue Impacts ($/kWh)				($0.000000176)	
Discounted Participant Payback (years)				NA	

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 2011 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	0.0507	$16,561,666	$26,969,947	$10,408,280	1.628
Total Resource Cost Test (TRC) No Adder	0.0507	$16,561,666	$24,518,133	$7,956,467	1.480
Utility Cost Test (UCT)	0.0338	$11,062,406	$24,518,133	$13,455,728	2.216
Rate Impact Test (RIM)		$39,446,988	$24,518,133	($14,928,855)	0.622
Participant Cost Test (PCT)		$16,996,666	$51,010,292	$34,013,626	3.001
Lifecycle Revenue Impacts ($/kWh)				$0.000032376	
Discounted Participant Payback (years)				1.25	

Energy Star New Homes

Last Approved Filing – Advice 11-10, Filed October 17, 2011.
Avoided Costs Used – 2007 IRP – 46% Residential Whole House Load Factor decrement.

Results of the five cost effectiveness tests using 2011 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	$0.103	$3,445,806	$3,092,014	($353,792)	0.897
Total Resource Cost Test (TRC) No Adder	$0.103	$3,445,806	$2,810,922	($634,884)	0.816
Utility Cost Test (UCT)	$0.092	$3,078,537	$2,810,922	($267,615)	0.913
Rate Impact Test (RIM)		$6,214,848	$2,810,922	($3,403,926)	0.452
Participant Cost Test (PCT)		$2,054,099	$4,823,141	$2,769,042	2.348
Lifecycle Revenue Impacts ($/k				$0.000009675	
Discounted Participant Payback				1.53	

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 2011 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	0.0242	$1,488,334	$3,360,631	$1,872,296	2.258
Total Resource Cost Test (TRC) No Adder	0.0242	$1,488,334	$3,055,119	$1,566,785	2.053
Utility Cost Test (UCT)	0.0305	$1,880,284	$3,055,119	$1,174,835	1.625
Rate Impact Test (RIM)		$7,085,030	$3,055,119	($4,029,911)	0.431
Participant Cost Test (PCT)		$0	$7,021,474	$7,021,474	NA
Lifecycle Revenue Impacts ($/kWh)				$0.000026169	
Discounted Participant Payback (years)				NA	

Low Income Weatherization

Last Approved Filing – Advice 11-12, Filed November 23, 2011.
Avoided Costs Used – August 2005 updated to the 2004 IRP 65% east system load factor decrement.

Results of the five cost effectiveness tests using 2011 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	0.0197	$245,566	$781,585	$536,019	3.183
Total Resource Cost Test (TRC) No Adder	0.0197	$245,566	$710,532	$464,966	2.893
Utility Cost Test (UCT)	0.0197	$245,566	$710,532	$464,966	2.893
Rate Impact Test (RIM)		$1,350,212	$710,532	($639,680)	0.526
Participant Cost Test (PCT)		$0	$1,276,664	$1,276,664	NA
Lifecycle Revenue Impacts ($/kWh)				$0.000002661	
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 2011 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	0.0368	$19,351,906	$33,253,736	$13,901,831	1.718
Total Resource Cost Test (TRC) No Adder	0.0368	$19,351,906	$30,230,669	$10,878,764	1.562
Utility Cost Test (UCT)	0.0162	$8,510,059	$30,230,669	$21,720,610	3.552
Rate Impact Test (RIM)		$38,941,665	$30,230,669	($8,710,995)	0.776
Participant Cost Test (PCT)		$19,824,656	$41,384,461	$21,559,805	2.088
Lifecycle Revenue Impacts ($/kWh)				$0.000032132	
Discounted Participant Payback (years)				4.27	

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 2011 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	0.0459	$12,509,987	$16,682,166	$4,172,179	1.334
Total Resource Cost Test (TRC) No Adder	0.0459	$12,509,987	$15,165,605	$2,655,619	1.212
Utility Cost Test (UCT)	0.0215	$5,866,760	$15,165,605	$9,298,846	2.585
Rate Impact Test (RIM)		$19,714,423	$15,165,605	($4,548,818)	0.769
Participant Cost Test (PCT)		$12,833,843	$21,024,196	$8,190,354	1.638
Lifecycle Revenue Impacts ($/kWh)				$0.000016779	
Discounted Participant Payback (years				6.22	

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 2011 program performance and utilizing the 2004 IRP avoided costs are included in the following table.

2004 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	0.0230	$419,152	$1,215,107	$795,955	2.899
Total Resource Cost Test (TRC) No Adder	0.0230	$419,152	$1,104,642	$685,490	2.635
Utility Cost Test (UCT)	0.0202	$367,156	$1,104,642	$737,486	3.009
Rate Impact Test (RIM)		$1,628,861	$1,104,642	($524,219)	0.678
Participant Cost Test (PCT)		$61,900	$1,502,030	$1,440,130	24.265
Lifecycle Revenue Impacts ($/kWh)				$0.000003404	
Discounted Participant Payback (years)				0.25	

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 2011 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: 60% LF Decrement	
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder	0.0352	$4,714,411	$8,999,596	$4,285,185	1.909
Total Resource Cost Test (TRC) No Adder	0.0352	$4,714,411	$8,181,451	$3,467,040	1.735
Utility Cost Test (UCT)	0.0212	$2,842,982	$8,181,451	$5,338,469	2.878
Rate Impact Test (RIM)		$10,233,905	$8,181,451	($2,052,455)	0.799
Participant Cost Test (PCT)		$4,994,636	$10,969,218	$5,974,583	2.196
Lifecycle Revenue Impacts ($/kWh)				$0.000008017	
Discounted Participant Payback (years)				3.04	

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 2011 program performance and utilizing the $59.43 benefit value are included in the following table.

Avoided Capacity @ $59.43/kW

All Measures					
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder		$1,180,477	$3,386,697	$2,206,220	2.869
Total Resource Cost Test (TRC) No Adder		$1,180,477	$ 3,078,815	$1,898,338	2.608
Utility Cost Test (UCT)		$2,502,866	$3,078,815	$575,949	1.230
Rate Impact Test (RIM)		$2,502,866	$ 3,078,815	$575,949	1.230
Participant Cost Test (PCT)		$0	$1,322,389	$1,322,389	NA

Air Conditioner Load Management (Cool Keeper)

Last Approved Filing – Advice 11-03, Filed March 28, 2011.
Avoided Costs Used – 2003 IRP – 100 MW 1% Load Factor Decrement

Results of the five cost effectiveness tests using 2011 program performance and utilizing the 2003 IRP benefit value are included in the following table.

Avoided Capacity @ $100.62/kW

All Measures					
	Levelized $/kWh	Costs	Benefits	Net Benefits	Benefit/Cost Ratio
Total Resource Cost Test (PTRC) + Conservation Adder		$52,174,715	$124,142,940	$71,968,225	2.38
Total Resource Cost Test (TRC) No Adder		$52,174,715	$112,857,218	$60,682,503	2.16
Utility Cost Test (UCT)		$69,616,716	$112,857,218	$43,240,502	1.62
Rate Impact Test (RIM)		$69,616,716	$112,857,218	$43,240,502	1.62
Participant Cost Test (PCT)			$17,442,002	$17,442,002	NA