



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

2011

Docket No. 10A-471EG
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2011 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 2011 Colorado Demand-Side Management (DSM) Annual Status Report (“Status Report”) to the Colorado Public Utilities Commission (“Commission”) at the conclusion of the 2011 DSM Plan. In this filing, Public Service will report on its 2011 electric and natural gas savings achievements of approximately 312 GWh and 483,090 Dth for its electric and natural gas DSM Programs.

The electric savings of 312 GWh are a significant accomplishment equaling 130% of the Commission ordered goal of 240 GWh and 122% of the 256 GWh savings target for 2011 agreed to as part of the Settlement entered into in Docket No. 10A-471EG. The gas savings of 483,090 Dth were also a significant accomplishment, as we achieved 131% of our approved goal of 368,227 Dth. To achieve these savings, the Company spent a total of \$80.9 million (\$63.8 million – electric, \$17.1 million – natural gas) on its electric and natural gas programs, thereby spending less than the approved electric budget of \$68.5 million and spending slightly more than the approved gas budget of \$15.8 million. Below in Figures 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

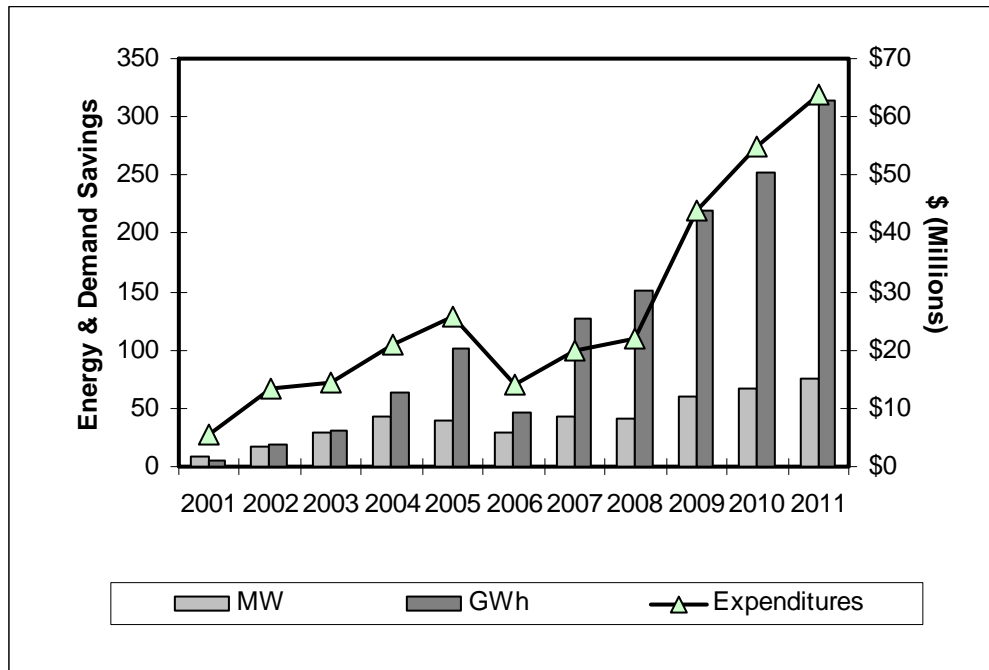
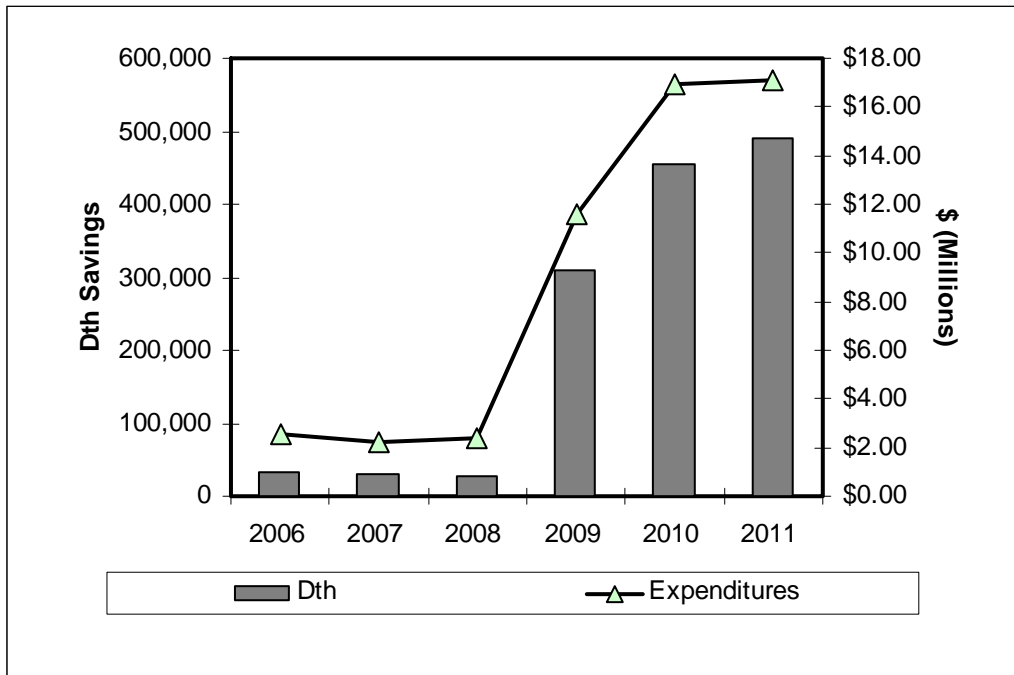


Figure 2: Historical Natural Gas Program Savings and Expenditures



History of 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 resources 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 (“E\$P”) 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 320MW

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 an 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 providing such funding mechanisms. Such efforts will result in an improvement in the 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 install 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 to 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 related to its gas and electric energy efficiency DSM programs. Hearings for the Application were held early in 2011. Following the hearing the Commission issued on April 26, 2011, Decision Nos. C11-0442 approving Public Service's Application 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 Approved Stipulation and Settlement 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. February 28, 2012 Public Service filed the updated 2012/2013 DSM Plan.

High-Level Achievements

In 2011, Public Service's electric portfolio achieved demand savings of 75,659 generator kW (107% of goal) and energy savings of 311,643,169 generator kWh (122% of goal) at a cost of \$63,823,098 (93% of goal). The gas portfolio achieved savings of 483,090 Dth (131% of goal) at a cost of \$17,091,491 (108% of goal). These achievements have provided electric net benefits of approximately \$226 million and gas net benefits of \$9.4 million. Based on these achievements and net benefits, the Company has calculated an associated financial incentive of \$18.7 million for its electric portfolio and \$2.3M for its gas portfolio. This includes \$1.8 million for the incentive and an acknowledgement of lost revenues associated with gas DSM programs of \$420,870. The incentive calculations are shown in more detail in the Financial Incentive Calculations section of this Report.

Public Service built on the success of the 2010 program year, including very strong performance in several products, including: Lighting Efficiency, Motor & Drive Efficiency, Evaporative Cooling Rebates, and Insulation Rebates. 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 2.85 and 1.21, respectively, compared to goal TRC ratios of 2.64 and 1.16. Tables 1a and 1b below compare at a segment level the forecasted budgets, savings goals, and expected cost-effectiveness for 2011 to the actual expenditures, realized savings, and actual 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 2.85 to 2.47 and 1.21 to 1.15, respectively.

Table 1a: High-Level Electric Goals and Achievements for 2011

2011	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	\$36,334,530	\$34,103,558	35,447	33,639	161,706,399	179,143,313	2.71	2.64
Residential Segment	\$21,712,770	\$21,020,685	33,055	39,722	65,302,859	109,612,139	3.12	4.67
Low-Income Segment	\$2,377,425	\$2,317,014	881	983	13,068,915	11,848,032	2.36	2.00
Indirect Segment	\$8,109,209	\$6,381,841	1,379	1,314	15,829,466	11,039,684		
2011 TOTAL	\$68,533,933	\$63,823,098	70,762	75,659	255,907,639	311,643,169	2.64	2.85

Table 1b: High-Level Natural Gas Goals and Achievements for 2011

2011	Gas Budget	Gas Actual Spend	Goal Dth	Net Realized Dth	Goal Modified TRC Ratio	Achieved Modified TRC Ratio
Business Segment	\$2,695,332	\$2,188,525	84,735	81,652	1.33	1.26
Residential Segment	\$5,137,459	\$8,320,589	170,279	299,944	1.29	1.21
Low-Income Segment	\$4,403,546	\$4,327,466	77,528	101,494	1.28	1.52
Indirect Segment	\$3,570,838	\$2,254,910	35,685	0		
2011 TOTAL	\$15,807,175	\$17,091,491	368,227	483,090	1.16	1.21

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

	Electric	Gas
Modified TRC Benefits w/ Adder	\$348,190,604	\$55,022,171
Modified TRC Costs	\$122,205,834	\$45,581,780
Modified TRC Ratio	2.85	1.21
Modified TRC Benefits w/ Adder	\$348,190,604	\$55,022,171
Incentive	\$18,746,647	\$1,888,078
Acknowledgement of Load Revenue (ALR)	N/A	\$420,870
Modified TRC Costs w/ Incentive & ALR	\$140,952,481	\$47,890,728
Modified TRC Ratio w/ Incentive & ALR	2.47	1.15

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 to 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 measure, 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 2011. Detailed programmatic changes made through 60/90-Day Notices are described in the "Changes in 2011" section of the pertinent product descriptions. A description of these changes can also be found at: www.xcelenergy.com.

Table 2: 60/90-Day Notices Submitted in 2011

Program 60-Day Notice	Changes Made	Effective Date
ENERGY STAR Retailer Incentive Pilot	Product Measures Added, Technical Modifications	3-2011

Energy Management Systems	Product Description	3-2011
ENERGY STAR New Homes	Product Description	5-2011
Insulation Rebates	Evaluation of Additional Product Measures	5-2011
Compressed Air Efficiency	Product Measures Added, Technical Modifications	5-2011
Cooling Efficiency	Evaluation of Additional Product Measures	6-2011
Computer Efficiency	New Product	6-2011
Lighting Efficiency	Product Measures, Technical Modifications	7-2011
Cooling Efficiency	Product Measures, Technical Modifications	8-2011
Home Performance with ENERGY STAR	Evaluation of Additional Product Measures	8-2011
Motor & Drive Efficiency	Product Evaluation Recommendations, Technical Modifications	9-2011
Evaporative Cooling Rebates	Product Evaluation Recommendations, Technical Modifications	9-2011
Recommissioning	Product Evaluation Recommendations, Technical Modifications	9-2011
Program 90-Day Notice	Changes Made	Effective Date
Central Air Conditioning Tune-Up	Discontinuation of Product	9-2011

Program Achievements and Expenditures

The following Tables 3a, 3b, 4a, and 4b provide the goals and budgets approved in the 2011 DSM Plan as well as Public Service's 2011 achievements, actual spending, and cost-effectiveness results by product.

The significant drop in natural gas prices has had a negative impact on the cost-effectiveness of some of our products. In order to allow for continuation of these products we have made the following changes which were approved in the 2011 Plan:

- Adopted internal guidelines that will minimize non-cost-effective measures and products while we recognize the need for exceptions due to bundled and whole house programs.
- Analyzed cost-effectiveness based on a program level. However, former "segments" were now defined as "programs". Therefore, for cost effectiveness, there are six different programs:
 1. Business Electric

2. Business Gas
3. Residential Electric
4. Residential Gas
5. Low Income Electric
6. Low Income Gas

Some of the products that comprise the six programs listed above did not pass the modified Total Resource Cost (TRC) Test in 2011. 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.

- Data Center Efficiency – Electric – The program did not pass because only study rebates were paid, which did not have direct impacts in 2011. In an effort to build project pipeline and address long project lead times, we have relaxed some of the program participation guidelines to allow greater flexibility and better serve customer needs. For 2012, individual projects can now be analyzed without a study. Also, the trade qualification process has been simplified to a one page application with work samples to become qualified to participate in program studies where customers receive funding.
- Standard Offer – Electric & Gas – Standard Offer failed TRC due to falling natural gas prices, which led to lower system benefits to the product. The 3 projects in the product were originally evaluated using 2010 avoided costs and had MTRC values >1.0, however the reduction in system benefits due to lower natural gas prices in 2011 was enough to bring the product MTRC < 1.0. We continue to see interest in Standard Offer and have a good pipeline of projects that we believe will drive better cost effectiveness.
- Home Performance with ENERGY STAR – Electric – The Home Performance with ENERGY STAR program failed the TRC test for electric the third year in a row. This primarily gas driven product has compact fluorescents lights (CFLs) as the primary electric measure to successfully complete the program. Customers are recommended to install 20 bulbs per home. As CFLs are becoming more popular and offered incentives in our Home Lighting program, many customers already had the CFL measure previously completed. As a result, customers are not installing as many CFLs per home as forecasted in 2011. The Company has decided to continue the program as it's been redesigned for 2012 and 2013 program years.
- Segment Efficiency – Gas – Segment Efficiency did not pass the TRC test due to a small amount of expense while no projects were completed. The Company expects natural gas participation in the future.
- Water Heating Rebate – Gas – The product did not pass due to a combination of factors. The product had higher participation than expected in the less efficient storage tank water heater measure. It also had lower than expected participation in the higher efficiency storage tank water heater and tankless water heater. This disparity between anticipated and actual market acceptance of the available technologies along with falling natural gas prices drove the MTRC below 1.0.

- Recommissioning - The Recommissioning gas product was not cost effective in 2011 primarily due to a higher than anticipated number of gas studies paid in the program year compared to the completed projects submitted. We anticipate that during 2012 that there will be a greater number of completed projects.

Table 3a: 2011 Electric Program Goals and Budgets

2011	Electric Participants	Electric Budget	Customer kW	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Business Program						
Heating Efficiency	0	0	0	0	0	
Compressed Air Efficiency	75	\$1,100,762	819	712	4,639,368	2.19
Computer Efficiency	0	\$0	0	0	0	-
Cooling Efficiency	350	\$3,567,538	4,877	2,941	7,809,971	1.92
Custom Efficiency	50	\$2,224,028	2,071	1,595	8,682,818	1.80
Data Center Efficiency	14	\$840,317	470	383	3,972,363	2.11
Energy Management Systems	50	\$1,581,520	922	82	7,327,993	1.70
Lighting Efficiency	946	\$7,058,065	15,524	11,891	48,120,245	3.27
Motor & Drive Efficiency	1,100	\$2,889,440	4,955	3,616	20,385,702	4.00
New Construction	60	\$7,039,703	7,829	7,033	26,582,420	3.41
Process Efficiency	4	\$1,197,706	1,606	1,231	7,782,869	2.53
Recommissioning	53	\$1,181,825	861	481	4,999,877	1.05
Segment Efficiency	124	\$1,751,712	1,463	897	6,614,412	1.83
Self-Directed Custom Efficiency	13	\$1,014,859	1,366	1,232	5,625,816	3.59
Small Business Lighting	200	\$3,350,397	1,401	1,268	4,626,514	1.68
Standard Offer	60	\$1,536,658	2,232	2,087	4,536,030	2.36
Business Program Energy Efficiency Total	3,099	\$36,334,530	46,397	35,447	161,706,399	2.71
Business Program Total	3,099	\$36,334,530	46,397	35,447	161,706,399	2.71
Residential Program						
Energy Efficient Showerheads	5,231	\$95,589	10,462	0	1,033,159	3.73
ENERGY STAR New Homes	1,400	\$245,845	77	45	401,622	1.07
Evaporative Cooling Rebate	3,000	\$1,517,260	5,067	3,194	1,567,480	4.05
Heating System Rebate	0	\$0	0	0	0	
High Efficiency Air Conditioning	1,785	\$1,940,949	3,061	2,548	2,181,463	1.34
Home Lighting & Recycling	342,855	\$3,790,461	54,994	6,686	55,746,536	3.34
Home Performance with ENERGY STAR	100	\$59,270	185	29	153,298	1.77
Insulation Rebate	1,277	\$23,809	288	161	193,812	8.97
Refrigerator Recycling	1,500	\$488,928	209	138	1,016,471	1.06
School Education Kits	18,318	\$571,975	10,861	109	2,193,015	1.18
Water Heating Rebate	200	\$118,982	448	59	519,966	1.57
Residential Program Energy Efficiency Total	375,666	\$8,853,068	85,651	12,970	65,006,821	2.63
Load Management Program - Residential Saver's Switch	19,500	\$12,859,703	58,500	20,085	296,038	3.71
Residential Program Total	395,166	\$21,712,770	144,151	33,055	65,302,859	3.12
Low-Income Program						
Energy Savings Kit	7,975	\$758,578	25,438	437	7,579,429	3.76
Multi-Family Weatherization	888	\$164,619	347	43	504,571	1.55
Non-Profit Energy Efficiency	322	\$312,843	433	68	722,935	1.39
Single-Family Weatherization	2,545	\$1,141,385	3,355	333	4,261,979	1.88
Low-Income Program Total	11,730	\$2,377,425	29,574	881	13,068,915	2.36
Indirect Products & Services						
Education/Market Transformation						
Business Energy Analysis	400	\$1,045,914	0	0	0	
Customer Behavioral Change - Business	1,385	\$153,756	0	0	0	
Customer Behavioral Change - Residential	34,000	\$982,682	0	0	0	
Residential Home Energy Audit	3,520	\$602,313	0	0	0	
Education/Market Transformation Total	39,305	\$2,784,665	0	0	0	
Planning and Research						
DSM Planning & Administration	0	\$283,167	0	0	0	
Program Evaluations	0	\$265,162	0	0	0	
Measurement & Verification	0	\$79,142	0	0	0	
DSM Market Research	0	\$263,243	0	0	0	
DSM Product Development	0	\$0	0	0	0	
Product Development - General	0	\$950,056	0	0	0	
Central AC Tune-up Pilot	1,000	\$277,566	344	254	262,783	1.19
Energy Feedback Pilot	50,000	\$329,450	788	120	7,482,526	1.00
ENERGY STAR Retailer Incentive Pilot	50,000	\$2,282,689	5,809	1,006	8,084,157	1.58
In-Home Smart Device Pilot	0	\$594,068	0	0	0	
SmartGridCity Pricing Pilot	0	\$0	0	0	0	
DSM Product Development Total	101,000	\$4,433,829	6,942	1,379	15,829,466	
Planning and Research Total	101,000	\$5,324,544	6,942	1,379	15,829,466	
Indirect Products & Services Total	140,305	\$8,109,209	6,942	1,379	15,829,466	
PORTFOLIO TOTAL	550,300	\$68,533,933	227,064	70,762	255,907,639	2.64

Table 3b: 2011 Electric Program Achievements and Expenditures

2011	Electric Participants	Electric Spend	Customer kW	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Business Program						
Heating Efficiency	0	0	0	0	0	
Compressed Air Efficiency	58	\$732,757	809	466	3,102,645	2.05
Computer Efficiency	0	\$1,036	0	0	0	
Cooling Efficiency	213	\$1,513,634	2,172	1,573	2,495,174	2.12
Custom Efficiency	55	\$2,036,510	1,559	917	6,927,582	1.59
Data Center Efficiency	8	\$539,436	0	0	0	0.37
Energy Management Systems	37	\$1,004,197	1,139	136	8,236,938	1.37
Lighting Efficiency	1,925	\$9,297,255	19,537	14,298	69,138,959	3.46
Motor & Drive Efficiency	555	\$4,137,089	6,844	3,710	24,369,680	3.69
New Construction	46	\$4,714,667	6,846	5,511	22,879,418	2.37
Process Efficiency	7	\$1,365,606	1,303	927	6,496,684	3.03
Recommissioning	46	\$956,562	914	435	5,551,351	1.40
Segment Efficiency	15	\$331,559	152	18	1,090,099	1.04
Self-Directed Custom Efficiency	2	\$977,629	1,035	428	7,666,147	2.05
Small Business Lighting	777	\$5,887,611	5,501	4,663	18,475,290	2.42
Standard Offer	10	\$608,010	693	558	2,713,345	0.82
Business Program Energy Efficiency Total	3,754	\$34,103,558	48,503	33,639	179,143,313	2.64
Business Program Total	3,754	\$34,103,558	48,503	33,639	179,143,313	2.64
Residential Program						
Energy Efficient Showerheads	6,022	\$61,519	108,393	0	1,019,241	5.70
ENERGY STAR New Homes	2,114	\$897,101	566	359	1,785,494	1.73
Evaporative Cooling Rebate	3,481	\$1,487,936	9,819	5,159	2,552,623	10.35
Heating System Rebate	0	\$0	0	0	0	
High Efficiency Air Conditioning	1,655	\$1,795,963	2,548	2,151	1,734,126	1.24
Home Lighting & Recycling	399,205	\$3,404,888	97,307	11,831	96,600,049	4.87
Home Performance with ENERGY STAR	108	\$81,850	106	27	90,546	0.66
Insulation Rebate	4,984	\$172,288	1,878	1,360	1,357,872	2.40
Refrigerator Recycling	3,163	\$670,168	443	280	2,124,083	1.60
School Education Kits	18,308	\$358,478	10,855	114	2,010,791	1.56
Water Heating Rebate	18	\$12,722	45	6	52,822	1.47
Residential Program Energy Efficiency Total	439,058	\$8,942,914	231,961	21,286	109,327,647	5.76
Load Management Program - Residential Saver's Switch	18,626	\$12,077,770	55,878	18,437	284,493	3.68
Residential Program Total	457,684	\$21,020,685	287,839	39,722	109,612,139	4.67
Low-Income Program						
Energy Savings Kit	19,774	\$601,265	22,859	342	6,132,146	3.89
Multi-Family Weatherization	1,141	\$111,347	554	47	699,926	1.99
Non-Profit Energy Efficiency	40	\$314,305	336	281	1,173,520	1.33
Single-Family Weatherization	3,448	\$1,290,098	2,640	313	3,842,440	1.68
Low-Income Program Total	24,403	\$2,317,014	26,389	983	11,848,032	2.00
Indirect Products & Services						
Education/Market Transformation						
Business Energy Analysis	438	\$885,488	0	0	0	
Customer Behavioral Change - Business	1,880	\$139,827	0	0	0	
Customer Behavioral Change - Residential	67,616	\$1,043,250	0	0	0	
Residential Home Energy Audit	15,331	\$532,946	0	0	0	
Education/Market Transformation Total	85,265	\$2,601,512	0	0	0	
Planning and Research						
DSM Planning & Administration	0	\$367,151	0	0	0	
Program Evaluations	0	\$145,962	0	0	0	
Measurement & Verification	0	-\$5,852	0	0	0	
DSM Market Research	0	\$121,797	0	0	0	
DSM Product Development	0	\$0	0	0	0	
Product Development - General	0	\$233,993	0	0	0	
Central AC Tune-up Pilot	0	\$23,730	0	0	0	-
Energy Feedback Pilot	47,958	\$348,864	0	0	0	-
ENERGY STAR Retailer Incentive Pilot	55,698	\$1,552,579	8,367	1,314	11,039,684	1.61
In-Home Smart Device Pilot	0	\$992,105	0	0	0	
SmartGridCity Pricing Pilot	0	\$0	0	0	0	
DSM Product Development Total	103,656	\$3,151,271	8,367	1,314	11,039,684	
Planning and Research Total	103,656	\$3,780,329	8,367	1,314	11,039,684	
Indirect Products & Services Total	188,921	\$6,381,841	8,367	1,314	11,039,684	
PORTFOLIO TOTAL	674,762	\$63,823,098	371,097	75,659	311,643,169	2.85

Table 4a: 2011 Natural Gas Program Goals and Budgets

2011	Gas Participants	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Program						
Heating Efficiency	233	\$1,534,345	44,012	28,685	\$1,063,687	1.29
Compressed Air Efficiency	0	\$0	0			
Cooling Efficiency	0	\$0	0			
Custom Efficiency	10	\$476,763	9,637	20,214	\$142,911	1.18
Data Center Efficiency	0	\$0	0			
Energy Management Systems	5	\$86,000	2,245	26,106	\$23,662	1.19
Lighting Efficiency	0	\$0	0			
Motor & Drive Efficiency	0	\$0	0			
New Construction	13	\$321,098	17,532	54,600	\$607,910	1.51
Process Efficiency	3	\$123,332	4,301	34,874	\$94,104	1.57
Recommissioning	9	\$72,967	2,199	30,134	\$72	1.00
Segment Efficiency	9	\$55,661	3,627	65,161	\$107,455	1.96
Self-Directed Custom Efficiency	0	\$0	0			
Small Business Lighting	0	\$0	0			
Standard Offer	30	\$25,166	1,181	46,946	\$17,378	1.31
Business Program Energy Efficiency Total	312	\$2,695,332	84,735	31,438	\$2,057,180	1.33
Business Program Total	312	\$2,695,332	84,735	31,438	\$2,057,180	1.33
Residential Program						
Energy Efficient Showerheads	26,658	\$292,221	25,297	86,569	\$1,379,462	4.75
ENERGY STAR New Homes	1,400	\$2,207,711	39,618	17,945	\$104,641	1.02
Evaporative Cooling Rebate	0	\$0	0			
Heating System Rebate	6,500	\$1,284,228	54,093	42,121	\$1,845,793	1.49
High Efficiency Air Conditioning	0	\$0	0			
Home Lighting & Recycling	0	\$0	0			
Home Performance with ENERGY STAR	100	\$177,733	4,980	28,018	\$60,164	1.14
Insulation Rebate	2,935	\$490,372	24,063	49,070	\$297,732	1.13
Refrigerator Recycling	0	\$0	0			
School Education Kits	18,318	\$523,824	14,740	28,139	\$399,544	1.50
Water Heating Rebate	2,300	\$161,370	7,488	46,406	-\$221,474	0.78
Residential Program Energy Efficiency Total	58,211	\$5,137,459	170,279	33,145	\$3,865,862	1.29
Load Management Program - Residential Saver's Switch	0	\$0	0			
Residential Program Total	58,211	\$5,137,459	170,279	33,145	\$3,865,862	1.29
Low-Income Program						
Energy Savings Kit	14,025	\$677,008	30,597	45,195	\$1,169,916	2.50
Multi-Family Weatherization	940	\$602,448	6,788	11,267	\$141,828	1.13
Non-Profit Energy Efficiency	868	\$658,920	6,972	10,581	\$139,929	1.11
Single-Family Weatherization	1,455	\$2,465,171	33,171	13,456	\$673,363	1.15
Low-Income Program Total	17,288	\$4,403,546	77,528	17,606	\$2,125,035	1.28
Indirect Products & Services						
Education/Market Transformation	0	\$0	0			
Business Energy Analysis	100	\$190,109	0	0		
Customer Behavioral Change - Business	593	\$69,324	0	0		
Customer Behavioral Change - Residential	34,000	\$918,294	0	0		
Residential Home Energy Audit	3,960	\$697,548	0	0		
Education/Market Transformation Total	38,653	\$1,875,275	0	0		
Planning and Research	0	\$0	0			
DSM Planning & Administration	0	\$166,721	0	0		
Program Evaluations	0	\$665,162	0	0		
Measurement & Verification	0	\$39,188	0	0		
DSM Market Research	0	\$263,243	0	0		
DSM Product Development	0	\$0	0			
Product Development - General	0	\$365,638	0	0		
Central AC Tune-up Pilot	0	\$0	0			
Energy Feedback Pilot	50,000	\$195,610	35,685	182,429	\$33,596	1.17
ENERGY STAR Retailer Incentive Pilot	0	\$0	0			
In-Home Smart Device Pilot	0	\$0	0			
SmartGridCity Pricing Pilot	0	\$0	0			
DSM Product Development Total	50,000	\$561,248	35,685	63,582		
Planning and Research Total	50,000	\$1,695,562	35,685	21,046		
Indirect Products & Services Total	88,653	\$3,570,838	35,685	9,993		
PORTFOLIO TOTAL	164,464	\$15,807,175	368,227	23,295	\$4,856,445	1.16

Table 4b: 2011 Natural Gas Program Achievements and Expenditures

2011	Gas Participants	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Program						
Heating Efficiency	249	\$1,346,930	35,258	26,177	\$367,627	1.10
Compressed Air Efficiency	0	\$0	0			
Cooling Efficiency	0	\$0	0			
Custom Efficiency	15	\$247,795	12,431	50,166	\$414,215	1.46
Data Center Efficiency	0	\$0	0			
Energy Management Systems	11	\$59,784	5,514	92,235	\$25,792	1.08
Lighting Efficiency	0	\$0	0			
Motor & Drive Efficiency	0	\$0	0			
New Construction	22	\$439,313	24,977	56,856	\$1,029,085	1.66
Process Efficiency	0	\$8,678	0	0	-\$8,678	-
Recommissioning	4	\$54,250	3,472	63,992	-\$21,809	0.89
Segment Efficiency	4	\$9,357	0	0	-\$9,982	(0.07)
Self-Directed Custom Efficiency	0	\$0	0			
Small Business Lighting	0	\$0	0			
Standard Offer	0	\$22,417	0	0	-\$13,750	0.39
Business Program Energy Efficiency Total	305	\$2,188,525	81,652	37,309	\$1,782,499	1.26
Business Program Total	305	\$2,188,525	81,652	37,309	\$1,782,499	1.26
Residential Program						
Energy Efficient Showerheads	34,124	\$287,944	27,716	96,253	\$1,647,210	5.58
ENERGY STAR New Homes	3,369	\$4,459,987	99,994	22,420	\$2,004,656	1.16
Evaporative Cooling Rebate	0	\$0	0			
Heating System Rebate	5,815	\$1,115,221	47,627	42,706	\$1,627,931	1.49
High Efficiency Air Conditioning	0	\$0	0			
Home Lighting & Recycling	0	\$0	0			
Home Performance with ENERGY STAR	108	\$162,683	3,223	19,811	\$73,328	1.27
Insulation Rebate	6,971	\$1,669,249	104,718	62,734	\$462,706	1.04
Refrigerator Recycling	0	\$0	0			
School Education Kits	18,308	\$456,013	11,520	25,263	\$264,558	1.36
Water Heating Rebate	2,228	\$169,493	5,145	30,357	-\$125,272	0.82
Residential Program Energy Efficiency Total	70,923	\$8,320,589	299,944	36,048	\$5,955,118	1.21
Load Management Program - Residential Saver's Switch	0	\$0	0			
Residential Program Total	70,923	\$8,320,589	299,944	36,048	\$5,955,118	1.21
Low-Income Program						
Energy Savings Kit	26,070	\$576,459	38,839	67,375	\$1,875,908	3.69
Multi-Family Weatherization	433	\$563,889	7,577	13,436	\$116,702	1.11
Non-Profit Energy Efficiency	40	\$586,002	7,994	13,642	\$112,983	1.11
Single-Family Weatherization	2,894	\$2,601,116	47,084	18,102	\$1,852,091	1.39
Low-Income Program Total	29,437	\$4,327,466	101,494	23,453	\$3,957,685	1.52
Indirect Products & Services						
Education/Market Transformation						
Business Energy Analysis	302	\$163,623	0	0		
Customer Behavioral Change - Business	0	\$68,162	0	0		
Customer Behavioral Change - Residential	0	\$643,073	0	0		
Residential Home Energy Audit	2,673	\$541,463	0	0		
Education/Market Transformation Total	2,975	\$1,416,321	0	0		
Planning and Research						
DSM Planning & Administration	0	\$98,078	0	0		
Program Evaluations	0	\$375,307	0	0		
Measurement & Verification	0	\$3,731	0	0		
DSM Market Research	0	\$97,026	0	0		
DSM Product Development	0	\$0	0	0		
Product Development - General	0	\$58,277	0	0		
Central AC Tune-up Pilot	0	\$0	0	0		
Energy Feedback Pilot	47,958	\$206,170	0	0	-\$206,170	-
ENERGY STAR Retailer Incentive Pilot	0	\$0	0	0		
In-Home Smart Device Pilot	0	\$0	0	0		
SmartGridCity Pricing Pilot	0	\$0	0	0		
DSM Product Development Total	47,958	\$264,447	0	0		
Planning and Research Total	47,958	\$838,589	0	0		
Indirect Products & Services Total	50,933	\$2,254,910	0	0		
PORTFOLIO TOTAL	151,598	\$17,091,491	483,090	28,265	\$9,440,391	1.21

The following Table 5 provides the CO₂ and SO_x emissions avoided for 2011 and cumulatively over the lifetime for each product.

Table 5: 2011 Emissions Avoided

2011	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								
Heating Efficiency		2,169	2,169			38,155	38,155	
Compressed Air Efficiency	2,353		2,353	1,578	34,075		34,075	18,099
Cooling Efficiency	1,892		1,892	1,269	32,534		32,534	16,864
Custom Efficiency	5,253	782	6,035	3,524	82,345	14,075	96,420	43,998
Data Center Efficiency	0		0	0	0		0	0
Energy Management Systems	6,246	347	6,593	4,190	58,497	3,469	61,966	28,743
Lighting Efficiency	52,429		52,429	35,174	751,932		751,932	399,377
Motor & Drive Efficiency	18,480		18,480	12,398	319,462		319,462	165,590
New Construction	17,350	1,477	18,826	11,640	299,846	29,537	329,383	155,423
Process Efficiency	4,926		4,926	3,305	83,087		83,087	43,848
Recommissioning	4,210	203	4,413	2,824	28,215	1,422	29,636	14,419
Segment Efficiency	827		827	555	7,897		7,897	3,880
Self-Directed Custom Efficiency	5,813	0	5,813	3,900	87,296	0	87,296	46,965
Small Business Lighting	14,010		14,010	9,399	242,128		242,128	125,505
Standard Offer	2,058	0	2,058	1,380	26,622	0	26,622	14,037
Business Program Total	135,846	4,978	140,824	91,137	2,053,937	86,657	2,140,594	1,076,748
Residential Program								
Energy Efficient Showerheads	773	2,615	3,388	519	4,492	15,691	20,182	2,300
ENERGY STAR New Homes	1,354	6,358	7,712	908	21,222	114,450	135,672	11,339
Evaporative Cooling Rebate	1,936		1,936	1,299	18,128		18,128	8,907
Heating System Rebate		3,618	3,618			65,131	65,131	
High Efficiency Air Conditioning	1,315		1,315	882	9,501		9,501	4,797
Home Lighting & Recycling	73,253		73,253	49,144	523,231		523,231	267,402
Home Performance with ENERGY STAR	69	201	269	46	740	3,363	4,103	387
Insulation Rebate	1,030	6,500	7,529	691	13,504	124,960	138,464	7,120
Refrigerator Recycling	1,611		1,611	1,081	11,210		11,210	5,729
School Education Kits	1,525	1,821	3,346	1,023	9,465	10,304	19,768	4,847
Water Heating Rebate	40	334	374	27	473	6,060	6,533	251
Residential Program Energy Efficiency Total	82,904	21,448	104,352	55,619	611,966	339,958	951,924	313,081
Load Management Program - Residential Saver's Switch	216		216	145	2,875		2,875	1,516
Residential Program Total	83,120	21,448	104,568	55,764	614,841	339,958	954,800	314,597
Low-Income Program								
Energy Savings Kit	4,650	4,122	8,772	3,120	35,014	22,310	57,324	17,676
Multi-Family Weatherization	531	457	988	356	3,694	9,139	12,833	1,888
Non-Profit Energy Efficiency	890	468	1,358	597	6,193	9,353	15,547	3,165
Single-Family Weatherization	2,914	2,754	5,668	1,955	25,848	53,581	79,429	12,890
Low-Income Program Total	8,984	7,801	16,786	6,028	70,750	94,383	165,132	35,619
Planning and Research								
DSM Product Development								
Energy Feedback Pilot								
ENERGY STAR Retailer Incentive Pilot	8,371		8,371	5,616	108,255		108,255	57,466
DSM Product Development Total	8,371	0	8,371	5,616	108,255	0	108,255	57,466
Planning and Research Total	8,371	0	8,371	5,616	108,255	0	108,255	57,466
Indirect Products & Services Total	8,371	0	8,371	5,616	108,255	0	108,255	57,466
PORTFOLIO TOTAL	236,322	34,228	270,549	158,545	2,847,783	520,998	3,368,781	1,484,430

* Emissions assumptions: To calculate the avoided CO₂ and SO_x emission resulting from its 2011 electric DSM programs, Public Service used the same emissions intensity (lbs/kWh) used to determine the avoided emissions values in the 2011 DSM Plan. For natural gas, Public Service assumed 117 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 five 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 6a: Electric Program Costs by Budget Category – Budget

2011	Electric Cost Categories - 2011						
	Program Planning & Design	Administration & Program Delivery	Advertising/Promotion/ Customer Ed	Participant Rebates and Incentives	Equipment & Installation	Measurement and Verification	Total
Business Program							
Heating Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Compressed Air Efficiency	\$53,593	\$406,418	\$171,283	\$427,993	\$0	\$41,475	\$1,100,762
Cooling Efficiency	\$68,049	\$421,533	\$267,729	\$2,720,227	\$0	\$90,000	\$3,567,538
Custom Efficiency	\$245,903	\$734,876	\$320,744	\$828,581	\$0	\$93,924	\$2,224,028
Data Center Efficiency	\$56,040	\$121,209	\$256,160	\$356,908	\$0	\$50,000	\$840,317
Energy Management Systems	\$43,101	\$568,944	\$172,056	\$732,254	\$0	\$65,165	\$1,581,520
Lighting Efficiency	\$88,064	\$439,453	\$456,787	\$5,833,580	\$0	\$240,180	\$7,058,065
Motor & Drive Efficiency	\$26,686	\$322,360	\$205,635	\$2,247,617	\$0	\$87,142	\$2,889,440
New Construction	\$13,343	\$2,052,314	\$485,970	\$3,704,405	\$0	\$783,672	\$7,039,703
Process Efficiency	\$133,429	\$622,277	\$32,000	\$350,000	\$0	\$60,000	\$1,197,706
Recommissioning	\$93,386	\$246,298	\$156,485	\$641,773	\$0	\$43,883	\$1,181,825
Segment Efficiency	\$16,011	\$532,586	\$149,385	\$953,740	\$0	\$99,990	\$1,751,712
Self-Directed Custom Efficiency	\$18,680	\$268,755	\$6,452	\$720,972	\$0	\$0	\$1,014,859
Small Business Lighting	\$6,671	\$2,463,941	\$220,673	\$600,420	\$0	\$58,692	\$3,350,397
Standard Offer	\$17,346	\$265,388	\$34,129	\$1,183,795	\$0	\$36,000	\$1,536,658
Business Program Energy Efficiency Total	\$880,302	\$9,466,352	\$2,935,488	\$21,302,265	\$0	\$1,750,123	\$36,334,530
Business Program Total	\$880,302	\$9,466,352	\$2,935,488	\$21,302,265	\$0	\$1,750,123	\$36,334,530
Residential Program							
Energy Efficient Showerheads	\$300	\$23,890	\$54,456	\$14,879	\$0	\$2,064	\$95,589
ENERGY STAR New Homes	\$1,334	\$61,001	\$15,348	\$113,449	\$0	\$54,712	\$245,845
Evaporative Cooling Rebate	\$2,669	\$101,513	\$282,554	\$1,069,000	\$0	\$61,524	\$1,517,260
Heating System Rebate	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High Efficiency Air Conditioning	\$2,669	\$153,706	\$185,674	\$1,498,900	\$0	\$100,000	\$1,940,949
Home Lighting & Recycling	\$3,043	\$789,871	\$1,014,701	\$1,782,846	\$0	\$200,000	\$3,790,461
Home Performance with ENERGY STAR	\$1,334	\$27,530	\$12,411	\$15,377	\$0	\$2,618	\$59,270
Insulation Rebate	\$0	\$5,148	\$8,747	\$7,914	\$0	\$2,000	\$23,809
Refrigerator Recycling	\$1,334	\$231,452	\$157,678	\$75,000	\$0	\$23,464	\$488,928
School Education Kits	\$1,334	\$345,461	\$24,903	\$165,142	\$0	\$35,135	\$571,975
Water Heating Rebate	\$200	\$2,982	\$25,000	\$90,000	\$0	\$800	\$118,982
Residential Program Energy Efficiency Total	\$14,217	\$1,742,554	\$1,781,473	\$4,832,507	\$0	\$482,317	\$8,853,068
Load Management Program - Residential Saver's Switch	\$27,895	\$791,643	\$1,550,303	\$5,520,000	\$4,806,363	\$163,500	\$12,859,703
Residential Program Total	\$42,112	\$2,534,196	\$3,331,776	\$10,352,507	\$4,806,363	\$645,817	\$21,712,770
Low-Income Program							
Energy Savings Kit	\$1,334	\$429,720	\$122,452	\$182,072	\$0	\$23,000	\$758,578
Multi-Family Weatherization	\$2,669	\$14,674	\$21,226	\$120,047	\$0	\$6,002	\$164,619
Non-Profit Energy Efficiency	\$0	\$35,761	\$16,226	\$252,856	\$0	\$8,000	\$312,843
Single-Family Weatherization	\$2,669	\$60,472	\$131,226	\$901,922	\$0	\$45,096	\$1,141,385
Low-Income Program Total	\$6,672	\$540,627	\$291,130	\$1,456,897	\$0	\$82,098	\$2,377,425
Indirect Products & Services							
Education/Market Transformation							
Business Energy Analysis	\$29,346	\$842,689	\$173,878	\$0	\$0	\$0	\$1,045,914
Customer Behavioral Change - Business	\$0	\$0	\$153,756	\$0	\$0	\$0	\$153,756
Customer Behavioral Change - Residential	\$0	\$200,664	\$782,018	\$0	\$0	\$0	\$982,682
Residential Home Energy Audit	\$0	\$441,089	\$144,664	\$0	\$0	\$16,560	\$602,313
Education/Market Transformation Total	\$29,346	\$1,484,442	\$1,254,316	\$0	\$0	\$16,560	\$2,784,665
Planning and Research							
DSM Planning & Administration	\$0	\$281,942	\$1,226	\$0	\$0	\$0	\$283,167
Program Evaluations	\$0	\$0	\$0	\$0	\$0	\$265,162	\$265,162
Measurement & Verification	\$0	\$0	\$0	\$0	\$0	\$79,142	\$79,142
DSM Market Research	\$0	\$263,243	\$0	\$0	\$0	\$0	\$263,243
DSM Product Development	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Product Development - General	\$322,056	\$258,000	\$0	\$350,000	\$20,000	\$0	\$950,056
Central AC Tune-up Pilot	\$2,539	\$62,575	\$27,452	\$150,000	\$0	\$35,000	\$277,566
Energy Feedback Pilot	\$329,450	\$0	\$0	\$0	\$0	\$0	\$329,450
ENERGY STAR Retailer Incentive Pilot	\$302,029	\$220,640	\$1,635,020	\$0	\$0	\$125,000	\$2,282,689
In-Home Smart Device Pilot	\$0	\$250,000	\$100,008	\$129,060	\$0	\$115,000	\$594,068
SmartGridCity Pricing Pilot	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DSM Product Development Total	\$956,074	\$791,215	\$1,762,480	\$629,060	\$20,000	\$275,000	\$4,433,829
Planning and Research Total	\$956,074	\$1,336,400	\$1,763,706	\$629,060	\$20,000	\$619,304	\$5,324,544
Indirect Products & Services Total	\$985,420	\$2,820,842	\$3,018,022	\$629,060	\$20,000	\$635,864	\$8,109,209
ELECTRIC PORTFOLIO TOTAL	\$1,914,506	\$15,362,018	\$9,576,416	\$33,740,729	\$4,826,363	\$3,113,902	\$68,533,933
% OF TOTAL	3%	22%	14%	49%	7%	5%	

Table 6b: Electric Program Costs by Budget Category – Actuals

2011	Electric Cost Categories - 2011						
	Program Planning & Design	Administration & Program Delivery	Advertising/Promotion/ Customer Ed	Participant Rebates and Incentives	Equipment & Installation	Measurement and Verification	Total
Business Program							
Heating Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Compressed Air Efficiency	\$20,464	\$256,633	\$71,129	\$370,084	\$0	\$14,447	\$732,757
Computer Efficiency	\$0	\$1,036	\$0	\$0	\$0	\$0	\$1,036
Cooling Efficiency	\$66,683	\$351,527	\$164,698	\$908,601	\$0	\$22,125	\$1,513,634
Custom Efficiency	\$194,792	\$650,608	\$414,707	\$756,721	\$0	\$19,683	\$2,036,510
Data Center Efficiency	\$45,504	\$103,108	\$189,006	\$200,411	\$0	\$1,407	\$539,436
Energy Management Systems	\$20,786	\$290,102	\$169,549	\$523,761	\$0	\$0	\$1,004,197
Lighting Efficiency	\$152,936	\$1,264,105	\$363,503	\$7,480,551	\$0	\$36,159	\$9,297,255
Motor & Drive Efficiency	\$39,745	\$574,101	\$373,079	\$3,124,880	\$0	\$25,284	\$4,137,089
New Construction	\$19,692	\$1,899,770	\$282,458	\$2,046,380	\$0	\$466,367	\$4,714,667
Process Efficiency	\$64,786	\$811,215	\$3,623	\$482,025	\$0	\$3,957	\$1,365,606
Recommissioning	\$52,244	\$200,455	\$116,768	\$587,094	\$0	\$0	\$956,562
Segment Efficiency	\$1,964	\$112,731	\$117,297	\$99,482	\$0	\$86	\$331,559
Self-Directed Custom Efficiency	\$22,295	\$133,056	\$22,516	\$799,762	\$0	\$0	\$977,629
Small Business Lighting	\$0	\$3,542,520	\$125,860	\$2,193,329	\$0	\$25,901	\$5,887,611
Standard Offer	\$35,884	\$87,780	\$27,248	\$456,970	\$0	\$128	\$608,010
Business Program Energy Efficiency Total	\$737,775	\$10,278,747	\$2,441,441	\$20,030,052	\$0	\$615,543	\$34,103,558
Business Program Total	\$737,775	\$10,278,747	\$2,441,441	\$20,030,052	\$0	\$615,543	\$34,103,558
Residential Program							
Energy Efficient Showerheads	\$292	\$30,402	\$157	\$30,493	\$0	\$175	\$61,519
ENERGY STAR New Homes	\$3,057	\$186,511	\$21,491	\$396,351	\$0	\$289,692	\$897,101
Evaporative Cooling Rebate	\$1,048	\$188,631	\$164,296	\$1,113,420	\$0	\$20,541	\$1,487,936
Heating System Rebate	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High Efficiency Air Conditioning	\$5,460	\$172,068	\$209,366	\$1,314,050	\$0	\$95,019	\$1,795,963
Home Lighting & Recycling	\$19,347	\$483,052	\$934,271	\$1,958,133	\$0	\$10,086	\$3,404,888
Home Performance with ENERGY STAR	\$2,195	\$46,187	\$8,311	\$10,694	\$0	\$14,463	\$81,850
Insulation Rebate	\$286	\$14,299	\$1,374	\$156,243	\$0	\$86	\$172,288
Refrigerator Recycling	\$0	\$410,713	\$104,864	\$148,705	\$0	\$5,886	\$670,168
School Education Kits	\$251	\$178,825	\$14,355	\$165,047	\$0	\$0	\$358,478
Water Heating Rebate	\$0	\$4,622	\$0	\$8,100	\$0	\$0	\$12,722
Residential Program Energy Efficiency Total	\$31,936	\$1,715,311	\$1,458,485	\$5,301,235	\$0	\$435,948	\$8,942,914
Load Management Program - Residential Saver's Switch	\$13,059	\$4,486,279	\$1,772,801	\$5,734,192	\$0	\$71,440	\$12,077,770
Residential Program Total	\$44,996	\$6,201,590	\$3,231,285	\$11,035,427	\$0	\$507,387	\$21,020,685
Low-Income Program							
Energy Savings Kit	\$769	\$303,599	\$16,280	\$279,293	\$0	\$1,323	\$601,265
Multi-Family Weatherization	\$516	\$28,260	\$0	\$75,397	\$0	\$7,173	\$111,347
Non-Profit Energy Efficiency	\$7,563	\$43,537	\$0	\$255,228	\$0	\$7,977	\$314,305
Single-Family Weatherization	\$4,026	\$146,037	\$84,657	\$1,013,086	\$0	\$42,292	\$1,290,098
Low-Income Program Total	\$12,875	\$521,433	\$100,937	\$1,623,004	\$0	\$58,765	\$2,317,014
Indirect Products & Services							
Education/Market Transformation							
Business Energy Analysis	\$4,295	\$849,834	\$133,388	-\$102,030	\$0	\$0	\$885,488
Customer Behavioral Change - Business	\$0	\$24,633	\$115,195	\$0	\$0	\$0	\$139,827
Customer Behavioral Change - Residential	\$0	\$196,228	\$847,022	\$0	\$0	\$0	\$1,043,250
Residential Home Energy Audit	\$0	\$363,089	\$145,415	\$0	\$0	\$24,442	\$532,946
Education/Market Transformation Total	\$4,295	\$1,433,784	\$1,241,020	-\$102,030	\$0	\$24,442	\$2,601,512
Planning and Research							
DSM Planning & Administration	\$0	\$367,151	\$0	\$0	\$0	\$0	\$367,151
Program Evaluations	\$0	\$562	\$0	\$0	\$0	\$145,400	\$145,962
Measurement & Verification	\$0	\$0	\$0	\$0	\$0	-\$5,852	-\$5,852
DSM Market Research	\$7,165	\$114,632	\$0	\$0	\$0	\$0	\$121,797
DSM Product Development	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Product Development - General	\$153,146	\$80,847	\$0	\$0	\$0	\$0	\$233,993
Central AC Tune-up Pilot	\$156	\$23,301	\$273	\$0	\$0	\$0	\$23,730
Energy Feedback Pilot	\$18,773	\$330,091	\$0	\$0	\$0	\$0	\$348,864
ENERGY STAR Retailer Incentive Pilot	\$1,220	\$136,577	\$1,381,918	\$32,865	\$0	\$0	\$1,552,579
In-Home Smart Device Pilot	\$0	\$918,279	\$32,699	\$0	\$22,226	\$18,901	\$992,105
SmartGridCity Pricing Pilot	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DSM Product Development Total	\$173,295	\$1,489,095	\$1,414,890	\$32,865	\$22,226	\$18,901	\$3,151,271
Planning and Research Total	\$180,460	\$1,971,439	\$1,414,890	\$32,865	\$22,226	\$158,449	\$3,780,329
Indirect Products & Services Total	\$184,756	\$3,405,224	\$2,655,910	-\$69,165	\$22,226	\$182,891	\$6,381,841
ELECTRIC PORTFOLIO TOTAL	\$980,401	\$20,406,993	\$8,429,574	\$32,619,318	\$22,226	\$1,364,586	\$63,823,098
% OF TOTAL	2%	32%	13%	51%	0%	2%	

Table 7a: Gas Program Costs by Budget Category – Budget

2011	Gas Cost Categories - 2011						
	Program Planning & Design	Administration & Program Delivery	Advertising/Promotion/ Customer Ed	Participant Rebates and Incentives	Equipment & Installation	Measurement and Verification	Total
Business Program							
Heating Efficiency	\$6,671	\$349,490	\$111,217	\$1,039,027	\$0	\$27,940	\$1,534,345
Compressed Air Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cooling Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Custom Efficiency	\$52,160	\$258,484	\$69,150	\$72,539	\$0	\$24,430	\$476,763
Data Center Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Energy Management Systems	\$14,671	\$47,325	\$2,328	\$19,323	\$0	\$2,352	\$86,000
Lighting Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Motor & Drive Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Construction	\$0	\$26,248	\$137,523	\$113,817	\$0	\$43,510	\$321,098
Process Efficiency	\$21,349	\$57,290	\$31,503	\$10,160	\$0	\$3,030	\$123,332
Recommissioning	\$8,020	\$19,612	\$4,810	\$35,279	\$0	\$5,246	\$72,967
Segment Efficiency	\$8,006	\$11,055	\$24,090	\$8,505	\$0	\$4,005	\$55,661
Self-Directed Custom Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Small Business Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Standard Offer	\$5,337	\$3,867	\$1,226	\$11,136	\$0	\$3,600	\$25,166
Business Program Energy Efficiency Total	\$116,215	\$773,371	\$381,848	\$1,309,786	\$0	\$114,113	\$2,695,332
Business Program Total	\$116,215	\$773,371	\$381,848	\$1,309,786	\$0	\$114,113	\$2,695,332
Residential Program							
Energy Efficient Showerheads	\$1,034	\$109,878	\$98,822	\$75,827	\$0	\$6,660	\$292,221
ENERGY STAR New Homes	\$2,669	\$521,732	\$130,323	\$1,047,716	\$0	\$505,271	\$2,207,711
Evaporative Cooling Rebate	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Heating System Rebate	\$5,337	\$167,645	\$303,042	\$769,980	\$0	\$38,224	\$1,284,228
High Efficiency Air Conditioning	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Home Lighting & Recycling	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Home Performance with ENERGY STAR	\$2,669	\$69,178	\$28,534	\$72,038	\$0	\$5,314	\$177,733
Insulation Rebate	\$1,334	\$37,439	\$68,539	\$353,060	\$0	\$30,000	\$490,372
Refrigerator Recycling	\$0	\$0	\$0	\$0	\$0	\$0	\$0
School Education Kits	\$1,334	\$238,221	\$2,452	\$281,817	\$0	\$0	\$523,824
Water Heating Rebate	\$3,000	\$27,538	\$12,800	\$103,000	\$0	\$15,032	\$161,370
Residential Program Energy Efficiency Total	\$17,377	\$1,171,631	\$644,512	\$2,703,438	\$0	\$600,501	\$5,137,459
Load Management Program - Residential Saver's Switch	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Residential Program Total	\$17,377	\$1,171,631	\$644,512	\$2,703,438	\$0	\$600,501	\$5,137,459
Low-Income Program							
Energy Savings Kit	\$1,334	\$429,720	\$121,226	\$101,728	\$0	\$23,000	\$677,008
Multi-Family Weatherization	\$2,669	\$35,423	\$21,226	\$517,266	\$0	\$25,863	\$602,448
Non-Profit Energy Efficiency	\$0	\$64,586	\$21,226	\$565,108	\$0	\$8,000	\$658,920
Single-Family Weatherization	\$2,669	\$123,401	\$191,226	\$2,045,595	\$0	\$102,280	\$2,465,171
Low-Income Program Total	\$6,672	\$653,130	\$354,904	\$3,229,697	\$0	\$159,143	\$4,403,546
Indirect Products & Services							
Education/Market Transformation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Business Energy Analysis	\$9,365	\$175,293	\$5,452	\$0	\$0	\$0	\$190,109
Customer Behavioral Change - Business	\$0	\$0	\$69,324	\$0	\$0	\$0	\$69,324
Customer Behavioral Change - Residential	\$0	\$200,664	\$717,630	\$0	\$0	\$0	\$918,294
Residential Home Energy Audit	\$0	\$511,570	\$166,538	\$0	\$0	\$19,440	\$697,548
Education/Market Transformation Total	\$9,365	\$887,527	\$958,944	\$0	\$0	\$19,440	\$1,875,275
Planning and Research							
DSM Planning & Administration	\$0	\$165,495	\$1,226	\$0	\$0	\$0	\$166,721
Program Evaluations	\$0	\$0	\$0	\$0	\$0	\$665,162	\$665,162
Measurement & Verification	\$0	\$0	\$0	\$0	\$0	\$39,188	\$39,188
DSM Market Research	\$0	\$263,243	\$0	\$0	\$0	\$0	\$263,243
DSM Product Development	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Product Development - General	\$163,638	\$42,000	\$0	\$150,000	\$10,000	\$0	\$365,638
Central AC Tune-up Pilot	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Energy Feedback Pilot	\$195,610	\$0	\$0	\$0	\$0	\$0	\$195,610
ENERGY STAR Retailer Incentive Pilot	\$0	\$0	\$0	\$0	\$0	\$0	\$0
In-Home Smart Device Pilot	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SmartGridCity Pricing Pilot	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DSM Product Development Total	\$359,248	\$42,000	\$0	\$150,000	\$10,000	\$0	\$561,248
Planning and Research Total	\$359,248	\$470,738	\$1,226	\$150,000	\$10,000	\$704,350	\$1,695,562
Indirect Products & Services Total	\$368,612	\$1,358,265	\$960,170	\$150,000	\$10,000	\$723,790	\$3,570,838
GAS PORTFOLIO TOTAL	\$508,876	\$3,956,397	\$2,341,433	\$7,392,921	\$10,000	\$1,597,547	\$15,807,175
% OF TOTAL	3%	25%	15%	47%	0%	10%	

Table 7b: Gas Program Costs by Budget Category – Actuals

2011	Gas Cost Categories - 2011						
	Program Planning & Design	Administration & Program Delivery	Advertising/Promotion/ Customer Ed	Participant Rebates and Incentives	Equipment & Installation	Measurement and Verification	Total
Business Program							
Heating Efficiency	\$13,035	\$243,094	\$40,815	\$1,031,162	\$0	\$18,824	\$1,346,930
Compressed Air Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cooling Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Custom Efficiency	\$66,661	\$61,878	\$26,691	\$90,611	\$0	\$1,954	\$247,795
Data Center Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Energy Management Systems	\$907	\$15,898	\$1,469	\$41,511	\$0	\$0	\$59,784
Lighting Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Motor & Drive Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Construction	\$10,199	\$186,229	\$42,879	\$165,608	\$0	\$34,399	\$439,313
Process Efficiency	\$3,228	\$5,315	\$62	\$0	\$0	\$74	\$8,678
Recommissioning	\$7,340	\$17,030	\$171	\$29,709	\$0	\$0	\$54,250
Segment Efficiency	\$0	\$8,041	\$1,868	-\$625	\$0	\$74	\$9,357
Self-Directed Custom Efficiency	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Small Business Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Standard Offer	\$7,708	\$4,531	\$1,511	\$8,667	\$0	\$0	\$22,417
Business Program Energy Efficiency Total	\$109,078	\$542,016	\$115,465	\$1,366,642	\$0	\$55,324	\$2,188,525
Business Program Total	\$109,078	\$542,016	\$115,465	\$1,366,642	\$0	\$55,324	\$2,188,525
Residential Program							
Energy Efficient Showerheads	\$292	\$112,714	\$768	\$172,988	\$0	\$1,183	\$287,944
ENERGY STAR New Homes	\$3,583	\$570,049	\$26,348	\$2,701,239	\$0	\$1,158,768	\$4,459,987
Evaporative Cooling Rebate	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Heating System Rebate	\$0	\$218,641	\$182,042	\$696,430	\$0	\$18,109	\$1,115,221
High Efficiency Air Conditioning	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Home Lighting & Recycling	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Home Performance with ENERGY STAR	\$567	\$58,594	\$19,521	\$68,529	\$0	\$15,472	\$162,683
Insulation Rebate	\$1,571	\$71,891	\$8,491	\$1,581,822	\$0	\$5,474	\$1,669,249
Refrigerator Recycling	\$0	\$0	\$0	\$0	\$0	\$0	\$0
School Education Kits	\$0	\$174,344	\$0	\$281,669	\$0	\$0	\$456,013
Water Heating Rebate	\$545	\$39,228	\$5,912	\$109,885	\$0	\$13,924	\$169,493
Residential Program Energy Efficiency Total	\$6,558	\$1,245,461	\$243,081	\$5,612,561	\$0	\$1,212,929	\$8,320,589
Load Management Program - Residential Saver's Switch	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Residential Program Total	\$6,558	\$1,245,461	\$243,081	\$5,612,561	\$0	\$1,212,929	\$8,320,589
Low-Income Program							
Energy Savings Kit	\$456	\$303,754	\$16,280	\$254,646	\$0	\$1,323	\$576,459
Multi-Family Weatherization	\$4,179	\$26,699	\$0	\$496,630	\$0	\$36,382	\$563,889
Non-Profit Energy Efficiency	\$11,672	\$56,643	\$0	\$509,847	\$0	\$7,840	\$586,002
Single-Family Weatherization	\$0	\$209,138	\$141,423	\$2,208,387	\$0	\$42,169	\$2,601,116
Low-Income Program Total	\$16,307	\$596,233	\$157,703	\$3,469,509	\$0	\$87,714	\$4,327,466
Indirect Products & Services							
Education/Market Transformation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Business Energy Analysis	\$0	\$155,101	\$8,521	\$0	\$0	\$0	\$163,623
Customer Behavioral Change - Business	\$0	\$17,402	\$50,761	\$0	\$0	\$0	\$68,162
Customer Behavioral Change - Residential	\$0	\$168,360	\$474,712	\$0	\$0	\$0	\$643,073
Residential Home Energy Audit	\$0	\$382,467	\$133,766	\$0	\$0	\$25,230	\$541,463
Education/Market Transformation Total	\$0	\$723,331	\$667,760	\$0	\$0	\$25,230	\$1,416,321
Planning and Research							
DSM Planning & Administration	\$0	\$97,068	\$0	\$0	\$0	\$0	\$97,068
Program Evaluations	\$0	\$1,178	\$0	\$0	\$0	\$159,691	\$160,869
Measurement & Verification	\$0	\$0	\$0	-\$350	\$0	\$3,961	\$3,611
DSM Market Research	\$0	\$131,665	\$0	\$0	\$0	\$0	\$131,665
DSM Product Development	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Product Development - General	\$72,702	\$113,657	\$0	\$0	\$0	\$0	\$186,359
Central AC Tune-up Pilot	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Energy Feedback Pilot	\$10,713	\$195,457	\$0	\$0	\$0	\$0	\$206,170
ENERGY STAR Retailer Incentive Pilot	\$0	\$0	\$0	\$0	\$0	\$0	\$0
In-Home Smart Device Pilot	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SmartGridCity Pricing Pilot	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DSM Product Development Total	\$83,415	\$309,114	\$0	\$0	\$0	\$0	\$392,529
Planning and Research Total	\$83,415	\$539,025	\$0	-\$350	\$0	\$163,652	\$785,742
Indirect Products & Services Total	\$83,415	\$1,262,356	\$667,760	-\$350	\$0	\$188,882	\$2,202,063
GAS PORTFOLIO TOTAL	\$215,357	\$3,646,065	\$1,184,010	\$10,448,363	\$0	\$1,544,849	\$17,038,643
% OF TOTAL	1%	21%	7%	61%	0%	9%	

Compliance

Table 8: Status Report Compliance and Reporting Requirements

Item #	Compliance Point	Reference ³	Report Reference / Comment
ELECTRIC			
1	PSCo shall work with Staff prior to filing its first advice letter in accordance resulting from this docket (the DSMCA filing), in order to develop templates for the supporting documentation and data that will accompany these filings. This template shall be filed in this docket as a compliance item. Parties shall develop the format and content of the annual DSM report filings.	E - p.53, paragraph 172	PSCo. met Commission Staff on January 27, 2010 to discuss reporting requirements.
2	The annual DSM report will be filed with the Commission on April 1 of each year, starting in 2010.	E - p.53, paragraph 173	Report filed April 1, 2012.
3	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.	E - p.18 (ARRR), paragraph 58	Avoided Cost Assumptions, Pages 92-98
4	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.	S - p.16	See Tables 3a - 5. \$/kWh over lifetime and net economic benefits achieved by program in Cost-Effectiveness Section.
5	Use Appendix B for: <ul style="list-style-type: none"> o Developing forecast of annual DSMCA expenditures for 2009 and 2010; o Establishing overall annual energy savings targets for 2009 and 2010, and o Determining savings achieved in 2009 and 2010 to calculate the electric DSM financial incentive. o Determining cost-effectiveness and calculating net economic benefits (with avoided costs from App E) using the incremental customer O&M savings (for prescriptive measures only), customer O&M costs (for prescriptive measures only), incremental customer capital costs (for prescriptive measures only), net-to-gross ratios, and deemed savings formulas and other technical assumptions. 	S - p.13	2009/2010 Plan, Docket No. 08A-366EG
6	Use deemed savings from the technical assumptions to calculate the prescriptive program savings.	S - p.14	2009/2010 Plan, Docket No. 08A-366EG
7	Use the methodology described in the Direct Testimony of Company witness Jeremy Petersen (JP) to determine DSM portfolio and program cost-effectiveness.	S - p.14	2009/2010 Plan, Docket No. 08A-366EG

³ **Reference Key:**

E = Enhanced Plan Order, Docket No. 07A-420E, Decision No. C08-0560

S = DSM Stipulation & Settlement Agreement, Docket No. 08A-366EG, Decision No. R08-1243

G = Gas Rules, 4 CCR 723-4

Table 8: Status Report Compliance and Reporting Requirements (cont.)

Item #	Compliance Point	Reference ⁴	Report Reference / Comment
8	Use this same JP methodology for calculating the net economic benefit associated with DSM measures actually installed.	S - p.14	2009/2010 Plan, Docket No. 08A-366EG
9	All Participant O&M data should be treated as proprietary in the absence of a written agreement signed by the Participant authorizing disclosure.	S - p.8	2009/2010 Plan, Docket No. 08A-366EG
10	Do not include Participant O&M data in incentive calculations unless there is authorization to disclose such data.	S - p.8	No participant O&M data was included in the financial incentive calculations for 2010.
11	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 	S - p.9	Participant O&M data has been neither requested nor disclosed to any external party.
12	Verify results of Self-Directed customers' energy savings calculations and evaluation, M&V results.	S - p.7	See Evaluation, Measurement and Verification Results, p.75
13	Approve 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.	S - p.7	Ongoing process as part of 2009/2010 Plan, Docket No. 08A-366EG
14	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.	S - p.8	Ongoing process as part of 2009/2010 Plan, Docket No. 08A-366EG
15	Track expenditures, energy savings, and paybacks associated with each approved project under the Self-Directed Custom Efficiency Program.	S - p.8	Ongoing process as part of 2009/2010 Plan, Docket No. 08A-366EG

⁴ **Reference Key:**
E = Enhanced Plan Order, Docket No. 07A-420E, Decision No. C08-0560
S = DSM Stipulation & Settlement Agreement, Docket No. 08A-366EG, Decision No. R08-1243
G = Gas Rules, 4 CCR 723-4

Table 8: Status Report Compliance and Reporting Requirements (cont.)

Item #	Compliance Point	Reference ⁵	Report Reference / Comment
16	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.	E - p.37, paragraph 117	Financial Incentive Calculations, Pages 25 – 28. The proposed financial incentive is included in the final TRC calculation shown on p.7
17	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.	E - p.44, paragraph 140	Included in Financial Incentive Calculations, Pages 25 – 28.
GAS			
18	Beginning April 1, 2010 and each April 1st thereafter, each utility shall submit its annual DSM report, application for bonus and DSMCA filing.	G - Rule 4752(b)	Report filed April 1, 2012.
19	Each utility shall also file an annual DSM report and an application for bonus.	G - Rule 4750(b)	Included with Report filed April 1, 2012.
20	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 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.	G – Rule 4753(h)(I)	PSCo spent a total of \$17.1 million on its natural gas DSM programs. This surpassed the expenditure targets - \$6,136,486 (2% of gas base rate revenues), and \$5,346,849 (0.5% of total gas revenues) set in Decision No. R10-1336.
21	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.	G - Rule 4754(a)	See Status Report Section, Pages 29 – 67.
22	Annual program expenditures shall be separated into cost categories contained in the approved DSM plan.	G – Rule 4754(b)	See Program Costs by Budget Category Tables, Pages 17 – 20.
23	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.	G – Rule 4754(c)	Executive Summary Tables 4a & 4b. Also, see Status Report Section for each program.

⁵ **Reference Key:**

E = Enhanced Plan Order, Docket No. 07A-420E, Decision No. C08-0560

S = DSM Stipulation & Settlement Agreement, Docket No. 08A-366EG, Decision No. R08-1243

G = Gas Rules, 4 CCR 723-4

Table 8: Status Report Compliance and Reporting Requirements (cont.)

Item #	Compliance Point	Reference ⁶	Report Reference / Comment
24	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.	G – Rule 4754(d)	See Cost-Effectiveness section for portfolio results. Individual program results included in work papers.
25	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.	G – Rule 4754(e)	See Evaluation, Measurement & Verification 2011 Results, Pages 68 – 88.
26	<p>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.</p> <p>(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.</p> <p>(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:</p> <p>(A) The Energy Factor is determined by the 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>	G - Rule 4754(f)	Included with Report filed April 1, 2012. See also Financial Incentive Calculation, Pages 25 – 28.
27	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)	G – Rule 4754(g)	See Financial Incentive Calculation, Pages 25 – 28.

⁶ **Reference Key:**
 E = Enhanced Plan Order, Docket No. 07A-420E, Decision No. C08-0560
 S = DSM Stipulation & Settlement Agreement, Docket No. 08A-366EG, Decision No. R08-1243
 G = Gas Rules, 4 CCR 723-4

Financial Incentive Calculations

Electric Financial Incentive

In 2008, the Commission approved a new DSM incentive mechanism for electric programs (Docket No. 07A-420E). The mechanism includes a \$2.0 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 incentive mechanism was modified as a result of a Stipulation and Settlement Agreement entered into in Docket No. 07A-420E-Reopened. On December 3, 2010, the ALJ issued Decision No. R10-1297 approving the Settlement Agreement without modification resulting in an increase to the cap applicable to the electric incentive equal to 25% of the higher of the approved Plan Budget or actual program expenditures, plus one-half of the Disincentive Offset (\$1,613,164). For 2011, this same modification is effective; however, the combination of the Disincentive Offset and the Performance Incentive can not exceed \$21,613,164.

The performance incentive component awards a percentage of net benefits for achievement above 2011 savings goal, 235 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 60% of the performance incentive comprises the first installment that is awarded in the year following the 2011 performance year. The second installment includes the remaining 40% of the performance incentive. For the 2011 achievements, this second installment will be filed on April 1, 2014 with the 2013 DSM Annual Status Report. Public Service is now eligible to recover the second installment from its 2009 Plan (\$2,218,623).

Based upon Public Service’s achievements of 312 GWh and net benefits of \$196,976,665, the total Disincentive Offset and performance incentive for the 2011 performance year was limited by the program spending cap of 25%, plus one half of the Disincentive Offset (\$1,613,164), or \$18,746,647. Table 9 below shows the first and second installments. Table 10 has the full calculation of the electric financial incentive. Based on the scale of net benefits set by the Commission, the performance incentive would have been \$23,514,923 million (including the \$3.2 million Disincentive Offset) absent a cap on the performance incentive.

Table 9: Summary of 2011 Electric Incentive

	Amount
1st Installment:	
Disincentive Offset	\$ 3,226,327
Performance Incentive (60%)	\$ 9,312,192
Total 1st Installment	<u>\$ 12,538,519</u>
2nd Installment:	
Performance Incentive (40%)	<u>\$ 6,208,128</u>
Total	<u>\$ 18,746,647</u>

The full calculation of Public Service’s 2011 Electric Incentive is shown in Table 10.

Table 10: Public Service 2011 Electric DSM Incentive

(A) = \$2M / (1 - Tax Rate)	Disincentive Offset (Grossed-up for Income Taxes)	\$3,226,327
	Disincentive Offset (Not Grossed-up for Income Taxes)	\$2,000,000
	Tax Rate	38.01%
	Performance Incentive Calculation	
(B)	Approved 2011 kWh Goal	235,000,000
(C)	kWh from YE Achievements	311,643,169
(D)	Net Economic Benefits from YE Achievements	\$197,157,037
	<i>Net Economic Benefits Adjustments:</i>	
(E)	Low-Income Allowance from YE Achievements	\$0
(F)	Market Transformation Allowance from YE Achieve.	\$2,175,183
(G)	Incremental Participant O&M - Excluded for 2011 Incentive Calculation	-\$2,355,555
(H) = (D)+(E)+(F)+(G)	FINAL Net Benefits from YE Achievements	\$196,976,665
(I) = (C)/(B)	% of Goal Achieved	133%
(J)	% of Net Benefits Awarded	10.3%
(K) = (H) * (J)	Performance Incentive	\$20,288,596
(L) = (A) + (K)	Total Un-Capped Incentive	\$23,514,923
(M)	2011 Total Approved Budget	\$68,533,935
(N)	2011 Program Expenditures	\$63,823,098
(O) = IF ((M) > (N),(M),(N))	Program Expenditures Subject to Cap (Higher of Budget or Actual)	\$68,533,935
(P) = ((O) * 25%) + ((A) * 50%)	Spend Cap (Subject to Hard Cap of \$21,613,164 - Per Settlement Agreement - Dkt. 07A-420E)	\$18,746,647
(Q) = IF (K) < (O),(K),(O)	Total 2011 Proposed Electric Financial Incentive Pre-Tax	\$18,746,647
(R) = (A)	Disincentive Offset	\$3,226,327
(S) = ((Q) - (R)) * 60%	+ 60% of Performance Incentive	\$9,312,192
(T) = (R) + (S)	subtotal 1st Installment (pre-tax)	\$12,538,519
(U) = ((Q) - (R)) * 40%	+ 40% of Performance Incentive - 2nd Installment (pre-tax)	\$6,208,128
(V) = (T) + (U)	Total	\$18,746,647

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 4754(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 2011, the natural gas incentive is calculated to be \$1,888,078. This bonus is well under the expenditure cap of \$4,272,873, but hits the net benefits cap of \$1,888,078. In addition, Public Service is filing for an acknowledgement of lost revenues associated with gas DSM programs of \$420,870 for a total award of \$2,308,948. The full calculation of Public Service’s 2011 Natural Gas Incentive is detailed in Table 11.

Table 11: Public Service 2011 Natural Gas Bonus and Acknowledgement of Lost Revenue

Natural Gas Bonus:				
(A)	Approved Energy Target (Goal) (Dth)	368,227		
(B)	Energy Target Achieved (Dth)	483,090		
(C)	% of Energy Target Achieved	131.2%		
			Dth	Spend
(D) = Approved Dth / Approved Spend	Approved Savings Target	23,295	368,227	\$ 15,807,175
(E) = Achieved Dth / Actual Spend	Savings Target Achieved - Portfolio Total	28,265	483,090	\$ 17,091,491
(F) = Low-Income Achieved Dth / Low-Income Actual Spend	Savings Target Achieved - Low-Income Program	23,453	101,494	\$ 4,327,466
(G) = If Low-Income Achieved / Spend < Portfolio Achieved / Spend, remove Low-Income from Portfolio Total	Savings Target Achieved - Adjusted*	29,896	381,596	\$ 12,764,025
(H)	Total DSM Expenditures	\$17,091,491		
(I) = 0.5% * ((C) - 80)	Energy Factor	25.5%		
(J) = (G)/(D)	Savings Factor	1.283378284		
(K) = (I) * (J)	% of Net Benefits Awarded	32.7%		
(L)	Net Economic Benefits Achieved	\$9,440,391		
	<i>Net Economic Benefits Adjustments</i>			
(M)	Low-Income Allowance from Plan	\$0		
(N) = (L) + (M)	FINAL Net Economic Benefits Achieved	\$9,440,391		
(O) = MIN(20%*(L), 25%*(H))	Incentive Cap	\$1,888,078		
(P) = If (K)*(L) < (O), (K)*(L), (O)	Total 2011 Proposed Gas Financial Incentive Pre-Tax	\$1,888,078		
Acknowledgement of Lost Revenue (ALR):				
	Business/Residential Allocation:			%
(Q)	Business Savings (Dth)	81,652		17%
(R)	Residential & Low Income Savings (Dth)	401,438		83%
	Total Savings	483,090	100%	
	Allocated Bonus			
(S) = (P) * (Q)	Business	319,124		
(T) = (P) * (R)	Residential & Low Income	1,568,955		
(U) = (S) * (T)	Total	1,888,078		
	Acknowledgement of Lost Revenue [ALR] Calculation:			
	Dollar Value Per Therm			
(V)	Business (Non-residential)	\$ 0.10242		
(W)	Residential	\$ 0.08401		
	12-Month Therm Reduction Impact From 2011 Programs			
(X)	Business (Non-residential)	816,520		
(Y)	Residential	4,014,379		
	ALR Totals			
(Z) = (V) * (X)	Business (Non-residential)	\$ 83,627		
(A1) = (W) * (Y)	Residential	\$ 337,243		
(A2) = (Z) + (A1)	Total ALR	\$ 420,870		
(A3) = (P) + (A2)	Total Gas Bonus and ALR	\$ 2,308,948		

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 12a: Business Program- Electric Products (Budget to Actual)

2011	Budget						Actual					
	Electric Participants	Electric Budget	Customer kW	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio	Electric Participants	Electric Spend	Customer kW	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Business Program												
Compressed Air Efficiency	75	\$1,100,762	819	712	4,639,368	2.19	58	\$732,757	809	466	3,102,645	2.05
Computer Efficiency								\$1,036				
Cooling Efficiency	350	\$3,567,538	4,877	2,941	7,809,971	1.92	213	\$1,513,634	2,172	1,573	2,495,174	2.12
Custom Efficiency	50	\$2,224,028	2,071	1,595	8,682,818	1.80	55	\$2,036,510	1,559	917	6,927,582	1.59
Data Center Efficiency	14	\$840,317	470	383	3,972,363	2.11	8	\$539,436	0	0	0	0.37
Energy Management Systems	50	\$1,581,520	922	82	7,327,993	1.70	37	\$1,004,197	1,139	136	8,236,938	1.37
Lighting Efficiency	946	\$7,058,065	15,524	11,891	48,120,245	3.27	1,925	\$9,297,255	19,537	14,298	69,138,959	3.46
Motor & Drive Efficiency	1,100	\$2,889,440	4,955	3,616	20,385,702	4.00	555	\$4,137,089	6,844	3,710	24,369,680	3.69
New Construction	60	\$7,039,703	7,829	7,033	26,582,420	3.41	46	\$4,714,667	6,846	5,511	22,879,418	2.37
Process Efficiency	4	\$1,197,706	1,006	1,231	7,782,869	2.53	7	\$1,365,606	1,303	927	6,496,684	3.03
Recommissioning	53	\$1,181,825	861	481	4,999,877	1.05	46	\$956,502	914	435	5,551,351	1.40
Segment Efficiency	124	\$1,751,712	1,463	897	6,614,412	1.83	15	\$331,559	152	18	1,090,099	1.04
Self-Directed Custom Efficiency	13	\$1,014,859	1,366	1,232	5,625,816	3.59	2	\$977,629	1,035	428	7,666,147	2.05
Small Business Lighting	200	\$3,350,397	1,401	1,268	4,626,514	1.68	777	\$5,887,611	5,501	4,663	18,475,290	2.42
Standard Offer	60	\$1,536,658	2,232	2,087	4,536,030	2.36	10	\$608,010	693	558	2,713,345	0.82
Business Program Energy Efficiency Total	3,099	\$36,334,530	46,397	35,447	161,706,399	2.71	3,754	\$34,103,558	48,503	33,639	179,143,313	2.64
Business Program Total	3,099	\$36,334,530	46,397	35,447	161,706,399	2.71	3,754	\$34,103,558	48,503	33,639	179,143,313	2.64

Table 12b: Business Program - Gas Products (Budget to Actual)

2011	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												
Heating Efficiency	233	\$1,534,345	44,012	28,685	\$1,063,687	1.29	249	\$1,346,930	35,258	26,177	\$367,627	1.10
Custom Efficiency	10	\$476,763	9,637	20,214	\$142,911	1.18	15	\$247,795	12,431	50,166	\$414,215	1.46
Energy Management Systems	5	\$86,000	2,245	26,106	\$23,662	1.19	11	\$59,784	5,514	92,235	\$25,792	1.08
New Construction	13	\$321,098	17,532	54,600	\$607,910	1.51	22	\$439,313	24,977	56,856	\$1,029,085	1.66
Process Efficiency	3	\$123,332	4,301	34,874	\$94,104	1.57	0	\$8,678	0	0	-\$8,678	-
Recommissioning	9	\$72,967	2,199	30,134	\$72	1.00	4	\$54,250	3,472	63,992	-\$21,809	0.89
Segment Efficiency	9	\$55,661	3,627	65,161	\$107,455	1.96	4	\$9,357	0	0	-\$9,982	(0.07)
Standard Offer	30	\$25,166	1,181	46,946	\$17,578	1.31	0	\$22,417	0	0	-\$13,750	(0.39)
Business Program Energy Efficiency Total	312	\$2,695,332	84,735	31,438	\$2,057,180	1.33	305	\$2,188,525	81,652	37,309	\$1,782,499	1.26
Business Program Total	312	\$2,695,332	84,735	31,438	\$2,057,180	1.33	305	\$2,188,525	81,652	37,309	\$1,782,499	1.26

The electric portfolio performed above its targets on the strength of its established products. Lighting Efficiency was the largest contributor due to increasing trade participation 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 New Construction continue to heavily contribute to the portfolio.

Process Efficiency made significant strides in 2011, more than doubling its 2010 net generator kWh impacts. The majority of the projects were identified in 2009 and 2010 and implemented during continued contact and joint planning with customers. Also noteworthy was the growth of the Small Business Lighting product, which exceeded target and grew over 200 percent from 2010 performance. In partnership with Franklin Energy, the Company implemented an aggressive promotion strategy to encourage adoption of high efficiency lighting in its small- and mid-sized businesses.

Some products continued to struggle in 2011 due to aggressive targets and an underestimation of the time it takes for customers to implement. Standard Offer and Data Center Efficiency both saw high interest and participation in the first stages of the product and have built strong pipelines for future years, however customers are having difficulty implementing measures as access to capital continues to be a challenge. Segment Efficiency has been focusing on the commercial real estate market, which continues to struggle. Heavy marketing through industry organizations is beginning to break down barriers and building owners and operators are gaining interest but implementation of energy efficiency measures remains lower than expected.

The business natural gas portfolio was slightly short of target but showed improvement over 2010. Momentum in the market from previously identified pipeline projects in most programs along with more than anticipated natural gas savings in New Construction contributed to the growth. Relatively low natural gas prices continue to reduce the potential benefits for customers and make natural gas efficiency improvements appear less attractive.

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 low participation in the study based programs such as Process Efficiency, Standard Offer and Segment Efficiency.

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 encourages 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 of up to \$2,500 for 50 hp to 99 hp systems and 75 percent of the study costs up to \$15,000 for systems of at least 100 hp. To receive study rebates, the customer must repair at least half of the leaks identified in the study which usually requires no customer capital expense, but significantly reduces energy waste.
- Custom rebates of up to \$600 per kW saved for improvements identified in the studies. Identified opportunities cover a wide range of options and can include capital purchases, such as qualifying compressors and “process” changes, such as piping modifications or horsepower reductions.

Deviation from Goal

The product fell short of goal and spending was lower than planned. Vendor feedback shows that compressed air users have been particularly reluctant to make capital improvements during the economic down turn. To a lesser extent, vendors have mentioned that the majority of compressors in service are 5 hp to 10 hp compressors, which are too small to have much potential for energy savings. Further, the largest of compressed air projects are using our Process Efficiency and Self Direct products. Finally, the rebated studies have identified fewer projects than anticipated.

In 2011, emphasis was placed on encouraging vendor participation through educational activities to improve the thoroughness of the studies.

Changes in 2011

In 2011, we introduced bonuses of up to \$200 per kW in addition to the base rates of \$400 per kW.

60-Day Notice:

We introduced prescriptive rebates for VSD compressors that increase capacity or replace failed compressors. We also increased the prescriptive rebates for VSD compressors that replace working compressors.

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, but exceeded its participation goal. The impacts per participant were much lower than 2010 due to smaller than estimated equipment being purchased. There was also lower participation in the Custom Cooling component, where larger and more complex projects are generally identified, as compared to 2010.

The increase in participation can directly be attributed to a focus on trade partner presentations and training of the Business Solutions Center (“BSC”) staff. Presentations were made to over fifty new trade partners that had not previously participated in the product.

Changes in 2011

60-Day Notice:

There were two 60-Day Notices posted in 2011:

- A 60-Day Notice was posted as agreed to in the Stipulation and Settlement Agreement as it relates to an Early Replacement retrofit product. The 60-Day Notice states that we have not completed the evaluation and are continuing to work with the Energy Efficiency Business Coalition (“EEBC”) to refine the inputs before finalizing the calculated MTRC and concluding whether the measure is cost-effective. Another 60-Day Notice will be posted when the work is completed.
- A 60-Day Notice was posted to add two new prescriptive measures to the Cooling Efficiency Product: rebates for retrofitting an existing chiller with a variable speed drive and rebates for Plate and Frame Heat Exchangers.

Computer Efficiency

The Computer Efficiency Product offers prescriptive electric rebates to business customers who install Virtual Desktop Infrastructure, as well as to desktop personal computer (PC) manufacturers that design, install, and deliver units with energy efficient power supplies to business customers in Xcel Energy’s electric service territory. The manufacturers use the incentives to promote their efficient computers that use high efficient power supplies and to increase their number of products with high efficient power supplies installed developed and offered to customers.

Deviation from Goal

The product had no participation or savings in 2011. The lack of participation is directly tied to computer manufacturers’ willingness to sign up for the product. We are reevaluating the M&V requirements, which have been the largest hurdle, in order to increase participation from the largest manufacturers in 2012. Future success of the product will depend on enrolling the largest PC manufacturers to participate in the upstream incentive program. Given that we have been successful

with this product model in other jurisdictions, we anticipate enrolling our first manufacturer into the Colorado product early in 2012. We also continue to aggressively identify and target enrollment from midsized and small local PC manufacturers.

Changes in 2011:

60-Day Notice:

This product was launched on June 25, 2011 through a 60-Day Notice.

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's prescriptive rebate products. All Custom Efficiency projects require pre-approval before purchase and installation and must pass TRC 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. In 2011, some of the technologies rebated included refrigerated cases, window replacements, and food service cooking equipment.

Deviation from Goal

The Custom Efficiency Product did not meet its electric savings goal but exceeded its gas savings goal in 2011. Electric and gas spending were under budget as a result of lower than expected labor and rebate costs. As a whole, the product is experiencing some erosion as other product offerings, including Self-Direct and Process Efficiency, expand and gain traction. In addition, as end-uses move from custom to prescriptive, such as data center projects and electronically commutated motors for refrigerated cases, the Custom Efficiency Product must find new efficient technologies to take their place.

Changes in 2011

None.

Data Center Efficiency

The Data Center Efficiency Product offers custom electric rebates and evaluations to customers who make energy saving improvements to a data center. The product encourages a holistic approach by providing energy efficiency information and rebate opportunities together with site evaluations and project analyses. The product is primarily marketed via the Xcel Energy account managers, trade relations, direct communications, and advertising efforts.

Deviation from Goal

The product did not meet its savings or participation goals and, as a result, its budget was under spent. While we did have some participation in the study portion of the product and continued to receive new project applications and build pipeline, this segment has a longer project lead time than originally anticipated and as such we did not receive any completed project information for rebate.

Changes in 2011

We made some adjustments to the product guidelines, resulting in more options and flexibility for customer and trade participation.

- Removed the holistic study requirement, allowing studies smaller in scope to be funded
- Added a custom-type project analysis option to the program
- Simplified the trade approval process from RFI to individual applications

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.

Systems covered in the product include new energy management systems in an existing building, replacing a non-functional energy management system, replacing an obsolete energy management system, and adding functionality and/or control points to an existing system. The duplication of existing systems or adjusting the set points of an existing system does not qualify for rebate under the EMS Product. Additionally, systems installed as part of new construction projects are ineligible.

The product offers incentives totaling up to \$600 per implied kW and \$7 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 exceeded its electric goal, and grew compared with the prior year. In 2011, we made a concerted effort to educate partners and customers about each system's improvements and encouraged continued improvement of on-peak controls strategies. Despite higher rebates than the base levels of other custom products, we held expenses well within budget.

The EMS Product's gas performance was more than double its goal despite the fact that many of the larger applicants have not been retail gas customers.

Changes in 2011

In 2011, we introduced bonuses of up to \$200 per kW in addition to the base rates of \$400 per kW. The bonuses gained wide customer interest and influenced many of the completed projects, especially in the fourth quarter.

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, participation, or spending goals in 2011. Despite a strong pipeline, momentum continued to slow in the third and fourth quarters. We anticipated a similar upswing in late 2011 to what we saw in 2010, however the fourth quarter did not produce a significant jump to meet goal.

Changes in 2011

None.

Lighting Efficiency

The Lighting Efficiency Product offers rebates to customers who purchase and install qualifying energy efficient lighting products 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 and Lighting Redesign rebates are 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, limited-time bonus rebates, newly-added prescriptive rebate measures, increased participation by lighting trade partners, and continued momentum driven by higher rebate levels commenced in 2009.

Changes in 2011

A significant reduction in the product's net-to-gross value from 96 percent to 84 percent, effective January 11, 2010 continued to have a substantial effect on net energy-savings achievement reported in 2011. This change was required by the 2009 process and impact evaluation.

60-Day Notice:

The product expanded its prescriptive rebate offerings by updating technical assumptions, moving certain fluorescent fixture rebates from custom to prescriptive, expanding outdoor prescriptive LED rebate availability, and removing certain prescriptive rebates due to changing U.S. Department of Energy lighting efficiency standards. All product changes were effective July 15, 2011.

Motor & Drive Efficiency

The Motor & Drive Efficiency Product is designed to reduce the barriers that prevent customers from purchasing high-efficiency motors and variable frequency drives used on eligible fans and

pumps. We offer prescriptive rebates to eligible customers who install qualifying equipment, and custom rebates to those customers whose projects do not meet the prescriptive criteria.

Deviation from Goal

In 2011, the product met its energy savings target but exceeded its budget. Contributing to its success was a multifaceted customer awareness campaign including: radio, print, articles and trade meetings throughout the year. The majority of the product's impacts continue to come from variable speed/frequency drives. In 2012, we will continue to focus on Small Business opportunities, and we have designed a media campaign to increase awareness about motors and drives within HVAC systems. The higher than expected spending resulted from the lower net-to-gross value, which drives higher costs per project for the entire program.

Changes in 2011

In 2011, we reduced the product's net-to-gross ratio from 87 percent to 65 percent based on a recommendation in the most recent process and impact evaluation.

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 2011. 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 and \$7 per Dth in 2011. A \$0.04 per kWh rebate was added in late 2011.

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 and \$7 per Dth in 2011.

Deviation from Goal

The product fell short of its electric savings goal. We experienced challenges due to the recession and continued downturn in the commercial new construction market. Of the projects that we expected to finish in 2011, five projects were put on hold and eight were cancelled. Due to long lead times of approximately two to four years before a project actually finishes construction, there

isn't a way to build a contingency plan to fill the gap in the short-term. 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 2011

To continue to promote higher efficiency levels in buildings and allow other energy companies to participate in EDA, Public Service began reimbursing a customer's chosen consulting company for early analyses conducted under the EDA Enhanced track. In addition, we increased the minimum savings requirements from 5 percent to 15 percent in 2011 for the Basic track and from 15 percent to 30 percent for the Enhanced track; the electric incentive was increased from \$300 to \$400 per kW. In August 2011, a \$0.04 kWh incentive was added to better align with whole building design strategy decisions by emphasizing both peak demand savings as well as conservation savings. These changes apply to new projects beginning after the policy's effective date.

To assist Colorado counties that adopt more stringent code levels, a policy was added stating that "If the local government energy code is at least 10 percent more stringent than the EDA baseline participants can qualify for the EDA program if their energy efficiency savings exceeds the local code by 5 percent for the Basic track, 10 percent for the Enhanced track. Photovoltaic systems may be used to meet the local code, but amounts spent towards a photovoltaic system will not be eligible for rebates under this program."

Process Efficiency

The Process Efficiency Product was designed to target energy intensive processes at large industrial facilities for efficiency upgrades. The product is primarily intended to identify and provide incentives to large process changes that are not currently completed through Custom Efficiency or the prescriptive products, and establish business practices that drive additional conservation measures in the future.

The product uses a three phase 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 encourages customers to integrate energy efficiency into daily business practices.

Deviation from Goal

In 2011, Process Efficiency realized more than a 200 percent improvement in energy savings over the 2010 year-end results. However, this progress was not sufficient to meet the 2011 savings and participation goals. We continue to struggle with long project lead-times and conflicting customer priorities. We are actively marketing the product to new customers and feel that the current pipeline is adequate to meet goals in 2012 and beyond.

Process Efficiency did not meet its gas goals in 2011. Customers who qualify for the Process Efficiency Product by size generally are not retail natural gas customers. If we do happen to identify a qualifying customer that has an Xcel Energy retail gas meter, it is typically not feeding large industrial process equipment and, therefore, is not a high priority for the customer.

Changes in 2011

Due to a lack of opportunity, the gas portion of this product will be discontinued for the 2012/13 DSM Plan.

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, get credited towards those respective prescriptive and custom end-use products.

Deviation from Goal

The Recommissioning Product exceeded its participant and energy savings goals, but did not meet its demand goal. Many measures had high energy savings, but low demand savings, which can be attributed to the fact that recommissioning measures are designed to provide optimal operating conditions during non-peak hours as well. Although we forecast our demand goal based on the information in our pipeline, actually meeting this goal is dependent on which measures identified in a study are actually implemented by the customer. We under spent both the electric and gas budgets primarily due to the fact that approximately 60 percent of the electric and 50 percent of the gas projects did not qualify for a rebate as the paybacks were less than one year.

Changes in 2011

In 2011, we added a new requirement to the product that describes which measures the study provider is expected to analyze when completing a study. This addition helps ensure that the provider is uncovering all available recommissioning opportunities to maximize customer savings potential.

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 2011. Though we conducted more studies than the previous year, measure implementation still fell short. One of the main challenges we faced was change in ownership of commercial properties right after studies were conducted. Therefore, the sales cycle had to start over again with new decision makers that were not part of the study and are not familiar with the product. During the last quarter of 2011, we sent out an email communication to potential customers and customers that have conducted studies but have not yet implemented study measures. The account management team and the study provider continue to market to building owners and facility managers.

Changes in 2011

None.

Self-Direct Energy Efficiency

The Self-Direct Energy Efficiency Product provides large commercial and industrial electric customers in Colorado the opportunity to self-fund energy conservation projects at their facilities. Customers who engineer, implement, and commission qualifying projects can receive increased rebate levels to offset their costs of implementation. Participants must be prequalified and have an aggregated peak demand of 2 MW and annual energy sales of 10 GWh to participate.

Deviation from Goal

The Self-Direct Product exceeded its participation and savings goals, which led to increased spending. This was the result of one large project that exceeded its projected energy savings.

Changes in 2011

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 energy savings goal for 2011, and kept spending at budget, due to a higher-than-expected volume of prescriptive lighting projects implemented, increased awareness of and partnership with Franklin Energy, the product's implementer, and growing momentum driven by attractive rebates.

Changes in 2011

In the first quarter of 2011, we introduced a 50 percent bonus rebate for a limited time 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 take effect in January 2013. The promotion resulted in a significant energy savings opportunity with the added sense of urgency with phase out timing and higher rebates.

60-Day Notice:

In mid-year 2011, we restored prescriptive rebates for normal and high ballast factor fluorescent ballasts via 60-Day Notice. Fluorescent fixture rebates were tiered, and Low Ballast Factor ballasts earned a premium rebate.

Standard Offer

The Standard Offer Product is designed to support conservation that is delivered through the Energy Service Company (ESCO) trade allies and support customers who use alternative financing to implement energy saving measures. Although it is targeted to public entities such as 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 Governor's 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. It also supports the Governor's initiative for government entities to consider using ESCO services to implement conservation measures.

The Standard Offer Product provides customers with an opportunity to identify and implement a comprehensive package of cost-effective efficiency measures whether they have internal resources and funding or they want to use outside resources such as those from an ESCO. The Product differs from other DSM offerings because it allows customers to work with Energy Service Companies if desired. By doing so, customers are open to alternative funding mechanisms for their conservation projects that may not be available through 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 ESCO.

Deviation from Goal

The Product saw good growth in 2011, with over 20 projects advancing to new stages. However, even with this growth year-end achievement still fell short of goal. We had anticipated seeing some of the larger projects initiated in 2009 and 2010 to be completed in 2011, but delays pushed them out to 2012 and 2013. We expect that through heightened outreach and product specific training of the ESCOs conducted in the fourth quarter of 2011 will improve the turn-around time of application preapproval by Xcel Energy and help reduce some of these delays.

Changes in 2011

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 13a: Residential Program – Electric Products (Budget to Actual)

2011	Budget						Actual					
	Electric Participants	Electric Budget	Customer kW	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio	Electric Participants	Electric Spend	Customer kW	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Residential Program												
Energy Efficient Showerheads	5,231	\$95,589	10,462	0	1,033,159	3.73	6,022	\$61,519	108,393	0	1,019,241	5.70
ENERGY STAR New Homes	1,400	\$245,845	77	45	401,622	1.07	2,114	\$897,101	566	359	1,785,494	1.73
Evaporative Cooling Rebate	3,000	\$1,517,260	5,067	3,194	1,567,480	4.05	3,481	\$1,487,936	9,819	5,159	2,552,623	10.35
High Efficiency Air Conditioning	1,785	\$1,940,949	3,061	2,548	2,181,463	1.34	1,655	\$1,795,963	2,548	2,151	1,734,126	1.24
Home Lighting & Recycling	342,855	\$3,790,461	54,994	6,686	55,746,536	3.34	399,205	\$3,404,888	97,307	11,831	96,600,049	4.87
Home Performance with ENERGY STAR	100	\$59,270	185	29	153,298	1.77	108	\$81,850	106	27	90,546	0.66
Insulation Rebate	1,277	\$23,809	288	161	193,812	8.97	4,984	\$172,288	1,878	1,360	1,357,872	2.40
Refrigerator Recycling	1,500	\$488,928	209	138	1,016,471	1.06	3,163	\$670,168	443	280	2,124,083	1.60
School Education Kits	18,318	\$571,975	10,861	109	2,193,015	1.18	18,308	\$358,478	10,855	114	2,010,791	1.56
Water Heating Rebate	200	\$118,982	448	59	519,966	1.57	18	\$12,722	45	6	52,822	1.47
Residential Program Energy Efficiency Total	375,666	\$8,853,068	85,651	12,970	65,006,821	2.63	439,058	\$8,942,914	231,961	21,286	109,327,647	5.76
Load Management Program - Residential Saver's Switch	19,500	\$12,859,703	58,500	20,085	296,038	3.71	18,626	\$12,077,770	55,878	18,437	284,493	3.68
Residential Program Total	395,166	\$21,712,770	144,151	33,055	65,302,859	3.12	457,684	\$21,020,685	287,839	39,722	109,612,139	4.67

Table 13b: Residential Program – Gas Products (Budget to Actual)

2011	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 Efficient Showerheads	26,658	\$292,221	25,297	86,569	\$1,379,462	4.75	34,124	\$287,944	27,716	96,253	\$1,647,210	5.58
ENERGY STAR New Homes	1,400	\$2,207,711	39,618	17,945	\$104,641	1.02	3,369	\$4,459,987	99,994	22,420	\$2,004,656	1.16
Heating System Rebate	6,500	\$1,284,228	54,093	42,121	\$1,845,793	1.49	5,815	\$1,115,221	47,627	42,706	\$1,627,931	1.49
Home Performance with ENERGY STAR	100	\$177,733	4,980	28,018	\$60,164	1.14	108	\$162,683	3,223	19,811	\$73,328	1.27
Insulation Rebate	2,935	\$490,372	24,063	49,070	\$297,732	1.13	6,971	\$1,669,249	104,718	62,734	\$462,706	1.04
School Education Kits	18,318	\$523,824	14,740	28,139	\$399,544	1.50	18,308	\$456,013	11,520	25,263	\$264,558	1.36
Water Heating Rebate	2,300	\$161,370	7,488	46,406	-\$221,474	0.78	2,228	\$169,493	5,145	30,357	-\$125,272	0.82
Residential Program Total	58,211	\$5,137,459	170,279	33,145	\$3,865,862	1.29	70,923	\$8,320,589	299,944	36,048	\$5,955,118	1.21

Both the electric and natural gas residential portfolios performed extremely well in 2011. The best performing products included Home Lighting, ENERGY STAR® New Homes, Evaporative Cooling Rebates, Refrigerator Recycling and Insulation Rebates.

The Home Lighting & Recycling Product led performance in the residential electric segment. Nearly two 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 ENERGY STAR New Homes and Insulation Rebate products far exceed goals. More contractors were educated, trained and comfortable with the products resulting in more effectively selling energy efficiency and Public Service rebates to customers.

The electric Home Performance with ENERGY STAR and gas Water Heater Rebate Products were not cost-effective due to the actual measures that were implemented by participants. Participants in the Home Performance with ENERGY STAR Product generally only installed the least costly measures resulting in lower than anticipated savings for the cost of the product. For the Water Heater Rebate Product more customers chose the tankless water heater than anticipated resulting in less energy savings per project than anticipated. Public Service has made several changes to the programs and communication plan and expects better performance in 2012.

The electric residential portfolio budget was slightly below target. This was due to the largest increases in savings coming from Home Lighting & Recycling where incremental impacts are relatively inexpensive as fixed costs have already been paid. The gas portfolio significantly exceeded its budget target primarily due to the higher than anticipated performance of ENERGY STAR New Homes. The product exceeded its gas savings target by over 250 percent while only exceeding its budget by just over 200 percent.

Residential Products

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 then mailed a showerhead kit, which includes the energy efficient showerhead, thread seal tape, and installation instructions free of charge.

Deviation from Goal

The product met its filed goals for participation and natural gas and electric savings and maintained cost-effectiveness. The Company was able to meet its savings goal despite a reduction in energy savings due to a lower-than-expected verified installation rate.

Changes in 2011

None.

ENERGY STAR New Homes

The ENERGY STAR New Homes Product encourages homebuilders and homeowners to consider a “whole-house” approach to energy conservation. The product provides incentives to builders to achieve both natural gas and electric energy savings, but is flexible by allowing the builder to choose which efficiency measures to install. A qualified energy rater works with the builder during the construction phase to ensure the home is built to ENERGY STAR standards and/or Public Service program requirements. Public Service pays the rater up to \$400 for each home enrolled and completed.

Deviation from Goal

The product experienced a very good year, exceeding its participation, savings, and spending goals. The filed goals for the product were inaccurate because they were based on expected changes to the ENERGY STAR New Homes requirements provided by the U.S. Environmental Protection Agency (“EPA”). These requirements were not finalized until after the 2011 DSM Plan and goals were published. Once the specifications were released, we determined that they would not pass our cost-benefit analysis. Because the EPA requires that its specifications be followed in order to use the ENERGY STAR New Homes brand, we decided to drop the ENERGY STAR name. The EPA’s delay implementing v2.5 and our removing the ENERGY STAR qualification effectively allowed more homes than originally planned to participate in our program.

The product also saw energy savings increase on a per home basis throughout year as demonstrated by the average HERS score. We believe that homebuilders are becoming more familiar with the ENERGY STAR requirements and incorporating more features into their homes.

Changes in 2011

60-Day Notice:

In order to manage the product effectively for the remainder of 2011 and minimize any potential disruptions to participants in mid-year due to the EPA's implementation of new specifications, Public Service filed a 60-Day Notice to remove the requirement that homes be ENERGY STAR "qualified" in order to participate. The change allowed Public Service to continue to require qualification under the EPA's previous ENERGY STAR requirements. The change did not impact rebate levels paid to builders, nor did it impact expected energy savings per participant.

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 product, providing \$200 or the cost of the unit, whichever is less, for Tier 1 units with a cubic feet of air blown per minute of 2,500 or greater; \$500 for Tier 2 units with a minimum media saturation effectiveness of 85 percent, a remote thermostat, and a periodic purge water control; and \$1,000 for Tier 3 units that are indirect/direct closed whole house ducted systems.

Deviation from Goal

In 2011, Public Service increased its marketing efforts and made product enhancements recommended in the 2010 process and impact evaluation. These product improvements raised customer awareness and participation, resulting in the Evaporative Cooling Rebate Product achieving its participation and savings goals for 2011.

Changes in 2011

60-Day Notice:

Public Service modified the Evaporative Cooling Rebate Product to have a tiered incentive structure and incorporated Trade/Retailer Incentives into the product in order to motivate evaporative cooling sales and off-set negative cost incentives that currently exist. Product changes included an update base line, changes to rebate levels, and differentiation between regions within Colorado. Marketing process improvements included enhanced customer facing marketing materials and outreach efforts.

Heating System Rebate

Public Service's Heating System Rebate Product rewards customers with rebates when they choose a high-efficiency furnace or boiler. The product's customer benefits include the offset of initial equipment costs, long-term natural gas savings during the lifetime of the equipment, and increased home comfort. The product's market transformation strategy is moving customer behavior toward the purchase of the highest efficiency heating products rather than the federal minimum standard.

Deviation from Goal

The Heating System Rebate Product did not meet its energy savings or participant goals in 2011 primarily due to the elimination of marketing and advertising efforts. This was a portfolio-wide decision to keep administration costs down.

Changes in 2011

The rebate for the boiler changed from \$120 to \$100. The Home Performance with ENERGY STAR Product offered a slightly higher rebate on boilers. This makes the Home Performance with ENERGY STAR Product more appealing to those customers looking to make multiple improvements.

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 Xcel Energy 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 strived towards creating 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 product did not meet its goals in 2011. We continue to educate and train the trade community to encourage their understanding of and commitment to the product. Several marketing tactics were implemented, including print, outdoor and online advertising, trade events and training to ensure the success of this product in future years.

Changes in 2011

None.

Home Lighting & Recycling

The Home Lighting & Recycling Product offers discounted prices on energy efficient lighting including compact fluorescent light (CFL) bulbs and new for 2011, 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. Customers were able to purchase reduced-price bulbs at retail stores and through mail order. Public Service promoted the product extensively through a variety of advertising and promotions, including television, radio, on-line, publication, bill inserts, community events and point of purchase displays.

Deviation from Goal

In 2011, the Home Lighting & Recycling Product exceeded its participation (and thus savings) goal, selling near two million CFLs and nearly 1,000 LEDs. We believe that economic challenges have customers looking for ways to reduce their energy bills, and light bulbs present an easy, low cost way to make efficiency improvements. As a result, Public Service saw an increased interest in CFLs by both consumers and retailers. Public Service expanded the participating retailer network and increased advertising to leverage this trend. Public Service believes that there is further potential to increase CFL sales in the coming year and will look to continue to try to expand the product in 2012.

Changes in 2011

In 2011, Public Service conducted a market test to assess the viability of offering consumer discounts on LED bulbs. These bulbs were deemed viable and cost-effective. As a result, LED bulb discounts will be added as a permanent component of the Home Lighting & Recycling Product for 2012.

Home Performance with ENERGY STAR

The Home Performance with ENERGY STAR 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 greater than four do not qualify.

Participants have a limited amount of time from sign up to implement three required measures including: attic insulation, air sealing/weatherization, and installation of 20 compact fluorescent light bulbs. An additional two measures from a list of optional gas and electric savings options must also be installed, such as: new heating equipment, wall insulation, or ENERGY STAR appliances. Upon the customer’s completion of the product requirements, a post-improvement 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 the in-home post improvement inspection and managing the product tracking, administration, and management of the auditor team.

Deviation from Goal

The product did not meet its savings goals, but exceeded the participation goal. The primary reason for this is customers did not complete the higher savings measures. The majority of participants completed programmable thermostats and utilized the option to have one of the five measures be a pre-existing improvement.

While we did not hit our goals, we did make great strides educating our customers who received an audit about the benefits in the product and why it is great for those looking to stay in their home and make multiple improvements. The product was marketed through advertising, bill inserts, direct mail, event sponsorship, cross-marketing, and rebate bonuses.

Changes in 2011

In 2011, a contractor incentive was offered to increase the number of sign ups and completions in the Home Performance with ENERGY STAR Product. Contractors received a cash incentive for every home they successfully completed.

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 far exceeded its participation and savings goals for both the electric and gas components of the product. The product reached its goals mid-year, but the popularity of the product continued to drive participation and savings higher for the rest of 2011. The budget - was exceeded proportional to increased product participation. The strong performance is believed to be a mix of increased contractor and customer awareness with many communications and other offerings available to customers through the American Recovery and Reinvestment Act (ARRA) funding. Communities and City programs used Public Service rebates, in addition to cash rebates available through their own programs, to further motivate customers to make home improvements.

Changes in 2011

None; however, Public Service agreed in the Stipulation and Settlement Agreement for the 2011 DSM Plan to evaluate insulation rebate measures. Specifically, the Settlement Agreement required Public Service to evaluate insulation rebate options, including the potential for offering crawl space insulation, building envelope, ducts and new construction rebates. Public Service evaluated the above referenced insulation rebate options, but deemed these new options non-cost-effective.

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 2011. The success of the product can be attributed to enhanced advertising and marketing efforts and a rebate increase in 2011.

Changes in 2011

Public Service increased the rebate in 2011 from \$35 to \$50 to encourage participation in the product.

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 and water conservation products in their homes. The product is targeted at sixth grade students in our Colorado service territory. Our third-party contractor 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 including: aerators, showerheads, and CFLs, that are installed in the homes of the students. Parents are surveyed to determine the measure installation rates.

Deviation from Goal

The product reached its participant goal, but did not reach its savings goals for 2011. Installation rates for all measures were lower than expected. These lower install rates caused a reduction in savings, which prevented the product from reaching its energy savings goals. Spending was slightly under budget for both gas and electric spend.

Changes in 2011

The School Education Kits Product will change to electric-only Energy Wise kit for the 2012/2013 DSM Plan.

Water Heating Rebate

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 expected participant and energy savings goals in 2011. The budget was in line with participation levels. The natural gas conservation products adjusted course last year and did not aggressively market due to low natural gas prices. While participation and interest was high for standard gas storage tanks, most customers were interested in the lowest efficiency qualifying equipment. Electric heat pumps are a relatively new product with a high price point and limited awareness, therefore extremely limited participation.

The product did not pass The MTRC due to a combination of factors. The product had higher participation than expected in the less efficient storage tank water heater measure. It also had lower than expected participation in the higher efficiency storage tank water heater and tankless water heater. This disparity between anticipated and actual market acceptance of the available technologies along with falling natural gas prices drove the MTRC below 1.0. A more targeted focus on customer education and retailer outreach will help improve product performance 2012.

Changes in 2011

None.

Saver's Switch

The Saver's Switch Product 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. As of the end of 2011, more than 148,000 residential Colorado customers participated. Control periods for central air conditioners are declared an average of five to fifteen times per year each summer. In 2011, we had the lowest number of controls since the inception of product with only one four-hour control event.

Deviation from Goal

None.

Changes in 2011

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 14a: Low-Income Program - Electric Products (Budget to Actual)

2011	Budget						Actual					
	Electric Participants	Electric Budget	Customer kW	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio	Electric Participants	Electric Spend	Customer kW	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Low-Income Program												
Energy Savings Kit	7,975	\$758,578	25,438	437	7,579,429	3.76	19,774	\$601,265	22,859	342	6,132,146	3.89
Multi-Family Weatherization	888	\$164,619	347	43	504,571	1.55	1,141	\$111,347	554	47	699,926	1.99
Non-Profit Energy Efficiency	322	\$312,843	433	68	722,935	1.39	40	\$314,305	336	281	1,173,520	1.33
Single-Family Weatherization	2,545	\$1,141,385	3,355	333	4,261,979	1.88	3,448	\$1,290,098	2,640	313	3,842,440	1.68
Low-Income Program Total	11,730	\$2,377,425	29,574	881	13,068,915	2.36	24,403	\$2,317,014	26,389	983	11,848,032	2.00

Table 14b: Low-Income Program - Gas Products (Budget to Actual)

2011	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	14,025	\$677,008	30,597	45,195	\$1,169,916	2.50	26,070	\$576,459	38,839	67,375	\$1,875,908	3.69
Multi-Family Weatherization	940	\$602,448	6,788	11,267	\$141,828	1.13	433	\$563,889	7,577	13,436	\$116,702	1.11
Non-Profit Energy Efficiency	868	\$658,920	6,972	10,581	\$139,929	1.11	40	\$586,002	7,994	13,642	\$112,983	1.11
Single-Family Weatherization	1,455	\$2,465,171	33,171	13,456	\$673,363	1.15	2,894	\$2,601,116	47,084	18,102	\$1,852,091	1.39
Low-Income Program Total	17,288	\$4,403,546	77,528	17,606	\$2,125,035	1.28	29,437	\$4,327,466	101,494	23,453	\$3,957,685	1.52

The overall low-income electric portfolio missed its target in 2011 due to a shortfall in Energy Savings Kits and Single Family Weatherization. Post surveys on the Energy Savings Kits showed lower than anticipated install rates even though additional participants were allowed into the product. Single Family Weatherization fell short of target due to customers installing fewer of the available measures than originally anticipated. Multi-Family Weatherization and Non-Profit Energy Efficiency both exceeded targets on the electric side due to participants choosing to install more measures than originally anticipated and the completion of projects begun in 2010.

The natural gas Low Income portfolio exceeded its target on the performance of all products. The Single Family Weatherization product provided the largest contribution to savings. Many of the weatherization measures favor natural gas savings driving higher performance to target on the gas versus electric side.

Of particular note the Non-Profit Energy Efficiency product exceeded its electric and natural gas goals in 2011. The product is very similar to most business energy efficiency products with respect to the long lead-time to identify and complete a project. As a result of a strong pipeline of projects identified and approved in 2010, many customers were implementing throughout 2011. We expect participation to increase in 2012 and beyond as more projects are identified and entered into the program pipeline.

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 Home Energy Assistance Program funding or other forms of energy assistance, such as that provided by Energy Outreach of Colorado.

Deviation from Goal

The Energy Savings Kits program increased the number of kits made available to participants in an effort to overcome low installation rates in 2011. This strategy was successful for natural gas measures but fell short of expectations on electric measures.

Changes in 2011

None.

Multi-Family Weatherization

The Multi-Family Weatherization Product offers 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 funds supplement federal weatherization grants to produce incremental, cost-effective gas and electric savings. Each project submitted went through a custom analysis by Public Service efficiency engineers to determine cost-effectiveness.

Deviation from Goal

The Multi-Family Weatherization Product exceeded gas and electric savings goals, while staying under the gas and electric budget. This was primarily due to more cost-effective measures submitted per project reviewed allowing greater savings at a lower cost. Promotions and applications for the program were managed by the third-party program implementer.

Changes in 2011

None.

Non-Profit Energy Efficiency

The Non-Profit Energy Efficiency Product provides funding for energy efficiency retrofit improvements to qualified non-profit organizations within the Company's service territory. The product's focus is on helping organizations that serve low-income individuals, such as shelters, safe houses, and residential treatment centers for those who are on the brink of homelessness.

Public Service contracted with a third-party to support the Non-Profit Energy Efficiency initiative. The implementer recruits facilities and manages applications. Each project that was submitted in 2011 went through a custom analysis by Public Service efficiency engineers to determine cost-effectiveness.

Deviation from Goal

The Non-Profit Energy Efficiency Product exceeded the electric and gas savings goals in 2011. This was due to greater participation than anticipated now that the program had picked up momentum since its launch in 2009. The engineering approval process to review and approve projects has been enhanced to increase the responsiveness and turnaround time.

Changes in 2011

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, customers will receive one or more of the following services:

- Furnace Efficiency Upgrades;
- Wall Insulation;
- Attic Insulation;
- Refrigerator Replacements; and/or
- Compact Fluorescent Bulbs.

In addition to these measures, a major focus of the product is customer education on ways to reduce energy use in the home and to make smart energy choices. The auditors provide educational materials, historical energy usage information, and bill analyses to these customers during the weatherization process.

The Single-Family Weatherization Product is run in partnership with the Governor's Energy Office ("GEO") 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

Savings and participation goals for the gas portion of this program were met. The product received an increase in funding with the American Recovery and Reinvestment Act, which helped the product to reach more homes than in previous years.

The electric savings goals were not met in 2011. Participation and spend exceeded goals due to fewer electric measures installed per home in the beginning of the year. GEO and Public Service

implemented product and process improvements to encourage the maximum number of measures installed per home as the year continued.

Changes in 2011

None.

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 evaluations. 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 2011, including: Business Energy Analysis, Customer Behavioral Change – Business, Customer Behavioral Change – Residential, and Residential Home Energy Audit. The pilots did not measure savings in 2011 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 15a: Indirect Program – Electric Products (Budget to Actual)

2011	Budget						Actual					
	Electric Participants	Electric Budget	Customer kW	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio	Electric Participants	Electric Spend	Customer kW	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Indirect Products & Services												
Education/Market Transformation												
Business Energy Analysis	400	\$1,045,914	0	0	0		438	\$885,488	0	0	0	
Customer Behavioral Change - Business	1,385	\$153,756	0	0	0		1,880	\$139,827	0	0	0	
Customer Behavioral Change - Residential	34,000	\$982,682	0	0	0		67,616	\$1,043,250	0	0	0	
Residential Home Energy Audit	3,520	\$602,313	0	0	0		15,331	\$532,946	0	0	0	
Education/Market Transformation Total	39,305	\$2,784,665	0	0	0		85,265	\$2,601,512	0	0	0	
Planning and Research								\$0	0	0	0	
DSM Planning & Administration	0	\$283,167	0	0	0		0	\$367,151	0	0	0	
Program Evaluations	0	\$265,162	0	0	0		0	\$145,962	0	0	0	
Measurement & Verification	0	\$79,142	0	0	0		0	-\$5,852	0	0	0	
DSM Market Research	0	\$263,243	0	0	0		0	\$121,797	0	0	0	
DSM Product Development								\$0	0	0	0	
Product Development - General	0	\$950,056	0	0	0		0	\$233,993	0	0	0	
Central AC Tune-up Pilot	1,000	\$277,566	344	254	262,783	1.19	0	\$23,730	0	0	0	-
Energy Feedback Pilot	50,000	\$329,450	788	120	7,482,526	1.00	47,958	\$348,864	0	0	0	-
ENERGY STAR Retailer Incentive Pilot	50,000	\$2,282,689	5,809	1,006	8,084,157	1.58	55,698	\$1,552,579	8,367	1,314	11,039,684	1.61
In-Home Smart Device Pilot	0	\$594,068	0	0	0		0	\$992,105	0	0	0	
SmartGridCity Pricing Pilot	0	\$0	0	0	0		0	\$0	0	0	0	
DSM Product Development Total	101,000	\$4,433,829	6,942	1,379	15,829,466		103,656	\$3,151,271	8,367	1,314	11,039,684	
Planning and Research Total	101,000	\$5,324,544	6,942	1,379	15,829,466		103,656	\$3,780,329	8,367	1,314	11,039,684	
Indirect Products & Services Total	140,305	\$8,109,209	6,942	1,379	15,829,466		188,921	\$6,381,841	8,367	1,314	11,039,684	

Table 15b: Indirect Program – Gas Products (Budget to Actual)

2011	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	\$190,109	0	0			302	\$163,623	0	0		
Customer Behavioral Change - Business	593	\$69,324	0	0			0	\$68,162	0	0		
Customer Behavioral Change - Residential	34,000	\$918,294	0	0			0	\$643,073	0	0		
Residential Home Energy Audit	3,960	\$697,548	0	0			2,673	\$541,463	0	0		
Education/Market Transformation Total	38,653	\$1,875,275	0	0			2,975	\$1,416,321	0	0		
Planning and Research												
DSM Planning & Administration	0	\$166,721	0	0			0	\$98,078	0	0		
Program Evaluations	0	\$665,162	0	0			0	\$375,307	0	0		
Measurement & Verification	0	\$39,188	0	0			0	\$3,731	0	0		
DSM Market Research	0	\$263,243	0	0			0	\$97,026	0	0		
DSM Product Development												
Product Development - General	0	\$365,638	0	0			0	\$58,277	0	0		
Energy Feedback Pilot	50,000	\$195,610	35,685	182,429	\$33,596	1.17	47,958	\$206,170	0	0	-\$206,170	-
DSM Product Development Total	50,000	\$561,248	35,685	63,582			47,958	\$264,447	0	0		
Planning and Research Total	50,000	\$1,695,562	35,685	21,046			47,958	\$838,589	0	0		
Indirect Products & Services Total	88,653	\$3,570,838	35,685	9,993			50,670	\$2,254,910	0	0		

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 customers first-steps towards energy efficiency, by providing them with information on how their businesses use energy, and where they can reduce their operating costs. Public Service offers online energy assessments, on-site energy assessments, and engineering assistance studies.

Deviation from Goal

The product significantly exceeded its participation goal in 2011, while remaining below the projected budget. Advertising and direct mail tactics were implemented in an effort to increase awareness of the product and leverage cross-promotional opportunities with local community programs.

Changes in 2011

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 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 events, such as Doors Open Denver;
- Utilizing mass market advertising such as radio, print, and interactive to create awareness in energy efficiency;
- Online messaging through targeted websites;
- Conservation messaging through Public Service's newsletter to business customers; and
- 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 2,700 customers. Over 1,000 participants occurred through readership of the

newsletter to business customers called “Energy Solutions”. Additional participation came through all of the other communication channels referenced above.

Changes in 2011

None.

Customer Behavioral Change- Residential

The market transformation product targets all Colorado natural gas and electric residential customers. The initial 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 employed a variety of resources and communications channels to communicate energy efficiency and conservation. The strategy deployed encompassed awareness messaging and activities. In the initial implementation of the product, primary emphasis was placed on:

- Community-based events, such as home shows and conservation events;
- Utilizing mass market advertising such as radio, print, and interactive to create awareness in energy efficiency;
- Online messaging through targeted websites;
- 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; and
- Neighborhood sweeps.

Deviation from Goal

The product reached over 78,000 participants in 2011 compared to the 68,000 goal. The majority of interactions came through community-based events we attended, such as the National Western Stock Show, Colorado Home & Garden Show, Cherry Creek Arts Festival, Boulder Creek Festival, and the Fruita Fall Festival. The events were more effective than planned, which resulted in exceeding participation goal while spending was close to budget. Additional participation came through all of the other communication channels referenced above.

Changes in 2011

None.

Home Energy Audit

The Home Energy Audit Product provides energy audits to Public Service natural gas and/or electric customers at a reduced price. This product is designed to improve energy savings in

residential homes by influencing customer behavior through conservation education and implementation of energy efficient improvements in the home.

There are three types of in-home audits offered through this program at a 60 percent discount to the customer:

- Standard audit for \$60;
- Standard audit with blower door test for \$90; and
- Infrared audit which includes the standard and the blower door test for \$120.

Deviation from Goal

The product completed the year with a 92% customer service rating for overall satisfaction. Despite this and high customer awareness, we saw a decrease in customer participation in 2011. The product did not meet its participation or spending goals. Throughout the year, Public Service promoted the program through various marketing efforts such as a new advertising strategy, bill inserts, direct mail, community partnerships, event sponsorship, and call center training to boost participation.

Changes in 2011

None.

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 and DSM plans. This group performs the benefit-cost analyses of all of the energy efficiency and load management programs, provides tracking of the energy and demand savings, and collaborates with the Resource Planning group to develop inputs for the resources 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, as needed. These functions are needed to ensure a cohesive and high quality DSM portfolio that meets all legal requirements as well as the expectations of our customers and regulators.

Deviation from Goal

In total, DSM Planning & Administration spent slightly more than the total approved gas and electric budget due to an increase in internal labor and expenses. However, the actual spend was 30 percent more than the originally approved electric budget and 59 percent less than the approved gas budget. This is due to the way that the original approved budget was allocated between gas and electric. Instead of about an 80 percent/20 percent split, the electric/gas budget was allocated at about 60 percent/40 percent.

Changes in 2011

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 robustness 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 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 delivery and effectiveness.

Results of M&V activities are reported in the separate section entitled “Evaluation, Measurement, and Verification Results for 2011”. Realization rates for a majority of the prescriptive products were applied to 2011 gross savings while recommendations for changes to process, technical assumptions and net-to-gross ratios will be implemented in 2012.

Deviation from Goal

During 2011, we spent -\$5,582 for the electric program. A large negative adjustment of -\$27,336 was made in April 2011 to the electric program to account for expenditures that were incorrectly charged to this account in 2010. If we were to eliminate this adjustment, we spent \$21,754 on the electric products which is approximately 27% of our approved budget. The reduction in spending can be attributed to lower than anticipated expenses from our third party contractor and lower internal labor. For the gas products we spent \$3,731 which is approximately 10% of our approved budget. The reduction in spending was due to lower than anticipated internal labor expenses.

Changes in 2011

None.

DSM 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 2011, the Company conducted the following General Research projects:

- ESource Consultative Services;
- Dun & Bradstreet Business list refresh for Colorado;
- Home Energy Audit Tracker; and
- Residential 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 2011, the Company conducted the following product-specific research:

- Business Heating Efficiency;
- Business Self-Directed Custom Efficiency;
- Residential Energy Efficient Showerhead; and
- Low-Income Single-Family Weatherization.

Deviations from Goal

DSM Market Research was under budget in 2011 because we refined the scope on some of its evaluations, resulting in lower than budgeted costs. The following adjustments were made to the scheduled process and impact evaluations:

- The Low-Income Single-Family Weatherization evaluation did not include a net-to-gross analysis due to the nature of the product.
- The Residential Energy Efficient Showerhead evaluation did not include a technical assumptions analysis as those measures will be captured during the Portfolio wide review scheduled for 2013-2014.
- The Business Self-Directed Custom Efficiency evaluation was a process-only evaluation due to the smaller number of participants.

Changes in 2011

None.

DSM Product Development

Product Development identifies, assesses, and develops new conservation and load management products and services. This work enables Public Service 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. These ideas are then carefully screened; only ideas with the greatest potential are selected for the development process.

In 2011, Product Development developed nine new products or measures. These included seven new measures for business customers, including:

- Advanced Evaporative Cooling;
- Electronically Commutated Motors for Commercial Refrigeration;
- “Plan A” Variable Speed Drive (VSD) air compressors;
- Plate and Frame Heat Exchangers;
- Computer Efficiency measures: Desktop PC Virtualization prescriptive rebates and Upstream Manufacturer Incentive for desktop PCs with high-efficiency power supplies; and
- Retrofitting an existing chiller with a variable speed drive.

And two new measures for residential customers:

- Residential Ground Source Heat Pumps;
- Residential Heat Pump Water Heaters.

Product Development also initiated the following study in 2011:

- Commercial Efficiency Study -- The objectives of the Commercial Efficiency Pilot were to determine how to systematically remove barriers to implementing energy efficiency in the large commercial market and identify what makes commercial customers differ from industrial customers.

Current Status: The Commercial Efficiency process is modeled after our existing Process Efficiency product with customers progressing through three phases of activity aimed at developing and implementing a long-term energy sustainability plan. Two customer sites, one transportation and one hospitality, were selected for the study and progressed through Phase 1. Phases 2 and 3 will continue in 2012.

In addition, Product Development added the following pilot product in 2011:

- Building Code Support Pilot -- This pilot will determine if the proposed Department of Energy Building Energy Codes Program protocol process of measuring and verifying energy savings is viable and cost-effective.

Current Status: This pilot was added through a 60-Day Notice in late December and was still

in the initial 30-day comment period at year end.

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 2011

None.

60-Day Notice:

Public Service filed a 60-Day Notice in December to add the Building Code Support Pilot.

Central Air Conditioning Tune-up Pilot

The Central Air Conditioning Tune-up Pilot is a continuation of the pilot that began in 2010 to evaluate whether a residential air conditioning tune-up program could be cost-effective. This pilot has been concluded. It demonstrated that there wasn't enough participation to support a full product that was cost-effective.

Deviation from Goal

The pilot was unable to generate the level of participation necessary to meet its forecasted goal.

Changes in 2011

90-Day Notice: Public Service filed a 90-Day Notice in August to discontinue the Central Air Conditioning Tune-up Pilot.

Residential Energy Feedback Pilot

The intent of the pilot product is to provide customers with feedback regarding their energy usage through a variety of different delivery mechanisms and then to quantify how the feedback methods affect customer energy usage.

After some delays in setting up the data extraction for the Public Service residential customers, the first Home Energy Reports were sent in June. Behavior changes as a result of the feedback take some time to occur and will ramp up slowly over time. Preliminary analysis shows that savings are occurring with participants in this product.

Deviation from Goal

The 2011 initial savings impacts arrived too late in the year to be included in 2011 results and will be reported along with 2012 results after the product has had more time in the field.

Changes in 2011

None

ENERGY STAR Retailer Incentive

The ENERGY STAR Retailer Incentive Product provided incentives to retailers to motivate them to increase their inventory and sales of energy efficient televisions and appliances. The product included upstream incentives to retailers for the sale of qualifying ENERGY STAR units including: televisions, computer monitors, clothes washers, dishwashers, room air conditioners, and refrigerators.

Retailers developed marketing and merchandising plans using Public Service guidelines, implemented sales training for employees, and displayed point of purchase signage. The signage was created for all eligible units and displayed throughout promotional period. The retailers were required to submit sales data on a monthly basis to our third-party implementer, Wisconsin Energy Conservation Corporation (“WECC”). WECC contracted with Castenea Labs to validate the data and keep an updated database of product SKUs, model numbers, and eligible Public Service zip codes.

Deviation from Goal

The 2011 was very successful attracting four major retailers: Best Buy, Sears, K-Mart and Lowe’s, who, combined sold over 55,000 units. The retailers were highly engaged and communicated information about the product regularly to their sales staff. As a result, the product exceeded its participation goal at a lower cost than budgeted.

Changes in 2011

60-Day Notice:

Public Service filed a 60-Day Notice in February to remove the ENERGY STAR televisions 4.1 from the product and reducing the incremental cost of ENERGY STAR televisions 5.1.

Public Service also evaluated a second tier of dishwashers and the computer monitors for inclusion in the ENERGY STAR Retailer Incentive Pilot. The second tier of dishwashers was found to be non-cost-effective (MTRC ratio of 0.19). The computer monitors were found cost-effective and were added to the product.

In- Home Smart Device Pilot

The In-Home Smart Device Pilot Product 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.

Deviation from Goal

The In-Home Smart Device Pilot did not have any energy and demand savings goals. While the 2011 expenditures exceeded budget the pilot is under spending over the 3 year period (2009-2011) by ~\$400,000 in total. This is due to some of the development costs occurring later in development than originally planned.

At the time the budget was developed, our assumption was that certification of a vendor and installation of all in-home devices would be completed in 2010. This was not the case and no devices were installed in 2010. Planned budget included expenses for customer education, evaluation, measurement and verification. Actual non-planned budget expenses included: continued device testing for multiple providers, purchase and installation of certified devices, and deployment activities such as call center and installer training, marketing and enrollment activities.

Changes in 2011

In 2011, the pilot faced challenges in identifying an acceptable device for the pilot participants. In response, we changed some of the requirements for device providers. Providers no longer must integrate their data with Xcel Energy's online account management web portal if they are able to provide their own web portal with a similar experience. This required us to reevaluate vendor products against our revised functional and security requirements. We certified a vendor in August and began our marketing and recruitment in Boulder with a Commission order in the Pricing Pilot to have all systems installed by December. 470 customers were recruited for possible installation of an IHSD.

Despite our best efforts we were only successful in installing a small number of devices (101 in total – 66 in Pricing Pilot, 35 in IHSD pilot) for the following reasons:

1. During enrolment actual recruitment numbers were lower than anticipated due to customers needing to qualify as follows:
 - a. Customers must have central air conditioning;
 - b. Customers must own the property; and
 - c. Customers must have a wireless internet connection.
2. Once enrolled, we faced additional challenges in getting systems installed. Beginning with the scheduling process we had:
 - a. 29% of customers who can not be contacted to schedule an installation time.
 - b. 12% of customers disqualified after eligibility questions were reviewed during the scheduling phone call (ex. Customer originally answered yes to “have central air conditioning” but at time of scheduling answered “no”).
3. Once installers arrived at the Customer's residence we experienced a high percentage of “turn-downs”. These are situations where the IHSD system can not be installed due to issues at the premise:

- a. Grounding and bonding issues – a City of Boulder permitting requirement;
- b. No access to the customer’s electrical panel; and/or
- c. Unable to establish connection with the customer’s wireless internet.

In 2012 we filed a 60 day notice to highlight proposed changes to the Pilot.

Evaluation, Measurement, and Verification 2011 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. For its 2011 DSM Plan, 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, and 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 2011 pilot products included Central Air-Conditioning Tune-Up Pilot, Energy Feedback Pilot, ENERGY STAR Retailer Incentive Pilot, In-Home Smart Device Pilot, and SmartGridCity Pricing 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 2011 DSM Plan, parties agreed that the Company would conduct comprehensive product evaluations on the High Efficiency Showerheads, Single-Family Weatherization, Heating Efficiency, and Self-Direct products in 2011 (p. 18). Public Service intends to apply recommended changes coming from these comprehensive evaluations in 2012 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 2011

Public Service uses a variety of providers to conduct its measurement and verification activities. In 2011, 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 2011. All M&V activities followed the processes outlined in the M&V Plan filed with the 2011 DSM Plan, unless noted below. With its best efforts, the Company achieved portfolio realization rates of 98.5% for electric demand, 99.5% for electric energy, and 101.1% 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

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 249 prescriptive measures in 2011. For the prescriptive projects, Nexant performed 35 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 2011 Heating Efficiency prescriptive measures was 99.4% \pm 1.0% around the 90% targeted confidence level. Public Service did not complete any custom Heating Efficiency projects in 2011.

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 58 prescriptive Compressed Air Efficiency projects in 2011. Of these projects, Nexant performed 21 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 2011 Compressed Air Efficiency prescriptive measures were $98.8\% \pm 1.3\%$ and $100.9\% \pm 1.5\%$, respectively, around the targeted 90% confidence level.

Public Service completed five custom Compressed Air Efficiency projects in 2011. 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. For the two projects that exceeded savings of 0.5 GWh, the applications were 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 was one project for which the scope had changed by more than $\pm 10\%$. In addition, two of the projects were field-verified and the rest were phone-verified to confirm installation.

Computer Efficiency

The Computer Efficiency Product was new for 2011 and did not have any completed projects. In the future, projects will be measured and verified in a multi-step process. First, Public Service will confirm that all computers reported by the third-party administrator were shipped to Public Service zip codes. Then a third-party M&V provide will select a statistically significant random sampling from the participants to verify that the number of computers on the invoice matches the number of computers received, that the model numbers of the computers shipped matches the invoice, as well as to determine if any computers were returned. The M&V provider will then calculate a realization rate within a 90% confidence interval.

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 206 prescriptive Cooling Efficiency projects in 2011. Of these projects, Nexant performed 36 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 $99.3\% \pm 0.8\%$ and $100.0\% \pm 1.0\%$, respectively, around the 90% targeted confidence level.

Public Service completed seven custom Cooling Efficiency projects in 2011. 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 $\pm 10\%$. These projects were re-modeled to determine the final savings. There were no projects that exceeded savings of 1.0 GWh this year. In addition, all custom projects were field-verified by internal Account Managers.

Custom Efficiency

Public Service completed 55 electric and 15 gas Custom Efficiency projects in 2011. 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 three projects that exceeded savings of 0.5 GWh, the application was given a third review by the internal engineering team lead. For the project that exceeded savings of 1.0 GWh, the application was 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 12 projects for which the scope had changed by more than $\pm 10\%$. These projects were re-modeled to determine the final savings. In addition, for the one project over 1.0 GWh, Public Service contracted with Nexant to perform pre- and post-metering to verify savings. The Company reviewed the metering data to determine the final savings for each project. Finally, 28 projects were field-verified, and all others were phone verified, by internal Account Managers.

Data Center Efficiency

No projects with energy savings were completed in the Data Center Efficiency Product in 2011; however, eight studies were conducted. Thus, measurement and verification was not performed. For future projects, the M&V process will be built into the project approval process. When the customer applies for project pre-approval, the application (all technical assumptions and savings estimates) will be reviewed by an internal energy efficiency engineer. Within the initial engineering analysis, the expected project savings and payback will be calculated using technical assumptions that specifically fit the measure and application. Depending on the size of the project, it will be given a second review by an internal engineer. For projects that are expected to exceed savings of 0.5 GWh, the application will be given a third review by the internal engineering team lead. For projects expected to exceed savings of 1.0 GWh, the application will be given a final review by the engineering group manager. Upon completion of the project, internal staff will review the invoices to verify that the project scope has not changed. If the scope has changed, then the project will be re-modeled. In addition, for projects over 1.0 GWh, pre- and post-metering will be conducted to verify savings. The Company will review all metering data and/or bill histories to determine the final savings for each project.

Energy Management Systems

Public Service completed 38 EMS projects in 2011, of which, 27 were electric-only projects, one was a gas-only project, and 10 were combination electric and gas projects. 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 five projects that exceeded savings of 0.5 GWh, the application was given a third review by the internal engineering team lead. There were no projects that exceeded savings of 1.0 GWh this year. In addition, all 38 projects were analyzed by a third-party engineering firm. There were three projects for which the scope had changed by more than $\pm 10\%$. The Company reviewed all metering data and/or bill histories to determine the final savings for each project. Finally, one project was field-verified and 37 were phone-verified by internal Account Managers.

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 1,756 prescriptive Lighting Efficiency projects in 2011. For prescriptive projects (Retrofit and New Construction), Nexant performed 43 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 2011 Lighting Efficiency prescriptive measures were 97.3% \pm 2.7% and 98.2% \pm 2.0%, respectively, around the targeted 90% confidence level.

Public Service completed 169 custom Lighting Efficiency projects in 2011. 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 four projects that exceeded savings of 0.5 GWh, the application was given a third review by the internal engineering team lead. For the project that exceeded savings of 1.0 GWh, the application was given a final review by the engineering group manager and Nexant performed pre- and post-metering to verify savings. The Company reviewed all metering data to determine the final savings for the project. There were 32 projects for which the scope had changed by more than $\pm 10\%$. These projects were re-modeled to determine the final savings. In addition, 11 projects were field-verified and 158 were phone-verified by internal Account Managers.

Motor & Drive Efficiency

For the Motor & 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 531 prescriptive Motor & Drive Efficiency projects in 2011. From amongst these projects, Nexant randomly selected 41 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 2011 Motor & Drive Efficiency prescriptive measures were $98.3\% \pm 1.7\%$ and $98.6\% \pm 2.9\%$, respectively, around the targeted 90% confidence level.

Public Service completed 24 custom Motor & Drive Efficiency projects in 2011. 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. 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 one project that exceeded savings of 1.0 GWh, the application was given a final review by the engineering group manager and received pre- and post-metering to confirm its savings. There were no projects for which the scope had changed by more than $\pm 10\%$. In addition, all projects were either field or phone 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 15 projects (nine electric and six gas) under the Energy Efficient Buildings component in 2011. M&V for these projects was performed by Nexant. Public Service completed 37 electric projects and 16 gas projects under Energy Design Assistance. Four consulting groups, The Weidt Group, Group 14, Architectural Engineering Corporation, and Nexant conducted verification on these projects. All adopted measures received a visual verification. One project varied by more than $\pm 10\%$ and was therefore remodeled. 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 two prescriptive electric Process Efficiency projects in 2011. 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 five custom Process Efficiency projects in 2011, two in Cooling, one in Custom, one in Lighting, and one in Recommissioning. 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 the project exceeded savings of 0.5 GWh, the application was given a third review by the internal engineering team lead. For projects that exceeded savings of 1.0 GWh (none this year), the application was given a final review by the engineering group manager. There were no projects for which the scope had changed by more than $\pm 10\%$. In addition, all projects were either field or phone verified by internal Account Managers.

Recommissioning

Public Service completed 42 electric and 15 gas studies, and 46 electric and five gas Recommissioning projects in 2011. 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 measure 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. No measures met this threshold in 2011, so no metering was completed.

Segment Efficiency

Public Service completed four prescriptive projects in 2011, including one in Lighting and three in Motors. The Company used the realization rates determined for the end-use programs (Lighting Efficiency and Motor & Drive Efficiency) to calculate final demand and energy savings for these prescriptive projects. For the three custom EMS projects, measurement and verification was performed throughout the project. 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. If the scope had changed by more than $\pm 10\%$, then the project would have been re-modeled and the rebate granted on the basis of the revised savings. In addition, all projects were either phone verified by internal Account Managers.

Self-Direct

Customers completed two Self-Direct projects in 2011. 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 777 prescriptive projects in the Small Business Lighting Product in 2011. 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 $99.9\% \pm 0.5\%$ and $100.2\% \pm 0.9\%$, respectively, around a targeted confidence level of 90%.

Standard Offer

Public Service completed three electric Standard Offer projects and six studies in 2011. 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 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 2011, Public Service provided 40,146 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 62%.

ENERGY STAR New Homes

Public Service's ENERGY STAR New Homes Product was administered by a third-party provider, Energy Raters, and managed by 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 2011, 3,369 gas and 2,114 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 2011, Public Service rebated 3,481 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 43 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 2011 were $100.0\% \pm 0.0\%$ and $100.0\% \pm 0.0\%$, 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 5,815 units in 2011. A third-party verification contractor (Nexant) conducted field M&V, randomly selected 43 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 2011 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 1,655 equipment purchases and quality installations in 2011. The final demand and energy savings realization rates for the Equipment component of the product in 2011 were $98.0\% \pm 0.0\%$ and $98.0\% \pm 0.0\%$, 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 2011 were 83% and 86%, 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 1,111 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 2010 were $100.0\% \pm 0.0\%$ and $100.0\% \pm 0.0\%$, 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 instant rebate forms from various retailers. These rebate forms directly reduced the cost of certain ENERGY STAR compact fluorescent lamps at "check-out." No customer contact was made for the measurement and verification of this product. There were 1,996,025 units sold to 399,205 participants in 2011. Nexant examined and verified 456 rebates. Results of this effort showed only minor discrepancies, including four instances of a difference between the model number listed on the rebate form and the number listed in the database, 25 instances where there was an error or omission in the customer name, one database entry where the quantity differed from what was written on the voucher form, and 35 rebate forms with an error or

omission in the customer's address. 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, Lightly Treading, 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 108 homes completed in 2011. 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 4,984 electric rebates and 6,791 gas rebates through the Insulation Rebates Product in 2011. 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 43 participants wherein it was confirmed what type of insulation was installed in the home (attic insulation, wall insulation and air sealing). The final report for the Insulation Rebates Product in 2011 found a realization rate of $105.9\% \pm 3.0\%$.

Refrigerator Recycling

The Refrigerator Recycling Product provides a rebate to customers who retire their old, inefficient, but operational secondary refrigerators. In 2011, the Company recycled 3,163 refrigerators. To verify these results, Nexant performed phone surveys at year-end. The survey was given to 43 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 2011 found a realization rate of $95.6\% \pm 5.3\%$ 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 2011, the Product included 18,308 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 2011 year-end savings for the program were determined using the installation rates by measure determined by RAP, which were 37% for aerators, 65% for 13W and 62% for 18W CFLs, and 37% for showerheads.

Water Heating Rebates

The Water Heating Rebates Product provides rebates to customers who purchase new, energy efficient water heaters. Public Service provided 18 electric and 2,228 gas rebates in 2011. 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 43 randomly selected customers to perform field inspections and to verify the installed/rebated equipment. The final report for the Water Heating Rebates Product in 2011 demonstrated a 100.0% ± 0.0% 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 0.99 customer kW per smart switch of available load relief. This resulted in a realization rate of 96.1%, when compared to the savings of 1.03 generator kW per switch originally anticipated in the 2011 DSM Plan.

Easy Savings Energy Kits

The Easy Savings Energy Kits Product delivered 19,774 electric kits and 26,070 gas kits in 2011. This product was implemented by a third-party provider, the Governor's Energy Office ("GEO"), 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 58% for aerators, 67% for CFLs, and 51% for showerheads.

Multi-Family Weatherization

Public Service completed eight Multi-Family Weatherization projects in 2011. 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 Energy Efficiency

The Non-Profit Energy Efficiency Product had 40 projects completed in 2011. 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 3,448 electric homes and 2,894 gas homes in 2011. Public Service's third-party product implementer, the Governor's Energy Office ("GEO"), managed the eight 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

Central AC Tune-Up Pilot

This pilot was discontinued and no energy savings were recorded in 2011.

Energy Feedback Pilot

This pilot is still in its preliminary stages and no savings were recorded in 2011.

ENERGY STAR Retailer Incentive Pilot

The ENERGY STAR Retailer Incentive Pilot Program provided an incentive to Best Buy, Sears, Kmart, and Lowe's for their sales of ENERGY STAR appliances (refrigerators, dishwashers, clothes washers, televisions, and window air conditioners). Retailers were required to submit sales data to our third-party administrator, Wisconsin Energy Conservation Corporation. The sales data was then forwarded to a sub-contractor Eco Rebates (Castenea Labs) for evaluation of the models and comparison to the Public Service zip code list prior to rebates being paid. For units meeting our rebate criteria, incentives were paid directly to the retailers. Public Service rebated a total of 55,698 ENERGY STAR units in 2011. This program is assumed to have a realization rate of 100%.

In-Home Smart Device Pilot

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

Post-Program Year Activities

All measurement and verification activities for the 2011 performance year were completed in 2011 or early in 2012 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 2011

Public Service contracted for evaluators to perform process and/or impact evaluations in 2011 of four products: Heating Efficiency, Self-Directed Custom Efficiency, Energy Efficient Showerheads, and Low-Income Single-Family Weatherization. The following sections provide an overview of the findings of the evaluations and the evaluators' recommendations.

Heating Efficiency

Tetra Tech Inc., in partnership with Evergreen Economics and Michaels Energy, conducted a comprehensive process and impact evaluation of the Heating Efficiency Product, which included interviews of Public Service staff, as well as surveys of program participants and non-participants, trade allies, and vendors, and a benchmarking study of other utility programs, an engineering review of the program's baseline and technical assumptions. While recognizing that the Heating Efficiency Product is operating effectively considering its limited exposure to the market, the Tetra Tech team made a number of recommendations for both process and impact improvements that may be made to the product. The team suggests:

- Revising the assumed efficiency for condensing space heating and water heating boilers to 94 percent to be slightly more conservative and consistent with the literature;
- Making outdoor air temperature reset ineligible for domestic hot water only boilers;
- Conducting further research for the steam trap measure to ensure that the most representative information is used for participants, but only if or when steam trap savings meet or exceed 30 percent of the total prescriptive product savings;

- Reducing the effective useful life for stack dampers from 20 years to 12 years to be more consistent with other programs;
- Increasing the effective useful life for pipe insulation from seven years to ten to 15 years to be more consistent with other programs;
- Changing the NTG ratio for the next product year to 0.86;
- Offering trade ally incentives;
- Investigating the feasibility of an enhanced boiler tune-up option in Colorado once the Minnesota Commercial Heating Efficiency program pilots this enhanced option in 2012;
- Developing simple Xcel Energy-branded return-on-investment or energy savings calculators for use by HVAC contractors; and
- Investigating allowing HVAC contractors to enter into cooperative advertising campaigns with Xcel Energy.

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.

Self-Directed Custom Efficiency

Tetra Tech Inc., in partnership with Evergreen Economics and Michaels Energy, conducted a comprehensive process and impact evaluation of the Self-Directed Custom 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 early successes of the Self-Directed Custom Efficiency Product, the Tetra Tech team made a number of recommendations for both process and impact improvements that may be made to the product. The team suggests:

- Evaluating eligibility requirements in the context of the product's desired role in the business portfolio. The product's current eligibility restrictions are appropriate if Xcel Energy wishes to limit participation in the product to only their largest business customers. If interested in encouraging broader participation in the product, consider making eligibility requirements less restrictive. Two options worth consideration are lowering the current annual energy consumption and/or demand requirements and basing eligibility on project savings potential instead of consumption. The product should evaluate the feasibility, benefits, and costs of these options, keeping in mind customer demand for product offerings and the cost-effectiveness of the projects and the product's desired role in achieving portfolio goals.
- Expanding outreach to energy services companies and performance contractors in Colorado informing them about product offerings and requirements;
- Conducting additional research in the future to quantitatively assess the extent of free-ridership in the product, once increased participation numbers permit. If a substantial amount of free-ridership exists (40% or more are free-riders), consider instituting a higher minimum payback threshold for rebating projects (e.g., over a two year payback without the rebate);
- Providing additional information to prospective customers and vendors on the product's expectations for M&V plans, including a detailed inventory of the types of information and documentation needed for approval;
- Exploring ways to help interested customers find vendors who are capable of performing M&V requirements. One suggestion worth consideration is providing a link on the product webpage to the Colorado Governor's Energy Office's listing of approved energy service

providers (Service Provider Database). Another idea is providing a listing of vendors who have been involved with a project successfully completed through the product; and

- Clearly defining the process for rebate notification and communicating any changes to the estimated project rebate. Encourage account managers to communicate status updates to customers (and vendors, if appropriate).

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.

Energy Efficient Showerheads

The Cadmus Group Inc. conducted an impact and process evaluation of the Energy Efficient Showerheads Product in 2011, which included participant and non-participant 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. The team suggests:

- Reviewing the method for determining the installation rate;
- Implementing one to two follow-up opportunities after the business reply cards have been sent and again after the showerheads have been sent to remind people about the offer and to encourage them to install the showerhead;
- Incorporating a direct install effort, if it is determined cost-effective;
- Using this product to educate customers about other Xcel Energy products and additional ways to save energy;
- Expanding the product to commercial meters and directly targeting multi-family buildings;
- Using a NTG ratio of 0.99 for this product due to high levels of spillover; and
- Conducting a market transformation study to capture future savings and develop a baseline to use as an indicator for developing the product exit strategy.

Single-Family Weatherization

The Cadmus Group Inc. conducted a comprehensive process and impact evaluation of the Single-Family Weatherization Product in 2011, which included internal interviews of Public Service and Governor's Energy Office staff, as well as interviews of program participants, and a benchmarking study of other utility programs. As a result of this research, the team suggests:

- Incorporating a cost-effective automated quality assurance process in the audit software, which would save stakeholder time addressing data discrepancies after the audits have taken place;
- Working with the GEO to create a solution for on-the-ground field staff compliance such as a monthly update document or conference call describing any new changes;
- Adding new measures to the product such as showerheads, faucet aerators, and air sealing measures;
- Expanding the insulation options that qualify for the product. Currently, to participate in the product customers cannot have existing wall insulation, which rules out customers who have very low levels of insulation;
- Including additional AFUE levels for furnaces. In our interviews with the agencies, they mentioned that the required furnace model (92 AFUE) sometimes does not fit in the participants' homes, and thus a smaller model might be advised in these cases;

- Considering whether or not to base the cost-effectiveness of measures on more precise climate zone weather data. There could be further efficiency gains with heightened collaboration between local, state, and federal agencies;
- Working with implementers to ensure that they mention Public Service as the product sponsor when they are on-site speaking with customers (if it is important that customers are able to identify Public Service as a product sponsor);
- Expanding the participation of renters in the product by working with multi-family buildings and landlord/tenant agreements.
- Conducting some quality control visits. Presently, some customers have expressed concerns regarding the quality of furnace and insulation installations in particular;
- Collecting the square footage and home type for electric-only homes, as this information is already being collected for gas and combined homes;
- For homes with fewer sockets than the maximum CFL bulbs allowed, providing a one-for-one CFL replacement and having the contractor invoice per bulb based on the individual home/mobile home socket count;
- Considering home type as a component of savings achieved through gas measures. Currently, deemed savings are for site-built homes only. Twenty percent of the residences we visited during the verification site visits were mobile homes. The savings achieved through gas measures for site-built homes are up to 68% greater than the gas savings achieved for the same measures in mobile homes;
- Considering climate as a component of savings achieved for insulation and high-efficiency furnace measures. Currently, Public Service uses a singular value for all product measures in all locations. This is appropriate for refrigerators and CFLs, but may not be the best approach for insulation and furnace measures. The current deemed value is specific to the Denver metro area; and
- Increasing training standards for installers. Cadmus found that 35 percent of installed ceiling insulation did not meet the final requirement of R-38.

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:

- **2011 Product** – The DSM program offered by Public Service in 2011.
- **End-Use Measure Type** – Whether the program was prescriptive or custom, or the program components, if the M&V process differed for different projects within a single program.
- **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 Program Installation Rates, Realization Rates, and Final Net, Verified Savings by Product Component

2011 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																	
Heating Efficiency	Prescriptive	N/A	N/A	37,083	100.0%	N/A	N/A	99.4%	N/A	N/A	36,861	N/A	N/A	95.7%	N/A	N/A	35,258
	Custom	N/A	N/A	0	100.0%	N/A	N/A	100.0%	N/A	N/A	0	N/A	N/A	93.0%	N/A	N/A	0
Compressed Air Efficiency	Prescriptive	221	878,024	N/A	100.0%	99.8%	100.9%	N/A	221	885,926	N/A	87.0%	87.0%	N/A	192	770,756	N/A
	Custom	314	2,680,333	N/A	100.0%	100.0%	100.0%	N/A	314	2,680,333	N/A	87.0%	87.0%	N/A	274	2,331,890	N/A
Computer Efficiency	Prescriptive	0	0	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0.0%	0.0%	N/A	0	0	N/A
Cooling Efficiency	Prescriptive	1,722	2,327,411	N/A	100.0%	99.3%	100.0%	N/A	1,710	2,327,411	N/A	75.0%	75.0%	N/A	1,283	1,745,558	N/A
	Custom	334	861,627	N/A	100.0%	100.0%	100.0%	N/A	334	861,627	N/A	87.0%	87.0%	N/A	291	749,616	N/A
Custom Efficiency	Custom	1,054	7,962,738	13,366	100.0%	100.0%	100.0%	100.0%	1,054	7,962,738	13,366	87.0%	87.0%	93.0%	917	6,927,582	12,431
Data Center Efficiency	Custom	0	0	N/A	N/A	N/A	N/A	N/A	0	0	N/A	90.0%	90.0%	N/A	0	0	N/A
Energy Management Systems	Custom	156	9,467,745	5,929	100.0%	100.0%	100.0%	100.0%	156	9,467,745	5,929	87.0%	87.0%	93.0%	136	8,236,938	5,514
Lighting Efficiency	Prescriptive	14,938	66,969,470	N/A	100.0%	97.3%	98.2%	N/A	14,535	65,764,019	N/A	84.0%	84.0%	N/A	12,209	55,241,776	N/A
	Custom	2,175	14,476,232	N/A	100.0%	100.0%	100.0%	N/A	2,175	14,476,232	N/A	96.0%	96.0%	N/A	2,088	13,897,183	N/A
Motor & Drive Efficiency	Prescriptive	4,560	27,100,649	N/A	100.0%	98.3%	98.6%	N/A	4,483	26,721,240	N/A	65.0%	65.0%	N/A	2,914	17,368,806	N/A
	Custom	1,225	10,770,575	N/A	100.0%	100.0%	100.0%	N/A	1,225	10,770,575	N/A	65.0%	65.0%	N/A	796	7,000,874	N/A
New Construction	Energy Efficient Buildings	522	1,166,175	758	100.0%	100.0%	100.0%	100.0%	522	1,166,175	758	93.0%	93.0%	97.0%	485	1,084,543	735
	Energy Design Assistance	6,283	27,243,594	24,487	100.0%	100.0%	100.0%	100.0%	6,283	27,243,594	24,487	80.0%	80.0%	99.0%	5,026	21,794,875	24,242
Process Efficiency	Prescriptive Lighting	237	2,139,271	N/A	100.0%	97.3%	98.2%	N/A	230	2,100,764	N/A	86.6%	86.6%	N/A	199	1,819,253	N/A
	Prescriptive Motors	676	4,059,943	N/A	100.0%	98.3%	98.6%	N/A	664	4,003,104	N/A	86.6%	86.6%	N/A	575	3,466,688	N/A
	Custom	177	1,398,087	0	100.0%	100.0%	100.0%	100.0%	177	1,398,087	0	86.6%	86.6%	N/A	153	1,210,743	N/A
Recommissioning	Custom	483	6,168,167	3,472	100.0%	100.0%	100.0%	100.0%	483	6,168,167	3,472	90.0%	90.0%	100.0%	435	5,551,351	3,472
Segment Efficiency	Prescriptive Lighting	0	2,945	N/A	100.0%	97.3%	98.2%	N/A	0	2,892	N/A	84.0%	84.0%	N/A	0	2,429	N/A
	Prescriptive Motors	7	31,446	N/A	100.0%	98.3%	98.6%	N/A	7	31,006	N/A	65.0%	65.0%	N/A	4	20,154	N/A
	Custom Custom	15	1,227,031	0	100.0%	100.0%	100.0%	100.0%	15	1,227,031	0	87.0%	87.0%	N/A	13	1,067,517	N/A
Self-Directed Custom Efficiency	Custom	472	8,461,531	0	100.0%	100.0%	100.0%	N/A	472	8,461,531	N/A	90.6%	90.6%	N/A	428	7,666,147	N/A
Small Business Lighting	Prescriptive	4,667	18,438,414	N/A	100.0%	99.9%	100.2%	N/A	4,663	18,475,290	N/A	100.0%	100.0%	N/A	4,663	18,475,290	N/A
Standard Offer	Custom	638	3,097,426	0	100.0%	100.0%	100.0%	100.0%	638	3,097,426	0	87.6%	87.6%	N/A	558	2,713,345	N/A
Business Segment Total		40,877	216,928,832	85,095	100.0%	98.7%	99.2%	99.7%	40,361	215,292,913	84,873	83.3%	83.2%	96.2%	33,639	179,143,313	81,652

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

2011 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 Efficient Showerheads		0	1,643,938	44,703	62.0%	100.0%	100.0%	100.0%	0	1,019,241	27,716	100.0%	100.0%	100.0%	0	1,019,241	27,716
ENERGY STAR New Homes		390	1,940,688	108,690	100.0%	100.0%	100.0%	100.0%	390	1,940,688	108,690	92.0%	92.0%	92.0%	359	1,785,494	99,994
Evaporative Cooling Rebate		7,446	3,694,754	N/A	100.0%	100.0%	100.0%	N/A	7,446	3,694,754	N/A	69.3%	69.1%	N/A	5,159	2,552,623	N/A
Heating System Rebate		N/A	N/A	61,853	100.0%	N/A	N/A	100.0%	N/A	N/A	61,853	77.0%	77.0%	77.0%	N/A	N/A	47,627
High Efficiency Air Conditioning	Equipment Rebates	179	170,629	N/A	100.0%	98.0%	98.0%	N/A	175	167,217	N/A	89.0%	89.0%	N/A	156	148,851	N/A
	Quality Installation	372	243,210	N/A	100.0%	83.0%	86.0%	N/A	309	209,160	N/A	89.0%	89.0%	N/A	275	186,187	N/A
	Early Retirement	1,933	1,571,717	N/A	100.0%	100.0%	100.0%	N/A	1,933	1,571,717	N/A	89.0%	89.0%	N/A	1,721	1,399,088	N/A
Home Lighting & Recycling		13,278	108,417,563	N/A	99.0%	100.0%	100.0%	N/A	13,145	107,333,387	N/A	90.0%	90.0%	N/A	11,831	96,600,049	N/A
Home Performance w/ ENERGY STAR		29	96,325	3,431	100.0%	100.0%	100.0%	100.0%	29	96,325	3,431	94.0%	94.0%	94.0%	27	90,546	3,223
Insulation Rebate		1,443	1,440,698	111,106	100.0%	105.9%	105.9%	105.9%	1,528	1,525,699	117,661	89.0%	89.0%	89.0%	1,360	1,357,872	104,718
Refrigerator Recycling		480	3,642,367	N/A	100.0%	95.6%	95.6%	N/A	459	3,482,103	N/A	61.0%	61.0%	N/A	280	2,124,083	N/A
School Education Kits	Aerator	0	400,192	10,689	37.0%	100.0%	100.0%	100.0%	0	148,071	3,955	100.0%	100.0%	100.0%	0	148,071	3,955
	CFL	179	2,495,806	N/A	63.5%	100.0%	100.0%	N/A	114	1,584,837	N/A	100.0%	100.0%	N/A	114	1,584,837	N/A
	Showerhead	0	751,036	20,447	37.0%	100.0%	100.0%	100.0%	0	277,883	7,565	100.0%	100.0%	100.0%	0	277,883	7,565
Water Heating Rebate		6	52,822	5,717	100.0%	100.0%	100.0%	100.0%	6	52,822	5,717	100.0%	100.0%	90.0%	6	52,822	5,145
	Energy Efficiency Subtotal	25,735	126,561,744	366,635		100.0%	99.9%	101.8%	25,534	123,103,905	336,587	83.4%	88.8%	89.1%	21,286	109,327,647	299,944
Saver's Switch		19,185	296,038	N/A	100.0%	96.1%	96.1%	N/A	18,437	284,493	N/A	100.0%	100.0%	N/A	18,437	284,493	N/A
Residential Segment Total (w/o Low-Income)		44,919	126,857,783	366,635		98.3%	99.9%	101.8%	43,970	123,388,398	336,587	90.3%	88.8%	89.1%	39,722	109,612,139	299,944
Low-Income Segment																	
Energy Savings Kits	Aerator	0	1,150,324	41,438	58.0%	100.0%	100.0%	100.0%	0	667,188	24,034	100.0%	100.0%	100.0%	0	667,188	24,034
	CFL	511	7,540,297	N/A	67.0%	100.0%	100.0%	N/A	342	5,051,999	N/A	100.0%	100.0%	N/A	342	5,051,999	N/A
	Showerhead	0	809,725	29,029	51.0%	100.0%	100.0%	100.0%	0	412,960	14,805	100.0%	100.0%	100.0%	0	412,960	14,805
Multi-Family Weatherization		47	699,926	7,811	100.0%	100.0%	100.0%	100.0%	47	699,926	7,811	100.0%	100.0%	97.0%	47	699,926	7,577
Non-Profit Energy Efficiency		281	1,173,520	7,994	100.0%	100.0%	100.0%	100.0%	281	1,173,520	7,994	100.0%	100.0%	100.0%	281	1,173,520	7,994
Single-Family Weatherization		326	4,002,541	47,084	100.0%	100.0%	100.0%	100.0%	326	4,002,541	47,084	96.0%	96.0%	100.0%	313	3,842,440	47,084
Low-Income Segment Total		1,165	15,376,333	133,356		100.0%	100.0%	100.0%	996	12,008,134	101,728	98.7%	98.7%	99.8%	983	11,848,032	101,494
ENERGY STAR Retailer Incentive Pilot		1,520	12,734,270	N/A	100.0%	100.0%	100.0%	N/A	1,520	12,734,270	N/A	86.5%	86.7%	N/A	1,314	11,039,684	N/A
2011 TOTAL		88,481	371,897,219	585,087		98.5%	99.5%	101.1%	86,847	363,423,715	523,188	87.1%	85.8%	92.3%	75,659	311,643,169	483,090

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, among 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 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 18 and 19.

Public Service is reporting 2011 electric and gas portfolio MTRC Test results of 2.85 and 1.21, respectively. These results are shown in Tables 17 and 18. The portfolio results are based upon electric net benefits of \$226 million and gas net benefits \$9.4 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 3 and 4 in the Executive Summary section of this document. The full benefit-cost analyses for all products are being as work papers to this Status Report.

Table 18: Public Service's 2011 Gas DSM Portfolio Benefit-Cost Analysis

DSM PORTFOLIO - GAS					2011	GAS	ACTUAL
2011 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	16.38 years
	(\$Total)	(\$Total)	Test	Test	Net-to-Gross (Weighted on Dth)	B	91.96%
			(\$Total)	(\$Total)	Install/Realization Rate (Weighted on Dth)	C	95.3%
Benefits					Program Totals:		
System Benefits (Avoided Costs)					Participants	D	103,640
Commodity Cost Reduction	N/A	\$34,668,112	\$34,668,112	\$34,668,112	Average Net Dth/Yr Saved	E	4.66
Variable O&M Savings	N/A	\$226,449	\$226,449	\$226,449	Gross Realized Dth/Yr Saved	F	585,087
Demand Savings	N/A	\$2,553,661	\$2,553,661	\$2,553,661	Total Dth/Yr Saved	G	483,090
Subtotal				\$37,448,222	Utility Costs per Net Dth/Yr	H	\$35.38
Emissions Non-Energy Benefits Adder (5%)				\$1,872,411	Net Benefit (Cost) per Gross Dth/Yr	I	\$19.54
Subtotal	N/A	\$37,448,222	\$37,448,222	\$39,320,633	Non-Energy Benefits Adder per Gross Dth/Yr		\$3.88
Other Benefits					Annual Dth/\$M	(\$1M / G)	28,265
Bill Reduction - Gas	\$50,111,240	N/A	N/A	N/A	Total Utility Budget	(G x F)	\$17,091,491
Participant Rebates and Incentives	\$10,448,713	N/A	N/A	\$10,448,713	Total MTRC Net Benefits with Adder	(F x H)	\$9,440,391
Incremental Capital Savings	\$0	N/A	N/A	\$0	Total MTRC Net Benefits without Adder	(H - I) x F	\$7,567,980
Incremental O&M Savings	\$7,423,617	N/A	N/A	\$5,252,826			
Subtotal	\$67,983,570	N/A	N/A	\$15,701,538	Utility Program Cost per Net Dth Lifetime	(G / A)	\$2.16
1 Total Benefits	\$67,983,570	\$37,448,222	\$37,448,222	\$55,022,171			
Costs							
Utility Project Costs							
Program Planning & Design	N/A	\$171,932	\$171,932	\$171,932			
Administration & Program Delivery	N/A	\$3,526,742	\$3,526,742	\$3,526,742			
Advertising/Promotion/Customer	N/A	\$1,184,010	\$1,184,010	\$1,184,010			
Participant Rebates and Incentives	N/A	\$10,448,713	\$10,448,713	\$10,448,713			
Equipment & Installation	N/A	\$0	\$0	\$0			
Measurement and Verification	N/A	\$1,760,095	\$1,760,095	\$1,760,095			
Subtotal	N/A	\$17,091,491	\$17,091,491	\$17,091,491			
Utility Revenue Reduction							
Revenue Reduction - Gas	N/A	N/A	\$44,615,602	N/A			
Subtotal	N/A	N/A	\$44,615,602	N/A			
Participant Costs							
Incremental Capital Costs	\$30,719,662	N/A	N/A	\$28,490,289			
Incremental O&M Costs	\$0	N/A	N/A	\$0			
Subtotal	\$30,719,662	N/A	N/A	\$28,490,289			
Total Costs	\$30,719,662	\$17,091,491	\$61,707,093	\$45,581,780			
Net Benefit (Cost)	\$37,263,908	\$20,356,731	(\$24,258,871)	\$9,440,391			
Benefit/Cost Ratio	2.21	2.19	0.61	1.21			

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

Avoided Cost Assumptions

The following avoided cost data estimate 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 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.”

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 in Public Service’s 2011 DSM Plan over the 2011-2030 time period analyzed in this status report. The original avoided cost estimates from this 2011 DSM Plan are used in the cost-benefit analyses included in this status report.

In general, these updated estimates are very similar than the estimates from the 2011 DSM Plan for electric programs. For gas program, the updated assumptions are somewhat lower. Due to various lifetimes of the DSM measures and the effect of discounting future avoided costs, it is difficult to assess the impact on the cost-effectiveness of the DSM programs and portfolio. The impacts of these updates have not yet been updated.

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)

The current assumptions for avoided capacity costs match those filed in Public Service’s 2012/2013 DSM Plan (2012/2013 DSM Plan). They reflect the generic capacity cost estimates used in the Public Service’s 2012 Renewable Energy Standard Compliance Plan (Docket No. 11A-418E) for the two types of avoided electric generation – a gas-fired combustion turbine (CT) and a gas-fired combined-cycle plant (CC). These types of generation were applied to each DSM measure according to the avoided capacity characteristics of each measure. The 2011 plan capacity costs reflect generic capacity cost estimates used to model and evaluate 2009 All-Source Solicitation bids noted in the August 2009 compliance filing (120-Day Report) for the Company’s 2007 Resource Plan (Docket No. 07A-447E). These costs reflect an increase of 16.3% to include an appropriate estimate of planning reserves. The same avoided generation capacity cost was applied to each DSM measure, regardless of the characteristics of the measure.

Year	2011 DSM Plan \$/kW-yr	Current Assumption (CT) \$/kW-yr	Current Assumption (CC) \$/kW-yr	Year	2011 DSM Plan \$/kW-yr	Current Assumption (CT) \$/kW-yr	Current Assumption (CC) \$/kW-yr
2011	\$155	\$145	\$166	2021	\$198	\$174	\$198
2012	\$158	\$147	\$169	2022	\$203	\$178	\$201
2013	\$162	\$150	\$172	2023	\$208	\$181	\$205
2014	\$167	\$153	\$175	2024	\$213	\$184	\$208
2015	\$171	\$156	\$178	2025	\$218	\$188	\$212
2016	\$175	\$159	\$181	2026	\$224	\$191	\$215
2017	\$179	\$162	\$184	2027	\$230	\$195	\$219
2018	\$184	\$165	\$188	2028	\$235	\$198	\$223
2019	\$188	\$168	\$191	2029	\$241	\$202	\$227
2020	\$193	\$171	\$194	2030	\$247	\$206	\$231

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

The current assumption for avoided Transmission and Distribution Capacity Costs, as filed in the 2012/2013 DSM Plan, are estimated at \$30.00/kW-yr for 2012 with an annual escalation rate of 2.36%, based on the Company's corporate general escalation factor updated by Corporate Finance in May 2011. This results in a \$29.31/kW-yr estimate for 2011. The 2011 Plan estimates reflect the value of \$30.60 filed in the 2009/2010 DSM Plan escalated one year at the then-current escalation rate of 1.99% for 2010 and then escalated at the current 1.9% escalation rate for the start value of \$31.80 in 2011. The 1.9% escalation rate is based on the escalation rate used is the Company's corporate general escalation factor updated by Corporate Finance in May 2010.

Year	2011 DSM Plan \$/kW-yr	Current Assumption \$/kW-yr
2011	\$31.80	\$29.31
2012+	Escalated at 1.9%	Escalated at 2.36%

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

The current assumption for avoided marginal energy cost estimates, as filed in the 2012/2013 DSM Plan, reflect the assumed gas forecast and heat rates used in the Public Service Company's 2012 Renewable Energy Standard Compliance Plan (Docket No. 11A-418E) for the two types of avoided electric generation – a gas-fired combustion turbine (CT) and a gas-fired combined-cycle plant (CC). These types of generation were applied to each DSM measure according to the avoided energy characteristics of each measure. However, contrary to the 2011 DSM Plan method which assigned hourly costs to hourly energy characteristics, a single annual value of energy was applied to each measure each year. The 2011 DSM Plan marginal energy cost estimates were updated in April 2010 when the Company completed its 2010 sales forecast that includes new load forecasts. This sales forecast information, along with forecast fuel prices and other relevant inputs as of April of 2010 was input into the Company's forecasting tool, ProSym®, to derive the marginal unit cost to provide electricity based on fuel and operating and maintenance costs on an hourly basis. These hourly costs are then applied against the energy savings profile of each measure to determine the marginal avoided energy costs. Over the planning period in this plan, the fuels consumed by the marginal units is roughly half gas, half coal and a small percentage of purchased power. As such, a fluctuation in the price of either gas or coal can have a significant effect on these marginal energy prices. The following table outlines the annual average and maximum values of the hourly marginal cost analysis, as well as the current assumption of energy by generation type.

Year	2011 DSM Plan Avg \$/kWh	2011 DSM Plan Max \$/kWh	Current Assumption (CT) \$/kWh	Current Assumption (CC) \$/kWh
2011	\$0.036	\$0.081	\$0.060	\$0.035
2012	\$0.029	\$0.083	\$0.067	\$0.039
2013	\$0.030	\$0.074	\$0.071	\$0.042
2014	\$0.034	\$0.085	\$0.075	\$0.045
2015	\$0.035	\$0.089	\$0.081	\$0.049
2016	\$0.040	\$0.093	\$0.085	\$0.051
2017	\$0.044	\$0.136	\$0.087	\$0.052
2018	\$0.044	\$0.155	\$0.090	\$0.054
2019	\$0.047	\$0.114	\$0.093	\$0.057
2020	\$0.051	\$0.152	\$0.097	\$0.059
2021	\$0.053	\$0.121	\$0.100	\$0.061
2022	\$0.056	\$0.137	\$0.104	\$0.063
2023	\$0.063	\$0.169	\$0.109	\$0.066
2024	\$0.065	\$0.317	\$0.113	\$0.069
2025	\$0.072	\$0.187	\$0.116	\$0.071
2026	\$0.054	\$0.292	\$0.116	\$0.070
2027	\$0.057	\$0.235	\$0.117	\$0.071
2028	\$0.064	\$0.324	\$0.120	\$0.073
2029	\$0.044	\$0.148	\$0.124	\$0.075
2030	\$0.045	\$0.152	\$0.128	\$0.078

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

The current assumption for avoided emissions costs estimates, as filed in the 2012/2013 DSM Plan, reflect the base-case assumed zero cost for CO₂ emissions as filed in the Public Service's 2012 Renewable Energy Standard Compliance Plan (Docket No. 11A-418E). The following table reflects these current costs and the avoided CO₂ costs from the average MWh avoided from the 2011 DSM Plan. SO_x avoided costs are not included in either of the avoided emissions estimates. In the 2011 DSM Plan, a value of \$20 per ton, starting in 2014, was applied to the CO₂ emissions output avoided by DSM as determined by the units on margin as filed in the Company's 2007 Resource Plan (Docket No. 07A-447E) and current expansion plan updated for the Company's RES compliance filing (Docket No. 09A-772E) alternate scenario.

Year	2011 DSM Plan Avg \$/MWh	Current Assumption \$/MWh	Year	2011 DSM Plan Avg \$/MWh	Current Assumption \$/MWh
2011	\$0.00	\$0.00	2021	\$21.67	\$0.00
2012	\$0.00	\$0.00	2022	\$22.09	\$0.00
2013	\$0.00	\$0.00	2023	\$22.22	\$0.00
2014	\$14.67	\$0.00	2024	\$23.67	\$0.00
2015	\$15.10	\$0.00	2025	\$24.29	\$0.00
2016	\$15.65	\$0.00	2026	\$26.09	\$0.00
2017	\$16.67	\$0.00	2027	\$28.04	\$0.00
2018	\$17.71	\$0.00	2028	\$30.79	\$0.00
2019	\$18.96	\$0.00	2029	\$33.33	\$0.00
2020	\$20.07	\$0.00	2030	\$36.06	\$0.00

Gas Programs

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

The current assumption of commodity cost of gas is based on the 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. The 2011 DSM Plan assumption is based on a similar forecast, April 2010. The table below outlines the annual estimates from both

Year	2011 DSM Plan \$/Dth	Current Assumption \$/Dth	Year	2011 DSM Plan \$/Dth	Current Assumption \$/Dth
2011	\$5.50	N/A	2021	\$8.90	\$7.75
2012	\$5.91	\$4.89	2022	\$9.27	\$8.11
2013	\$6.16	\$5.30	2023	\$9.42	\$8.49
2014	\$6.49	\$5.66	2024	\$9.57	\$8.87
2015	\$6.94	\$6.14	2025	\$9.91	\$9.11
2016	\$7.41	\$6.50	2026	\$10.21	\$9.07
2017	\$7.77	\$6.64	2027	\$10.43	\$9.14
2018	\$8.11	\$6.90	2028	\$10.74	\$9.42
2019	\$8.34	\$7.19	2029	\$11.11	\$9.73
2020	\$8.56	\$7.45	2030	\$11.40	\$10.07

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. This value is the same for current assumptions as it was in the 2011 DSM Plan.

Year	2011 DSM Plan \$/Dth	Current Assumption \$/Dth
2011-2030	\$0.05	\$0.05

3. 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. This value is the same for current assumptions as it was in the 2011 DSM Plan.

Year	2011 DSM Plan \$/Dth	Current Assumption \$/Dth
2011-2030	\$56.37	\$56.37