



**2009/2010 Demand-Side Management Biennial Plan
Electric and Natural Gas
Public Service Company of Colorado
August 2008**



➤ Executive Summary

Public Service Company of Colorado (“Public Service” or the “Company”) submits this combined electric and natural gas 2009/2010 DSM Biennial Plan (“Plan”) to the Colorado Public Utilities Commission (“Commission”) as the initial phase of a new era in demand-side management (“DSM”) for the Company. In this filing, Public Service proposes annual energy savings goals of approximately 181 GWh in electric and 318,000 Dth in natural gas in 2009 and 244 GWh in electric and 403,000 Dth in natural gas in 2010, at proposed costs of \$61 million and \$76 million, respectively. Table 1 provides a summary of the Company’s proposed goals and budgets for the overall portfolio of programs.

Table 1: Public Service’s 2009/2010 DSM Biennial Plan Budgets and Goals

Proposed Programs	Expenditures (\$)	Energy Savings (Gen kWh or Dth)	Demand Savings (Gen kW)
2009			
Total Electric Conservation	\$31,070,629	181,360,530	34,717
Total Load Management	\$12,286,434	45,359	22,218
Total Electric Indirect	\$5,356,221	--	--
Total 2009 Electric DSM	\$48,713,284	181,406,129	56,935
Total Gas Conservation	\$9,667,787	318,141	--
Total Gas Indirect	\$2,885,743	--	--
Total 2009 Gas DSM	\$12,553,529	318,141	--
2009 Total	\$61,266,787	181,406,129 kWh, 318,141 Dth	56,935 kW
2010			
Total Electric Conservation	\$43,229,674	244,104,586	45,209
Total Load Management	\$12,286,434	45,359	22,218
Total Electric Indirect	\$4,806,038	--	--
Total 2010 Electric DSM	\$60,322,147	244,149,944	67,427
Total Gas Conservation	\$12,829,651	402,808	--
Total Gas Indirect	\$3,226,713	--	--
Total 2010 Gas DSM	\$16,056,364	402,808	--
2010 Total	\$76,378,511	244,149,944 kWh, 402,808 Dth	67,427 kW
2009/2010 Biennium Total	\$137,645,324	425,556,073 kWh, 720,949 Dth	124,362 kW

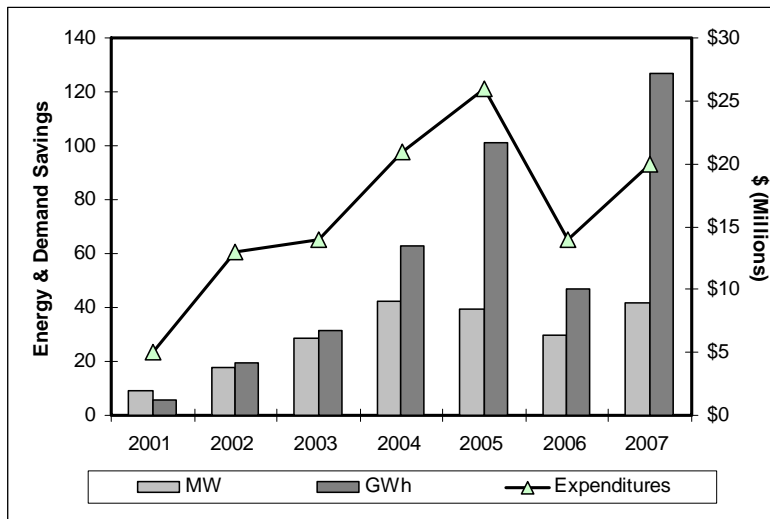
History of Recent DSM Activity in Colorado

During the last decade, 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:

- 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 320 MW and 800 GWh of cost-effective conservation for \$196 million (year 2005 dollars) between 2006 and 2013.

The following figure shows Public Service’s demand and energy savings over the past seven years. Note that energy and demand savings achievements, as well as spending, ramped up during the 1999 Settlement period (2001 to 2005), and that 2006 represented the launch of the 2004 Settlement.

Figure 1: Public Service’s 2001-2007 Electric DSM Achievements



Goals By Segment

For the 2009/2010 Biennial Plan, Public Service has developed a full portfolio of electric and natural gas DSM programs to serve all customer segments. For the purposes of this filing, the programs are split into four segments: Business, Residential, Low-Income, and Indirect. Public Service will market its energy efficiency programs to each customer segment based on the number of customers, relative size of each customer, and amount of conservation potential at a customer site. The goals for these segments are described in more detail below.

Business Segment

Energy efficiency sales to the Business Segment are achieved through Public Service's account managers, end-use equipment vendors, and energy service companies (ESCOs), as well as our Business Solutions Center. The Company's total proposed goals and budgets for the Business Segment in the 2009/2010 biennium include:

- 282.5 GWh and 60.8 MW in electric savings and 176,056 Dth in gas savings;
- \$53.7 million in electric budget and \$2.7 million in gas budget; and
- 5,399 electric and 561 gas participants.

Although economies of scale enable this customer segment to provide the lowest cost DSM per unit of energy saved, Business DSM is some of the most difficult to achieve over time. This is the case because business customers tend to require very short paybacks on investments and do not readily respond to traditional mass-market appeals. Further, on the gas side, the majority of large customers, who present some of the largest energy efficiency potential, are transport customers who will neither pay into the Demand-Side Management Cost Adjustment, nor be eligible to participate in the program offerings.

Residential Segment

Public Service has over 1.13 million electric and 1.18 million natural gas customers in its Residential Segment in Colorado. This segment includes single-family homes, townhomes, apartments and condominiums. The Company's total proposed goals and budgets for the Residential Segment during the 2009/2010 biennium include the following:

- 132.3 GWh and 62.7 MW in electric savings and 335,290 Dth of gas savings;
- \$41.9 million in electric budget and \$12.6 million in gas budget; and
- 654,510 electric and 80,550 gas participants.

Public Service developed its Plan to recognize that this market requires choices of conservation opportunities that accommodate various lifestyles, convenient participation, and information to make wise energy choices presented in useable and understandable forms and formats.

Low-Income Segment

The primary objective of the Low-Income Segment is to reduce energy consumption in low-income customers' homes and thereby reduce low-income customer bills. The Company's total proposed goals and budgets for the Low-Income Segment during the 2009/2010 biennium include the following:

- 10.7 GWh and 0.8 MW in electric savings and 209,603 Dth in gas savings;
- \$3.2 million in electric budget and \$7.2 million in gas budget; and
- 47,807 electric and 49,856 gas participants.

Indirect Segment

The Indirect Segment includes the indirect programs and activities that are not directly affiliated with any specific direct impact program. The Education/Market Transformation area includes four programs: Business Energy Analysis, Customer Behavioral Change-Business, Customer Behavioral Change-Residential, and Residential Home Energy Audits. The Planning & Research area includes four additional programs: DSM Market Research, DSM Planning & Administration, DSM Product Development, and Evaluation, Measurement & Verification. Public Service proposes an electric budget of \$4.8 million and a gas budget of \$3.2 million over the 2009/2010 biennium for this segment. Because this segment is not directly affiliated with specific direct impact programs but rather indirectly supports those programs, this segment does not have its own savings goals.

New Program Offerings

This Plan will be the first time that Public Service has offered gas DSM programs to its entire customer base, rather than solely to its low-income customers. As such, the Company has proposed 15 new gas programs, including the following Business programs:

- Boiler Efficiency;
- Custom Efficiency;
- Energy Management Systems;
- Furnace Efficiency;
- New Construction;
- Recommissioning;
- Segment Efficiency; and
- Standard Offer.

On the Residential side, Public Service will offer the following new gas programs:

- ENERGY STAR[®] New Homes;
- Energy Efficient Showerheads;
- Heating System Rebates;
- Home Performance with ENERGY STAR;
- Insulation Rebates;
- School Education Kits; and
- Water Heater Rebates.

Although the Company has offered electric DSM programs for many years, this Plan will introduce a number of new or enhanced electric programs, including the following Business programs:

- Data Center Efficiency;
- New Construction;
- Process Efficiency;
- Segment Efficiency;
- Self-Direct;
- Small Business Lighting Efficiency; and
- Standard Offer.

In the Residential segment, Public Service will offer the following new or enhanced electric programs:

- ENERGY STAR Retailer Incentive;
- ENERGY STAR New Homes;
- Home Performance with ENERGY STAR; and
- School Education Kits.

Major Initiatives: Market Transformation and Customer Education

In this biennium, Public Service will place greater emphasis on programs and services that help to redefine the energy efficiency marketplace through market transformation and customer education. The Company believes that market transformation and customer education are some of the least-cost ways to influence customer decisions and behaviors for the long term.

Public Service defines market transformation as marketing strategies that result in a permanent decrease in energy usage by inducing changes either in the product supply chain or in the behavior of the end-user. Often these structural and behavioral changes in the marketplace result in an increased or earlier adoption of energy efficient technologies and energy efficient practices that remain even after the program stimulus is removed.

The Company will be offering two types of Market Transformation programs in the 2009/2010 biennium. The Customer Behavioral Change for Residential and Customer Behavioral Change for Business programs will be indirect, meaning that they produce no direct energy savings, and the ENERGY STAR Retailer Incentive Pilot, a direct impact pilot program. In addition to these programs, Public Service has interwoven market transformation into many of its direct-impact programs by offering rebates on a variety of efficiency measures in order to make the efficient products more popular and more available in the marketplace, even if not cost effective on their own. By offering rebates for efficient measures, Public Service hopes to create a demand for the high efficiency products, thereby driving down their overall cost.

With this Plan, Public Service has also reaffirmed its commitment to transforming the energy efficiency market through new construction. The Company is offering new construction rebate and design assistance programs for all of its customer segments. Customers will receive rebates for construction that exceeds local codes and standards.

Also in this biennium, Public Service is offering a number of programs dedicated to customer education, such Business Energy Analysis and Residential Home Energy Audits. These are both indirect programs that provide customers with specific feedback and potential actions regarding their own homes and buildings. In addition, many of the other program offerings contained in this Plan have an educational component.

Stakeholders

Public Service believes that successful implementation of its Biennial Plan will be the result of active participation of its many stakeholders. These stakeholders include the Commission, the Governor's Energy Office ("GEO"), other state agencies, local governments, environmental groups, external consulting groups, efficient equipment manufacturers, distributors and vendors, installation contractors, and customer advocates. Each of the Company's programs offers its

own opportunities for stakeholder involvement and feedback. In addition, Public Service will continue to host its semi-annual DSM Roundtable as a forum for open dialogue and discussion.

Pilot and Start-up Programs

In Docket No. 07A-420E, the Commission distinguished start-up and pilot programs from existing or continuing programs. These would be programs in their first few years of implementation, that have long sales cycles, or that are testing unproven methods. For any of these reasons, start-up and pilot programs may not necessarily achieve a Modified Total Resource Cost (“MTRC”) Test ratio greater than one. In Decision No. C08-0560, the Commission allowed for such programs under these special circumstances to achieve an MTRC Test ratio of less than one. This is to allow Public Service time for new programs to reach cost-effectiveness status before ending the programs or disallowing cost recovery. Many of the new or enhanced programs proposed in this Plan could fit into the definition of a pilot or start-up; however, for the purposes of this Plan, Public Service has identified one pilot program, the ENERGY STAR Retailer Incentive Program, and five start-up programs, Data Center Efficiency, Process Efficiency, Segment Efficiency, Small Business Lighting, and Standard Offer in the 2009/2010 biennium. For any program that does not pass the MTRC Test at the end of the year, Public Service will explain the causes and provide recommendations on the program’s continuation in the annual status report.

Document Layout

This document has seven major sections, organized primarily by customer segment: Executive Summary, Business Segment, Residential Segment, Low-Income Segment, Indirect Segment, Technical Assumptions, and Appendices. Each of these sections is described in more detail below:

- Executive Summary – provides a high-level overview of the strategic direction of the overall 2009/2010 DSM Biennial Plan; provides program-level goals and budgets in a table;
- Business, Residential, Low-Income, and Indirect Segment – detail the specific programs and goals associated with each segment;
- Technical Assumptions – displays the forecasted technical assumptions used to calculate the energy and demand savings of every measure included in the Plan; an electronic file of the detailed technical assumptions for each program will be provided as part of the overall filing;
- Appendices – presents detail on the budget categories, a description of the types of avoided costs used, the background on the benefit-cost tests, and a list of acronyms.

Table 2a: Public Service's 2009 Electric DSM Program Budgets and Goals

	2009	Electric Participants	Electric Budget	Customer kW	Net Generator kW	Net Generator kWh	Modified TRC Ratio
Business Segment							
Boiler Efficiency							
Compressed Air Efficiency	231	\$1,009,956	1,672	1,474	9,181,365	4.03	
Cooling Efficiency	234	\$2,288,950	4,198	3,035	6,168,583	1.96	
Custom Efficiency	43	\$2,474,819	1,786	1,372	7,467,223	2.16	
Data Center Efficiency	10	\$531,350	703	571	5,920,281	4.57	
Energy Management Systems	29	\$777,692	535	47	4,238,885	2.31	
Furnace Efficiency							
Lighting Efficiency	627	\$4,418,019	9,208	7,989	31,856,916	3.13	
Motor & Drive Efficiency	1,100	\$2,582,081	5,056	3,681	20,711,411	4.96	
New Construction	46	\$3,971,921	5,697	5,506	20,784,026	4.09	
Process Efficiency	0	\$414,850	100	77	487,371	1.37	
Recommissioning	28	\$562,633	651	354	3,947,516	2.05	
Segment Efficiency	51	\$644,452	120	80	528,904	0.86	
Self-Direct	5	\$348,300	531	478	2,182,451	4.46	
Small Business Lighting	50	\$789,234	350	316	1,153,540	1.86	
Standard Offer	24	\$706,200	893	813	1,766,186	2.50	
Energy Efficiency Subtotal	2,478	\$21,520,457	31,501	25,793	116,394,660	3.30	
Business Segment Total	2,478	\$21,520,457	31,501	25,793	116,394,660	3.30	
Residential Segment							
Energy Efficient Showerhead							
ENERGY STAR New Homes	100	\$56,000	136	10	117,030	1.74	
ENERGY STAR Retailer Incentive	16,469	\$2,658,384	3,171	640	2,455,560	1.17	
Evaporative Cooling Rebate	3,800	\$1,195,900	6,551	3,803	2,071,569	8.32	
Heating System Rebate							
Home Lighting & Recycling	250,000	\$3,127,951	46,250	3,706	51,808,616	6.78	
Home Performance w/ ENERGY STAR	300	\$171,949	343	31	374,715	1.94	
Insulation Rebate							
Refrigerator Recycling	3,250	\$659,703	453	297	2,189,309	2.17	
School Education Kits	6,600	\$164,211	673	54	815,800	2.99	
Water Heating Rebate							
Energy Efficiency Subtotal	280,519	\$8,034,098	57,578	8,541	59,832,599	5.38	
Saver's Switch	19,500	\$12,286,434	58,500	22,218	45,359	4.21	
Load Management Subtotal	19,500	\$12,286,434	58,500	22,218	45,359	4.21	
Residential Segment Total (w/o Low Income)	300,019	\$20,320,532	116,078	30,759	59,877,958	4.66	
Low-Income Segment							
Easy Savings Energy Kits	20,000	\$591,185	2,040	163	2,472,121	2.39	
Multi-Family Weatherization	518	\$106,432	249	28	323,820	2.41	
Non-Profit Energy Efficiency	322	\$68,991	155	17	201,875	2.28	
Single-Family Weatherization	1,958	\$749,466	1,593	175	2,135,695	2.54	
Energy Efficiency Subtotal	22,798	\$1,516,075	4,037	384	5,133,511	2.45	
Low Income Segment Total	22,798	\$1,516,075	4,037	384	5,133,511	2.45	
Indirect Segment							
Education/Market Transformation							
Business Energy Analysis	400	\$697,191					
Customer Behavioral Change - Business	1,385	\$162,968					
Customer Behavioral Change - Residential	30,000	\$882,428					
Residential Home Energy Audit	7,176	\$654,672					
Education/Market Transformation Subtotal	38,961	\$2,397,259					
Planning and Research							
DSM Market Research		\$1,427,266					
DSM Planning & Administration		\$293,496					
DSM Product Development		\$498,560					
Evaluation, Measurement & Verification		\$739,640					
Planning and Research Subtotal		\$2,958,962					
Indirect Total	38,961	\$5,356,221					
2009 TOTAL	364,256	\$48,713,284	151,616	56,935	181,406,129	3.42	

Table 2b: Public Service's 2009 Gas DSM Program Budgets and Goals

	2009	Gas Participants	Gas Budget	Net Annual DTH Savings	Annual Dth/\$M	Modified TRC Ratio
Business Segment						
Boiler Efficiency		146	\$475,834	31,650	66,514	2.67
Compressed Air Efficiency						
Cooling Efficiency						
Custom Efficiency		14	\$198,578	13,492	67,944	2.42
Data Center Efficiency						
Energy Management Systems		14	\$132,121	6,286	47,579	1.69
Furnace Efficiency		50	\$44,346	4,204	94,803	4.25
Lighting Efficiency						
Motor & Drive Efficiency						
New Construction		9	\$184,291	11,747	63,743	1.87
Process Efficiency		6	\$39,300	9,049	230,261	7.24
Recommissioning		8	\$88,363	2,199	24,883	1.38
Segment Efficiency		5	\$25,754	0	0	0.00
Self-Direct						
Small Business Lighting						
Standard Offer		12	\$21,000	473	22,503	1.35
Energy Efficiency Subtotal		264	\$1,209,587	79,100	65,394	2.81
Business Segment Total		264	\$1,209,587	79,100	65,394	2.81
Residential Segment						
Energy Efficient Showerhead		20,000	\$199,514	14,280	71,576	5.99
ENERGY STAR New Homes		2,200	\$3,002,604	34,658	11,543	1.27
ENERGY STAR Retailer Incentive						
Evaporative Cooling Rebate						
Heating System Rebate		4,500	\$789,360	35,868	45,440	1.85
Home Lighting & Recycling						
Home Performance w/ ENERGY STAR		300	\$328,250	9,617	29,299	1.21
Insulation Rebate		1,500	\$529,900	28,210	53,237	1.72
Refrigerator Recycling						
School Education Kits		6,600	\$163,273	14,315	87,674	4.27
Water Heating Rebate		1,250	\$81,796	1,513	18,502	1.19
Energy Efficiency Subtotal		36,350	\$5,094,697	138,462	27,178	1.65
Saver's Switch						
Load Management Subtotal						
Residential Segment Total (w/o Low Income)		36,350	\$5,094,697	138,462	27,178	1.65
Low-Income Segment						
Easy Savings Energy Kits		20,000	\$591,599	36,666	61,978	3.85
Multi-Family Weatherization		518	\$292,290	6,298	21,547	1.35
Non-Profit Energy Efficiency		322	\$393,258	4,064	10,333	1.19
Single-Family Weatherization		2,946	\$2,086,355	53,551	25,667	1.34
Energy Efficiency Subtotal		23,786	\$3,363,503	100,579	29,903	1.92
Low Income Segment Total		23,786	\$3,363,503	100,579	29,903	1.92
Indirect Segment						
Education/Market Transformation						
Business Energy Analysis		100	\$155,262			
Customer Behavioral Change - Business		593	\$70,644			
Customer Behavioral Change - Residential		30,000	\$920,287			
Residential Home Energy Audit		7,774	\$710,484			
Education/Market Transformation Subtotal		38,467	\$1,856,677			
Planning and Research						
DSM Market Research			\$587,266			
DSM Planning & Administration			\$178,000			
DSM Product Development			\$129,440			
Evaluation, Measurement & Verification			\$134,360			
Planning and Research Subtotal			\$1,029,066			
Indirect Total		38,467	\$2,885,743			
2009 TOTAL		98,867	\$12,553,529	318,141	25,343	1.70

Table 2c: Public Service's 2010 Electric DSM Program Budgets and Goals

	2010	Electric Participants	Electric Budget	Customer kW	Net Generator kW	Net Generator kWh	Modified TRC Ratio
Business Segment							
	Boiler Efficiency						
	Compressed Air Efficiency	249	\$1,208,969	1,804	1,591	9,941,064	4.04
	Cooling Efficiency	252	\$2,582,748	4,597	3,253	6,951,439	2.04
	Custom Efficiency	50	\$3,085,144	2,077	1,595	8,682,818	2.15
	Data Center Efficiency	14	\$1,026,465	1,407	1,142	11,846,949	4.91
	Energy Management Systems	38	\$1,093,870	701	62	5,554,401	2.27
	Furnace Efficiency						
	Lighting Efficiency	678	\$5,066,713	10,096	8,759	35,890,773	3.24
	Motor & Drive Efficiency	1,100	\$2,832,479	5,056	3,681	20,711,411	4.93
	New Construction	65	\$5,313,990	8,336	8,051	30,410,718	4.41
	Process Efficiency	4	\$1,574,800	1,606	1,233	7,797,936	2.76
	Recommissioning	38	\$858,540	858	471	5,122,522	1.91
	Segment Efficiency	175	\$2,227,436	2,178	1,368	10,716,550	2.75
	Self-Direct	10	\$654,000	1,062	956	4,364,903	4.73
	Small Business Lighting	200	\$3,156,935	1,401	1,264	4,614,158	1.92
	Standard Offer	48	\$1,509,800	1,786	1,625	3,532,372	2.53
	Energy Efficiency Subtotal	2,921	\$32,191,888	42,964	35,053	166,138,016	3.36
	Business Segment Total	2,921	\$32,191,888	42,964	35,053	166,138,016	3.36
Residential Segment							
	Energy Efficient Showerhead						
	ENERGY STAR New Homes	200	\$97,550	272	21	234,059	1.90
	ENERGY STAR Retailer Incentive	18,116	\$2,964,229	3,488	704	2,701,058	1.14
	Evaporative Cooling Rebate	4,000	\$1,287,696	6,899	4,005	2,181,848	7.91
	Heating System Rebate						
	Home Lighting & Recycling	300,000	\$3,433,520	55,500	4,447	62,170,340	7.09
	Home Performance w/ ENERGY STAR	1,000	\$484,778	1,145	103	1,249,049	2.15
	Insulation Rebate						
	Refrigerator Recycling	4,375	\$885,382	609	400	2,947,146	2.21
	School Education Kits	7,300	\$188,938	745	60	902,324	2.96
	Water Heating Rebate						
	Energy Efficiency Subtotal	334,991	\$9,342,093	68,658	9,740	72,385,825	5.26
	Saver's Switch	19,500	\$12,286,434	58,500	22,218	45,359	4.03
	Load Management Subtotal	19,500	\$12,286,434	58,500	22,218	45,359	4.03
	Residential Segment Total (w/o Low Income)	354,491	\$21,628,527	127,158	31,958	72,431,183	4.59
Low-Income Segment							
	Easy Savings Energy Kits	22,000	\$650,410	2,244	180	2,719,334	2.38
	Multi-Family Weatherization	556	\$125,458	267	30	347,783	2.19
	Non-Profit Energy Efficiency	350	\$92,602	168	19	219,700	1.92
	Single-Family Weatherization	2,103	\$827,223	1,711	188	2,293,929	2.46
	Energy Efficiency Subtotal	25,009	\$1,695,693	4,391	417	5,580,745	2.38
	Low Income Segment Total	25,009	\$1,695,693	4,391	417	5,580,745	2.38
Indirect Segment							
	Education/Market Transformation						
	Business Energy Analysis	400	\$820,467				
	Customer Behavioral Change - Business	1,385	\$171,781				
	Customer Behavioral Change - Residential	34,000	\$1,381,488				
	Residential Home Energy Audit	7,416	\$762,937				
	Education/Market Transformation Subtotal	43,201	\$3,136,672				
	Planning and Research						
	DSM Market Research		\$247,610				
	DSM Planning & Administration		\$298,896				
	DSM Product Development		\$501,030				
	Evaluation, Measurement & Verification		\$621,830				
	Planning and Research Subtotal		\$1,669,366				
	Indirect Total	43,201	\$4,806,038				
	2010 TOTAL	425,622	\$60,322,147	174,514	67,427	244,149,944	3.45

Table 2d: Public Service's 2010 Gas DSM Program Budgets and Goals

	2010	Gas Participants	Gas Budget	Net Annual DTH Savings	Annual Dth/\$M	Modified TRC Ratio
Business Segment						
Boiler Efficiency		146	\$555,188	31,650	57,007	2.54
Compressed Air Efficiency						
Cooling Efficiency						
Custom Efficiency		14	\$177,505	13,492	76,010	2.51
Data Center Efficiency						
Energy Management Systems		14	\$129,649	6,286	48,486	1.68
Furnace Efficiency		50	\$50,139	4,204	83,850	4.02
Lighting Efficiency						
Motor & Drive Efficiency						
New Construction		12	\$313,864	15,510	49,415	1.77
Process Efficiency		12	\$60,600	18,099	298,656	7.58
Recommissioning		8	\$100,477	2,199	21,883	1.23
Segment Efficiency		17	\$84,100	3,627	43,126	2.13
Self-Direct						
Small Business Lighting						
Standard Offer		24	\$34,000	1,890	55,597	1.93
Energy Efficiency Subtotal		297	\$1,505,522	96,956	64,400	2.96
Business Segment Total		297	\$1,505,522	96,956	64,400	2.96
Residential Segment						
Energy Efficient Showerhead		22,950	\$227,224	16,387	72,118	6.03
ENERGY STAR New Homes		3,200	\$4,345,000	50,411	11,602	1.28
ENERGY STAR Retailer Incentive						
Evaporative Cooling Rebate						
Heating System Rebate		6,500	\$1,091,733	51,810	47,456	1.88
Home Lighting & Recycling						
Home Performance w/ ENERGY STAR		1,000	\$1,031,721	32,058	31,072	1.23
Insulation Rebate		1,500	\$534,755	28,210	52,753	1.73
Refrigerator Recycling						
School Education Kits		7,300	\$187,736	15,833	84,336	4.12
Water Heating Rebate		1,750	\$110,766	2,119	19,129	1.20
Energy Efficiency Subtotal		44,200	\$7,528,935	196,828	26,143	1.64
Saver's Switch						
Load Management Subtotal						
Residential Segment Total (w/o Low Income)		44,200	\$7,528,935	196,828	26,143	1.64
Low-Income Segment						
Easy Savings Energy Kits		22,000	\$651,246	40,333	61,932	3.82
Multi-Family Weatherization		556	\$353,615	6,760	19,116	1.34
Non-Profit Energy Efficiency		350	\$494,471	4,417	8,932	1.17
Single-Family Weatherization		3,164	\$2,295,861	57,515	25,051	1.33
Energy Efficiency Subtotal		26,070	\$3,795,193	109,024	28,727	1.91
Low Income Segment Total		26,070	\$3,795,193	109,024	28,727	1.91
Indirect Segment						
Education/Market Transformation						
Business Energy Analysis		100	\$156,091			
Customer Behavioral Change - Business		593	\$71,275			
Customer Behavioral Change - Residential		34,000	\$1,418,512			
Residential Home Energy Audit		8,034	\$820,356			
Education/Market Transformation Subtotal		42,727	\$2,466,233			
Planning and Research						
DSM Market Research			\$247,610			
DSM Planning & Administration			\$180,100			
DSM Product Development			\$130,400			
Evaluation, Measurement & Verification			\$202,370			
Planning and Research Subtotal			\$760,480			
Indirect Total		42,727	\$3,226,713			
2010 TOTAL		113,294	\$16,056,364	402,808	25,087	1.75

DSM PORTFOLIO-ELECTRIC

2009

ELECTRIC

GOAL

2009 Electric Benefit-Cost Analysis per Customer kW

	Participant Test (\$/kW)	Utility Test (\$/kW)	Rate Impact Test (\$/kW)	Modified Total Resource Test (\$/kW)
<i>System Benefits (Avoided Costs)</i>				
Generation Capacity		\$543	\$543	\$543
Transmission & Distribution Capacity		\$114	\$114	\$114
Marginal Energy		\$758	\$758	\$758
Avoided Emissions (CO ₂ , SO _x)		\$169	\$169	\$169
Subtotal		\$1,583	\$1,583	\$1,583
Non-Energy Benefits Adder (10%)				\$159
Subtotal		\$1,583	\$1,583	\$1,742
<i>Other Benefits</i>				
Participant Rebates and Incentives	\$152			\$152
Vendor Incentives				\$0
Incremental Capital Savings	\$0			\$0
Incremental O&M Savings	\$13			\$10
Subtotal	\$165			\$162
<i>Reduction in Sales Revenue</i>				
Electric	\$833		\$760	
Subtotal	\$833		\$760	
<i>Utility Program Costs</i>				
Program Planning & Design		\$11	\$11	\$11
Administration & Program Delivery		\$73	\$73	\$73
Advertising/Promotion/Customer Ed		\$38	\$38	\$38
Participant Rebates and Incentives	\$152		\$152	\$152
Equipment & Installation		\$32	\$32	\$32
Measurement and Verification		\$17	\$17	\$17
Miscellaneous		(\$1)	(\$1)	(\$1)
Subtotal		\$321	\$321	\$321
<i>Participant Costs</i>				
Incremental Capital Costs	\$248			\$235
Incremental O&M Costs	\$0			\$0
Subtotal	\$248			\$235
Total Benefits	\$998	\$1,583	\$1,583	\$1,903
Total Costs	\$248	\$321	\$1,081	\$556
Net Benefit (Cost)	\$749	\$1,262	\$502	\$1,347
Benefit/Cost Ratio	4.02	4.93	1.46	3.42

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	14 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	38.15%
Gross Load Factor at Customer	E	13.98%
Net-to-Gross (Energy)	F	91.2%
Net-to-Gross (Demand)	G	91.7%
Transmission Loss Factor (Energy)	H	6.66%
Transmission Loss Factor (Demand)	I	6.80%
MTRC Net Benefit (Cost)	J	\$1,347
MTRC Non-Energy Benefit Adder	K	\$159
<hr/>		
Net coincident kW Saved at Generator	$(D \times C \times G) / (1 - I)$	0.3755 kW
Gross Annual kWh Saved at Customer	$(B \times E \times C)$	1,225 kWh
Net Annual kWh Saved at Customer	$(B \times E \times C \times F)$	1,117 kWh
Net Annual kWh Saved at Generator	$(B \times E \times C \times F) / (1 - H)$	1,196 kWh
<hr/>		
Program Summary per Participant		
Gross kW Saved at Customer	L	0.42 kW
Net coincident kW Saved at Generator	$(G \times L) \times D / (1 - I)$	0.16 kW
Gross Annual kWh Saved at Customer	$(B \times E \times L)$	510 kWh
Net Annual kWh Saved at Customer	$(F \times (B \times E \times L))$	465 kWh
Net Annual kWh Saved at Generator	$(F \times (B \times E \times L)) / (1 - I)$	499 kWh
<hr/>		
Program Summary All Participants		
Total Participants	M	364,256
Total Budget	N	\$48,713,284
Gross kW Saved at Customer	$(M \times L)$	151,616 kW
Net coincident kW Saved at Generator	$((G \times L) \times D / (1 - I)) \times M$	56,935 kW
Gross Annual kWh Saved at Customer	$(B \times E \times L) \times M$	185,671,333 kWh
Net Annual kWh Saved at Customer	$(F \times (B \times E \times L)) \times M$	169,326,691 kWh
Net Annual kWh Saved at Generator	$((F \times (B \times E \times L)) / (1 - H)) \times M$	181,406,129 kWh
TRC Net Benefits with Adder	$(M \times L \times J)$	\$204,199,689
TRC Net Benefits without Adder	$(M \times L \times (J - K))$	\$180,148,493
<hr/>		
Utility Program Cost per kWh Lifetime		\$0.0188
Utility Program Cost per kW at Gen		\$856
Participant Payback with Rebate		1.6 years
Participant Payback without Rebate		4.2 years

DSM PORTFOLIO-GAS

2009 Gas Benefit-Cost Analysis per One Gross Dth/Yr

	Participant Test (\$/Dth-yr)	Utility Test (\$/Dth-yr)	Rate Impact Test (\$/Dth-yr)	Modified Total Resource Test (\$/Dth-yr)
<i>System Benefits (Avoided Costs)</i>				
Commodity Cost Reduction		\$70.57	\$70.57	\$70.57
Variable O&M Savings		\$0.37	\$0.37	\$0.37
Demand Savings		\$4.26	\$4.26	\$4.26
Subtotal		\$75.20	\$75.20	\$75.20
Emissions and Non-Energy Benefits Adder (5%)				\$3.76
Subtotal		\$75.20	\$75.20	\$78.95
<i>Other Benefits</i>				
Participant Rebates and Incentives	\$15.17			\$15.17
Vendor Incentives				\$0.00
Incremental Capital Savings	\$0.00			\$0.00
Incremental O&M Savings	\$21.13			\$17.31
Subtotal	\$36.29			\$32.48
<i>Reduction in Sales Revenue</i>				
Gas	\$102.76		\$84.20	
Subtotal	\$102.76		\$84.20	
<i>Utility Program Costs</i>				
Program Planning & Design		\$1.36	\$1.36	\$1.36
Administration & Program Delivery		\$8.21	\$8.21	\$8.21
Advertising/Promotion/Customer Ed		\$4.18	\$4.18	\$4.18
Participant Rebates and Incentives		\$15.17	\$15.17	\$15.17
Equipment & Installation		\$0.03	\$0.03	\$0.03
Measurement & Verification		\$3.90	\$3.90	\$3.90
Miscellaneous		-\$0.51	-\$0.51	-\$0.51
Subtotal		\$32.33	\$32.33	\$32.33
<i>Participant Costs</i>				
Incremental Capital Costs	\$40.37			\$33.08
Incremental O&M Costs	\$0.00			\$0.00
Subtotal	\$40.37			\$33.08
Total Benefits	\$139.06	\$75.20	\$75.20	\$111.43
Total Costs	\$40.37	\$32.33	\$116.53	\$65.41
Net Benefit (Cost)	\$98.69	\$42.86	-\$41.33	\$46.02
Benefit/Cost Ratio	3.44	2.33	0.65	1.70

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

2009

GAS

GOAL

Input Summary and Totals

Program Assumptions:

Lifetime (Weighted on Dth)	A	14 years
Net-to-Gross	B	82%

Program Totals:

Participants	C	98,867
Average Dth/Yr Saved	D	3.2
Total Dth/Yr Saved	E	318,141
Utility Costs per Net Dth/Yr	F	\$39.46
Net Benefit (Cost) per Gross Dth/Yr	G	\$46.02
Non-Energy Benefits Adder per Gross Dth/Yr	H	\$3.76
Annual Dth/\$M	(\$1M / F)	25,343
Total Utility Budget	(F x E)	\$12,553,529
Total MTRC Net Benefits with Adder	(E x G)	\$14,642,316
Total MTRC Net Benefits without Adder	(G - H) x E	\$13,446,183
Utility Program Cost per Net Dth Lifetime	(F / A)	\$2.92
Participant Payback with Rebate		2.5 years
Participant Payback without Rebate		4.1 years

DSM PORTFOLIO-ELECTRIC

2010

ELECTRIC

GOAL

2010 Electric Benefit-Cost Analysis per Customer kW

	Participant Test (\$/kW)	Utility Test (\$/kW)	Rate Impact Test (\$/kW)	Modified Total Resource Test (\$/kW)
<i>System Benefits (Avoided Costs)</i>				
Generation Capacity		\$568	\$568	\$568
Transmission & Distribution Capacity		\$116	\$116	\$116
Marginal Energy		\$874	\$874	\$874
Avoided Emissions (CO2, SOx)		\$231	\$231	\$231
Subtotal		\$1,789	\$1,789	\$1,789
Non-Energy Benefits Adder (10%)				\$179
Subtotal		\$1,789	\$1,789	\$1,968
<i>Other Benefits</i>				
Participant Rebates and Incentives	\$167			\$167
Vendor Incentives				\$0
Incremental Capital Savings	\$0			\$0
Incremental O&M Savings	\$32			\$26
Subtotal	\$199			\$193
<i>Reduction in Sales Revenue</i>				
Electric	\$987		\$903	
Subtotal	\$987		\$903	
<i>Utility Program Costs</i>				
Program Planning & Design		\$11	\$11	\$11
Administration & Program Delivery		\$76	\$76	\$76
Advertising/Promotion/Customer Ed		\$49	\$49	\$49
Participant Rebates and Incentives	\$167		\$167	\$167
Equipment & Installation		\$28	\$28	\$28
Measurement and Verification		\$17	\$17	\$17
Miscellaneous		(\$1)	(\$1)	(\$1)
Subtotal		\$346	\$346	\$346
<i>Participant Costs</i>				
Incremental Capital Costs	\$299			\$281
Incremental O&M Costs	\$0			\$0
Subtotal	\$299			\$281
Total Benefits	\$1,186	\$1,789	\$1,789	\$2,161
Total Costs	\$299	\$346	\$1,248	\$626
Net Benefit (Cost)	\$887	\$1,443	\$541	\$1,535
Benefit/Cost Ratio	3.97	5.18	1.43	3.45

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	15 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	39.28%
Gross Load Factor at Customer	E	16.31%
Net-to-Gross (Energy)	F	91.4%
Net-to-Gross (Demand)	G	91.7%
Transmission Loss Factor (Energy)	H	6.63%
Transmission Loss Factor (Demand)	I	6.75%
MTRC Net Benefit (Cost)	J	\$1,535
MTRC Non-Energy Benefit Adder	K	\$179
Net coincident kW Saved at Generator	$(D \times C \times G) / (1 - I)$	0.3864 kW
Gross Annual kWh Saved at Customer	$(B \times E \times C)$	1,429 kWh
Net Annual kWh Saved at Customer	$(B \times E \times C \times F)$	1,306 kWh
Net Annual kWh Saved at Generator	$(B \times E \times C \times F) / (1 - H)$	1,399 kWh

Program Summary per Participant

Gross kW Saved at Customer	L	0.41 kW
Net coincident kW Saved at Generator	$(G \times L) \times D / (1 - I)$	0.16 kW
Gross Annual kWh Saved at Customer	$(B \times E \times L)$	586 kWh
Net Annual kWh Saved at Customer	$(F \times (B \times E \times L))$	536 kWh
Net Annual kWh Saved at Generator	$(F \times (B \times E \times L)) / (1 - I)$	574 kWh

Program Summary All Participants

Total Participants	M	425,622
Total Budget	N	\$60,322,147
Gross kW Saved at Customer	$(M \times L)$	174,514 kW
Net coincident kW Saved at Generator	$((G \times L) \times D / (1 - I)) \times M$	67,427 kW
Gross Annual kWh Saved at Customer	$(B \times E \times L) \times M$	249,321,043 kWh
Net Annual kWh Saved at Customer	$(F \times (B \times E \times L)) \times M$	227,963,673 kWh
Net Annual kWh Saved at Generator	$((F \times (B \times E \times L)) / (1 - H)) \times M$	244,149,944 kWh
TRC Net Benefits with Adder	$(M \times L \times J)$	\$267,818,605
TRC Net Benefits without Adder	$(M \times L \times (J - K))$	\$236,541,498

Utility Program Cost per kWh Lifetime	\$0.0170
Utility Program Cost per kW at Gen	\$895
Participant Payback with Rebate	1.9 years
Participant Payback without Rebate	4.4 years

DSM PORTFOLIO-GAS**2010 Gas Benefit-Cost Analysis per One Gross Dth/Yr**

	Participant Test (\$/Dth-yr)	Utility Test (\$/Dth-yr)	Rate Impact Test (\$/Dth-yr)	Modified Total Resource Test (\$/Dth-yr)
<i>System Benefits (Avoided Costs)</i>				
Commodity Cost Reduction		\$73.67	\$73.67	\$73.67
Variable O&M Savings		\$0.38	\$0.38	\$0.38
Demand Savings		\$4.40	\$4.40	\$4.40
Subtotal		\$78.45	\$78.45	\$78.45
Emissions and Non-Energy Benefits Adder (5%)				\$3.92
Subtotal		\$78.45	\$78.45	\$82.37
<i>Other Benefits</i>				
Participant Rebates and Incentives	\$15.02			\$15.02
Vendor Incentives				\$0.00
Incremental Capital Savings	\$0.00			\$0.00
Incremental O&M Savings	\$22.57			\$18.47
Subtotal	\$37.59			\$33.49
<i>Reduction in Sales Revenue</i>				
Gas	\$107.59		\$88.04	
Subtotal	\$107.59		\$88.04	
<i>Utility Program Costs</i>				
Program Planning & Design		\$1.24	\$1.24	\$1.24
Administration & Program Delivery		\$6.54	\$6.54	\$6.54
Advertising/Promotion/Customer Ed		\$5.75	\$5.75	\$5.75
Participant Rebates and Incentives		\$15.02	\$15.02	\$15.02
Equipment & Installation		\$0.02	\$0.02	\$0.02
Measurement & Verification		\$4.48	\$4.48	\$4.48
Miscellaneous		-\$0.44	-\$0.44	-\$0.44
Subtotal		\$32.62	\$32.62	\$32.62
<i>Participant Costs</i>				
Incremental Capital Costs	\$41.05			\$33.59
Incremental O&M Costs	\$0.00			\$0.00
Subtotal	\$41.05			\$33.59
Total Benefits	\$145.18	\$78.45	\$78.45	\$115.86
Total Costs	\$41.05	\$32.62	\$120.66	\$66.21
Net Benefit (Cost)	\$104.14	\$45.83	-\$42.21	\$49.65
Benefit/Cost Ratio	3.54	2.41	0.65	1.75

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

2010**GAS****GOAL****Input Summary and Totals****Program Assumptions:**

Lifetime (Weighted on Dth)	A	14 years
Net-to-Gross	B	82%

Program Totals:

Participants	C	113,294
Average Dth/Yr Saved	D	3.6
Total Dth/Yr Saved	E	402,808
Utility Costs per Net Dth/Yr	F	\$39.86
Net Benefit (Cost) per Gross Dth/Yr	G	\$49.65
Non-Energy Benefits Adder per Gross Dth/Yr	H	\$3.92
Annual Dth/\$M	(\$1M / F)	25,087
Total Utility Budget	(F x E)	\$16,056,364
Total MTRC Net Benefits with Adder	(E x G)	\$20,000,724
Total MTRC Net Benefits without Adder	(G - H) x E	\$18,420,801
Utility Program Cost per Net Dth Lifetime	(F / A)	\$2.76
Participant Payback with Rebate		2.8 years
Participant Payback without Rebate		4.5 years