



Demand-Side Management Annual Status Report
Electric and Natural Gas
Public Service Company of Colorado

April 1, 2013 / Docket No. 11A-631EG

2012

2012 Demand-Side Management Annual Status Report

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Executive Summary

Public Service Company of Colorado (“Public Service” or the “Company”) submits this combined electric and natural gas 2012 Colorado Demand-Side Management (DSM) Annual Status Report (“Status Report”) to the Colorado Public Utilities commission (“Commission”) at the conclusion of the 2012 DSM Plan. In this filing, Public Service will report on its 2012 electric and natural gas DSM Programs.

The electric savings of 400.7 GWh are a significant accomplishment equaling 122% of the Commission ordered goal of 330 GWh. Realized demand savings of 90.6 MW equaled 114% of the goal of 79.3 MW. The gas savings of 431.5 Dth was 99% of our approved goal of 435 Dth. To achieve these savings, the Company spent a total of \$91.9 million (\$79.4 million – electric, \$12.5 million – natural gas) on its electric and natural gas programs, thereby spending \$2.1 million more than the approved electric budget of \$77.3 million and spending \$0.7 million less than the approved gas budget of \$13.2 million. Below in Figure 1 and 2 are Public Service’s historical achievements and expenditures for its electric and natural gas DSM Programs.

Figure 1: Historical Electric Program Savings and Expenditures

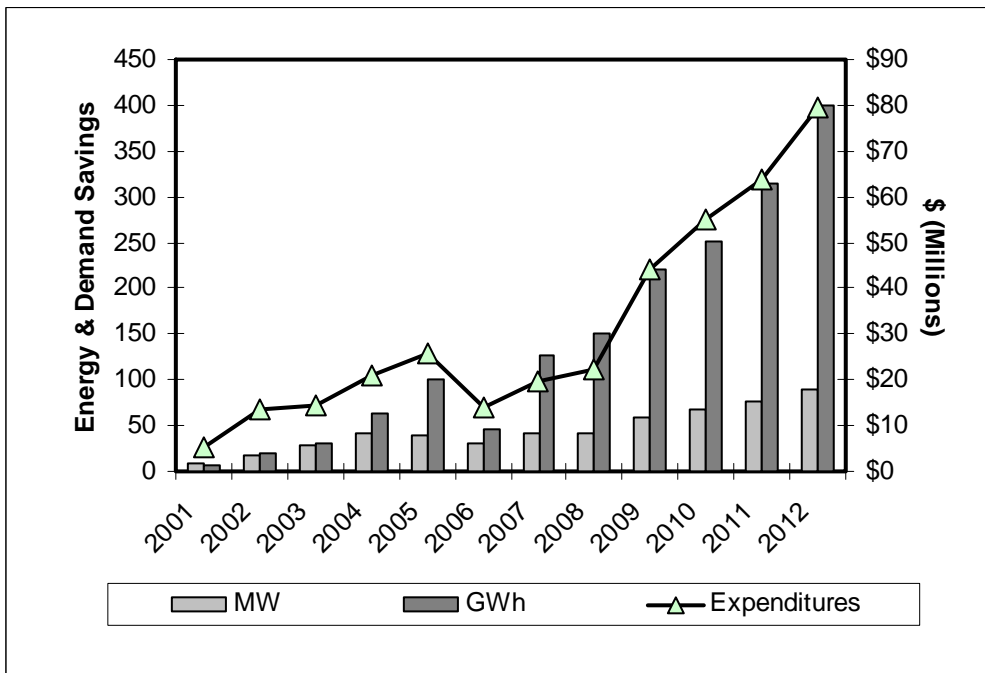
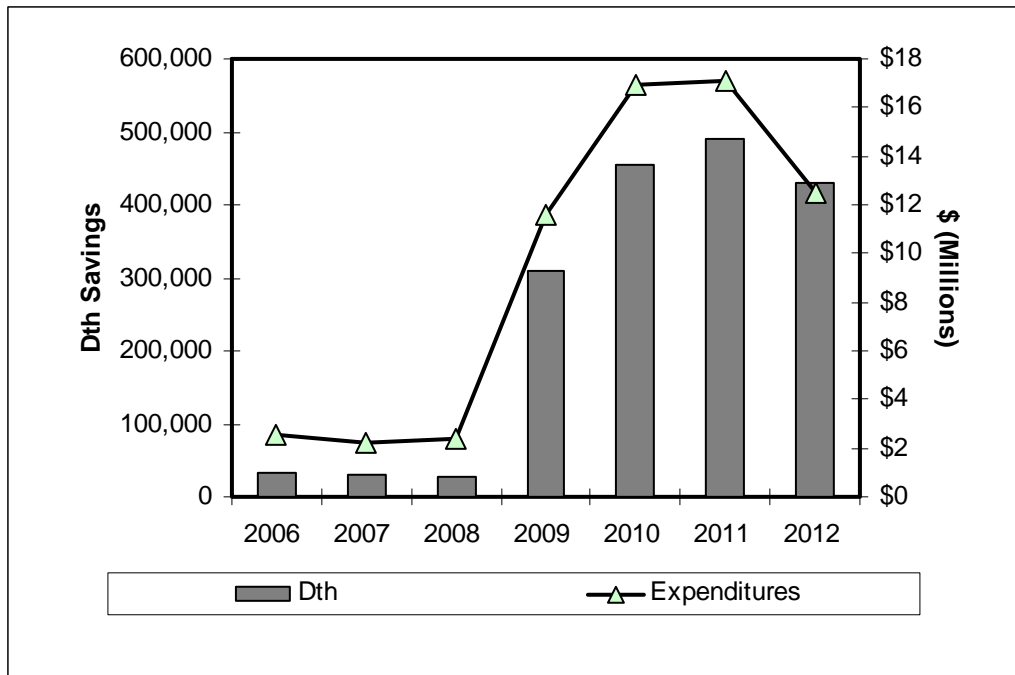


Figure 2: Historical Natural Gas Program Savings and Expenditures



History of the Plan:

Over the last sixteen years, Public Service has entered into several regulatory settlements involving demand-side management in conjunction with its integrated resource/least-cost planning process. The following paragraphs describe those settlements, as well as legislation and decisions significant to demand-side management:

- In the 1996 Integrated Resource Plan Settlement Agreement (Decision C98-1042, Docket No. 97A-297E), the Company committed up to \$10M for DSM over four years through two bid processes. The first focused on residential air conditioning load control and lighting for commercial customers (“Bid 2000”) and the second followed the completion of the Bid 2000 program.
- In the 1999 integrated Resource Plan DSM Stipulation and Settlement Agreement (Decision C00-1057, Docket No. 00A-008E), the Company committed to use its best efforts to acquire 124 MW of cost-effective DSM resource through the 1999 IRP Resource Acquisition Period ending December 31, 2005. The Company was authorized to spend no more than \$75 million (Year 2000 Dollars) to obtain the 124 MW of DSM. This amount included total capital costs and operating expenses incurred by the Company, but excluded expenses for the natural gas Energy Savings Partners (“ESP”) low-income weatherization program. The 1999 Agreement identified target savings by customer class and program type.
- As part of the 2003 Least-Cost Resource Plan Settlement Agreement (Decision C05-0049, Docket Nos. 04A-214E, 04A-215E, 04A-216E), the Company committed to obtain 320 MW and 800 GWh of cost effective conservation for \$196 million (Year 2005 Dollars) between 2006 and 2013.

- House Bill 07-1037, Concerning Measures to Promote Energy Efficiency, and Making as Appropriation Therefore was passed by the Colorado General Assembly and signed into law by Governor Ritter in 2007, and codified in relevant part at §§ 40-1-102(5), (6) and (7), C.R.S. as well as §§ 40-3.2-101 and 104, C.R.S. That bill establishes that:

...cost-effective natural gas and electricity demand-side management programs will save money for consumers and utilities and protect Colorado's environment. The general assembly further finds, determines, and declares that providing funding mechanisms to encourage Colorado's public utilities to reduce emissions or air pollutants and to increase energy efficiency are matters of statewide concern and that public interest is served by quality of life and health of Colorado citizens and an increase in the attractiveness of Colorado as a place to live and conduct business.¹

Section 40-3.2-104, C.R.S. further charges the Commission to:

...establish energy savings and peak demand reduction goals to be achieved by an investor-owned electric utility, taking into account the utility's cost-effective DSM potential, the need for electricity resources, the benefits DSM investments, and other factors as determined by the commission. The energy savings and peak demand reduction goals shall be at least five percent of the utility's retail system peak demand measured in megawatts in the base year and at least five percent of the utility's retail energy sales measured in megawatt-hours in the base year. The base year shall be 2006. The goals shall be met in 2018, counting savings in 2018 from DSM measures installed starting in 2006. The commission may establish interim goals and may revise the goals as it deems appropriate.²

- On June 27, 2007, the Commission issued Decision No. C07-0562 opening Docket No 07I-251G to investigate issues associated with the natural gas DSM requirements contained in §40-3.2-103, C.R.S., which directs the Commission to implement rules to establish specific natural gas DSM requirements for jurisdictional natural gas utilities. Through an informal workshop and two rounds of comments on proposed rules, the Commission issued Decision No. C08-0248 adopting the Rules regarding Natural Gas Demand Side Management, pursuant to House Bill 07-1037, enacted as § 40-3.2-103.
- On October 31, 2007, Public Service filed its Application for Authorization to Implement an Enhanced Demand Side Management Program and to Revise its Demand Side Management Cost Adjustment Mechanism to Include Current Cost Recovery and Incentives (Application). Public Service requested approval to implement an enhanced electric DSM program and to revise its demand-side management cost adjustment mechanism (DSMCA) to include current cost recovery and incentives designed to reward Public Service for successfully implementing cost-effective electric DSM programs and measures. On June 5, 2008, the Commission issued its Decision No. C08-0560 approving, in part, the enhanced DSM Plan proposed by the Company and establishing annual electric energy savings goals for Public Service from 2009 through 2020. As part of Decision No. C08-0560, the Commission also endorsed the Company's proposal to file biennial DSM plans and to

¹ § 40-3.2-101, C.R.S.

² § 40-3.2-104(2)

combine gas and electric DSM plans in one filing, thereby waiving the gas DSM rules' requirement for the Company to file triennial natural gas DSM Plans.

- In compliance with Decision No. C08-0560, Public Service filed its first combined gas and electric 2009/10 DSM Plan on August 11, 2008. In this Plan, the Company proposed a comprehensive portfolio of electric and natural gas demand-side management programs for 2009 and 2010 as well as annual budgets and annual goals for the natural gas DSM programs. The Commission initiated Docket No. 08A-366EG to consider the 2009/2010 DSM Plan filing and numerous parties intervened. However, prior to hearings, the majority of the Interveners, the Commission Staff, and the Company entered into a Stipulation and Settlement Agreement. The Settling Parties recommended approval of the Plan subject certain amendments and changes to specific DSM programs agreed to and described in Appendix to the Agreement. The Settling Parties further agreed to recommend to the Commission that the Company be afforded the discretion to modify the plan during the course of the plan period and agreed to a process for providing notice of plan changes to interested stakeholders.
- The Commission accepted the 2009/2010 Plan Stipulation in Decision R08-1243 issued on November 28, 2008. As agreed to in the Stipulation, in compliance with Decision No. R08-1243, on February 20, 2009, the Company filed its 2009/2010 DSM Plan Update, including all changes that had been agreed to in the Stipulation as well as corrections to certain errors made in the original plan filing. On May 1, 2009, the Company filed a further amendment to the Plan.
- On July 1, 2010, Public Service filed its Verified Application for approval of its proposed 2011 DSM Plan and continuation of the terms of the Stipulation and settlement Agreement entered into and approved by the Commission in docket No. 08A-366EG, except to the extent that those terms are specific to the company 2009/2010 Biennial DSM Plan. On December 16, 2010, the Stipulation and Settlement Agreement was approved by the Commission.
- On August 10, 2010 Public Service filed a Verified Application for Approval of a Number of Strategic Issues relating to its DSM Plan, Including long term electric energy savings goals and incentives. The Application proposed new electric savings goals along with a new electric incentive mechanism. In addition, the application requested various other changes were held early in 2011. Following the hearing the Commission issued on April 26, 2011, Decision Nos. C11-0442 approving Public Service's Applications with modifications. The Commission then issued Decision No. C11-0645 on June 14, 2011, addressing Public Service's Application for Rehearing, Reargument, or Reconsideration and granting the Company's Motion for a one-month extension to file its 2012-2013 Biennial Plan to August 1, 2011.
- On August 1, 2011 the Company filed a combined electric and natural gas 2012/2013 Biennial Demand-Side Management Plan Docket No. 11A-631EG. On November 10, 2011 a Stipulation and Settlement Agreement along with the Joint Motion to Approve Stipulation Agreement were filed by Public Service. The Stipulation and Settlement Agreement was approved by the Administrative Law Judge by Decision No. R-11-1326 issued on December 9, 2011 without significant modification. No exceptions were filed, and therefore, Decision No. R11-1326 became the final decision of the commission on December 29, 2011. It was ordered by the ALJ that within 60 days of the effective date of the Recommended Decision, Public Service shall file an update of its DSM Plan reflecting changes approved with approval of the Stipulation and Settlement Agreement, together with

an erratum correcting errors. On February 28, 2012 Public Service filed the updated 2012/2013 DSM Plan.

High-Level Achievements

In 2012, Public Service’s electric portfolio achieved demand savings of 90,647 generator kW (114% of goal) and energy savings of 400,675,909 generator kWh (122% of goal) at a cost of \$79,405,379 (103% of goal). The gas portfolio achieved savings of 431,496 Dth (99% of goal) at a cost of \$12,460,525 (94% of goal). These achievements have provided electric net benefits of approximately \$219.6 million including \$30.8 million Non-Energy Benefits Adder (which are excluded from the incentive calculation) and gas net benefits of \$5.7 million. Based on these achievements and net benefits, the Company has calculated an associated financial incentive of \$22.7 million for its electric portfolio and \$1.1 million for its gas portfolio. This includes \$757,916 for the gas financial incentive and an acknowledgement of lost revenues associated with gas DSM program of \$374,884. The incentive calculations are shown in more detail in the Financial Incentive Calculation section of this Report.

Public Service built on the success of the 2011 program year including very strong performance in several products, including: Lighting Efficiency, Motor & Drive Efficiency, School Education Kits and Refrigeration Recycling. The Company also worked on building customer awareness about the programs and providing education on the benefits of energy efficiency. Public Service maintained cost-effective electric and gas portfolios, achieving TRC ratios of 2.38 and 1.18, respectively, compared to goal TRC ratios of 2.49 and 1.31. Tables 1a and 1b below compare at a segment level the forecasted budgets, savings goals, and expected cost-effectiveness results. Table 1c provides the values used to calculate the Total Resource Cost Test ratio both without the financial incentive and taking into consideration the financial incentive. The TRC ratio drops slightly for both electric and gas, from 2.35 to 2.09 and 1.18 to 1.14, respectively.

Table 1a: High-Level Electric Goals and Achievements for 2012

2012	Electric Budget	Electric Actual Spend	Generator kW Goal	Net Realized Generator kW	Generator kWh Goal	Net Realized Generator kWh	Goal Modified TRC Ratio	Achieved Modified TRC Ratio
Business Segment	\$40,011,734	\$44,303,724	35,667	45,780	198,529,968	226,798,373	2.17	2.18
Residential Segment	\$27,531,932	\$27,084,085	41,883	41,104	110,975,610	151,293,814	4.31	3.63
Low-Income Segment	\$2,807,620	\$1,944,610	1,063	748	11,240,941	6,734,197	1.74	1.21
Indirect Segment	\$6,902,097	\$6,072,960	684	3,014	8,560,821	15,849,525		
2012 TOTAL	\$77,253,382	\$79,405,379	79,297	90,647	329,307,341	400,675,909	2.49	2.38

Table 1b: High-Level Natural Gas Goals and Achievements for 2012

2012	Gas Budget	Gas Actual Spend	Goal Dth	Net Realized Dth	Goal Modified TRC Ratio	Achieved Modified TRC Ratio
Business Segment	\$1,627,048	\$1,305,792	104,291	67,462	1.43	1.21
Residential Segment	\$5,940,706	\$5,926,669	245,279	213,932	1.35	1.19
Low-Income Segment	\$3,701,422	\$3,590,685	61,726	77,578	1.39	1.30
Indirect Segment	\$1,949,157	\$1,637,379	23,758	72,524		
2012 TOTAL	\$13,218,333	\$12,460,525	435,054	431,496	1.31	1.18

Table 1c: Total Resource Cost Test results with Financial Incentive

	Electric	Gas
Modified TRC Benefits w/ Adder	\$378,342,917	\$37,555,479
Modified TRC Costs	\$158,693,577	\$31,840,502
Modified TRC Ratio	2.38	1.18
Modified TRC Benefits w/ Adder	\$378,342,917	\$37,555,479
Incentive	\$22,688,263	\$757,916
Acknowledgement of Load Revenue (ALR)	N/A	\$374,884
Modified TRC Costs w/ Incentive & ALR	\$181,381,840	\$32,973,303
Modified TRC Ratio w/ Incentive & ALR	2.09	1.14

Summary of Program Changes

60/90-Day Notices

In recognition of the need to afford the Company discretion to make changes to the Plan in order achieve the greatest level of energy savings, the 2010 Stipulation and Settlement Agreement provided for a 60/90-Day Notice process for advising interested stakeholders of changes to the Plan. 60-Day Notices are required for any proposal to add a new DSM Program, reduce rebate levels, adopt new or discontinue existing measures, or change technical assumptions or eligibility requirements. 90-Day Notices are required for any program the Company wishes to discontinue. DSM roundtable participants have 30 days from the time of notice date to provide comments to Public Service on the proposed changes. Public Service will have 30 days thereafter to consider comments. Listed below are 60/90-Day Notices that were completed during 2012. Detailed programmatic changes made through 60/90-Day Notices are described in the “Changes in 2012” section of the pertinent product descriptions. A description of the changes can be found at:

http://www.xcelenergy.com/About_Us/Rates_&_Regulations/Regulatory_Filings/CO_DSM

Table 2: 60/90-Day Notices Submitted in 2012

Program 60-Day Notice	Changes Made	Effective Date
Building Code Support Pilot	New Pilot Product	2-24-2012
In-Home Smart Devices Pilot	Product Changes	5-1-2012
ENERGY Star New Homes	Product Changes	8-27-2012
Low Income Single Family Weatherization	New Product Measures	9-18-2012
Low Income Single Family Weatherization Program Evaluation	Product Evaluation Recommendations, Technical Modifications	9-23-2012
Business Heating Efficiency Program Evaluation	Product Evaluation Recommendations, Technical Modifications	9-23-2012
Self Direct Program Evaluation	Product Evaluation Recommendations	9-23-2012
Showerhead Program Evaluation	Product Evaluation Recommendations, Technical Modifications	9-25-2012
2012 AC Tune-Up RFP Response	Evaluation of RFP submissions	11-1-2012
Process Efficiency	Product Change	11-4-2012
Energy Efficiency Financing Application	New Product	11-29-2012
Computer Efficiency	Product Measure and M&V updated	11-30-2012
Lighting Efficiency 2012	Product Changes and Technical Modifications	11-21-2012
Low Income Kits	Technical Modifications	12-27-2012

Third Party Providers Administrative Costs

As a result of the Commission’s order in the Strategic Issues Docket, Docket No. 10A-554EG Decision No. C11-0645, Public Service is required to identify and report costs for products implemented in 2012 which utilize third-party implementers.

“14...Public Service shall, on a going forward basis beginning with programs implemented in 2012, track the administrative costs that it incurs when conducting a request for proposals and when managing the winning third-party providers of the DSM services throughout the entirety of their service periods. Such costs shall include, but not be limited to the costs of labor, software, and other materials to engage in these activities.”

The following Table 3 identifies all the existing products which had contracts re-bid in 2012 and RFPs issued in 2012 which resulted in new products. The reported costs include administrative

costs incurred conducting the requests for proposal, analyzing responses, selecting winning service providers, and ongoing management of the winning third-party providers in 2012. These costs also include loaded labor, materials and payments to third-parties and exclude incentive payments to customers.

Table 3: Third Party Provider Costs in 2012

Product Name	2012 Spend
Business New Construction	\$2,722,265
Innovative Technologies RFP	\$131,340
Segment Efficiency	\$174,727

Program Achievements and Expenditures

The following Tables 4a, 4b, 5a, and 5b provide the goals and budgets approved in the 2012 DSM Plan as well as Public Service’s 2012 achievements, actual spending, and cost-effectiveness results by product.

Some of the products that are part of our portfolio did not pass the modified Total Resource Cost (TRC) Test in 2012. While each of the products listed below are discussed in more detail in the Status Report section of this report, below is a bulleted summary of the primary reason for the failing of program TRC test ratios (gas and/or electric) as well as a brief description of plans to improve the ratios in 2012.

- Water Heater Rebate – Electric and Gas
 - Customers chose lowest qualifying efficiencies more than anticipated
 - Customers did not purchase higher efficiency technologies enough to overcome negative benefits of lower efficiency technologies.
 - Marketing will be conducting additional education and outreach to contractors and retailers to strengthen the messages for higher efficiency.
- Standard Offer – Gas
 - Low dekatherm achievement could not overcome study costs.
 - On 03/19/13, the Company issued a 90 day notice to discontinue the Standard Offer product for both electric and gas. We have evaluated the performance of this product over the past 4 years and find that we can better serve customers with other existing products.
- Insulation Rebate – Gas
 - Lower participation by customers with natural gas only service by provided by the Company.
 - Lower participation by customers with electric resistance heated homes.
- Low Income - Multi-Family Weatherization – Electric & Gas
 - Higher than expected rebate costs for projects that had lower savings than anticipated.
- Low Income – Non-Profit Efficiency – Gas

- Higher than expected rebate costs for projects that had a smaller gas savings than anticipated.

Table 4a: 2012 Electric Program Goals and Budgets

2012	Electric Participants	Electric Budget	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Business Program					
Compressed Air Efficiency	73	\$838,191	620	4,137,552	2.25
Computer Efficiency	2,666	\$500,637	1,004	7,342,230	2.87
Cooling Efficiency	301	\$2,976,091	2,121	7,033,292	1.52
Custom Efficiency	34	\$1,903,248	717	7,607,232	2.03
Data Center Efficiency	12	\$935,135	506	6,410,823	3.70
Energy Management Systems	56	\$1,541,500	243	8,495,894	1.70
Heating Efficiency	0	\$0	0	0	
Lighting Efficiency	1,140	\$8,388,395	12,040	62,917,758	2.78
Motor & Drive Efficiency	1,589	\$5,433,060	3,458	21,145,535	2.13
New Construction	91	\$6,385,394	8,147	24,457,692	2.20
Process Efficiency	12	\$2,017,096	782	11,029,631	2.26
Recommissioning	85	\$1,319,172	330	5,925,060	1.23
Segment Efficiency	60	\$1,185,732	347	2,585,240	1.38
Self-Directed Custom Efficiency	13	\$1,908,790	1,957	8,975,070	1.79
Small Business Lighting	165	\$3,011,058	2,108	11,328,366	1.82
Standard Offer	12	\$1,668,234	1,287	9,138,595	1.14
Business Program Total	6,309	\$40,011,734	35,667	198,529,968	2.17
Residential Program					
ENERGY STAR New Homes	2,580	\$532,721	89	1,543,624	1.32
Evaporative Cooling Rebates	4,298	\$2,282,325	6,042	3,771,471	9.83
Heating System Rebates	0	\$0	0	0	
High Efficiency Air Conditioning	2,010	\$2,405,385	2,871	2,372,400	1.31
Home Lighting & Recycling	522,500	\$5,440,714	10,167	90,786,179	3.52
Home Performance with ENERGY STAR	200	\$285,591	295	307,243	2.96
Insulation Rebate	3,120	\$115,505	540	428,993	3.54
Refrigerator Recycling	4,250	\$1,442,459	419	4,274,406	1.19
School Education Kits	30,000	\$1,538,568	535	5,809,487	1.46
Showerhead	2,631	\$61,600	0	466,836	5.36
Water Heater Rebate	200	\$100,100	59	517,787	1.38
Residential Program Energy Efficiency Total	571,789	\$14,204,968	21,018	110,278,427	4.60
Load Management Program - Residential Saver's Switch	19,500	\$13,326,964	20,865	697,183	3.97
Residential Program Total	591,289	\$27,531,932	41,883	110,975,610	4.31
Low-Income Program					
Energy Savings Kit	10,000	\$647,664	301	5,195,061	2.67
Multi-Family Weatherization	12	\$350,669	96	1,100,000	1.64
Non-Profit Energy Efficiency	25	\$572,599	282	1,003,630	1.83
Single-Family Weatherization	2,860	\$1,236,688	384	3,942,250	1.41
Low-Income Program Total	12,897	\$2,807,620	1,063	11,240,941	1.74
Indirect Products & Services					
Education/Market Transformation					
Business Energy Analysis	400	\$992,648			
Consumer Education - Business	1,385	\$153,765			
Consumer Education - Residential	34,000	\$1,232,674			
Residential Home Energy Audit	2,175	\$635,574			
Education/Market Transformation Total	37,960	\$3,014,661			
Planning and Research					
DSM Planning & Administration		\$287,559			
Program Evaluations		\$584,312			
Measurement & Verification		\$78,097			
DSM Market Research		\$274,912			
DSM Product Development		\$1,022,558			
Energy Feedback Pilot	50,000	\$379,400	684	8,560,821	1.37
In-Home Smart Device Pilot	600	\$1,240,597			
Electric Vehicle Charging Station Pilot		\$20,000			
DSM Product Development Total	50,600	\$2,662,555	684	8,560,821	
Planning and Research Total	50,600	\$3,887,436	684	8,560,821	
Indirect Products & Services Total	88,560	\$6,902,097	684	8,560,821	
PORTFOLIO TOTAL	699,056	\$77,253,382	79,297	329,307,341	2.49
ISOC		\$31,495	12,700	0	1.91
EnerNoc		\$0	3,500	0	-
PORTFOLIO TOTAL		\$77,248,877	95,497	329,307,341	
Energy Efficiency Total		\$63,926,418	58,432	328,610,158	
Load Management Total		\$13,358,459	37,065	697,183	

Table 4b: 2012 Electric Program Achievements and Expenditures

2012	Electric Participants	Electric Spend	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Business Program					
Compressed Air Efficiency	66	\$727,511	416	1,926,355	1.49
Computer Efficiency	958	\$98,223	318	2,327,730	3.63
Cooling Efficiency	392	\$1,816,235	1,455	2,517,769	1.60
Custom Efficiency	63	\$1,590,307	285	2,260,675	1.02
Data Center Efficiency	7	\$935,158	533	5,047,663	1.20
Energy Management Systems	31	\$960,789	171	6,026,684	1.66
Heating Efficiency					
Lighting Efficiency	3,115	\$13,532,934	20,956	100,991,613	2.70
Motor & Drive Efficiency	603	\$5,339,555	3,720	24,991,511	2.27
New Construction	61	\$4,990,596	4,601	16,339,117	1.65
Process Efficiency	9	\$1,633,374	464	6,483,653	1.78
Recommissioning	75	\$721,998	666	5,117,926	2.35
Segment Efficiency	1	\$227,697	136	279,435	1.67
Self-Directed Custom Efficiency	5	\$1,182,587	1,149	9,723,468	2.77
Small Business Lighting	1,707	\$9,602,594	10,094	38,639,817	2.17
Standard Offer	6	\$944,165	816	4,124,957	1.03
Business Program Total	7,099	\$44,303,724	45,780	226,798,373	2.18
Residential Program					
ENERGY STAR New Homes	1,554	\$582,760	353	1,790,057	1.93
Evaporative Cooling Rebates	4,346	\$2,403,855	5,303	3,377,533	7.80
Heating System Rebates					
High Efficiency Air Conditioning	2,243	\$2,492,482	2,989	2,433,876	1.25
Home Lighting & Recycling	768,892	\$6,564,433	16,463	131,518,655	3.70
Home Performance with ENERGY STAR	526	\$171,051	108	377,341	1.99
Insulation Rebate	1,655	\$115,847	568	552,968	3.50
Refrigerator Recycling	5,346	\$901,655	479	4,165,549	2.60
School Education Kits	30,002	\$1,489,543	542	5,877,174	1.49
Showerhead	2,563	\$36,586	0	649,381	7.03
Water Heater Rebate	29	\$64,694	8	73,989	0.64
Residential Program Energy Efficiency Total	817,156	\$14,822,906	26,814	150,816,524	4.04
Load Management Program - Residential Saver's Switch	12,682	\$12,261,179	14,290	477,290	2.91
Residential Program Total	829,838	\$27,084,085	41,104	151,293,814	3.63
Low-Income Program					
Energy Savings Kit	6,086	\$196,353	115	1,923,475	3.07
Multi-Family Weatherization	38	\$306,160	122	1,132,806	0.77
Non-Profit Energy Efficiency	26	\$542,416	323	1,118,365	1.34
Single-Family Weatherization	2,478	\$899,681	188	2,559,550	1.14
Low-Income Program Total	8,628	\$1,944,610	748	6,734,197	1.21
Indirect Products & Services					
Education/Market Transformation					
Business Energy Analysis	222	\$485,927			
Consumer Education - Business	7,166	\$167,689			
Consumer Education - Residential	144,540	\$1,172,673			
Residential Home Energy Audit	2,604	\$563,237			
Education/Market Transformation Total	154,532	\$2,389,525	0	0	
Planning and Research					
DSM Planning & Administration		\$365,396			
Program Evaluations		\$514,379			
Measurement & Verification		\$8,600			
DSM Market Research		\$196,781			
DSM Product Development		\$287,938			
Energy Feedback Pilot	46,082	\$603,179	3,014	15,849,525	1.87
In-Home Smart Device Pilot	1,011	\$1,652,445			
Electric Vehicle Charging Station Pilot		\$10,892			
Building Code Support Pilot		\$43,825			
DSM Product Development Total	47,093	\$2,598,280	3,014	15,849,525	
Planning and Research Total	47,093	\$3,683,435	3,014	15,849,525	
Indirect Products & Services Total	201,625	\$6,072,960	3,014	15,849,525	
PORTFOLIO TOTAL	1,047,190	\$79,405,379	90,647	400,675,909	2.38
ISOC		\$35,791	13,761	0	1.91
EnerNoc		\$0	3,103	0	-
PORTFOLIO TOTAL		\$79,441,169	107,511	400,675,909	
Energy Efficiency Total		\$67,144,200	76,356	400,198,618	
Load Management Total		\$12,296,969	31,154	477,290	

Table 5a: 2012 Natural Gas Program Goals and Budgets

2012	Gas Participants	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Program						
Compressed Air Efficiency						
Computer Efficiency						
Cooling Efficiency						
Custom Efficiency	5	\$221,520	6,294	28,414	\$80,198	1.19
Data Center Efficiency						
Energy Management Systems	16	\$37,604	2,889	76,824	\$143,231	1.85
Heating Efficiency	208	\$743,394	30,885	41,545	\$284,915	1.12
Lighting Efficiency						
Motor & Drive Efficiency						
New Construction	45	\$522,920	58,037	110,986	\$551,287	1.12
Process Efficiency						
Recommissioning	8	\$51,333	2,261	44,054	\$225,285	4.30
Segment Efficiency	9	\$20,241	2,171	107,234	\$57,038	1.72
Self-Directed Custom Efficiency						
Small Business Lighting						
Standard Offer	6	\$30,036	1,754	58,408	\$2,036,982	20.86
Interruptible Credit Option						
EnerNOC						
Business Program Total	297	\$1,627,048	104,291	64,098	\$3,378,936	1.43
Residential Program						
ENERGY STAR New Homes	2,580	\$2,591,808	72,521	27,981	\$1,605,837	1.26
Evaporative Cooling Rebates						
Heating System Rebates	6,500	\$944,327	53,514	56,669	\$1,534,523	1.44
High Efficiency Air Conditioning						
Home Lighting & Recycling						
Home Performance with ENERGY STAR	200	\$268,064	7,770	28,985	\$109,158	1.17
Insulation Rebate	8,000	\$1,569,679	81,533	51,942	\$1,853,942	1.24
Refrigerator Recycling						
School Education Kits						
Showerhead	21,286	\$225,000	18,125	80,556	\$1,766,158	7.24
Water Heater Rebate	3,070	\$341,828	11,816	34,568	-\$808	1.00
Residential Program Total	41,636	\$5,940,706	245,279	41,288	\$6,868,811	1.35
Low-Income Program						
Energy Savings Kit	9,998	\$466,944	16,476	35,285	\$1,590,990	4.09
Multi-Family Weatherization	12	\$438,503	6,788	15,480	\$9,846	1.01
Non-Profit Energy Efficiency	25	\$628,006	6,970	11,099	\$3,314	1.00
Single-Family Weatherization	1,830	\$2,167,969	31,492	14,526	\$928,276	1.23
Low-Income Program Total	11,865	\$3,701,422	61,726	16,676	\$2,532,426	1.39
Indirect Products & Services						
Education/Market Transformation						
Business Energy Analysis	100	\$159,182				
Consumer Education - Business	593	\$50,002				
Consumer Education - Residential	34,000	\$250,557				
Residential Home Energy Audit	2,400	\$517,030				
Education/Market Transformation Total	37,093	\$976,771				
Planning and Research						
DSM Planning & Administration		\$103,538				
Program Evaluations		\$254,626				
Measurement & Verification		\$14,010				
DSM Market Research		\$258,736				
DSM Product Development		\$246,619				
Energy Feedback Pilot	50,000	\$94,856	23,758	250,464	\$42,319	1.45
In-Home Smart Device Pilot		\$0				
Electric Vehicle Charging Station Pilot		\$0				
DSM Product Development Total	50,000	\$341,475	23,758	69,575	-\$204,300	
Planning and Research Total	50,000	\$972,385	23,758	24,433	-\$835,211	
Indirect Products & Services Total	87,093	\$1,949,157	23,758	12,189	-\$1,563,582	
PORTFOLIO TOTAL	140,891	\$13,218,333	435,054	32,913	\$11,216,591	1.31

Table 5b: 2012 Natural Gas Program Achievements and Expenditure

2012	Gas Participants	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Program						
Compressed Air Efficiency						
Computer Efficiency						
Cooling Efficiency						
Custom Efficiency	7	\$140,977	2,801	19,872	\$16,465	1.08
Data Center Efficiency						
Energy Management Systems	11	\$31,189	3,334	106,909	\$114,087	1.75
Heating Efficiency	363	\$657,049	21,585	32,306	\$204,466	1.11
Lighting Efficiency						
Motor & Drive Efficiency						
New Construction	31	\$407,281	34,106	83,741	\$689,663	1.28
Process Efficiency	0	\$301	0	0	-\$301	
Recommissioning	18	\$20,239	4,782	236,262	\$154,641	5.15
Segment Efficiency	0	\$1,250	0	0	-\$1,375	
Self-Directed Custom Efficiency						
Small Business Lighting						
Standard Offer	3	\$47,506	853	17,961	-\$124,875	0.45
Interruptible Credit Option						
EnerNOC						
Business Program Total	433	\$1,305,792	67,462	51,664	\$1,052,770	1.21
Residential Program						
ENERGY STAR New Homes	2,131	\$3,072,731	73,726	23,994	\$1,974,383	1.30
Evaporative Cooling Rebates						
Heating System Rebates	3,508	\$731,333	28,725	39,278	\$595,854	1.29
High Efficiency Air Conditioning						
Home Lighting & Recycling						
Home Performance with ENERGY STAR	526	\$396,979	13,147	33,117	\$406,908	1.44
Insulation Rebate	2,820	\$1,282,021	68,305	53,279	-\$806,870	0.89
Refrigerator Recycling						
School Education Kits						
Showerhead	20,741	\$264,007	25,505	96,609	\$1,305,258	5.07
Water Heater Rebate	1,838	\$179,599	4,524	25,190	-\$134,637	0.77
Residential Program Total	31,564	\$5,926,669	213,932	36,096	\$3,340,897	1.19
Low-Income Program						
Energy Savings Kit	7,373	\$139,069	11,419	82,112	\$501,344	3.94
Multi-Family Weatherization	18	\$503,416	14,390	28,585	-\$754,963	0.65
Non-Profit Energy Efficiency	27	\$554,096	6,412	11,571	-\$110,843	0.90
Single-Family Weatherization	2,478	\$2,394,104	45,357	18,945	\$2,587,868	1.67
Low-Income Program Total	9,896	\$3,590,685	77,578	21,605	\$2,223,407	1.30
Indirect Products & Services						
Education/Market Transformation						
Business Energy Analysis	148	\$45,402				
Consumer Education - Business	7,166	\$53,898				
Consumer Education - Residential	144,540	\$320,409				
Residential Home Energy Audit	2,882	\$483,515				
Education/Market Transformation Total	154,736	\$903,225				
Planning and Research						
DSM Planning & Administration		\$95,049				
Program Evaluations		\$71,919				
Measurement & Verification		\$1,007				
DSM Market Research		\$129,389				
DSM Product Development		\$64,324				
Energy Feedback Pilot	46,082	\$356,094	72,524	203,665	\$62,647	1.18
In-Home Smart Device Pilot						
Electric Vehicle Charging Station Pilot						
Building Code Support Pilot		\$16,373				
DSM Product Development Total	46,082	\$436,791	72,524	166,038	-\$18,050	
Planning and Research Total	46,082	\$734,154	72,524	98,786	-\$315,413	
Indirect Products & Services Total	200,818	\$1,637,379	72,524	44,293	-\$902,097	
PORTFOLIO TOTAL	242,711	\$12,460,525	431,496	34,629	\$5,714,977	1.18

The following Table 6 provides the CO₂ and SO_x emissions avoided for 2012 and cumulatively over the lifetime for each product.

Table 6: 2012 Emissions Avoided

2012	Annual				Cumulative over Lifetime			
	Tons CO ₂			lbs SO _x	Tons CO ₂			lbs SO _x
	Electric	Gas	TOTAL	Electric	Electric	Gas	TOTAL	Electric
Business Program								
Compressed Air Efficiency	1,406	0	1,406	1,146	25,654	0	25,654	12,403
Computer Efficiency	1,699	0	1,699	1,384	8,555	0	8,555	4,515
Cooling Efficiency	1,838	0	1,838	1,497	36,658	0	36,658	17,432
Custom Efficiency	1,650	169	1,820	1,344	30,530	2,881	33,412	14,761
Data Center Efficiency	3,685	0	3,685	3,002	38,254	0	38,254	18,365
Energy Management Systems	4,399	202	4,601	3,584	65,992	3,026	69,018	32,116
Heating Efficiency	0	1,306	1,306	0	0	21,998	21,998	0
Lighting Efficiency	73,724	0	73,724	60,057	1,156,300	0	1,156,300	562,605
Motor & Drive Efficiency	18,244	0	18,244	14,862	277,566	0	277,566	135,223
New Construction	11,928	2,063	13,991	9,716	238,551	41,268	279,819	113,460
Process Efficiency	4,733	0	4,733	3,856	80,462	0	80,462	39,367
Recommissioning	3,736	289	4,025	3,043	26,153	2,025	28,178	13,293
Segment Efficiency	204	0	204	166	3,672	0	3,672	1,775
Self-Directed Custom Efficiency	7,098	0	7,098	5,782	120,668	0	120,668	59,038
Small Business Lighting	28,207	0	28,207	22,978	455,769	0	455,769	221,570
Standard Offer	3,011	52	3,063	2,453	45,168	774	45,943	21,982
Business Program Total	165,563	4,081	169,644	134,871	2,609,953	71,973	2,681,925	1,267,906
Residential Program								
ENERGY STAR New Homes	1,307	4,460	5,767	1,064	24,567	88,684	113,251	11,877
Evaporative Cooling Rebates	2,466	0	2,466	2,009	36,984	0	36,984	18,303
Heating System Rebates	0	1,738	1,738	0	0	31,281	31,281	0
High Efficiency Air Conditioning	1,777	0	1,777	1,447	13,814	0	13,814	7,048
Home Lighting & Recycling	96,009	0	96,009	78,210	638,103	0	638,103	329,991
Home Performance with ENERGY STAR	275	795	1,071	224	3,438	13,811	17,250	1,715
Insulation Rebate	404	4,132	4,536	329	7,871	79,056	86,927	3,744
Refrigerator Recycling	3,041	0	3,041	2,477	25,835	0	25,835	12,782
School Education Kits	4,290	0	4,290	3,495	31,931	0	31,931	16,231
Showerhead	474	1,543	2,017	386	2,844	9,258	12,103	1,466
Water Heater Rebate	54	274	328	44	702	4,802	5,504	352
Residential Program Energy Efficiency Total	110,096	12,943	123,039	89,686	786,090	226,893	1,012,983	403,509
Load Management Program - Residential Saver's Switch	348	0	348	284	5,226	0	5,226	2,543
Residential Program Total	110,444	12,943	123,387	89,970	791,316	226,893	1,018,209	406,052
Low-Income Program								
Energy Savings Kit	1,404	691	2,095	1,144	9,167	3,837	13,004	4,748
Multi-Family Weatherization	827	871	1,698	674	9,096	9,577	18,673	4,422
Non-Profit Energy Efficiency	816	388	1,204	665	13,879	6,594	20,473	6,790
Single-Family Weatherization	1,868	2,744	4,613	1,522	20,446	53,601	74,047	9,773
Low-Income Program Total	4,916	4,693	9,609	4,005	52,589	73,609	126,197	25,734
Planning and Research								
DSM Product Development								
Energy Feedback Pilot	11,570	4,388	15,958	9,425	11,570	4,388	15,958	9,425
In-Home Smart Device Pilot	0	0	0	0	0	0	0	0
Electric Vehicle Charging Station Pilot	0	0	0	0	0	0	0	0
Building Code Support Pilot	0	0	0	0	0	0	0	0
DSM Product Development Total	11,570	4,388	15,958	9,425	11,570	4,388	15,958	9,425
Planning and Research Total	11,570	4,388	15,958	9,425	11,570	4,388	15,958	9,425
Indirect Products & Services Total	11,570	4,388	15,958	9,425	11,570	4,388	15,958	9,425
PORTFOLIO TOTAL	292,493	26,105	318,599	238,271	3,465,427	376,862	3,842,290	1,709,119

* Emissions assumptions: To calculate the avoided CO₂ and SO_x emission resulting from its 2012 electric DSM programs, Public Service used the same emissions intensity (lbs/kWh) used to determine the avoided emissions values in the 2012/2013 DSM Plan. For natural gas, Public Service assumed 121 lbs of CO₂ avoided per Dth saved. Emissions reductions of SO_x for natural gas are negligible and not reported here.

Program Costs by Budget Category

Public Service uses the following six budget categories to track and report its annual expenditures for each DSM program:

- Program Planning and Design – Costs to develop programs.
- Administration and Program Delivery – This category includes the costs for:
 - Project Delivery – to deliver the program to the customer including Program Manager labor and costs;
 - Utility Administration – to administer the program internally, including Rebate Processing and Planning and Administration; and
 - Other Project Administration – other costs not covered in any other cost category.
- Advertising, Promotion, and Customer Education – Costs to raise awareness, promote, and inform customers of program offerings.
- Incentives (Rebates) – The total dollars paid in rebates to program participants.
- Equipment and Installation – Costs for equipment purchase and installation.
- Measurement and Verification – Costs to perform measurement and verification activities.

Table 7a: Electric Program Costs by Budget Category - Budget

2012	Electric Cost Categories - 2012						
	Program Planning & Design	Administration & Program Delivery	Advertising/Promotion/ Customer Ed	Participant Rebates and Incentives	Equipment & Installation	Measurement and Verification	Total
Business Program							
Compressed Air Efficiency	\$54,500	\$185,923	\$107,901	\$462,506	\$0	\$27,361	\$838,191
Computer Efficiency	\$1,545	\$417,052	\$20,840	\$42,000	\$0	\$19,200	\$500,637
Cooling Efficiency	\$85,837	\$380,445	\$297,393	\$2,183,616	\$0	\$28,800	\$2,976,091
Custom Efficiency	\$228,899	\$765,434	\$367,351	\$491,564	\$0	\$50,000	\$1,903,248
Data Center Efficiency	\$65,400	\$101,202	\$235,546	\$507,987	\$0	\$25,000	\$935,135
Energy Management Systems	\$25,887	\$345,057	\$170,197	\$936,789	\$0	\$63,569	\$1,541,500
Heating Efficiency							
Lighting Efficiency	\$113,087	\$1,182,447	\$435,225	\$6,417,456	\$0	\$240,180	\$8,388,395
Motor & Drive Efficiency	\$43,600	\$534,496	\$394,654	\$4,297,155	\$0	\$163,155	\$5,433,060
New Construction	\$25,624	\$2,537,294	\$233,097	\$3,301,378	\$0	\$288,000	\$6,385,394
Process Efficiency	\$29,975	\$866,769	\$33,177	\$1,007,175	\$0	\$80,000	\$2,017,096
Recommissioning	\$24,525	\$232,780	\$252,774	\$799,093	\$0	\$10,000	\$1,319,172
Segment Efficiency	\$0	\$457,562	\$156,892	\$471,288	\$0	\$99,990	\$1,185,732
Self-Directed Custom Efficiency	\$16,450	\$138,732	\$17,488	\$1,736,120	\$0	\$0	\$1,908,790
Small Business Lighting	\$1,362	\$1,813,072	\$147,332	\$990,600	\$0	\$58,692	\$3,011,058
Standard Offer	\$34,062	\$177,636	\$39,001	\$1,381,535	\$0	\$36,000	\$1,668,234
Business Program Total	\$750,754	\$10,135,902	\$2,908,868	\$25,026,262	\$0	\$1,189,947	\$40,011,734
Residential Program							
ENERGY STAR New Homes	\$9,537	\$135,854	\$18,513	\$163,704	\$0	\$205,113	\$532,721
Evaporative Cooling Rebates	\$4,087	\$372,226	\$276,230	\$1,537,550	\$0	\$92,232	\$2,282,325
Heating System Rebates							
High Efficiency Air Conditioning	\$6,812	\$305,303	\$375,243	\$1,683,027	\$0	\$35,000	\$2,405,385
Home Lighting & Recycling	\$5,450	\$1,174,450	\$1,703,314	\$2,557,500	\$0	\$0	\$5,440,714
Home Performance with ENERGY STAR	\$5,450	\$144,188	\$11,441	\$112,332	\$0	\$12,180	\$285,591
Insulation Rebate	\$0	\$0	\$6,000	\$78,505	\$0	\$31,000	\$115,505
Refrigerator Recycling	\$2,725	\$317,823	\$894,411	\$212,500	\$0	\$15,000	\$1,442,459
School Education Kits	\$1,362	\$990,806	\$0	\$491,400	\$0	\$55,000	\$1,538,568
Showerhead	\$0	\$44,165	\$600	\$7,235	\$0	\$9,600	\$61,600
Water Heater Rebate	\$0	\$0	\$1,100	\$90,000	\$0	\$9,000	\$100,100
Residential Program Energy Efficiency Total	\$35,423	\$3,484,814	\$3,286,852	\$6,933,753	\$0	\$464,125	\$14,204,968
Load Management Program - Residential Saver's Switch							
	\$0	\$870,503	\$1,612,031	\$6,664,680	\$4,064,750	\$115,000	\$13,326,964
Residential Program Total	\$35,423	\$4,055,317	\$4,898,883	\$13,598,433	\$4,064,750	\$579,125	\$27,531,932
Low-Income Program							
Energy Savings Kit	\$1,362	\$423,340	\$100,384	\$116,578	\$0	\$6,000	\$647,664
Multi-Family Weatherization	\$19,075	\$53,132	\$40,038	\$227,072	\$0	\$11,352	\$350,669
Non-Profit Energy Efficiency	\$23,162	\$62,366	\$15,084	\$449,512	\$0	\$22,475	\$572,599
Single-Family Weatherization	\$2,725	\$85,326	\$130,038	\$960,407	\$0	\$58,192	\$1,236,688
Low-Income Program Total	\$46,324	\$624,164	\$285,544	\$1,753,569	\$0	\$98,019	\$2,807,620
Indirect Products & Services							
Education/Market Transformation							
Business Energy Analysis	\$47,058	\$760,015	\$185,575	\$0	\$0	\$0	\$992,648
Consumer Education - Business	\$0	\$6,496	\$147,269	\$0	\$0	\$0	\$153,765
Consumer Education - Residential	\$19,647	\$382,978	\$830,049	\$0	\$0	\$0	\$1,232,674
Residential Home Energy Audit	\$0	\$260,193	\$107,781	\$211,600	\$0	\$56,000	\$635,574
Education/Market Transformation Total	\$66,705	\$1,409,682	\$1,270,674	\$211,600	\$0	\$56,000	\$3,014,661
Planning and Research							
DSM Planning & Administration	\$0	\$287,559	\$0	\$0	\$0	\$0	\$287,559
Program Evaluations	\$0	\$0	\$186	\$0	\$0	\$584,126	\$584,312
Measurement & Verification	\$0	\$0	\$0	\$0	\$0	\$78,097	\$78,097
DSM Market Research	\$0	\$274,818	\$94	\$0	\$0	\$0	\$274,912
DSM Product Development	\$305,920	\$696,638	\$0	\$0	\$20,000	\$0	\$1,022,558
Energy Feedback Pilot	\$343,400	\$0	\$0	\$0	\$0	\$36,000	\$379,400
In-Home Smart Device Pilot	\$0	\$1,081,147	\$63,200	\$56,250	\$0	\$40,000	\$1,240,597
Electric Vehicle Charging Station Pilot	\$0	\$0	\$0	\$20,000	\$0	\$0	\$20,000
DSM Product Development Total	\$649,320	\$1,777,785	\$63,200	\$76,250	\$20,000	\$76,000	\$2,662,555
Planning and Research Total	\$649,320	\$2,340,162	\$63,480	\$76,250	\$20,000	\$738,223	\$3,887,436
Indirect Products & Services Total	\$716,026	\$3,749,844	\$1,334,154	\$287,850	\$20,000	\$794,223	\$6,902,097
PORTFOLIO TOTAL	\$1,548,527	\$18,663,978	\$9,427,450	\$40,666,114	\$4,084,750	\$2,661,314	\$77,253,382
ISOC	\$0	\$28,008	\$756	\$2,731	\$0	\$0	\$31,495
EnerNoc	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PORTFOLIO TOTAL	\$1,548,527	\$18,691,986	\$9,428,205	\$40,668,845	\$4,084,750	\$2,661,314	\$77,284,877
Energy Efficiency Total	\$1,548,527	\$17,793,475	\$7,815,419	\$34,001,434	\$20,000	\$2,546,314	\$63,926,418
Load Management Total	\$0	\$898,511	\$1,612,787	\$6,667,411	\$4,064,750	\$115,000	\$13,358,459

Table 7b: Electric Program Costs by Budget Category – Actual

2012	Electric Cost Categories - 2012						
	Program Planning & Design	Administration & Program Delivery	Advertising/Promotion/ Customer Ed	Participant Rebates and Incentives	Equipment & Installation	Measurement and Verification	Total
Business Program							
Compressed Air Efficiency	\$20,868	\$228,498	\$88,167	\$370,350	\$0	\$19,628	\$727,511
Computer Efficiency	\$0	\$38,613	\$0	\$59,610	\$0	\$0	\$98,223
Cooling Efficiency	\$99,154	\$410,879	\$175,192	\$1,103,567	\$0	\$27,442	\$1,816,235
Custom Efficiency	\$300,016	\$633,336	\$367,681	\$244,366	\$0	\$44,908	\$1,590,307
Data Center Efficiency	\$51,319	\$115,097	\$142,597	\$613,481	\$0	\$12,665	\$935,158
Energy Management Systems	\$17,685	\$273,655	\$189,390	\$468,047	\$0	\$12,012	\$960,789
Heating Efficiency							
Lighting Efficiency	\$188,060	\$1,705,598	\$363,118	\$11,226,243	\$0	\$49,915	\$13,532,934
Motor & Drive Efficiency	\$57,836	\$721,520	\$436,709	\$4,092,424	\$0	\$31,067	\$5,339,555
New Construction	\$27,476	\$2,229,018	\$305,248	\$2,187,974	\$0	\$240,880	\$4,990,596
Process Efficiency	\$61,809	\$620,292	\$15,672	\$932,012	\$0	\$3,588	\$1,633,374
Recommissioning	\$80,906	\$237,292	\$124,488	\$279,313	\$0	\$0	\$721,998
Segment Efficiency	\$865	\$62,484	\$100,466	\$63,882	\$0	\$0	\$227,697
Self-Directed Custom Efficiency	\$23,564	\$180,013	\$42,163	\$936,847	\$0	\$0	\$1,182,587
Small Business Lighting	\$0	\$4,519,236	\$129,258	\$4,911,940	\$0	\$42,160	\$9,602,594
Standard Offer	\$51,767	\$118,910	\$97,604	\$675,885	\$0	\$0	\$944,165
Business Program Total	\$981,324	\$12,094,442	\$2,577,752	\$28,165,940	\$0	\$484,265	\$44,303,724
Residential Program							
ENERGY STAR New Homes	\$2,644	\$163,523	\$442	\$268,841	\$0	\$147,310	\$582,760
Evaporative Cooling Rebates	\$4,739	\$301,363	\$315,222	\$1,751,050	\$0	\$31,480	\$2,403,855
Heating System Rebates							
High Efficiency Air Conditioning	\$5,333	\$292,241	\$387,807	\$1,807,101	\$0	\$0	\$2,492,482
Home Lighting & Recycling	\$22,736	\$736,643	\$1,728,410	\$4,066,329	\$0	\$10,315	\$6,564,433
Home Performance with ENERGY STAR	\$2,115	\$97,997	\$17,712	\$53,227	\$0	\$0	\$171,051
Insulation Rebate	\$1,271	\$18,226	\$526	\$95,825	\$0	\$0	\$115,847
Refrigerator Recycling	\$159	\$454,805	\$162,386	\$281,305	\$0	\$3,000	\$901,655
School Education Kits	\$1,870	\$994,040	\$2,200	\$491,433	\$0	\$0	\$1,489,543
Showerhead	\$319	\$26,120	\$2,070	\$7,198	\$0	\$880	\$36,586
Water Heater Rebate	\$0	\$27,762	\$2,932	\$13,500	\$0	\$20,500	\$64,694
Residential Program Energy Efficiency Total	\$41,185	\$3,112,719	\$2,619,708	\$8,835,809	\$0	\$213,485	\$14,822,906
Load Management Program - Residential Saver's Switch							
	\$879	\$4,115,088	\$1,685,374	\$6,347,665	\$0	\$112,173	\$12,261,179
Residential Program Total	\$42,064	\$7,227,807	\$4,305,082	\$15,183,474	\$0	\$325,658	\$27,084,085
Low-Income Program							
Energy Savings Kit	\$412	\$82,422	\$18,552	\$90,066	\$0	\$4,901	\$196,353
Multi-Family Weatherization	\$3,432	\$65,361	\$0	\$226,015	\$0	\$11,352	\$306,160
Non-Profit Energy Efficiency	\$13,229	\$67,276	\$0	\$439,436	\$0	\$22,475	\$542,416
Single-Family Weatherization	\$254	\$392,776	\$77,448	\$391,063	\$0	\$38,141	\$899,681
Low-Income Program Total	\$17,327	\$607,834	\$96,000	\$1,146,580	\$0	\$76,869	\$1,944,610
Indirect Products & Services							
Education/Market Transformation							
Business Energy Analysis	\$3,032	\$426,860	\$102,335	-\$46,300	\$0	\$0	\$485,927
Consumer Education - Business	\$0	\$15,931	\$151,758	\$0	\$0	\$0	\$167,689
Consumer Education - Residential	\$0	\$444,008	\$728,665	\$0	\$0	\$0	\$1,172,673
Residential Home Energy Audit	\$1,449	\$162,687	\$128,900	\$270,201	\$0	\$0	\$563,237
Education/Market Transformation Total	\$4,480	\$1,049,485	\$1,111,658	\$223,901	\$0	\$0	\$2,389,525
Planning and Research							
DSM Planning & Administration	\$0	\$365,396	\$0	\$0	\$0	\$0	\$365,396
Program Evaluations	\$0	\$3,498	\$0	\$0	\$0	\$510,881	\$514,379
Measurement & Verification	\$0	\$0	\$0	\$0	\$0	\$8,600	\$8,600
DSM Market Research	\$1,569	\$195,211	\$0	\$0	\$0	\$0	\$196,781
DSM Product Development	\$328,939	\$74,541	-\$115,542	\$0	\$0	\$0	\$287,938
Energy Feedback Pilot	\$17,003	\$586,176	\$0	\$0	\$0	\$0	\$603,179
In-Home Smart Device Pilot	\$925	\$525,540	\$22,601	\$0	\$1,095,410	\$7,969	\$1,652,445
Electric Vehicle Charging Station Pilot	\$2,326	\$4,519	\$0	\$0	\$4,048	\$0	\$10,892
Building Code Support Pilot	\$0	\$43,825	\$0	\$0	\$0	\$0	\$43,825
DSM Product Development Total	\$349,193	\$1,234,601	-\$92,941	\$0	\$1,099,458	\$7,969	\$2,598,280
Planning and Research Total	\$350,762	\$1,798,706	-\$92,941	\$0	\$1,099,458	\$527,450	\$3,683,435
Indirect Products & Services Total	\$355,242	\$2,848,191	\$1,018,717	\$223,901	\$1,099,458	\$527,450	\$6,072,960
PORTFOLIO TOTAL	\$1,395,958	\$22,778,275	\$7,997,551	\$44,719,894	\$1,099,458	\$1,414,242	\$79,405,379
ISOC	\$0	\$35,765	\$26	\$0	\$0	\$0	\$35,791
EnerNoc	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PORTFOLIO TOTAL	\$1,395,958	\$22,814,039	\$7,997,577	\$44,719,894	\$1,099,458	\$1,414,242	\$79,441,169
Energy Efficiency Total	\$1,395,079	\$18,663,186	\$6,312,178	\$38,372,230	\$1,099,458	\$1,302,069	\$67,144,200
Load Management Total	\$879	\$4,150,853	\$1,685,400	\$6,347,665	\$0	\$112,173	\$12,296,969

Table 8a: Gas Program Costs by Budget Category – Budget

2012	Gas Cost Categories - 2012						
	Program Planning & Design	Administration & Program Delivery	Advertising/Promotion/ Customer Ed	Participant Rebates and Incentives	Equipment & Installation	Measurement and Verification	Total
Business Program							
Compressed Air Efficiency							
Computer Efficiency							
Cooling Efficiency							
Custom Efficiency	\$88,562	\$57,673	\$43,213	\$27,072	\$0	\$5,000	\$221,520
Data Center Efficiency							
Energy Management Systems	\$8,175	\$14,660	\$322	\$12,943	\$0	\$1,504	\$37,604
Heating Efficiency							
Lighting Efficiency							
Motor & Drive Efficiency							
New Construction	\$15,625	\$150,014	\$11,179	\$338,102	\$0	\$8,000	\$522,920
Process Efficiency							
Recommissioning	\$8,175	\$22,774	\$11,867	\$7,517	\$0	\$1,000	\$51,333
Segment Efficiency	\$0	\$6,646	\$588	\$12,007	\$0	\$1,000	\$20,241
Self-Directed Custom Efficiency							
Small Business Lighting							
Standard Offer	\$6,812	\$11,214	\$0	\$8,410	\$0	\$3,600	\$30,036
Business Program Total	\$130,074	\$388,622	\$100,362	\$959,946	\$0	\$48,044	\$1,627,048
Residential Program							
ENERGY STAR New Homes	\$6,812	\$513,277	\$73,998	\$1,170,834	\$0	\$826,887	\$2,591,808
Evaporative Cooling Rebates							
Heating System Rebates							
High Efficiency Air Conditioning							
Home Lighting & Recycling							
Home Performance with ENERGY STAR	\$4,087	\$72,423	\$9,747	\$169,742	\$0	\$12,065	\$268,064
Insulation Rebate	\$1,362	\$44,857	\$0	\$1,259,460	\$0	\$264,000	\$1,569,679
Refrigerator Recycling							
School Education Kits							
Showerhead	\$0	\$154,464	\$2,400	\$58,537	\$0	\$9,600	\$225,000
Water Heater Rebate	\$5,450	\$14,578	\$12,800	\$279,000	\$0	\$30,000	\$341,828
Residential Program Total	\$20,436	\$858,256	\$184,430	\$3,710,033	\$0	\$1,167,552	\$5,940,706
Low-Income Program							
Energy Savings Kit	\$1,362	\$395,272	\$21,553	\$48,757	\$0	\$0	\$466,944
Multi-Family Weatherization	\$5,450	\$54,982	\$20,038	\$340,984	\$0	\$17,049	\$438,503
Non-Profit Energy Efficiency	\$5,450	\$40,903	\$20,000	\$528,241	\$0	\$33,412	\$628,006
Single-Family Weatherization	\$2,725	\$128,171	\$164,296	\$1,817,573	\$0	\$55,204	\$2,167,969
Low-Income Program Total	\$14,987	\$619,328	\$225,887	\$2,735,555	\$0	\$105,665	\$3,701,422
Indirect Products & Services							
Education/Market Transformation							
Business Energy Analysis		\$144,366	\$5,452	\$0	\$0	\$0	\$159,182
Consumer Education - Business		\$6,496	\$43,506	\$0	\$0	\$0	\$50,002
Consumer Education - Residential		\$149,963	\$100,594	\$0	\$0	\$0	\$250,557
Residential Home Energy Audit		\$193,029	\$45,601	\$248,400	\$0	\$30,000	\$517,030
Education/Market Transformation Total		\$493,854	\$195,153	\$248,400	\$0	\$30,000	\$976,771
Planning and Research							
DSM Planning & Administration		\$103,538	\$0	\$0	\$0	\$0	\$103,538
Program Evaluations		\$0	\$0	\$0	\$0	\$254,626	\$254,626
Measurement & Verification		\$0	\$0	\$0	\$0	\$14,010	\$14,010
DSM Market Research		\$258,712	\$24	\$0	\$0	\$0	\$258,736
DSM Product Development		\$134,275	\$0	\$0	\$0	\$0	\$246,619
Energy Feedback Pilot	\$85,856	\$0	\$0	\$0	\$0	\$9,000	\$94,856
In-Home Smart Device Pilot							
Electric Vehicle Charging Station Pilot		\$0	\$0	\$0	\$0	\$0	\$0
DSM Product Development Total	\$198,200	\$134,275	\$0	\$0	\$0	\$9,000	\$341,475
Planning and Research Total	\$198,200	\$496,525	\$24	\$0	\$0	\$277,636	\$972,385
Indirect Products & Services Total	\$207,565	\$990,379	\$195,177	\$248,400	\$0	\$307,636	\$1,949,157
PORTFOLIO TOTAL	\$373,062	\$2,857,834	\$705,855	\$7,653,934	\$0	\$1,628,898	\$13,218,333

Table 8b: Gas Program Costs by Budget Category – Actual

2012	Gas Cost Categories - 2012						
	Program Planning & Design	Administration & Program Delivery	Advertising/Promotion/ Customer Ed	Participant Rebates and Incentives	Equipment & Installation	Measurement and Verification	Total
Business Program							
Compressed Air Efficiency							
Computer Efficiency							
Cooling Efficiency							
Custom Efficiency	\$56,842	\$10,703	\$55,124	\$13,569	\$0	\$4,740	\$140,977
Data Center Efficiency							
Energy Management Systems	\$0	\$6,627	\$0	\$23,836	\$0	\$726	\$31,189
Heating Efficiency	\$35,295	\$90,778	\$2,424	\$501,341	\$0	\$27,210	\$657,049
Lighting Efficiency							
Motor & Drive Efficiency							
New Construction	\$3,878	\$111,280	\$1,672	\$277,879	\$0	\$12,572	\$407,281
Process Efficiency	\$248	\$53	\$0	\$0	\$0	\$0	\$301
Recommissioning	\$2,384	\$3,984	\$3,760	\$10,111	\$0	\$0	\$20,239
Segment Efficiency	\$0	\$615	\$760	-\$125	\$0	\$0	\$1,250
Self-Directed Custom Efficiency							
Small Business Lighting							
Standard Offer	\$4,141	\$889	\$0	\$42,477	\$0	\$0	\$47,506
Business Program Total	\$102,789	\$224,928	\$63,740	\$869,088	\$0	\$45,247	\$1,305,792
Residential Program							
ENERGY STAR New Homes	\$2,743	\$559,512	-\$3,844	\$1,925,081	\$0	\$589,240	\$3,072,731
Evaporative Cooling Rebates							
Heating System Rebates	\$213	\$202,303	\$96,972	\$411,500	\$0	\$20,345	\$731,333
High Efficiency Air Conditioning							
Home Lighting & Recycling							
Home Performance with ENERGY STAR	\$0	\$53,940	\$9,845	\$333,194	\$0	\$0	\$396,979
Insulation Rebate	\$1,711	\$162,935	\$11,534	\$1,094,971	\$0	\$10,870	\$1,282,021
Refrigerator Recycling							
School Education Kits							
Showerhead	\$241	\$189,006	\$17,024	\$57,627	\$0	\$109	\$264,007
Water Heater Rebate	\$78	\$51,403	\$6,862	\$109,765	\$0	\$11,491	\$179,599
Residential Program Total	\$4,985	\$1,219,100	\$138,392	\$3,932,138	\$0	\$632,055	\$5,926,669
Low-Income Program							
Energy Savings Kit	\$412	\$65,704	\$12,400	\$60,044	\$0	\$508	\$139,069
Multi-Family Weatherization	\$234	\$54,393	\$0	\$431,740	\$0	\$17,049	\$503,416
Non-Profit Energy Efficiency	\$12,363	\$59,703	\$0	\$448,617	\$0	\$33,412	\$554,096
Single-Family Weatherization	\$78	\$249,419	\$124,590	\$1,986,269	\$0	\$33,748	\$2,394,104
Low-Income Program Total	\$13,087	\$429,219	\$136,991	\$2,926,671	\$0	\$84,717	\$3,590,685
Indirect Products & Services							
Education/Market Transformation							
Business Energy Analysis	\$1,422	\$43,905	\$75	\$0	\$0	\$0	\$45,402
Consumer Education - Business	\$0	\$4,719	\$49,179	\$0	\$0	\$0	\$53,898
Consumer Education - Residential	\$0	\$179,327	\$141,082	\$0	\$0	\$0	\$320,409
Residential Home Energy Audit	\$0	\$138,064	\$28,910	\$316,541	\$0	\$0	\$483,515
Education/Market Transformation Total	\$1,422	\$366,016	\$219,246	\$316,541	\$0	\$0	\$903,225
Planning and Research							
DSM Planning & Administration	\$0	\$95,049	\$0	\$0	\$0	\$0	\$95,049
Program Evaluations	\$0	\$3,811	\$0	\$0	\$0	\$68,108	\$71,919
Measurement & Verification	\$0	\$0	\$0	\$0	\$0	\$1,007	\$1,007
DSM Market Research	\$0	\$129,389	\$0	\$0	\$0	\$0	\$129,389
DSM Product Development	\$40,463	\$23,861	\$0	\$0	\$0	\$0	\$64,324
Energy Feedback Pilot	\$8,897	\$347,197	\$0	\$0	\$0	\$0	\$356,094
In-Home Smart Device Pilot	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Electric Vehicle Charging Station Pilot	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building Code Support Pilot	\$0	\$16,373	\$0	\$0	\$0	\$0	\$16,373
DSM Product Development Total	\$49,360	\$387,431	\$0	\$0	\$0	\$0	\$436,791
Planning and Research Total	\$49,360	\$615,680	\$0	\$0	\$0	\$69,115	\$734,154
Indirect Products & Services Total	\$50,781	\$981,696	\$219,246	\$316,541	\$0	\$69,115	\$1,637,379
PORTFOLIO TOTAL	\$171,642	\$2,854,943	\$558,369	\$8,044,439	\$0	\$831,134	\$12,460,525

Compliance

Table 9: Status Report Compliance and Reporting Requirements

Item #	Compliance Point - Description	Comp. Pt. Reference	Status Report Reference	Comment
	Electric			
1	The annual DSM report will be filed with the Commission on April 1 of each year, starting in 2010.	Dkt. 07A-420E, Decision C08-560, p.53, ¶173.	---	Report filed April 1, 2013.
2	We accept the modification proposed by PSCo that the avoided costs underlying the net economic benefits not be updated between the first and second installment calculation. Also, we find that the avoided cost data shall be updated with each annual report so that the degree of change can be assessed and this issue incorporated into the overall review of DSM incentives in 2010. We will thereby consider whether avoided costs should be updated more frequently.	Dkt. 07A-420E, Decision C08-0769 p.18, ¶58	Avoided Cost Assumptions, Pages 98 – 101	---
3	Shall include the results achieved during the previous plan year in total and by program, including achieved energy and demand savings, avoided annual and cumulative CO ₂ and SO _x emissions in metric tons, actual expenditures, expenditures expressed in terms of \$/kWh over the lifetime of the measures installed, and net economic benefits achieved.	Docket No. 08A-366EG, Decision No. R08-1243, Stipulation & Settlement Agreement, p.16	Tables 4a - 6	\$/kWh over lifetime and net economic benefits achieved by program in Cost-Effectiveness Section.
4	Use deemed savings from the technical assumptions to calculate the prescriptive program savings.	Docket No. 08A-366EG, Decision No. R08-1243, Stipulation & Settlement Agreement, p.14	---	Deemed savings have been used to calculate all prescriptive program savings.
5	Use the methodology described in the Direct Testimony of Company witness Jeremy Petersen (JP) to determine DSM portfolio and program cost-effectiveness.	Docket No. 08A-366EG, Decision No. R08-1243, Stipulation & Settlement Agreement, p.14	See Cost Effectiveness Section	The 2012 Status report continues to use this methodology.
6	Use this same JP methodology for calculating the net economic benefit associated with DSM measures actually installed.	Docket No. 08A-366EG, Decision No. R08-1243,	See Cost effectiveness Section	The 2012 Status report continues to use this methodology.

		Stipulation & Settlement Agreement, p.14		
7	All Participant O&M data should be treated as proprietary in the absence of a written agreement signed by the Participant authorizing disclosure.	Docket No. 08A-366EG, Decision No. R08-1243, Stipulation & Settlement Agreement, p.8	---	Participant O&M data has been treated as proprietary.
8	Do not include Participant O&M data in incentive calculations unless there is authorization to disclose such data.	Docket No. 08A-366EG, Decision No. R08-1243, Stipulation & Settlement Agreement, p.8	---	No participant O&M data has been used in incentive calculations.
9	PSCo may only disclose the results, by cost category, of calculations made using the privileged values, but not values themselves, by making such results available for inspection by both the Staff of CO PUC and OCC at the Company's Colorado offices, pursuant to the following procedures: <ul style="list-style-type: none"> o PSCo will provide the customer 10 business-days notice of the place and time of the inspection and provide the opportunity for a customer representative to be present during the inspection. o PSCo shall maintain a log of persons, dates, times and documents reviewed. o Participant O&M data shall not be disclosed to any other party or by any other means, except after receipt of written authorization from the Participant 	Docket No. 08A-366EG, Decision No. R08-1243, Stipulation & Settlement Agreement, p.9	---	Participant O&M data has been neither requested nor disclosed to any external party.
10	Verify results of Self-Directed customers' energy savings calculations and evaluation, M&V results	Docket No. 08A-366EG, Decision No. R08-1243, Stipulation & Settlement Agreement, p.7	See Evaluation, Measurement and Verification Results section	Detailed in Self-Direct description in M&V section
11	Approve self-directed custom projects for which the customer meets TRC test value at least equal to one (1), rather than limiting this program to installations that have a TRC value at least equal to the TRC value for the overall DSM portfolio.	Docket No. 08A-366EG, Decision No. R08-1243, Stipulation & Settlement	---	Ongoing process as part of 2012/2013 Plan, Docket No. 11A-631EG

		Agreement, p.7		
12	Offer the Self-Directed Custom Efficiency Program to commercial and industrial customers who have an aggregated peak demand at all meters of at least 2 MW in any single month and an aggregated annual energy usage of at least 10 GWh. The customer of record must be the same for all meters aggregated to qualify for this program.	Docket No. 08A-366EG, Decision No. R08-1243, Stipulation & Settlement Agreement, p.8	---	Ongoing process as part of 2012/2013 Plan, Docket No. 11A-631EG
13	Track expenditures, energy savings, and paybacks associated with each approved project under the Self-Directed Custom Efficiency Program.	Docket No. 08A-366EG, Decision No. R08-1243, Stipulation & Settlement Agreement, p.8	---	Ongoing process as part of 2012/2013 Plan, Docket No. 11A-631EG
14	All incentive payments must be included in the final TRC calculation. At the time of the annual report following the DSM performance year, the incentive amounts will be "proposed" versus "final". PSCo shall include the proposed incentive amounts in their annual report.	Dkt. 07A-420E, Decision C08-560, p.37, ¶117	See Financial Incentive Section.	---
15	For any low-income program that achieves a TRC<1.0, the costs and benefits may be excluded from the calculation of net economic benefits. The energy and demand savings may be applied toward the calculation of overall energy and demand savings, for the purposes of determining progress toward annual goals.	Dkt. 07A-420E, Decision C08-560, p.44, ¶140	See Financial Incentive Section	---
16	Beginning with the 2012 Annual Status Report, we will quantify and track certain costs incurred through the use of third-party providers.	Dkt. No. 10A-554EG Decision C11-0645, p. 5, ¶14	See Executive Summary, Table 3	---
17	The Annual Status Report of 2012 and 2013 results, the Company will include a comparison of the resulting net benefits and TRC tests using the former avoided cost methodology and the updated methodology.	Dkt. No. 11A-631EG Stipulation & Settlement Agreement, p. 17 – 18	See Avoided Cost Assumptions Section	---
	Gas			
1	Beginning April 1, 2010 and each April 1st thereafter, each utility shall submit its annual DSM report, application for bonus and DSMCA filing.	Rule 4752(b)	---	Report filed April 1, 2013.
2	Each utility shall also file an annual DSM report and an application for bonus.	Rule 4750(b)	---	Included with Report filed April 1, 2013.
3	The utility's annual expenditure target for DSM programs shall be, at a minimum, two percent of a natural gas utility's base rate revenues, (exclusive of commodity costs), from its sales customers in	Rule 4753(h)(I)	---	PSCo spent a total of \$12.5 million on its natural gas DSM programs. This

	the 12-month calendar period prior to setting the targets, or one-half of one percent of total revenues from its sales customers in the 12-month calendar period prior to setting the targets, whichever is greater.			surpassed the expenditure targets - \$7,253,934 (2% of gas base rate revenues), and \$4,809,597 (0.5% of total gas revenues) set in Docket No. 08A-366EG.
4	In the annual DSM report the utility shall describe its actual DSM programs as implemented. For each DSM program, the utility shall document actual program expenditures, energy savings, participation levels and cost-effectiveness.	Rule 4754(a)	Executive Summary Table 5b	---
5	Annual program expenditures shall be separated into cost categories contained in the approved DSM plan.	Rule 4754(b)	Cost by Budget Category Table 8b	---
6	For each DSM program, the utility shall compare the program's proposed and actual expenditures, savings, participation rate, and cost-effectiveness; in addition, the utility shall prepare an assessment of the success of the program, and list any suggestions for improvement and greater customer involvement.	Rule 4754(c)	Executive Summary Tables 5a & 5b.	---
7	The utility shall provide actual benefit/cost results for the overall DSM plan and individual DSM programs implemented during the plan year. The benefit/cost analysis shall be based on the costs incurred and benefits achieved, as identified in the modified TRC test. Benefit values are to be based upon the results of M&V evaluation, when such has been conducted as set forth in rule 4755. Otherwise, the benefit values of the currently approved DSM plan are to be used.	Rule 4754(d)	Cost Effectiveness section for portfolio results,	Individual program results included in work papers available upon request
8	If the annual report covers a year within which an M&V evaluation was completed, the complete M&V results are to be included as part of the annual report.	Rule 4754(e)	See Evaluation, Measurement & Verification 2012 Results.	
9	The utility may file an application for bonus, pursuant to rule 4760. The application for bonus shall include the utility's calculation of estimated bonus applying the methodology set forth in this rule to the utility's actual performance. (II) As a threshold matter, the utility must expend at least the minimum amount set forth in rule 4753 (g)(I), except during a phase-in period as set forth in rule 4753 (g)(III), in order to earn a bonus. (III) The bonus amount is a percentage of the net economic benefits resulting from the DSM plan over the period under review. The percentage value is the product of the two factors: (A) The Energy Factor is determined by the	Rule 4754(f)	See Financial Incentive Calculation	Included with Report filed April 1, 2013.

	<p>percentage of the energy target achieved by the utility. The energy factor is zero plus 0.5% for each one percent above 80 percent of the energy target achieved by the utility.</p> <p>(B) The Savings Factor is the actual savings achieved divided by the approved savings target. Each of these quantities is expressed in dekatherms saved per dollar expended.</p> <p>(IV) The following is provided as an example of the bonus calculation, using these illustrative numbers: utility achieves 106 percent of its energy target; the utility's savings target is 15,000 dekatherms per \$1 million expended, and the utility's actual savings is 18,000 dekatherms per \$1 million.</p>			
10	<p>Acknowledgment of Lost Revenues (ALR) - Separate from any bonus determined by the Commission, the Commission may authorize a utility to recover a calculated amount of revenue that acknowledges that an effective DSM program reduced the utility's revenue. The amount shall be calculated as set forth in Rule 4754(g)(I) (A)-(F)</p>	Rule 4754(g)	See Financial Incentive Calculation Section.	

Financial Incentive Calculations

Electric Financial Incentive

The Commission approved the current DSM incentive mechanism for electric programs in Docket No.10A-554EG (Decision C11-0442). The mechanism includes a \$3.2 million “Disincentive Offset” that is grossed up for income taxes. The Disincentive Offset is awarded when Public Service achieves 80% of the year’s savings goal. Based upon the Public Service’s effective tax rate, 38.01%, the Disincentive Offset is grossed-up \$3.2 million. The Disincentive Offset increases to \$5.0 million when Public Service achieves 100% of the year’s savings goal. The combination of the Disincentive Offset and the Performance Incentive can not exceed \$30 million.

The MTRC test used to determine cost effectiveness includes a Non-Energy Benefits Adder of 10% of Avoided Revenue Requirements for Business and Residential programs and 25% for Low-Income. However, the Non-Energy Benefits Adder is removed from the net benefits for the purpose of incentive calculation. The performance incentive component awards a percentage of net benefits without adder for achievement above 2012 savings goal, 330 GWh. A minor adjustment is made for market transformation programs, allowing for the costs of these programs to be excluded from the net benefits. The Disincentive Offset along with the performance incentive comprises the total award which is recovered in the year following the 2012 performance year.

Based upon Public Service’s achievements of 400.7 GWh and net benefits of \$192,263,729 the total Disincentive Offset and performance incentive for the 2012 performance year was not limited by the \$30 million cap. Table 10 below summarizes the Disincentive Offset along with the performance incentive.

Table 10: Summary of 2012 Electric Incentive

	Amount
Disincentive Offset	\$5,000,000
Performance Incentive	\$17,688,263
Total	\$22,688,263

The full calculation of Public Service’s 2012 Electric Incentive is shown in Table 11.

Table 11: Public Service 2012 Electric DSM Incentive

Disincentive Offset (Grossed-up for Income Taxes)	\$5,000,000
Performance Incentive Calculation	
Approved 2012 kWh Goal	330,000,000
kWh from YE Achievements	400,675,909
Net Economic Benefits without Adder from YE Achievements	\$188,839,275
<i>Net Economic Benefits Adjustments</i>	
Low-Income Allowance from YE Achievements	\$448,564
Market Transformation Allowance from YE Achieve.	\$2,992,806
Incremental Participant O&M - Excluded for 2012 Incentive Calculation	-\$16,917
FINAL Net Benefits from YE Achievements	\$192,263,729
% of Goal Achieved	121%
% of Net Benefits Awarded	9.2%
Performance Incentive	\$17,688,263
Total Incentive - Subject to CAP	\$22,688,263
Incentive Cap (Subject to Hard Cap of \$30,000,000)	\$30,000,000
Total 2012 Proposed Electric Financial Incentive Pre-Tax	\$22,688,263

Natural Gas Bonus

The natural gas incentive mechanism (Gas DSM “Bonus”) is calculated as set forth in 4 CCR 723-4-4754 (“Rule 4754”). The natural gas DSM Bonus is awarded in a single installment, requested by application and approved in the first status report year following the Gas DSM program year in which the savings were achieved. The approved Gas DSM Bonus amount is recovered through the Gas Demand-Side Management Cost Adjustment (“G-DSMCA”), over the same twelve-month period as set forth in 4 CCR 723-4-4752 (b) (I). (See, Rule 4752(g)(I)(E))

The natural gas incentive is awarded on a sliding scale of net benefits, calculated based on an Energy Factor (percent of Dth goal achieved) and a Savings Factor (Dth per \$1 million spend). The natural gas DSM Bonus is capped at 25% of expenditure, or 20% of net benefits, whichever is less. For 2012, the natural gas incentive is calculated to be \$757,916. This bonus is well under the expenditure cap of \$3,115,131 and the net benefits cap of \$1,316,157. In addition, Public Service is filing for an acknowledgement of lost revenues associated with gas DSM programs of \$374,884 for a

total award of \$1,132,801. The full calculation of Public Service's 2012 Natural Gas Incentive is detailed in Table 12.

Table 12: Public Service 2012 Natural Gas Bonus and Acknowledgement of Lost Revenue

Approved Energy Target (Goal)	435,054	dekatherm per yer		
Energy Target Achieved - YE Forecast	431,496	dekatherm per yer		
% of Energy Target Achieved	99.2%			
			Dth	Spend
Approved Savings Target	32,913	dekatherm per \$1M	435,054	\$ 13,218,333
Savings Target Achieved - Portfolio Total	34,629	dekatherm per \$1M	431,496	\$ 12,460,525
Savings Target Achieved - Low-Income Program	21,605	dekatherm per \$1M	77,578	\$ 3,590,685
Savings Target Achieved - Adjusted*	39,901	dekatherm per \$1M	353,918	\$ 8,869,840
Total DSM Expenditures	\$12,460,525	From 2012 YE Forecast		
Energy Factor	9.5%			
Savings Factor	1.212327854			
% of Net Benefits Awarded	11.5%	= Energy Factor * Savings Factor		
Net Economic Benefits Achieved	\$5,714,977			
<i>Net Economic Benefits Adjustments</i>				
Low-Income Allowance from Plan	\$865,806			
FINAL Net Economic Benefits Achieved	\$6,580,783			
Incentive Cap	\$1,316,157	= 20% of net economic benefits or 25% of expenditures, whichever is less		
Total 2012 Proposed Gas Financial Incentive Pre-Tax	\$757,916			
Business/Residential Allocation		%		
Business Forecasted Savings (Dth)	67,462	16%		
Residential & Low Income Forecasted Savings (Dth)	364,033	84%		
Total Savings	431,495	100%		
Allocated Bonus				
Business	118,496			
Residential & Low Income	639,420			
Total	757,916			
Acknowledgement of Lost Revenue [ALR]				
Calculation:				
Dollar Value Per Therm				
Business (Non-residential)	\$ 0.10238			
Residential	\$ 0.08401			
12-Month Therm Reduction Impact From 2012 Programs				
Business (Non-residential)	674,619			
Residential	3,640,334			
ALR Totals				
Business (Non-residential)	\$ 69,064			
Residential	\$ 305,820			
Total ALR	\$ 374,884			
Total Gas Bonus and ALR	\$ 1,132,801			

Business Program

The business DSM products serve commercial and industrial customers of all sizes with a broad portfolio of offerings designed to meet the needs of this varied segment. Eligible customers are on a Public Service business rate for electric service and/or retail natural gas service. The portfolio has three main components. Prescriptive products focus on the most common equipment. Custom products encourage savings from unique situations, often involving newer technologies or measures. Study and educational products help customers identify efficiency opportunities.

Table 13a: Business Program- Electric Products (Budget to Actual)

2012	Budget					Actual				
	Electric Participants	Electric Budget	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio	Electric Participants	Electric Spend	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Business Program										
Compressed Air Efficiency	73	\$838,191	620	4,137,552	2.25	66	\$727,511	416	1,926,355	1.49
Computer Efficiency	2,666	\$500,637	1,004	7,342,230	2.87	958	\$98,223	318	2,327,730	3.63
Cooling Efficiency	301	\$2,976,091	2,121	7,033,292	1.52	392	\$1,816,235	1,455	2,517,769	1.60
Custom Efficiency	34	\$1,903,248	717	7,607,232	2.03	63	\$1,590,307	285	2,260,675	1.02
Data Center Efficiency	12	\$935,135	506	6,410,823	3.70	7	\$935,158	533	5,047,663	1.20
Energy Management Systems	56	\$1,541,500	243	8,495,894	1.70	31	\$960,789	171	6,026,684	1.66
Heating Efficiency						0	\$0	0	0	0.00
Lighting Efficiency	1,140	\$8,388,395	12,040	62,917,758	2.78	3,115	\$13,532,934	20,956	100,991,613	2.70
Motor & Drive Efficiency	1,589	\$5,433,060	3,458	21,145,535	2.13	603	\$5,339,555	3,720	24,991,511	2.27
New Construction	91	\$6,385,394	8,147	24,457,692	2.20	61	\$4,990,596	4,601	16,339,117	1.65
Process Efficiency	12	\$2,017,096	782	11,029,631	2.26	9	\$1,633,374	464	6,483,653	1.78
Recommissioning	85	\$1,319,172	330	5,925,060	1.23	75	\$721,998	666	5,117,926	2.35
Segment Efficiency	60	\$1,185,732	347	2,585,240	1.38	1	\$227,697	136	279,435	1.67
Self-Directed Custom Efficiency	13	\$1,908,790	1,957	8,975,070	1.79	5	\$1,182,587	1,149	9,723,468	2.77
Small Business Lighting	165	\$5,011,958	2,108	11,328,366	1.82	1,707	\$9,602,594	10,094	38,639,817	2.17
Standard Offer	12	\$1,668,234	1,287	9,138,595	1.14	6	\$944,165	816	4,124,957	1.03
Business Program Total	6,309	\$40,011,734	35,667	198,529,968	2.17	7,099	\$44,303,724	45,780	226,798,373	2.18

Table 13b: Business Program - Gas Products (Budget to Actual)

2012	Budget						Actual					
	Gas Participants	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio	Gas Participants	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Program												
Compressed Air Efficiency												
Computer Efficiency												
Cooling Efficiency												
Custom Efficiency	5	\$221,520	6,294	28,414	\$80,198	1.19	7	\$140,977	2,801	19,872	\$16,465	1.08
Data Center Efficiency												
Energy Management Systems	16	\$37,604	2,889	76,824	\$145,231	1.85	11	\$31,189	3,334	104,909	\$114,087	1.75
Heating Efficiency	208	\$743,394	30,885	41,545	\$284,915	1.12	363	\$657,049	21,585	32,306	\$204,466	1.11
Lighting Efficiency												
Motor & Drive Efficiency												
New Construction	45	\$522,920	58,037	110,986	\$551,287	1.12	31	\$407,281	34,106	83,741	\$689,663	1.28
Process Efficiency							0	\$301	0	0	-\$301	
Recommissioning	8	\$51,333	2,261	44,054	\$225,285	4.30	18	\$20,239	4,782	236,262	\$154,641	5.15
Segment Efficiency	9	\$20,241	2,171	107,234	\$57,038	1.72	0	\$1,250	0	0	-\$1,375	
Self-Directed Custom Efficiency												
Small Business Lighting												
Standard Offer	6	\$30,036	1,754	58,408	\$2,036,982	20.86	3	\$47,506	853	17,961	-\$124,875	0.45
Business Program Total	297	\$1,627,048	104,291	64,098	\$3,378,936	1.43	433	\$1,305,792	67,462	51,664	\$1,032,770	1.21

The electric portfolio performed above its targets on the strength of its established products. Lighting Efficiency was the largest contributor due to a rebate bonus promotion conducted in 2012 and concerns that some rebated measures will be lost due to increasing federal standards. Additionally Small Business Lighting significantly exceeded its targets for the same reason. Motor & Drive Efficiency and Self-Directed Custom Efficiency also exceeded their goals in 2012 and for the first time since their launch Data Center Efficiency and Computer Efficiency were strong contributors to the program.

The Lighting Efficiency and Small Business Lighting products implemented rebate bonuses in 2012 to accelerate market conversion of T12 fixtures to more efficient bulb and fixture options. Customer response exceeded the Company's expectations and resulted in significant achievement. The Data Center Efficiency product began to realize significant savings in 2012 as several of the long term projects that were being ushered through the process completed. Also of note the new Computer Efficiency product, launched in 2011, posted solid, cost effective savings in its second year.

Some products continued to struggle in 2012 due to aggressive targets and an underestimation of the time it takes for customers to implement projects. Standard Offer and Segment Efficiency both saw low participation in 2012. For Segment Efficiency customers continue to have difficulty implementing measures with paybacks less than 1 to 2 years. The target market for the Standard Offer product has shown a preference for other products offered by Public Service. Plans are in place to revitalize the Segment Efficiency product while the Company is considering the discontinuation of the Standard Offer product.

The business natural gas program was short of target but remained stable and cost effective with the exception of the Standard Offer product. Low natural gas prices continue to reduce the potential benefits for customers and make natural gas efficiency improvements appear less attractive. While below targets the Heating Efficiency and New Construction products continue to be the major contributors to the program. Recommissioning exceeded its targets due to a continued interest in lower cost natural gas measures.

Electric and natural gas spending in the Business Program was below budgeted levels. Electric spending was lower than anticipated due to the more cost-effective products such as Lighting Efficiency and Motor & Drive Efficiency bringing in the majority of impacts. Gas spending was lower due to lower participation across the program.

Business Programs

Compressed Air Efficiency

The Compressed Air Efficiency Product helps customers identify and address inefficiencies in their compressed air systems. The product encourages the repair and redesign of existing systems and the purchase of efficient options for new and replacement systems. The product has three components:

- Prescriptive rebates for new no-loss air drains and for Variable Frequency Drive (VFD) compressors of 10 hp to 50 hp.
- Study rebates for 50 hp to 99 hp systems of up to \$2,500; and for systems of at least 100 hp, 75% of the study costs. To receive study rebates, the customer must repair at least half of the leaks identified in the study. Leak repairs usually require no customer capital expense but significantly reduce energy waste.
- Custom rebates of up to \$600 per kW saved for improvements identified in the studies. Energy saving opportunities can include a wide range of capital purchases and “process” improvements, such as piping modifications or horsepower reductions.

Deviation from Goal

The product fell short of goal and spending was below budget. Primary contributors were:

- Public Service Co saw a lack of in-territory trade partner participation in 2012. Six of the seven in-state trade partners have exited our market to focus entirely on oil/gas field services outside our territory, or have completely replaced their in-region staff.
- Additionally several large projects that would have qualified for the product participated in holistic programs such as Process Efficiency. Due to the fact that large customers prefer to participate in holistic programs the product’s average project size has declined by 76% since 2008, and three-fourths of its opportunities are now from small business.

We have begun an intensive campaign to influence the trade partners to re-focus on the in-territory market, and to influence new trade partner personnel.

Changes in 2012

None.

Computer Efficiency

The Computer Efficiency product offers prescriptive electric rebates to business customers who install Virtual Desktop Infrastructure (VDI) or PC Power Management and to desktop personal computer (PC) manufacturers that design, manufacture, and sell units with energy efficient power supplies to business customers in Public Service Company’s electric service territory. The product is marketed to PC manufacturers through a third-party implementer that works directly with the various PC manufacturers to track equipment sold into our territory. The VDI and power

management rebates are promoted directly to business customers through our sales and trade channels, as well as through direct marketing campaigns.

Deviation from Goal

The product did not achieve its electric savings and participation goals for 2012 due to difficulties in influencing computer manufacturers to agree to stringent monitoring and verification requirements. Subsequent to making changes in the monitoring and verification requirements, Computer Efficiency was successful at enrolling the largest PC manufacturers in the product. Unfortunately the changes were not implemented in time to achieve goal in 2012.

Business customers are also looking for a mix of computing solutions which the Computer Efficiency is successful in delivering. The product has aided PC manufacturers in manufacturing and selling an increased number of qualifying computer models to our customers. The product also had its first successes in marketing its Virtual Desktop Infrastructure (VDI) rebate to business customers and has launched marketing for the new PC Power Management offering.

Changes in 2012

M&V process changes were filed in the 60-Day Notice described below.

60-Day Notice

In 2012 the company added a new prescriptive measure to the Computer Efficiency product called Network Personal Computer Power Management (PC Power Management). This measure pays a prescriptive rebate for customers who install PC Power Management software at a centralized location to control desktop PCs remotely. This measure is not for laptops or notebook computers, but must be qualifying desktop computers.

The M&V requirements of the upstream incentives was changed via the same 60-Day Notice. In our 2012/2013 Colorado DSM plan we proposed a custom M&V process for the power supplies. The changes were:

- a. New Additional Requirements:
 - The M&V third-party administrator will receive weekly or monthly reports from manufacturers and compile data of qualifying units which will be forwarded to PSCo.
 - Assignment of qualifying desktop units to groups for determination of efficiency level and appropriate rebating.
 - The third-party administrator will utilize a tracking database.
 - PSCo will receive a monthly report from the third-party administrator.
- b. Removed Requirements:
 - A third-party will complete follow-up phone surveys to a sample of participants to confirm whether the unit was installed or returned. The third-party determines the installation rate from the survey results, which will then be applied to the gross savings for the calendar year.

A change was made to the technical assumptions for all measures within the Computer Efficiency Product. The original technical assumptions included the assumption that some single shift computers were not operating during weekends (Saturdays and Sundays). Upon further analysis, it was determined that these computers were normally turned off at the close of business on Friday and turned on at the start of business Monday morning. Therefore, additional hours for Friday evenings and Monday mornings were added to the “Off” hours of operation. This results in a reduction to the baseline operating hours which also caused a reduction to proposed and associated savings.

Cooling Efficiency

The Cooling Efficiency Product offers incentives to customers who purchase and install high efficiency cooling equipment. Rebate dollars and study funding are offered to assist in buying down the incremental cost associated with purchasing high efficiency equipment and to shorten the associated payback period. Customers may qualify for a mix of prescriptive rebates for common high efficiency equipment and custom rebates for newer and more system-based high efficiency solutions. Marketing efforts and events are directed toward educating customers on making strategic decisions that will benefit their facility, as well as to vendors who work with customers on a daily basis.

Deviation from Goal

The Cooling Efficiency Product fell short of its annual savings goals. While participation in roof top units exceeded the previous year, the savings per unit for this equipment was down significantly due to the adoption of the International Energy Code Council (IECC) 2009 energy efficiency code. There was also lower participation in Custom Cooling measures, where larger and more complex projects are generally identified. Air conditioning projects at data centers that would have previously counted toward the Cooling product achievements were re-classified as Data Center Efficiency achievements in 2012 contributing to variance between filed forecast and actual achievement. A very successful Cooling Efficiency Expo was conducted early in 2012. The expo provided an opportunity for customers to speak directly with equipment distributors. An upstream distributor incentive was implemented during the fourth quarter to incent distributors to increase the availability of high efficiency equipment in the market.

Changes in 2012

In 2012, IECC 2009 energy efficiency code was adopted to reflect the most common energy code in PSCo service territory. The minimum qualifying efficiencies for cooling equipment were substantially higher for many of the prescriptive cooling measures resulting in lower energy savings per participant.

Custom Efficiency

The Custom Efficiency Product is designed to provide rebates on a wide variety of equipment and

process improvements that do not fall within Public Service Company's (PSCo) prescriptive rebate products. All Custom Efficiency projects require pre-approval before purchase and installation and must pass MTRC tests within our analysis. This process is in place to help ensure that the product significantly influenced the project and that rebates are awarded to projects that are technically and financially sound.

Deviation from Goal

The Custom Efficiency Product did not meet its electric or gas savings goal in 2012. Of the seventy custom projects submitted in 2012, thirty six were for anti sweat controls, which represented 60% of the custom achievement. The Custom Efficiency product is designed to evaluate new technologies like this so that there is ultimately enough data to justify a prescriptive rebate. As a result PSCo expects that anti-sweat controls will become a prescriptive product in 2013. New technologies are currently being evaluated. These include HVAC controls for roof top units, refrigerant additives, and energy saving valves.

Changes in 2012

None

Data Center Efficiency

The Data Center Efficiency Product offers evaluations and rebates to customers who make energy saving improvements to a data center. The product encourages a holistic approach by providing energy efficiency information, site evaluations and project analyses. Prescriptive and custom rebates encourage the implementation of energy saving upgrades.

The product is primarily marketed through the Xcel Energy account managers, trade relations, direct communications, and advertising efforts.

Deviation from Goal

Although the product did not meet the achievement goal, 2012 was the most successful year since implementation for the product, and its spend was below budget. Data Center Efficiency continues to have uniquely long sales cycles, analysis, and implementation periods due to the coordination of the various stakeholders within the customer's facility. Strategic efforts include customer outreach and advertising, ongoing trade outreach and education, as well as exploring methods for reducing analysis times and managing project implementation.

Changes in 2012

None.

Energy Management Systems

The Energy Management Systems (EMS) Product is designed to encourage customers to install or upgrade building control systems. An EMS system typically includes a centralized network programmed to monitor and control lighting and mechanical systems within a building, which allows customers to reduce energy costs by centrally managing the usage of equipment.

The product covers new energy management systems in an existing building, replacement of an obsolete energy management system, and adding functionality and/or control points to an existing system. Ineligible measures include duplicate system functions, in-room thermostats, set point adjustment and the rebalancing of existing systems. Systems installed as part of new construction projects are also ineligible.

The product offers incentives totaling up to \$600 per implied kW and \$4 per Dth saved. Actual kWh savings and/or actual on-peak demand savings can contribute to the implied kW.

Deviation from Goal

The EMS Product did not meet its electric savings goal, and its spending was commensurately below budget. Applicants were nearly 30% greater than the planned participants, but many of the projects failed to pass the modified total resource cost test (MTRC) due to high implementation costs and the fact that much of the control strategies occur outside of Public Service Co.'s system peak. Several customers also chose to postpone implementation of their projects due to the high cost of the system. Public Service Co. continues to work with customers and the trade to implement higher net benefit projects and is optimistic about future participation.

The product's gas performance met its goal.

Changes in 2012

None.

Heating Efficiency

The Heating Efficiency Product provides rebates for retail natural gas business customers who purchase high efficiency natural gas or dual-fuel commercial equipment for heating or process loads. Product rebates are designed to promote the installation of high-efficiency boilers, commercial water heaters, pipe insulation, boiler tune-ups, and boiler system auxiliary equipment that improves combustion and seasonal efficiency.

Deviation from Goal

The product did not meet its savings or spending goals in 2012, however, participation exceeded filed estimates. Despite a strong pipeline early in the year, momentum slowed in the final quarter due to customers reacting to low natural gas prices and subsequently the lower benefits of choosing high efficiency. While participation exceeded expectations we are continuing to see an increasing trend of small business participation over the larger commercial and industrial customers. With a

higher quantity of smaller projects, resulting in higher than anticipated transaction costs, the product spend was somewhat out of alignment with achievement.

Changes in 2012

Several changes were noteworthy this year as we concluded a program evaluation late in 2011 that was implemented in 2012.

- Public Service Company (PSCo) will adopt the change to assumed efficiency for Condensing space heating and water heating boilers from 96% to 94%. An evaluation of this change indicates it **will insignificantly impact the total resource cost**
- PSCo will make outdoor air temperature reset ineligible for **domestic hot water only boilers.**
- PSCo will reduce the effective useful life for stack dampers from 20 to 12 years to be more consistent with other programs.
- PSCo will change the effective useful life for pipe insulation from 7 to 15 years
- The net-to-gross ratio will change to 0.86
- PSCo currently offers a return-on-investment online tool and is currently evaluating an energy savings calculator tool that may be implemented for use by HVAC contractors.

60-Day Notice

A 60-Day Notice was filed in August 2012 as the program evaluation recommendations, mentioned above, were implemented. Changes were communicated to DSM Roundtable participants and Heating Advisory Board members.

Lighting Efficiency

The Lighting Efficiency Product offers rebates to customers who purchase and install qualifying energy efficient lighting in existing or new construction buildings. Prescriptive rebates are offered to encourage customers to purchase energy efficient lighting by lowering the up-front premium costs associated with this equipment. Custom Efficiency Lighting and Lighting Redesign rebates are also available for energy-saving lighting solutions not included in the prescriptive rebate menu, and require pre-approval prior to purchasing equipment and beginning a project.

Deviation from Goal

The product exceeded its energy savings goal proportionately higher than spending due to a higher volume of core prescriptive lighting and Custom lighting projects implemented. The main driver in this product's over performance is the phasing out of fluorescent T12 to T8 fixture rebates after 2012, due to the Department of Energy's (DOE) more stringent lighting standards. The marketplace responded to bonus rebates for removing inefficient T12 fixtures and marketing efforts implemented to communicate this change. The product offered 50% bonus rebates for T12-removal projects completed by March 31, and 30% bonus rebates for projects completed between April 1 and December 31. Secondary drivers are increased participation by lighting trade partners, and increased achievement from prescriptive LED lighting measures.

Changes in 2012

Screw-in CFL rebates were removed from the product's menu of prescriptive rebates beginning in 2012.

60-Day Notice

In 2012, we posted a 60 Day Notice to expand Deemed Savings Technical Assumptions to add or update eligible technology pairings, lighting controls and costs. The changes will allow a wider range of projects to qualify for prescriptive rebates. Three new lighting rebate categories were added, and several prescriptive LED rebates levels were reduced due to recent market pricing trends.

Motor & Drive Efficiency

The Motor & Drive Efficiency Product is designed to encourage customers to purchase high-efficiency motors and variable frequency drives used on fans, pumps and eligible industrial equipment. We offer prescriptive rebates to customers who install qualifying equipment, and custom rebates to those customers whose projects do not meet the prescriptive criteria.

Deviation from Goal

In 2012, the product met its savings target within its budget. Contributors to the success were substantial growth within the small business segment, a large multi-GWh participant, and the addition of a successful new measure, Electronically Commutated Motors.

Changes in 2012

2012 was the first full year of our rebates for Electronically Commutated Motors (ECMs), and Constant Speed Motor Controllers.

New Construction

The Business New Construction mission is to help business customers prioritize energy efficiency when constructing new buildings. By providing whole building energy analysis for larger buildings and checklists of opportunities for smaller buildings, we help customers achieve their energy and sustainability goals.

The **Energy Design Assistance** (EDA) component was the primary offering to customers in 2012. Features include free energy consulting services in support of integrated design processes by providing computer modeling of planned designs, funding to offset the cost of design time associated with the increased energy analyses, financial rebates to improve the cost-effectiveness of packages of energy-efficient measures, and field verification to ensure that the strategies are installed per the design intent. Construction rebates were \$400 per kW, \$0.04 per kWh and \$4 per Dth in 2012.

The **Energy Efficient Buildings (EEB)** component is a combination of prescriptive measures and custom analyses that allows customers to package numerous measures into an online workbook (Microsoft Excel calculator) and fill out just one application versus multiple applications. The workbook provides immediate, preliminary rebate amounts per measure input into the calculator, giving the customer the tools to make early decisions to influence better energy efficiency equipment choices. Rebates vary by project and are based on prescriptive levels for measures such as cooling, heating, and motors. Rebates for non-prescriptive measures, such as lighting and building envelope, were \$400 per kW, \$0.04 per kWh and \$4 per Dth in 2012.

Deviation from Goal

The product fell short of its electric savings goal. We experienced challenges due to the lingering effects of the recession and continued downturn in the commercial new construction market. Of the projects that we expected to finish in 2012, six projects were put on hold and three were cancelled. Due to long lead times of approximately two to four years before a project actually finishes construction, short term contingency plans would not be effective in increasing participation. In anticipation of improvements in the new construction market in the near future, funding was spent to help increase the pipeline for future years, with a focus on education and marketing the programs to architects, contractors, and other interested stakeholders.

Changes in 2012

None.

Process Efficiency

Process Efficiency was designed to target energy intensive processes at large facilities with two GWh hours of potential energy savings. The product is primarily intended to identify and influence improvements to large systems that are not currently completed through Custom Efficiency or the prescriptive products, and establish business practices that drive additional conservation measures in the future.

It uses a three phased approach to provide customers with the resources necessary to drive conservation through the development and implementation of a holistic, sustainable energy management plan. Participation in this product results in not only a list of conservation opportunities with a plan for implementation but also involves integrating energy efficiency into how the customer completes their daily business practices.

Deviation from Goal

The Process Efficiency product continues to penetrate the Colorado industrial market with significantly more customers participating and actively implementing projects. Some of the identified savings opportunities were implemented in 2012, but the majority of the larger, longer lead-time projects will not be completed until 2013. Expenses for the product were relatively high in comparison to achievement due in large part to this delay in project implementation. However, even

with this lower than expected energy savings the program still has a very favorable MTRC which shows the value of this more in-depth service.

Changes in 2012

As of January 1st, 2012, Public Service Co. no longer offered support identifying, scoping or rebating gas projects.

60-Day Notice

Due to the success PSCo has seen in Colorado with the Process Efficiency delivery model, a 60-day notice was filed in October to remove the industrial-only restriction and expand the offering to commercial customers. With no objections from stakeholders, this change was officially adopted on November 4th, 2012.

Recommissioning

The Recommissioning product is designed to assist electric and/or natural gas customers in improving the efficiency of their existing building operations. It focuses on tuning up their existing systems to run as efficiently as possible and to operate as intended, as an alternative to purchasing new equipment. The product offers study funding to identify measures and rebates to encourage the implementation of those recommissioning measures. Additionally, the studies identify prescriptive and custom opportunities when, once implemented, are moved into the prescriptive and custom end-use products with-in our portfolio.

Deviation from Goal

The Recommissioning Product exceeded its demand and dekatherm goals, but fell slightly short of its electric energy savings goal. Many measures had high demand savings, but lower energy savings than we have seen in the past, which can be attributed to the fact that some recommissioning measures are designed to provide optimal operating conditions during peak hours as well. Although the forecast is based on historical and pipeline information, actual achievement is dependent on which measures identified in a study are eventually implemented by the customer. We under spent both the electric and gas budgets primarily due to the fact that overall, many of the implemented measures for both gas and electric projects did not qualify for a rebate as the paybacks were less than one year.

Changes in 2012

None

Segment Efficiency

The Segment Efficiency Product was designed to target specific market segments by offering a comprehensive assessment of building systems and operations. Commercial real estate office buildings in excess of 50,000 square feet continue to be the only segment served by this product. The assessment provides a comprehensive list of energy conservation opportunities, including:

- A low-cost Preliminary Report that describes the building's energy-consuming systems, identifies energy conservation opportunities, and provides estimates of the projected savings, cost, and rebates for each measure. Customers are charged \$2,500 on their energy bill after the completion of the report.
- An optional Investigative Study includes a net operating income analysis and detailed engineering calculations for specific energy conservation opportunities. Customers receive Investigative Study funding up to 50 percent of the study cost, not to exceed \$25,000.
- Customers earn up to 30 percent in bonus rebates on items identified in the Preliminary Report that are implemented within the program timeframe.
- ENERGY STAR Benchmarking score.

Deviation from Goal

The Segment Efficiency Product did not meet its savings or participation goals in 2012. Fewer studies were conducted than in previous years. While the studies that were conducted identified significant savings for large equipment replacement, customers opted to implement measures with much shorter payback times due to high cost of improvements. One study identified lighting savings of nearly 1 GWh. This project was completed only in part, but will have additional savings carried over into 2013. The study provider actively approached potential customers and identified potential barriers to participation. These are being studied in more detail for the next plan year. An RFP was issued and a new study provider has been selected for the program in 2013.

Changes in 2012

None

Self-Directed Custom Efficiency

The Self-Directed Custom Efficiency product provides large commercial and industrial electric customers in Colorado the opportunity to directly manage the engineering and reporting requirements for their energy efficiency projects. Due to this added reporting placing a greater financial burden on the customer we are able to offer larger rebates. Customers must complete and fund all stages of the project life-cycle from identification, engineering, implementation, and commissioning to qualify for the higher rebate levels.

Because of the highly technical and rigorous requirements established for reporting and validating this type of energy savings project, the product is only open to customers with access to the appropriate resources. Therefore, participants must be prequalified and have an aggregated peak demand of two MWs and annual consumption of 10 GWh hours.

Deviation from Goal

The Self-Direct Product fell short of the kW and participation goals in 2012, but exceeded kWh goal. This discrepancy can be explained by the nature of the projects and customers who contributed to the achievement, which varied from the historical projects used to develop goal. For example, the largest project was implemented at an industrial facility where the kW was saved on equipment with long operating hours. This disproportionately drove up the kWh savings. The overachievement in the kWh goal was accomplished even though the Product spent only 60% of budget.

Changes in 2012

None.

60-Day Notice

None.

Small Business Lighting

The Small Business Lighting Product offers free lighting audits, recommendations for energy-saving measures, special services, and attractive cash rebates to business customers who purchase and install energy efficient lighting equipment in existing facilities. The product is available to businesses with peak demand of up to 400 kW, and seeks to overcome barriers that often prevent small businesses from investing in energy efficient lighting, including limited financial resources and time, low awareness of lighting equipment, and lack of access to quality contractors.

Deviation from Goal

The product significantly exceeded its goals. This can be attributed to the phase out of T12 fluorescent fixtures and the December 31, 2012 deadline for invoicing and installation of qualifying T12 retrofit projects. Due to this increase in participation, the product spend exceeded budget but was in line with the increased savings. Franklin Energy, the product's implementer, continued to be a significant driver for customer awareness and project completion.

Changes in 2012

In the first quarter of 2012, Public Service Co. introduced a 30 percent bonus rebate through the end of 2012 to encourage customers to remove T12 fluorescent fixtures and replace them with T8 or T5 fixtures before the U.S. Department of Energy efficiency standards for fluorescent lamps and ballasts took effect in January 2013. The promotion resulted in significant energy savings with this added sense of urgency of phase out timing and higher rebates.

Screw-in CFL rebates were removed from the product's menu of prescriptive rebates beginning in 2012

60-Day Notice:

In 2012, Public Service Co. posted a 60 Day Notice to expand Deemed Savings Technical Assumptions to add or update eligible technology pairings, lighting controls and costs. The changes will allow a wider range of projects to qualify for prescriptive rebates. Three new lighting rebate categories were added, and several prescriptive LED rebates levels were reduced due to recent market pricing trends.

Standard Offer

The Standard Offer Product provides customers with an opportunity to identify and implement a comprehensive package of cost effective efficiency measures using their internal resources and funding, or using outside resources such as those from an Energy Services Company (ESCO). The Product differs from PSCo's other DSM offerings in that it allows customers to work with ESCOs if desired. Working with an ESCO allows the customers to take advantage of alternative funding mechanisms for their energy efficiency projects that may not be available through the Company's other Products. The technical energy audit used in this Product is an investment grade audit, which can be used by the customer to secure internal or external funding for the project. Additionally, bundling individual measures into comprehensive projects minimizes required Company and customer resources, and increases the size of the projects, which draws more interest from contractors, equipment suppliers and ESCOs.

The Standard Offer Product is designed to support conservation that is delivered through the trade allies and support customers who use alternative financing to implement energy saving measures. Although it is targeted to public entities such as K-12 schools, colleges and universities, and state, local, and county government, all business customers are eligible to participate.

The Product is a result of working with the Colorado Energy Office and the Colorado Energy Services Coalition. The components are designed, not to limit participation to customers working with Coalition members, but to help remove some of the barriers that this trade organization identified to customers implementing projects.

Deviation from Goal

With the Product failing to reach goal and not meeting cost-effectiveness (MTRC) in 2011, greater emphasis was placed on outreach to the ESCO community and providing additional tools and assistance through our engineering team in 2012. Even with this increased effort the product continued its overall poor performance, failing to meet any of its filed goals once again. We are attributing this poor performance to several factors including:

- Customers choosing other products within the portfolio
- The complexity and size of the projects

- Bundling of long-payback projects
- Higher cost to implement measures due to the risk ESCOs assume with performance contracting
- Multi-stage participation requirements

The natural-gas side of the product was well below target, achieving less than 50% of filed dekatherm goal with only a single participant. This failure to meet goals while still expending resources in the identification and scoping of projects led to the product's TRC falling well below the 1.0 requirement.

Due to the four year persistence of these issues a 90-day notice closing the product was filed on March 14th, 2013. This change should not have a negative affect on the level of support that the DSM Products provide for any customer projects. What we will more likely see is customers choosing to rebate their projects through other programs in the portfolio.

Changes in 2012

None.

60-Day Notice

None.

Residential Program

The Residential Program serves customers who live in single-family dwellings, apartments and condominiums and receive electric and/or natural gas from Public Service. The Company focuses on cost-effective, direct impact products that target household appliances and lighting. This effort is supplemented with educational services intended to further increase customer understanding and interest in conservation and energy efficiency.

Table 14a: Residential Program – Electric Products (Budget to Actual)

2012	Budget					Actual				
	Electric Participants	Electric Budget	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio	Electric Participants	Electric Spend	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Residential Program										
ENERGY STAR New Homes	2,580	\$532,721	89	1,543,624	1.32	1,554	\$582,760	353	1,790,057	1.93
Evaporative Cooling Rebates	4,298	\$2,282,325	6,042	3,771,471	9.83	4,346	\$2,403,855	5,303	3,377,533	7.80
Heating System Rebates	0	\$0	0	0	-	0	\$0	0	0	-
High Efficiency Air Conditioning	2,010	\$2,405,385	2,871	2,372,400	1.31	2,243	\$2,492,482	2,989	2,433,876	1.25
Home Lighting & Recycling	522,500	\$5,440,714	10,167	90,786,179	3.52	768,892	\$6,564,433	16,463	131,518,655	3.70
Home Performance with ENERGY STAR	200	\$285,591	295	307,243	2.96	526	\$171,051	108	377,341	1.99
Insulation Rebate	3,120	\$115,505	540	428,993	3.54	1,655	\$115,847	568	552,968	3.50
Refrigerator Recycling	4,250	\$1,442,459	419	4,274,406	1.19	5,346	\$901,655	479	4,165,549	2.60
School Education Kits	30,000	\$1,538,568	535	5,809,487	1.46	30,002	\$1,489,543	542	5,877,174	1.49
Showerthead	2,631	\$61,600	0	466,836	5.36	2,563	\$36,586	0	649,381	7.03
Water Heater Rebate	200	\$100,100	59	517,787	1.38	29	\$64,694	8	73,989	0.64
Residential Program Energy Efficiency Total	571,789	\$14,204,968	21,018	110,278,427	4.60	817,156	\$14,822,906	26,814	150,816,524	4.04
Load Management Program - Residential Saver's Switch	19,500	\$13,326,964	20,865	697,183	3.97	12,682	\$12,261,179	14,290	477,290	2.91
Residential Program Total	591,289	\$27,531,932	41,883	110,975,610	4.31	829,838	\$27,084,085	41,104	151,293,814	3.63

Table 14b: Residential Program – Gas Products (Budget to Actual)

2012	Budget						Actual					
	Gas Participants	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio	Gas Participants	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Residential Program												
ENERGY STAR New Homes	2,580	\$2,591,808	72,521	27,981	\$1,605,837	1.26	2,131	\$3,072,731	73,726	23,994	\$1,974,383	1.30
Evaporative Cooling Rebates												
Heating System Rebates	6,500	\$944,327	53,514	56,669	\$1,534,523	1.44	3,508	\$731,333	28,725	39,278	\$95,854	1.29
High Efficiency Air Conditioning												
Home Lighting & Recycling												
Home Performance with ENERGY STAR	200	\$268,064	7,770	28,985	\$109,158	1.17	526	\$396,979	13,147	33,117	\$406,908	1.44
Insulation Rebate	8,000	\$1,569,679	81,533	51,942	\$1,853,942	1.24	2,820	\$1,282,021	68,305	53,279	-\$806,870	0.89
Refrigerator Recycling												
School Education Kits												
Showerthead	21,286	\$225,000	18,125	80,556	\$1,766,158	7.24	20,741	\$264,007	25,505	96,609	\$1,305,258	5.07
Water Heater Rebate	3,070	\$341,820	11,816	34,568	-\$808	1.00	1,838	\$179,599	4,524	25,190	-\$134,637	0.77
Residential Program Total	41,636	\$5,940,706	245,279	41,288	\$6,868,811	1.35	31,564	\$5,926,669	213,932	36,096	\$3,340,897	1.19

The electric residential program performed extremely well in 2012. The following products exceeded target: Home Lighting, ENERGY STAR® New Homes, High Efficiency Air Conditioning, Home Performance with Energy Star®, Insulation Rebates, School Education Kits and Showerhead.

The Home Lighting & Recycling Product led performance in the residential electric segment. Approximately three million bulbs were sold through retail partners and online sales. Increased advertising, event marketing and the addition of more retail partners lead to the success.

Continued focus on building relationships with home builders and equipment contractors and promoting the benefits of energy efficiency helped the majority of the products exceed targets. More contractors were educated, trained and comfortable with the products resulting in more effectively selling energy efficiency and Public Service rebates to customers. The Home Performance with Energy Star[®] product reinvented itself through product and delivery changes allowing it to go from non cost effective in 2011 to slightly exceeding targets in 2012.

The residential natural gas program was short of target but remained stable and cost effective with the exception of the Water Heater product. Low natural gas prices continue to reduce the potential benefits for customers and make natural gas efficiency improvements appear less attractive. The following products exceeded their targets: Energy Star[®] New Homes, Home Performance with Energy Star[®] and Showerhead.

The natural gas Water Heater Rebate Product was not cost-effective due to the actual measures that were implemented by participants. For the Water Heater Rebate Product more customers chose the lowest qualifying efficiency water heaters resulting in less energy savings per project than anticipated.

The electric residential program budget was slightly below target while being well above target in energy savings. This was due to the largest increases in savings coming from Home Lighting & Recycling where incremental impacts are relatively inexpensive as fixed costs are paid. The natural gas program budget was also slightly below target primarily due to lower than expected participation.

Residential Products

ENERGY STAR New Homes

The ENERGY STAR® New Homes product provides homebuilders with an incentive to exceed state and local energy building codes and common construction practices. Homebuilders are encouraged to consider a whole-house approach to energy conservation when building new single-family and small multi-family homes. Participating energy raters provide key services and product support which greatly contribute to the on-going success of this product. The product helps builders create homes that surpass most homes in terms of comfort, energy efficiency, moisture control, air quality and durability.

Deviation from Goal

The product met the filed Dth savings goal in September 2012 and was closed shortly thereafter. Product closure was directly tied to the Dth savings goal as noted in the 60 Day Notice posted June 27. We overspent on both our filed gas and electric budgets; however, this was anticipated and was a primary reason for closing the product. Participating homes achieved higher efficiency levels (lower HERS scores) than originally forecasted and in doing so, earned higher rebates than what was included in the budgets. Gas participation was less than forecast for the same basic reason, participating homes achieved more savings per home, so it took fewer homes to reach the Dth savings goal. Electric participation was less than forecast. In our forecast we incorrectly assumed all participants would be a combined gas/electric customer. While most participants were a combo customer, approximately 27% were natural gas only customers.

We significantly exceeded both the demand (kW) and energy savings (kWh) goals. The increase for both is the result of builder choices which moved more strongly than expected into the higher efficiency tiers of the program by installing measures that provide increased kW and kWh savings. As a result of these choices, energy savings more than doubled on a per home basis than we originally forecast. Demand savings increased at an even greater percentage over forecast. Builders choose to install; more ENERGY STAR appliances, windows with lower solar heat gain coefficient and additional efforts were expended in order to achieve greater air tightness to the home envelope. We also saw more use of spray-foam insulation, which contributes towards overall air home tightness.

Changes in 2012

See 60 Day Notice below

60-Day Notice

Public Service posted a 60-day notice on June 27th to make some changes to the ENERGY STAR New Homes (ESNH) Product. The primary driver for this notice was to balance product cost effectiveness while maintaining the EPA ENERGY STAR brand requirements. Changes for 2012 included: elimination of the enrollment fee paid to raters and also the Builder Option Package and

Sampling test out methods, closure of the program when we met our Dth savings goal, corrections and changes to the rebate amounts and a new ENERGY STAR v3 builder rebate tier was added.

Evaporative Cooling Rebate

The Evaporative Cooling Rebate Product provides a cash rebate to electric customers who purchase and permanently install high-efficiency evaporative cooling equipment for residential use. This is a tiered rebate program, providing up to \$250 or the cost of the unit, whichever is less, for Standard System Tier 1 units with a cubic feet of air blown per minute of 2,500 or greater; up to \$600 for Premium System Tier 2 units with a minimum media saturation effectiveness of 85%, a remote thermostat, and a periodic purge water control; and \$1,000 for Whole House System Tier 3 units that use our premium system approved products with a minimum media saturation effectiveness of 85%, a remote thermostat, a periodic purge water control and have at a minimum of four installed ducts per unit.

Deviation from Goal

In 2012, Public Service increased its marketing and upstream efforts in coordination with our partner WECC, Wisconsin Energy Conservation Center. These product marketing improvements raised customer awareness, more specifically at the retailer store level, and increased our participation to exceed 2012 participation goals. Evaporative Cooling fell slightly short of electric savings goals due to lower than forecasted premium system (tier 2) units in the Denver Metro/Front Range region and whole home system units in the Western Slope regions, which provide our greatest energy savings per unit. Trainings will be conducted in 2013 to highlight where the shortfall is and how we can improve these numbers. Trade and Retailer Incentives also continue to be advantageous in our Colorado market and explains the increase of participation over 2011.

Changes in 2012

None

Heating System Rebate

The Heating System Rebate Product provides an incentive in the form of a cash rebate to Public Service Company's natural gas customers who purchase high-efficiency heating equipment for residential use. The customers benefit by the lower cost of energy efficient units and experiencing energy savings throughout the lifetime of the equipment.

Deviation from Goal

The Heating System Rebate Product did not meet its energy savings or participant goals in 2012. In recognition of very low natural gas commodity prices and the resulting loss of societal benefits for natural gas DSM programs, the decision to cut administrative budgets, while maintaining a stable portfolio of natural gas DSM programs, was made in the 2012 – 2013 DSM Biennial Plan. The reduction of marketing and advertising for the Heating System Rebate product as well as customer reaction to longer payback periods with low fuel prices is responsible for the product missing its targets. Although with customers that did participate in the product the vast majority of 2012

participants chose the most energy efficient home furnaces, and nearly 800 contractors are still registered to help sell in the available rebates, fewer customers than expected participated in the product in 2012.

Changes in 2012

None.

High Efficiency Air Conditioning

The High Efficiency Air Conditioning Product comprehensively addresses energy efficiency opportunities related to central air conditioners and air-source heat pumps. This product consists of three major components:

- **Equipment Rebates**— Central air conditioners and air-source heat pumps ranging from 14.5 to 16 SEER or greater are eligible for a rebate. Rebates range from \$250-\$500.
- **Trade-In Rebates**- Trade-in central air conditioners units must be replaced by a new AC unit of a SEER 14 and maximum efficiency of EER 12 and installed by Public Service Company registered contractor. Rebate is \$500.
- **Quality Installation** – This component is the cornerstone of the product since the other two components are built with the quality installation process in mind. This process is based on standards developed by the Air Conditioning Contractors of America (ACCA), which dictate the steps a contractor must take to ensure a quality installation. Contractors who meet the quality installation requirements are eligible to receive a \$100 incentive from Public Service.

The High Efficiency Air Conditioning Product strives to create increased awareness of quality installation among customers and trade partners. This product requires a participating NATE-certified contractor to perform the improvement to earn the rebate.

Deviation from Goal

The High Efficiency Air Conditioning Product exceeded its 2012 energy savings, participation goals and budget. Strong relationships with the contractors were the main drivers to exceeding goal. To support the contractors Public Service Company offered AC trainings instructed by industry experts, promotional items and contractor recognition.

Changes in 2012

None.

Home Lighting

The Home Lighting program offers discounted prices on energy efficient lighting including compact fluorescent light (CFL) and light emitting diode (LED) bulbs. Energy efficient lights are an easy and low cost way for customers to save energy and reduce the cost of their monthly electric bills. Public

Service Company promoted the program through a variety of advertising and promotions, including television, radio, on-line, publication, bill inserts, community events and point of purchase displays.

PSCo provided in-store discounts on selected models of CFLs and LEDs at local participating retailers. Nearly 500 retail locations participated in the program and provided discounts on nearly 500 different models of energy efficient bulbs. Public Service worked with retailers and manufacturers to buy down the price of twist and specialty CFL bulbs and LED bulbs were also discounted. The Company supported local events offering free CFL bulbs and collaborated with local entities to promote energy efficient bulbs.

We continued to provide CFL recycling at Ace Hardware stores throughout our service area. 23,564 bulbs were recycled in 2012, which is an 18% increase over the previous year.

Deviation from Goal

Customers responded favorably to the promotions. Economic challenges have customers looking for ways to reduce their energy bills. As a result, there was an increased interest in energy efficient bulbs from both consumers and retailers. PSCo exceeded the goal by substantially, selling and distributing approximately 3 million energy efficient bulbs. Because we sold approximately one million more bulbs than were budgeted for, we exceeded the budget, however, we spent proportionally less than what was originally budgeted per unit.

CO Home Lighting M&V dollars were included in the wrong budget category. Although it appears that no dollars were budgeted for M&V, those dollars were included in the budget in a different category.

Changes in 2012

In 2012, we began using baselines adjusted to account for the 2007 Energy Independence Security Act.

Home Performance with ENERGY STAR

The Home Performance with ENERGY STAR (HPwES) Product is a comprehensive, “whole house” retrofit product. This product is designed to give cash rebates to customers for implementation of measures identified during the Home Energy Audit. It is only available to Public Service residential combination gas and electric customers and all-electric customers with electric space heating. Customers residing in multi-unit complexes that have more than four units do not qualify.

Participants have a limited amount of time from the program sign-up to implementation of three measures. Customers must implement air sealing, attic insulation, and energy efficient lighting if recommended in their audit and have not been completed previously. Upon completion of the product improvements, a post-improvement verification inspection is completed.

Public Service hired a third-party product implementer for this product and the Home Energy Audit Product. The implementer is responsible for conducting quality assurance on the in-home post

improvement inspections, the home energy audit report, and the audit itself. The implementer also provides customer support, contractor management, and oversight of the energy modeling software.

Deviation from Goal

In 2012, Public Service redesigned this product to improve its performance and effectiveness. As a result of this redesign, we exceeded our achievement and participation goals and remained cost effective. The gas budget exceeded goal to account for the increase in forecasted rebates and the electric budget remained under goal.

Changes in 2012

In 2012, the redesigned product launched requiring customers to complete three measures instead of five. Also, the Home Energy Audit Product went from a subsidized cost to a rebate that can be earned for completing a home energy audit through the Company's program.

During the year, the product conducted a concierge pilot which delivered customer outreach and direct marketing to eligible residential customers. This pilot was defined and written into the settlement agreement of the 2012/2013 CO DSM Plan. The purpose of the pilot was to see if the program would gain participation directly from specialized marketing services while remaining cost effective. Public Service pulled a working group together and partnered with Red Rocks Community College, military veterans selected through the State Energy Sector Partnership Grant administered through the Colorado Department of Labor and Employment, National Renewable Energy Laboratory, and Populus, LLC to conduct the concierge pilot. Upon review of the data compiled as part of the pilot, the additional services and outreach were found not to be a driver to increased participation resulting in these services deemed non-cost effective. Therefore, the product will not move forward with the concierge services for the 2013 product plan.

Insulation Rebate

The Insulation Rebate Product was available to all residential gas and electric heated customers for installing insulation in their existing single-family home or one-to-four unit property. Rebates were available for qualifying installations of attic insulation and bypass sealing, wall insulation, and air sealing and weather-stripping.

Deviation from Goal

The Insulation Rebate Product exceeded its electric participation and savings goals, and was slightly under the gas participation and savings goals for 2012. The budget was exceeded proportionally to increased product participation for electric, and was under budget for gas. The Insulation Rebate program continues to be a strong performing product within the residential portfolio and remains popular as a standalone rebate. Insulation also continues to be one of the most cost effective home improvement opportunities to the customer, and is often suggested by contractors as a first option in improving energy savings and lowering bills. In 2012, the natural gas portion of the program was deemed not cost effective per the Total Resource Cost (MTRC) test, due to lower than forecasted natural gas only and electric resistance heated only homes. This was adjusted in the 60 Day

Insulation and Air Sealing rebate program modification filed on January 2, 2013, which more accurately portrays expected Incremental O&M savings based on adjusted combo, electric only and gas only participation.

Changes in 2012

The Company evaluated and developed a quality assurance program to ensure program standards and guidelines are being met. Several stakeholder meetings were held in Q2 and Q3 to develop the quality assurance program, which now includes contractor certifications, air sealing, blower door and combustion appliance zone (CAZ) requirements. Additionally, the stakeholders group agreed that additional funds given in 2012 should be used towards contractor trainings and as scholarships to help fund certifications in order to meet our new requirements. In Q4, the contractors were invited to an educational workshop, where scholarship opportunities, training partners and introductions to blower door, CAZ training and air sealing were presented. Approximately 40 companies took advantage of the scholarship dollars in order to participate in our 2013 program.

Refrigerator Recycling

The Refrigerator Recycling Product is designed to decrease the number of inefficient secondary refrigerators in residential households. The product reduces energy usage by allowing customers to dispose of their operable, inefficient, secondary refrigerators in an environmentally safe and compliant manner. Customers receive a \$50 incentive and free pick up and disposal services to recycle the secondary refrigerator. This product is primarily marketed by a variety of bill inserts, direct mailers and online/social media efforts.

Deviation from Goal

The Refrigerator Recycling Product achieved both its participant and electric energy savings goal in 2012. The success of the product can be attributed to the expanded program that was launched in Q1 during the re-filing, and effective advertising and marketing efforts to our Colorado customers.

Changes in 2012

Public Service Company expanded the Refrigerator Recycling program to begin accepting freezers and primary refrigerator units in the Colorado territory. Additionally, the rebate remained the same, with customers able to receive a maximum of \$100 per home, per program year.

School Education Kits

The School Education Kits Product combines a set of classroom and in-home activities with projects that enable students and parents to install energy efficiency products in their homes. The product is targeted at sixth grade students in our Colorado service territory. Our third-party contractor, Resource Action Programs, fully implements the School Education Kits Product, including recruiting and training teachers, providing all materials, and tracking participation by the students and teachers. Energy savings are based on the number of measures Compact Fluorescent

Lamps (CFLs) that are installed in the homes of the students. Public Service bases these savings on feedback that are received through the parent/student survey results.

Deviation from Goal

The program reached its participant and electric savings goal. Although the goals assumed 66% install rates measurement and verification survey results showed higher install rates than were anticipated in the electric components. The overall reported averaged install rates were 67% in our 2012 program year.

The program performs one flight of kits within a given year, typically in the spring. Early on in 2012, Product Management initiated strategic plans to increase overall installation rates, which initiated focus groups that included teachers. Results included improved parent letters, a booklet with approximate savings for measures implemented in home, and a quick-install CD to increase installation. Actual install rates increased over 2011, and overall the results met electric goals. Spending was also slightly under budget for electric spend due to administrative efficiencies.

Changes in 2012

None

Energy Efficient Showerheads

The Energy Efficient Showerheads Product provides a free energy efficient showerhead to residential customers to help them save energy, water, and money. Qualifying customers receive a direct mail offer for a 1.5-gallon per minute showerhead during a specific campaign time period.

Customers accept the offer by mailing in the business reply card or calling the toll free number prior to the deadline listed on the postcard. If they do so, they are mailed a showerhead kit, which includes the energy efficient showerhead, thread seal tape and installation instructions free of charge.

Deviation from Goal

Public Service added incremental marketing efforts and made strategic enhancements recommended in the 2011 process and impact evaluation. This program exceeded its electric and gas budgets and savings goals in 2012 due to the addition of a second direct mail campaign and enhanced marketing materials that better explained the benefits of installing an energy efficient showerhead.

Changes in 2012

None

Water Heating

The Water Heating Rebate Product uses rebates to encourage residential customers to purchase energy saving water heating equipment. Rebates are available for:

- Energy efficient natural gas storage and tankless water heaters, and
- Electric-only heat pump water heaters.

As a result, participating customers reduce their natural gas and electricity usage and long-term operating costs.

Deviation from Goal

The Water Heating Rebate Product did not meet the participant and energy savings goals in 2012 however the expenses were in line with participation levels. In 2012 Public Service significantly increased outreach, education and awareness for electric-only heat pump water heaters resulting in increased participation over 2011.

Changes in 2012

None

Saver's Switch®

Saver's Switch is an integral part of Xcel Energy's load management efforts. As of the end of 2012, the product had almost 160,000 residential Colorado customers enrolled in the program.

The Residential Saver's Switch program offers bill credits as an incentive for residential customers with central air conditioners to allow the Company to control operation of their air conditioners on hot summer days when the system is approaching its peak. Residential customers receive a \$40 annual discount on their October bill each year they participate.

Control periods for central air conditioners are declared an average of five to fifteen times per year each summer. 2012 was an unusual year in that we did not need to activate the program.

Deviation from Goal

The product did not meet the participation or budget goals for 2012. The primary reason is that approximately 50% of eligible customers in Colorado are enrolled in the Saver's Switch product. While a penetration rate this high is very successful it does leave the population of eligible and willing participants significantly reduced for future years. Therefore, we are experiencing a decline in customer sign-up rates and lower participation in our promotional activities.

Changes in 2012

None

60-Day Notice

None

Low-Income Program

The Low-Income Program consists of the Single-Family Weatherization, Multi-Family Weatherization, Easy Savings Energy Kits, and Non-Profit Energy Efficiency products. These products analyze natural gas and electric consumption for low-income customers and provide them with products, services and education designed to assist them in lowering their energy bills.

Table 15a: Low-Income Program - Electric Products (Budget to Actual)

2012	Budget					Actual				
	Electric Participants	Electric Budget	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio	Electric Participants	Electric Spend	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Low-Income Program										
Energy Savings Kit	10,000	\$647,664	301	5,195,061	2.67	6,086	\$196,353	115	1,923,475	3.07
Multi-Family Weatherization	12	\$350,669	96	1,100,000	1.64	38	\$306,160	122	1,132,806	0.77
Non-Profit Energy Efficiency	25	\$572,599	282	1,003,630	1.83	26	\$542,416	323	1,118,365	1.34
Single-Family Weatherization	2,860	\$1,236,688	384	3,942,250	1.41	2,478	\$899,681	188	2,559,550	1.14
Low-Income Program Total	12,897	\$2,807,620	1,063	11,240,941	1.74	8,628	\$1,944,610	748	6,734,197	1.21

Table 15b: Low-Income Program - Gas Products (Budget to Actual)

2012	Budget						Actual					
	Gas Participants	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio	Gas Participants	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Low-Income Program												
Energy Savings Kit	9,998	\$466,944	16,476	35,285	\$1,590,990	4.09	7,373	\$139,969	11,419	82,112	\$501,344	3.94
Multi-Family Weatherization	12	\$438,503	6,788	15,480	\$9,846	1.01	18	\$503,416	14,390	28,585	-\$754,963	0.65
Non-Profit Energy Efficiency	25	\$628,006	6,970	11,099	\$3,314	1.00	27	\$554,096	6,412	11,571	-\$110,843	0.90
Single-Family Weatherization	1,830	\$2,167,969	31,492	14,526	\$928,276	1.23	2,478	\$2,394,104	45,357	18,945	\$2,587,868	1.67
Low-Income Program Total	11,865	\$3,701,422	61,726	16,676	\$2,532,426	1.39	9,896	\$3,590,685	77,578	21,605	\$2,223,407	1.30

The overall low-income electric program missed its target in 2012 due to a shortfall in Energy Savings Kits and Single Family Weatherization. The Energy Savings Kits product continues to struggle with identifying new income qualified customers and lower than expected installation rates. Single Family Weatherization fell short of target on the electric side due to customers installing fewer compact fluorescent bulbs than originally anticipated. Multi-Family Weatherization and Non-Profit Energy Efficiency both slightly exceeded targets on the electric side.

The natural gas Low Income portfolio exceeded its target on the performance of Multi-Family Weatherization and Single-Family Weatherization. The Single Family Weatherization product added new natural gas measures resulting in additional savings per participant while the Multi-Family product saw more interest in more cost effective measures than originally anticipated. Many of the weatherization measures favor natural gas savings driving higher performance to target on the gas versus electric side.

The electric Low Income program budget was under spent due to fewer than expected electric measures being implemented. Natural gas spending was in alignment with the plan.

Low Income Products

Energy Savings Kits

The Energy Savings Kits Product provides qualifying low-income customers with a bundle of home energy efficiency measures and educational materials. Customers prove income eligibility by applying for Federal Low-Income Housing Energy Assistance Program funding or other forms of energy assistance, such as that provided by Energy Outreach of Colorado. In 2012 the kits included the following measures:

- 1.0GPM faucet aerator
- 1.5GPM faucet aerator
- 1.5GPM showerhead
- Eight compact fluorescent light (CFL) bulbs

Deviation from Goal

The product did not meet its electric or gas participant goals and fell short of its electric savings goal. Public Service Company experienced challenges due to a declining pool of income-eligible customers for the product and lower than expected installation rates. Several offers were sent during the year in an attempt to increase product participation. Additional efforts were made to encourage customers to install their kit components through follow up and outreach efforts. The product was under the electric and gas budgets due to successful cost negotiations with the third-party program partner along with lower than expected participation rates.

Changes in 2012

The product began a process evaluation during 2012. Recommendations from the evaluation are under review.

60-Day Notice

A 60-Day Notice was posted in 2012 to update the product's technical assumptions. This increased the savings per unit for the showerhead that was included in the kit to match the stand alone Showerhead product.

Multi-Family Weatherization

The Multi-Family Weatherization Product provides funding on a wide variety of equipment and process improvements for natural gas and electric efficiency measures to low income multi-family buildings. These buildings have common areas, greater square footage, and more appliances and potential measures than the Single-Family Weatherization Program.

Public Service Company funds supplement federal weatherization grants to produce incremental, cost-effective gas and electric savings. Each submitted project went through a custom analysis by the Company's energy efficiency engineers to determine cost-effectiveness.

Deviation from Goal

The Multi-Family Weatherization Product met its electric savings goal and far exceeded the gas savings goal while combined electric and gas spending was only slightly higher than budgeted for 2012. This was mainly due to cost-effective implemented measures especially gas efficiency measures. This allows greater savings at a lower cost. However, despite this strong performance, the product did not pass the Modified TRC Test. The primary reason for this is due to the high rebate costs for projects that had a smaller gas savings than anticipated. Additionally, the product measures that were implemented had higher incremental costs such as boilers and furnaces.

Changes in 2012

None.

Non-Profit Energy Efficiency

The Non-Profit Weatherization Product provides funding on a wide variety of equipment and process improvements for natural gas and electric efficiency measures to qualified non-profit organizations within the Company's service territory. The product's focus is helping organizations that serve low-income individuals, such as shelters, safe houses, and residential treatment centers.

Public Service worked with a third-party and supplemented federal weatherization grants to produce incremental, cost-effective gas and electric savings. The implementer identified and qualified nonprofit facilities for the product. Each project submitted in 2012 went through a custom analysis by Public Service Company energy efficiency engineers to determine cost effectiveness.

Deviation from Goal

The Non-Profit Energy Efficiency Product exceeded the electric savings goal and slightly underperformed on the gas savings goal, while actual spending was somewhat lower than budgeted spending for both electric and gas. Participation was on par with the 2012 goal, and the implementer has identified potential 2013 participants. The gas component did not pass the Modified TRC Test. The primary reason that this did not pass was due to the high rebate costs for projects that had a smaller gas savings than anticipated. Additionally, the product measures that were implemented had high incremental costs such as boilers and furnaces.

Changes in 2012

None.

Single Family Weatherization

The Single-Family Weatherization Product offers natural gas and electric efficiency measures to low-income single-family households. Depending on the needs of the home, eligible customers will receive the cost effective improvements recommended. In addition to these measures, a major focus of the program is customer education on ways to reduce energy use in the home and to make smart energy choices.

The Single-Family Weatherization Product is run in partnership with the state's program run by the Colorado Energy Office ("CEO") and the various weatherization agencies across the state. DSM funds supplement federal weatherization grants to produce incremental, cost-effective gas and electric savings.

Deviation from Goal

In 2012, the product significantly exceeded the gas savings goal, and did not meet the electric savings goal. The product met participation goals and product spend was proportionate to the savings achievement for both fuels. The gas savings opportunities increased with the addition of four new measures that achieve gas savings. These four new measures are the installation of storm windows, mobile home attic insulation, crawlspace insulation, and water heaters in combination of modifications to the savings methodology.

The product was challenged in achieving electric savings because there were not as many CFLs installed as forecasted. The CFL measure savings methodology also changed in 2012 to be a per bulb rebate instead of a set package amount rebate, and some homes received fewer bulbs than forecasted.

Changes in 2012

The product adopted several changes from a mid-year program evaluation and settlement agreement for the 2012/2013 CO DSM Plan. These changes impacted the budget, energy savings forecasted, and current list of measures offered to qualified customers. The Company was asked to evaluate additional measures and, if found cost effective, incorporate them into the 2012 product year. The product implemented new measures, updated technical assumptions and estimated energy savings and its revised budget.

60-Day Notice

In 2012, the product posted two separate 60-day notices. The first notice included the changes agreed to through the settlement agreement. These changes were to increase the total budget for gas and electric measures, and to evaluate new measures for cost effectiveness. The second notice implemented the recommendations identified in the product evaluation.

Indirect Program

The Indirect Program includes products and services that support the overall Plan. Most of these products and services do not directly produce energy or demand savings and are not independently evaluated for cost-effectiveness. However, pilot products that are being evaluated to become direct impact products and have measured savings do go through a cost-effectiveness evaluation. The costs of the entire indirect program are included in the overall portfolio cost-effectiveness evaluation. This segment has two areas: Education/Market Transformation and Planning and Research.

Within the Education/Market Transformation, the Company offered four customer-facing products in 2012, including: Business Energy Analysis, Customer Behavioral Change – Business, Customer Behavioral Change – Residential, and Residential Home Energy Audit. The pilots did not measure savings in 2012 and were therefore not evaluated for cost-effectiveness.

Within the Planning and Research area, Public Service operated four internal products: DSM Market Research, DSM Planning and Administration, DSM Product Development, and Evaluation, Measurement and Verification.

The Indirect Program does not have energy and demand savings goals with the exception of some of the pilots. The Program’s budget consists primarily of labor, educational material, and study costs. Most studies are conducted by outside experts, generally selected through a competitive bid.

Table 16a: Indirect Program – Electric Products (Budget to Actual)

2012	Budget					Actual				
	Electric Participants	Electric Budget	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio	Electric Participants	Electric Spend	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Indirect Products & Services										
Education/Market Transformation										
Business Energy Analysis	400	\$992,648				222	\$485,927			
Customer Behavioral Change - Business	1,385	\$153,765				7,166	\$167,689			
Customer Behavioral Change - Residential	34,000	\$1,232,674				144,540	\$1,172,673			
Residential Home Energy Audit	2,175	\$635,574				2,604	\$563,237			
Education/Market Transformation Total	37,960	\$3,014,661				154,532	\$2,389,525			
Planning and Research										
DSM Planning & Administration		\$287,559					\$365,396			
Program Evaluations		\$584,312					\$514,379			
Measurement & Verification		\$78,097					\$8,600			
DSM Market Research		\$274,912					\$196,781			
DSM Product Development		\$1,022,558					\$287,938			
Energy Feedback Pilot	50,000	\$379,400	684	8,560,821	1.37	46,082	\$603,179	3,014	15,849,525	1.87
In-Home Smart Device Pilot	600	\$1,240,597				1,011	\$1,652,445			
Electric Vehicle Charging Station Pilot		\$20,000					\$10,892			
Building Code Support Pilot							\$43,825			
DSM Product Development Total	50,600	\$2,662,555	684	8,560,821		47,093	\$2,598,280	3,014	15,849,525	
Planning and Research Total	50,600	\$3,887,436	684	8,560,821		47,093	\$5,683,435	3,014	15,849,525	
Indirect Products & Services Total	88,560	\$6,902,097	684	8,560,821		201,625	\$6,072,960	3,014	15,849,525	

Table 16b: Indirect Program – Gas Products (Budget to Actual)

2012	Budget						Actual					
	Gas Participants	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio	Gas Participants	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Indirect Products & Services												
Education / Market Transformation												
Business Energy Analysis	100	\$159,182					148	\$45,402				
Customer Behavioral Change - Business	593	\$50,002					7,166	\$53,898				
Customer Behavioral Change - Residential	34,000	\$290,557					144,540	\$320,409				
Residential Home Energy Audit	2,400	\$517,030					2,882	\$483,515				
Education/Market Transformation Total	37,093	\$976,771					154,736	\$903,225				
Planning and Research												
DSM Planning & Administration		\$103,538						\$95,049				
Program Evaluations		\$254,626						\$71,919				
Measurement & Verification		\$14,010						\$1,007				
DSM Market Research		\$258,756						\$129,389				
DSM Product Development		\$246,619						\$64,324				
Energy Feedback Pilot	50,000	\$94,856	23,758	250,464	42,319	1.45	46,082	\$356,094	72,524	203,665	62,647	1.18
In-Home Smart Device Pilot												
Electric Vehicle Charging Station Pilot												
Building Code Support Pilot								\$16,373				
DSM Product Development Total	50,000	\$341,475	23,758	69,575	-204,300		46,082	\$436,791	72,524	166,038	-18,050	
Planning and Research Total	50,000	\$972,385	23,758	24,433	-835,211		46,082	\$734,154	72,524	98,786	-315,413	
Indirect Products & Services Total	87,093	\$1,949,157	23,758	12,189	-1,563,582		200,818	\$1,637,379	72,524	44,293	-902,097	

Education / Market Transformation Products

Energy Analysis

Energy Analysis is an indirect impact product that offers analysis services that identify energy saving opportunities designed for both small business and large commercial and industrial customers. The product's goal is to provide a starting point for our customers in energy efficiency, by providing them with information on how their businesses use energy, and where they can reduce their operating costs. Public Service Company offers online energy assessments, on-site energy assessments, and engineering assistance studies.

Deviation from Goal

The product did not meet its electric participation goal, but exceeded its gas participation goal in 2012. The product finished the year under budget. The decrease in participation can mainly be attributed to the lack of Federal funds available to cities and counties to conduct energy audits compared to previous years. Adjustments to the program and its marketing are being explored to increase participation and implementation rates.

Changes in 2012

None.

Customer Behavioral Change- Business

This market transformation product was launched in 2009 and targeted all Colorado natural gas and electric business customers. The initial goal of the product was to improve public knowledge concerning the benefits of energy efficiency and conservation. This is considered an initial phase of a long-term process of creating educated and engaged customers who are prepared to act on energy efficiency opportunities.

Because this segment is made up of a wide range of business types, Public Service Company employed a variety of resources and communications channels to promote energy efficiency and conservation. The strategy deployed encompassed awareness messaging and customer activities. In the initial implementation of the product, primary emphasis was placed on:

- Community-based partnerships with chambers and economic development groups
- Utilizing mass market advertising such as radio, print, and interactive to create awareness in energy efficiency
- Increased online presence via targeted banner ads, ResponsibleByNature.com
- Conservation messaging through Public Service's newsletters to business customers
- Conducting free energy efficiency workshops and distribution of Smart Energy Employee materials.

Deviation from Goal

The product far exceeded the goal of 1,978 business participants in 2011. Interactions were made with more than 7,000 customers. Similar to the Residential Behavior Change program, a new strategy was employed. More strategic decisions about engagement opportunities were made based on alignment with community-based business organizations like South Metro Chamber of Commerce, JEFFCO EDC, and the Colorado Municipal League (CML).

Changes in 2012

The strategy in 2012 shifted to proactively seeking engagement opportunities coupled with achieving product penetration with the Energy Efficiency product portfolio.

Customer Behavioral Change- Residential

This market transformation product targets all Public Service Company natural gas and electric residential customers. The goal of the product was to improve public knowledge concerning the benefits of energy efficiency and conservation. We view this as the initial phase of a long-term process of creating educated and engaged customers who are ready to act on energy efficiency opportunities.

Because the residential segment is demographically varied, Public Service Company employed a variety of resources and communications channels to communicate energy efficiency and conservation. The education and outreach initiatives in 2012 included:

- Community-based events, such as home shows and conservation events
- Mass market advertising such as radio, print, and interactive to create awareness in energy efficiency
- Social media strategy
- Increased online presence including targeted banner advertising
- Conservation messaging through Public Service's newsletter to residential customers
- Publication of reference education materials
- Conducting free energy efficiency workshops
- Placing watt meters in public library districts

Deviation from Goal

The program exceeded the participation goal in 2012. This represented a significant improvement over 2011. To achieve these results, a new strategy was employed. Aligning the program with the most valuable opportunities for the communities became the focus of the program in 2012. Sponsorship of sporting events and teams were reduced in favor of community-based events to maximize engagement opportunities with customers.

A sampling of community-based events that drove interactions included the National Western Stock Show, the Taste of Colorado, the Colorado Home & Garden Show, as well as local community

events including the Carnation Festival, Western Welcome Week, Derby Daze, and the Celtic Harvest Festival to name a few.

Changes in 2012

The strategy in 2012 shifted to more community based events that increased quality interactions with the Company's customers.

Residential Home Energy Audit

The Residential Home Energy Audit Product provides rebates to Public Service natural gas and/or electric customers that receive an in-home energy audit. This product is designed to encourage customers to understand their home's energy usage through an energy audit which can lead to improvements in energy savings in residential homes by influencing customer behavior through conservation education and implementation of energy efficient improvements.

There are three types of in-home audit rebates offered through this product that earn up to a 60% rebate to the customer:

- Standard audit for 60% of the cost up to \$100;
- Standard audit with blower door test for 60% of the cost up to \$160;
- Infrared audit which includes the standard and the blower door test for 60% of the cost up to \$200.

Deviation from Goal

The product completed the year with an 89% customer service rating for overall satisfaction. The program was redesigned for the 2012 program year and yielded positive results. Both the gas and electric product participation exceeded the goal, which indicated that the new product model was successful. The product also remained under its spending goals. Throughout the year, Public Service promoted the product through various marketing efforts such as advertising strategy, bill inserts, direct mail, community partnerships and call center training to boost participation.

Changes in 2012

The product was redesigned for 2012 which changed it from a subsidized utility model to a rebate product model. Customers can now choose their auditor from a list of qualified participating product audit contractors to have the audit completed. The product also incorporated in-home energy modeling software that all audit contractors are required to use to earn the rebate. The use of this tool also helps to ensure quality and consistency across multiple participating contractors.

Planning and Research Products

DSM Planning & Administration

DSM Planning & Administration is an indirect product with internal staff that manages all energy efficiency-related filings, including the annual status report, DSM Plans and Strategic Issue Application. This group performs the cost-benefit analyses of all of the energy efficiency and load management products, provides tracking of the energy and demand savings, and collaborates with the Resource Planning group to develop inputs for the resource plans. The DSM Planning & Administration group also provides management and oversight of all evaluation, measurement and verification planning and policies, hosts the quarterly DSM Roundtable, and works with outside consultants and stakeholders, as needed. These functions are necessary to ensure a cohesive and high quality DSM portfolio that meets all legal requirements as well as the expectations of our internal and external customers and the Colorado PUC.

Deviation from Goal

The DSM Planning & Administration product overspent the combined electric and gas budgets during 2012 by about 17%. The electric DSM Planning budget was overspent by 27% and the gas DSM Planning budget was underspent by 9%. In 2012, we compiled and posted 15 60 day notices of program modifications, filed a revised 2012/2013 Plan based on the Settlement Agreement and PUC Decision R11-1326 approved on December 29, 2011, prepared rebuttal testimony in the Electric Resource Plan regarding DSM long range capacity reductions, and began the initial planning process for the upcoming Strategic Issue Application.

Changes in 2012

None

Measurement and Verification

The Measurement and Verification (“M&V”) Plan for Public Service was developed to measure and verify all direct savings electric and gas products on an ongoing basis during each year, as well as on a post-performance year basis in order to ensure that the savings, technical assumptions, and net-to-gross ratios that are reported by Public Service are as accurate as possible. The intensity of the M&V is balanced with the costs of the plan, being mindful of the objectives of ensuring accurate savings while keeping expenditures prudent and maintaining the cost-effectiveness of the products. Product savings are validated through a multi-step process designed to ensure that rebates are correctly processed, rebated measures were installed, and equipment is performing as intended. The M&V activities also provide opportunities to evaluate customer satisfaction and identify strategies for improving product deliver and effectiveness.

Results of M&V activities are reported in the separate section entitled “Evaluation, Measurement, and Verification Results for 2012”. Realization rates for a majority of the prescriptive products were applied to 2012 gross savings while recommendations for changes to process, technical assumptions and net-to-gross ratios will be implemented in 2013. The spend for this general M&V line item includes only the internal labor to manage the overall M&V process and charges from the 3rd party M&V vendors for their expenses in creating the M&V reports not directly related to a specific program. Most of the M&V expenses from the 3rd party vendors are charged directly to each program.

Deviation from Goal

During 2012, we significantly under-spent our approved budgets of \$78,097 for general electric M&V and \$14,010 for general gas M&V. The actual spend was \$8,600 for electric and 1,007 for gas. This was due to much less than anticipated internal labor charges as well as outside M&V vendor charges. As the M&V activities have matured, less time has been needed to oversee this activity as well as less time for the 3rd party M&V vendor to prepare their monthly and annual reports.

Changes in 2012

None

Market Research

DSM Market Research conducts surveys and studies to gauge energy awareness and interest around DSM conservation efforts. These functions are needed to provide overall support for clarifying DSM issues and thoroughly understanding current and potential DSM customers. In 2012, the Company conducted the following General Research projects:

- ESource Consultative Services;
- Dun & Bradstreet small business list refresh;
- Home Energy Audit Tracking;
- Low Income Tracking;
- Residential Home Energy Use Tracking;
- Ad Tracking; and
- Business DSM Attitude, Awareness & Usage (AAU).

Market Research also manages product-specific research, which includes process and impact evaluations of individual products. These functions are needed to identify product strengths and opportunities for improvement. In 2012, the Company conducted the following product-specific research:

- Business Process Efficiency;
- Low-Income Energy Savings Kits; and
- Residential High Efficiency Air Conditioning

Lastly, Market Research used budget to support two projects: 1) a two-year initiative that involves a review of the technical assumptions within various programs and 2) a survey that collects net-to-gross information as part of the on-going M&V process.

Deviation from Goal

DSM Market Research was under budget in 2012 primarily because the Custom Segment Research projects were cancelled due to lack of need, and the Technical Assumptions Portfolio Review was lower than budgeted due to the timing of work. Finally, DSM Market Research refined the scope on some of its evaluations and research projects, resulting in lower than budgeted costs.

Changes in 2012

DSM Market Research added the Residential High Efficiency Air Conditioning Evaluation in 2012 per the Colorado Settlement Agreement.

And to accommodate for major program changes with Residential Home Performance with EnergySTAR, DSM Market Research moved the evaluation of this program from 2012 to 2013 and replaced it with the Low Income Energy Savings Kit, which was scheduled for evaluation in 2013.

DSM Product Development

Product Development identifies, assesses, and develops new conservation and load management products and services. This work enables Public Service Company to identify and promote promising new conservation and load management opportunities for its customers. The product development process starts with ideas and concepts from customers, regulators, energy professionals, interest groups, and Public Service staff.

In 2012, Product Development developed three new products or measures:

- Network Personal Computer Power Management (PC Power Management);
- LED Wall Pack Fixtures – Exterior and Parking Garage Installations up to 150 watts;
- Bi-level Stairwell Fixtures with Integrated Sensors;

In addition to the products added in 2012 Product Development also issued an RFP for Innovative Technology and an RFP for a Commercial and Residential Air Conditioning Tune-up program.

- *RFP for Innovative Technology*: Evaluated 54 initial idea submissions and requested more detailed proposals from 12 respondents. Selected 3 of the proposals for addition to the 2013 Plan:
 - Direct Evaporative Pre-Cooling
 - Residential Variable Speed Pool Pumps
 - Business Refrigeration Program
- *Commercial and Residential Air Conditioning Tune-up*: Two proposals were received and were analyzed for cost effectiveness. After reviewing the proposals and evaluating several different scenarios and options, the Company does not believe that it can implement a cost effective, combined, residential and small commercial air conditioner tune-up program at this time.

In addition, Product Development added the following pilot product in 2012:

- **Community Energy Planning.** The objective of this pilot is to determine if providing strategic support in the development and implementation of a community-level energy plan can successfully drive increased conservation activity.

Deviation from Goal

Product Development did not spend its approved electric or gas budgets in 2011 due to lower than anticipated spending for consulting services and association dues.

Changes in 2012

None.

60-Day Notice

Public Service Company filed 60 Day Notices for:

Community Energy Planning
Residential Pool Pump

Residential Energy Feedback Pilot

This pilot focuses on testing feedback options for energy use with residential customers to better understand what behavior-based energy conservation can be achieved by providing residential customers better feedback on their energy use. The proposed pilot will test various forms, frequencies and contents of feedback including paper reports mailed periodically and emailed reports sent monthly to better understand which works better and why. The pilot is based on OPOWER's Home Energy Reports feedback system.

Deviation from Goal

Participation was lower than anticipated due to customers opting out of the pilot or moving. Energy savings in 2012 exceeded goal. This is attributed to greater than anticipated savings from e-mail participants whose savings were expected to be very low. Natural gas savings were also higher than the goal which was established using other jurisdictions as a baseline. We continue to monitor this development to see if this impact can be replicated during 2013.

The spend was higher than the budget because work on the expansion of the pilot to add additional customers started in 2012.

Changes in 2012

An initiative was launched in June 2012 to add an extra report for the month of July 2012 with the goal of boosting savings.

60-Day Notice

None

In- Home Smart Device Pilot

The In-Home Smart Device Pilot is designed to test how residential customers respond to various control strategies and energy consumption information delivered to their homes through in-home energy management devices. Participants are expected to lower their energy consumption when provided with the tools to monitor and track their energy usage. The following devices are installed in the home of each participant:

- EnergyHub Home Base, a smart controller with in home display;
- Honeywell Wireless Thermostat, controllable by Public Service Company;
- Two Sockets (15 amp smart plugs), controllable by Public Service Company; and
- Wireless CT Sensor, which sends whole home electricity use to Home Base.

Participants must first qualify for the product, with the primary criteria being they must have a functioning central AC unit installed in their home and a working wireless internet connection. For their participation, customers receive the in-home device system and installation at no cost and are free to keep the devices after the pilot concludes. Participants are required to remain active in the pilot for a minimum of one year.

All marketing, recruiting, enrolment and installations for this program is now complete and the focus has shifted to customer support and ongoing outreach and executing control events. A status report on first year operation will be shared with Roundtable participants and the preliminary evaluation will be posted in May 2013.

Deviation from Goal

Per the revised 60 day notice for this pilot the Company increased the goal for participants outside of Boulder. With this extra effort and increased spending the Company successfully installed the vast majority of the devices falling short by only 143 devices out of the forecasted 1,149. The primary reason for this was the larger than expected number of customers that were not interested in enrolling in the program. With the 35 Boulder participants, we have large enough study group to obtain reliable results.

The 2012 expenditures exceeded the budget. The increased expenditures were for marketing, recruitment and installation costs for the expanded population of customers in Centennial and Westminster. During the budget development for the 2012/2013 plan the devices were included in the Administration Budget. In 2012, the amount of spend dollars for devices were allocated to the equipment and installation category. In the 60-day notice filed in April 2012, we had forecasted that

the spend in 2012 would exceed the approved budget but would be balanced by an under-spend in 2013 due to the timing of activities in the 2-year period.

Changes in 2012

A revised 60 day notice was posted in April to expand the target number of customer installs outside Boulder.

Following the comment period the pilot's focus was then shifted to operations and customer support mode to accomplish the following:

- Recruited 1006 customers outside of Boulder for participation in the pilot
- Completed 13 Control events between May and November with participation in these events averaging approximately 50%
- Initiated several customer outreach activities that included: post installation and turndown letters, a number of system feature highlights, a control event kickoff email with instructions, control event notifications, outbound calls to offline customers to instruct them how to reconnect, instructions for customers who disabled their systems for Control events.
- Completed a customer survey at the end of the year to solicit feedback on the devices, the control events and the program in general. Response rate was high at 51% of which 89% responded that they are satisfied with their 'In-Home' devices. 80% of customers generally found the energy usage information provided on the Home Base or web portal helpful.

60-Day Notice

In 2012, the Company filed a revised 60 day notice to include the following **changes**:

- An increase in the number of non-pricing customers outside of Boulder from 400 to 1149
- An increase in the forecasted budget spend for 2012 and a decrease for 2013. The total 2012/13 budget amount remained the same
- Removal of references to natural gas which is not in scope
- Revision of the evaluation report dates and the company who will be preparing the reports

Electric Vehicle Charging Station Pilot

The Electric Vehicle Charging Station Pilot (EVSE) will provide insights into customer electric vehicle charging patterns and behaviors, how charging load coincides with Public Service's system peak and how these vehicles may impact the distribution system. This pilot will determine when customers are charging, the typical duration of the charge and frequency by which the charging load is available for Demand Response (DR). The pilot is based on a two way communications device similarly designed to the Saver's Switch normally used to control central air conditioners. Public Service Company will partner with various groups to identify potential participants in the pilot program. During control events we will control the charging device at least 12 times per control season. The customer will be given an annual credit of \$100 and access to the associated data related to the vehicle charging.

Key research questions to be addressed by this pilot:

- Monitor residential and commercial charging characteristics and behaviors
- Identify if the vehicle charging overlaps with the system peak
- Distinguish a potential strategy for controlling vehicle charging that will minimize the impact to the distribution system

To assess the EVSE pilot, this project will provide monitoring and control results for three years from the control season of 2012 through the control season of 2014.

Deviation from Goal

Fewer than anticipated devices were deployed during the first year of the pilot. Three installations of the initially planned were completed in 2012. These installations uncovered concerns which could impact the pilot's budget and its objectives. First, the cost of the equipment was higher than anticipated due to higher than quoted hardware costs and communications costs. Additionally the usefulness and reliability of the data was not suitable for the needs of the pilot. Finally, the physical installation of the devices proved to be cumbersome and unacceptable to the participants.

Based upon the issues uncovered it was necessary to look for alternative hardware solutions for this pilot. Our investigations lead us to adopt a three phase strategy to fulfill our pilot goals.

First, a limited number of electric vehicle charging stations will be initially deployed. These units have all the capabilities sought from a load control device plus the benefit of being market ready and can be deployed quickly. A third-party reseller will manage an end-to-end approach from customer recruiting, purchase and inventory, through post-sale support. These systems include a robust reporting system with an appealing design and user interface. The customer will purchase these systems directly from the reseller at a reduced price subsidized by Public Service Company. To control pilot costs only 10 of these charging stations will be deployed for the pilot. Recruiting for this phase will begin in the first quarter of 2013.

The second phase will involve deploying another device similar to what was originally envisioned for the pilot. This load control device provides the functionality originally desired at a price point in line with original budget estimates. Unfortunately the device will not be available from the manufacturer until the second quarter of 2013.

Our work in re-scoping the pilot drove us to the conclusion that the ultimate load control solution for electric vehicles will involve direct interaction with the vehicles themselves. To this end we will undertake a third phase of the pilot, to work directly with the OEM's software (e.g. General Motor's OnStar, Toyota's Entune, Nissan's Carwings, etc.) to control/interrupt the charging. At this point it is too early to tell if this will be successful, but we believe this pilot is an appropriate mechanism to pursue this effort.

Changes in 2012

As detailed above, 3 of the planned 10 installations were completed in 2012 which lead to the development of the three-phased approach described above.

Building Energy Code Support Pilot

The Building Code Support Pilot involves working with the local building community and jurisdictions in adopting and/or improving compliance to International Energy Conservation Code (IECC) 2009. The Company believes that support, including code training and technical support, will enable the participants to accelerate adoption of higher building energy codes and/or increase code compliance.

This pilot will determine if the proposed DOE Building Energy Codes Program (BECP) protocol process of measuring and verifying energy savings is viable and cost-effective.

The pilot will determine energy savings potential for the pilot participants. The subset will not be a statistical representation of the full market. If the pilot determines that the subset of participants have viable and cost effective energy savings, further work with the broader population will be needed which is outside the scope of this pilot. Finally, we will attempt to identify the portion of energy savings attributed to the pilot

Deviation from Goal

Spending during 2012 was less than the approved electric and gas budget. This was the result of the participant jurisdictions not being available for training until the later part of 2012. Consequently not all of the consulting hours anticipated could be met. The training that was not completed will be scheduled for the beginning of 2013.

Changes in 2012

None

60-Day Notice

A 60 day notice for this pilot was posted in December 2011. The pilot was implemented in February 2012.

Interruptible Service Option Credit and Third Party Demand Response

Interruptible Service Option Credit

The Colorado Interruptible Service Option Credit (ISOC) program offers significant savings opportunities for our Colorado business customers who can reduce their electric demand when notified. In return for participating, customers receive a monthly credit based on the options they have selected.

The program is a tariff rate approved by the Colorado Public Utilities Commission, and is available to commercial customers in the Colorado service territory. To qualify, customers must have an interruptible demand of at least 300 kilowatts (kW) during the months of June, July, August and September. In addition, the customer must have a Contract Interruptible Load (CIL) of 300 kW or more.

Customers choose the amount of interruption appropriate for their facility. The credit they receive is tied to the number of hours they contract to be interrupted each year and their advance notice option.

Interruption periods are triggered as a result of capacity, contingency and/or economic constraints. Economic interruptions are the only interruptions that offer a buy-through option. Currently, all interruptions (events) last a minimum of 4 hours, unless the customer has chosen to waive the 4-hour minimum interruption timeframe.

Unless customers choose the *Within 10-Minute-notice* option, we do not reduce the amount of electricity available to their facility; it's up to the customer to take steps to reduce their load during control periods. If customers do not meet their agreed-upon load reduction, they will be charged penalties. In 2012, there were a total of 32 control events called; 30 economic and 2 contingency.

Deviation from Goal

ISOC exceeded its forecasted spend in 2012 due to higher than expected participation. These expenses included higher than expected labor and administrative costs associated with managing a larger program but less than usual promotional costs due to "through the door interest" in the program.

As a tariff rate ISOC is available to all customers that qualify. From a total demand credit budget perspective, dollars allocated for this initiative are based on the number of hours they contract to be controlled each year, the amount of controllable load they have available, and their advance notice option.

Changes in 2012

None.

Peak Savings Program (EnerNOC)

The Peak Savings Program is a third party demand response aggregation program managed by EnerNOC. It was developed as a result of PUC Decision No. C08-0369 under Docket No. 07A-469E. The program was designed to price capacity at below the levelized avoided cost of a combustion turbine. This means that on purely a capacity basis, the program should always yield positive net benefits. The EnerNOC contract runs through 2016 and has a 40 MW demand response minimum. EnerNOC's Third Party Demand Response Program was branded "Peak Savings" to align with other load reduction programs offered by Public Service Co.. Public Service Co. is allowed to recover the costs of the Peak Savings Program through the DSMCA.

Peak Saving's participants range in size from >1 MW to <100 kW. EnerNOC seeks a diverse portfolio in order to meet the 40 MW year round demand response commitments required under the contract. The interruptible load available through the Peak Savings Program appears as one large resource to our System Operators. Public Service Co. can choose to interrupt either when it believes such action will lower overall system costs, which is referred to as an Economic Interruption, when there is a shortage of resources, which is referred to as a Capacity Interruption, or when there is an unexpected loss of Operating Reserves due to an outage, which is referred to as a Contingency Interruption.

Deviation from Goal

EnerNOC is contractually responsible for providing a minimum of 40 MW and maximum of 44 MW of interruptible load each month. EnerNOC has maintained a MW load within this threshold for 2012.

Changes in 2012

None.

Evaluation, Measurement, and Verification 2012 Results

Background

An Evaluation, Measurement, and Verification (EM&V) Plan is necessary to help ensure that Public Service's DSM programs are delivering reliable energy and demand savings and to improve overall program design and operation. Public Service developed its EM&V Plan to evaluate, measure, and verify savings for gas and electric DSM products during and after each performance year, in order to confirm that savings and technical assumptions were accurate. The robustness of any EM&V Plan must be balanced against the cost of performing evaluation, measurement and verification, keeping in mind the objectives of ensuring accurate savings calculations while keeping expenditures prudent and maintaining the cost-effectiveness of programs.

Description of Process

The Company's EM&V approach includes both performance year and post-performance year activities. Performance year activities are conducted on an ongoing basis during the reporting year and include rebate application validation and ongoing measurement and verification. Post-performance year activities occur in the year following the reporting year and include all comprehensive product (process and impact) evaluations. Each of these EM&V activities is described in more detail below.

- **Rebate Application Validation** takes place on a daily basis during the program year and involves auditing all rebate applications received by the Company. Our Rebate Operations Department has a two-step process, as described in more detail in the EM&V Plan. The first step entails validating every application for accuracy and completeness as it is received prior to processing. In the second step, all rebates that have been entered into a tracking system are audited each day prior to issuing a rebate. The objective of this validation is to ensure that the rebate forms and the reported gross savings that are entered into the Company's databases are as accurate as possible and that customers are receiving the correct rebates.
- **Ongoing Measurement and Verification's** main objective is to ensure that the gross energy and demand savings reported by the Company are accurate. Ongoing M&V takes place during and just after the performance year.
 - For Prescriptive products, contractors or product implementers design samples with a target of either 90% confidence interval with $\pm 10\%$ precision or 80% confidence interval with $\pm 20\%$ precision around the realization rates for each product. They then select random samples and perform field inspections on product participants and verify that the measures are installed and operating, and that the critical features of the measures that determine the savings are accurate. If not, the product's reported savings are adjusted using a "realization rate" that reflects the results of these inspections.
 - For Custom products, the M&V process depends on the size and scope of the project. Projects are typically pre-approved through an engineering analysis performed by one of the Company's internal energy efficiency engineers. Within the initial engineering analysis, the expected project savings and payback are calculated using technical assumptions that specifically fit the measure and application. Depending on the size of

- the project, these calculations are then reviewed by a second internal energy efficiency engineer and/or manager and a random sampling is sent for third-party review. After installation of the efficiency measure, a Public Service employee conducts a field visit or a telephone verification to ensure that the product is installed correctly and within the parameters provided in the pre-approval application. In addition, an internal engineer reviews the efficiency measure invoices to determine if the project remained within $\pm 10\%$ of its original scope. If it did not, then the project is re-modeled. For projects with measure savings equal to or greater than one GWh or 20,000 Dth, pre- and post-installation metering is performed for a minimum of two weeks to measure and verify savings. For all metered projects, the analysis of the metering data is conducted by one of the Company's internal energy efficiency engineers, then reviewed by a team of internal engineers and a manager.
- For Load Management products, Public Service selected a third-party contractor to monitor air conditioning usage for randomly selected customer sites. The data collected were analyzed by another third-party consultant to determine the available load relief provided by the load management program.
 - **Comprehensive Product Process and Impact Evaluations** are conducted on an individual product basis to assess overall product effectiveness and to determine what improvements or other changes should be implemented in the future. These evaluations do not verify the savings of a specific performance year and are not applied retrospectively to particular performance year activities. These comprehensive studies are not conducted each year, but instead are staggered over several years in order to comprehensively evaluate most of the portfolio of products. The objectives of the process evaluation include: determining customer satisfaction with the product; identifying the populations that participate in the product and target markets that are potentially receptive, but do not currently participate in the product; identifying areas where the product, processes, or marketing could be improved; quantifying the product's market saturation levels; and suggesting appropriate rebate design. The objectives of the impact evaluation include reviewing and/or measuring the baseline and technical assumptions used to calculate product savings and estimating net product impacts. Net product savings result from taking into account attribution factors, such as free ridership and spillover.

EM&V for pilot products may differ from EM&V for prescriptive or custom products because pilots are being evaluated for whether they may be viable in the marketplace. Therefore, additional testing, often designed specifically for the specific pilot, is often required. The 2012 pilot products included Energy Feedback Pilot, In-Home Smart Device Pilot, and the Electric Vehicle Charging Station Pilot.

Outline of Requirements

The Commission has provided guidance on the requirements for the Public Service's evaluation, measurement and verification activities in a number of places, including the Gas Rule (4 Code of Colorado Regulations (C.C.R.) 723-4-4755) and the approved Settlement Agreement for the Company's 2009/10 DSM Plan. The Gas Rule contains the following requirements:

4755. Measurement and Verification.

- (a) Each utility shall implement a measurement and verification (M&V) program to evaluate the actual performance of its DSM program. The utility shall present its M&V plan as a part of its DSM plan application, pursuant to rule 4753, and shall include the complete M&V evaluation results with its annual DSM report in those years when the M&V is conducted.
- (b) As a part of its M&V process, the utility shall, at a minimum, design an M&V plan to evaluate the effectiveness of the actual DSM measures and programs implemented by the utility. The M&V plan shall address: sampling bias; a data gathering process sufficient to yield statistically significant results; and generally accepted methods of data analysis. The M&V plan shall also include an evaluation of free ridership, spillover, and the net-to-gross ratio. The M&V evaluation shall be implemented at least once per DSM plan period. Subsequent DSM plan applications shall reflect the results of all completed M&V evaluations.
- (c) The M&V evaluation shall, at a minimum, include the following:
 - (I) An assessment of whether the DSM programs have been implemented as set forth in its Commission approved DSM plan;
 - (II) A measurement of the actual energy savings for each DSM program, in dekatherms per dollar expended and in total dollars, and a comparison to the corresponding utility projections in the approved DSM plan;
 - (III) To the extent feasible, an assessment of the period of time that each DSM measure actually remains in service, and a comparison to the corresponding utility projections in the approved DSM plan;
 - (IV) A summary of the actual benefit/cost ratio for each DSM program within the approved DSM plan;
 - (V) An assessment of the extent to which education and market transformation efforts are achieving the desired results; and
 - (VI) Recommendations for how the utility can improve the market penetration and cost effectiveness of individual DSM programs.

Within the Settlement Agreement to Public Service's 2012/13 DSM Plan, parties agreed that the Company would conduct comprehensive product evaluations on the High Efficiency Air Conditioning, Home Performance with ENERGY STAR, and Process Efficiency products in 2012 (p. 19). However, in the revised 2012/13 DSM Plan, Public Service switched the 2012 Home Performance with ENERGY STAR evaluation with the 2013 Low-Income Energy Savings Kit evaluation due to changes to the Home Performance product that would impact future program design and make the findings of a retrospective evaluation less applicable (p. 253-254). Therefore, in 2012, the Company evaluated the Energy Savings Kits product, rather than Home Performance. Public Service intends to apply recommended changes coming from these comprehensive evaluations in 2013 unless otherwise noted.

In compliance with these requirements, Public Service has applied the following concepts to its EM&V Plan:

- The ongoing M&V Plan will be conducted annually for all products. Comprehensive evaluations will be conducted on a staggered schedule over several years.
- The ongoing M&V Plan results will be reported with each annual DSM Status Report.
- For programs that use a sampling methodology for M&V, the Plan will address sampling bias, and all samples will be designed to yield statistically significant results.
- For products that are selected for a comprehensive evaluation, an evaluation of free ridership, spillover, and the net-to-gross ratio will be included as a study objective.
- Subsequent DSM Plan applications shall reflect the results of ongoing M&V, results of completed comprehensive evaluations, and results of any other DSM studies that are reviewed.
- The annual M&V evaluation report will include an assessment of whether the DSM products have been implemented as set forth in the Commission-approved Plan.

What M&V Occurred in 2012

Public Service uses a variety of providers to conduct its measurement and verification activities. In 2012, measurement and verification for the majority of direct-impact prescriptive products was conducted by a verification contractor (Nexant). For some products, such as ENERGY STAR New Homes, Home Performance with ENERGY STAR, and New Construction, the third-party product implementer verified all of the installations to ensure that reported gross savings were accurate. Custom projects are either verified through engineering reviews of savings or through pre- and post-metering, depending on the size of the project. The following paragraphs provide the M&V activities and results for each of the DSM products offered by the Company in 2012. All M&V activities followed the processes outlined in the M&V Plan filed with the 2012 DSM Plan, unless noted below. With its best efforts, the Company achieved portfolio realization rates of 99.9% for electric demand, 100.3% for electric energy, and 99.8% for natural gas energy. Where sampling was used in the M&V process for prescriptive measures, the achieved precision and confidence level is provided.

Business Products

Compressed Air Efficiency

For the Compressed Air Efficiency Product, measurement and verification were performed on a continuous basis throughout the program year. As applications were received, all critical customer information, equipment eligibility, and proper rebates amounts were reviewed, validated, and corrected if inaccurate. The internal Rebate Operations group audited 100% of the rebates applications to ensure that the information was reasonable and correctly entered into the tracking database.

Public Service completed 44 prescriptive Compressed Air Efficiency projects in 2012. Of these projects, Nexant performed 20 field inspections of installed energy efficient equipment at randomly-selected participant locations to verify key savings factors. For variable frequency drive compressors of less than 50 HP, the contractor verified the horse power, hours of operation, and make and model number of the equipment. For no-air-loss drain valves, the contractor verified the number of valves that replaced electronic timed drains, or the number of new valves installed. The contractor re-calculated the demand and energy savings using the verified factors and the deemed savings formulas and compared the calculation to the reported gross savings. The final demand and energy

realization rates for the 2012 Compressed Air Efficiency prescriptive measures were $100.0\% \pm 0.2\%$ and $100.0\% \pm 0.1\%$, respectively, around the targeted 90% confidence level.

Public Service completed 14 custom Compressed Air Efficiency projects and eight studies in 2012. For all custom projects, the M&V process was built into the project approval process. When the customer applied for project pre-approval, the application (all technical assumptions and savings estimates) was first reviewed by an internal energy efficiency engineer. Within the initial engineering analysis, the expected project savings and payback were calculated using technical assumptions that specifically fit the measure and application. Depending on the size of the project, it was given a second review by an internal engineer. Had there been projects that exceeded savings of 0.5 GWh, the applications would have been given a third review by the internal engineering team lead. Upon completion of the project, internal staff reviewed the invoices to verify that the project scope had not changed. There were three projects for which the scope had changed by more than $\pm 10\%$. In addition, all of the projects were phone-verified to confirm installation.

Computer Efficiency

Computer Efficiency was measured and verified in a multi-step process. First, Public Service confirmed that all computers reported by the third-party administrator were shipped to Public Service zip codes. Then the third-party M&V provider conducted phone surveys on a statistically significant random sampling of participants to verify that the number of computers on the invoice matched the number of computers received, that the model numbers of the computers shipped matched the invoice, as well as to determine if any computers were returned. In 2012, the Computer Efficiency Product provided 9,554 upstream manufacturer incentives through 2,499 incentive applications with a final installation rate of 100%.

In addition, the product provided 36 virtual desktop infrastructure rebates to two participants. The M&V provider conducted field inspections of both projects to determine whether the measures were properly installed and had the potential to generate savings. Upon performing the field inspection of these VDI installations, the M&V provider discovered that the two installations were in fact one installation for which two rebate forms (an original and a revised) had been submitted. The resulting double-counting is reflected in and corrected by the unusually low realization rates of $49.5\% \pm 166.0\%$ for demand and $49.5\% \pm 166.0\%$ for energy.

Cooling Efficiency

For the Cooling Efficiency Product, measurement and verification were performed on a continuous basis throughout the program year. As applications were received, all critical customer information, equipment eligibility, and proper rebates amounts were reviewed, validated, and corrected if inaccurate. The internal Rebate Operations group audited 100% of the rebates applications to ensure that the information was reasonable and correctly entered into the tracking database.

Public Service completed 232 prescriptive Cooling Efficiency projects in 2012. Of these projects, Nexant performed 33 field inspections of installed energy efficient equipment at randomly-selected participant locations to verify key savings factors, including: product name; model number, equipment capacity, market segment, and climate zone. If the project included variable air valves, they were counted and confirmed to be new. The contractor re-calculated the demand and energy savings using the verified factors and the deemed savings formulas and compared the calculation to the reported gross savings. The final demand and energy savings realization rates for the 2011

Cooling Efficiency prescriptive measures were $99.6\% \pm 1.1\%$ and $99.7\% \pm 0.6\%$, respectively, around the 90% targeted confidence level.

Public Service completed two custom Cooling Efficiency projects in 2012. For all custom projects, the M&V process was built into the project approval process. When the customer applied for project pre-approval, the application (all technical assumptions and savings estimates) was first reviewed by an internal energy efficiency engineer. Within the initial engineering analysis, the expected project savings and payback were calculated using technical assumptions that specifically fit the measure and application. Depending on the size of the project, it was given a second review by an internal engineer. Upon completion of the project, internal staff reviewed the invoices to verify that the project scope had not changed. There were no projects where the scope changed by more than $\pm 10\%$. There were no projects that exceeded savings of 1.0 GWh this year. In addition, all custom projects were phone or field-verified by internal Account Managers.

Custom Efficiency

Public Service completed 63 electric and seven gas Custom Efficiency projects in 2012. For these projects, the M&V process was built into the project approval process. When the customer applied for project pre-approval, the application (all technical assumptions and savings estimates) was first reviewed by an internal energy efficiency engineer. Within the initial engineering analysis, the expected project savings and payback were calculated using technical assumptions that specifically fit the measure and application. Depending on the size of the project, it was given a second review by an internal engineer. For the lone project that exceeded savings of 0.5 GWh, the application was given a third review by the internal engineering team lead. If a project had exceeded savings of 1.0 GWh, the application would have been given a final review by the engineering group manager. Upon completion of each project, internal staff reviewed the invoices to verify that the project scope had not changed. There were 15 projects for which the scope had changed by more than $\pm 10\%$. These projects were re-modeled to determine the final savings. Finally, five projects were field-verified, and all others were phone verified, by internal Account Managers.

Data Center Efficiency

The Data Center Efficiency Product completed seven projects and three studies in 2012. The M&V process was built into the project approval process. When the customer applied for project pre-approval, the application (all technical assumptions and savings estimates) were reviewed by an internal energy efficiency engineer. Within the initial engineering analysis, the expected project savings and payback were calculated using technical assumptions that specifically fit the measure and application. Depending on the size of the project, it was given a second review by an internal engineer. For the two projects with savings exceeding 0.5 GWh, the application was given a third review by the internal engineering team lead. For the two projects that exceeded savings of 1.0 GWh, the applications were given a final review by the engineering group manager and the projects themselves were pre- and post-metered to verify savings. The Company reviewed all metering data and/or bill histories to determine the final savings for each project. Upon completion of each project, internal staff reviewed the invoices to verify that the project scope had not changed. There were seven projects for which the scope had changed by more than $\pm 10\%$. These projects were re-modeled to determine the final savings. Finally, all seven projects were field-verified by internal Account Managers.

Energy Management Systems

Public Service completed 30 electric and 11 gas EMS projects in 2012. The M&V process for this program was built into the project approval process. When the customer applied for project pre-approval, the application (all technical assumptions and savings estimates) was first reviewed by an internal energy efficiency engineer. Within the initial engineering analysis, the expected project savings and payback were calculated using technical assumptions that specifically fit the measure and application. Depending on the size of the project, it was given a second review by an internal engineer. For the two projects that exceeded savings of 0.5 GWh, the applications were given a third review by the internal engineering team lead. For the lone project that exceeded savings of 1.0 GWh, the application was given a final review by the engineering group manager and the project itself was pre- and post-metered to verify savings. The Company reviewed all metering data and/or bill histories to determine the final savings for the project. Upon completion of each project, internal staff reviewed the invoices to verify that the project scope had not changed. There was one project for which the scope had changed by more than $\pm 10\%$. This project was re-modeled to determine the final savings. Finally, all of the projects were phone-verified by internal Account Managers.

Heating Efficiency

For the Heating Efficiency Product, measurement and verification were performed on a continuous basis throughout the program year. As applications were received, all critical customer information, equipment eligibility, and proper rebates amounts were reviewed, validated, and corrected if inaccurate. The internal Rebate Operations group audited 100% of the rebates applications to ensure that the information was reasonable and correctly entered into the tracking database.

Public Service completed 112 prescriptive measures in 2012. For the prescriptive projects, Nexant performed 32 field inspections of installed energy efficient equipment at randomly-selected participant locations to verify key savings factors including: the equipment type and size (condensing, non-condensing, MBTUH), model number, thermal/combustion efficiency (minimum of 85% for non-condensing or 92% for condensing), and operating hours per year. The contractor re-calculated the demand and energy savings using the verified factors and the deemed savings formulas and compared the calculation to the reported gross savings. The final energy realization rate for the 2012 Heating Efficiency prescriptive measures was $100.9\% \pm 2.0\%$ around the 90% targeted confidence level.

Public Service completed one custom Heating Efficiency project in 2012. For all custom projects, the M&V process was built into the project approval process. When the customer applied for project pre-approval, the application (all technical assumptions and savings estimates) was first reviewed by an internal energy efficiency engineer. Within the initial engineering analysis, the expected project savings and payback were calculated using technical assumptions that specifically fit the measure and application. Depending on the size of the project, it was given a second review by an internal engineer. If a project had exceeded savings of 20,000 Dth, the application would have been given a final review by the engineering group manager. There were no projects that exceeded savings of 20,000 Dth this year. Upon completion of the project, internal staff reviewed the invoices to verify that the project scope had not changed. There were no projects where the scope changed by more than $\pm 10\%$. In addition, the custom project was either phone or field-verified by an internal Account Manager.

Interruptible Service Option Credit

ISOC customers are metered during their interruptions. The Company has nearly instantaneous feedback during these times to measure customer response. Therefore, traditional, after-the-fact, measurement and verification is unnecessary for this program.

Lighting Efficiency

For the Lighting Efficiency Product, measurement and verification were performed on a continuous basis throughout the program year. As applications were received, all critical customer information, equipment eligibility, and proper rebates amounts were reviewed, validated, and corrected if inaccurate. The internal Rebate Operations group audited 100% of the rebates applications to ensure that the information was reasonable and correctly entered into the tracking database.

Public Service completed 3,115 prescriptive Lighting Efficiency projects in 2012. For prescriptive projects (Retrofit and New Construction), Nexant performed 41 field inspections of installed energy efficient equipment at randomly-selected participant locations to verify key savings factors including: watts of bulbs/ballast installed, segment, type of lights, and number of bulbs/fixtures. The contractor re-calculated the demand and energy savings using the verified factors and the deemed savings formulas and compared the calculation to the reported gross savings. The final demand and energy savings realization rates for the 2012 Lighting Efficiency prescriptive measures were $101.3\% \pm 3.5\%$ and $105.1\% \pm 7.3\%$, respectively, around the targeted 90% confidence level.

Public Service completed 182 custom Lighting Efficiency projects in 2012. The M&V process for these lighting measures was built into the project approval process. When the customer applied for project pre-approval, the application (all technical assumptions and savings estimates) was first reviewed by an internal energy efficiency engineer. Within the initial engineering analysis, the expected project savings and payback were calculated using technical assumptions that specifically fit the measure and application. Depending on the size of the project, it was given a second review by an internal engineer. For the one project that exceeded savings of 0.5 GWh, the application was given a third review by the internal engineering team lead. If any projects had exceeded savings of 1.0 GWh, the application would have been given a final review by the engineering group manager and Nexant would have performed pre- and post-metering to verify savings. There were 156 projects for which the scope had changed by more than $\pm 10\%$. These projects were re-modeled to determine the final savings. In addition, all projects were either field- or phone-verified by internal Account Managers.

Motor and Drive Efficiency

For the Motor and Drive Efficiency Product, measurement and verification were performed on a continuous basis throughout the program year. As applications were received, all critical customer information, equipment eligibility, and proper rebates amounts were reviewed, validated, and corrected if inaccurate. The internal Rebate Operations group audited 100% of the rebates applications to ensure that the information was reasonable and correctly entered into the tracking database.

Public Service completed 592 prescriptive Motor and Drive Efficiency projects in 2012. From amongst these projects, Nexant randomly selected 39 participants to receive field inspections of installed energy efficient equipment to verify key savings factors including: size of the motor,

customer segment, actual motor efficiency, application of the motor, and the number of motors installed. The contractor re-calculated the demand and energy savings using the verified factors and the deemed savings formulas and compared the calculation to the reported gross savings. The final demand and energy savings realization rates for the 2012 Motor and Drive Efficiency prescriptive measures were $100.0\% \pm 0.0\%$ and $100.0\% \pm 0.0\%$, respectively, around the targeted 90% confidence level.

Public Service completed eight custom Motor and Drive Efficiency projects in 2012. For these projects, the M&V process for these measures was built into the project approval process. When the customer applied for project pre-approval, the application (all technical assumptions and savings estimates) was first reviewed by an internal energy efficiency engineer. Within the initial engineering analysis, the expected project savings and payback were calculated using technical assumptions that specifically fit the measure and application. Depending on the size of the project, it was given a second review by an internal engineer. If projects had exceeded savings of 0.5 GWh, the applications would have been given a third review by the internal engineering team lead. No projects exceeded savings of 1.0 GWh. There were no projects for which the scope had changed by more than $\pm 10\%$. In addition, all projects were verified by internal Account Managers.

New Construction

Public Service's New Construction Product includes two components: prescriptive Energy Efficient Buildings and custom Energy Design Assistance. Measurement and verification is performed on all New Construction projects, whether prescriptive or custom. The Company completed 46 projects (30 electric and 16 gas) under the Energy Efficient Buildings component in 2012. M&V for these projects was performed by Nexant. Public Service completed 31 electric projects and 15 gas projects under Energy Design Assistance. Four consulting groups, The Weidt Group, Group 14, and Architectural Engineering Corporation conducted verification on these projects. All adopted measures received a visual verification. This information was used in our savings reports and for rebate payment. Since all project savings are calculated based on independent verification, this program has a realization rate of 100%.

Process Efficiency

Public Service completed 19 prescriptive electric Process Efficiency projects in 2012, nine in Lighting and ten in Motor & Drives. The Company applied the realization rates determined for the prescriptive end-use programs (Lighting Efficiency and Motor & Drive Efficiency) to calculate final demand and energy savings for the prescriptive component of the Process Efficiency Product.

Public Service completed four custom Process Efficiency projects in 2012, three in Custom and one in EMS. The M&V process for these measures was built into the project approval process. When the customer applied for project pre-approval, the application (all technical assumptions and savings estimates) was first reviewed by an internal energy efficiency engineer. Within the initial engineering analysis, the expected project savings and payback were calculated using technical assumptions that specifically fit the measure and application. Depending on the size of the project, it was given a second review by an internal engineer. For the two projects that exceeded savings of 0.5 GWh, the application was given a third review by the internal engineering team lead. For the one project that exceeded savings of 1.0 GWh, the application was given a final review by the engineering group manager and the project itself was pre- and post-metered to verify savings. There were three projects for which the scope had changed by more than $\pm 10\%$. These projects were re-modeled to

determine the final savings. In addition, all projects were either field- or phone-verified by internal Account Managers.

Recommissioning

Public Service completed 38 electric and five gas studies, and 37 electric and 13 gas Recommissioning projects in 2012. The measurement and verification of these projects was relatively simple because each implemented measure resulted from a previous Recommissioning study completed by an independent party. The customer hired an engineering firm to conduct a study of the building to determine energy savings for each measure; an internal engineer then reviewed and verified 100% of projects for savings calculation accuracy. In turn, each study was thoroughly reviewed and approved by a qualified Public Service engineer. If a project had savings greater than or equal to one GWh or 20,000 Dth per year, pre- and post-metering would be required unless it would be too costly or physically impossible. One project met this threshold in 2012.

Segment Efficiency

Public Service completed one prescriptive lighting project in 2012. The Company used the realization rates determined for the end-use program (Lighting Efficiency) to calculate final demand and energy savings for this prescriptive project. Segment Efficiency did not have any custom projects in 2012. Had there been any custom projects, they would have followed the standard custom measurement and verification process.

Self-Directed Custom Efficiency

Customers completed five Self-Directed projects in 2012. In order to participate in the Self-Direct Custom Efficiency Product, customers were required to submit a detailed project application, which included their proposed monitoring plan used to document demand and energy savings. Public Service may request monitoring on any project, regardless of size. All measurement and verification was required to be performed in accordance with the International Performance Measurement and Verification Protocol (IPMVP) guidelines.

Upon approval of the monitoring plan, the customer implemented the project. After project completion, a project completion report was submitted that includes raw metering results and engineering calculations to demonstrate actual energy and demand savings based on pre- and post-monitoring results. All projects were reviewed by the internal energy efficiency engineers and/or managers, depending on their size. The rebate amount was based on these results.

Small Business Lighting

Public Service completed 1,576 prescriptive projects in the Small Business Lighting Product in 2012. Measurement and verification were performed on a continuous basis throughout the program year. As applications were received, all critical customer information, equipment eligibility, and proper rebates amounts were reviewed, validated, and corrected if inaccurate. The internal Rebate Operations group audited 100% of the rebates applications to ensure that the information was reasonable and correctly entered into the tracking database.

Additional onsite project verification was performed. Nexant randomly selected samples of customers who received a rebate for on-going M&V. Nexant then performed 41 field inspections of installed energy efficient equipment, and verified the key savings factors that were required in the formula. The savings factors that pertain to this program are: watts of bulbs/ballast, segment, type of lights, and number of bulbs/fixtures. The contractor re-calculated the demand and energy

savings using the verified factors and the deemed savings formula and compared them to the reported gross savings. The final demand and energy savings realization rates for the 2011 Small Business Lighting prescriptive measures were $99.0\% \pm 1.4\%$ and $99.1\% \pm 1.3\%$, respectively, around a targeted confidence level of 90%.

Public Service completed 129 custom Small Business Lighting projects in 2012. The M&V process for these lighting measures was built into the project approval process. When the customer applied for project pre-approval, the application (all technical assumptions and savings estimates) was first reviewed by an internal energy efficiency engineer. Within the initial engineering analysis, the expected project savings and payback were calculated using technical assumptions that specifically fit the measure and application. Depending on the size of the project, it was given a second review by an internal engineer. For projects that exceed savings of 0.5 GWh, the application would be given a third review by the internal engineering team lead. If any projects had exceeded savings of 1.0 GWh, the application would have been given a final review by the engineering group manager and Nexant would have performed pre- and post-metering to verify savings. There were 46 projects for which the scope had changed by more than $\pm 10\%$. These projects were re-modeled to determine the final savings. In addition, all projects were either field- or phone-verified by internal Account Managers.

Standard Offer

Public Service completed two electric and one gas Standard Offer projects, as well as six studies in 2012. Measurement and verification of this program is the responsibility of the participants. Each participant was required to provide a measurement and verification plan (M&V plan) in their technical energy audit. The M&V plan must meet sound engineering practices and industry standard references such as the International Performance Measurement & Verification Protocol. The M&V plan must include annual measurement for a minimum of three years after installation. The ESCO or a third-party implemented the M&V plan, and used the collected data to determine the actual conservation for the implemented measures. The Company's internal energy efficiency engineers reviewed all metering data and paid additional rebates for savings above the expected levels. Conversely, the customer must refund a portion of the rebate if savings are not as high as expected.

Residential Products

ENERGY STAR New Homes

Public Service's ENERGY STAR New Homes Product was administered by a third-party provider, Residential Science Resources, Inc. (RSR). All homes rebated through this program were subject to verification by a qualified Home Energy Rating Service (HERS) Rater and their associated Residential Energy Services Network (RESNET) Provider. In most cases, the HERS Rater completed three site visits to each home during the construction phase. There are approximately 1,500 points of data collected and submitted for each home, including the duct blaster test results and the final HERS rating. Upon completion, RSR reviewed each home and its HERS rating to confirm the energy savings calculations. Energy saving impacts for each home rebated were calculated based on the actual construction as compared to the reference (baseline) home for that particular area. As a result, the realization rate for this program is one. In 2012, 2,131 gas and 1,554 electric homes successfully completed the program requirements.

Evaporative Cooling Rebate

The Evaporative Cooling Rebate Product provides rebates to customers who purchase efficient evaporative cooling units. In 2012, Public Service rebated 4,350 qualifying evaporative cooling units. This product was measured and verified in a two-step process. As rebates were received, critical customer information, equipment eligibility and proper rebate amounts were reviewed, validated, and corrected if inaccurate. The Rebate Operations group also audited the rebate applications to ensure that the information from the form was entered correctly into the tracking database.

In addition, a third-party verification contractor (Nexant) conducted field M&V on 37 customers who received rebates. The contractor made appointments with the sample customers to perform field inspections and to verify the installed/rebated equipment. The final demand and energy savings realization rates for the Evaporative Cooling Rebates Product in 2012 were 100.0% \pm 0.0% and 102.1% \pm 1.9%, respectively, around the targeted confidence level of 90%.

Heating System Rebate

For the Heating System Rebates Product, all rebate applications were audited with a two-step process. As rebates were received, critical customer information, equipment eligibility and proper rebate amounts were reviewed, validated and corrected if inaccurate. In the second step, Rebate Operations audited the rebate applications to ensure that the information from the form was entered correctly into the tracking database.

Public Service rebated 3,508 units in 2012. A third-party verification contractor (Nexant) conducted field M&V, randomly selected 40 participants for measurement and verification. The contractor made appointments with the sample customers to perform field inspections and to verify the installed/rebated equipment. The final energy savings realization rate for the Heating System Rebates Product in 2012 was 100% \pm 0.0% around the 90% targeted confidence level.

High Efficiency Air Conditioning

The High Efficiency Air Conditioning Product provides rebates to customers who purchase high-efficiency equipment, properly install high efficiency air-conditioning equipment, or retire their old, inefficient equipment and purchase of high-efficiency equipment. Because air conditioners can only

be field tested when the ambient outdoor temperature is above 70°F (or 55°F with a Field Diagnostic Services Inc. tool), this product maintains a slightly different M&V calendar than Public Service's other programs. Specifically, air conditioners that are installed after October 1 of each year will not be inspected until the following spring, and thus, the M&V calendar year for this product runs from October 1 to September 30 of each year.

The three product components have different M&V processes. M&V for the equipment purchase and quality installation were considered together and performed by Residential Science Resources. The M&V process was designed to verify that the installed equipment matched what was rebated and that the equipment was installed according to quality installation standards, as described by the Air Conditioning Contractors of America. The M&V involved an ongoing random sampling of rebated projects, following the standard prescriptive program guidelines. To verify a quality installation, the Verification Contractor confirmed that a Manual J calculation was performed and that the participant's refrigeration charge, airflow, and duct leakage were within acceptable ranges. Public Service rebated a total of 1,699 equipment purchases and quality installations in 2012. The final demand and energy savings realization rates for the Equipment component of the product in 2012 were 100.0% ± 0.0% and 100.0% ± 0.0%, respectively, around the targeted confidence level of 90%. The final demand and energy savings realization rates for the quality installation component of the product in 2012 were 76% and 76%, respectively, around the targeted confidence level of 90%.

M&V for the Early Retirement component of the High Efficiency Air Conditioning Product was performed by Public Service since the original equipment removal was conducted by independent HVAC contractors. For each of the 628 retirements rebated, the contractor was required to report to Public Service the type and age of equipment being removed. Public Service then spot-checked the provided paperwork to confirm that the removed equipment met program requirements. The final demand and energy savings realization rates for the Early Retirement component of the program in 2012 were 100.0% ± 0.0% and 100.0% ± 0.0%, respectively, around the targeted confidence level of 90%.

Home Lighting & Recycling

Nexant performed Public Service's Home Lighting & Recycling Product measurement and verification. The verification process consisted of cross-checking Public Service's program tracking databases with a sample of monthly or weekly invoices and invoice details from various manufacturers submitted to retailers. These invoices contained product buy-down dollar amounts and counts for each item SKU. No customer contact was made for the measurement and verification of this product. There were 3,038,229 units sold to 768,893 participants and recycled 23,564 bulbs in 2012. Nexant examined and verified 45 invoice line detail items out of the total 124,250 records contained within the Company's program tracking database. The 45 line items were taken from a sample of 33 out of the total 264 monthly manufacturer invoices and associated invoice details. Results of this effort showed only minor discrepancies, including:

- three discrepancies between the counts and rebate amounts in the invoice detail by store, however the total SKU for each record invoice detail and invoice matched the total for the associated input record in Xcel Energy's database.
- Six discrepancies in the manufacturer number, however the descriptions for these line items indicate matching wattage and similar (if not identical) lamp type.

None of these discrepancies would suggest that the lamps were not actually purchased as reported.

Home Performance with ENERGY STAR

Public Service's third-party product implementer, Populus, Inc., performed verification of home improvements, including a blower door test to verify the natural air changes per hour, a Combustion Appliance Zone test, and inspections of all work performed. There were 57 electric and gas homes completed in 2012. Due to the extensive testing performed on each home, this product is assumed to have a realization rate of 100%.

Insulation Rebate

Public Service paid 3,273 electric rebates and 5,579 gas rebates through the Insulation Rebates Product in 2012. All rebate applications were audited with a two-step process. On the front-end, as rebate applications were received, all critical customer information, equipment eligibility and proper rebate amounts were reviewed, validated, and corrected if inaccurate. The second step took place prior to the rebate being issued where Rebate Operations audits 100% of the rebate applications to ensure that the information from the form was entered correctly into the tracking database.

A third-party verification contractor, Nexant, performed additional M&V for the Insulation Rebates Product. A phone survey was given to a random sample of 87 participants wherein it was confirmed what type of insulation was installed in the home (attic insulation, wall insulation and air sealing) and whether the customer had central air conditioning (for electric savings). The final report for the Insulation Rebates Product in 2012 found realization rates of $80.8\% \pm 20.7\%$ for electric demand, $77.9\% \pm 18.8\%$ for electric energy, and $98.5\% \pm 4.6\%$ for gas. The electric realization rates are low because the M&V provider discovered that our Rebate Operations had incorrectly marked that the majority of customers had central air conditioning when a good number did not.

Refrigerator Recycling

The Refrigerator Recycling Product provides a rebate to customers who retire their old, inefficient, but operational secondary refrigerators. In 2012, the Company recycled 5,347 refrigerators. To verify these results, Nexant performed phone surveys at year-end. The survey was given to 52 randomly selected participants and confirmed that the old refrigerator was operational and removed from the home as reported. The final report for the Refrigerator Recycling Product in 2012 found a realization rate of $100.0\% \pm 0.0\%$ for both demand and energy savings.

School Education Kits

The School Education Kits Product provides curriculum and educational materials to teachers and school children to teach them more about energy efficiency. In 2012, the Product included 30,002 school children. Program administration, measurement, and verification for the School Education Kits Program were conducted by a third-party vendor, Resource Action Programs (RAP). RAP used parental surveys to determine which measures were installed in the home. These surveys were evaluated and summarized by RAP. The 2012 year-end savings for the program were determined using the installation rates by measure determined by RAP, which were 71% for 13W and 63% for 18W CFLs.

Water Heating Rebate

The Water Heating Rebate Product provides rebates to customers who purchase new, energy efficient water heaters. Public Service provided 29 electric and 1,838 gas rebates in 2012. All rebate applications were audited with a two-step process. As rebates were received, critical customer

information, equipment eligibility and proper rebate amounts were reviewed, validated and corrected if inaccurate. In the second step, Rebate Operations audited the rebate applications to ensure that the information from the form was entered correctly into the tracking database.

A third-party verification contractor, Nexant, conducted field M&V, randomly selecting samples of customers who received a rebate. The contractor visited 41 randomly selected customers to perform field inspections and to verify the installed/rebated equipment. The final report for the Water Heating Rebates Product in 2012 demonstrated a $100.5\% \pm 0.3\%$ realization rate.

Saver's Switch

Public Service's load management group selected 100 random customer sites from the Saver's Switch population in Colorado. A third-party, AEC, installed data loggers on these sites to monitor air conditioning usage during control days and non-control days. The data obtained was analyzed by another third-party, KEMA. Based on the results of the smart switches, KEMA established a stable forecast estimate of 1.15 generator kW per smart switch of available load relief. This resulted in a realization rate of 107.5%, when compared to the savings of 1.07 generator kW per switch originally anticipated in the 2012/13 DSM Plan. Note that the measurement and verification performed on Saver's Switch does not include switches deployed in 2012. The sampling is conducted in the spring before any switches are installed and the sample premises are monitored throughout the cooling season.

Energy Efficient Showerheads

Electric and natural gas water heating customers who received a postcard invitation were eligible to receive a free 1.5gpm showerhead through the Energy Efficient Showerheads Product. In 2012, Public Service provided 23,304 showerheads. CustomerLink performed a phone survey of a random sampling of customers who received a free showerhead. Based on the phone survey results, the installation rate was 55%.

Low-Income Products

Energy Savings Kit

The Energy Savings Kits Product delivered 6,086 electric kits and 7,373 gas kits in 2012. This product was implemented by a third-party provider, Energy Federation Inc., who identified income-qualified customers to receive kits. CustomerLink performed a phone survey to those customers who received a kit. Installation rates were found to be 41% for aerators, 53% for CFLs, and 43% for showerheads.

Multi-Family Weatherization

Public Service completed 38 electric and 18 gas Multi-Family Weatherization projects in 2012. The third-party program implementer, Energy Outreach of Colorado (EOC), performed the measurement and verification of the Multi-Family Weatherization Product. Once the energy efficiency improvements were completed, EOC audited each building to confirm that all work was completed correctly. Savings were calculated for each project based on the measures installed. As a result, the realization rate for this program is 100%.

Non-Profit Weatherization

The Non-Profit Energy Efficiency Product completed 26 electric and 27 gas projects in 2012. Public Service's third-party program implementer, Energy Outreach of Colorado (EOC), performed the measurement and verification of the Non-Profit Energy Efficiency Product. Once the energy efficiency improvements were completed, EOC audited each building to confirm that all work was completed correctly. Savings were calculated for each project based on the measures installed. As a result, the realization rate for this program is 100%.

Single-Family Weatherization

The Single-Family Weatherization Product provided weatherizations on 263 electric and gas homes in 2012. Public Service's third-party product implementer, the Colorado Energy Office managed the weatherization agencies that performed energy savings measures in each income-qualified single-family home. 100% of homes weatherized were subject to verification from Public Service at any given time. The Company received a signed or electronic form from each customer attesting to the work performed by GEO. Energy savings were calculated on a per measure, per home, basis. Savings were calculated for each project based on the measures installed. As a result, the realization rate for this program is 100%.

Pilot Products

Market Transformation: Energy Feedback Pilot

In 2012, the Energy Feedback Pilot contacted 46,082 electric/gas combination homes. This program was implemented and the data analyzed by a third-party provider, OPower. In 2012, the realization rate for the Energy Feedback Pilot was 100.0%.

Market Transformation: In-Home Smart Devices Pilot

No savings will be claimed as the result of this pilot in 2012.

Market Transformation: Building Code Support Pilot

No savings will be claimed as the result of this pilot in 2012.

Electric Vehicle Charging Station Pilot

No savings will be claimed as the result of this pilot in 2012.

Post-Program Year Activities

All measurement and verification activities for the 2012 performance year were completed in 2012 or early in 2013 and all results are included in this report. Public Service intends to complete all future M&V activities annually prior to filing its M&V Report.

Product Process and Impact Evaluations Performed in 2012

Public Service contracted for evaluators to perform process and/or impact evaluations in 2012 of three products: Process Efficiency, High Efficiency Air Conditioning, and Low-Income Energy Savings Kits. The following sections provide an overview of the findings of the evaluations and the evaluators' recommendations.

Process Efficiency

Tetra Tech Inc., in partnership with Evergreen Economics, conducted a comprehensive process and impact evaluation of the Process Efficiency Product, which included interviews of Public Service staff; as well as surveys of program participants, non-participants, and trade allies; and a benchmarking study of other utility programs. While recognizing the Process Efficiency Product as an industry leader, the Tetra Tech team made a number of suggestions for both process and impact improvements that may be made to the product. The team had the following recommendations:

- Assess measure persistence through the program check-ins with customers to monitor if measure persistence remains high or if there are any problem areas that need to be addressed;
- Make no change to the current stipulated net-to-gross ratio of 90%;
- Continue this holistic program offering in the Xcel Energy Business DSM Portfolio;
- Continue the program's phased delivery and commitment to engaging upper management at the beginning of the participation process. Look for ways to keep customers engaged once they reach Phase 3;
- Continue the program's commitment to incorporating energy management into participant's core business practices. This should include the use of diagnostic assessment and benchmarking tools like EnVINTA, as well as providing continuing technical support and financial incentives for making energy-saving improvements;
- Continue using current study funding and end-use incentive levels coupled with achievement bonuses. Also, monitor the accuracy of estimates for study funding and project rebates to best inform customers in their decision-making processes;
- Evaluate participation levels, study conversion rates, realization of energy savings estimates, project lead times, and upfront study costs in setting annual energy savings goals and budgets for the next program filing. Consider increasing program eligibility requirements to smooth out participation (discussed more under Recommendation (#9));

- Continue internal management processes that encourage individual programs working together to achieve portfolio goals;
- Consider increasing eligibility to mid-size industrial customers in addition to large commercial customers. Assess the cost effectiveness and customer response of the recent change in Minnesota eligibility (from two GWh to one GWh in savings potential) and consider implementing a similar change in Colorado to better manage and help achieve energy savings goals;
- As the program grows, evaluate internal staff resources and roles to ensure they are sufficient to effectively deliver the program while maintaining balanced workloads for program and account management staff. This assessment is especially important if Xcel Energy expands program eligibility;
- Continue working to strengthen collaboration between Xcel Energy engineering staff and the program's implementation contractor, particularly in communicating and gathering necessary inputs for custom energy analyses. Also, assess the feasibility of adding a local implementation presence in Colorado;
- Continue to leverage account manager relationships to identify project opportunities and inform customers about the Process Efficiency program;
- Investigate ways to engage less active account management staff. One approach might be highlighting participant success stories and achievement awards, illustrating the potential benefits to account managers' own customers. Another approach worth considering is using existing forums to solicit account management feedback and address concerns. Finally, the program might work with account management staff to identify ways the recently added sales engineer and marketing assistant positions could possibly help alleviate account managers' workload;
- Continue to leverage secondary study specialists to support Phase 2 scoping studies and make sure the scope of work and study expectations are fully understood by all parties prior to commissioning work;
- Continue to evaluate and refine the CRM tracking system to make sure it accommodates the data needed for project tracking and evaluation for continuous or multi-stage participation programs such as Process Efficiency. Specifically, the program should track which Phase MOU has been signed by participants and scoped projects in addition to approved projects, completed projects, and projected savings
- The evaluation team has no additional recommendations for improving customer satisfaction; and
- Continue to engage third-party study providers and other trade allies and inform them about partnership opportunities.

All of these recommendations are currently being reviewed by Public Service. Any proposed changes to impact assumptions will be publicized through 60-Day Notice prior to implementation.

High Efficiency Air Conditioning

The Cadmus Group Inc. conducted an impact and process evaluation of the High Efficiency Air Conditioning Product in 2012, which included surveys with customers who received a rebate for participating in the product, surveys with participating and non-participating installation contractors, and focus groups with participating contractors, and a benchmarking study of other utility programs. The team's recommendations are to:

- Continue to build relationships with contractors.
 - Explore expanding trade ally participation to include opportunities for friendly competition and rewards for increased equipment installations.
 - Explore sponsoring contractor round tables to: (1) promote industry discussion among participating contractors, and (2) provide an opportunity for participating contractors to share program benefits and positive experiences with nonparticipating contractors to order to encourage greater participation.
 - Continue to recognize participating contractors by providing them with program-specific marketing, such as truck magnets and yard signs to help them distinguish themselves, as well as continuing to recognize top performers within the participating contractor group with awards and plaques.
 - Consider enhancing existing customer-focused QI handouts and brochures to include talking points for contractors to share with customers that specifically address lifetime cost and savings, key customer questions, and QI benefits.
 - Explore ways in which training can be enhanced to better serve the contractors.
 - Consider allocating more training time to discussing how the sizing requirement can be met to help contractors better understand what equipment could meet the needs of a home and to cut down on the time it takes them to research the information.
 - Consider adding a specific training component around duct sizing, explaining how old or improperly sized ducts can impact an installation.
 - Explore ways to facilitate contractors' ability to meet the NATE certification requirement by either offering an incentive to help offset the upfront cost of the certification or by updating the contractor training to more closely reflect the language and structure used in NATE certification.
- Consider a tiered approach for file review and M&V site selection.
 - Explore a tiered approach to document submittal requirements by initially requiring contractors to submit recorded measurements, load calculations, and the AHRI reference number for every installation, but decreasing this requirement after they have completed a certain number of jobs. Once a contractor has successfully completed a certain number of installations, submitting the load calculations could be required only for sites selected for an M&V visit.
 - Explore selecting installations for on-site verification based on the contractor, using a tiered system rather than conducting a random sample of all submitted

applications. Consider using a tiered approach in which each contractor's sampling rate decreases once they pass a certain number of verifications.

- Increase program awareness and explore the possibility of expanding customer-focused marketing by highlighting the benefits of QI, the available rebates, and the online list of registered contractors available through the Xcel Energy Website.
 - Consider investigating ways to increase customer awareness about the QI component of the program and its value.
 - Consider exploring strategies to increase customer awareness and use of Xcel Energy's registered contractor list.
 - Re-examine the program Website structure to ensure that the contractor list is easy to access within one or two page levels.
 - Explore advertising on Websites geared toward an older audience.
 - Explore the possibility of expanding customer-focused marketing and advertising by highlighting the benefits of QI through the use of educational videos and social media channels.
 - Consider leveraging contractor testimonials by highlighting them on communication and outreach collateral targeting new contractors.
- Consider investigating marketing segmentation efforts specifically to reach Affluent Empty Nests, Midlife Success, and Young Accumulators.
- Consider increasing cross-marketing with Home Performance, Furnace and Boiler Rebate, and Saver's Switch programs.
- Explore implications of modifying the M&V requirements and process.
 - Consider requiring more stringent qualifications for verification staff (e.g., a highly skilled HVAC technician or engineer).
 - Explore the implications of modifying the pass/fail criteria for equipment sizing and airflow, considering factors such as the energy and demand impacts associated with each component and the accuracy of measurement equipment.
 - Explore the implications of re-evaluating the target airflow and equipment capacity calculations.
 - Consider claiming savings from an undersized system.
- Consider assessing the amount of savings allocated to QI components. Reassess the deemed savings attributable to correct QI by using the verified EER (through field measurements) and regional HVAC unit energy consumption.
- Consider the program changes of removing SEER 14.5-14.9 equipment incentives and changing the methodology of analyzing QI savings to lower free-ridership.
- Explore the costs and benefits associated with a tiered early retirement incentive approach based on the SEER level of the replaced unit.
- Perform additional nonparticipant site visits in a future study to more accurately determine QI free-ridership and market conditions.

All of these recommendations are currently being reviewed by Public Service. Any proposed changes to impact assumptions will be publicized through 60-Day Notice prior to implementation.

Low-Income Energy Savings Kits

The Cadmus Group Inc. conducted an impact and process evaluation of the Low-Income Energy Savings Kits Product in 2012, which included interviews with product staff and implementing agencies. The team has the following recommendations:

- Consider additional ways to market the program through LEAP, local assistance agencies, and the Low Income Weatherization Program. XE could consider the following supplemental methods for participant recruitment:
 - XE could partner with social service agencies and /or non-profit organizations throughout the Colorado service territory to distribute energy-saving kits to the low-income customers they serve.
 - XE could target buildings owned by the Department of Housing and Urban Development (HUD) or those on the Department of Energy's (DOE's) HUD-approved list of qualifying buildings.
 - Consider methods that allow customers to self-identify their eligibility.
 - Consider measuring whether kit recipients' awareness of XE as the source improves with the redesigned packaging introduced in 2012.
 - Consider enhancing the educational/informational materials included in the kits.
 - Consider additional research to quantify savings achieved through behavior change influenced by the energy education component of the ESK Program.
 - Consider exploring the costs and benefits of providing education through workshops.
 - Consider suggestions for improving the installation rates, such as enhancing information about equipment settings and maintenance, and connecting the measures to expected energy savings.
 - Explore possible causes for the large percentage of customers that said they had not received a kit.
 - Explore faucet aerator compatibility issues. Consider offering information about faucet aerator adaptors and how to obtain one if the kit aerator does not fit the recipient's faucet.
 - Consider exploring additional innovative electricity-saving measures to include in the energy-saving kits. Consider including alternative measures to achieve significant electric savings impacts:
 - Weatherstripping measures
 - Coupons/vouchers for smart power strips
 - Coupons/vouchers for lighting controls.
- Kit measures that were evaluated and excluded at the start of the program may have value in the future as the baseline and technologies change.

All of these recommendations are currently being reviewed by Public Service. Any proposed changes to impact assumptions will be publicized through 60-Day Notice prior to implementation.

M&V Results

The following pages provide Tables 16a and 16b, which describe the installation rates and realization rates used to calculate net, verified savings by program component. The columns of the table are defined in the following bullets:

- **2012 Product** – The DSM product offered by Public Service in 2012.
- **End-Use Measure Type** – Whether the product was prescriptive or custom, or the product components, if the M&V process differed for different projects within a single product.
- **Gross Gen kW** – The gross demand savings at the generator after line losses and coincidence with peak are factored in.
- **Gross Gen kWh** – The gross energy savings at the generator after line losses are removed.
- **Gross Dth** – The gross energy savings.
- **Installation Rate** – The percent of measures that were installed, as opposed to purchased.
- **Demand (kW) Realization Rate** – The ratio of gross electric demand savings measured in the M&V process to the electric demand savings claimed in the rebate application, expressed as a percentage.
- **Energy (kWh) Realization Rate** – The ratio of gross electric energy savings measured in the M&V process to the electric energy savings claimed in the rebate application, expressed as a percentage.
- **Energy (Dth) Realization Rate** – The ratio of gross natural gas energy savings measured in the M&V process to the gas energy savings claimed in the rebate application, expressed as a percentage.
- **Verified Gross Gen kW** – The gross demand savings at the generator after the installation and demand realization rates have been applied.
- **Verified Gross Gen kWh** – The gross energy savings at the generator after the installation and energy realization rates have been applied.
- **Verified Gross Dth** – The gross savings after the installation and gas realization rates have been applied.
- **Electric Demand NTG** – The net-to-gross ratio (percentage) applied to the Verified Gross Gen kW value to arrive at the Verified Net Gen kW value.
- **Electric Energy NTG** – The net-to-gross ratio (percentage) applied to the Verified Gross Gen kWh value to arrive at the Verified Net Gen kWh value.
- **Gas NTG** – The net-to-gross ratio (percentage) applied to the Verified Gross Dth value to arrive at the Verified Net Dth value.
- **Verified Net Gen kW** – The final demand savings at the generator achieved once the installation rate, realization rate, and net-to-gross ratio were applied.
- **Verified Net Gen kWh** – The final energy savings at the generator achieved once the installation rate, realization rate, and net-to-gross ratio were applied.
- **Verified Net Dth** – The final gas savings achieved once the installation rate, realization rate, and net-to-gross ratio were applied.

Table 16a: Business Segment Installation Rates, Realization Rates, and Final Net, Verified Savings by Program Component

2012 Products	End-Use/Measure Type	Gross Gen kW	Gross Gen kWh	Gross Dth	Installation Rate	Demand (kW) Realization Rate	Energy (kWh) Realization Rate	Energy (Dth) Realization Rate	Verified Gross Gen kW	Verified Gross Gen kWh	Verified Gross Dth	Elec Demand NTG	Elec Energy NTG	Gas NTG	Verified Net Gen kW	Verified Net Gen kWh	Verified Net Dth
Business Segment																	
Compressed Air Efficiency	Prescriptive	227	776,896	N/A	100.0%	100.0%	100.0%	N/A	227	776,896	N/A	87.0%	87.0%	N/A	197.08	675,900	N/A
	Custom	252	1,437,305	N/A	100.0%	100.0%	100.0%	N/A	252	1,437,305	N/A	87.0%	87.0%	N/A	219.05	1,250,455	N/A
Computer Efficiency	Prescriptive	363	2,653,961	N/A	100.0%	99.7%	99.7%	N/A	362	2,644,737	N/A	88.0%	88.0%	N/A	318.39	2,327,730	N/A
Cooling Efficiency	Prescriptive	1,505	2,606,003	N/A	100.0%	99.6%	99.7%	N/A	1,499	2,598,185	N/A	80.0%	80.0%	N/A	1,199.58	2,078,548	N/A
	Custom	294	504,851	N/A	100.0%	100.0%	100.0%	N/A	294	504,851	N/A	87.0%	87.0%	N/A	255.57	439,221	N/A
Custom Efficiency	Custom	328	2,598,477	3,012	100.0%	100.0%	100.0%	100.0%	328	2,598,477	3,012	87.0%	87.0%	93.0%	285.38	2,260,675	2,801
Data Center Efficiency	Custom	605	5,641,118	N/A	100.0%	100.0%	100.0%	N/A	605	5,641,118	N/A	88.1%	89.5%	N/A	532.50	5,047,663	N/A
Energy Management Systems	Custom	197	6,927,222	3,585	100.0%	100.0%	100.0%	100.0%	197	6,927,222	3,585	87.0%	87.0%	93.0%	171.27	6,026,684	3,334
Heating Efficiency	Prescriptive	N/A	N/A	24,682	100.0%	N/A	N/A	100.9%	N/A	N/A	24,904	N/A	N/A	86.0%	N/A	N/A	21,418
	Custom	N/A	N/A	180	100.0%	N/A	N/A	100.0%	N/A	N/A	180	N/A	N/A	93.0%	N/A	N/A	167
Lighting Efficiency	Prescriptive	22,627	100,972,309	N/A	100.0%	101.3%	105.1%	N/A	22,921	106,121,897	N/A	84.0%	84.0%	N/A	19,253.91	89,142,393	N/A
	Custom	1,773	12,342,937	N/A	100.0%	100.0%	100.0%	N/A	1,773	12,342,937	N/A	96.0%	96.0%	N/A	1,701.86	11,849,219	N/A
Motor and Drive Efficiency	Prescriptive	5,611	36,937,918	N/A	100.0%	100.0%	100.0%	N/A	5,611	36,937,918	N/A	66.3%	66.6%	N/A	3,718.97	24,596,695	N/A
	Custom	1	607,410	N/A	100.0%	100.0%	100.0%	N/A	1	607,410	N/A	65.0%	65.0%	N/A	0.65	394,816	N/A
New Construction	Energy Efficient Buildings	1,564	4,626,001	13,789	100.0%	100.0%	100.0%	100.0%	1,564	4,626,001	13,789	93.0%	93.0%	97.0%	1,455.00	4,303,569	13,376
	Energy Design Assistance	3,903	14,932,442	20,940	100.0%	100.0%	100.0%	100.0%	3,903	14,932,442	20,940	80.6%	80.6%	99.0%	3,146.00	12,035,548	20,730
Process Efficiency	Prescriptive Lighting	243	1,691,371	N/A	100.0%	101.3%	105.1%	N/A	246	1,777,631	N/A	90.0%	90.0%	N/A	221.12	1,599,868	N/A
	Prescriptive Motors	259	1,910,766	N/A	100.0%	100.0%	100.0%	N/A	259	1,910,766	N/A	90.0%	90.0%	N/A	233.36	1,719,689	N/A
	EMS	1	436,770	N/A	100.0%	100.0%	100.0%	N/A	1	436,770	N/A	90.0%	90.0%	N/A	1.04	393,093	N/A
	Custom	9	3,078,892	0	100.0%	100.0%	100.0%	100.0%	9	3,078,892	0	90.0%	90.0%	N/A	8.52	2,771,003	N/A
Recommissioning	Custom	740	5,686,584	5,313	100.0%	100.0%	100.0%	100.0%	740	5,686,584	5,313	90.0%	90.0%	90.0%	666.11	5,117,926	4,782
Segment Efficiency	Prescriptive Lighting	138	274,098	N/A	100.0%	101.3%	105.1%	N/A	140	288,077	N/A	97.0%	97.0%	N/A	136.00	279,435	N/A
Self-Directed Custom Efficiency	Custom	1,268	10,732,305	N/A	100.0%	100.0%	100.0%	N/A	1,268	10,732,305	N/A	90.6%	90.6%	N/A	1,148.97	9,723,468	N/A
Small Business Lighting	Prescriptive	9,376	35,009,650	N/A	100.0%	99.0%	99.1%	N/A	9,283	34,694,563	N/A	100.0%	100.0%	N/A	9,282.67	34,694,563	N/A
	Custom	845	4,109,640	N/A	100.0%	100.0%	100.0%	N/A	845	4,109,640	N/A	96.0%	96.0%	N/A	811.01	3,945,254	N/A
Standard Offer	Custom	932	4,708,855	918	100.0%	100.0%	100.0%	100.0%	932	4,708,855	918	87.6%	87.6%	93.0%	816.34	4,124,957	853
Business Segment Total		53,062	261,203,781	72,420	100.0%	100.4%	101.9%	100.3%	53,260	266,121,478	72,642	86.0%	85.2%	92.9%	45,780.32	226,798,373	67,462

Table 16b: Residential Segment and Low-Income Segment Installation Rates, Realization Rates, and Final Net, Verified Savings by Program Component

2012 Products	End-Use/Measure Type	Gross Gen kW	Gross Gen kWh	Gross Dth	Installation Rate	Demand (kW) Realization Rate	Energy (kWh) Realization Rate	Energy (Dth) Realization Rate	Verified Gross Gen kW	Verified Gross Gen kWh	Verified Gross Dth	Elec Demand NTG	Elec Energy NTG	Gas NTG	Verified Net Gen kW	Verified Net Gen kWh	Verified Net Dth
Residential Segment																	
ENERGY STAR New Homes		384	1,945,714	80,137	100.0%	100.0%	100.0%	100.0%	384	1,945,714	80,137	92.0%	92.0%	92.0%	353.16	1,790,057	73,726
Evaporative Cooling Rebate		9,131	5,701,727	N/A	100.0%	100.0%	102.1%	N/A	9,131	5,821,463	N/A	58.1%	58.0%	N/A	5,303.00	3,377,533	N/A
Heating System Rebate		N/A	N/A	37,305	100.0%	N/A	N/A	100.0%	N/A	N/A	37,305	77.0%	77.0%	77.0%	N/A	N/A	28,725
High Efficiency Air Conditioning	Equipment Rebates	232	257,853	N/A	100.0%	100.0%	100.0%	N/A	232	257,853	N/A	89.5%	91.2%	N/A	207.60	235,168	N/A
	Quality Installation	462	295,642	N/A	100.0%	100.0%	100.0%	N/A	462	295,642	N/A	89.0%	89.0%	N/A	411.41	263,121	N/A
	Early Retirement	2,663	2,174,817	N/A	100.0%	100.0%	100.0%	N/A	2,663	2,174,817	N/A	89.0%	89.0%	N/A	2,370.38	1,935,587	N/A
Home Lighting & Recycling		19,522	155,953,081	N/A	99.0%	100.0%	100.0%	N/A	19,326	154,393,550	N/A	85.2%	85.2%	N/A	16,463.03	131,518,655	N/A
Home Performance w/ ENERGY STAR		115	401,427	13,986	100.0%	100.0%	100.0%	100.0%	115	401,427	13,986	94.0%	94.0%	94.0%	108.05	377,341	13,147
Insulation Rebate		790	797,577	77,916	100.0%	80.8%	77.9%	98.5%	638	621,313	76,747	89.0%	89.0%	89.0%	568.22	552,968	68,305
Refrigerator Recycling		818	7,118,419	N/A	100.0%	100.0%	100.0%	N/A	818	7,118,419	N/A	58.5%	58.5%	N/A	478.87	4,165,549	N/A
School Education Kits		811	8,802,840	N/A	66.765%	100.0%	100.0%	N/A	542	5,877,174	N/A	100.0%	100.0%	N/A	541.68	5,877,174	N/A
Water Heating Rebate		8	73,621	5,002	100.0%	100.5%	100.5%	100.5%	8	73,989	5,027	100.0%	100.0%	90.0%	8.28	73,989	4,524
Energy Efficient Showerheads		0	1,192,619	46,842	55.0%	100.0%	100.0%	100.0%	0	655,940	25,763	99.0%	99.0%	99.0%	0.00	649,381	25,505
	Energy Efficiency Subtotal	34,936	184,715,338	261,187	98.7%	99.6%	100.0%	99.6%	34,320	179,637,302	238,964	78.1%	84.0%	89.5%	26,813.67	150,816,524	213,932
Saver's Switch		14,290	477,290	N/A	100.0%	100.0%	100.0%	N/A	14,290	477,290	N/A	100.0%	100.0%	N/A	14,290.14	477,290	N/A
Residential Segment Total (w/o Low-Income)		49,226	185,192,628	261,187	99.1%	99.7%	100.0%	99.6%	48,610	180,114,592	238,964	84.6%	84.0%	89.5%	41,103.81	151,293,814	213,932
Low-Income Segment																	
Energy Savings Kits	Aerator	0	263,749	12,436	41.0%	100.0%	100.0%	100.0%	0	108,137	5,099	100.0%	100.0%	100.0%	0.00	108,137	5,099
	CFL	218	3,171,056	N/A	53.0%	100.0%	100.0%	N/A	115	1,680,660	N/A	100.0%	100.0%	N/A	115.31	1,680,660	N/A
	Showerhead	0	313,206	14,699	43.0%	100.0%	100.0%	100.0%	0	134,679	6,321	100.0%	100.0%	100.0%	0.00	134,679	6,321
Multi-Family Weatherization		122	1,132,806	14,390	100.0%	100.0%	100.0%	100.0%	122	1,132,806	14,390	100.0%	100.0%	100.0%	121.51	1,132,806	14,390
Non-Profit Weatherization		323	1,118,365	6,412	100.0%	100.0%	100.0%	100.0%	323	1,118,365	6,412	100.0%	100.0%	100.0%	323.43	1,118,365	6,412
Single-Family Weatherization		188	2,559,550	45,357	100.0%	100.0%	100.0%	100.0%	188	2,559,550	45,357	100.0%	100.0%	100.0%	188.17	2,559,550	45,357
Low-Income Segment Total		851	8,558,732	93,293	88.0%	100.0%	100.0%	100.0%	748	6,734,197	77,578	100.0%	100.0%	100.0%	748.42	6,734,197	77,578
Energy Feedback Pilot		3,014	15,849,525	72,524	100.0%	100.0%	100.0%	100.0%	3,014	15,849,525	72,524	100.0%	100.0%	100.0%	3,014.01	15,849,525	72,524
In-Home Smart Device Pilot		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Building Code Support Pilot		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Electric Vehicle Charging Station Pilot		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2012 TOTAL		106,153	470,804,667	499,424	99.5%	100.0%	101.1%	99.8%	105,632	468,819,793	461,708	85.8%	85.5%	93.5%	90,646.56	400,675,909	431,496

Cost-Effectiveness

Cost-effectiveness (“benefit-cost”) analyses represent the ratio of a product’s benefits to its costs. By varying which benefits and costs are included in the calculation, the ratio can show how beneficial a DSM portfolio, program, or measure might be from a number of different perspectives (the Participant, Utility, Rate Impact, or Total Resource Cost). In Colorado, the Commission calls for utilities to use the Modified Total Resource Cost (MTRC) Test for its cost-effectiveness analyses. The MTRC Test takes into account system and other benefits, utility and participant costs, as well as environmental adders to calculate the benefit-cost ratio. These analyses are performed in a multi-step process that takes into account, amount others, the:

- Savings achieved by the program;
- Participant and Utility Spending on the product, by budget category;
- Avoided costs for the product (discussed in more detail in the next section of this document);
- Incremental O&M and Capital Spending and Savings of the product;
- Lifetime, operating hours, coincidence of savings with summer peak, net-to-gross, transmission loss factors, and realization rates for the product.

The benefit-cost ratio is first determined at the measure-level; individual measures are then combined to produce the product-level benefit-cost analysis. All of the products in the portfolio (gas or electric) are then combined to create the portfolio-level benefit-cost analysis, as provided in Tables 17 and 18.

Public Service is reporting 2012 electric and gas portfolio MTRC Test results of 2.38 and 1.18, respectively. These results are shown in Tables 17 and 18. The portfolio results are based upon Electric net benefits of \$219.6 million and gas net benefits \$5.7 million. Pursuant to the DSM Rules and Statutes, Public Service has provided the cost-effectiveness results (MTRC Test ratios) for each of the products in its electric and gas programs in Tables 4b and 5b in the Executive Summary section of this document. The full benefit-cost analyses for all products are being as provided as work papers to this Status Report.

Table 17: Public Service's 2012 Electric DSM Portfolio Benefit-Cost Analysis

DSM PORTFOLIO - ELECTRIC					2012 ELECTRIC		ACTUAL
2012 Net Present Cost Benefit Summary Analysis For All Participants					Input Summary and Totals		
	Participant	Utility	Rate	Modified	Program Inputs per Customer kW		
	Test	Test	Impact	TRC	Lifetime (Weighted on Generator kWh)	A	11.81 years
	(\$Total)	(\$Total)	(\$Total)	(\$Total)	Annual Hours	B	8760
Benefits					Gross Customer kW	C	1 kW
Avoided Revenue Requirements					Generator Peak Coincidence Factor	D	32.76%
Generation Capacity	N/A	\$123,256,268	\$123,256,268	\$123,256,268	Gross Load Factor at Customer	E	16.66%
Transmission & Distribution Cap	N/A	\$22,879,552	\$22,879,552	\$22,879,552	Net-to-Gross (Energy)	F	85.7%
Marginal Energy	N/A	\$156,677,138	\$156,677,138	\$156,677,138	Net-to-Gross (Demand)	G	85.9%
Avoided Emissions (CO2)	N/A	N/A	N/A	\$0	Transmission Loss Factor (Energy)	H	7.034%
Subtotal				\$302,812,958	Transmission Loss Factor (Demand)	I	7.453%
Non-Energy Benefits Adder (10.2%)				\$30,810,065	Installation/Realization Rate (Energy)	J	99.4%
Subtotal	N/A	\$302,812,958	\$302,812,958	\$333,623,023	Installation/Realization Rate (Demand)	K	99.4%
Other Benefits					MTRC Net Benefit (Cost)	L	\$732
Bill Reduction - Electric	\$331,435,912	N/A	N/A	N/A	MTRC Non-Energy Benefit Adder	M	\$103
Participant Rebates and Incentives	\$44,719,894	N/A	N/A	\$44,719,894	Net coincident kW Saved at Generator	$(G \times C \times K) \times D / (1 - I)$	0.3023 kW
Incremental Capital Savings	\$0	N/A	N/A	\$0	Gross Annual kWh Saved at Customer	$(B \times E \times C)$	1,459 kWh
Incremental O&M Savings	\$0	N/A	N/A	\$0	Net Annual kWh Saved at Customer	$(F \times (B \times E \times C \times J))$	1,242 kWh
Subtotal	\$376,155,806	N/A	N/A	\$44,719,894	Net Annual kWh Saved at Generator	$(F \times (B \times E \times C \times J)) / (1 - H)$	1,336 kWh
Total Benefits	\$376,155,806	\$302,812,958	\$302,812,958	\$378,342,917	Program Summary per Participant		
Costs					Gross kW Saved at Customer	P	0.29 kW
Utility Project Costs					Net coincident kW Saved at Generator	$(G \times P \times K) \times D / (1 - I)$	0.09 kW
Program Planning & Design	N/A	\$1,395,958	\$1,395,958	\$1,395,958	Gross Annual kWh Saved at Customer	$(B \times E \times P)$	418 kWh
Administration & Program Delivery	N/A	\$22,778,275	\$22,778,275	\$22,778,275	Net Annual kWh Saved at Customer	$(F \times (B \times E \times P \times J))$	356 kWh
Advertising/Promotion/Customer	N/A	\$7,997,551	\$7,997,551	\$7,997,551	Net Annual kWh Saved at Generator	$(F \times (B \times E \times P \times J)) / (1 - H)$	383 kWh
Participant Rebates and Incentives	N/A	\$44,719,894	\$44,719,894	\$44,719,894	Program Summary All Participants		
Equipment & Installation	N/A	\$1,099,458	\$1,099,458	\$1,099,458	Total Participants	Q	1,047,190
Measurement and Verification	N/A	\$1,414,242	\$1,414,242	\$1,414,242	Total Budget	R	\$79,405,379
Subtotal	N/A	\$79,405,379	\$79,405,379	\$79,405,379	Gross kW Saved at Customer	$(Q \times P)$	299,900 kW
Utility Revenue Reduction					Net coincident kW Saved at Generator	$((G \times P \times K) \times D / (1 - I)) \times Q$	90,647 kW
Revenue Reduction - Electric	N/A	N/A	\$280,936,511	N/A	Gross Annual kWh Saved at Customer	$(B \times E \times P) \times Q$	437,687,153 kWh
Subtotal	N/A	N/A	\$280,936,511	N/A	Gross Installed Annual kWh Saved at Customer	$(B \times E \times P \times J) \times Q$	434,854,510 kWh
Participant Costs					Net Annual kWh Saved at Customer	$(F \times (B \times E \times P \times J)) \times Q$	372,491,418 kWh
Incremental Capital Costs	\$78,549,670	N/A	N/A	\$73,542,179	Net Annual kWh Saved at Generator	$((F \times (B \times E \times P \times J)) / (1 - H)) \times Q$	400,675,909 kWh
Incremental O&M Costs	\$6,336,160	N/A	N/A	\$5,746,019	TRC Net Benefits with Adder	$(Q \times P \times L)$	\$219,649,340
Subtotal	\$84,885,830	N/A	N/A	\$79,288,198	TRC Net Benefits without Adder	$(Q \times P \times (L - M))$	\$188,839,275
Total Costs	\$84,885,830	\$79,405,379	\$360,341,890	\$158,693,577	Utility Program Cost per kWh Lifetime		
							\$0.0168
					Utility Program Cost per kW at Gen		
							\$876
Net Benefit (Cost)	\$291,269,976	\$223,407,579	(\$57,528,932)	\$219,649,340			
Benefit/Cost Ratio	4.43	3.81	0.84	2.38			

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Table 18: Public Service's 2012 Gas DSM Portfolio Benefit-Cost Analysis

DSM PORTFOLIO - GAS					2012	GAS	ACTUAL
2012 Net Present Cost Benefit Summary Analysis For All Participants					Input Summary and Totals		
	Participant	Utility	Rate	Modified	Program Assumptions:		
	Test	Test	Impact	TRC	Lifetime (Weighted on Dth)	A	14.44 years
	(\$Total)	(\$Total)	(\$Total)	(\$Total)	Net-to-Gross (Weighted on Dth)	B	92.09%
					Install/Realization Rate (Weighted on Dth)	C	96.5%
Benefits					Program Totals:		
Avoided Revenue Requirements					Participants	D	242,711
Commodity Cost Reduction	N/A	\$23,199,804	\$23,199,804	\$23,199,804	Average Net Dth/Yr Saved	E	1.78
Variable O&M Savings	N/A	\$167,378	\$167,378	\$167,378	Total Dth/Yr Saved	F	431,496
Demand Savings	N/A	\$1,887,182	\$1,887,182	\$1,887,182	Utility Costs per Net Dth/Yr	G	\$28.88
Subtotal				\$25,254,365	Net Benefit (Cost) per Gross Dth/Yr	H	\$13.24
Emissions Non-Energy Benefits Adder (8.9%)				\$2,251,191	Non-Energy Benefits Adder per Gross Dth/Yr	I	\$5.22
Subtotal	N/A	\$25,254,365	\$25,254,365	\$27,505,556	Annual Dth/\$M	(\$1M / G)	34,629
Other Benefits					Total Utility Budget	(G x F)	\$12,460,525
Bill Reduction - Gas	\$35,237,686	N/A	N/A	N/A	Total MTRC Net Benefits with Adder	(F x H)	\$5,714,977
Participant Rebates and Incentives	\$8,044,439	N/A	N/A	\$8,044,439	Total MTRC Net Benefits without Adder	(H - I) x F	\$3,463,786
Incremental Capital Savings	\$0	N/A	N/A	\$0	Utility Program Cost per Net Dth Lifetime	(G / A)	\$2.00
Incremental O&M Savings	\$4,182,013	N/A	N/A	\$2,005,485			
Subtotal	\$47,464,137	N/A	N/A	\$10,049,924			
Total Benefits	\$47,464,137	\$25,254,365	\$25,254,365	\$37,555,479			
Costs							
Utility Project Costs							
Program Planning & Design	N/A	\$171,642	\$171,642	\$171,642			
Administration & Program Delivery	N/A	\$2,854,943	\$2,854,943	\$2,854,943			
Advertising/Promotion/Customer I	N/A	\$558,369	\$558,369	\$558,369			
Participant Rebates and Incentives	N/A	\$8,044,439	\$8,044,439	\$8,044,439			
Equipment & Installation	N/A	\$0	\$0	\$0			
Measurement and Verification	N/A	\$831,134	\$831,134	\$831,134			
Subtotal	N/A	\$12,460,525	\$12,460,525	\$12,460,525			
Utility Revenue Reduction							
Revenue Reduction - Gas	N/A	N/A	\$31,625,883	N/A			
Subtotal	N/A	N/A	\$31,625,883	N/A			
Participant Costs							
Incremental Capital Costs	\$21,296,020	N/A	N/A	\$19,379,977			
Incremental O&M Costs	\$0	N/A	N/A	\$0			
Subtotal	\$21,296,020	N/A	N/A	\$19,379,977			
Total Costs	\$21,296,020	\$12,460,525	\$44,086,408	\$31,840,502			
Net Benefit (Cost)	\$26,168,118	\$12,793,839	(\$18,832,043)	\$5,714,977			
Benefit/Cost Ratio	2.23	2.03	0.57	1.18			

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Avoided Cost Assumptions

The following avoided cost data estimates have been updated and included with this status report as ordered in Decision No. C08-0769, paragraph 58 for Docket No. 07A-420E. The Order states:

“58. ...Also, we find that the avoided cost data shall be updated with each annual report so the degree of change can be assessed and this issue incorporated into the overall review of DSM Incentives in 2012. We will thereby consider whether avoided costs should be updated more frequently.”

These avoided cost estimates are our current estimates as filed in Public Service’s 2012/2013 DSM Plan. These estimates are also compared to the estimates used over the 2012-2030 time period analyzed in this status report. The original avoided cost estimates from the 2012/2013 DSM Plan are used in the cost-benefit analyses included in this status report.

Electric Programs

In order to determine the cost-effectiveness of its electric energy efficiency and load management programs, Public Service must first calculate the avoided generation, transmission, distribution, and marginal energy costs these programs avoid. Below are tables showing the avoided cost assumptions used in this plan.

1. Estimated Annual Avoided Generation Capacity Costs (Source: Public Service Resource Planning)

Capacity costs reflect current generic capacity cost estimates used in the latest RESA filings for the two types of avoided electric generation – a gas-fired combustion turbine (CT) and a gas-fire combined-cycle plant (CC).

	CT	CC		CT	CC
Year	Gen Capacity \$/kW-mo	Gen Capacity \$/kW-mo	Year	Gen Capacity \$/kW-mo	Gen Capacity \$/kW-mo
2012	\$12.28	\$14.08	2023	\$15.07	\$17.04
2013	\$12.51	\$14.33	2024	\$15.35	\$17.34
2014	\$12.75	\$14.58	2025	\$15.64	\$17.65
2015	\$12.99	\$14.83	2026	\$15.93	\$17.96
2016	\$13.23	\$15.09	2027	\$16.23	\$18.27
2017	\$13.48	\$15.36	2028	\$16.53	\$18.59
2018	\$13.74	\$15.63	2029	\$16.84	\$18.92
2019	\$13.99	\$15.90	2030	\$17.16	\$19.25
2020	\$14.26	\$16.18	2031	\$17.48	\$19.59
2021	\$14.52	\$16.46	2032	\$17.80	\$19.93
2022	\$14.79	\$16.75			

2. Estimated Annual Avoided Transmission and Distribution Capacity Costs (Source: Public Service Resource Planning)

Review by Resource Planning determined that \$30/kW-yr is a good estimate of the benefit of Transmission and Distribution capacity for 2012. This value is escalated at the current 2.36% escalation rate for all following years based on the Company’s corporate general escalation factor updated by Corporate Finance in May 2011.

Year	\$/kW-yr
2012	\$30.00
2012+	Escalated at 2.36%

3. Estimated Annual Avoided Marginal Energy Costs (Source: Public Service Resource Planning and Quantitative Risk Services)

Avoided marginal energy costs reflect the assumed gas forecast and heat rates used in the latest RESA filings for the two types of avoided electric generation – a gas-fired combustion turbine (CT) and a gas-fire combined-cycle plant (CC).

	CT	CC		CT	CC
Year	Marginal Energy \$/MWh	Marginal Energy \$/MWh	Year	Marginal Energy \$/MWh	Marginal Energy \$/MWh
2012	\$66.65	\$39.44	2023	\$108.61	\$66.20
2013	\$71.03	\$42.28	2024	\$112.98	\$68.98
2014	\$75.43	\$45.13	2025	\$115.79	\$70.70
2015	\$81.09	\$48.83	2026	\$115.56	\$70.33
2016	\$85.08	\$51.39	2027	\$116.91	\$71.04
2017	\$86.76	\$52.38	2028	\$120.27	\$73.12
2018	\$89.93	\$54.37	2029	\$123.96	\$75.41
2019	\$93.42	\$56.57	2030	\$127.97	\$77.92
2020	\$96.60	\$58.56	2031	\$130.95	\$79.71
2021	\$100.00	\$60.70	2032	\$133.93	\$81.51
2022	\$104.14	\$63.34			

4. Estimated Annual Avoided Emissions Costs (includes CO₂) (Source: Public Service Resource Planning)

In the latest RESA filings, the base-case assumed zero cost for CO₂ emissions. For this reason, this value is set to \$0 for all future years.

Gas Programs

In order to determine the cost-effectiveness of its gas programs, Public Service must calculate the avoided commodity cost of gas, avoided capacity costs and any avoided variable O&M costs associated with the gas energy efficiency savings. Below are tables showing the avoided cost assumptions used in this Plan.

1. Estimated Commodity Cost of Gas (Source: Public Service Gas Resource Planning)

The following table outlines the current gas price forecast as of April 2011 using a market snapshot for short-term prices and a quantitative average of projections from well-known forecasting services for the long-term forecast prices.

Year	\$/Dth	Year	\$/Dth
2012	\$4.89	2023	\$8.49
2013	\$5.30	2024	\$8.87
2014	\$5.66	2025	\$9.11
2015	\$6.14	2026	\$9.07
2016	\$6.50	2027	\$9.14
2017	\$6.64	2028	\$9.42

2018	\$6.90	2029	\$9.73
2019	\$7.19	2030	\$10.07
2020	\$7.45	2031	\$10.31
2021	\$7.75	2032	\$10.55
2022	\$8.11		

2. Estimated Avoided Variable O&M Costs (Source: Public Service Pricing and Planning)

The company used the following value provided by the Company’s Pricing and Planning department to determine variable O&M costs avoided with a reduction in gas usage.

Year	\$/Dth
2012-2030	\$0.05

4. Estimated Annual Avoided Reservation Costs (used to estimate capacity savings – Peak Day Dth savings estimated as 1% of annual Dth savings) (Source: Public Service Gas Resource Planning)

The following annual avoided reservation costs was used to determine the cost of service to transport incremental gas supplies to the metropolitan Denver area. The Company uses the CIG firm transportation rate to estimate this cost.

Year	\$/Dth
2012-2030	\$56.37

Avoided Cost Methodology Change

The 2012-2013 DSM Plan included a change in methodology to determine the avoided costs used to calculate generation capacity and marginal energy benefits. Decision No. R11-1326 ordered that a comparison be made to determine the effect of this change in methodology. The Settlement Agreement approved in this order, under settlement term 10 at pages 17 and 18 states:

“10. ...When filing the annual status report of 2012 results on April 1, 2013, and the 2013 results on April 1, 2014, the Company will include a comparison of the resulting net benefits and TRC tests using the former avoided cost methodology and the updated methodology approved for this Plan.”

The table on the following page shows the comparison of the resulting net benefits and TRC tests using the former avoided cost methodology (2011 Method) and the updated methodology approved for this plan (2012-2013 Method):

Table 17: Avoided Cost Methodology Comparison

2012	Generation Capacity Benefits			Marginal Energy Benefits			MTRC Net Benefits			MTRC Ratio		
	2011 Method	2012-2013 Method	Change	2011 Method	2012-2013 Method	Change	2011 Method	2012-2013 Method	Change	2011 Method	2012-2013 Method	Change
Business Program												
Compressed Air Efficiency	738,776	738,776	0	820,493	1,027,750	207,257	620,271	827,528	207,257	1.37	1.49	0.12
Computer Efficiency	223,140	223,140	0	381,437	449,281	67,844	542,958	610,803	67,844	3.33	3.63	0.29
Cooling Efficiency	2,691,600	2,474,224	-217,376	1,849,157	1,948,153	98,996	2,572,429	2,454,049	-118,380	1.63	1.60	-0.03
Custom Efficiency	507,433	507,433	0	1,031,757	1,248,762	217,005	-172,569	44,436	217,005	0.92	1.02	0.10
Data Center Efficiency	651,783	651,783	0	1,428,745	1,843,188	414,442	160,042	574,484	414,442	1.05	1.20	0.14
Energy Management Systems	270,623	270,623	0	1,897,342	2,909,136	1,011,794	811,914	1,823,708	1,011,794	1.29	1.66	0.37
Heating Efficiency												
Lighting Efficiency	33,941,289	33,941,289	0	42,030,776	49,883,342	7,852,566	61,570,528	69,423,094	7,852,566	2.50	2.70	0.19
Motor & Drive Efficiency	5,913,041	5,913,041	0	10,343,205	12,330,050	1,986,845	12,206,924	14,193,769	1,986,845	2.09	2.27	0.18
New Construction	8,516,529	8,194,187	-322,342	9,221,884	11,087,305	1,865,421	8,382,421	9,925,500	1,543,079	1.55	1.65	0.10
Process Efficiency	792,983	792,983	0	2,851,589	3,397,923	546,334	1,951,595	2,497,928	546,334	1.61	1.78	0.17
Recommissioning	614,374	614,374	0	947,862	1,335,661	387,800	1,073,689	1,461,489	387,800	1.99	2.35	0.36
Segment Efficiency	247,317	247,317	0	128,875	151,802	22,927	198,900	221,827	22,927	1.60	1.67	0.07
Self-Directed Custom Efficiency	1,951,902	1,951,902	0	3,995,803	5,095,830	1,100,027	4,708,959	5,808,986	1,100,027	2.44	2.77	0.34
Small Business Lighting	16,081,465	16,081,465	0	15,742,537	19,035,855	3,293,318	21,907,875	25,201,193	3,293,318	2.01	2.17	0.15
Standard Offer	1,289,902	1,289,902	0	1,511,870	1,991,155	479,285	-344,843	134,442	479,285	0.92	1.03	0.11
Business Program Energy Efficiency Total	74,432,157	73,892,438	-539,718	94,183,332	113,735,193	19,551,861	116,191,093	135,203,235	19,012,143	2.01	2.18	0.17
Business Program Total	74,432,157	73,892,438	-539,718	94,183,332	113,735,193	19,551,861	116,191,093	135,203,235	19,012,143	2.01	2.18	0.17
Residential Program												
ENERGY STAR New Homes	630,454	630,454	0	1,008,899	987,398	-21,500	1,070,156	1,048,655	-21,500	1.95	1.93	-0.02
Evaporative Cooling Rebates	8,445,473	8,445,473	0	1,683,588	1,630,367	-53,221	18,064,144	18,010,922	-53,221	7.82	7.80	-0.02
Heating System Rebates												
High Efficiency Air Conditioning	2,847,037	2,495,373	-351,664	1,100,435	1,126,587	26,152	1,589,638	1,264,125	-325,513	1.31	1.25	-0.06
Home Lighting & Recycling	12,053,094	12,053,094	0	24,048,603	32,331,011	8,282,407	32,069,996	40,352,404	8,282,407	3.15	3.70	0.55
Home Performance with ENERGY STAR	174,022	157,508	-16,514	154,463	175,524	21,062	221,799	226,347	4,548	1.97	1.99	0.02
Insulation Rebate	992,665	873,799	-118,866	470,964	473,766	2,802	1,388,071	1,272,007	-116,064	3.73	3.50	-0.23
Refrigerator Recycling	503,432	503,432	0	944,716	1,277,151	332,434	1,106,176	1,438,610	332,434	2.23	2.60	0.37
School Education Kits	517,215	517,215	0	1,164,189	1,617,528	453,339	508,136	961,475	453,339	1.26	1.49	0.23
Showerheads	0	0	0	117,307	147,701	30,394	232,239	262,633	30,394	6.33	7.03	0.70
Water Heater Rebate	11,811	11,811	0	26,027	32,195	6,168	-42,841	-36,673	6,168	0.58	0.64	0.06
Residential Program Energy Efficiency Total	26,175,203	25,688,159	-487,044	30,719,191	39,799,228	9,080,036	56,207,513	64,800,505	8,592,992	3.64	4.04	0.40
Load Management Program - Residential Saver's Switch	22,290,160	22,290,160	0	303,608	230,393	-73,216	23,440,957	23,367,741	-73,216	2.91	2.91	-0.01
Residential Program Total	48,465,363	47,978,319	-487,044	31,022,799	40,029,620	9,006,821	79,648,470	88,168,246	8,519,776	3.37	3.63	0.25
Low-Income Program												
Energy Savings Kit	101,396	101,396	0	303,849	422,169	118,320	457,054	575,374	118,320	2.64	3.07	0.43
Multi-Family Weatherization	155,039	155,039	0	332,835	432,287	99,453	-397,500	-298,047	99,453	0.70	0.77	0.08
Non-Profit Energy Efficiency	542,406	542,406	0	451,267	586,108	134,841	369,880	504,720	134,841	1.25	1.34	0.09
Single-Family Weatherization	182,264	182,264	0	806,798	923,824	117,026	101,303	218,329	117,026	1.06	1.14	0.07
Low-Income Program Total	981,105	981,105	0	1,894,749	2,364,388	469,639	530,738	1,000,377	469,639	1.11	1.21	0.10
DSM Product Development												
Energy Feedback Pilot	404,406	404,406	0	493,508	547,937	54,429	468,932	523,361	54,429	1.78	1.87	0.09
In-Home Smart Device Pilot												
Electric Vehicle Charging Station Pilot												
Building Code Support Pilot												
PORTFOLIO TOTAL	124,283,030	123,256,268	-1,026,763	127,594,388	156,677,138	29,082,750	191,593,353	219,649,340	28,055,987	2.21	2.38	0.18
PORTFOLIO TOTAL % Change			-0.83%			22.79%			14.64%			8.01%