Xcel Energy®

2013/2014/2015

Minnesota Electric and Natural Gas Conservation Improvement Program

E,G002/CIP-12-447

414 Nicollet Mall
Minneapolis, MN 55401

June 1, 2012

—Via Electronic Filing—

William Grant
Deputy Commissioner
Minnesota Department of Commerce
85 7th Place East, Suite 500
St. Paul, MN 55101-2198

RE: 2013-2015 Minnesota Electric and Natural Gas Conservation Improvement Program
Docket No. E,G002/CIP-12-447

Dear Director Grant:

Northern States Power Company, doing business as Xcel Energy, electronically submits to the Minnesota Department of Commerce, Division of Energy Resources this 2013-2015 Triennial Plan for its Minnesota Electric and Natural Gas Conservation Improvement Program. This Plan is filed pursuant to Minn. Stat. § § § 216B.2401, 216B.241, and 216B.2411 and Minn. R. 7690.0500.

We have electronically filed this document through the eDockets system maintained by the Minnesota Department of Commerce and the Minnesota Public Utilities Commission. By copy of this transmittal letter, Xcel Energy is notifying persons on the attached service list of this filing.

Parties wishing to access our 2013-2015 CIP Triennial Plan can retrieve the document by going to the eDockets homepage and searching for Docket No. E,G002/CIP-12-447. We provide a direct link to the eDockets website: https://www.edockets.state.mn.us/EFiling/home.jsp.

Please contact me at suzanne.galster@xcelenergy.com or (612) 330-5518 if you have any questions regarding this filing.

Sincerely,

/s/

SUZANNE DOYLE
MANAGER
DSM REGULATORY STRATEGY & PLANNING

Enclosures
c: Service List

CERTIFICATE OF SERVICE

I, Lindsey Didion, hereby certify that I have this day served copies of the foregoing document or a summary thereof on the attached list of persons.

xx by depositing a true and correct copy or summary thereof, properly enveloped with postage paid in the United States mail at Minneapolis, Minnesota; or

xx via electronic filing

Docket No. E,G002/CIP-12-447

Dated this 1st day of June 2012

/s/

_____

Lindsey Didion

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➢ EXECUTIVE SUMMARY

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Department of Commerce, Division of Energy Resources our 2013-2015 Conservation Improvement Program Triennial Plan. The Plan proposes annual savings goals of 1.5% of retail sales for our electric portfolio and 1% for our natural gas portfolio. The Company respectfully requests that the DER approve this filing to guide our Minnesota electric and natural gas conservation and load management activities for 2013, 2014, and 2015.

With this Plan, we continue the momentum developed during our 2010-2012 Plan, where we greatly increased our electric savings and reached the 1.5% electric savings goal for the first time and well ahead of expectations. This extraordinary accomplishment was largely due to successful implementation of the growth strategies we outlined in the last Plan, as well as the introduction of a financial incentive mechanism that has proven effective at motivating utilities to increase energy savings through CIP.

Although the current financial incentive mechanism is under review, we have put forth this Triennial Plan in good faith that the incentive will remain strong enough to motivate continued performance at the 1.5% level, as is proposed in this Plan for our electric portfolio. With continuation of the current incentive framework, we are well positioned for ongoing success.

Considerations for 2013-2015 Plan

While we are continuing many of the same strategies and programs implemented as part of our previous Plan, there are a few notable factors that influenced the development of this Plan and prompted changes to our portfolio. We discuss these factors and changes below.

Reduction in Avoided Costs

Due to the decline in natural gas prices, as well as the decline in use per customer as homes and appliances become more efficient, the benefits created by CIP programs on a per kWh and Dth basis are lower than in recent years. Yet the costs to administer these programs have typically increased as we have pursued harder-to-reach customers and savings opportunities. As a result, some programs we currently offer are no longer cost-effective or are marginally cost-effective. To address this issue, in April 2012, the DER announced a policy for 2013-2015 CIP plans that requires portfolios to be cost-effective at the segment level, rather than the program level. Existing programs will be grandfathered in and allowed to be non-cost-effective, so long as the segment in which they reside still passes the Participant and Societal Tests. Programs new to this Plan, however, must be cost-effective. This agreement applies only to this planning cycle and will be revisited in future cycles. Bearing this in mind, we have included a few programs in this Plan that are not cost-effective as stand-alone programs. These are:

- Residential Energy Feedback (in 2013) – Due to the additional costs of converting this from a pilot to a program, the electric component of Energy Feedback does not pass in its first program year. It is predicted to pass in the second and third years of the Plan. The gas component passes in all years.
- Low-Income Home Energy Savings (in all years) – The high costs associated with delivering new appliances to low-income customers have caused the electric component of this program to be non-cost-effective in all Plan years.

- Low-Income Multi-Family Energy Savings (in all years) – The additional costs of delivering this program in the apartment sector at no cost to participants render the program non-cost-effective in all Plan years.
- Residential Water Heater Rebate (in all years) – Due to exceptionally low gas prices, as well as changes to product baselines, which have reduced deemed savings, the Water Heater Rebate program does not pass in 2013, 2014 or 2015.

A corollary impact of low gas prices is that customer payback periods are longer, particularly for gas efficiency projects. Additionally, in this tight economy, customers are having difficulties coming up with the capital necessary to pursue gas efficiency projects. Although we set gas goals at 789,925 Dth (1.12% of sales) for 2010 and 814,471 Dth (1.15% of sales) for 2011, we did not meet these goals in 2010 or 2011. Achievements for 2010 and 2011 were 1.0% and 1.06% of sales, respectively. Taking the challenges of lower gas prices, the tight economy, and that it has been difficult to meet our approved goals in recent years, we have proposed a more realistic goal of 1% of retail sales for each year of this Plan. We believe that these goals are more consistent with recent experience and our expectations of future performance.

Changing Lighting Efficiency Baselines

To comply with the Energy Security and Independence Act, which directs the national phase-out of standard incandescent bulbs, we are appropriately changing the baseline efficiency of the compact fluorescent light bulbs in our portfolio. The phase-out will reduce the savings we can capture per unit and the overall savings from our programs. Because so many of our programs offer a lighting component, this change is reducing the potential savings achievable portfolio-wide. In order to make up for these lost savings, we have changed our product lineups, as well as our marketing tactics. For example, we are expanding our LED offerings, discontinuing our online CFL sales, and promoting CFLs in new ways.

New Programmatic Approaches

To maintain high levels of savings in the face of the challenges described above, we have taken steps to engage hard-to-reach customers and improve our offerings. In the Business Segment, we are offering a new holistic program, Commercial Efficiency, that encourages long-term energy planning with our customers, as well as a more targeted program, Foodservice Equipment. We are also leveraging the success of our Process Efficiency program, as its savings contributions have increased every year since its inception in 2007. We are expanding the Turn Key Services and Self-Direct programs to help customers assess and overcome barriers to energy efficiency projects. In the Low-Income Segment, we propose to launch a new Multi-Family Energy Savings program which will serve the apartment sector. Finally, we have moved Energy Feedback from a pilot to an expanded Residential program.

Solar*Rewards Phase-Out from CIP

As part of the development of this Triennial Plan, we reevaluated the landscape for solar in Minnesota and contemplated its future role in CIP given current market conditions. Since launching the Solar*Rewards program in 2010, we have supported many diverse solar installations, including roof-top installations by the University of Minnesota and the City of Minneapolis and numerous homeowner and small business installations throughout the Twin Cities. We are proud of the role we have played in helping to enable solar power in Minnesota and have gained valuable information that will be useful as more solar is added and integrated into our system.

Given our experience over the last couple of years and the current market outlook, we believe this Plan provides an appropriate and opportune time to phase-out Solar*Rewards as a CIP program. Phasing out the program makes sense for several reasons, including:

- The cost of solar installations has fallen dramatically, requiring a reevaluation of all the incentives in the market for solar, including Solar*Rewards.
- Customers interested in solar have other subsidies available, including the federal tax incentive and the Minnesota Bonus Rebate program for panels manufactured in Minnesota.
- While the cost of solar has fallen, it is still an expensive new generation resource. With near-flat growth in customer demand, the addition of new, expensive generation no longer makes economic sense.
- With continued momentum behind our conservation programs, we can achieve our goals with more cost-effective measures than solar.
- We are collaborating with regulators and stakeholders on a comprehensive distributed generation strategy to establish an effective regulatory framework and provide value to customers.

As discussed in the Renewable Energy Segment, the phase-out will include a transition period in 2013, during which the program will be funded at $2.5 million and the one-time incentive amount will be $1.50 per Watt. Reducing the incentive amount and discontinuing the Solar*Rewards program after 2013 avoids $12.5 million in spending over 2013-2015 as compared to 2010-2012.

Proposed Goals

In this Plan, we continue our legacy of providing customers with nearly unlimited options for saving energy. The proposed plan establishes ambitious goals of saving 1,307 GWh, 315 MW, and 2,084,797 Dth over the three year period at a cost of $304 million. The proposed Plan also includes estimated budgets and energy savings from anticipated alternative filings. In the following sections, we discuss our proposed goals by fuel and by segment and overarching strategies for reaching the goals.

This plan is designed to achieve electric savings equal to 1.5% of retail sales and gas savings equal to 1.0% of retail sales in 2013, 2014, and 2015. Our proposal is consistent with the goal approved in our most recent resource plan in Docket No. E002/RP-07-1572 to strive to achieve the 1.5% savings goal over the planning horizon. The table below summarizes our proposed goals. The following tables provide proposed goals and budgets for each program and segment by year.

Goals and Budgets as a Percent of Retail Sales

	Electric				Gas			
Year	**Budget**	**Proposed Energy Savings (GWh)**	**Total Adjusted Sales (GWh)**	**Savings as % of Retail Sales**	**Budget**	**Proposed Energy Savings (Dth)**	**Total Adjusted Sales (Dth)**	**Savings as % of Retail Sales**
2013	$86,763,621	436	28,987	1.5%	$13,616,878	696,415	69,458,419	1.0%
2014	$86,057,389	436	28,987	1.5%	$14,389,693	691,908	69,458,419	1.0%
2015	$89,038,690	435	28,987	1.5%	$14,367,523	696,474	69,458,419	1.0%

We request that the DER approve goals and budgets by segment. This is consistent with the DER's new policy to maintain portfolio cost-effectiveness at the segment, rather than the program-level. In addition, this approach will allow us greater flexibility to manage specific product performance within each segment, as well as the overall cost-effectiveness of our CIP Plan. The following tables provide the segment goals:

2013 Segment-Level Goals

	Electric				Gas		
Segment	**Participation**	**Budget**	**Gen kW**	**Gen kWh**	**Participation**	**Budget**	**Dth**
Business	72,162	$41,556,765	53.167	286,545,465	2,775	$4,269,785	430,500
Residential	1,485,313	$20,378,392	40,845	109,575,754	581,243	$5,265,055	242,281
Low-Income	4,146	$2,321,035	477	2,602,248	2,050	$1,656,980	23,635
Planning		$4,154,742				$1,010,746	
Research, Evaluations, & Pilots		$1,971,538				$682,862	
Renewable Energy		$2,500,000					
Assessments		$1,736,000				$345,600	
EUI							
Total	1,561,736	$86,763,621	106,273	435,844,594	586,068	$13,616,878	696,415

2014 Segment-Level Goals

	Electric				Gas		
Segment	**Participation**	**Budget**	**Gen kW**	**Gen kWh**	**Participation**	**Budget**	**Dth**
Business	77,185	$43,198,901	53,088	296,888,998	2,902	$4,644,432	490,913
Residential	1,560,397	$20,730,713	39,869	101,190,600	573,836	$5,573,531	177,360
Low-Income	4,346	$2,568,863	498	2,633,067	2,050	$1,636,181	23,635
Planning		$4,216,343				$1,029,794	
Research, Evaluations, & Pilots		$1,381,920				$671,305	
Renewable Energy							
Assessments		$1,736,000				$345,600	
EUI							
Total	1,641,928	$86,057,359	104,455	435,712,665	578,788	$14,389,693	691,908

2015 Segment-Level Goals

	Electric				Gas		
Segment	**Participation**	**Budget**	**Gen kW**	**Gen kWh**	**Participation**	**Budget**	**Dth**
Business	82,173	$44,698,041	52,840	297,568,573	2,900	$4,809,699	496,084
Residential	1,699,699	$21,762,406	39,647	100,401,037	566,752	$5,632,928	177,115
Low-Income	4,246	$2,520,587	476	2,445,325	2,050	$1,636,221	23,275
Planning		$4,290,268				$1,057,933	
Research, Evaluations, & Pilots		$1,805,988				$417,042	
Renewable Energy							
Assessments		$1,736,000				$345,600	
EUI							
Total	1,786,119	$89,038,690	103,962	435,414,935	571,702	$14,367,523	696,474

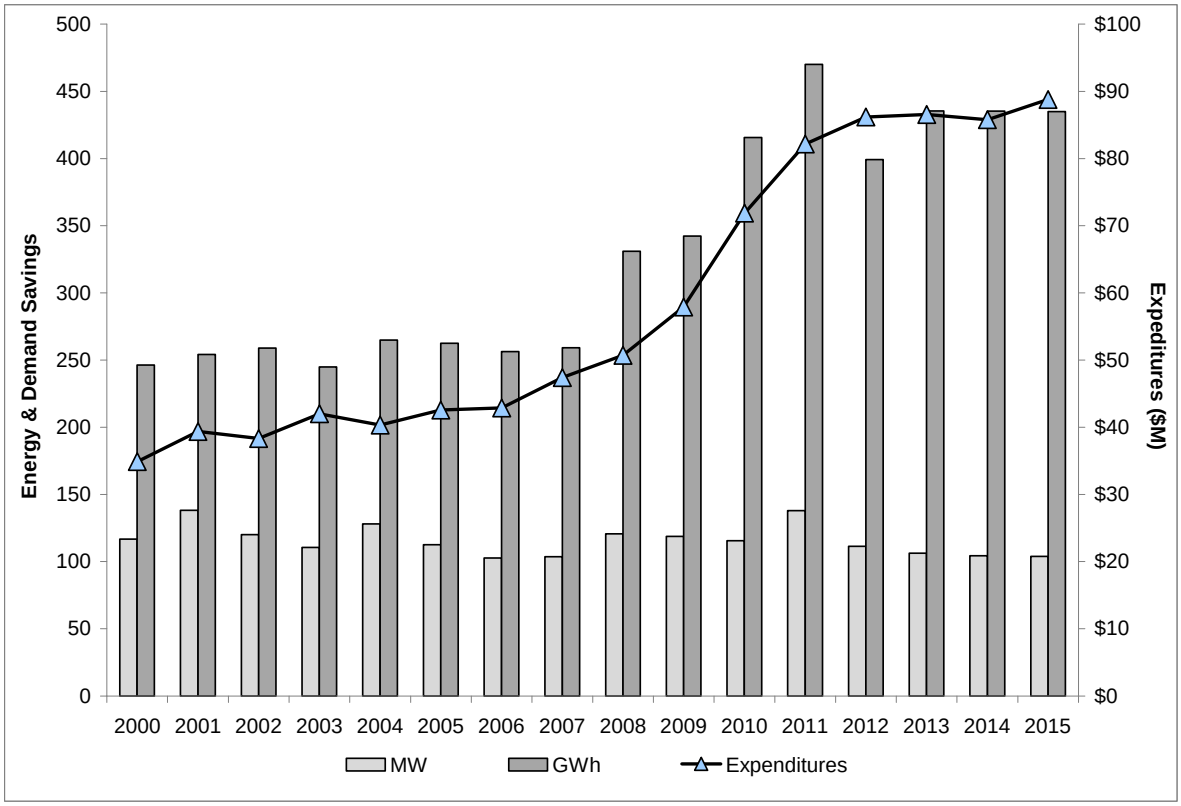
Historical Achievements

The 2013-2015 CIP Triennial Plan continues Xcel Energy's long-standing commitment to DSM. Although DSM activities in many states around the country have ebbed and flowed, Minnesota and Xcel Energy, as its largest utility, have generally maintained a consistent approach to DSM. This long-standing commitment and dedication to excellence in running cost-effective conservation and load management programs places the Company among the nation's top utilities in terms of energy and demand saved and most innovative programs.

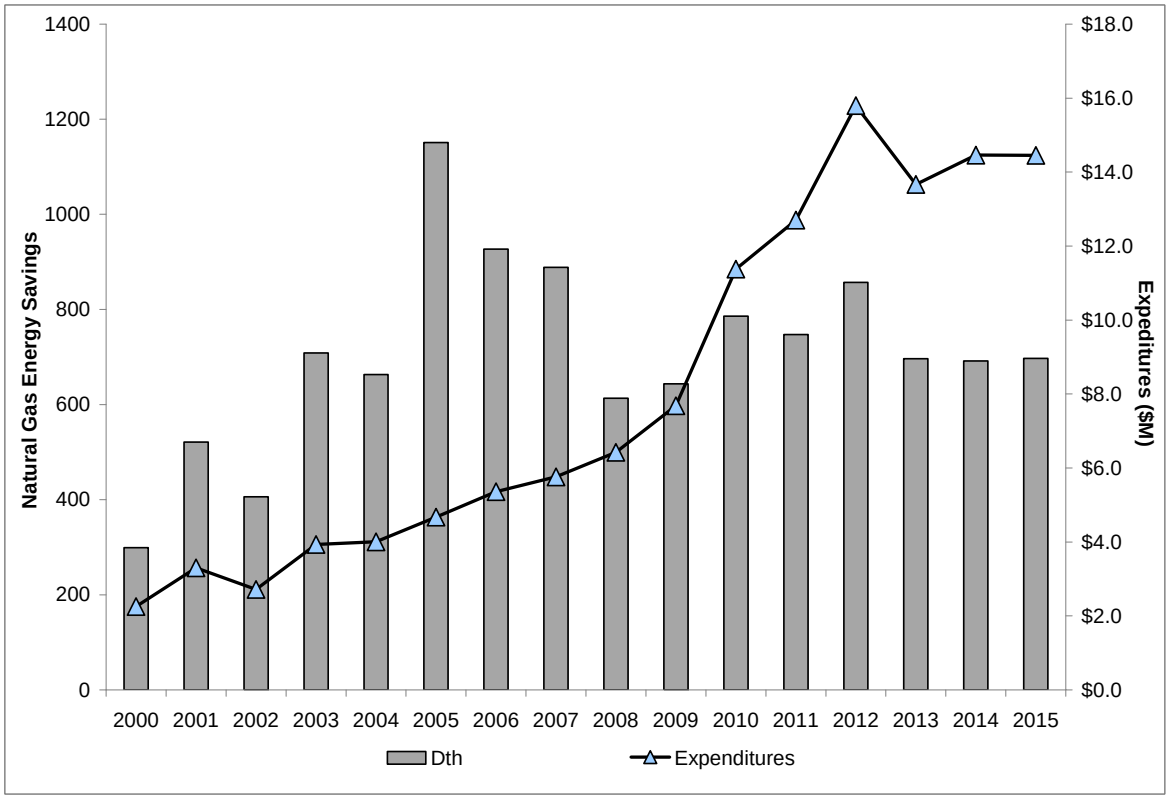
The Company has received many awards for its commitment to DSM. Most recently, we were awarded ENERGY STAR's 2012 Sustained Excellence Award, which is considered their most prestigious award, for our ongoing leadership across ENERGY STAR programs, including energy efficient products, services, new homes and buildings in the commercial, industrial and public sectors. This is the third year that ENERGY STAR has recognized Xcel Energy. In 2009 and 2011, the Company won Partner of the Year for Excellence in Program Delivery.

Between 1990 and 2011, Xcel Energy invested over $1 billion (nominal) resulting in 5,912 GWh of electric energy savings, 2,675 MW of electric demand savings and an estimated 10,992,937 MCF of natural gas savings. The following figures show our historical spending on CIP and energy savings achievements. Our proposed goals for 2013, 2014, and 2015 are provided for context.

CIP Electric Achievements, 2000-2015



CIP Gas Achievements, 2000-2015



Executive Summary Table - Electric 2013

2013	Electric Participants	Electric Budget	Customer kW	Generator kW	Generator kWh	Societal Test Ratio
Business Segment						
Business New Construction	53	$6,145,119	6,412	6,287	26,464,770	1.32
Commercial Efficiency	10	$1,049,963	700	443	4,259,068	1.41
Computer Efficiency	2,804	$1,277,315	1,546	1,662	12,098,358	1.66
Cooling Efficiency	1,105	$1,959,471	1,994	1,661	7,097,985	1.48
Custom Efficiency	121	$3,014,398	3,608	1,739	16,816,821	1.63
Data Center Efficiency	13	$753,467	557	398	4,831,078	3.20
Efficiency Controls	87	$1,378,684	2,092	338	16,692,249	2.09
Fluid Systems Optimization	451	$1,470,374	2,006	1,977	13,054,622	2.42
Foodservice Equipment	46	$48,181	102	73	491,753	2.65
Heating Efficiency						
Lighting Efficiency	798	$6,961,434	10,305	9,000	54,022,924	1.81
Motor Efficiency	877	$4,316,494	7,217	6,057	36,021,638	2.14
Process Efficiency	74	$6,023,911	10,608	7,752	65,971,934	2.63
Recommissioning	119	$1,105,147	1,771	566	11,511,765	1.87
Self-Direct	10	$1,870,868	3,220	2,172	9,917,591	1.46
Turn Key Services	353	$1,375,116	1,905	602	6,931,471	1.71
Business Segment Energy Efficiency Total	**6,921**	**$38,749,942**	**54,045**	**40,725**	**286,184,027**	**1.89**
Electric Rate Savings	90	$557,534	18,000	9,186	340,347	6.67
Saver's Switch for Business	1,151	$1,970,791	12,620	3,256	21,090	1.57
Business Segment Load Management Total	**1,241**	**$2,528,325**	**30,620**	**12,441**	**361,437**	**2.70**
Business Education	14,000	$247,498				
Small Business Lamp Recycling	50,000	$31,000				
Business Segment Indirect Total	**64,000**	**$278,498**				
Business Segment Total	**72,162**	**$41,556,765**	**84,665**	**53,167**	**286,545,465**	**1.90**
Residential Segment						
Energy Efficient Showerheads	1,050	$14,488	175		360,781	8.51
Energy Feedback	150,000	$1,110,027	896	668	8,570,819	0.96
ENERGY STAR Homes	860	$195,622	315	108	916,126	1.68
Heating System Rebates	7,000	$758,550	1,750	1,343	4,745,263	1.40
Home Energy Squad	5,500	$1,188,089	3,461	574	2,820,471	1.24
Home Lighting	527,877	$4,463,168	67,206	10,273	77,675,154	2.78
Home Performance with ENERGY STAR®	225	$97,692	221	141	169,025	1.26
Insulation Rebate	288	$86,211	453	231	331,717	1.37
Refrigerator Recycling	5,500	$782,428	1,183	713	6,221,426	3.08
Residential Cooling	9,859	$4,703,374	9,050	8,921	5,355,937	1.01
School Education Kits	20,000	$616,858	2,189	181	2,231,297	1.48
Water Heater Rebate						
Residential Segment Energy Efficiency Total	**728,159**	**$14,016,508**	**86,900**	**23,155**	**109,398,017**	**1.74**
Residential Segment Load Management - Saver's Switch	**20,000**	**$4,842,843**	**60,413**	**17,690**	**177,738**	**3.48**
Consumer Education	433,854	$775,640				
Home Energy Audit	3,300	$557,401				
Residential Lamp Recycling	300,000	$186,000				
Residential Segment Indirect Total	**737,154**	**$1,519,041**				
Residential Segment Total	**1,485,313**	**$20,378,392**	**147,312**	**40,845**	**109,575,754**	**1.89**
Low-Income Segment						
Home Energy Savings Program	2,100	$1,354,160	584	188	938,843	0.65
Low-Income Home Energy Squad	1,650	$386,163	1,365	196	1,105,499	1.56
Multi-Family Energy Savings Program	396	$580,712	366	94	557,906	0.69
Low-Income Segment Total	**4,146**	**$2,321,035**	**2,315**	**477**	**2,602,248**	**0.77**
Planning Segment						
Application Development and Maintenance		$1,101,600				
Advertising & Promotion		$2,520,000				
CIP Training		$125,000				
Regulatory Affairs		$408,142				
Planning Segment Total		**$4,154,742**				
Research, Evaluations & Pilots Segment						
Market Research		$1,164,538				
Product Development		$807,000				
Research, Evaluations & Pilots Segment Total		**$1,971,538**				
PORTFOLIO SUBTOTAL	**1,561,621**	**$70,382,471**	**234,293**	**94,489**	**398,723,467**	**1.81**

Renewable Energy Segment - Solar*Rewards	**116**	**$2,500,000**	**1,533**	**783**	**2,121,127**	**0.45**
Anticipated Alternative Filings						
CEE One-Stop Efficiency Shop		$11,200,000	10,230	11,000	35,000,000	
EnerChange		$270,000				
Energy Smart		$327,750				
Trillion BTU		$347,400				
Anticipated Alternative Filings Total		**$12,145,150**	**10,230**	**11,000**	**35,000,000**	
Assessments Segment		**$1,736,000**				
Electric Utility Infrastructure Segment						
PORTFOLIO TOTAL	**1,561,736**	**$86,763,621**	**246,056**	**106,273**	**435,844,594**	

Executive Summary Table - Gas 2013

2013	Gas Participants	Gas Budget	Dth Savings	Societal Test Ratio
Business Segment				
Business New Construction	14	$443,688	24,018	1.14
Commercial Efficiency	4	$211,178	12,023	2.31
Computer Efficiency				
Cooling Efficiency				
Custom Efficiency	39	$633,706	25,253	2.47
Data Center Efficiency				
Efficiency Controls	27	$206,988	20,324	2.09
Fluid Systems Optimization				
Foodservice Equipment	58	$92,129	5,388	2.19
Heating Efficiency	633	$1,553,325	190,028	2.26
Lighting Efficiency				
Motor Efficiency				
Process Efficiency	19	$815,182	120,014	3.88
Recommissioning	30	$126,038	14,071	3.20
Self-Direct	2	$85,738	9,868	3.75
Turn Key Services	49	$64,402	9,513	2.57
Business Segment Energy Efficiency Total	**875**	**$4,232,373**	**430,500**	**2.43**
Electric Rate Savings				
Saver's Switch for Business				
Business Segment Load Management Total				
Business Education	1,900	$37,412		
Small Business Lamp Recycling				
Business Segment Indirect Total	**1,900**	**$37,412**		
Business Segment Total	**2,775**	**$4,269,785**	**430,500**	**2.43**
Residential Segment				
Energy Efficient Showerheads	13,950	$175,502	22,852	11.83
Energy Feedback	150,000	$453,245	27,220	1.09
ENERGY STAR Homes	500	$742,389	35,485	2.23
Heating System Rebates	5,777	$928,352	82,800	1.91
Home Energy Squad	3,000	$785,723	27,263	2.31
Home Lighting				
Home Performance with ENERGY STAR®	225	$266,823	7,149	1.21
Insulation Rebate	1,049	$323,651	14,455	1.43
Refrigerator Recycling				
Residential Cooling				
School Education Kits	20,000	$482,038	21,597	4.50
Water Heater Rebate	1,330	$177,146	3,461	0.68
Residential Segment Energy Efficiency Total	**195,831**	**$4,334,869**	**242,281**	**2.12**
Residential Segment Load Management - Saver's Switch				
Consumer Education	382,912	$540,806		
Home Energy Audit	2,500	$389,380		
Residential Lamp Recycling				
Residential Segment Indirect Total	**385,412**	**$930,186**		
Residential Segment Total	**581,243**	**$5,265,055**	**242,281**	**1.92**
Low-Income Segment				
Home Energy Savings Program	400	$1,192,083	9,360	1.12
Low-Income Home Energy Squad	1,650	$464,897	14,274	2.45
Multi-Family Energy Savings Program				
Low-Income Segment Total	**2,050**	**$1,656,980**	**23,635**	**1.51**
Planning Segment				
Application Development and Maintenance		$267,246		
Advertising & Promotion		$572,000		
CIP Training		$40,000		
Regulatory Affairs		$131,500		
Planning Segment Total		**$1,010,746**		
Research, Evaluations & Pilots Segment				
Market Research		$454,890		
Product Development		$227,972		
Research, Evaluations & Pilots Segment Total		**$682,862**		
PORTFOLIO SUBTOTAL	**586,068**	**$12,885,428**	**696,415**	**2.06**

Renewable Energy Segment - Solar*Rewards				
Anticipated Alternative Filings				
CEE One-Stop Efficiency Shop				
EnerChange		$330,000		
Energy Smart		$17,250		
Trillion BTU		$38,600		
Anticipated Alternative Filings Total		**$385,850**		
Assessments Segment		**$345,600**		
Electric Utility Infrastructure Segment				
PORTFOLIO TOTAL	**586,068**	**$13,616,878**	**696,415**	

Executive Summary Table - Electric 2014

2014	Electric Participants	Electric Budget	Customer kW	Generator kW	Generator kWh	Societal Test Ratio
Business Segment						
Business New Construction	49	$6,055,734	6,083	5,975	25,085,206	1.35
Commercial Efficiency	20	$1,837,293	1,527	1,033	8,861,195	1.62
Computer Efficiency	2,908	$1,420,915	1,588	1,707	12,426,585	1.65
Cooling Efficiency	1,106	$1,950,860	1,979	1,644	7,106,359	1.53
Custom Efficiency	123	$3,074,265	3,677	1,773	17,140,222	1.68
Data Center Efficiency	15	$848,062	807	557	7,050,853	3.10
Efficiency Controls	90	$1,426,994	2,165	350	17,274,536	2.17
Fluid Systems Optimization	494	$1,615,374	2,248	2,202	14,507,254	2.62
Foodservice Equipment	72	$55,191	147	108	729,965	2.96
Heating Efficiency						
Lighting Efficiency	589	$5,471,322	7,547	6,675	40,022,385	1.83
Motor Efficiency	877	$4,335,454	7,217	6,057	36,021,638	2.22
Process Efficiency	81	$6,909,437	12,314	9,076	75,856,071	2.71
Recommissioning	124	$1,148,781	1,838	587	11,938,416	1.96
Self-Direct	15	$2,743,423	4,831	3,258	14,876,387	1.52
Turn Key Services	391	$1,502,201	2,108	666	7,668,306	1.79
Business Segment Energy Efficiency Total	**6,954**	**$40,395,306**	**56,076**	**41,668**	**296,565,377**	**1.96**
Electric Rate Savings	80	$483,602	16,000	8,165	302,531	7.01
Saver's Switch for Business	1,151	$2,037,295	12,620	3,256	21,090	1.55
Business Segment Load Management Total	**1,231**	**$2,520,897**	**28,620**	**11,421**	**323,621**	**2.60**
Business Education	14,000	$247,498				
Small Business Lamp Recycling	55,000	$35,200				
		$282,698				
Business Segment Total	**77,185**	**$43,198,901**	**84,696**	**53,088**	**296,888,998**	**1.97**
Residential Segment						
Energy Efficient Showerheads	1,050	$15,025	175		360,781	8.51
Energy Feedback	142,500	$1,017,621	851	635	8,142,278	1.08
ENERGY STAR Homes	860	$204,376	297	106	900,058	1.70
Heating System Rebates	7,000	$759,010	1,750	1,343	4,745,263	1.45
Home Energy Squad	5,501	$1,229,621	3,468	583	2,820,466	1.25
Home Lighting	594,824	$4,598,468	60,027	9,176	69,378,126	2.53
Home Performance with ENERGY STAR®	225	$98,853	211	140	162,570	1.29
Insulation Rebate	296	$89,082	467	240	340,788	1.41
Refrigerator Recycling	6,000	$848,163	1,290	778	6,787,010	3.26
Residential Cooling	9,987	$4,735,920	9,153	9,022	5,417,907	1.04
School Education Kits	20,000	$617,668	1,890	155	1,957,614	1.38
Water Heater Rebate						
Residential Segment Energy Efficiency Total	**788,243**	**$14,213,807**	**79,579**	**22,178**	**101,012,862**	**1.70**
Residential Segment Load Management - Saver's Switch	**20,000**	**$4,961,935**	**60,413**	**17,690**	**177,738**	**3.47**
Consumer Education	433,854	$776,640				
Home Energy Audit	3,300	$576,731				
Residential Lamp Recycling	315,000	$201,600				
		$1,554,971				
Residential Segment Total	**1,560,397**	**$20,730,713**	**139,991**	**39,869**	**101,190,600**	**1.85**
Low-Income Segment						
Home Energy Savings Program	2,100	$1,358,641	563	186	915,688	0.66
Low-Income Home Energy Squad	1,650	$391,308	1,228	184	994,948	1.47
Multi-Family Energy Savings Program	596	$818,914	478	129	722,431	0.69
Low-Income Segment Total	**4,346**	**$2,568,863**	**2,269**	**498**	**2,633,067**	**0.75**
Planning Segment						
Application Development and Maintenance		$1,101,600				
Advertising & Promotion		$2,574,000				
CIP Training		$125,000				
Regulatory Affairs		$415,743				
Planning Segment Total		**$4,216,343**				
Research, Evaluations & Pilots Segment						
Market Research		$574,920				
Product Development		$807,000				
Research, Evaluations & Pilots Segment Total		**$1,381,920**				
PORTFOLIO SUBTOTAL	**1,641,928**	**$72,096,739**	**226,956**	**93,455**	**400,712,665**	**1.85**

Renewable Energy Segment - Solar*Rewards						
Anticipated Alternative Filings						
CEE One-Stop Efficiency Shop		$11,200,000	10,230	11,000	35,000,000	
EnerChange		$337,500				
Energy Smart		$342,000				
Trillion BTU		$345,150				
Anticipated Alternative Filings Total		**$12,224,650**	**10,230**	**11,000**	**35,000,000**	
Assessments Segment		**$1,736,000**				
Electric Utility Infrastructure Segment						
PORTFOLIO TOTAL	**1,641,928**	**$86,057,389**	**237,186**	**104,455**	**435,712,665**	

Executive Summary Table - Gas 2014

2014	Gas Participants	Gas Budget	Dth Savings	Societal Test Ratio
Business Segment				
Business New Construction	13	$450,056	23,235	1.14
Commercial Efficiency	8	$335,181	20,301	2.31
Computer Efficiency				
Cooling Efficiency				
Custom Efficiency	53	$713,216	39,984	2.47
Data Center Efficiency				
Efficiency Controls	33	$249,168	25,014	2.09
Fluid Systems Optimization				
Foodservice Equipment	82	$108,101	7,207	2.19
Heating Efficiency	704	$1,578,882	200,010	2.26
Lighting Efficiency				
Motor Efficiency				
Process Efficiency	21	$851,073	135,761	3.88
Recommissioning	30	$127,139	14,071	3.20
Self-Direct	3	$125,437	14,801	3.75
Turn Key Services	54	$68,767	10,529	2.57
Business Segment Energy Efficiency Total	**1,002**	**$4,607,020**	**490,913**	**2.43**
Electric Rate Savings				
Saver's Switch for Business				
Business Segment Load Management Total				
Business Education	1,900	$37,412		
Small Business Lamp Recycling				
	1,900	**$37,412**		
Business Segment Total	**2,902**	**$4,644,432**	**490,913**	**2.43**
Residential Segment				
Energy Efficient Showerheads	13,950	$182,087	22,852	11.83
Energy Feedback	142,500	$415,873	25,859	1.09
ENERGY STAR Homes	500	$781,748	35,485	2.23
Heating System Rebates	5,777	$1,173,079	17,418	1.91
Home Energy Squad	3,000	$800,059	28,229	2.31
Home Lighting				
Home Performance with ENERGY STAR®	225	$271,998	7,210	1.21
Insulation Rebate	1,092	$334,065	15,033	1.43
Refrigerator Recycling				
Residential Cooling				
School Education Kits	20,000	$483,082	21,597	4.50
Water Heater Rebate	1,380	$187,995	3,677	0.68
Residential Segment Energy Efficiency Total	**188,424**	**$4,629,986**	**177,360**	**2.12**
Residential Segment Load Management - Saver's Switch				
Consumer Education	382,912	$540,806		
Home Energy Audit	2,500	$402,739		
Residential Lamp Recycling				
	385,412	**$943,545**		
Residential Segment Total	**573,836**	**$5,573,531**	**177,360**	**1.92**
Low-Income Segment				
Home Energy Savings Program	400	$1,188,045	9,360	1.12
Low-Income Home Energy Squad	1,650	$468,136	14,274	2.45
Multi-Family Energy Savings Program				
Low-Income Segment Total	**2,050**	**$1,656,181**	**23,635**	**1.51**
Planning Segment				
Application Development and Maintenance		$267,246		
Advertising & Promotion		$588,000		
CIP Training		$40,000		
Regulatory Affairs		$134,548		
Planning Segment Total		**$1,029,794**		
Research, Evaluations & Pilots Segment				
Market Research		$443,333		
Product Development		$227,972		
Research, Evaluations & Pilots Segment Total		**$671,305**		
PORTFOLIO SUBTOTAL	**578,788**	**$13,575,243**	**691,908**	**2.06**

Renewable Energy Segment - Solar*Rewards				
Anticipated Alternative Filings				
CEE One-Stop Efficiency Shop				
EnerChange		$412,500		
Energy Smart		$18,000		
Trillion BTU		$38,350		
Anticipated Alternative Filings Total		**$468,850**		
Assessments Segment		**$345,600**		
Electric Utility Infrastructure Segment				
PORTFOLIO TOTAL	**578,788**	**$14,389,693**	**691,908**	

Executive Summary Table - Electric 2015

2015	Electric Participants	Electric Budget	Customer kW	Generator kW	Generator kWh	Societal Test Ratio
Business Segment						
Business New Construction	43	$5,337,135	5,094	4,988	21,048,986	1.38
Commercial Efficiency	37	$3,171,977	2,865	2,094	16,132,446	1.80
Computer Efficiency	2,911	$1,490,993	1,588	1,707	12,426,585	1.67
Cooling Efficiency	1,109	$1,963,169	1,982	1,645	7,134,438	1.58
Custom Efficiency	128	$3,172,659	3,816	1,840	17,787,022	1.74
Data Center Efficiency	18	$1,010,286	1,183	796	10,380,517	3.01
Efficiency Controls	92	$1,490,726	2,213	358	17,662,728	2.24
Fluid Systems Optimization	551	$1,860,934	2,646	2,573	16,634,440	2.74
Foodservice Equipment	72	$58,727	147	108	729,965	3.02
Heating Efficiency						
Lighting Efficiency	449	$4,917,319	5,694	5,041	30,027,945	1.70
Motor Efficiency	877	$4,354,982	7,217	6,057	36,021,638	2.30
Process Efficiency	91	$6,609,504	11,586	8,565	71,224,992	2.78
Recommissioning	124	$1,151,320	1,838	587	11,938,416	2.06
Self-Direct	20	$3,616,137	6,441	4,344	19,835,182	1.57
Turn Key Services	421	$1,605,351	2,271	717	8,259,652	1.87
Business Segment Energy Efficiency Total	**6,942**	**$41,811,218**	**56,581**	**41,419**	**297,244,952**	**2.00**
Electric Rate Savings	80	$492,822	16,000	8,165	302,531	7.05
Saver's Switch for Business	1,151	$2,106,903	12,620	3,256	21,090	1.54
Business Segment Load Management Total	**1,231**	**$2,599,725**	**28,620**	**11,421**	**323,621**	**2.58**
Business Education	14,000	$247,498				
Small Business Lamp Recycling	60,000	$39,600				
Business Segment Indirect Total	**74,000**	**$287,098**				
Business Segment Total	**82,173**	**$44,698,041**	**85,201**	**52,840**	**297,568,573**	**2.01**
Residential Segment						
Energy Efficient Showerheads	1,050	$15,747	175		360,781	8.39
Energy Feedback	190,375	$1,530,056	1,297	967	12,406,647	1.23
ENERGY STAR Homes	860	$199,145	281	105	885,775	1.77
Heating System Rebates	7,000	$759,470	1,750	1,343	4,745,263	1.49
Home Energy Squad	5,499	$1,239,558	2,925	537	2,384,706	1.18
Home Lighting	675,611	$4,857,433	55,664	8,520	64,376,286	2.27
Home Performance with ENERGY STAR®	225	$99,995	200	138	156,325	1.31
Insulation Rebate	311	$93,156	493	250	361,265	1.46
Refrigerator Recycling	6,500	$920,950	1,398	843	7,352,594	3.42
Residential Cooling	10,114	$4,768,217	9,254	9,121	5,479,306	1.07
School Education Kits	20,000	$618,350	1,624	131	1,714,351	1.28
Water Heater Rebate						
Residential Segment Energy Efficiency Total	**917,545**	**$15,102,077**	**75,061**	**21,957**	**100,223,299**	**1.64**
Residential Segment Load Management - Saver's Switch	**20,000**	**$5,083,549**	**60,413**	**17,690**	**177,738**	**3.47**
Consumer Education	433,854	$765,640				
Home Energy Audit	3,300	$596,640				
Residential Lamp Recycling	325,000	$214,500				
Residential Segment Indirect Total	**762,154**	**$1,576,780**				
Residential Segment Total	**1,699,699**	**$21,762,406**	**135,474**	**39,647**	**100,401,037**	**1.80**
Low-Income Segment						
Home Energy Savings Program	2,000	$1,307,042	505	174	842,035	0.66
Low-Income Home Energy Squad	1,650	$394,569	1,142	177	925,303	1.43
Multi-Family Energy Savings Program	596	$818,976	430	124	677,988	0.68
Low-Income Segment Total	**4,246**	**$2,520,587**	**2,076**	**476**	**2,445,325**	**0.75**
Planning Segment						
Application Development and Maintenance		$1,101,600				
Advertising & Promotion		$2,628,000				
CIP Training		$124,999				
Regulatory Affairs		$435,669				
Planning Segment Total		**$4,290,268**				
Research, Evaluations & Pilots Segment						
Market Research		$998,988				
Product Development		$807,000				
Research, Evaluations & Pilots Segment Total		**$1,805,988**				
PORTFOLIO SUBTOTAL	**1,786,119**	**$75,077,290**	**222,750**	**92,962**	**400,414,935**	**1.86**

Renewable Energy Segment - Solar*Rewards						
Anticipated Alternative Filings						
CEE One-Stop Efficiency Shop		$11,200,000	10,230	11,000	35,000,000	
EnerChange		$337,500				
Energy Smart		$356,250				
Trillion BTU		$331,650				
Anticipated Alternative Filings Total		**$12,225,400**	**10,230**	**11,000**	**35,000,000**	
Assessments Segment		**$1,736,000**				
Electric Utility Infrastructure Segment						
PORTFOLIO TOTAL	**1,786,119**	**$89,038,690**	**232,980**	**103,962**	**435,414,935**	

Three Year Summary	Electric Participants	Electric Budget	Customer kW	Generator kW	Generator kWh
2013	1,561,736	$86,763,621	246,056	106,273	435,844,594
2014	1,641,928	$86,057,389	237,186	104,455	435,712,665
2015	1,786,119	$89,038,690	232,980	103,962	435,414,935
2013 - 2015 Total	**4,989,783**	**$261,859,701**	**716,223**	**314,690**	**1,306,972,193**

Executive Summary Table - Gas 2015

2015	Gas Participants	Gas Budget	Dth Savings	Societal Test Ratio
Business Segment				
Business New Construction	12	$419,412	20,739	1.14
Commercial Efficiency	13	$482,239	25,591	2.31
Computer Efficiency				
Cooling Efficiency				
Custom Efficiency	53	$719,247	39,984	2.47
Data Center Efficiency				
Efficiency Controls	33	$238,902	25,014	2.09
Fluid Systems Optimization				
Foodservice Equipment	82	$107,430	7,207	2.19
Heating Efficiency	691	$1,578,199	195,006	2.26
Lighting Efficiency				
Motor Efficiency				
Process Efficiency	23	$862,029	137,395	3.88
Recommissioning	30	$127,259	14,071	3.20
Self-Direct	4	$165,145	19,735	3.75
Turn Key Services	58	$72,425	11,342	2.57
Business Segment Energy Efficiency Total	**1,000**	**$4,772,287**	**496,084**	**2.43**
Electric Rate Savings				
Saver's Switch for Business				
Business Segment Load Management Total				
Business Education	1,900	$37,412		
Small Business Lamp Recycling				
Business Segment Indirect Total	**1,900**	**$37,412**		
Business Segment Total	**2,900**	**$4,809,699**	**496,084**	**2.43**
Residential Segment				
Energy Efficient Showerheads	13,950	$191,126	22,852	11.83
Energy Feedback	135,375	$399,534	24,566	1.09
ENERGY STAR Homes	500	$775,123	35,485	2.23
Heating System Rebates	5,777	$1,200,159	17,736	1.91
Home Energy Squad	3,000	$808,680	28,328	2.31
Home Lighting				
Home Performance with ENERGY STAR®	225	$277,193	7,259	1.21
Insulation Rebate	1,133	$344,870	15,615	1.43
Refrigerator Recycling				
Residential Cooling				
School Education Kits	20,000	$484,023	21,597	4.50
Water Heater Rebate	1,380	$194,914	3,677	0.68
Residential Segment Energy Efficiency Total	**181,340**	**$4,675,622**	**177,115**	**2.12**
Residential Segment Load Management - Saver's Switch				
Consumer Education	382,912	$540,806		
Home Energy Audit	2,500	$416,500		
Residential Lamp Recycling				
Residential Segment Indirect Total	**385,412**	**$957,306**		
Residential Segment Total	**566,752**	**$5,632,928**	**177,115**	**1.92**
Low-Income Segment				
Home Energy Savings Program	400	$1,167,851	9,001	1.12
Low-Income Home Energy Squad	1,650	$468,370	14,274	2.45
Multi-Family Energy Savings Program				
Low-Income Segment Total	**2,050**	**$1,636,221**	**23,275**	**1.51**
Planning Segment				
Application Development and Maintenance		$267,246		
Advertising & Promotion		$610,000		
CIP Training		$40,000		
Regulatory Affairs		$140,687		
Planning Segment Total		**$1,057,933**		
Research, Evaluations & Pilots Segment				
Market Research		$189,070		
Product Development		$227,972		
Research, Evaluations & Pilots Segment Total		**$417,042**		
PORTFOLIO SUBTOTAL	**571,702**	**$13,553,823**	**696,474**	**2.06**

Renewable Energy Segment - Solar*Rewards				
Anticipated Alternative Filings				
CEE One-Stop Efficiency Shop				
EnerChange		$412,500		
Energy Smart		$18,750		
Trillion BTU		$36,850		
Anticipated Alternative Filings Total		**$468,100**		
Assessments Segment		**$345,600**		
Electric Utility Infrastructure Segment				
PORTFOLIO TOTAL	**571,702**	**$14,367,523**	**696,474**	

Three Year Summary	Gas Participants	Gas Budget	Dth Savings
2013	586,068	$13,616,878	696,415
2014	578,788	$14,389,693	691,908
2015	571,702	$14,367,523	696,474
2013 - 2015 Total	**1,736,558**	**$42,374,094**	**2,084,797**

➢ COMPLIANCE WITH RULES & STATUTES

The 2013-2015 Triennial Plan fulfills Xcel Energy's compliance with Minn. Stat. § 216B.241, subd. 2(a), which requires public utilities to file CIP plans by June 1 of the applicable year. In 2001, Xcel Energy received Department of Commerce approval to file a combined gas and electric CIP plan; we continue this approach with the current filing.

Minn. R. 7690.0500 contains the requirements and procedures for CIP filings. Minn. Stat. § § § 216B.2401, 216B.241, and 216B.2411 contain provisions the Company must meet in its CIP. This section provides all of the compliance order points required therein.

Statutory Requirements

Minimum Spending Requirement

Minn. Stat. § 216B.241, requires that 2.0% of the Company's electric Gross Operating Revenues ("GOR") be spent on electric CIP and 0.5% of gas GOR be spent on gas CIP. The table below shows our spending in relation to our minimum spending requirement for 2013, 2014, and 2015.

Minimum Spending Requirement 2013-2015

	2011 Net Revenues (GOR – Exempt)	% of GOR	Minimum Spending Requirement	2013 Proposed Budget	2014 Proposed Budget	2015 Proposed Budget
Electric	$2,636,308,672	2.0%	$52,726,173	$86,763,621	$86,057,389	$89,038,690
Gas	$526,755,700	0.5%	$2,633,778	$13,616,878	$14,389,693	$14,367,523

Goals as a Percentage of Sales

Minn. Stat. § 216B.241, subd. 1c requires utilities to file a CIP Plan with no less than 1.0% goals and a statewide goal of 1.5%. The table below shows our proposed natural gas and electric goals annually, as percent of the previous three-year (2009, 2010 & 2011) weather-normalized sales, adjusted for exempt customers as of May 15, 2012. Should additional customers be approved for CIP exemption, we may request to modify the baseline to incorporate the effect of those exemptions.

Goals as a Percent of Sales 2013-2015

	Electric			Gas		
Year	**Energy Savings Proposed (MWh)**	**Total Adjusted Sales (MWh)**	**Savings as % of Retail Sales**	**Energy Savings Proposed (Dth)**	**Total Adjusted Sales (Dth)**	**Savings as % of Retail Sales**
2013	435,845	28,987,234	1.5%	696,415	69,458,419	1.0%
2014	435,713	28,987,234	1.5%	691,908	69,458,419	1.0%
2015	435,415	28,987,234	1.5%	696,474	69,458,419	1.0%

Low-Income Goals

The 2007 Legislature approved an amendment to Minn. Stat. § 216B.241, subd. 7, which required utilities to spend 0.2% of their residential natural gas GOR on low-income gas programs and 0.1% of their residential electric GOR on low-income electric programs, unless otherwise approved by the Commissioner. The following table provides our proposed low-income spending in comparison to the spending requirement.

Low-Income Spending Requirement 2013-2015

	Residential GOR	% of GOR	Low-Income Spend Requirement	2013 Proposed LI Budget	2014 Proposed LI Budget	2015 Proposed LI Budget
Electric	$1,005,138,696	0.1%	$1,005,139	$2,321,035	$2,568,863	$2,520,587
Gas	$302,734,626	0.2%	$605,469	$1,656,980	$1,656,181	$1,636,221

Research & Development Spending Cap

Minn. Stat. § 216B.241, subd. 2(c), limits spending on Research & Development ("R&D") to 10% of the minimum spending requirement. CIP R&D identifies, assesses, and develops new load management and energy efficiency products and services. This work enables Xcel Energy to identify and promote promising new energy saving opportunities for its customers. Market potential studies fall into this category. However, because we do not have any market potential studies planned for 2013-2015, the planned R&D spending is limited to Product Development. The following table provides our proposed R&D spending over the Plan period in comparison to the spending cap.

Research & Development Spending Cap 2013-2015

	% of Min Spend	Min Spend	R&D Cap	2013 Proposed R&D Budget	2014 Proposed R&D Budget	2015 Proposed R&D Budget
Electric	10%	$52,726,173	$5,272,617	$807,000	$807,000	$807,000
Gas	10%	$2,633,778	$263,378	$227,972	$227,972	$227,972

Distributed Energy Resources Spending Cap

Minn. Stat. § 216B.2411, subd. 1 allows a utility to spend up to five percent of its minimum spending requirement on distributed generation projects. The Solar*Rewards program proposed in this filing currently falls under this cap.

Distributed Generation Cap 2013-2015

	% of Min Spend	Min Spend	Distributed Resources Cap	2013 Proposed Distributed Resources Budget	2014 Proposed Distributed Resources Budget	2015 Proposed Distributed Resources Budget
Solar*Rewards	5%	$52,726,173	$2,636,309	$2,500,000	N/A	N/A

Lighting Use and Recycling Programs
Minn. Stat. § 216B.241 requires utilities to invest in projects that encourage the use of energy efficient lighting and reclamation or recycling of spent fluorescent and high intensity discharge lamps. Xcel Energy meets this requirement through its business and residential lighting and lamp recycling programs.

Facilities Energy Efficiency
Minn. Stat. § 216B.241, subd. 1f requires all utilities to include in their conservation plans programs that facilitate professional engineering verification to qualify a building as ENERGY STAR-labeled, Leadership in Energy and Environmental Design ("LEED") certified, or Green Globes-certified. Xcel Energy's Business New Construction and Turn Key Services programs satisfy this requirement.

Other Compliance

Combined Natural Gas and Electric DSM Plan
Minn. R. 7690.0500, subp. 1, governs the submission of investor-owned electric and natural gas utilities' Conservation Improvement Programs. On March 2, 2009, we filed a variance request to submit a combined electric and natural gas plan on June 1, 2009 as well as with each subsequent annual status report. On May 13, 2009, the Director approved our request for all future CIP Plans and Status Reports.

CIP Plan Contents
Minn. R. 7690.0500, subp. 2, governs the contents of each CIP Plan. Each content component is addressed below.

A. A comprehensive description of the proposed program, including a description of each project making up the program;

See description in each project and segment write-up.

B. For each individual project, a completed project information sheet that will be provided by the department. The project information sheet can be used to provide the information required in items E and F;

See enclosed project information sheet.

C. For each project making up the program, a description of the expected effect of each project on peak demand and energy consumption with supporting assumptions, including a list of each conservation technology or process to be promoted and the energy – and demand – savings assumptions associated with each identified technology;

See enclosed cost benefit analyses, BENCOST modeling, and technical assumptions for each project.

D. For each electric utility that must submit an integrated resource plan to the Public Utilities Commission, an explanation of how its overall conservation improvement

program enables the utility to meet the long-term demand-side management goals established in its most recent integrated resource plan;

See enclosed executive summary. We note that the most recent Resource Plan Order in Docket No. E002/RP-07-1572 directs us to strive to achieve the 1.5% savings goal over the long-term planning horizon. This Plan establishes a goal to reach the 1.5% goal in the short-term, which will position us well to strive to sustain these high levels of savings over the longer-term. Our current Resource Plan is being considered in Docket No. E002/RP-10-825.

E. An estimate of the expected cost-effectiveness of each project to the utility, to the project's participants, to the utility's ratepayers, and to society;

See enclosed cost-benefit analyses, BENCOST modeling, and project information sheet for each project.

F. For each project targeted at residential consumers, an estimate of the anticipated percentage of use of each project among:

a. Low-income participants; and

b. Renters;

See enclosed project information sheets.

G. A detailed budget for each project for the next three years;

See enclosed project information sheets.

H. A description of the utility's ratemaking treatment and cost-recovery method;

The ratemaking and cost-recovery procedures for this CIP follow those currently approved by the Public Utilities Commission.

I. An estimate of participation in each project;

See enclosed project information sheets.

J. An explanation of how the proposed projects provide for the involvement of community energy organizations, when appropriate;

See enclosed individual program descriptions

K. An outline of the proposed plan for evaluating the effectiveness of each proposed project;

See enclosed program descriptions as well as the Research, Evaluations, and Pilots Segment for a schedule of planned program evaluations. The Measurement and Verification policy is included within the Planning Segment.

L. For each renewable energy project, an estimate of the net energy and capacity to be produced by each project and the projected reliability of the technology that would be used; and

See Solar*Rewards program.

M. Additional information that the Department determines is necessary as a result of its review or evaluation of previous projects of the particular utility.

None.

➢ BUSINESS SEGMENT

Description
The Business Segment represents all Xcel Energy customers who are not on a residential rate, including small business, large commercial, and large industrial customers. This broad and varied Segment has historically contributed a significant portion of the energy savings to the Company's DSM portfolio and is expected to continue to do so in the future.

Xcel Energy offers studies, assessments, prescriptive, custom and holistic programs to best serve business customers over a broad range of projects. Our program portfolio encourages customers to choose high efficiency options ranging from a simple lighting fixture replacement to a main production line upgrade or inclusion of energy efficiency in the design of a new facility. Study-based programs also offer assistance whether customers need to identify simple energy efficiency opportunities or they are trying to change their corporate culture to an energy efficiency model. Holistic programs foster a deeper level of customer commitment to energy efficiency and engage customers in long-term energy planning intended to change the way customers look at energy and conduct their business. Our holistic Process Efficiency program has increased its contribution to our portfolio since the 2007 launch, and we are expanding our holistic offerings with a new Commercial Efficiency program in this Plan. This individualized approach to identifying customer needs, measuring energy savings, and removing implementation barriers is popular with customers and has proven successful in delivering sustainable energy savings. For customers interested in a less hands-on approach, our Self-Direct program offers a strong alternative that we expect to grow in the 2013-2015 Plan period.

Most of the programs in our business portfolio are available to all of our business customer sectors such as small and large retail, office, hospital, manufacturer, educational and government facilities. A few programs, such as Commercial Efficiency and Process Efficiency, are designed to serve specific market sectors by better targeting efficiency opportunities and customizing delivery options to better engage customers and match their operations and needs.

Programs
This comprehensive program portfolio ensures that Xcel Energy has something to offer almost any business customer in almost any energy efficiency situation. While planning for ongoing customer engagement in energy efficiency, the Company performed an extensive review of national DSM programs and utilized the American Council for an Energy Efficient Economy's Best Practices report to identify program improvements and technology options. In addition, we analyzed the Minnesota Statewide Gas Potential Study results and recommendations and reviewed customer and trade ally feedback to produce a well-rounded mix of programs that serve the multitude of business customers in our service territory. We have added resources and programs to fill gaps to help us achieve the goals listed in this Plan as cost-effectively as possible.

In addition to program enhancements in many of our existing programs, we have expanded our offerings to better serve this market segment. New and enhanced Business Segment program offerings for this Triennium are detailed in the paragraphs below.

Commercial Efficiency

The Commercial Efficiency program builds on the success of our industrial Process Efficiency program and encourages medium to large commercial customers to approach energy efficiency and conservation from a holistic perspective rather than as a series of equipment upgrades. The program strives to engage customers in ongoing energy management and to engrain energy efficiency into their core business values and metrics. This approach focuses up-front resources to identify business practices, technical projects, and behavior changes across the organization, and then delves into investigations that lead to long-term sustainable energy practices that persist through personnel changes or varying business conditions. Back-end rebate bonuses help drive deeper energy savings and encourage efficiency throughout a system. This tiered approach helps customers realize their deep energy-savings potential. We are optimistic about the program's ability to overcome customer barriers to energy efficiency and to lead to additional savings for customers willing to partner extensively with us to achieve mutual energy efficiency goals.

Foodservice Equipment

As part of our attempt to broaden our natural gas efficiency offerings and based on the assessment of the Minnesota Statewide Gas Potential Study, we are adding a Foodservice Equipment prescriptive rebate program to our portfolio. Previously, we offered Custom Efficiency rebates for customers installing energy efficient foodservice equipment. We are confident that the easier processes and standardized rebate levels of this new prescriptive program, along with a targeted marketing effort, will increase installations of energy saving foodservice equipment.

Overall Goals

The Business Segment contributes a significant portion of Xcel Energy's planned conservation and load management achievements in this Plan. Planned achievements of 881 GWh and 1.4 million Dth over the three-year period account for 67% of the Company's total electric energy savings goal and 68% of the total natural gas goal.

Market Analysis

We face significant challenges in our efforts to reach our goals. Consumer spending, service industry, real estate, construction, manufacturing, and energy sectors all continue to report challenging business environments compared to the years prior to 2010. Business access to credit and capital, and concerns about the impact of credit on their business statements remain a barrier for customers wanting to implement energy efficiency projects. Running lean is the new normal for our business customers, which helps engage customers in efficiency planning but also limits capital spending available for efficiency projects. Customers' requirements for capital projects are very aggressive, with many businesses only considering projects with paybacks of two years or less. We continue to see many energy efficiency customer projects postponed or cancelled due to economic factors.

The low price of natural gas makes energy efficiency very challenging for our business gas programs. With prices half of what they were in our previous Plan, the paybacks for energy efficiency projects are significantly longer, which requires us to look differently at capital projects. To counter this, we will rely on our holistic programs and Heating Efficiency program to aggressively assist customers to identify low-cost system improvements and projects that overcome customer financial barriers. We anticipate that these programs will contribute significantly to our gas portfolio and have adjusted to help meet our natural gas targets in this challenging environment.

The strategies presented in this Plan are designed to address these difficulties. Additionally, the Company is evaluating several other opportunities detailed in the Product Development and Research section of this plan.

Marketing/Advertising/Promotion

We rely on trade allies, end-use equipment vendors, energy services companies, and account managers to drive conservation and load management achievements in the Business Segment. Although sales to the largest business customers typically require personal visits, the Company also utilizes newsletters, customer events, direct mail, email communications, and awareness advertising. The challenge of communicating with these customers is that they may not be aware of energy efficiency options and tend to focus on a product's original purchase price, rather than lifetime costs, and are unlikely to replace equipment until it is broken. However, energy supply and climate change issues have increased this awareness of and affinity for energy saving actions. To support its marketing efforts, the Company will employ an integrated approach to communications, where the tactics are designed to work in concert with each other and reinforce key messages over time.

We also market our programs differently to the various business subpopulations, depending on the target audience. We begin by identifying subpopulations with shared characteristics. Once identified, these subpopulations receive messaging adjusted for their unique needs.

Overall Policies

The Company has adopted several general policies that are followed in the Business Segment. Individual programs may follow different policies as noted in the program descriptions. The general policies provide overall management direction; however, they may be relaxed for specific time periods when warranted for promotional events or other purposes.

The segment-level policies include:

- Cost-Effectiveness Tests: All customer projects going through the custom analysis process must pass the Participant and Societal Tests with an absolute ratio of 1.0 or greater.
- Proof of Installation: All programs require documentation of installation, whether it be proof of purchase (e.g., invoices) or a site verification.
- Installation Date: Rebates are provided for equipment installed within 12 months of purchase or project completion unless otherwise noted in the individual program policies.
- Payback Requirements: Projects must have a payback longer than nine months, and cannot exceed the expected lifetime of the equipment.
- Studies: Study funding cannot exceed 75% of the study cost unless otherwise noted in the individual program policies.
- Influenced Savings refers to projects for which Xcel Energy played a significant role in the customer's decision to implement an energy efficiency measure, and for which the customer participated in the normal Custom Efficiency project submission process, yet whose cost-effective analysis or payback period failed. For such projects, Xcel Energy denies the customer any rebate for the measure, but claims Influenced Savings in order to appropriately account in the Company's energy and demand savings for the implementation of the higher energy efficiency technology and to recognize the often significant labor investment and/or study costs involved in the project. Influenced savings guidelines are listed below:
    1. Project Preapproval – Must occur prior to purchase and installation.
    2. Cost-Effectiveness Tests – Projects must pass the Participant and Societal Tests.

3. Payback – Projects with a payback period of less than nine months may be considered only if they meet all the other Influenced Savings guidelines herein.
4. Large Projects – Projects with savings of 2 GWh and greater require separate DER pre-review. All other projects will be reviewed as part of the Status Report.
5. Savings Cap – Influenced Savings claims cannot exceed 4% of the Company's annual CIP achievements.
6. Documentation – Documentation must be provided to show Xcel Energy's involvement was an important factor in implementing the energy saving project.

- Study-Driven Credit: If a customer implements measures identified in an Xcel Energy study or assessment, or identified in a study funded by Xcel Energy, and the measure has a payback period of less than nine months or longer than the expected lifetime of the equipment, the customer will not receive a rebate, but the Company will claim those savings as study-driven credit. We believe that our help identifying and analyzing the energy efficiency measures provides influence on the customer's decision to implement those measures. These savings do not count toward Influenced Savings. All programs that fund studies are eligible to claim study-driven credit.
- Program Incentives: We design our program incentives to limit rebates to 60% of incremental cost. Custom projects limit rebates to 60% of the actual project cost. Prescriptive rebate levels are set based on deemed incremental costs and rebates are capped at 60% of actual total project cost; this practice helps ensure we do not pay more than 60% of the incremental cost for a specific project for which the pricing varies from the deemed cost. Bonuses and special offers may increase the rebate cap as a percent of incremental cost, but we strive to ensure that it never exceeds 100%.

Stakeholder Involvement

In the course of developing this Plan, we interacted with many local organizations to refine existing programs, shape new programs, and discuss partnership opportunities. These local organizations include:

- Building Owners and Managers Association,
- Center for Energy and Environment,
- CenterPoint Energy,
- Enterprise Minnesota,
- Franklin Energy,
- Minnesota Blue Flame Gas Association's Conservation Committee, and
- Minnesota Technical Assistance Program

In addition to local contacts, we also worked with regional and national organizations in developing the Plan, including:

- American Council for an Energy Efficient Economy,
- Chartwell, Inc.,
- CLEAResult Midwest,
- Compressed Air and Gas Institute,
- Consortium for Energy Efficiency,
- Department of Energy/ENERGY STAR,
- E Source,

- Electrical Apparatus Service Association,
- Evergreen Economics,
- Hydraulic Institute,
- Lighting Research Center,
- Michael's Engineering,
- Midwest Energy Efficiency Alliance, and
- Tetra Tech.

Several of these local and national organizations will either be involved in one or more programs through our request for proposal process or will be utilized to provide feedback on our programs to understand areas for future improvement.

➢ Business New Construction

Description
The Business New Construction program influences owners, architects, and engineers to include energy efficient systems and equipment in their designs for new construction and/or major renovation projects. We provide modeling services as well as electricity and natural gas efficiency implementation rebates. The program is primarily marketed by our sales team and consultants to design teams and customers who want to build energy efficiency into their building design.

The program's main offerings include the following:

- Prescriptive rebates for motors, cooling and heating equipment identified in the Energy Efficient Buildings program component. Other equipment is rebated at the custom levels listed below; and
- Custom rebates for energy efficiency strategies incorporated into the building design for new construction, additions, and major renovations through either the Energy Efficient Buildings or the Energy Design Assistance program component.

The main offerings are described below.

Energy Design Assistance (EDA)
The EDA offering provides energy expertise to encourage energy efficient building design and construction practices. EDA offers design assistance in support of an integrated design process by providing free computer modeling of the planned design, funding to offset the cost of design time associated with the increased energy analysis, financial incentives to improve the cost-effectiveness of a package of energy efficiency measures, and field verification to ensure that the strategies are installed per the design intent. EDA is a free service for our business customers.

EDA offers three tracks for customer involvement: Basic, Quick, and Enhanced. The Basic track is for customers interested in a collaborative design process to identify energy savings using new technologies. Projects must represent buildings with 50,000 square feet or greater that are in the schematic design or early design development phase. The design team must strive to achieve a minimum of 5% energy savings over baseline.

The Quick track is for customers who may not have time for a full version of our Basic track. These include projects that may be smaller in scope, those that are using a design-build model, or projects that need results faster than may be possible through traditional modeling approaches. These projects must represent buildings with a minimum of 20,000 square feet that are in the design development phase. The design team must strive to achieve a minimum of 5% energy savings over baseline.

The Enhanced track is for customers interested in obtaining sustainable building certifications such as the United States Green Building Council's (USGBC's) Leadership in Energy and Environmental Design (LEED). The enhanced track allows for further analysis in the early stages of design for HVAC, daylighting, and massing analysis. Projects in the Enhanced Track must represent buildings with a minimum of 50,000 square feet that are in the pre-design or early schematic phase. Design teams must strive to achieve a minimum of 30% energy savings over baseline. Finally, the project

must be registered with the USGBC LEED certification or equivalent certification (i.e. Minnesota B3 or Green Globes).

We will administer the Business New Construction program with help from outside energy design consultants who will facilitate meetings with the design teams and building owners, and complete energy modeling activities. The current EDA baseline is based on the updated Minnesota State Energy Code referencing the ASHRAE 90.1-2004 Energy Standard.

Energy Efficient Buildings (EEB)

The EEB offering is intended to provide a simplified approach to optimizing energy efficiency options in new construction, additions, and major renovations. This component addresses the portion of the new construction market not suited for the full-blown energy modeling of the EDA offering. It offers final design review, equipment recommendations, and onsite verification.

Focusing on the needs of smaller building owners, the EEB offering provides a comprehensive list of typical energy efficiency measures that can be incorporated into the new building design, as well as the rebate amounts for each measure. Incentives are provided for heating, cooling, lighting, building envelope, motors, and custom opportunities. We will administer the product using both internal and external resources to review the calculations, recommend equipment, and verify installation. EEB is a free service to our business customers. Any size building may participate, but this component is best suited for buildings that are greater than 5,000 square feet. Projects should enter the program prior to beginning construction and before awarding bids for equipment. Customers are encouraged to start the process prior to completion of construction documents.

Unlike many other programs, the Business New Construction program will verify incremental project costs at a program level rather than at the project level. Because of the large scale of most projects, the final costs for all energy savings measured identified within the building are difficult to identify individually. Instead, we use the best estimate of costs from the design team and use it to project the energy savings costs using the DOE2 energy model. The payback criterion is estimated using the same cost definitions as for incremental cost.

Program Changes

The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Roll up the Energy Design Assistance and Energy Efficient Building programs into one program offering.	Both programs benefit customers who are building new buildings and additions and/or who are completing major renovations	New to this Plan	New

Budget and Goal Considerations

The program's participation, energy savings goals, and budgets were determined by reviewing historical achievement and the state of the construction market industry. The construction market has seen some slow down in the recent past, but we expect that to stabilize. The main budget drivers include the following:

- Customer Service - Most of the budget is associated with the cost of modeling specific Energy Design Assistance projects, as well as time spent conducting customer meetings.
- Advertising and Promotion – This item includes funds to promote the program through trade shows, small group opportunities, and customer/vendor mailings.
- Participant Incentives – The rebate budget was estimated based on historical average rebates per participant. The Energy Design Assistance option also offers design team incentives up to $12,000 to reimburse them for the extra expense associated with participation.
- Measurement and Verification – All business new construction projects are verified using site visits.

Involvement of Community Energy Organizations

The New Construction program engages customers, trade allies, and other stakeholders at the individual project level.

➢ Commercial Efficiency

Description
Commercial Efficiency is a new program in this filing that will offer study funding, prescriptive rebates, custom rebates, and energy optimization services for mid-sized to large commercial electricity and/or natural gas customers who engage in a holistic approach to sustainable energy management. This program was modeled after our successful Process Efficiency program with adjustments made to reflect the unique nature of the commercial market. The program will target commercial customers that have at least 1 GWh or 4,000 Dth of conservation potential. Typically these customers will have a peak electricity demand of at least 500 kW or annual gas consumption of at least 50,000 Dth.

The program will influence customers' energy choices differently than our traditional project-based programs. Through the Commercial Efficiency program, we will help customers initiate long-term energy management strategies and identify energy savings opportunities, while encouraging them to integrate energy efficiency into their standard business practices. These efforts will far exceed the scope of our other study programs and may result in projects that span multiple years.

The program offerings will be delivered in three phases. Each of these phases will be defined in a Memorandum of Understanding that is customized to reflect the needs of the specific customer.

Stage 1: Identification
Xcel Energy will perform a high level analysis to identify opportunities for energy savings in the customer's business practices, facilities, and operations. This will be completed at no cost to the customer. Phase 1 will be delivered using internal resources or a third-party provider selected through an RFP process.

Stage 2: Scoping
We will provide support and resources to further define, measure, and provide recommendations and assistance for energy savings opportunities while working with the customer to optimize the business practices identified in Phase 1. We will pay the majority of these costs; the customer will contribute up to 25%, with a lifetime cap of $7,500. The purpose of the customer contribution is to ensure management-level engagement and the customer's commitment to a holistic approach. Phase 2 is delivered using internal resources or third-party technical experts selected through an RFP process, or through technology-specific experts of the customer's choosing.

Stage 3: Implementation
We will work with the customer to put together a schedule of efficiency and conservation goals that translates their energy management plans into actual conservation impacts. This phase will include a customized rebate and bonus schedule that rewards deep energy savings and/or a system-wide approach.

Upon project completion, customers will earn rebates for improvements that qualify for any of our prescriptive or custom programs. The savings will be included in the Commercial Efficiency program achievements, but will mirror the rules and rebate levels of our other programs. If the improvements do not qualify for rebates due to program rules, we will claim the project savings as

standard program savings due to the extensive level of influence we will have invested with these customers.

We will primarily rely on our account management team to identify qualifying commercial customers who are most likely to benefit from this holistic approach versus an end-use project approach to conservation. In the future, trade partners may also be used to help promote and deliver the program to customers.

Due to the similar holistic nature of the Process Efficiency and Commercial Efficiency programs, we plan to use similar program-specific policies for both programs. Unless otherwise noted, these policies previously have been filed and approved by the DER for the Process Efficiency program:

- Bundling: When customers identify multiple measures for installation, a bundle can be evaluated to see if it qualifies for a rebate versus each individual component. This will allow measures with too short of a payback for a rebate to be leveraged to drive projects with too long a payback for the customer to install so that both will be implemented.
- Preapproval dates: Custom-type measures in Commercial Efficiency will require a custom analysis, but the actual date the project is submitted and the analysis is completed will not disqualify a project if it was initiated after the customer entered the program. This is due to the extensive resources used by the program to identify and scope ways to drive energy efficiency into how a customer does business. The goals and awareness created during Phases 1 and 2 can result in projects that drive energy savings in business areas that act without immediately notifying the personnel in contact with Xcel Energy.
- Rebate bonuses: We will use the rebate structure of the other end-use programs and then incorporate rebate bonuses for system optimization and/or exceeding annual achievement targets.
- Facility-level metering: This concept is being developed and may be tested through this program. We will work in advance with the DER to define the methodology of how we propose to take credit under this metering scenario. Facility-level metering would provide us the ability to accurately account for all savings generated by installation of a measure and incorporate the savings that may be driven plant-wide that we have been unable to accurately capture historically.
- Behavioral Savings: We will use the DER's Average Savings Method to count behavior savings created through single entity-based behavioral change efforts. This also could apply to technical projects that require specific behaviors to maintain persistent energy savings throughout their lifetime.

Program Changes

This program was offered as a pilot through Product Development in 2011 and 2012 and will be converted to a program for the 2013-2015 Triennial Plan.

Budget and Goal Considerations

We developed the program's participation, energy savings goals, and budgets using the results of the pilot program. In addition, we calculated the likely energy savings based on the custom and prescriptive technical assumptions used for the other business programs, implemented project data, and rebate levels. We also compared our estimated spending to that of the Process Efficiency program as a cross check of reasonableness, knowing that holistic programs tend to spend money up front for extensive future energy savings achievement.

The main budget drivers include the following:

- Administration – These costs are driven by marketing, sales, engineering, and external labor resources to support the Company's heavy engagement with the customer, as well as to cover the costs of those projects requiring metered verification.
- Customer Service – The Company will utilize third-party resources to deliver the program's identification and scoping phases.
- Participant Incentives – The program has a robust rebate budget due to the size of projects likely to be initiated through the Commercial Efficiency program.

Involvement of Community Energy Organizations

In the future, the Commercial Efficiency program may evolve to work with Community Energy Organizations to promote the program and deliver its offerings. In particular, the Trillion BTU financing delivered by the St. Paul Port Authority, the Center for Energy and the Environment, and Xcel Energy could collaborate to help customers fund large capital projects when financing is a barrier to implementation. We will consider leveraging other resources as they become available through community and other organizations, and consider integrating their offerings into our program and customers' energy management plans.

➢ Computer Efficiency

Description
The Computer Efficiency program offers prescriptive rebates to computer manufacturers that sell and ship personal computers (PCs) with efficient power supplies to customers in our service area and to customers who install virtual desktop infrastructure or remote power management.

The program's main offerings include the following:

- Upstream manufacturer incentives for personal computers sold with high efficiency power supplies installed; and
- Prescriptive rebates for virtual desktop installations, where customers install "thin-client" or "zero-client" devices in lieu of a desktop PC.

The main offerings are described in detail below.

Upstream Manufacturer Incentives
The main component of the Computer Efficiency program is an upstream incentive paid to computer manufacturers for selling personal computers with efficient power supplies to businesses in our service territory. This component is administered through a third-party, Ecova Plug Load Solutions (PLS), that promotes their 80 Plus campaign on behalf of utilities across North America. When units are shipped to qualified customers in our service territory (as confirmed by the manufacturer), PLS pays the manufacturer incentives and provides a report and invoice to Xcel Energy for reimbursement.

Prescriptive Virtual Desktop Rebates
This customer-facing component provides rebates to business customers who implement a Virtual Desktop Infrastructure (VDI) strategy. This strategy involves installing a VDI device for either thin clients or zero clients instead of the traditional desktop PC. The VDI device has a lower operating wattage and uses less energy than traditional desktop computers.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Change in assumed number of units purchased per participant for the high efficiency PCs product.	When PCs are purchased, they are often bought in multiples. Historically, a ratio of 1-to-1 was used. A new ratio of 10 units per participant was determined by using the total 2010 units divided by the total number of invoices and then rounding.	New to this Plan	New

Budget and Goal Considerations
The program's participation, energy savings goals, and budget were determined by looking at the Company's overall electric goal and past participation levels.

The main budget drivers include the following:

- Customer Incentives – This budget reflects only the downstream rebates. This is based on 2010-2011 participation across the offerings and includes predicted growth in products.
- Administration – The vast majority of the administration budget is allocated to the external administration of the upstream product. The product is currently being administered by PLS. The internal labor budget is based on past program performance with an increase built in for expanded program offerings, engineering, and account management involvement.
- Advertising and Promotion – Budgets for direct promotion and sales support materials are included in the total budget. Promotions are targeted to PC manufacturers, customers and trade partners and typically focus around activities such as new or revised product offerings, case studies featuring successful projects, educational opportunities, and campaigns to increase specific product awareness.
- Other – A large portion of the budget is allocated for upstream incentives to computer manufacturers. This budget reflects the new incentive levels and incentive tiers implemented in 2012 and the projected manufacturer participation in each tier, which is based on 2010-2011 participation across the program.

Involvement of Community Energy Organizations
None.

➢ Cooling Efficiency

Description
The Cooling Efficiency program offers prescriptive and custom electric rebates to business customers who install efficient cooling systems used for space and process cooling. The program also offers rebates for cooling-focused studies. The program is primarily marketed through our account managers for our large customers. We also work closely with our trade partners, specifically manufacturers' representatives, to market the program.

The program's main offerings include:

- Prescriptive rebates for:
  - Cooling equipment that substantially exceeds the minimum efficiency required by energy codes; and
  - VFD retrofits on chillers.
- Custom rebates for:
  - Cooling recovery and other non-prescriptive cooling projects.
- Study funding of up to 75% of the study cost not to exceed $25,000 to identify and quantify energy saving cooling projects.

The main offerings are described below.

Prescriptive Cooling Efficiency Rebates
The program offers rebates for cooling equipment that exceeds the minimum efficiency of ASHRAE 90.1 -2004 standards. Eligible prescriptive equipment includes packaged terminal air conditioners, rooftop unit economizers, water source heat pumps, direct expansion units, plate and frame heat exchangers, variable frequency drive retrofits on chillers, and new chillers. The prescriptive program does not require preapproval.

Custom Cooling Efficiency Rebates
Custom rebates are available for non-prescriptive energy efficient cooling equipment. To be eligible for a custom rebate, preapproval is required before moving forward with the project. The energy savings are then analyzed and it is only upon project completion that we issue a rebate.

Cooling Efficiency Study Funding
The program offers funding to identify energy efficiency opportunities. Customers must receive preapproval before moving forward with the study. The projected energy savings are then analyzed and it is only upon completion of the study that we issue study funding. The study rebates are awarded based on projected savings of up to 75% of the study costs with a maximum of $25,000.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Addition of electronically commutated motors measure	Capitalize on marketing efficiencies with similar segment	New to this Plan	New
Addition of anti-sweat heater controls measure	Added to capitalize on additional savings and participation	Informal Modification	May 2012
Addition of zero loss doors measure	Added to capitalize on additional savings and participation	Informal Modification	May 2012
No longer offering rebates for hotel room controller measure	Product fails cost-effectiveness tests with updated technical assumptions	New to this Plan	New

Budget and Goal Considerations
The program's participation, energy savings goals, and budget were determined by looking at the Company's overall electric goal, past program participation levels, and the typical ramp-up period for program changes and new offerings. We reviewed the equipment and project characteristics of historical projects to develop a projected average savings per participant for various program offerings. Reported energy savings for the program will be determined by using project-specific inputs of actual use and efficiency.

The main budget drivers include the following:

- Participant Incentives – The budget reflects the rebate levels and projected customer participation in each offering, which was based on 2010 and 2011 participation across the offerings.
- Trade Incentives – The budget includes incentives for the trades. Although trade incentives may change during the Plan period, we currently intend to offer incentives of up to 10% of the customer's rebate on qualifying chiller rebates and 5% of the customer's rebate on direct expansion units, which increases to 10% if combined with a qualifying economizer.
- Administration – These budgets are based on past program performance with a slight increase built in for expanded program offerings, engineering, promotion, and participation.
- Advertising and Promotion – The promotional budget includes spending for several customer and trade communications per year, which are necessary to drive participation and awareness.
- Customer Service – The Company occasionally utilizes analytical and consulting services for custom Cooling Efficiency projects.

Involvement of Community Energy Organizations

Because cooling systems can be very complex, trade support is crucial to achieving our goals. We have engaged trade allies in program design and improvement through meetings and the creation of the Cooling Council. This group started in early 2009 and continues to meet roughly twice a year to discuss new technologies, program issues, and general market topics. The Cooling Council members are representatives from all levels of the cooling equipment distribution chain. Members include manufacturer's representatives, mechanical engineering firms, and equipment contractors. Also, we will work with the trade on specific projects to evaluate energy savings strategies through our Trade Relations Manager.

➢ Custom Efficiency

Description
The Custom Efficiency program offers custom electric and gas rebates to business customers who install qualifying energy efficiency measures that are not covered by our prescriptive programs. The Custom Efficiency program is marketed to all business customers regardless of size. This program also funds studies to help determine project viability and energy savings.

The program's main offerings include the following:

- Custom equipment rebates for:
    - Energy saving projects, including installing new equipment, replacing existing equipment, or retrofitting equipment or processes, that lower a customer's electric or natural gas use. Projects must pass the required Participant and Societal Tests on a per project basis.
    - Conservation opportunities not covered by other programs, including but not limited to the following end-uses:
        - Boilers (process boilers & boilers >10 million BTUH);
        - Compressed air and other fluid systems;
        - Cooling systems;
        - Lighting systems;
        - Motor systems; and
        - Custom – all other (heat recovery, humidification, refrigeration systems, etc.).
- Study funding of up to 75% of study cost, not to exceed $25,000.

The main offerings are described below.

Equipment Rebates
To be eligible for rebates, the customer application must be submitted and preapproved prior to ordering equipment. We will notify the customer if the project qualifies for a rebate and provide the estimated rebate amount. To qualify for a rebate, projects must pass the Participant and Societal Tests and have a payback of at least nine months. An Xcel Energy engineer will evaluate each application to determine the demand and energy savings of the proposed system relative to industry standards and the interactive energy effects of the system components.

Study Funding
To be eligible for study funding, the customer must submit their application and have it preapproved prior to ordering equipment. We will notify the customer if the project qualifies for study funding and detail the amount of funding to be provided.

Program Changes
None.

Budget and Goal Considerations
The program's participation, energy savings goals, and budgets were determined by looking at the overall electric and gas goals, analyzing historical data, reviewing projects in the pipeline, and understanding the forecasted economic conditions. Participation levels are based on expected

average project size and mix of technologies anticipated. We also included other variables such as promotions needed to reach goals, rebate levels, and staffing.

The main budget drivers include the following:

- Participant Incentives – The rebate budget reflects estimated technologies and participants based on historical 2010 and 2011 data.
- Administration – These budgets are based on past program performance with a slight increase per year.
- Advertising and Promotion – Promotional activities are planned to increase customer awareness of our program and encourage participation.

Involvement of Community Energy Organizations

Projects reviewed under Custom Efficiency range from common technologies to complex equipment unique to a customer's operations. Therefore, trade support is important to promote this program and to gather details for individual projects. We gather input from trade allies and community organizations through meetings and also from discussions of individual projects.

➢ Data Center Efficiency

Description
The Data Center Efficiency program offers prescriptive and custom rebates to business customers who install electricity-saving measures in their data centers. The program also offers rebates for data center energy studies. The program is primarily marketed through our account managers to our large customers, but any size data center can participate. We also work closely with our trade partners, specifically engineering firms, technology services firms, mechanical contractors, and manufacturers' representatives to market the program.

The program's main offerings include the following:

- Prescriptive rebates for efficiency improvements falling under any of the end-use prescriptive programs we offer.
- Custom rebates are awarded for unique or uncommon efficiency measures, such as:
    - Air-flow management,
    - Server and IT systems,
    - Cooling systems,
    - Humidification systems,
    - Transformers, or
    - Uninterruptible Power Supplies (UPS).
- Study funding of up to 75% of study cost not to exceed $25,000 to identify and/or quantify energy saving projects. Exceptions to the cap may apply for very large or complex sites.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Removing Fast Track Study path	Path has not been used and is no longer needed	New to this Plan	New

Budget and Goal Considerations
The program's participation, energy savings goals, and budgets were determined by looking at the Company's overall electric goal, past participation levels, current pipeline, and expected project lead time. We also reviewed the equipment and project characteristics of recent study results and project analyses to develop a projected average savings per participant for various program offerings.

The main budget drivers include the following:

- Participant Incentives – The rebate budget reflects the current rebate levels and projected customer participation in each offering, which was based on 2011 participation combined with future pipeline data. The Company has included a larger rebate budget than in the past to accommodate the larger expected participation in coming years.
- Administration – These budgets are based on past program performance with a slight increase built in for expanded program offerings, engineering, promotion, and participation.
- Advertising and Promotion – Promotion and advertising budgets are based on historical spend.

Involvement of Community Energy Organizations

The Data Center Efficiency program works with multiple community energy organizations, ranging from trade partners and installers to local industry organizations. Xcel Energy hosts training and information sessions for trade partners, and sponsors and presents at local industry chapter organization meetings and events.

➢ Efficiency Controls

Description
The Efficiency Controls program offers custom electric and gas rebates to customers who install automated energy control systems resulting in energy savings. Such systems are centralized networks programmed to monitor and control lighting and mechanical systems within a building, and allow customers to reduce energy costs by adjusting usage of equipment. The program is marketed to all business customers regardless of size.

The program offers custom rebates for:

- Installation of automated control systems;
- Addition of control points to an existing system; and
- Microprocessor-based control panels.

To be eligible for rebates, customers must submit their applications and have them preapproved prior to purchase or ordering equipment. Xcel Energy notifies the customer of rebate qualification along with the rebate amount. An Xcel Energy engineer will evaluate each application to determine the demand and energy savings of the proposed new system operation relative to industry standards and the interactive energy effects of the system components.

The high initial cost of installing an automated control system is a traditional barrier to participation in this program. To overcome such barriers, we continue to run promotions to raise awareness of the technology and the program. These promotions are targeted at our trade allies.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Change equipment lifetime from 10 to 15 years.	Better alignment with actual market conditions	New to this Plan	New
Discontinue Replacement System "discounted lifetime" originally approved by the DER in 2008	Applied to Replacement Systems older than 10 years. No longer applies; with change to 15 year lifetime, all replacement systems older than 15 years will be considered new systems	New to this Plan	New

Budget and Goal Considerations
The program's participation, energy savings goals, and budgets were determined by analyzing the overall electric and gas goals, historical program performance, and economic forecasts. The main budget drivers include the following:

- Participant Incentives – The rebate budgets were estimated based on historical program performance from 2011.

- Administration – These budgets were based on historical performance and include a slight increase each year.
- Advertising and Promotion – This category is intended to cover the planned direct promotions used to raise awareness of the technology and program, as well as to encourage participation.

Involvement of Community Energy Organizations
The Efficiency Controls program employs the services of an energy engineering firm to conduct an analysis of each project for cost-effectiveness.

➢ Foodservice Equipment

Description
The Foodservice Equipment program offers prescriptive gas and electric rebates to business customers who purchase and install qualifying energy efficient foodservice equipment. The objective of the program is to encourage customers to purchase higher efficiency food service equipment.

The program's main offerings include prescriptive rebates for the following:

- Gas Equipment
  - Broilers (upright, char, salamander),
  - Demand controlled ventilation,
  - Dishwashers (gas water heating),
  - Fryers,
  - Ovens (combination, convection, conveyor, rotisserie, rotating rack), and
  - Pasta cookers.
- Electric Equipment
  - Demand controlled ventilation,
  - Dishwashers (electric water heating), and
  - Hot food holding cabinets.

Program Changes
None.

Budget and Goal Considerations
The gas savings levels were established using DER's deemed savings. The electric savings were developed using technical assumptions provided by ENERGY STAR and Consortium for Energy Efficiency. We used CenterPoint Energy's 2010 participation levels to estimate the number of participants expected to purchase each gas technology and Focus on Energy's 2010 participation levels to estimate participation in the electric technologies.

The main budget drivers include the following:

- Participant Incentives – The rebate budget reflects the current rebate levels and projected customer participation in each offering.
- Administration – Since this is a fairly new program, labor budgets are based on anticipated performance rather than historical trends.
- Advertising and Promotion – This budget will provide the funds to promote the program via customer and trade education and awareness through events, direct communication, and other awareness-building tactics.

Involvement of Community Energy Organizations
We will work with community organizations, distributors and manufacturers of foodservice equipment to help educate customers of this program offering.

➢ Fluid Systems Optimization

Description
The Fluid Systems Optimization program, historically known as the Compressed Air program, offers study funding to perform system diagnostics, as well as prescriptive and custom rebates for the purchase of energy saving equipment. The major systems supported by the program are compressed air, pumping, fans, blowers, vacuums, and hydraulics. System diagnostic studies are funded as a means to identify and correct inefficiencies within customers' air and liquid systems. Studies often identify additional measures to improve system efficiency. The program is primarily marketed to mid- to large-sized industrial customers.

The program's main offerings include the following:

- Prescriptive Rebates for:
  - Variable speed drive compressors,
  - No loss air drains,
  - Cycling refrigerated dryers,
  - Dew point demand controls, and
  - Mist eliminators.
- Custom and Recommissioning rebates including, but not limited to:
  - Calibration/tune-up of system set points,
  - Adjustment of valves and dampers,
  - Reducing system demand,
  - Air to electric conversions,
  - Capital equipment replacements and upgrades, and
  - System redesigns.
- Compressed air supply-side and demand-side studies.
- System Studies for:
  - Pumping,
  - Fan systems,
  - Blower systems,
  - Vacuum systems, and
  - Hydraulic systems.

The main offerings are described below:

<u>Prescriptive Rebates</u>
The Fluid Systems Optimization program offers rebates for qualifying prescriptive equipment.

<u>Custom and Recommissioning Rebates</u>
The program will pay custom rebates for qualifying energy saving measures that are not included under the prescriptive rebate category. Such projects are evaluated under the Custom Efficiency analysis and must follow the rules of the Custom Efficiency program. The Company will also rebate qualifying system tune-ups, waste reduction efforts, and non-capital equipment changes that are identified in a study and do not fit into the prescriptive rebate category. Recommissioning measures will follow the rules and policies of the Recommissioning program.

Compressed Air Supply-Side Study
A customer's preapproved Compressed Air Supply-Side Study cost is eligible for reimbursement after 75% of the leaks identified have been repaired and the study has been reviewed by an Xcel Energy engineer or an authorized consultant. The studies are based on the customer's existing system horsepower and identify a customer's supply baseline and system improvements.

Compressed Air Demand-Side Study
A customer's preapproved Compressed Air Demand-Side Study cost is eligible for reimbursement after the study has been reviewed by an Xcel Energy engineer or an authorized consultant. These studies focus on examining how a customer is using compressed air. The studies offer recommendations for using compressed air more efficiently and offer alternatives to inappropriate or wasteful uses of compressed air.

System Studies
The Company will pay study funding of up to 75% of the study cost not to exceed $25,000. An implementation incentive is offered for all measures, regardless of the payback, and the maximum incentive is the customer's out of pocket cost for their study (i.e. study cost minus study rebate).

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Revised Compressed Air Supply-Side Study rebate levels	To better align the study rebates to actual savings identified and claimed from a compressed air study	Informal Modification	Nov 2011
Added cycling refrigerated dryers, dew point demand controls & mist eliminators as prescriptive products	These products help round out the components of the supply-side of a compressed air system	Informal Modification	May 2012
Split Compressed Air studies into two distinct studies: one for the supply-side and one for the demand-side	This will better align the program with different types of study providers. It will also remove the conflict of interest to have an equipment provider also making recommendations to remove compressed air uses.	New to this Plan	New
Added six new industrial system studies: Pumping, Fans, Blowers, Vacuums, Compressed Air Demand-Side and Hydraulics	This will help customers look at all of their industrial fluid systems, not just the compressed air system.	New to this Plan	New

Budget and Goal Considerations
The program's participation, energy savings goals, and budgets were determined by looking at the Company's overall electric goal and past participation levels.

The main budget drivers include the following.

- Participant Incentives – This budget represents the rebates we will pay for products and studies. This is based on 2010-2011 participation across the offering and includes predicted growth in the legacy products and new opportunities from the new study offerings. This budget has been increased to support the six new industrial systems to be studied.
- Administration – These budgets are based on past program performance with an increase built in for increased participation and technical engineer support.
- Advertising and Promotion – Budgets for direct promotion and sales support materials are included in the total budget. Promotions are targeted to manufacturers' representatives, customers, and other trade partners, and typically focus on activities such as new or revised product offerings, case studies featuring successful projects, educational opportunities, and campaigns to increase specific product awareness.

Involvement of Community Energy Organizations
The Fluid Systems Optimization program partners with the DOE to provide training on the Compressed Air Challenge program and Fan Systems. We also work with the Hydraulic Institute promoting pump system optimization and creating pumping standards and best practices. We have partnered with the Consortium for Energy Efficiency to establish best practices for industrial systems including blower systems and pumping.

➢ Heating Efficiency

Description
The Heating Efficiency program offers prescriptive and custom natural gas rebates to business customers who install energy efficient boilers, furnaces, water heaters, and other system improvements. The program also offers funding to conduct heating engineering assistance studies. The program is primarily marketed through our account managers for our large customers. We also work closely with our trade partners, specifically manufacturers' representatives, to market the program.

The program's main offerings include the following:

- Prescriptive rebates for:
  - New boilers, furnaces, and water heaters that substantially exceed the minimum efficiency required by energy codes;
  - Optional auxiliary boiler equipment that further improves a new or existing boiler's efficiency; and
  - Distribution-system improvements, including steam trap repair and replacement and pipe insulation.
- Custom rebates for:
  - Heat recovery projects and other energy saving projects that lower a customer's natural gas use and pass the required Societal and Participant Tests on a per project basis
- Study funding of up to 100% of the study cost, not to exceed $25,000, to identify and quantify heating-related energy saving projects.
  - Steam Trap Audit studies will be funded at up to 100% of cost, which is $15 per trap; and
  - All other studies will be funded at up to 75% of study cost, not to exceed $25,000.

The main offerings are described below.

Prescriptive Rebates
The program offers prescriptive rebates for boilers, furnaces, and water heaters that substantially exceed the minimum efficiency required by energy codes. Prescriptive rebates are also available for auxiliary boiler equipment to improve a boiler's efficiency or distribution-system improvements to reduce heat losses. New packaged boiler systems do not qualify for auxiliary equipment rebates unless the customer can show that the same boiler is available and qualifies for the base boiler rebate without the auxiliary equipment.

Custom Rebates
The program offers custom rebates for efficient equipment that is non-prescriptive. These projects require preapproval and are funded based on anticipated energy savings. The Custom rebate process is more complex than the prescriptive rebate process, as each project is analyzed on an individual basis rather than based on deemed savings.

Study Funding
The program offers two types of study funding for customers interested in identifying and analyzing potential heating-related energy efficiency projects: prescriptive steam trap audits and custom

studies. Prescriptive steam trap audits are rebated at $15 per trap and may receive funding up to 100% of the audit cost. These audits do not require preapproval; however, all faulty traps identified in the study must be replaced. Custom studies are funded based on anticipated savings up to 75% of the study cost, not to exceed $25,000. These studies require preapproval and each project is analyzed individually.

Program Changes

The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Combined Furnace Efficiency and Heating Efficiency programs.	Capitalize on program efficiencies.	New to this Plan	New
Added 96% efficient furnaces to the program.	Drive additional participation and savings.	New to this Plan	New
Added early replacement boilers to the program.	Drive additional participation and savings.	New to this Plan	New
Changed assumed efficiency for condensing space heating and water heating boilers to 94% from 96%.	This was a recommendation from the 2011 program evaluation.	New to this Plan	New
Made outdoor air temperature resets ineligible for domestic hot water only boilers.	This was a recommendation from the 2011 program evaluation.	New to this Plan	New
Changed assumed hours from 6,000 to 8,760 for steam traps in systems that include domestic water heating.	Change in hours more accurately reflects actual hours than previous assumptions.	New to this Plan	New
Changed lifetime of modulating burner controls and stack dampers from 20 to 12 years.	This was a recommendation from a 2011 program evaluation.	New to this Plan	New
Increased the lifetime of pipe insulation from 7 to 13 years.	This was recommendation from a 2011 program evaluation.	New to this Plan	New

Budget and Goal Considerations

The program's participation, energy savings goals, and budgets were determined by looking at the Company's overall gas goal, past participation levels, the typical ramp-up period for program changes, and new offerings. We reviewed the equipment chosen and general characteristics of historical projects to develop a projected average savings per participant for various program offerings.

The main budget drivers include the following:

- Participant Incentives – The rebate budget reflects the new measure levels and projected customer participation in each offering, which was based on 2010 and 2011 participation across the offerings.

- Administration – These budgets are based on past program performance with a slight increase built in for expanded program offerings, engineering, and participation.
- Advertising and Promotions – Promotions may include direct mail to customers and trade, training for the tune-up plus program, email marketing and the Energy Solutions newsletter.
- Customer Service – This budget will be applied to consulting and analytical services for boiler projects that are analyzed through the Custom Efficiency program.

Involvement of Community Energy Organizations

The Commercial Heating program works with multiple community energy organizations from trade vendors and installers, to the Minnesota Blue Flame Association. We meet with the trade annually to assess engagement, program strengths and weaknesses, as well as to get feedback on the market. The Minnesota Blue Flame Association is used to drive awareness of natural gas conservation topics and increase educational resources for energy savings options.

➢ Lighting Efficiency

Description
The Lighting Efficiency program offers prescriptive and custom rebates to Xcel Energy electric business customers who install qualifying energy efficient lighting equipment in existing or new buildings. The program also offers rebates for Lighting Redesign studies to customers needing assistance to optimize the lighting systems within their facilities. The program is primarily marketed through our account managers for our large customers. We also work closely with our trade partners, manufacturers' representatives, distributors, and contractors to market the program.

The program's main offerings include the following:

- Prescriptive rebates for products from a pre-defined list of lighting measures that save energy. Typical options include:
    - Replacement of high intensity discharge (HID) fixtures with new fluorescent fixtures;
    - Light emitting diode (LED) and compact fluorescent lamps and fixtures that replace inefficient systems, including incandescent and HID.
    - Niche LED measures, including refrigerated case lighting, as well as exterior wall pack, canopy and soffit lighting.
- Custom rebates for energy saving lighting projects that do not fall within the requirements of the prescriptive rebates.
- Study funding of up to 75% of study cost, not to exceed $25,000, is available for customers who have facilities that are under or mis-lit. Studies will identify and quantify lighting solutions that include energy saving opportunities.

The main offerings are described below.

Prescriptive Lighting Rebates
The program offers rebates for qualifying lighting equipment that is more efficient than existing equipment in retrofit situations or more efficient than standard equipment in new construction applications. Lighting measures most applicable to a prescriptive rebate format are ones that are commonly installed in the marketplace and have an easily identifiable means to determine energy savings.

Custom Lighting Rebates
Energy saving lighting measures that do not fit into a prescriptive rebate category can be evaluated through the Custom Efficiency analysis, provided the customer obtains preapproval before proceeding with the project. While this option provides rebates for projects that may not otherwise be rebated, there are a number of barriers to participation, which limit the number of projects received. These barriers include purchasing equipment before obtaining preapproval, as well as not having the capability or time to gather and provide all information needed to analyze the energy savings potential of the project.

Lighting Redesign Studies
Funding for lighting redesign studies is available to customers who have facilities where the lighting is not meeting the needs of the employees. This may include situations where the lighting system was installed prior to the prevalence of computers, when more lighting was needed to work on tasks,

but is now causing eye strain or glare on computer screens. It may also be appropriate when the use of a facility changes and the current lighting system is no longer sufficient for the application.

Studies must be performed by an individual who holds one of the following credentials: Lighting Certified professional, Certified Lighting Efficiency Professional, or someone who is a member of the International Association of Lighting Designers. Customers may also elect to work with an individual who does not hold one of these designations; in that situation, the individual must provide sufficient documentation to demonstrate his or her lighting design qualifications to Xcel Energy. Implementation rebates are available to customers who proceed with recommendations from the study and install energy efficient lighting equipment.

Program Changes

The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Added a prescriptive rebate for stairwell fixtures	This is a unique fixture that does not currently fit well within any of our existing rebate measures.	Informal Modification	May 2012
Adjusted occupancy sensor rebate levels and established minimum levels of connected load	Changes in the market have led to a reduced amount of controlled load per fixture. This rebate change will better align the rebate levels with the energy savings.	Informal Modification	May 2012
Added a prescriptive rebate for LED screw-in fixtures	This is a unique product that does not currently fit well within any of our existing rebate measures.	Informal Modification	May 2012
Updated rebate levels for LED interior lamps and fixtures and exterior canopy and soffit fixtures	The costs of LED products are dropping significantly; this change is to better align the rebate with the product cost.	Informal Modification	May 2012
Discontinued T12 to T8 or T5 rebates	T12 equipment will no longer be manufactured after July 2012, so we feel it is appropriate to remove this category of rebates as of 2013.	New to this Plan	New

Budget and Goal Considerations

The program's participation, energy savings goals, and budgets were determined by looking at the Company's overall electric goal, past participation levels, as well as the large number of LED products that are expected to become commercially available during the time period of this Plan. The 2013 budget also includes funds to pay rebates for T12 to T8 or T5 lighting projects that were completed in 2012 but had not yet been submitted for rebate. While projects must be completed and invoiced in 2012 to qualify for these rebates, we will accept applications for these projects through April 2013 in order to give customers sufficient time to assemble documentation and submit the rebate applications.

We reviewed the equipment and project characteristics of historical projects to develop projected average cents per kWh rebates for each measure. Anticipated energy savings for the program was determined using Xcel Energy's deemed savings database.

The main budget drivers include the following:

- Participant Incentives – The vast majority of the budget is allocated for rebates. This budget reflects the new rebate levels and projected customer participation in each measure, which was based on 2010-2011 participation across the offerings.
- Administration – These budgets are based on past program performance with a slight increase built in for expanded program offerings, engineering, and account management involvement.
- Advertising and Promotion – A small promotional budget was derived using historical data from past activities. Promotions are targeted to customers and trade partners and typically focus around activities such as new or revised product offerings, case studies featuring successful projects, educational opportunities, and bonus rebates.
- Customer Service – This budget will be applied to consulting and analytical services for lighting projects that are analyzed through the Custom Efficiency program.

Involvement of Community Energy Organizations

The Lighting Efficiency program is promoted through a number of community organizations. The Minnesota Chamber of Commerce's Energy Smart program actively promotes lighting efficiency and refers their membership to the program as part of their overall initiative to promote energy efficiency. We coordinate regularly with the Center for Energy and Environment and the One-Stop Shop program to ensure the rebate levels, policies, and practices are relatively consistent. Additionally, we work with trade organizations, such as the Building Owners and Managers Association, as a means to promote energy efficiency to their membership.

➢ Motor Efficiency

Description
The Motor Efficiency program is designed to reduce the barriers that prevent customers from purchasing high efficiency motors, variable frequency drives (VFDs), and constant speed motor controllers (CSMCs). To overcome these barriers, we offer both prescriptive and custom rebates to business customers who install high efficiency equipment. The program also offers rebates for motor-related engineering studies. The program is primarily marketed through our account managers to our large customers. We also work closely with our trade partners, specifically manufacturers' representatives, to market the program.

The program's main offerings include the following;

- Prescriptive rebates for:
  - New or replacement equipment that meets or exceeds the National Electrical Manufacturers Association (NEMA) Premium efficiency energy standards for motors;
  - VFDs used to control the motor speed of fans and pumps; and
  - CSMCs used to control any constant speed motor that is lightly loaded when the speed cannot vary.
- Custom rebates for projects that do not follow the prescriptive criteria.
- Study funding of up to 75% of the study cost, not to exceed $25,000, to identify and quantify motor-related energy saving projects.

The main offerings are described below:

Prescriptive Rebates
The program offers prescriptive rebates for NEMA Premium efficiency motors, VFDs, and CSMCs. Rebates are available for existing and new construction facilities. NEMA Premium motors allow customers to improve their motor system efficiency and system reliability, while reducing electricity consumption and costs. VFDs provide overall machine operating efficiency while saving energy and reducing maintenance costs. VFDs and NEMA Premium efficiency motors may be used throughout customer facilities for pumps (water), heating and cooling (fans and air handlers), process motors, and other applications. CSMCs provide savings on devices like escalators, power walks or people movers, crushers and under-loaded conveyors.

Custom Motors
For projects that fall outside the scope of the prescriptive measures, we offer custom motor rebates. These projects and rebates are individually evaluated to determine the demand and energy savings for each project, along with payback, to ensure these projects pass both the Participant and Societal Tests.

Program Changes
None.

Budget and Goal Considerations
The program's participation, energy savings goals, and budgets were determined by looking at the Company's overall electric goal and historical participation levels. Our analysis included the review

of equipment and characteristics of historical projects to develop a projected average savings per participant for various program offerings.

The main budget drivers include the following:

- Participant Incentives – The budget reflects the new rebate levels and projected customer participation in each offering, which was based on 2008 through 2011 participation across the offerings.
- Administration – These budgets are based on past program performance with a slight increase built in for expanded program offerings, engineering and participation.
- Advertising and Promotion – A small promotional budget was derived using historical data from past activities. Promotions are targeted to customers and typically focus around activities such as new or revised product offerings, or bonus rebates.
- Customer Service – The Company employs consulting and analytical services for motor projects that are analyzed through the Custom Efficiency program, as well as for motor engineering studies.

Involvement of Community Energy Organizations

The Motor Efficiency program works with multiple community energy organizations including trade vendors, distributors and installers. This is done by hosting training sessions for both customers and trade partners. We also participate regularly with Motors Decisions Matter to ensure practices, product offerings and rebates are relatively consistent. Additionally, we work with trade organizations, such as the Building Owners and Managers Association and Electrical Apparatus Service Association, Inc. as a means to promote energy efficiency to their membership.

➢ Process Efficiency

Description
The Process Efficiency program offers study funding, prescriptive rebates, custom rebates and energy planning services to mid-sized and large industrial electricity and/or natural gas customers who engage in a holistic approach to sustainable energy management. The program influences customers' energy choices differently than our traditional project-based programs. Through Process Efficiency, we become heavily involved in each participant's energy management strategy development and opportunity identification. We invest significant resources up front to help the customer create and implement a sustainable energy management plan that far exceeds the scope of our project-specific programs and often spans multiple years. A customized approach helps identify and overcome barriers to energy efficiency for customers engaged in this program. The program requires that industrial customers have at least 1 GWh or 4,000 Dth of conservation potential. Typically, these customers have a peak electricity demand of at least 500 kW or gas consumption of approximately 50,000 Dth.

The program's main offerings are typically delivered in three phases. Each of these phases is defined in a Memorandum of Understanding that is customized to reflect the needs of the specific customer.

Stage 1: Identification
This high level analysis identifies opportunities for energy savings in participants' business practices and within their facilities and operations. This is completed at no cost to the customer using internal resources or a third-party provider selected through a request for proposal (RFP) process.

Stage 2: Scoping
We provide support and resources to further define and provide recommendations for energy savings opportunities identified in Phase 1 while working to optimize the business practices identified in Phase 1. We will pay the majority of these costs; the customer will contribute 25%, with a lifetime cap of $7,500. This customer investment is designed to validate management-level engagement and commitment to a holistic approach. This phase is delivered using internal resources or a third-party provider selected through an RFP process; alternatively, technology-specific investigations may be performed by a preapproved expert of the customer's choosing.

Stage 3: Implementation
We will work with the customer to put together a schedule of efficiency and conservation goals that translates their energy management plans into actual conservation impacts. This phase includes a customized rebate and bonus schedule that rewards deep energy savings and/or a system-wide approach.

Upon project completion, customers will earn rebates for improvements that qualify for any of our prescriptive or custom programs. The savings are included in the Process Efficiency program achievements, but match the rules and rebate levels of our other programs. When it is not possible to pay a rebate due to program rules, we will abide by those rules but claim the project impacts as program savings due to the extensive level of influence we have invested with the customer to drive savings.

Delivering Process Efficiency to customers requires extensive internal and external resources. The magnitude and complexity of many custom-type projects require significant resources from our internal technical staff. The enhanced relationship with the customer requires significant account management resources, and customization of the offering to match customer needs requires significant marketing resources. We will work with external resources (selected by the customer or through a periodic RFP process) to deliver both the Identification and Scoping phases of the program.

While the market is limited, we plan to continue to work with new and existing large industrial customers while further customizing program services to cost-effectively engage mid-market industrial customers. We will continue to rely on our account management team to identify qualifying industrial customers who are most likely to benefit from this holistic approach. As trade partners are incorporated into the delivery of the program, they are likely to refer potential qualifying customers who are a good fit for the program's approach. We will also leverage energy and industrial groups to promote and deliver the program to customers.

In addition to offering support for specific technical projects and sustainable energy planning, we will help customers drive efficient business practices and habits by providing a menu of supporting materials and services for them to choose from. This fresh look often leads to significant, sustainable energy savings that are not equipment-driven. While we historically have not taken credit for any resulting behavior-driven efficiency gains, we plan to start incorporating these behavior-driven impacts when we can influence, identify, isolate, measure, and verify the savings using the protocol recommended by the DER.

Policies that pertain specifically to this program include:

- Bundling: As previously filed and approved by the DER, when customers identify multiple measures for installation, a bundle can be evaluated to see if it qualifies for a rebate versus each individual component. This allows measures with too short of a payback for a rebate to be leveraged to drive projects with too long a payback for the customer to install so that both will be implemented.
- Preapproval dates: As previously filed and approved by the DER, custom type measures in Process Efficiency still require a custom analysis, but the actual date the project is submitted and the analysis is completed does not disqualify a project if it was initiated after the customer entered Process Efficiency. This is due to the extensive resources the program provides to identify and scope ways to drive energy efficiency into how a customer always does business. The result is that the goals and awareness created during Phases 1 and 2 can result in projects that drive energy savings in business areas that act without immediately notifying the personnel in contact with Xcel Energy.
- Rebate bonuses: As previously filed and approved by the DER, the Process Efficiency program uses the rebate structure of the other end-use programs and then incorporates bonuses to encourage more saving, for example for system optimization and/or exceeding annual achievement targets.
- Facility-Level Metering: This concept is being developed and may be tested through the program. We will work in advance with the DER to define the methodology of how we propose to take credit under this metering scenario. It provides us the ability to accurately account for all savings generated by installation of a measure and incorporates the savings that may be driven plant-wide that to date we have been unable to accurately capture.

- Behavior: We will use the DER's Average Savings Method to count behavior savings created through single entity-based behavioral change efforts. This also could apply to technical projects that require specific behaviors to maintain persistent energy savings throughout their lifetime.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Add behavior-driven energy savings	Holistic approach provides platform conducive to include behavior savings.	New to this Plan	New
Change the calculation of program participants from the number of projects completed annually to the number of customers actively engaged in the program.	More accurately reflects the number of program participants, rather than the number of completed projects.	New to this Plan	New

Budget and Goal Considerations
We determined the program's participation, energy savings goals, and budgets by examining historic participation levels, project and participation cycles, and costs. We took a conservative approach by applying historical spending levels across new program achievement goals and adding very few additional resources as we strive to optimize cost-effective program delivery to a larger group of customers.

The main budget drivers include the following:

- Administration – These costs are driven by marketing, sales, engineering and external labor resources to support our heavy engagement in customers' business practices, a large number of unique process-specific efficiency projects, and the number of projects requiring metered verification.
- Customer Service – Third-party resources to deliver the program's identification and scoping phases drive these costs, which directly benefit participants and contribute substantially to the program budget.
- Participant Incentives – Due to the large projects initiated through the Process Efficiency program, the program has a robust rebate budget.

Involvement of Community Energy Organizations
The Process Efficiency program works with the Minnesota Blue Flame Association to help deliver efficiency and conservation information and workshops to our natural gas customers. Participants' large capital projects are financed through a combination of the Trillion BTU program delivered by the St. Paul Port Authority, the Center for Energy and the Environment, and Xcel Energy. We also work with Enterprise Minnesota to research industrial customers' business needs, incorporate energy efficiency into their LEAN consulting services, and market to mid-sized industrial customers. We work with the Department of Energy to deploy their industrial training programs and studies to Process Efficiency customers and integrate the results into the customer's long-term energy

strategies. The Minnesota Technical Assistance Program also is a good fit for the program, and we utilize their expertise and intern program to help customers increase their efficiency. We will consider leveraging resources as they become available through these and other external organizations and integrate their offerings into Process Efficiency and our customers' energy management plans.

➢ Recommissioning

Description
The Recommissioning program offers study funding and electric and natural gas implementation rebates to business customers who optimize their existing equipment to make it more energy efficient, rather than purchasing new equipment. The program is primarily marketed through our account managers, Business Solutions Center, and recommissioning study providers.

The program's main offerings include the following:

- Custom rebates Recommissioning or system tune-ups. Typical measures that are identified include, but are not limited to:
    - Calibration/tune-up of Energy Management System points;
    - Adjustment of outside air and return air dampers;
    - Resetting the chilled water and hot water supply temperatures;
    - Optimum start/stop of air handlers and makeup air units (early shutdown in the evening, late start in the morning);
    - Resetting of a chiller's condenser water temperature; and
    - Eliminating simultaneous heating and cooling.
- Study funding of up to 75% of the study cost, not to exceed $25,000, to identify and quantify Recommissioning-related energy saving measures.

The main offerings are described below:

Recommissioning Study "Basic" Path
Customers may receive rebates for both the study and implementation of their recommissioning measures. Our study funding will help customers pay a firm to identify the recommissioning opportunities that exist within their building. This path has historically been the most popular choice for our customers.

Fast Track Implementation Path
This path is for customers who have either performed a study outside of our program or have identified recommissioning measures within their building without doing a full blown study. To qualify, we will review their study, recommendations, and savings opportunities to determine recommissioning implementation rebates. We will perform the same detailed review as we do for studies that we fund. Because our review helps customers make decisions, we will claim Study-Driven credit for the resulting savings, no matter what the payback is, when customers implement the recommendations.

Refrigeration Recommissioning Path
This path is focused on analyzing grocery and convenience store refrigeration systems to determine how their refrigeration systems (i.e. compressors, condensers, display cases, suction and discharge temperatures) can be adjusted and optimized to save energy. Due to the nature of the recommended measures, implementation of the energy savings recommendations occur as the provider is conducting the analysis.

The DER has previously approved the following policies, which are specific to Recommissioning:

- If it is too burdensome for the customer to provide invoices for a project, we will accept their signature as documentation of implementation as long as the customer is willing to forego any potential rebate for the project.
- Study-driven credit: If a customer implements measures that have less than a nine month payback or greater than a 15 year payback, the customer will not receive a regular rebate but we will claim those study-driven savings. We believe that our help identifying and analyzing energy efficiency measures provides sufficient influence on the customer's decision to implement those measures.
- Maintenance: The program claims energy savings for maintenance items identified and implemented through the Recommissioning process.
- Secondary credit: We will offer rebates and take credit for measures that have secondary benefits in addition to on-site energy benefits. These secondary benefits could include purchase chilled water, city water, etc. The electricity savings embedded in these secondary benefits will be added to the on-site reduction.

Program Changes
None.

Budget and Goal Considerations
The program's participation, energy savings goals, and budgets were determined by looking at the Company's overall electric and natural gas goal and past participation levels for the program. We reviewed historical projects to develop a projected average savings per participant for the program.

The main budget drivers include the following:

- Participant Incentives – The budget includes costs for study rebates, implementation rebates, and the early implementation bonus. We estimate that there will be about 25% more study participants than implementation participants to help build the pipeline for future years. Historically, we have paid out more in study rebates than implementation rebates as many of the measures had quick paybacks and did not qualify for rebates.
- Administration – These budgets are based on past program performance.
- Advertising and Promotion – This category includes costs for customer mailings, literature printing, customer seminars, and vendor training.
- Other – We offer a vendor incentive to encourage study providers to find as much savings opportunity as they can. The incentive is based on the amount of savings they identify within the study and they have to reach a minimum amount of identified savings to earn the incentive.

Involvement of Community Energy Organizations
We value feedback from customers and providers and make an effort to gather their input to ensure the program is effective. As ideas are generated, the team will review and implement if feasible. The program team as well as the trade relations manager meets with active trade allies to discuss the program and to obtain feedback, as necessary. Continuous communication with this group through informal conversations and project work provides opportunities to keep this line of feedback open.

➢ Self-Direct

Description
The Self-Direct program will provide our larger electricity and natural gas business customers with the opportunity to self-manage their energy saving projects. For this responsibility and their efforts, we offer higher rebates whose dollar value is based on the amount of energy savings achieved. Participants must have the ability to perform the project design, conduct engineering review, analyze their measurement and verification (M&V) results, commission their work, and validate and report the associated energy savings for any projects included in this program.

This program is targeted toward self-sufficient customers with an interest and capability to oversee their own energy efficiency improvement projects, as opposed to those who desire full-service via holistic products like Process Efficiency. The program gives self-sufficient retailers and public service providers, larger property management companies, manufacturers, and multi-national corporations the opportunity to plan efficiency around their business model.

Customer eligibility requirements include a minimum aggregated monthly peak load of at least 2 MW and/or an aggregated annual energy usage of at least 10 GWh and/or 100,000 Dth. Customers may bundle multiple projects in their energy management plan to meet the eligibility requirements. Qualified customers will identify their energy savings initiatives and submit an application, proposed energy saving plan, monitoring plan, and pre-project energy usage data to Xcel Energy for review and preapproval. We will issue a preapproval receipt with their rebate offer.

After the fully installed and operational project is completed, customers must submit their project completion documents (application, final report. and monitoring results) for review and final approval by Xcel Energy, whereupon a rebate check, based on the achieved savings, is issued. Xcel Energy reserves the right to request additional information and make amendments regarding the project scope and expectations, as warranted, with the objective of understanding and coming to mutual agreement.

Qualified customers will be allowed to participate in other CIP programs offered by Xcel Energy, but will not be eligible for a rebate for the same efficiency measure through another program. Finally, customers with new construction projects are not eligible to participate in Self-Direct, but instead will be directed to our Business New Construction program.

Program Changes
None.

Budget and Goal Considerations
The budgets and goals were developed based on the historical performance of this program in another jurisdiction, extrapolated and adjusted to the Minnesota market. The rebate budgets were estimated using anticipated completions. The anticipated sales cycle from project initiation to completion is about 18 to 24 months, and it represents a risk of stranded investments to Xcel Energy if a customer withdraws before completing their project. We will mitigate this risk by monitoring the customer's commitment throughout the process.

The main budget drivers include the following:

- Administration – This budget includes the costs of internal labor which were estimated using historical spending.
- Participant Incentives – The rebate budget is the main budget driver for this program.

Involvement of Community Energy Organizations

We anticipate some customers will hire local consulting engineering companies to help design and manage their projects, and we also anticipate customers in area energy initiatives will be involved as well.

➢ Turn Key Services

Description
The Turn Key Services program is designed to remove hurdles for our business customers of all sizes when identifying and implementing energy efficiency projects. The program is primarily marketed through our account managers and energy efficiency specialists. We also work closely with our third-party consultant to market the program.

The program's main offerings include the following:

- Prescriptive rebates for the end-uses rebated in our other prescriptive programs;
- Custom rebates for any measures eligible for rebate under our other custom programs; and
- Study funding of up to 75% of study costs, not to exceed $25,000, to identify and quantify energy saving projects.

The main offerings are described below.

Identification
Customers will have several identification methods to choose from, including:

- Walkthrough: This assessment is customer-driven and intended to focus efforts on areas of concern. Time will be invested in easily identifiable opportunities and determining potential for further investigation if necessary.
- ASHRAE Level I audit: This level offers a walkthrough of the entire facility and identification of simple low/no cost opportunities in addition to simple higher cost conservation opportunities. This audit involves an analysis of the customer billing information and an energy balance of the various end-uses. An ENERGY STAR Benchmarking score will be calculated for all applicable building segments.
- Engineering Study: This method provides an investment grade analysis of a major single system or process for modification or replacement. This analysis will provide a bid-ready report to assist customers in making educated business decisions between multiple solutions. Participants may also use study funding available through our other programs to identify energy saving measures. Study results will provide the estimated energy savings, cost savings, payback, and rebate eligibility for all energy-saving opportunities identified.

Services
The program will offer a variety of specific services that customers may choose from depending on their specific needs. Services include, but are not limited to:

- Customer meetings;
- Assessments – measure identification;
- Engineering/feasibility analyses;
- Qualifications of energy savings and scoping projects identified by the customer;
- Design work for complex projects over 250,000 kWh;
- Bidding process and selection;
- Coordination of implementation and pre-metering;
- Verification of installation and post-metering; and
- Paperwork compilation and submission.

Funding

Participants will be eligible for prescriptive and custom rebates for installed and implemented energy efficiency measures. In addition, we will subsidize studies to identify potential measures, as well as project scoping and implementation costs to encourage customers to move beyond the barriers to participation.

Consistent with other custom type projects, we anticipate there will be projects identified through this program that are custom in nature and payback to the customer is less than nine months. The Company will claim study-driven credit for these projects.

Program Changes

None.

Budget and Goal Considerations

The program's participation, energy savings goals, and budgets were determined by looking at historical program performance and study participation.

The main budget drivers include the following:

- Administration – This budget includes labor estimates which are based on historical spending with a slight increase built in over the three years for expanded program goals, engineering, and participation.
- Customer Service – This cost includes the assessments, scoping, and project management services provided directly to the customer.
- Advertising and Promotion – As the program takes shape we will expand the effort in this area to encourage more participation. For this Plan, we have kept the dollar amount limited as the majority of outreach will be done by our sales force.
- Participant Incentives – The rebate budget reflects the assumed participation across multiple end-use programs based on identified projects in 2010 and 2011.
- Measurement and Verification – A portion of the implemented projects will need to be verified and a fixed cost was used in conjunction with an estimated sample size to calculate an appropriate budget.

Involvement of Community Energy Organizations

The Turn Key Services program will employ the services of a third-party company to deliver the assessments and the project scoping and implementation assistance for the program.

➢ Electric Rate Savings

Description

The Electric Rate Savings program is offered to any business customer who can reduce their electric loads during control periods by at least 50 kW. In return for reducing their loads, they receive a monthly discount on their demand charges. Participants save as much as 54% on demand charges over the entire year. Currently, the Electric Rate Savings program is promoted directly through Xcel Energy's account management team.

Program Changes
None.

Budget and Goal Considerations
The program's participation, energy savings goals, and budgets were estimated using historical program performance and emerging market influences expected in the near future. The budget for this program includes labor costs for associated services, with the remaining costs attributed to customer communications. Every year a program information packet is sent to each participating customer, explaining any program changes, reminders of their responsibility as an interruptible customer on a control day, and historical information. Due to recessionary factors and a mature program life cycle, participation in this program is expected to decline mildly in the next three years. As a result, the budget for the program will decline slightly for the 2013 – 2015 period.

The main components of the program budget include:

- Administration – This category includes labor costs for internal sales, sales support and fulfillment, marketing administration and planning, equipment installation and maintenance, project planning and implementation.
- Advertising and Promotion – We have budgeted to conduct an annual customer mailing and provide collateral materials.

Involvement of Community Energy Organizations
None.

➢ Saver's Switch® for Business

Description
Saver's Switch is a load management program available to business electric customers with central air conditioning. Participating customers receive a monthly discount on their June through September bills. In exchange for the discounts, participants allow Xcel Energy to cycle their air conditioner on and off during control events, which typically occur on hot, humid summer days. Air conditioners are controlled via a radio operated switch installed by a licensed electrician on or near the customer's air conditioner. The switches utilize an adaptive algorithm designed to ensure a 50% reduction in air conditioner load during a control event. In the past decade, we have had an average of six control events per year. The tariff allows for up to 300 control hours each year.

Program Changes
None.

Budget and Goal Considerations
The program budget and savings were developed based on equipment and installation costs for the number of switches to be installed and replaced. During the course of this Plan, in addition to recruiting new participants, we intend to replace switches older than 20 years. We will also conduct inspections of additional older switches to verify functionality and, if needed, replace with new hardware. The overall participant target will be met with a combination of new installations and maintenance replacements.

The main budget drivers included the following:

- Administration – This budget category will cover the costs of internal labor for program planning and implementation, as well as the costs of external contract labor and software maintenance.
- Customer Service – The program will use a third-party to install the switches.
- Advertising and Promotion – The program will have a limited promotional budget in this Plan, as most of the installations will be from the replacement of old switches.
- Measurement and Verification – The program will hire a third-party to conduct measurement and verification to determine the savings per switch achieved each year.

Involvement of Community Energy Organizations
The program utilizes specialized hardware and contracted installers. Therefore, other than for promotions, there is no involvement from community energy organizations.

➢ Business Education

Description
The Business Education program focuses on creating awareness of energy efficiency and providing business customers with information about what they can do to reduce energy use in their buildings. The program encourages customers to make Xcel Energy their first contact when considering equipment or process upgrades and engages customers to make changes that lower their energy use. It focuses on removing the barriers to adoption of energy efficiency measures by educating customers and their employees on the impacts of their energy use and offering information on how to take action to achieve long-term energy savings.

The program is primarily marketed to small and mid-sized business customers through direct mail and email newsletters, advertising campaigns, outreach events and sponsorships, and the Energy Efficiency Specialists at the Business Solutions Center.

The program's main offerings include the following:

- Online Energy Assessments,
- Energy Efficiency Workshops,
- Smart Energy Employee™ materials, and
- Efficiency Partner awards.

The main offerings are described below.

Online Energy Assessment
This free, half-hour, do-it-yourself analysis helps businesses discover potential ways to save on their annual energy bills. Customers enter 12 months of billing data, their specific industry, equipment, and age of their facility. The assessment provides specific energy saving recommendations and applicable rebate and program offerings from Xcel Energy.

Energy Savings Workshops
The Company offers free, one-hour business presentations on how to save money with useful, practical advice from certified energy efficiency experts. We partner with local energy auditors to offer presentations on energy efficiency opportunities including: lighting, building envelope, heating, ventilation and cooling, hot water, machines, and no-cost/low-cost energy saving tips.

Smart Energy Employee Materials
Businesses can order a variety of Smart Energy Employee materials to engage their employees in energy conservation and help change workplace behaviors to enhance energy efficiency and save money. Xcel Energy provides posters, window clings, magnets, sticky notes, and notepads with no-cost energy saving tips that assist organizations in developing creative and effective energy savings campaigns.

Efficiency Partner Awards

This annual award program recognizes Xcel Energy business customers and trade partners for their energy efficiency efforts. This public recognition gives customers a visible award for often invisible efforts to help the environment by implementing and promoting energy efficiency improvements. Partners qualify based on the previous year's efficiency efforts and receive an environmentally friendly plaque, as well as window clings to display at their facility. They are also given access to the Efficiency Partner logo for their promotional materials.

Program Changes

None.

Budget and Goal Considerations

The program's participation goals and budgets were determined by estimating direct mail and email campaign read and open rates, educational material requests, and event, community outreach, workshop attendance, and online energy assessment participation.

The main budget drivers include the following:

- Administration – This budget provides funds for internal staff and external fulfillment.
- Advertising and Promotion – This budget includes funds for direct mail promotion of no-cost/low-cost energy saving tips, Online Energy Assessments, energy efficiency workshops and events, creation of Smart Energy Employee materials, and Efficiency Partner Awards, sponsorships, and print and interactive advertising.

Involvement of Community Energy Organizations

The Business Education program participates in a variety of community-hosted customer outreach events. The program provides displays, staffing, and materials to promote energy conservation and efficiency to attendees.

➢ Small Business Lamp Recycling

Description
The Small Business Lamp Recycling program encourages customers in Minnesota to recycle their spent fluorescent bulbs instead of discarding them, to ensure that hazardous materials, such as mercury, are not getting into the environment.

The program's main offerings include the following:

- Free compact fluorescent light bulb recycling at participating local hardware stores and partnering county hazardous waste facilities; and
- Coupons for 50¢ off the recycling fee for each fluorescent tube and HID bulb at participating hardware stores. The coupons are available at participating hardware stores and on the xcelenergy.com and responsiblebynature.com websites.

The Small Business Lamp Recycling Program is marketed primarily through Xcel Energy's Home Lighting program promotions, participating hardware stores, and on the main Xcel Energy website. A new feature allows customers to search by zip code to find the nearest recycling site.

The Company follows the requirements of Minn. Stat. 216B.241, subd 5, which necessitates public utilities to notify customers that fluorescent recycling is the law in Minnesota. Every Small Business Lamp Recycling and Home Lighting promotional piece includes a disclaimer regarding the statute, such as, "Fluorescent lamps contain small amounts of mercury that are harmful to the environment. In Minnesota, it is illegal to dispose of spent mercury bulbs in household trash receptacles."

Program Changes
None.

Budget and Goal Considerations
Budgets were developed based on historical spending and the expected number of bulbs to be recycled in the coming years. The budget is set to increase about five percent annually to account for additional bulbs that we anticipate will be recycled each year. The promotional budgets will remain consistent throughout the Triennial Plan.

The main budget drivers include the following:

- Administration – This will provide funds for internal labor for planning and program implementation.
- Advertising and Promotion – We will market this program with the Home Lighting promotions.

Involvement of Community Energy Organizations
Xcel Energy stays active in the Minnesota and national Lamp Recycling community through its partnerships with Mercury Technologies of Minnesota, Inc. and the Center for Energy and Environment.

➢ RESIDENTIAL SEGMENT

Description
The Residential Segment consists of over one million electric and nearly 400,000 natural gas customers who reflect a diverse population with a variety of lifestyles. In this Plan, the Residential portfolio will offer a comprehensive set of programs including prescriptive rebates for heating and cooling equipment, whole house solutions for new and existing homes, and educational offerings such as energy audits. The Residential Segment also contains Saver's Switch®, a long-standing load management program available to residential customers with central air conditioning and electric water heaters.

Programs
The Residential Segment will offer 15 program offerings for this Plan. These include 12 direct impact programs and three indirect programs. We will offer a new electric savings component to the Heating System Rebate program, and the previously piloted Energy Feedback program will now become a fully launched program starting in 2013. All programs from the 2010-2012 Triennial Plan will be continued during the next three-year period.

Overall Goals
The Residential Segment programs provide a wide variety of offerings intended to provide all Residential customers an opportunity to participate. Planned achievements of 311 GWh and 596,756 Dth over the three-year period account for 24% of the Company's total electric energy savings goal and 29% of the total natural gas goal. The majority of energy savings within the Residential Segment will come from four key programs: Home Lighting, Energy Feedback, Residential Cooling, and Heating System Rebates.

We anticipate challenges in our efforts to expand the savings achieved in the Residential Segment due to the national phase out of standard incandescent bulbs and increasing market penetration of compact fluorescent light bulbs (CFLs). The phase out will reduce the savings we can capture per unit and make the purchase of CFLs more commonplace. In the past, the Home Lighting program has comprised approximately 70% of total savings from our Residential Segment. The program's previous successes can be attributed to the large consumption differential between incandescent bulbs and CFLs, and the widespread availability of CFLs, making it easy and very cost-beneficial for residential customers to participate. In this Plan, we will mount an aggressive residential lighting campaign and will focus more on specialty CFLs and LED lighting. Despite these efforts, we expect the savings from residential lighting to be lower and the costs to be higher than previous program results. Beyond CFLs, common residential electric conservation measures, such as appliance and air conditioner replacements, can require major investment, which, in this economy, is a barrier to participation and could limit achievements from the residential sector.

Marketing/Advertising/Promotion
The Company primarily relies upon trade allies, end-use equipment vendors, energy services companies, and our call center representatives to drive energy efficiency and load management participation in the Residential Segment. Due to heightened awareness of energy costs and climate change, we are finding increased opportunities to market our DSM programs to customers. To support these marketing efforts, we will employ an integrated approach to communications, where the tactics will work in concert with each other and reinforce key messages over time.

We follow the "AIDA" (awareness, interest, desire, action) process for encouraging customers to use the rebate programs: create awareness, create interest, create desire, and move toward action. When communicating with customers, the Company will use several overarching key messages including reduced consumption, lower operating costs, decreased utility bills, and impact on environment.

Overall Policies
The Residential Segment does not have any unique policies that the Company or participants must follow.

Stakeholder Involvement
In the course of developing this Plan, the Company met with many local organizations to refine existing programs, shape new programs, and discuss partnership opportunities. These local organizations include:

- Center for Energy and Environment,
- Neighborhood Energy Connection,
- Clean Energy Resource Team, and
- Green Institute.

In addition to local contacts, we also worked with national organizations in developing the Plan, including:

- American Council for an Energy Efficient Economy,
- Consortium for Energy Efficiency,
- Department of Energy/ENERGY STAR,
- Wisconsin Energy Conservation Corporation,
- Proctor Engineering,
- Air Conditioning Contractors Association,
- North American Technician Excellence,
- Gas Appliance Manufacturing Association,
- Air Conditioning Heating Refrigeration Institute,
- Resource Action Programs, and
- E Source.

Several of these local and national organizations will either be involved in one or more programs through our request for proposal process or will be utilized to provide feedback on our programs to understand areas for future improvement.

➢ Energy Efficient Showerheads

Description
The Energy Efficient Showerheads program is designed to offer year-round natural gas and electric savings to Xcel Energy customers. Residential natural gas and combination gas and electric customers in our Minnesota service territory are eligible to receive a free 1.5-gallon-per-minute (GPM) high efficiency showerhead, 1.5 GPM kitchen aerator, and 1.0 GPM bathroom aerator to help reduce energy costs and water use.

Eligible customers are contacted and offered a free kit, valued at approximately $9. Interested customers make the active decision whether to request the energy efficiency measure. We distribute a free energy efficiency kit to customers who respond to the offer within the promotional period. Kit contents include one showerhead, one kitchen and bath aerator, Teflon tape, and illustrated installation instructions.

Each participant is allowed one kit. If budget allows, a second complimentary showerhead is offered to customers who have four or more residents in the home and more than one shower. Customers with more than one bathroom may be offered additional aerators based on budget availability. Customers may participate in the program once every seven years.

The Company contracts with a third-party provider to manage all customer responses and distribute the energy efficient showerheads. The third-party provider is a recognized distributor of energy efficiency-related products in the United States. Customer responses will be tracked by the provider, given to us following the distribution, and kept in a tracking system to calculate savings.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Changed assumption regarding percentage of customers with gas versus electric water heating	Data from Xcel Energy Home Use Study indicate 93% of homes use gas water heating and 7% use electric water heating	New to this Plan	New
Changed gas and electric savings assumptions	Used data from Xcel Energy's New Mexico Residential Showerhead Pilot Report to update	New to this Plan	New
Added 1.5 GPM kitchen aerator	Increase program's energy savings with minimal cost	New to this Plan	New
Added 1.0 GPM bathroom aerator	Increase program's energy savings with minimal cost	New to this Plan	New

Budget and Goal Considerations
The product budget was developed based upon the expected participation level. Using the 2011 program performance as a guide, the cost of the showerheads, fulfillment, postage, and all necessary marketing efforts were included to develop the budgets.

The main budget drivers include the following:

- Administration – This budget covers the costs of external fulfillment, project planning, and implementation.
- Advertising and Promotion – The program uses this budget to print direct mail to attract customers.
- Measurement and Verification – This category provides funds to survey participating customers.

Involvement of Community Energy Organizations

None.

➢ Energy Feedback

Description
The Energy Feedback program is based on the Residential Home Energy Reporting System, a patented program developed by Opower. The program provides a targeted direct mailing called the Home Energy Report to our Minnesota residential customers, providing specific recommendations and incentives to motivate and to teach customers how to reduce their energy consumption. Customers receive new information with each Home Energy Report. An online tool has also been developed to support program objectives. Savings are quantified by comparing the energy consumption of the participating group to a non-participating control group. Opower, as our current third-party provider, will provide an analysis of the impact of the project each year.

The program's main offerings include the following:

Personalized Home Energy Reports - The Home Energy Reports are a targeted direct mailing that provides specific recommendations and incentives to motivate customers to reduce their energy consumption. The individualized reports provide:

- Customers' energy use compared to the average of 100 neighbors in similar-sized homes with similar characteristics;
- Targeted efficiency recommendations based on an analysis of the household's energy usage, demographics, and home characteristics; and
- Advice on how report recipients can easily implement efficiency measures based on their individual circumstances.

Online Community of Action - We provide an online suite of tools that gives customers greater insight into their energy consumption and what they can do to become more energy efficient. The online suite includes:

- Customer-specific electricity and natural gas consumption data;
- An efficiency recommendation database with community ratings and reviews, which provides customer feedback collected and analyzed regionally on which tips work best for customers in Minnesota; and
- A Home Energy Assessment tool with progressive, simple, and straightforward questions that provide immediate value and feedback.

The participant and control groups are selected among Minnesota residential customers. Participants will be given the opportunity to opt out at any time throughout the duration of the program.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Change from a pilot to a program	Pilot has demonstrated effectiveness	New to this Plan	New
Adopted DER methodology for counting savings from behavior programs	Compliance with DER Decision in Docket Nos. E,G002/CIP-09-198 and E,G999/CI-08-133.	New to this Plan	New

Budget and Goal Considerations
The budget and goals were developed with the costs supplied by Opower for preparing and mailing the Home Energy Reports and an ongoing regression analysis of participants and the control group to determine the electric and gas savings. Administrative costs for data extraction and program administration from Xcel Energy are based on actual costs derived from the Pilot.

The main budget drivers include the following:

- Administration – This budget provides funds for internal project planning, program management, and implementation.
- Customer Service – The program uses this category to cover the costs of training Customer Service Representatives to handle questions regarding the program.

Involvement of Community Energy Organizations
The Center for Energy and the Environment has been instrumental in the development, implementation, and evaluation of this program as a pilot project. In addition, the Home Energy Reports will provide targeted information to low-income participants regarding community-sponsored programs, such as Weatherization Assistance.

➢ ENERGY STAR® Homes

Description
The ENERGY STAR Homes program encourages home builders to construct energy efficient residential homes by providing prescriptive rebates for energy efficiency measures and providing free services including: blue print analysis, construction site visits, HERS ratings, blower door testing, infrared scanning, and ENERGY STAR verification. Although the program does not require a home to reach the ENERGY STAR Version 3 qualifications, it does strive to educate builders on the requirements and encourages them to meet and exceed the ENERGY STAR threshold.

This program applies to builders of residential single-family, duplex, triplex, fourplex, town homes, and condo units that have individual heating systems and residential meters, and that receive electric and/or gas service from Xcel Energy. We will use a third-party implementer to recruit builders, coordinate home inspections, and track the energy savings, which will vary depending on the measures installed.

The program's main offerings include the following:

- Free consulting and education services to builders in our gas service territory, including:
  - Blue print analysis,
  - Construction site visits,
  - Blower door testing, and
  - Infrared scanning.
- Prescriptive rebates to offset site inspection costs for homes in our electric-only service territory.
- Prescriptive rebates for homes in our electric-only service territory that install three of the following measures:
  - ECM furnace fan,
  - ENERGY STAR dishwasher,
  - ENERGY STAR clothes washer,
  - ENERGY STAR refrigerator, or
  - 20 CFLs.

The main offerings are described below.

<u>Electric and Gas Performance</u>
For each home built in our gas service territory, the builder will receive up to three inspections free of charge: one inspection before insulation, one after insulation, and one when the home is completed. On the third inspection, blower door and duct blaster tests will be performed. These site inspections and the other free services, which include blue print analysis, infrared scanning, HERS rating, and ENERGY STAR verification, will be performed by the third-party program implementer and certified HERS Raters. Subsidized homes, such as those built by Habitat for Humanity, receive the same services listed above, and the non-profit entities are eligible for a $500 rebate.

Electric-Only Performance

For homes built in our electric-only service territory, the builder may receive a rebate to help offset the cost of the program's required site visits, HERS ratings, and other services, including blue print analysis and blower door test. The builder will receive a $250 rebate for homes 2,000 square feet or above and $150 for homes under 2,000 feet.

Electric Prescriptive Rebates

For homes built in our electric service territory, the builder can obtain a prescriptive rebate of up to $500 dollars if they install a combination of three items from the following list: electronically commutated motor or variable speed furnace fan or air handler, ENERGY STAR clothes washer, dishwasher, refrigerator, or 20 ENERGY STAR-rated light fixtures or bulbs.

Program Changes

The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Changes to baseline efficiency of bulbs	To comply with the Energy Security and Independence Act	New to this Plan	New

Budget and Goal Considerations

The program's budgets and electric and gas energy savings goals were determined by cost estimates based on a vendor proposal and historical program expenses.

The main budget drivers include the following:

- Administration – This category funds project planning and implementation, as well as builder recruitment
- Customer Service – This covers the costs associated with free services offered through the program.
- Advertising and Promotion – The program's direct promotions, including sponsorship of the Parade of Homes and presence at local community events, and sales support materials are supported with this budget.
- Participant Incentives – This budget covers customer and builder rebates.
- Measurement and Verification – The costs associated with site inspections of homes are funded through this category.

Involvement of Community Energy Organizations

Our ENERGY STAR Homes program is a nationally recognized program. The Environmental Protection Agency (EPA) honored the Company in 2009 as the ENERGY STAR Partner of the Year and again in 2011 with the Sustained Excellence Award, which is their most prestigious award as it recognizes our long-term commitment to energy efficiency. We continually work with the EPA to help develop a best practices model. In addition, we serve on the new home construction committee for the Consortium for Energy Efficiency (CEE), regularly meet and work with the EPA and ENERGY STAR, and attend the ENERGY STAR Homes Partner meetings and RESNET conferences.

➢ Heating System Rebates

Description
The Heating System Rebates program offers prescriptive rebates to natural gas customers who purchase high efficiency forced air furnaces and hot water boilers. The program also offers rebates for customers who purchase electronically commutated motors (ECMs) with their forced air furnaces. The ECM measure is available to electric customers of Xcel Energy, regardless of the fuel provider for their new forced air furnaces. Customers are allowed to select their own contractor for equipment installation.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Discontinue 90% AFUE furnaces	With the change in federal regulations made by the U.S. Department of Energy, 90% AFUE furnaces will become the baseline	New to this Plan	New
Add ECM Rebate	Encourage adoption of this optional feature	New to this Plan	New
Redesigned rebate tiers	Drive customers to the highest efficiency equipment	New to this Plan	New

Budget and Goal Considerations
The program's participation, energy savings goals, and budgets were determined through an analysis of historical program performance. We also took into consideration the new DOE furnace standards when creating the goals and budgets.

The main budget drivers include the following:

- Participant Incentives – Customer rebates make up the majority of the budget.
- Administration – Rebate fulfillment, product management, and administrative support represents the next largest portion of the program.
- Advertising and Promotion – This budget category funds print, broadcast, and online advertising, event promotion, community outreach, and HVAC dealer trade shows.

Involvement of Community Energy Organizations
We collaborate with the Minnesota Heating & Cooling Association, the Minnesota Plumbing, Heating, Cooling Contractors of America, and the Heating, Air-Conditioning Distributors International to help advance the program.

➢ Home Energy Squad®

Description
The Home Energy Squad program offers installation services to electric and gas customers who seek to improve their homes' energy efficiency, increase their comfort, and lower their utility bills. The program installs a number of moderate impact, low cost measures for combination gas and electric customers and for electric-only customers who are natural gas customers of CenterPoint Energy. The program seeks to assist customers' efforts to overcome barriers related to making energy improvements. Such barriers include confusion on which products are right for their home, product cost, and finding qualified installers.

The program's main offerings include the following:

- Electric measures, including:
  - CFL light bulbs of various wattages.
- Heating and cooling measures, including:
  - Weather-stripping of one external door,
  - Programmable thermostat installation, and
  - Setback of pre-existing programmable thermostats.
- Hot water measures, including:
  - Insulation blanket for hot water heater,
  - High efficiency showerheads,
  - Low flow sink aerators, and
  - Temperature assessment and setback of water heater.
- Optional measures for customer purchase, including:
  - LED bulb,
  - Weather-stripping of an additional door,
  - Second programmable thermostat installation,
  - Power control timers for TVs & electronic accessories, and
  - Dimmable CFLs.

This program offers the delivery and installation of energy conservation measures bundled within one package with flat pricing. The price covers the cost of the measures; Xcel Energy pays for the labor. Xcel Energy and CenterPoint Energy share the labor cost in homes where both utilities supply the energy. Customers also can purchase additional measures that are priced individually.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Water Heater Temperature Setback	Offers gas savings for the customer in addition to addressing safety concern.	Informal Modification	May 2012
Reduce CFL Savings	To align the program with the new lighting baselines brought about by the Energy Security and Independence Act.	New to this Plan	New
Add LED measure	Additional electric savings and introduction of technology via program	Informal Modification	May 2012
Program pre-existing programmable thermostat	Additional heating and cooling savings for the customer.	New to this Plan	New
Single package for customer purchase	Single package model allows for measure installations to meet energy savings needs specific to each home.	New to this Plan	New
Power control timer replacing the power strip measure	Easier installation and higher customer satisfaction.	New to this Plan	New
Add dimmable CFL	Fulfills commonly requested and popular measure among customers	New to this Plan	New

Budget and Goal Considerations and Participation Development
The program's budgets and electric and gas energy savings goals were determined by cost estimates based on vendor proposals, potential number of participants, and historical program expenses. The program needs increased advertising and promotion costs to reach previously untapped customer targets and to reach customers outside of the Twin Cities.

The main budget drivers include the following:

- Administration – This budget funds program administration costs through third-party vendors, as well as third-party labor for the installation of energy efficient measures in customers' homes.
- Advertising and Promotion – This category covers print, broadcast and interactive advertising and event promotion.

Involvement of Community Energy Organizations
Xcel Energy partners with CenterPoint Energy to serve their common customers. Xcel Energy contracts with the Neighborhood Energy Connection in the utility's gas and electric combination territory, and with the Center for Energy and Environment and CenterPoint Energy in the utilities' shared territory.

➢ Home Lighting

Description
The Home Lighting program provides in-store discounts for customers to purchase energy efficient compact fluorescent lights (CFLs) and light emitting diode (LED) light bulbs to help save energy in their homes. LED bulbs are priced higher than CFLs but offer slightly more energy savings, longer life, and better performance for dimming applications. They contain no mercury, so recycling is not required.

The program's main offerings include discounted bulbs from a variety of retailers throughout the state. The bulb manufacturer and Xcel Energy combine funds to offer product discounts that range from $1 to $10 per bulb. We partner with a variety of retailers including big box, home improvement, grocery, and drug store chains. Customers receive the discounted price at the register.

The Home Lighting program will be marketed through a wide variety of mediums to reach the diverse residential audience. We use an advertising media mix, bill inserts, sweepstakes and point of purchase displays. In this Plan, we will reduce the emphasis on selling CFL twist bulbs and increase the importance of changing every bulb to an energy efficient one. To achieve this, the program will offer increased discounts for specialty CFLs, placing more empasis on market segmentation, and tailoring key messages. As the market for LED bulbs grows, we will expand discounts to more models and incorporate LED messaging to a greater extent into marketing tactics.

We promote only ENERGY STAR-rated CFLs and LEDs. ENERGY STAR provides important quality control parameters to help ensure customers get maximum performance and lifetime from the bulbs that they purchase.

We will use a third-party implementer to deliver the program, negotiate with manufacturers, and coordinate product availability. The implementer will regularly monitor inventory, ensure signage is present, and verify that employees are trained. They will also track sales and provides sales data to Xcel Energy.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Eliminate Mail Order Website	Retailers now carry a wide variety of CFLs at a lower price.	New to this Plan	New
Changes to baseline efficiency of bulbs (see table below)	To comply with the Energy Sercurity and Independence Act.	New to this Plan	New

We will use the following agreed upon baselines:

Lumens	Corresponding Incandescent Wattage	EISA Approved Wattage	DER Approved 2013 Baseline	DER Approved 2014 Baseline
1490-2600	100 W	72 W	80.5 W	76 W
1050-1489	75 W	53 W	64.5 W	57.5 W
750-1049	60 W	43 W	55 W	48.5 W
310-749	40 W	29 W	37 W	33 W

Budget and Goal Considerations and Participation Development
The program's participation and energy savings goals were determined by reviewing historical performance, analyzing program barriers, and estimating market potential and saturation.

The budget was developed by determining the number of units that will be sold and the costs required to sell them. The main budget drivers include the following:

- Administration – This budget is used for project planning, implementation, and installation contractors.
- Customer Services – The program uses a third-party implementer to work with manufacturers and retailers.
- Advertising and Promotion – This category will fund television and radio commercials, print and Internet advertising, bill inserts and point-of-purchase displays, and local consumer events for the program.
- Participant Incentives – This budget covers the costs to provide product discounts.

Involvement of Community Energy Organizations
We work closely with the EPA to align promotions and tactics. We also communicate regularly with the Consortium of Energy Efficiency and E Source to monitor best practices throughout the country.

➢ Home Performance with ENERGY STAR®

Description
The Home Performance with ENERGY STAR program offers prescriptive electric and gas rebates to residential customers who take a whole-house approach to improving the energy efficiency of their existing, single-family homes. Derived from the DOE's nationally recognized program of the same name, our program provides customers with energy auditing services, direct contractor resources, rebates to reduce the project cost, and independent verification of the improvements after completion.

The program is marketed primarily through the Home Energy Audit program. Incentives will be provided to auditors who register customers for the program and follow through with completion. We will implement a variety of marketing strategies to provide program information through the website, print media, and local "green" community events. We will also stay in contact with the DOE to identify existing resources and tools available to promote the program.

The program's main offerings include prescriptive rebates for:

- Air sealing/ weather stripping,
- Attic and wall insulation,
- Compact fluorescent light bulbs (CFLs),
- Boilers and furnaces,
- Electrically commutated motor fans,
- Central air conditioners,
- Programmable thermostats – new install,
- Programmable thermostats – setback of pre-existing,
- Water heaters – new install,
- Water heaters – setback of pre-existing,
- Power control timers, and
- Major household appliances (clothes washer, dishwasher, refrigerator).

Program participants must be both electric and natural gas customers of Xcel Energy to participate and must first complete an energy audit with a blower door test through Xcel Energy's Home Energy Audit program.

To receive rebates, customers are required to implement at least five energy efficiency measures: three mandatory measures (air sealing/weather stripping, attic insulation, and CFLs) and two optional from those recommended by the auditor. The customer will receive rebates for improvements made within one year of signing up for the program. Improvements are verified by the auditor. We will not rebate pre-existing efficient equipment, but will allow it to count toward the CFL requirement and one of the optional installs. A list of approved HPwES contractors will be provided to the customers to assist them in obtaining bids and hiring an installation contractor. We will train the recommended contractors about the program and its required processes.

Program Changes

The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Redesigned rebate tiers	Drive customers to the highest efficiency equipment and to align this program with our stand alone offerings.	New to the Plan	New
Addition of freezers	Encourage the retirement of all inefficient units.	New to the Plan	New
Discontinue 90% AFUE furnaces	With the change in federal regulations made by the U.S. Department of Energy, 90% AFUE furnaces will become the baseline.	New to the Plan	New
Added Water Heater Temperature Setback	Offers gas savings for the customer in addition to addressing safety concern.	New to the Plan	New
Add LED measure	Additional electric savings and introduction of technology via program	New to the Plan	New
Existing Programmable Thermostat Setback	Offers gas savings for the customer.	New to the Plan	New
Add 0.90 EF Tankless Water Heater	Market transformation; recent participation trending toward higher EF level; 0.90 is more cost effective for Company and customers	New to the Plan	New
Remove 0.82 EF Tankless Water Heater	Market transformation; recent participation trending toward higher EF level.	New to the Plan	New
Remove 0.80 EF Storage Tank Water Heater	Lack of availability in the marketplace	New to the Plan	New
Removed occupancy sensor as an optional measure.	Measure no longer passed our cost benefit test.	New to the Plan	New
Removed AC 14.5 SEER equipment rebate.	Changing from equipment rebate to quality install rebate.	New to the Plan	New
Addition of central air conditioning quality install rebate	To encourage customers to quality install even lower SEER units.	New to the Plan	New
Reduce Lighting Savings	To align the program with the new lighting baselines brought about by the Energy Security and Independence Act.	New to the Plan	New

Budget and Goal Considerations and Participation Development

The program's budgets and electric and gas energy savings goals were determined using cost and savings estimates based on a vendor proposal and by historical program performance. Home Energy

Auditors have proven to be the most cost-effective channel to promote the program, so we have shifted dollars from advertising to vendor incentives. In addition, dollars are being shifted from project delivery to measurement and verification to properly allocate the costs associated with the site visits that were historically charged to the Administration budget category.

The main budget drivers include the following:

- Administration – This category covers program planning and implementation
- Advertising and Promotion – The program will be marketed via direct promotion, including bill inserts and advertising and support materials, including brochures and welcome kits.
- Participant Incentives – Though the mix of measures and rebate levels are based upon our standard prescriptive programs, this program's rebate levels will be slightly higher than those in the standalone programs to help cover the costs of multiple installs or performance upgrades.
- Measurement and Verification – The program funds a third-party "test out" home visit to verify measures that were installed.
- Other – The vendor incentives are funded through this budget.

Involvement of Community Energy Organizations

Xcel Energy contracts with the Neighborhood Energy Connection (NEC) to implement the program. NEC is responsible for program promotion support, sign-ups, customer follow-up, verification visits, paperwork administration, and program tracking.

➢ Insulation Rebate

Description
The Insulation Rebate program offers prescriptive electric and natural gas rebates to customers who upgrade the insulation and air-sealing in their homes. The program will capture gas and electric savings on existing single-family and multi-unit homes, up to four units, that professionally install insulation. Xcel Energy electric-only customers must use electricity as their main heating source in order to qualify. The Insulation Rebate program will be marketed primarily through an advertising media mix, bill inserts, the Xcel Energy website, and cross-marketing opportunities with other Xcel Energy products.

The program's main offering is a rebate of 20% of the product and installation cost, up to $300, for qualifying efficiency measures listed below:

- Attic insulation and bypass sealing to an R-value of 44,
- Wall insulation to an R-Value of 12, or
- Air-sealing and weather stripping.

The customer's home must meet the following conditions in order to qualify for the program:

- Attic insulation must have an R-Value of 20 or less; or
- If the pre-job R-Value is greater than 20, the post-job R-Value must increase by at least an R-25; and
- Wall cavities must be void of a recognized insulation material.

Participating customers must contract for insulation services with insured insulation contractors and all installations must be completed to the manufacturer's specifications meeting all federal, state and local codes. Additionally, air sealing and weather stripping must follow industry-accepted practices for mitigating air leakage. Homes will be limited to a maximum rebate of $300 in every calendar year. Rebates will not be issued for the same measure completed under a different rebate program, such as Home Performance with ENERGY STAR.

We rely upon a dealer network to aid in the success of the program. Xcel Energy provides an online registry of trusted contractors to choose from, or customers may select any insured contractor. The Trade Relations Manager will offer program-specific trainings and information sessions to the insulation trade.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Capture electric cooling savings	Fully realize savings from insulation	Formal Modification	Oct 2011
Rebate application deadline set at July 31 the year after the measure is completed	Align with all other Xcel Energy residential rebate programs	New to this Plan	New
Specify that customers are limited to one rebate per calendar year	To increase customer participation in the program while not exceeding the parameters of the program cap of $300.	New to this Plan	New

Budget and Goal Considerations and Participation Development
The program's budgets and electric and gas energy savings goals were determined using cost and savings estimates based on historical customer costs and by historical program performance. Home energy auditors and insulation contractors have proven to be the most cost-effective channel to promote the program, so we have shifted dollars from advertising to vendor incentives, as needed. In addition, dollars are being shifted from project delivery to measurement and verification to properly allocate the costs associated with the site visits that were historically charged to the Administration budget category.

The main budget drivers include the following:

- Administration – This category funds program planning and implementation, channel management and rebate processing.
- Advertising and Promotion – The program will have direct and indirect promotions such as community outreach events in partnership with other natural gas rebate programs.
- Participant Incentives – This budget covers the costs of customer rebates.
- Measurement and Verification – The program uses these funds to perform verification of submitted paperwork.
- Other – The program utilizes vendor incentives and training to promote the program.

Involvement of Community Energy Organizations
The Xcel Energy residential trade relations manager is involved with the Minnesota Building Performance Association and the Xcel Energy trade partners network to help advance the program.

➢ Refrigerator Recycling

Description
The Refrigerator Recycling program offers residential electric customers prescriptive rebates and pick-up services to dispose of their operable, inefficient secondary refrigerators and freezer units in an environmentally safe and compliant manner. The program is designed to educate customers about inefficient secondary refrigerators and freezers, and the potential long-term cost savings and energy usage reduction from removing them.

The program offers a $35 prescriptive rebate for removing a:

- Secondary unit that was operating for at least six months prior to pick up; and
- Freezer operating as standalone unit.

The program is limited to two units removed per household per year. The program will take energy credit for each freezer or refrigerator based on its age and unit type.

The Company will use the services of a qualified third-party vendor to perform the following services:

- Unit collection, recycling, transportation and storage;
- Qualification of unit at the time of scheduled pick up;
- Appliance processing and materials recycling;
- Issuance of incentive payments;
- Implementation of all customer service related to above activities;
- Product tracking and reporting; and
- Supporting Measurement and Verification requirements.

The vendor will be required to comply with all local, state and federal requirements. This includes maintaining all permits and licenses required for any facilities, equipment and personnel used for this product. The vendor is bound by contract to de-manufacture and recycle all units received; none may be re-sold or placed back in service. The adherence to this process will ensure that recycled units will not re-enter the market.

Xcel Energy and the third-party vendor will both market the program. The target market consists of customers who are disposing of their second refrigerators and/or freezer (usually located in a garage or basement). Generally, these customers have a single-family home with two or more individuals in the household. The product will be available to customers for a limited program period to attract only secondary units and to limit free-ridership. The marketing strategy will utilize seasonal campaigns to promote the product. Product demand often peaks in the summer months, which is associated with customer home improvement and cleaning projects. Deployment of promotional tactics will coincide with these seasonal time periods, with contingency plans if goals are not made by third quarter of each year. Additionally, the third-party provider will survey participants annually to determine customer satisfaction and to verify energy savings.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Addition of freezers	Encourage the retirement of all inefficient units.	New to this Plan	New

Budget and Goal Considerations and Participation Development
The program's participation, electric energy savings goals and budget were derived from historical program results and costs per participant. The main budget drivers include the following:

- Administration – This budget category is used for internal marketing and rebate operations labor.
- Customer Service – The program uses a third-party vendor to implement the program, including: marketing planning, online scheduling; call center operations; refrigerator/freezer collection, transportation, and storage; qualification of appliances; appliance processing and materials recycling; issuing of customer incentive payments; all customer service aspects related to recycling, qualifications and incentives; product tracking and all reporting to Xcel Energy and environmental and compliance entities; supporting measurement and verification and compliance with all local, state and federal requirements.
- Advertising and Promotion – This effort includes: bill inserts, direct mail, print, outdoor, broadcast and online advertisements, community outreach and social media.
- Participant Incentives – The program pays customer rebates with these funds.
- Measurement and Verification – The program performs measurement and verification on the third-party delivery for Xcel Energy.

Involvement of Community Energy Organizations
We will market the program in cooperation with environmental organizations and events as opportunities arise.

➢ Residential Cooling

Description
The Residential Cooling program motivates customers to purchase new energy efficient cooling equipment and have it installed using Quality Installation (QI) practices based on the Air Conditioning Contractors of America standards. The program provides an incentive to Xcel Energy electric customers to purchase qualifying central air conditioning (AC) or air source heat pump (ASHP) equipment and have it installed using industry-standard guidelines, which dictate proper sizing, airflow, and refrigeration charge. Ground source heat pumps (GSHP) are eligible for rebates when customers purchase and install ENERGY STAR equipment; however, these are not subject to quality installation requirements.

The program's main offerings include the following rebates:

Equipment	Criteria	Rebate Amount
Central AC & ASHP	13 – 14.9 SEER with Quality Installation	$150
Central AC & ASHP	15 SEER/12.5 EER with Quality Installation	$350
Central AC & ASHP	16 SEER/13 EER with Quality Installation	$450
GSHP	14.1 EER Closed Loop	$150 per ton, maximum $750

To be eligible for the AC and ASHP program incentives, customers must use a registered contractor for the installation. Participating installation companies must have at least one installer take and pass the Residential Cooling online quality installation assessment, which is a multiple choice exam that measures the aptitude of the installer in the areas of air flow, refrigeration, proper sizing and duct sealing. Xcel Energy also accepts but does not require North American Technician's Excellence certification to become a registered contractor.

The Residential Cooling program uses print, online and radio advertising to reach customers. A trade relations manager will communicate program details to the contractor and distributor channels, conduct training sessions on program specifics, and provide technical support navigating computer applications supporting the program.

Program Changes
The Residential Cooling program requirements have changed for this Plan. The newly proposed criteria eliminate the lowest rebate tier of 14.5 SEER equipment and add a quality installation customer incentive for 13 and 14 SEER units. It also increases the rebate amounts for 15 and 16 SEER units.

The strategy behind the changes to the rebate criteria is to motivate all customers to get a quality installation no matter what efficiency unit they purchase. Secondly, the 14.5 SEER rebate was eliminated and additional rebate dollars were added to the higher tiers to encourage customers to take the next step up in purchasing a higher efficiency unit.

Budget and Goal Considerations and Participation Development
The budgets for the Residential Cooling program were developed based on historical costs per participant and were estimated according to expected participation. Taking into consideration the

economic state of the market, the decreased construction of new homes, and the end of the federal tax credits, the program goals reflect a decrease in participation and an increase in the promotional budget to maintain a high level of energy savings.

The main budget drivers include the following:

- Administration – This category funds administration labor, materials, postage and rebate processing labor and measure and verification.
- Advertising and Promotion – The program will utilize radio, internet and outdoor advertising, promotional brochures and trade communications.
- Participant Incentives – This budget item funds customer rebates for qualifying products.

Involvement of Community Energy Organizations

The Residential Cooling program works closely with the Minnesota Heating and Cooling Association and the Minnesota Building Performance Organization to align best practices and help to communicate and educate with the trade about our programs. Instructors from the Dunwoody Technical Institute HVAC program are consulted as needed and perform an annual review of 10% of the submitted application forms as part of the measurement and verification process. The results are reported to Xcel Energy, and we notify those contractors who have shown questionable installation practices.

➢ School Education Kits

Description
The School Education Kits program offers a multi-component kit that combines classroom activities and in-home projects to fifth or sixth grade students and their parents to teach them about energy and water conservation. The program will target schools within our Minnesota service territory that receive both electric and natural gas service and to those teachers and students who enroll in the program through the third-party implementers.

The program's main offering is an Education Activity Kit containing the following:

- Natural Resources Fact Chart,
- Digital water/air thermometer,
- FilterTone alarm,
- High efficiency showerhead (1.5 gpm),
- Kitchen aerator (1.5 gpm),
- 13-Watt Compact fluorescent light bulb (60 Watt equivalent),
- 18-Watt Compact fluorescent light bulb (75 Watt equivalent),
- Flow rate test bag,
- LED night light,
- Parent comment card, and
- Wristband postcard.

The prescriptive program provides direct impact savings, helps to build awareness of energy conservation at a young age, and provides energy and water savings to customers of various income levels. Traditional marketing tactics are not needed since schools are selected to ensure maximum outreach. Once schools are selected and enrolled, our third-party implementer recruits and trains the teachers, provides all materials, distributes the kits, and continues ongoing support if the teachers have questions during the unit. Classroom support is available via fax, phone, email and by a toll-free 800 number.

Teachers can enroll through a variety of channels. If teacher response is insufficient, the third-party provider will implement contingencies for additional outreach. Upon enrollment, teachers dictate to the third-party when in the school year they would like to use the program materials and provide accurate enrollment numbers. The third-party staff will remain in contact with teachers throughout the school year to assist teachers as needed, as well as to ensure return of the surveys that provide measurement and verification results. It can take up to three months to receive the results from each elementary school depending on when the teachers begin the activity.

As part of an ongoing process, the third-party provider will also establish a waiting list for schools that do not meet the enrollment deadline or exceed the current goal, but are interested in participating in the future. The list will ensure strong participation for subsequent years, and can be deployed at any point the program has additional budget to do so.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Reduce Lighting Savings	To align the program with the new lighting baselines brought about by the Energy Security and Independence Act.	Informal Modification	May 2012

Budget and Goal Considerations and Participation Development
The program's participation, electric and natural gas energy savings goals, and budgets were estimated using historical program results and proposed third-party costs. The main budget drivers include the following:

- Administration – This budget funds the program's internal labor and external fulfillment by our third-party implementer, which includes: project planning, turn key coordination, implementation, marketing, tracking of installations/surveys, call center and online help centers, measurement and verification of the program, and enrollment/reporting.
- Advertising and Promotion – The program will conduct outreach events and teacher recruitment.
- Participant Incentives – This category covers the costs of the kit contents.
- Measurement and Verification – Measurement and verification of the program are conducted by the third-party implementer for Xcel Energy.

Involvement of Community Energy Organizations
We will work with our Community Affairs department, Account Management group, and local community non-profits to identify schools. We will also look for additional opportunities when available for cross promotion, outreach, or cost sharing.

➢ Water Heater Rebate

Description
The Water Heater Rebate program offers prescriptive rebates to customers who purchase and install qualifying high efficiency natural gas water heating equipment for residential use. Customers may choose their own independent residential water heating trade partners or installers, or may install the unit themselves.

In order to participate, customers must receive natural gas service from Xcel Energy. The program is applicable only for the purchase of qualifying new standard tank water heaters or tankless water heaters installed in new or replacement applications. While the 0.67 EF standard tanks do not pass the cost-effectiveness tests, they are included as a part of the Water Heater Rebate program to spur customer demand for high efficiency equipment in the marketplace.

The U.S. Department of Energy is scheduled to raise the federal minimum efficiency of storage tank water heaters from 0.59 EF to 0.62 EF for 40-gallon units on April 16, 2015, per section 325(e)(4)(B) of the Energy Policy and Conservation Act. On that date, 40-gallon units less than 0.62 EF cannot be manufactured or imported for sale in the United States. Prior to April 16, 2015, these lower efficiency units can be sold until inventories are depleted. Based on conversations with multiple water heating trade partners and manufacturers, the 0.59 EF to 0.61 EF storage water heaters are expected to remain on shelves well through the end of 2015 and into 2016. As a result, we intend to keep the baseline efficiency at 0.59 EF and 0.62 EF as the first rebate tier throughout this triennial filing period.

We intend to market the program using a variety of communication tools, including: HVAC trade partner communication, email newsletters, tradeshows, and point-of-purchase materials at retailers. The program will be cross-promoted with other Xcel Energy residential heating-related programs.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Add 0.90 EF Tankless Water Heater	Market transformation; recent participation trending toward higher EF level; 0.90 is more cost-effective for the Company and customers.	New to this Plan	New
Remove 0.82 EF Tankless Water Heater	Market transformation; recent participation trending toward higher EF level.	New to this Plan	New
Remove 0.80 EF Storage Tank Water Heater	Lack of availability in the marketplace.	New to this Plan	New

Budget and Goal Considerations and Participation Development
The program's participation and gas savings goals were developed based on historical program performance and expected participation throughout the Triennial period. The budget was determined based on the costs needed to rebate the expected number of eligible units and the appropriate rebate levels per efficiency level.

The main budget drivers include the following:

- Administration – This category represents internal labor for project planning and implementation, as well as external contract labor, materials and postage.
- Advertising and Promotion – This program will be promoted via trade partner communication, email newsletters, tradeshows, and point-of-purchase materials.
- Participant Incentives – The majority of the budget goes to pay customer rebates.

Involvement of Community Energy Organizations
Xcel Energy is an active member in the Consortium for Energy Efficiency's Coalition of ENERGY STAR Water Heaters. The Company is committed to assisting this group's mission of inspiring changes in the market through the promotion of energy efficient technologies.

➢ Saver's Switch®

Description
Saver's Switch is Xcel Energy's residential load management program. The program gives participating customers bill discounts in exchange for allowing the Company to reduce their air conditioning and water heater usage on days of peak demand. During a control event (typically a hot, humid day or evening), air conditioners are cycled on and off in a manner designed to reduce the load by 50%. Enrolled electric water heater load is shed entirely for the duration of the control event, which can occur at any time of year. Air conditioners and water heaters are controlled via a radio operated switch installed by a licensed electrician on or near the customer's central air conditioning unit. Participants in the air conditioning program have the option of enrolling a qualifying electric water heater; however, customers cannot enroll a water heater on its own.

The program's main offerings include the following:

- Participating air conditioning customers receive a 15% discount off the electric energy charges on their bills between June and September; and
- Water heater participants receive 2% off the same charges year-round.

The Saver's Switch program has operated in Minnesota since 1990. Many of the switches installed early in the program are now beyond their estimated useful life. In this Plan, we intend to continue to use the Virtual Visit tool to identify switches that should be replaced. We also plan to proactively replace switches more than 20 years old.

Program Changes
None.

Budget and Goal Considerations and Participation Development
The program budget and savings were developed based on equipment and installation costs for the number of switches to be installed and replaced.

The main budget drivers include the following:

- Administration – This budget category will cover the costs of internal labor for program planning and implementation, as well as the costs of external contract labor and software maintenance.
- Customer Services – The program uses a third-party to install the switches.
- Advertising and Promotion – The program will have a limited promotional budget in this Plan, as most of the installations will be from the replacement of old switches.
- Measurement and Verification – The program hires a third-party consultant to conduct measurement and verification to determine the savings per switch achieved each year.

Involvement of Community Energy Organizations
The program utilizes specialized hardware and contracted installers. Therefore, other than for promotions, there is no involvement from community energy organizations.

➢ Consumer Education

Description
The Consumer Education program is an indirect-impact program that provides residential customers with the information and resources to reduce their energy usage. Because the Residential Segment is demographically varied, Xcel Energy employs a variety of resources to communicate the conservation message.

The program's communication strategies include the following:

- Annual community and conservation events and local community event outreach with energy efficiency messages;
- Social media (Facebook, Twitter, blogs, etc.);
- Online messaging through local newspaper media websites;
- Direct mail marketing to address seasonal usage challenges;
- Sponsorship of local Earth Day events;
- Sponsorship of local conservation publications;
- Conservation messaging through bi-monthly Energy Update Newsletter;
- Publication of reference materials; and
- Sponsorship of seminars and conferences supporting residential conservation and energy efficiency.

The program will focus on renewing existing partnerships and establishing new partnerships with online and print media. In addition, the program will employ Social Media strategies to drive active engagement in energy efficiency through Facebook, Twitter and blogs. By continuing to diversify the communication channels, the program will increase residential customer knowledge and provide a greater variety of resource options and services.

Program Changes
None.

Budget and Goal Considerations and Participation Development
The program budgets were developed through identification of customer growth patterns, costs to produce materials, the reach of advertising, and sponsorship costs. The participation goals were established through targeted outreach to customer segments and use of multiple channels for delivery of energy efficiency messaging.

The main budget drivers included the following:

- Administration – This category represents the internal labor needed for program planning and implementation.
- Advertising and Promotion – Promotional events are the primary budget driver for this program.

Involvement of Community Energy Organizations
None.

➢ Home Energy Audit

Description
The Home Energy Audit program offers discounted energy auditing services to residential customers. The purpose of this program is to improve energy savings by influencing homeowners' and renters' behaviors through conservation education. This program will be marketed through seasonal advertising and bill inserts as increases in monthly energy bills tend to drive program activity. We will also take advantage of local "green event" opportunities and direct mail campaigns as needed.

The program's main offerings include the following:

- Three tiers of In-Home Audits:
  - Home Walkthrough ($30),
  - Standard Audit ($60), and
  - Standard Audit with Infrared ($100)
- Free Online Home Analysis Tool

The main offerings are described below.

In-Home Audits
The Home Walkthrough will begin with the auditor's review and analysis of the customer's billing history and a discussion surrounding any concerns or questions that the customer may have regarding home energy usage and related comfort. The auditor will perform an assessment of the interior and exterior of the home and provide a review of the top three recommendations to the homeowner. This option is free to income-qualifying customers. An electronic personalized audit report is emailed to the customer highlighting the top recommendations, providing rebate program information, and sharing infrared photos, if applicable.

The Standard Audit includes all Home Walkthrough audit components, as well as a blower door test and a combustion appliance zone (CAZ) test. The blower door test will be conducted in every home and the CAZ test will be performed only if atmospherically vented appliances are present.

The Standard Audit with Infrared includes all Standard Audit components as well as an infrared scan to evaluate internal structures such as drywall and insulation and to determine temperature differences where insulation is present, missing, or not working effectively.

Both the Home Walkthrough and the Standard Audit will be available to all customers. The Standard Audit with Infrared will be available to all natural gas customers and electrically heated customers. Customers may get a Home Walkthrough audit every three years, or upgrade to a more extensive audit more frequently.

Free Online Home Analysis Tool
Customers can utilize the online Home Analysis tool free of charge. The online audit prompts customers to enter information about their homes, including: square footage, type of cooling and heating, age of the home, and number of residents. This audit offers customers suggestions about how to reduce their energy bills such as adding insulation, replacing old inefficient appliances, maintaining or replacing heating systems, as well as purchasing energy efficient products such as

showerheads and compact fluorescent lights. Once the online audit is completed, customers will be notified of the three in-home audit options and provided information about our conservation rebate programs.

Program Changes

Change	Rationale	DER Notification Method	Date Notified
Offering Standard Audit with Infrared to all-electric customers.	Offer a reduced cost audit to all our customers.	New to this Plan	New

Budget and Goal Considerations and Participation Development

The program's participation and budgets were determined by historical program participation and expenses. The cost per participant has increased over the years as a result of the investment into more sophisticated online tracking systems and electronic audit reports, the inclusion of the CAZ test in the top two tiers, as well as the growing popularity of higher-priced Standard Audit with Infrared.

The main budget drivers include the following:

- Administration – The budget includes the costs of internal labor and external contract labor to support the program.
- Customer Services – This category represents the costs of the third-party auditors, as well as the payments made by customers for their audits.
- Advertising and Promotion – The program includes a modest promotional budget to steer customers to the audits.

Involvement of Community Energy Organizations

Xcel Energy contracts with the Neighborhood Energy Connection to implement the Home Energy Audit program. NEC is responsible for program promotion, audit scheduling, auditor recruiting and subcontracting, paperwork administration and program tracking.

➢ Residential Lamp Recycling

Description
The Residential Lamp Recycling program encourages customers in Minnesota to recycle their spent fluorescent bulbs instead of discarding them, to ensure that hazardous materials, such as mercury, are not getting into the environment.

The program's main offerings include the following:

- Free compact fluorescent light bulb recycling at participating local hardware stores and partnering county hazardous waste facilities.
- Coupons that offer 50 cents off the recycling fee for each fluorescent tube and HID bulb at participating hardware stores. The coupons are available at participating hardware stores and on the xcelenergy.com and responsiblebynature.com websites.

The Residential Lamp Recycling program is marketed primarily through Xcel Energy Home Lighting program promotions, participating hardware stores, and on the main Xcel Energy website. A new feature allows customers to search by zip code to find the nearest recycling site.

The Company follows the requirements of Minn. Stat. § 216B.241, subd. 5, which necessitates public utilities to notify customers that fluorescent recycling is the law in Minnesota. Every Residential Lamp Recycling and Home Lighting promotional piece includes a disclaimer regarding the statute, such as, "Fluorescent lamps contain small amounts of mercury that are harmful to the environment. In Minnesota, it is illegal to dispose of spent mercury bulbs in household trash receptacles."

Program Changes
None.

Budget and Goal Considerations and Participation Development
Budgets were developed based on historical spending and the estimated number of bulbs to be recycled in the coming years. The budget is set to increase about five percent annually to account for additional bulbs that we anticipate will be recycled each year. Promotional budgets will remain consistent throughout the Triennial Plan.

The main budget drivers include the following:

- Administration – This will provide funds for internal labor for planning and program implementation.
- Advertising and Promotion – We will market this program with the Home Lighting promotions.

Involvement of Community Energy Organizations
Xcel Energy stays active in the Minnesota and national lamp recycling community through regular partnership with Mercury Technologies of Minnesota, Inc. and the Center for Energy and Environment.

➢ LOW-INCOME SEGMENT

Description
The Low-Income Segment is a subset of the overall Residential Segment. Low-income customers traditionally reside in single- and multi-family rental homes. The goal of this Segment is to educate low-income customers about their energy usage and how to reduce their monthly utility bills. To address this group, we will provide materials and assistance to make permanent changes in low-income residences, which will improve comfort and lower costs. We have expanded the Low-Income Segment since the last Triennial Plan to provide additional opportunities to reach customers.

Programs
We will offer three Low-Income programs in this Plan: Home Energy Savings, Low-Income Home Energy Squad, and Multi-Family Energy Savings. The Single Family Weatherization and the Home Electric Savings programs of previous Plans have been combined to create the Home Energy Savings program (HESP) in this Plan. This program, along with Low-Income Home Energy Squad, will offer analyses of both gas and electric consumption to income-qualified customers and provide them with products and services that assist in lowering their monthly energy bills. Through HESP, customers may also be eligible for replacement of appliances based on the condition of the existing units identified during the analysis phase.

The new offering starting in 2013 is the Multi-Family Energy Savings program (MESP). This program will provide opportunities for the underserved apartment sector. Using the HESP program model, MESP will offer electric home energy efficiency measures and educational information to apartment dwellers. A third-party program implementer will deliver MESP operations.

Overall Goals
We have estimated savings of 7.7 GWh and 70,544 Dth over the three-year period from the Low-Income Segment, accounting for nearly 1% of the Company's total electric energy savings goal and 3% of its total natural gas goal. Most of the energy savings within the Segment will come from compact fluorescent light bulbs, insulation, and appliances. We experienced a challenge in reaching our electric savings goals in recent years and the addition of MESP will help to address the gap through its promotion and enrollment of apartment building residents. The Low-Income Segment budgets are increasing from the last Plan to account for increased labor and equipment costs. Additionally, we have increased funding for water heater installations, consistent with current installation costs as reported by the low-income agencies.

Market Analysis
The interest in and need for low-income energy efficiency services has never been greater. Due to high unemployment levels, some customers are struggling to pay their monthly bills. We believe that the Low-Income Segment plays a vital role by providing programs and services to help lower energy bills and improve the comfort of low-income homes.

Marketing/Advertising/Promotion
Traditionally, we have minimized efforts to promote and build awareness of our low-income offerings since participating community agencies managed enrollment. While there is a growing interest in the programs themselves, awareness is still relatively low, so we are continuing to expand

how we promote the Segment. In this Plan, the Low-Income programs will be marketed through a variety of activities, including: neighborhood community events, workshops, direct mail campaigns, and partnerships with local non-profits.

Overall Policies
To participate in the Low-Income Segment, customers must have incomes that fall below 50% of the State Median Income guidelines or 200% of Federal Poverty levels, which ever is greater.

Stakeholder Involvement
The current low-income programs are delivered through community non-profit agencies including the Center for Energy and Environment, Community Action of Minneapolis, Energy CENTS Coalition, and Neighborhood Energy Connection. In addition to these direct partners, we also work with a variety of community outreach groups such as the Project for Pride in Living, local food shelves, and the Salvation Army.

➢ Home Energy Savings

Description
The Home Energy Savings program offers free education and home improvement services to income-qualifying customers. This is a new program combining the old Home Electric Savings and Single-Family Weatherization programs. The customer will receive a home visit and energy bill analysis to learn about energy conservation. Based on the visit, we will determine the customer's eligibility for other offerings including home weatherization and appliance replacements. Income-qualified Xcel Energy customers must be at 50% of the State Median Income guidelines or at 200% of the federal poverty level, whichever is greater.

The program is implemented through third-party providers who are responsible for program promotion, customer enrollment, income eligibility confirmation, recruitment, subcontractor management, program tracking, and reporting. The program is promoted through advertising efforts including radio, online, and television. We will also promote the program at community events and through collaboration with other local non-profits, such as the Salvation Army, Project for Pride in Living, and local food shelves.

The program's main offerings include the following:

- Free electric home services including:
    - Home visits,
    - CFLs,
    - Refrigerator and/or freezer replacements and recycling,
    - Window/wall AC replacements and recycling,
    - Electronically commutated motors for furnaces, and
    - Attic insulation for electrically heated homes.
- Free gas home services including:
    - Attic insulation and air-sealing,
    - Wall insulation,
    - Furnace or boiler replacement, and
    - Water heater replacement.

The main offerings are described below.

<u>Electric Home Services</u>
The home visits and CFLs are available to all income-qualified customers in our electric service territory. These visits include:

- Analysis of the electric bill;
- Client assessment and education;
- Inspection and evaluation of major appliances;
- Installation of four CFLs;
- Written energy savings recommendations;
- Distribution of energy conservation educational materials; and
- Evaluation and installation of electric weatherization services to electric heat customers.

Appliance replacements are available to those customers whose appliances meet the following criteria:

- Customer must own the appliance or provide a signed property owner waiver to allow replacement and recycling of the old inefficient appliance;
- Appliance must be used on a regular basis;
- Appliance must be in working condition;
- Refrigerators must be the primary unit in the home unless the customer agrees to recycle a second working appliance as well; and
- Window AC units may have a maximum EER rating of 8.5.

Gas Home Services

These services are available to all income-qualified customers in our gas service territory:

- DOE standard energy audit including blower door testing;
- Detailed specifications for all weatherization measures;
- Insulation of attic and bypass sealing to an R-value of 44;
- Insulation of walls to an R-value of 14 or greater; and
- Carbon monoxide detector installed with any weatherization job.

We will provide funding for replacement of old inefficient furnaces, boilers, and water heaters with the following:

- Furnaces with minimum AFUE of 92% for a maximum annual average of $3,500 per unit including equipment and labor cost;
- Boilers with minimum AFUE of 84% for a minimum annual average of $4,500 per unit including equipment and labor costs; and
- Natural gas water heaters with an EF of 0.67 or higher, for a maximum of $1,400 per unit including equipment and labor costs.

Program Changes

The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Combined the former Home Electric Savings and Single-Family Weatherization programs	Programs are delivered as one program by third-party implementers	New to this Plan	New
Increased maximum funding provided for water heater replacements	Increase in cost for that measure expressed by vendors	New to this Plan	New
Added carbon monoxide detectors to list of weatherization measures	To increase safety for our customers where we are helping them increase the tightness of their homes	New to this Plan	New
Reduced lighting savings	To align the program with the new lighting baselines brought about by the Energy Security and	New to this Plan	New

	Independence Act.		

Budget and Goal Considerations and Participation Development
The program's participation, energy savings goals, and budgets were based on cost estimates and feedback from our third-party implementers and historical program performance and expenses. The main budget drivers include the following:

- Administration – This budget covers internal labor for program planning and implementation.
- Customer Service – Third-party program implementers are funded through this budget.
- Advertising and Promotion – The program's direct advertising, bill inserts, community outreach events and more are conducted with these funds.
- Participant Incentives – Equipment subsidies are funded in this budget.

Involvement of Community Energy Organizations
The current program is delivered through two community non-profit agencies, Community Action of Minneapolis and Energy CENTS Coalition. In addition, we continuously try to build relationships with existing agencies and non-profit organizations in the state, such as the Salvation Army and Project for Pride in Living. These partnerships allow us to increase program awareness and increase program participation.

➢ Low-Income Home Energy Squad®

Description
The Low-Income Home Energy Squad program offers installation services to electric and gas customers who seek to improve their home's comfort and lower their utility bills. The program is marketed to income-qualified customers in Xcel Energy's combination gas and electric territory. The program pays for the equipment and labor costs to install a number of appropriate, moderate impact measures. The program helps to remove barriers for customers to make energy improvements.

The program's main offerings include the following:

- Electric measures
  - CFLs of various wattages,
  - Power control timers for TVs & electronic accessories, and
  - Dimmable CFLs.
- Heating/cooling measures
  - Weather-stripping of external doors,
  - Programmable thermostat installation, and
  - Setback of pre-existing programmable thermostats.
- Hot water measures
  - Insulation blanket for hot water heaters,
  - High efficiency showerheads,
  - Low-flow sink aerators, and
  - Temperature assessment and setback of water heaters.

This program offers the delivery and installation of energy conservation measures bundled within one package. The program pays all equipment and labor costs. A quick analysis of the home is completed by the technicians upon entering the home and then installation of energy efficiency measures is completed. The technicians discuss the measures with the homeowner and educate the homeowner about the proper use of the measures in addition to offering energy conservation tips.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Add water heater temperature setback	Significant gas savings in customers' homes in addition to setting at a safe water temperature	Informal Modification	May 2012
Reduce CFL Savings	To align the program with the new lighting baselines brought about by the Energy Security and Independence Act.	New to this Plan	New
Program pre-existing programmable thermostat	Additional heating/cooling savings for the customer	New to this Plan	New
Power control timer replacing the power strip measure	Easier installation and higher customer satisfaction	New to this Plan	New
Add dimmable CFL	Fulfills commonly requested and popular measure among customers	New to this Plan	New

Budget and Goal Considerations and Participation Development
The program's participation, electric and gas savings goals, and budgets were estimated using historical program performance and costs, estimated vendor costs, and desired customer targets.

The main budget drivers include the following:

- Administration – This budget covers third-party vendor costs for project planning and implementation.
- Customer Service – The program pays the installation labor and measure expenses for income-qualified customers.
- Advertising and Promotion – We will conduct community outreach and neighborhood print advertising with this budget.

Involvement of Community Energy Organizations
Xcel Energy contracts with the Neighborhood Energy Connection in the Company's gas and electric combination territory to provide this service.

➢ Multi-Family Energy Savings

Description
The Multi-Family Energy Savings program offers free education and services to qualifying multi-family buildings. The Multi-Family program is designed to provide the same electric services to income-qualifying renters as the former Home Energy Savings program. The program is designed to reach these tenants and support low-income housing through building-wide projects. The program will offer free seminars, which will be held in each building, to educate tenants on energy use and conservation, and free in-unit energy upgrades, including CFLs and appliance replacements.

To qualify, multi-family buildings in our electric territory must meet the following criteria:

- For properties with two to four housing units, at least 50% of the households must have incomes below 50% of the State Median Income guidelines or 200% of the federal poverty level, whichever is greater; and
- For properties with five or more units, 66% of the households must have incomes below 50% of the State Median Income guidelines or 200% of the federal poverty level, whichever is greater.

The program will be administered by third-party providers who can provide services throughout Xcel Energy's Minnesota electric service territory. The third-party implementers are responsible for program promotion support, confirming building eligibility, hosting seminars, recruiting and organizing subcontractors, and program tracking and reporting. The program will be promoted through direct mail campaigns and sales calls to qualifying buildings, which are identified through local resources such as HUD and LIHEAP.

The program's main offering is free electric equipment and installations, including:

- CFLs,
- Refrigerator Replacements and Recycling,
- Window/Wall AC Replacements and Recycling,
- Freezer Replacements and Recycling,
- ECM Furnace Fans, and
- Attic Insulation for electrically-heated buildings with 2-4 units.

This offering will provide energy seminars, building assessments, CFL installation, and educational materials to qualified buildings. In addition, appliance replacement will be provided to those buildings/units where the appliances meet the following criteria:

- Appliance must be used on a regular basis;
- Appliance must be in working condition;
- Refrigerator must be the primary one used in the unit, unless customer agrees to recycle a second working appliance as well; and
- Window air-conditioning (AC) units must have an EER rating of 8.5 or less to be replaced.

Appliances that are replaced through this program will continue to be the property of the original owner. For example, refrigerators owned by the building owner will continue to be property of the building owner and window AC units owned by the tenant will continue to be property of the tenant.

Program Changes
None.

Budget and Goal Considerations and Participation Development
The program's participation and energy savings goals were developed using historical costs and savings from the former Home Electric Savings program. Goals are set lower for 2013 to accommodate the expected mid-year launch and ramping up for 2014 and 2015.

The main budget drivers include the following:

- Administration – This category covers internal labor for program planning and implementation.
- Customer Services – The third-party program implementers are funded through this budget.
- Advertising and Promotion – The program will conduct marketing in the form of sales calls and direct mail campaigns.
- Participant Incentives – Although the program does not pay rebates, the equipment subsidies are funded in this budget.

Involvement of Community Energy Organizations
The program was developed and designed with input from many local stakeholders, all of whom were involved in either the Rental Housing Energy Efficiency Work Group led by Minnesota Community Action Partnership or the Multi-Family Affordable Housing Work Group led by American Council for an Energy-Efficient Economy and the National Housing Trust.

➢ PLANNING SEGMENT

Description
The Planning Segment includes indirect-impact efforts that are not directly affiliated with a specific direct-impact program. The Segment includes Advertising & Promotion, Application Development and Maintenance, CIP Training, and Regulatory Affairs.

The overall purpose of the Planning Segment is to:

- Increase awareness and participation in our programs through CIP-specific advertising and promotional messages;
- Provide software and hardware tools and processes to make it easier for internal staff and customers to manage and participate in our programs;
- Provide strategic direction for Xcel Energy's DSM portfolio;
- Ensure CIP-related regulatory compliance;
- Guide Xcel Energy internal policy issues related to CIP; and
- Train Xcel Energy's Marketing & Sales staff for effective performance.

Programs
The Segment includes Advertising & Promotion, Application Development and Maintenance, CIP Training, and Regulatory Affairs.

Overall Goals
The budgets for this Segment were developed based on historical costs. As an indirect-impact Segment, there are no savings goals associated with these efforts.

Market Analysis
Not applicable.

Marketing/Advertising/Promotion
Not applicable.

Overall Policies
Not applicable.

Stakeholder Involvement
Not applicable.

➢ Advertising & Promotion

Description
The Advertising & Promotion program drives awareness of electric and gas conservation and efficient options among all types of customers. These budgets also support program-specific strategies for programs with the broadest appeal. The budget is split internally to support both residential and business objectives. The aim of our advertising and promotion efforts is to ensure that efficiency is top-of-mind when customers are faced with purchasing decisions that impact their energy use and to encourage them to look at the lifetime savings rather than focusing on first costs. We also strive to help customers think, on an ongoing basis, about how they could do things better when it comes to energy.

Various media types help us reach customers at different stages of the efficiency decision-making process, including:

- Awareness: cable television and radio advertising;
- Attention: print advertising, sponsorships and events; and
- Engagement: interactive media, direct marketing.

We aim to engage customers in ongoing efficiency efforts by:

- Driving web visits to focused content pages with engaging content (downloads, video views, and interactive pages);
- Increasing engagement with our digital media and direct-marketing efforts;
- Maintaining awareness, likeability, and favorable opinion of our offerings;
- Creating an emotional connection by appealing to individual needs/barriers;
- Sponsoring cost-effective events and outreach; and
- Maintaining traditional marketing outreach where those tactics deliver the most cost-effective impact.

Program Changes
None.

Budget and Goal Considerations and Participation Development
The program's budgets were determined by using cost estimates from past projects, vendor proposals, current customer counts, current conservation advertising budgets, known costs for creating new campaigns, and other general industry pricing knowledge. As we continue to optimize the marketing mix, the budget will give us the flexibility to choose the tactics and tools that best meet our needs for cost-effective results. The main budget drivers include the following:

- Administration – This category covers the internal labor necessary to implement our marketing campaigns.
- Advertising and Promotion – These funds are spent directly on advertising and promotion.

Involvement of Community Energy Organizations
The Advertising & Promotion budget provides support to the Residential and Business programs that partner with non-profit agencies and community organizations.

➢ Application Development & Maintenance

Description
Marketing, managing and delivering energy efficiency programs, as well as reporting on program achievement, involves extensive data and process management, which is performed with the Application Development and Maintenance budget. To support this work, Xcel Energy utilizes several different computer systems. In order to support these dynamically changing programs, we conduct regular maintenance and sometimes require specific new functionality. In this Plan, we intend to perform enhancements to our current systems, as well as system updates to maintain the quality of our reporting. These necessary changes will introduce additional reporting flexibility and efficiencies, improve back office processes, and improve process management by injecting efficiencies into current operations.

Program Changes
None.

Budget and Goal Considerations and Participation Development
Our Application Development and Maintenance work is performed by a combination of in-house software developers and system administrators as well as contracted external resources. The budgets for this work represent both software purchases as well as the labor required to configure the software to integrate with existing systems and processes. The budgets were developed using historical trends for existing system maintenance work and project-specific budgets for new system development work.

The main budget drivers include the following:

- Administration – All expenditures for this program, including internal labor, software licenses, and application development and maintenance are covered by this budget category.

Involvement of Community Energy Organizations
Not applicable.

➢ CIP Training

Description
The CIP Training program allows Xcel Energy staff within the marketing, engineering, regulatory, operations, and sales teams the opportunity for continued education on energy efficient electric and natural gas equipment, as well as new advances in technology and changes in the energy efficiency industry. To enhance our knowledge base, staff may attend either internal or external training sessions on various technologies, industry best practices, as well as energy efficiency and conservation-related conferences and seminars. With continued education, we are able to stay current on the energy efficiency industry and ultimately better serve our customers. This will allow us to overcome future challenges and help us meet our conservation goals.

Program Changes
None.

Budget and Goal Considerations and Participation Development
The program budget was developed by evaluating historical spending.

The main budget drivers include the following:

- Administration – This budget covers the internal labor, materials, and travel expenses for our staff to attend training sessions.

Involvement of Community Energy Organizations
Not applicable.

➢ Regulatory Affairs

Description
Regulatory Affairs manages all DSM regulatory filings, directs and prepares cost-benefit analyses, provides results of energy conservation achievements, manages electric and gas potential studies, and analyzes and prepares cost recovery reports. The group also provides procedures for effectively addressing requirements for the DSM regulatory process. These functions are needed to ensure a cohesive and high-quality DSM portfolio that meets legal requirements, as well as the expectations of Xcel Energy's customers, regulators and staff.

In addition, Regulatory Affairs supports the DSM component of resource planning, rate cases, and certificates of need, and provides strategic evaluation planning and internal policy guidance. These functions are needed to ensure the cost-effectiveness of DSM, to ensure the quality of DSM impact estimates, help generate ideas for future DSM projects, establish programmatic consistency, and manage DSM-related marketing information.

Budget and Goal Considerations and Participation Development
Program budgets were developed based on historical spending. Included in the Regulatory Affairs budgets are materials, administration, and outside consulting costs. Budgets have decreased slightly to recognize we have not spent the total budgeted consulting costs in 2010-2012.

The main budget drivers include the following:

- Administration – This budget category covers the internal labor and materials, outside consulting and contracting necessary to deliver all CIP-related regulatory filings in Minnesota. In addition, annual software license fees for DSMore (used for cost-benefit analyses) are included in this budget.

Program Changes
None.

Involvement of Community Energy Organizations
The Regulatory Affairs group works with third-party alternative filers, community organizations, and other interested parties as applicable. In addition, we regularly attend energy efficiency meetings and functions and assist with legislative policy.

➢ RESEARCH, EVALUATIONS, & PILOTS SEGMENT

Description
The Research, Evaluations, and Pilots Segment includes indirect research and development efforts that are not directly affiliated with a specific direct impact program. This Segment provides research, evaluation, and screening of new DSM products and concept testing.

Under this Segment, Market Research and Product Development will:

- Evaluate achieved energy and demand savings;
- Quantify the various levels of market potential for programs;
- Analyze overall effects of Xcel Energy's CIP portfolio on customer usage and overall system peak demand and system energy usage;
- Develop new DSM programs;
- Research, pilot, and monitor new conservation products to determine conservation opportunity;
- Provide overall informational support for DSM;
- Evaluate the processes and impacts of DSM Programs;
- Measure overall customer satisfaction with Xcel Energy's various DSM efforts;
- Provide segment and target market information; and
- Examine in further depth the various assumptions used within program design and management.

Portions of this Segment are subject to the Research and Development spending cap of 10% of our minimum-spending requirement. For the most part, Market Research projects fall outside of Research & Development (R&D), except for the market potential studies, as the information is not intended exclusively to assist in developing new programs and mainly addresses existing programs through efforts like program evaluations. Since no market potential studies are planned for the triennial period, Market Research budgets have not been included in the R&D cap. All of Product Development projects and costs are included within the R&D category and subject to the cap, except for pilot programs.

Programs
This Segment is comprised of the Market Research and Product Development teams.

Overall Goals
The budgets for Market Research and Product Development were based on past spending and adjusted for planned expenditures. Pilot projects may be proposed as either direct or indirect impact. No direct-impact pilots are recommended as part of this filing and no savings goals are proposed. No market potential studies are proposed for this filing.

Market Analysis
Not applicable.

Marketing/Advertising/Promotion
Not applicable.

Overall Policies
Not applicable.

Stakeholder Involvement
We involve external parties (government, manufacturers, vendors, installers) in our product development process through the CIP Advisory Board and through one-on-one conversation about product ideas. We also seek the input of manufacturers, vendors, and installers as we build the technical assumptions for each product in order to test for cost effectiveness.

➢ Market Research

Description
Market Research drives a variety of CIP-specific projects that are used to inform our decision-making concerning DSM. These efforts fall into three categories:

- Program Support Activities primarily provide overall DSM informational support for several programs or segments;
- Program Evaluations provide individual specific program process and/or impact evaluations; and
- Program Assumptions Analysis examines in further depth the various assumptions used within program design and management.

Although research needs may change during the course of this Plan, we currently plan to conduct the following Market Research efforts:

- Program Support Activities:
  - Energy Conservation Awareness, Attitude & Usage Studies;
  - Home Use Study;
  - Satisfaction Research for the following programs: Home Energy Audit, Low Income;
  - Business and Residential Advertising Awareness Tracking; and
  - Customer Segment Research.
- Program Evaluations:
  - Residential Segment: Home Performance with ENERGY STAR, Consumer Education, Heating System Rebates, Home Energy Squad; and
  - Business Segment: Custom Efficiency, Self-Direct, Fluid Systems Optimization, Lighting Efficiency.
- Program Assumptions Analysis:
  - Portfolio Wide Technical Assumptions Review; and
  - Net-to-gross Data Collection within M&V Prescriptive Inspections.

Program Changes
None.

Budget and Goal Considerations and Participation Development
The Market Research budget was developed based on historical program costs for similar projects of similar scope.

The main budget drivers include the following:

- Administration – This budget category covers the internal staff and external professional services needed for project planning and implementation.
- Measurement and Verification – This category provides funds for program evaluations and the program assumptions analysis.

Involvement of Community Energy Organizations
Not applicable.

➢ Measurement & Verification

This section documents our efforts to measure and verify direct-savings gas and electric programs to ensure that reported savings are as accurate as possible while balancing measurement and verification (M&V) robustness against cost. M&V costs have been budgeted within each program's overall budget. Custom projects all adhere to pre-established M&V policy and threshold under Docket Number E,G999/CIP-06-1591. For programs not specifically listed in this document, project M&V is not conducted due to budgetary or logistical constraints, but may be validated in periodic program evaluations.

1) **Rebate Application Validation (All Programs)**

Step 1: Validate the applications prior to data entry and send back to customer or account manager if missing or incorrect data,

Step 2: Daily audit is conducted on all rebates after data entry but before rebate is issued. Errors are corrected and rebate is paid.

2) **Measurement & Verification (General)**

Verifies on an ongoing basis during performance year the gross energy and demand savings.

- **Prescriptive programs** using deemed savings technical assumptions have random sample field inspections to verify that the measure is installed and operating and the key parameters of the technical assumption matches rebate.
- **Custom programs** go through stages of engineering review of the custom measure savings calculations. Random samples are sent out for further review with an outside engineering firm. Projects with savings greater than 1 GWh or 20,000 Dth are pre- and post-metered, as are some projects that we meter at engineering discretion to verify assumptions for new technologies or other variables.
- **Exception programs** conduct M&V as it makes sense from a financial, accuracy, logistical and customer investment standpoint.

Prescriptive Process

For most of the programs, the verification contractor selects a statistically valid number of projects to verify through field inspections or phone surveys. The sample size is designed to achieve accuracy levels of between 10% and 20% given a confidence level of 90% around the "realization rate" and is weighted to select larger projects. The number of randomly selected participants in the sample may increase or decrease during the year to ensure that the realization rate accuracy approximates the precision goals for the program. Sampling bias caused by poor response rates and deliberate exclusion of sample projects will be reduced through a quality control process. Rebate forms notify all customers that their respective premises and measures are subject to verification inspections.

The "realization rate" is a calculated value that compares the verified savings to the reported savings. The realization rate for a project is the ratio of the verified savings to the savings reported on the rebate application. The realization rate for the program as a whole is the ratio of the program's total

verified savings to the total rebate reported savings. The program realization rate is applied to all program savings to determine program impacts.

The process is as follows:

1. Customer submits rebate application and required documentation to Xcel Energy after measure is installed.
2. Rebate Operations reviews all business and residential program rebate applications, supporting documentation, and vendor invoices. They check the customer information, equipment eligibility and proper rebate amounts. If information is missing or incorrect, the application is sent back to the account representative or customer to make changes.
3. If project qualifies for rebate, Rebate Operations enters rebate application form data into the rebate tracking system and authorizes rebate payment. Prior to authorizing rebates, all applications are verified in a daily audit.
4. Monthly, Xcel Energy sends the third-party verification contractor (VC) all projects completed during the period.
5. VC selects random samples, notifies Xcel Energy of the sample selections, and manages statistically valid sample process to achieve a 90% confidence level with 10% precision. If it is not possible to achieve 90/10, a confidence and precision level of 90/20 is acceptable.
6. VC contacts customer to schedule the inspection.
7. Verification contractor visits site and verifies the savings factors and equipment information for that measure. VC also re-runs the rebate calculation worksheet for each project to ensure the inputs and outputs of the calculator are correct.
8. VC documents discrepancies and submits report to Xcel Energy.
9. Xcel Energy product management and technical staff evaluate the nature of the discrepancy and take appropriate follow-up actions.
10. VC calculates realization rate for each project and cumulative year-to-date realization rate for each program.
11. Corrective action such as communication of program requirements, changes to program rules or identification of intentional misuse of the programs will be undertaken based on these audit results as necessary.

Applicable Prescriptive Programs

Including prescriptive projects of programs with prescriptive and custom components.

Business Programs

- Commercial Efficiency
- Computer Efficiency
- Cooling Efficiency
- Fluid System Optimization
- Foodservice Equipment
- Heating Efficiency
- Lighting Efficiency
- Motor Efficiency
- Process Efficiency
- Turn Key Services

Residential Programs

- Heating System Rebate
- Insulation Rebate
- Low-Income-Home Energy Savings
- Multi-Family Energy Savings
- Residential Cooling
- Water Heating Rebate

Programs and/or Components with Variation from Prescriptive Process

- The **Boiler Tune-Up and Tune-Up Plus** measures from the Heating Efficiency program do not have audits performed.
- **Business New Construction - Energy Efficient Buildings (EEB) component**, EEB differs from the prescriptive process in that preapproval is required prior to equipment install, invoices are not required, and all projects are field verified.
- For **Computer Efficiency** program, all manufacturers will provide sales data on quantity and type of computer equipment shipped.
- **Energy Feedback, Home Performance with ENERGY STAR, Home Energy Squad, Low-Income Home Energy Squad, Refrigerator Recycling** the third-party implementers are responsible for ensuring verification of measures.
- For **ENERGY STAR Homes**, third-party implementer verifies 100% of homes and may use a 10% sampling process with builders/units that meet the sampling criteria.
- For **Home Lighting**, all retailers will provide sales data on quantity and type of bulbs sold.
- **Residential Cooling**, in addition to the prescriptive verification process, Dunwoody Institute performs a 10% audit of submitted data from the rebate applications. A Dunwoody Institute expert reviews the data and identifies values that are not within a normal range. Contractors with potential data issues are identified and action is taken to notify contractors to help correct the problem.
- Select programs utilize third-party program implementers or survey companies to complete follow-up surveys to a sample of the participants to confirm and track whether the equipment was installed. An installation rate is applied to the program's annual savings.
    - For **School Education Kits** participants conduct and submit surveys.
    - For **Showerhead** program, third-party implementer will report on quantity of showerheads distributed. The third-party survey company will report on installation rates.

<u>General Custom Process</u>

Project Identification

1. Project identification and scoping.
2. Customer submits preapproval application to Xcel Energy

Preapproval

3. Xcel Energy engineer (or outside engineering firm) reviews the application and calculates the energy and demand savings based on the technical assumptions specific to that measure and the resulting rebate.
4. Xcel Energy engineers review the calculations, regardless of whether internal or external engineers completed Step 3.
5. Xcel Energy selects a random sample of committed projects and sends this list to an outside engineering firm (if Xcel Energy associate engineer performed Step 3) to review the calculations.
6. If the outside engineering firm disagrees with the Xcel Energy engineer's analysis, they discuss the project and reach consensus on the calculations.

7. Xcel Energy sends out a preapproval or rejection letter stating the preapproved demand and energy savings along with the rebate amount.

Monitoring

8. If monitoring will be needed, an Xcel Energy senior engineer drafts a measurement and verification plan and sends out a monitoring agreement for customer signature.
9. If the customer does not have the appropriate meter structure, a third-party engineering firm will install metering equipment and collect the pre-data as set forth in the monitoring agreement.
10. After the designated pre-monitoring period, the customer completes the project installation and contacts the account manager.
11. The third-party engineering firm collects post-installation monitoring data and sends pre- and post-data to Xcel Energy.

Site Verification

12. For managed accounts, the customer's account manager works with the customer to verify project installation and removal of old equipment, and obtain invoices or alternate cost documentation for submission to Xcel Energy DSM staff.

Approval and Rebate Payment

13. For non-monitored projects, the invoices are reviewed and if the installed measure specifications match the proposed measure specifications, then the preapproved rebate is awarded. If project costs changed by >89% or less or greater than 111%, or the scope changed, the project is reevaluated (return to Step 3).
14. For monitored projects, Xcel Energy engineer (or third-party engineering firm) determines actual savings based on monitoring results.
15. For monitored projects, if Xcel Energy engineer completes the analysis, 100% of projects will be sent to third-party engineering firm for review.
16. If the third-party engineering firm disagrees with the Xcel Energy engineer's analysis, they discuss the project and reach consensus on the calculations.
17. For monitored projects, if the incremental cost, customer kW savings, and generator kWh savings vary by <= 10% of the preapproved estimated savings, the preapproved rebate is paid and the monitored savings are claimed. A new analysis will be conducted if the actual savings vary by >10%. The rebate paid will be based on actual savings, and Xcel Energy will claim the post-monitored results.
18. Project savings are reported in the year that the rebate is awarded.

Applicable Custom Programs

Including custom and behavioral projects of programs with these components.

- Commercial Efficiency
- Cooling Efficiency
- Custom Efficiency
- Data Center Efficiency
- Efficiency Controls
- Fluid System Optimization
- Heating Efficiency

- Lighting Efficiency
- Motor Efficiency
- Process Efficiency
- Turn Key Services

Exceptions
Programs with special design elements are verified using processes unique to the program. The M&V process for these products is described below.

Business New Construction – Energy Design Assistance component
The Energy Design Assistance (EDA) component includes field verification to ensure that the strategies are installed per the design intent. Xcel Energy contracts with a third-party consultant to complete the energy modeling and measurement and verification. The rebate is not paid until savings are verified.

The following process shows the steps taken throughout the EDA process to ensure proper installation and energy savings.

1. Application submittal.
2. Meetings take place with the customer and design team.
3. Consultant completes energy modeling to identify conservation packages.
4. Construction documents are reviewed for measures identified through the energy model. The design team and customer are notified whether these measures were found within these documents.
5. The customer completes construction.
6. Consultant visits site and verifies that specified measures were installed. Selected equipment and systems are monitored for a two week timeframe, as appropriate, to evaluate performance variables against modeling assumptions.
7. For projects with individual measures that have savings greater than or equal to 1.0 GWh or 20,000 Dth per year, the individual measures must be considered "selected equipment" as defined in Step 6 above.
8. The actual results are compared to the estimated savings to determine the final rebate.
9. Rebate is issued to customer based on final savings.

Recommissioning, Heating System Optimization and Study Driven Program (general process)
The customer hires an engineering firm to conduct a study of the building to determine energy savings for each measure. An Xcel Energy engineer then reviews and verifies 100% of the identified opportunities for savings calculation accuracy prior to approving and paying a rebate for the study.

When opportunities are implemented an Xcel Energy engineer verifies that the implemented measures match what was approved and edits any changes implemented that do not exactly match the approved study. For Recommissioning, the customer needs to notify us when this happens. For other programs, the quantity/equipment detail on the invoices may be used.

For study-driven projects that underwent a custom project evaluation to determine rebate eligibility but do not qualify for a rebate, those projects follow the custom verification and reporting processes.

Self-Direct Program
Qualifying customers submit M&V plans with their applications. M&V plans, which may include pre-installation monitoring, are reviewed and approved by Xcel Energy engineer (or outside engineering firm).

Load Management

Electric Rate Savings
Customer participation and compliance is verified via the specialized meters deployed. This allows us to confirm the amount of load shed at each control event.

Saver's Switch
The Saver's Switch program (business and residential) contracts with a third-party to conduct annual load research on a sample of participant sites. This research measures the amount of load relief realized when a control is implemented.

In territories where the automated meter reading system is available we are able to test switches remotely to identify sites with failed switches. We anticipate continuing this process annually going forward to ensure a healthy switch population.

Renewables

Solar*Rewards
The customer is required to install the housing for a second meter at the site to measure the energy produced by the solar unit. Analysis will be conducted on the metered data from production meters to validate and update deemed savings technical assumptions for future plans.

➢ Product Development

Description
CIP Product Development identifies, assesses, and develops new energy efficiency and demand response products and services for eventual inclusion as new CIP programs, products, and measures. This work enables Xcel Energy to stay current and advance important new energy saving technologies for customers. The group also develops improvements to existing products.

The product development process begins with ideas for new energy conservation measures from customers, regulators, energy professionals, Xcel Energy staff, and others. Before a new product is approved, the group will research new ideas, evaluate them for savings potential, screen, and sometimes test particular product ideas as we work through the development process.

During this triennial period, Product Development will continue to develop new products and expand existing products to help meet Xcel Energy's conservation goals. Products or programs will be selected for development based on several criteria including, but not limited to, energy efficiency potential, level of development time, longevity of the offering (i.e. how long until a product becomes the industry standard), number and type of market barriers, and risk (technological, market) among others.

Specific efforts that will also be managed under Product Development are described below.

Codes & Standards Study
Many utilities across the country are starting to look at different ways they can impact the development and implementation of codes and standards to drive conservation. In Minnesota, where there is a unified state-wide energy code, we believe that a codes and standards program would be most effective if it was defined and implemented through a state-wide initiative that incorporated the interested utilities across the state and other engaged stakeholders.

The Product Development team will lead the process of developing that potential statewide initiative. The group will work to define a market offering, determine the best method to manage implementation of that offering, develop a methodology to measure the impact of the offering in the marketplace, and delineate how the participating utilities will attribute savings to the individual entities participating in the initiative. It is anticipated that this work will build off the initial review completed as a part of the Minnesota Environmental Initiative's "1.5% Energy Efficiency Solutions Project."

Energy Efficiency Emerging Technology
The primary objectives of Xcel Energy's emerging technology work are to identify, track, and evaluate energy efficient emerging technologies that may be a good fit for our programs and to develop all of the information required to introduce the technology to the efficiency portfolio and, ultimately, to end-users.

In the 2010-2012 Triennial, Product Development administered an Emerging Technology Grant program to help in the process of identifying and evaluating new energy efficient emerging technologies. While this effort enabled interesting projects to occur, we have determined that we

can evaluate emerging technologies more effectively by managing our own pilots rather than just distributing grant funding.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Direct Emerging Technology funding to pilots and discontinue the Emerging Technology Grant program.	Funding pilots will be more effective than funding grants.	New to this Plan	New

Budget and Goal Considerations and Participation Development
Product Development is an indirect-impact program and, therefore, (generally) does not set any participation or energy savings goals. Product Development, on occasion, will develop pilots with savings goals. We will seek approval to claim direct-impact savings in those cases. The program budgets were developed by reviewing historical program expenditures and estimating the time involved in completing future efforts.

The main budget drivers include the following:

- R&D – This category funds internal Product Development staff.
- Administration – Product Development contracts with external consultants to assist in project planning and implementation.
- Participant Incentives – The budget includes funds to provide subsidies for pilot programs.

Involvement of Community Energy Organizations
Product Development involves external parties (government entities, manufacturers, vendors and installers) in our product development process through one-on-one conversations about product ideas. We also seek the input of manufacturers, vendors and installers as we build the technical assumptions for each product in order to test for cost effectiveness.

➢ Solar*Rewards

Description
The Solar*Rewards program offers prescriptive electric rebates to residential and commercial customers who install interconnected PV systems within program guidelines. Incentives are available to customers who meet the program requirements, install qualified equipment according to Xcel Energy's interconnection rules, and sign a 20-year contract. The contract assigns the renewable energy credits (RECs), also described as the solar energy's environmental attributes, to Xcel Energy for the term of the contract. Solar*Rewards is offered to offset the cost of PV installation for customers and help develop the PV installer and supply chain industry within Minnesota. The program is primarily marketed by Xcel Energy through newsletters and events like home shows and renewable workshops. The majority of sales are secured by the installer community marketing directly to Xcel Energy's customer base.

The program offers prescriptive rebates of $1.50 per watt for the installation of UL-certified, California Energy Commission-compliant PV panels. PV systems must be larger than 0.5 kW and smaller than 40 kW for any given premise. Customers may not install systems with kWh generation capacity of more than 120% of the premise's previous 12 months energy consumption.

Program Changes
The following table summarizes program changes made after the 2011 Status Report was filed, as well as changes new to this Plan.

Change	Rationale	DER Notification Method	Date Notified
Reduced incentive payment of $1.50 per DC Watt installed.	There has been a substantial reduction in the cost of PV panels in recent years.	New to this Plan	New
Request approval to discontinue as CIP program after 2013	We expect to have met the program goal of helping to develop the PV equipment and installer business community in Minnesota.	New to this Plan	New

Budget and Goal Considerations and Participation Development
The program's participation and energy savings goals were developed based on historical program performance and expected demand for future installations. The 2013 rebate is lower than that of previous years due to a continued reduction in the cost of PV panels. Given our request to discontinue the program as part of CIP after 2013, no 2014 or 2015 goals or budgets are included in this Plan.

The main budget drivers include the following:

- Administration – This category covers the internal labor for program planning and implementation, as well as contract labor, legal assistance, and materials.
- Advertising and Promotion – A small portion of the budget is dedicated to marketing the program.
- Participant Incentives – Customer rebates are the main budget driver for the program.

➢ Assessments

Description
The Assessments Segment accounts for monetary assessments from the Minnesota Department of Commerce, Division of Energy Security. Minn. Stat. § 216B.241, subd(s). 1d, e and f assess each utility a fee for technical assistance, applied research and development grants, and facilities energy efficiency.

Program Changes
None.

Budget and Goal Considerations and Participation Development
Segment budgets for this triennial period were developed based on the direct and indirect assessment invoices received in 2011.

The main budget drivers include the following:

- Other – All regulatory assessments are budgeted to this category.

Involvement of Community Energy Organizations
Not applicable.

➢ Electric Utility Infrastructure

Description
The Minnesota Next Generation Energy Act of 2007 ("Act") created the opportunity for an electric utility to claim savings from projects that improve the efficiency of the utility's infrastructure or system towards its electric savings goal, provided that the utility files a plan to achieve savings of at least one percent of retail sales through direct energy conservation programs. The Act also authorized a new rate schedule for recovery of electric utility infrastructure project costs, but does not require that a utility create a specific rate schedule in order to claim the related energy savings.

Electric utility infrastructure (EUI) projects are defined in Minn. Stat. § 216B.1636 as electric utility-owned projects that:

1) Replace or modify existing electric utility infrastructure, including utility-owned buildings, if the replacement or modification is shown to conserve energy or use energy more efficiently, consistent with section 216B.241, subd. 1c; or
2) Conserve energy or use energy more efficiently by using waste heat recovery converted into electricity as defined in section 216B.241, subd. 1, paragraph (n).

Minn. Stat. § 216B.241, subd. 1c, also clarifies that EUI projects "must result in increased energy efficiency greater than that which would have occurred through normal maintenance activity." Sample projects include distribution system improvements that reduce line losses and heat rate improvements that increase the efficiency of energy production, such as process optimization and equipment design modifications.

In addition to contributing towards our CIP goals, EUI projects typically have the following benefits:

- Direct energy consumption savings,
- Reduced maintenance costs,
- Extended equipment life, and
- Better power plant performance.

The energy savings translate to less natural gas or coal needed to produce electricity, which reduces greenhouse gas emissions and fuel costs, thereby lowering the environmental impact and overall cost of generation.

Because we are expecting to meet the 1.5% goal through customer programs, EUI projects will likely play a minor role in this Triennial Plan. However, savings from EUI projects will become increasingly important over time as the savings potential from traditional programs declines.

Given the minor role expected for EUI in this Plan and uncertainties in project funding and timing, we are not proposing specific savings goals or budgets for this Segment. Should we complete any EUI projects during the Plan, we will report the results in our annual status report, following established CIP guidelines, as applicable. For example, for large custom-type projects, we propose to submit the relevant analysis and supporting documentation to the DER prior to submitting the

Status Report. For each project, we will provide a cost-benefit analysis showing that the project is in the public interest.

Program Changes
None.

Budget and Goal Considerations
As discussed above, we are not proposing any budgets or savings goals for this Segment.

Involvement of Community Energy Organizations
Because this is an internal program, we do not anticipate the involvement of community energy organizations. However, we did actively participate in the EUI workgroup convened as part of 1.5% Energy Efficiency Solutions workgroup. In that stakeholder workgroup, we discussed basic principles, eligibility guidelines, calculation methodologies, and cost recovery options. We are continuing to evaluate our EUI projects in light of the agreements reached by the workgroup.

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Electric CIP Total
Project Description:
(Note changes)

Type Conservation, Load Management and Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	7,840,315			8,507,963			8,834,355		
Utility Administration	17,760,983			18,200,645			19,115,969		
Advertising & Promotion	7,352,065			6,775,040			7,570,394		
Participant Incentives	33,495,445			34,440,172			35,552,753		
R&D	807,000			807,000			807,000		
Other	3,126,663			3,365,919			3,196,819		
Total Costs	$70,382,471			$72,096,739			$75,077,290		
Project Participants									
Total Participants	1,561,621			1,641,928			1,786,119		
% of Spending by Customer Segment									
Residential	29%			29%			29%		
Commercial	59%			60%			60%		
Industrial									
Farm									
Other	12%			11%			11%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	3%			4%			3%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	255			244			224		
Annual kWh Saved - Generator	398,723,467			400,712,665			400,414,935		
Cost per Annual kWh Saved	$0.1765			$0.1799			$0.1875		
Measure Lifetime (Years)	13.3			13.3			13.2		
Lifetime kWh savings	5,306,557,747			5,347,930,964			5,294,910,320		
Cost per kWh Lifetime	$0.0133			$0.0135			$0.0142		
Average kW Savings per Participant	0.06			0.06			0.05		
Annual kW Savings - Generator	94,489			93,455			92,962		
Cost per KW Saved	$744.87			$771.46			$807.61		
Cost/Benefit Results									
Societal									
Net present value	$88			$91			$87		
B/C ratio	1.81			1.85			1.86		
Participant									
Net present value	$195			$192			$178		
B/C ratio	3.67			3.68			3.65		
Rate Payer									
Net present value	($95)			($88)			($80)		
B/C ratio	0.63			0.65			0.66		
Utility									
Net present value	$115			$117			$111		
B/C ratio	3.56			3.65			3.63		

ELECTRIC CIP TOTAL — 2013 ELECTRIC GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$75,795,619	$75,795,619	$75,795,619	$75,795,619
T & D	N/A	$19,847,042	$19,847,042	$19,847,042	$19,847,042
Marginal Energy	N/A	$154,884,926	$154,884,926	$154,884,926	$154,884,926
Environmental Externality	N/A	N/A	N/A	N/A	$7,117,402
Subtotal	N/A	$250,527,587	$250,527,587	$250,527,587	$257,644,990
Participant Benefits					
Bill Reduction - Electric	$327,987,519	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$33,495,445	N/A	N/A	$33,495,445	$33,495,445
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$57,261,838	N/A	N/A	$17,401,614	$17,401,614
Subtotal	$418,744,801	N/A	N/A	$50,897,059	$50,897,059
Total Benefits	$418,744,801	$250,527,587	$250,527,587	$301,424,646	$308,542,049
Costs					
Utility Project Costs					
Customer Services	N/A	$7,840,315	$7,840,315	$7,840,315	$7,840,315
Project Administration	N/A	$17,760,983	$17,760,983	$17,760,983	$17,760,983
Advertising & Promotion	N/A	$7,352,065	$7,352,065	$7,352,065	$7,352,065
Measurement & Verification	N/A	$2,263,355	$2,263,355	$2,263,355	$2,263,355
Rebates	N/A	$33,495,445	$33,495,445	$33,495,445	$33,495,445
Other	N/A	$1,670,308	$1,670,308	$1,670,308	$1,670,308
Subtotal	N/A	$70,382,471	$70,382,471	$70,382,471	$70,382,471
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$327,987,519	N/A	N/A
Subtotal	N/A	N/A	$327,987,519	N/A	N/A
Participant Costs					
Incremental Capital Costs	$113,988,292	N/A	N/A	$100,435,448	$100,435,448
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$113,988,292	N/A	N/A	$100,435,448	$100,435,448
Total Costs	$113,988,292	$70,382,471	$398,369,990	$170,817,919	$170,817,919
Net Benefit (Cost)	$304,756,509	$180,145,116	($147,842,403)	$130,606,728	$137,724,130
Benefit/Cost Ratio	3.67	3.56	0.63	1.76	1.81

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	13.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	37.06%
Gross Load Factor at Customer	E	18.06%
Transmission Loss Factor (Energy)	F	7.012%
Transmission Loss Factor (Demand)	G	8.117%
Societal Net Benefit (Cost)	H	$588

Program Summary per Participant		
Gross kW Saved at Customer	I	0.15 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.06 kW
Gross Annual kWh Saved at Customer	(B x E x I)	237 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	255 kWh

Program Summary All Participants		
Total Participants	J	1,561,621
Total Budget	K	**$70,382,471**
Gross kW Saved at Customer	(J x I)	234,293 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**94,489 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	370,766,438 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**398,723,467 kWh**
Societal Net Benefits	(J x I x H)	**$137,724,130**
Utility Program Cost per kWh Lifetime		**$0.0133**
Utility Program Cost per kW at Gen		**$744.87**

ELECTRIC CIP TOTAL — 2014 ELECTRIC GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$77,515,969	$77,515,969	$77,515,969	$77,515,969
T & D	N/A	$20,449,830	$20,449,830	$20,449,830	$20,449,830
Marginal Energy	N/A	$165,518,699	$165,518,699	$165,518,699	$165,518,699
Environmental Externality	N/A	N/A	N/A	N/A	$7,407,319
Subtotal	N/A	$263,484,497	$263,484,497	$263,484,497	$270,891,816
Participant Benefits					
Bill Reduction - Electric	$335,851,880	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$34,440,172	N/A	N/A	$34,440,172	$34,440,172
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$62,226,589	N/A	N/A	$18,935,050	$18,935,050
Subtotal	$432,518,641	N/A	N/A	$53,375,222	$53,375,222
Total Benefits	$432,518,641	$263,484,497	$263,484,497	$316,859,719	$324,267,038
Costs					
Utility Project Costs					
Customer Services	N/A	$8,507,963	$8,507,963	$8,507,963	$8,507,963
Project Administration	N/A	$18,200,645	$18,200,645	$18,200,645	$18,200,645
Advertising & Promotion	N/A	$6,775,040	$6,775,040	$6,775,040	$6,775,040
Measurement & Verification	N/A	$2,409,353	$2,409,353	$2,409,353	$2,409,353
Rebates	N/A	$34,440,172	$34,440,172	$34,440,172	$34,440,172
Other	N/A	$1,763,566	$1,763,566	$1,763,566	$1,763,566
Subtotal	N/A	$72,096,739	$72,096,739	$72,096,739	$72,096,739
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$335,851,880	N/A	N/A
Subtotal	N/A	N/A	$335,851,880	N/A	N/A
Participant Costs					
Incremental Capital Costs	$117,494,709	N/A	N/A	$102,914,466	$102,914,466
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$117,494,709	N/A	N/A	$102,914,466	$102,914,466
Total Costs	$117,494,709	$72,096,739	$407,948,619	$175,011,206	$175,011,206
Net Benefit (Cost)	$315,023,932	$191,387,758	($144,464,122)	$141,848,513	$149,255,832
Benefit/Cost Ratio	3.68	3.65	0.65	1.81	1.85

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	13.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	37.84%
Gross Load Factor at Customer	E	18.75%
Transmission Loss Factor (Energy)	F	6.982%
Transmission Loss Factor (Demand)	G	8.099%
Societal Net Benefit (Cost)	H	$658

Program Summary per Participant

Gross kW Saved at Customer	I	0.14 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.06 kW
Gross Annual kWh Saved at Customer	(B x E x I)	227 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	244 kWh

Program Summary All Participants

Total Participants	J	1,641,928
Total Budget	K	**$72,096,739**
Gross kW Saved at Customer	(J x I)	226,956 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**93,455 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	372,734,358 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**400,712,665 kWh**
Societal Net Benefits	(J x I x H)	**$149,255,832**
Utility Program Cost per kWh Lifetime		**$0.0135**
Utility Program Cost per kW at Gen		**$771.46**

ELECTRIC CIP TOTAL — 2015 ELECTRIC GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$78,937,113	$78,937,113	$78,937,113	$78,937,113
T & D	N/A	$20,782,846	$20,782,846	$20,782,846	$20,782,846
Marginal Energy	N/A	$173,019,139	$173,019,139	$173,019,139	$173,019,139
Environmental Externality	N/A	N/A	N/A	N/A	$7,374,822
Subtotal	N/A	$272,739,097	$272,739,097	$272,739,097	$280,113,919
Participant Benefits					
Bill Reduction - Electric	$339,931,095	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$35,552,753	N/A	N/A	$35,552,753	$35,552,753
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$62,822,087	N/A	N/A	$18,701,529	$18,701,529
Subtotal	$438,305,936	N/A	N/A	$54,254,282	$54,254,282
Total Benefits	$438,305,936	$272,739,097	$272,739,097	$326,993,379	$334,368,201
Costs					
Utility Project Costs					
Customer Services	N/A	$8,834,355	$8,834,355	$8,834,355	$8,834,355
Project Administration	N/A	$19,115,969	$19,115,969	$19,115,969	$19,115,969
Advertising & Promotion	N/A	$7,570,394	$7,570,394	$7,570,394	$7,570,394
Measurement & Verification	N/A	$2,201,065	$2,201,065	$2,201,065	$2,201,065
Rebates	N/A	$35,552,753	$35,552,753	$35,552,753	$35,552,753
Other	N/A	$1,802,754	$1,802,754	$1,802,754	$1,802,754
Subtotal	N/A	$75,077,290	$75,077,290	$75,077,290	$75,077,290
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$339,931,095	N/A	N/A
Subtotal	N/A	N/A	$339,931,095	N/A	N/A
Participant Costs					
Incremental Capital Costs	$120,112,934	N/A	N/A	$104,281,997	$104,281,997
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$120,112,934	N/A	N/A	$104,281,997	$104,281,997
Total Costs	$120,112,934	$75,077,290	$415,008,386	$179,359,287	$179,359,287
Net Benefit (Cost)	$318,193,002	$197,661,807	($142,269,288)	$147,634,092	$155,008,914
Benefit/Cost Ratio	3.65	3.63	0.66	1.82	1.86

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	13.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	38.36%
Gross Load Factor at Customer	E	19.09%
Transmission Loss Factor (Energy)	F	6.984%
Transmission Loss Factor (Demand)	G	8.085%
Societal Net Benefit (Cost)	H	$696

Program Summary per Participant

Gross kW Saved at Customer	I	0.12 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.05 kW
Gross Annual kWh Saved at Customer	(B x E x I)	209 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	224 kWh

Program Summary All Participants

Total Participants	J	1,786,119
Total Budget	K	**$75,077,290**
Gross kW Saved at Customer	(J x I)	222,750 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**92,962 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	372,450,281 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**400,414,935 kWh**
Societal Net Benefits	(J x I x H)	**$155,008,914**

Utility Program Cost per kWh Lifetime	**$0.0142**
Utility Program Cost per kW at Gen	**$807.61**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Total Gas CIP With Indirect Participants
Project Description:
(Note changes)

Type Conservation, Load Management and Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	2,084,567			2,188,354			2,299,392		
Utility Administration	3,592,311			3,633,751			3,640,172		
Advertising & Promotion	1,915,515			1,967,640			2,004,689		
Participant Incentives	4,100,045			4,589,942			4,661,621		
R&D	227,972			227,972			227,972		
Other	965,017			967,584			719,977		
Total Costs	$12,885,428			$13,575,243			$13,553,823		
Project Participants									
Total Participants	586,068			578,788			571,702		
% of Spending by Customer Segment									
Residential	29%			28%			28%		
Commercial	19%			19%			20%		
Industrial									
Farm									
Other	26%			25%			23%		
Total % of Spending (must equal 100%)	74%			72%			71%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	13%			12%			12%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	1.19			1.20			1.22		
Annual Dth Saved	696,415			691,908			696,474		
Cost per Dth	$18.5025			$19.6200			$19.4606		
Project Life (Years)	11.3			10.8			10.8		
Lifetime Dth Saved	7,867,084			7,438,747			7,516,518		
Cost per Lifetime Dth Saved	$1.6379			$1.8249			$1.8032		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$91,392,752								
B/C ratio	2.06								
Participant									
Net present value	$185,578,684								
B/C ratio	3.52								
Rate Payer									
Net present value	($75,239,993)								
B/C ratio	0.59								
Utility									
Net present value	$67,874,115								
B/C ratio	2.70								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Total Gas CIP With Indirect Participants**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$8,785,382	$8,985,301	$8,892,202
Incentive Costs =	$4,100,045	$4,589,942	$4,661,621
16) Total Utility Project Costs =	$12,885,428	$13,575,243	$13,553,823
17) Direct Participant Costs ($/Part.) =	$41	$42	$43
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$2	$3	$3
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	11.3	10.8	10.8
21) Avg. Dth/Part. Saved =	1.19	1.20	1.22
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	586,068	578,788	571,702
24) Total Annual Dth Saved =	696,415	691,908	696,474
25) Incentive/Participant =	$7.00	$7.93	$8.15

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$22	$23	$24
Cost per Participant per Dth =	$53.03	$54.47	$54.38
Lifetime Energy Reduction (Dth)	22,822,349		
Societal Cost per Dth	$3.78		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($75,239,993)	0.59
Utility Cost Test	$67,874,115	2.70
Societal Test	$91,392,752	2.06
Participant Test	$185,578,684	3.52

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Total Gas CIP Direct Participants Only**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$6,124,176	$6,303,244	$6,422,509
Incentive Costs =	$4,100,045	$4,589,942	$4,661,621
16) Total Utility Project Costs =	$10,224,222	$10,893,187	$11,084,130
17) Direct Participant Costs ($/Part.) =	$121	$126	$132
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$6	$8	$8
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	11.3	10.8	10.8
21) Avg. Dth/Part. Saved =	3.50	3.61	3.78
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	198,756	191,476	184,390
24) Total Annual Dth Saved =	696,415	691,908	696,474
25) Incentive/Participant =	$20.63	$23.97	$25.28

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$51	$57	$60
Cost per Participant per Dth =	$49.20	$50.59	$50.84
Lifetime Energy Reduction (Dth)	22,822,349		
Societal Cost per Dth	$3.43		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($67,427,037)	0.62
Utility Cost Test	$75,687,071	3.35
Societal Test	$99,205,708	2.27
Participant Test	$185,578,684	3.52

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Electric CIP Conservation Total
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	5,140,397			5,734,223			5,982,056		
Utility Administration	10,828,607			11,118,021			11,902,205		
Advertising & Promotion	3,611,622			3,706,030			3,800,564		
Participant Incentives	33,495,445			34,440,172			35,552,753		
R&D	0			0			0		
Other	2,011,414			2,179,529			2,196,304		
Total Costs	$55,087,484			$57,177,976			$59,433,882		
Project Participants									
Total Participants	739,226			799,543			928,734		
% of Spending by Customer Segment									
Residential	25%			25%			25%		
Commercial	70%			71%			70%		
Industrial									
Farm									
Other	4%			4%			4%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	1%			1%			0%		
Budget % (% of Row 30)	4%			4%			4%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	539			501			431		
Annual kWh Saved - Generator	398,184,292			400,211,306			399,913,576		
Cost per Annual kWh Saved	$0.1383			$0.1429			$0.1486		
Measure Lifetime (Years)	13.3			13.4			13.2		
Lifetime kWh savings	5,301,873,593			5,343,435,891			5,290,415,248		
Cost per kWh Lifetime	$0.0104			$0.0107			$0.0112		
Average kW Savings per Participant	0.09			0.08			0.07		
Annual kW Savings - Generator	64,358			64,344			63,851		
Cost per KW Saved	$855.96			$888.63			$930.82		
Cost/Benefit Results									
Societal									
Net present value	$175			$176			$158		
B/C ratio	1.83			1.88			1.89		
Participant									
Net present value	$386			$370			$322		
B/C ratio	3.50			3.52			3.49		
Rate Payer									
Net present value	($185)			($168)			($142)		
B/C ratio	0.62			0.64			0.65		
Utility									
Net present value	$232			$228			$203		
B/C ratio	4.12			4.19			4.18		

ELECTRIC CIP CONSERVATION TOTAL — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$52,353,265	$52,353,265	$52,353,265	$52,353,265
T & D	N/A	$19,847,042	$19,847,042	$19,847,042	$19,847,042
Marginal Energy	N/A	$154,684,684	$154,684,684	$154,684,684	$154,684,684
Environmental Externality	N/A	N/A	N/A	N/A	$7,110,244
Subtotal	N/A	$226,884,992	$226,884,992	$226,884,992	$233,995,237
Participant Benefits					
Bill Reduction - Electric	$308,413,925	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$33,495,445	N/A	N/A	$33,495,445	$33,495,445
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$57,261,838	N/A	N/A	$17,401,614	$17,401,614
Subtotal	$399,171,207	N/A	N/A	$50,897,059	$50,897,059
Total Benefits	$399,171,207	$226,884,992	$226,884,992	$277,782,051	$284,892,296
Costs					
Utility Project Costs					
Customer Services	N/A	$5,140,397	$5,140,397	$5,140,397	$5,140,397
Project Administration	N/A	$10,828,607	$10,828,607	$10,828,607	$10,828,607
Advertising & Promotion	N/A	$3,611,622	$3,611,622	$3,611,622	$3,611,622
Measurement & Verification	N/A	$1,148,217	$1,148,217	$1,148,217	$1,148,217
Rebates	N/A	$33,495,445	$33,495,445	$33,495,445	$33,495,445
Other	N/A	$863,197	$863,197	$863,197	$863,197
Subtotal	N/A	$55,087,484	$55,087,484	$55,087,484	$55,087,484
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$308,413,925	N/A	N/A
Subtotal	N/A	N/A	$308,413,925	N/A	N/A
Participant Costs					
Incremental Capital Costs	$113,988,292	N/A	N/A	$100,435,448	$100,435,448
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$113,988,292	N/A	N/A	$100,435,448	$100,435,448
Total Costs	$113,988,292	$55,087,484	$363,501,409	$155,522,932	$155,522,932
Net Benefit (Cost)	$285,182,915	$171,797,508	($136,616,417)	$122,259,119	$129,369,364
Benefit/Cost Ratio	3.50	4.12	0.62	1.79	1.83

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	13.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	41.30%
Gross Load Factor at Customer	E	29.50%
Transmission Loss Factor (Energy)	F	7.011%
Transmission Loss Factor (Demand)	G	8.063%
Societal Net Benefit (Cost)	H	$903

Program Summary per Participant		
Gross kW Saved at Customer	I	0.19 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.09 kW
Gross Annual kWh Saved at Customer	(B x E x I)	501 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	539 kWh

Program Summary All Participants		
Total Participants	J	739,226
Total Budget	K	**$55,087,484**
Gross kW Saved at Customer	(J x I)	143,260 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**64,358 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	370,266,048 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**398,184,292 kWh**
Societal Net Benefits	(J x I x H)	**$129,369,364**
Utility Program Cost per kWh Lifetime		**$0.0104**
Utility Program Cost per kW at Gen		**$855.96**

ELECTRIC CIP CONSERVATION TOTAL — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$53,933,189	$53,933,189	$53,933,189	$53,933,189
T & D	N/A	$20,449,830	$20,449,830	$20,449,830	$20,449,830
Marginal Energy	N/A	$165,315,637	$165,315,637	$165,315,637	$165,315,637
Environmental Externality	N/A	N/A	N/A	N/A	$7,400,141
Subtotal	N/A	$239,698,655	$239,698,655	$239,698,655	$247,098,797
Participant Benefits					
Bill Reduction - Electric	$316,738,832	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$34,440,172	N/A	N/A	$34,440,172	$34,440,172
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$62,226,589	N/A	N/A	$18,935,050	$18,935,050
Subtotal	$413,405,593	N/A	N/A	$53,375,222	$53,375,222
Total Benefits	$413,405,593	$239,698,655	$239,698,655	$293,073,877	$300,474,019
Costs					
Utility Project Costs					
Customer Services	N/A	$5,734,223	$5,734,223	$5,734,223	$5,734,223
Project Administration	N/A	$11,118,021	$11,118,021	$11,118,021	$11,118,021
Advertising & Promotion	N/A	$3,706,030	$3,706,030	$3,706,030	$3,706,030
Measurement & Verification	N/A	$1,223,076	$1,223,076	$1,223,076	$1,223,076
Rebates	N/A	$34,440,172	$34,440,172	$34,440,172	$34,440,172
Other	N/A	$956,454	$956,454	$956,454	$956,454
Subtotal	N/A	$57,177,976	$57,177,976	$57,177,976	$57,177,976
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$316,738,832	N/A	N/A
Subtotal	N/A	N/A	$316,738,832	N/A	N/A
Participant Costs					
Incremental Capital Costs	$117,494,709	N/A	N/A	$102,914,466	$102,914,466
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$117,494,709	N/A	N/A	$102,914,466	$102,914,466
Total Costs	$117,494,709	$57,177,976	$373,916,808	$160,092,442	$160,092,442
Net Benefit (Cost)	$295,910,884	$182,520,680	($134,218,152)	$132,981,435	$140,381,577
Benefit/Cost Ratio	3.52	4.19	0.64	1.83	1.88

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	13.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	42.91%
Gross Load Factor at Customer	E	30.81%
Transmission Loss Factor (Energy)	F	6.982%
Transmission Loss Factor (Demand)	G	8.016%
Societal Net Benefit (Cost)	H	$1,018

Program Summary per Participant		
Gross kW Saved at Customer	I	0.17 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.08 kW
Gross Annual kWh Saved at Customer	(B x E x I)	466 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	501 kWh

Program Summary All Participants		
Total Participants	J	799,543
Total Budget	K	**$57,177,976**
Gross kW Saved at Customer	(J x I)	137,924 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**64,344 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	372,269,288 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**400,211,306 kWh**
Societal Net Benefits	(J x I x H)	**$140,381,577**

Utility Program Cost per kWh Lifetime	**$0.0107**
Utility Program Cost per kW at Gen	**$888.63**

ELECTRIC CIP CONSERVATION TOTAL — 2015 ELECTRIC GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$54,797,896	$54,797,896	$54,797,896	$54,797,896
T & D	N/A	$20,782,846	$20,782,846	$20,782,846	$20,782,846
Marginal Energy	N/A	$172,803,636	$172,803,636	$172,803,636	$172,803,636
Environmental Externality	N/A	N/A	N/A	N/A	$7,367,921
Subtotal	N/A	$248,384,377	$248,384,377	$248,384,377	$255,752,298
Participant Benefits					
Bill Reduction - Electric	$320,808,847	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$35,552,753	N/A	N/A	$35,552,753	$35,552,753
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$62,822,087	N/A	N/A	$18,701,529	$18,701,529
Subtotal	$419,183,687	N/A	N/A	$54,254,282	$54,254,282
Total Benefits	$419,183,687	$248,384,377	$248,384,377	$302,638,659	$310,006,580
Costs					
Utility Project Costs					
Customer Services	N/A	$5,982,056	$5,982,056	$5,982,056	$5,982,056
Project Administration	N/A	$11,902,205	$11,902,205	$11,902,205	$11,902,205
Advertising & Promotion	N/A	$3,800,564	$3,800,564	$3,800,564	$3,800,564
Measurement & Verification	N/A	$1,200,661	$1,200,661	$1,200,661	$1,200,661
Rebates	N/A	$35,552,753	$35,552,753	$35,552,753	$35,552,753
Other	N/A	$995,643	$995,643	$995,643	$995,643
Subtotal	N/A	$59,433,882	$59,433,882	$59,433,882	$59,433,882
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$320,808,847	N/A	N/A
Subtotal	N/A	N/A	$320,808,847	N/A	N/A
Participant Costs					
Incremental Capital Costs	$120,112,934	N/A	N/A	$104,281,997	$104,281,997
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$120,112,934	N/A	N/A	$104,281,997	$104,281,997
Total Costs	$120,112,934	$59,433,882	$380,242,730	$163,715,879	$163,715,879
Net Benefit (Cost)	$299,070,754	$188,950,495	($131,858,352)	$138,922,780	$146,290,701
Benefit/Cost Ratio	3.49	4.18	0.65	1.85	1.89

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	13.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	43.94%
Gross Load Factor at Customer	E	31.76%
Transmission Loss Factor (Energy)	F	6.984%
Transmission Loss Factor (Demand)	G	7.988%
Societal Net Benefit (Cost)	H	$1,094

Program Summary per Participant		
Gross kW Saved at Customer	I	0.14 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.07 kW
Gross Annual kWh Saved at Customer	(B x E x I)	401 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	431 kWh

Program Summary All Participants		
Total Participants	J	928,734
Total Budget	K	**$59,433,882**
Gross kW Saved at Customer	(J x I)	133,718 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**63,851 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	371,985,211 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**399,913,576 kWh**
Societal Net Benefits	(J x I x H)	**$146,290,701**

Utility Program Cost per kWh Lifetime	**$0.0112**
Utility Program Cost per kW at Gen	**$930.82**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Electric CIP Load Management Total
Project Description:
(Note changes)

Type Load Management
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	2,212,000			2,267,500			2,327,188		
Utility Administration	4,326,101			4,398,732			4,503,989		
Advertising & Promotion	468,067			416,600			417,098		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	365,000			400,000			435,000		
Total Costs	$7,371,168			$7,482,832			$7,683,274		
Project Participants									
Total Participants	21,241			21,231			21,231		
% of Spending by Customer Segment									
Residential	66%			66%			66%		
Commercial	34%			34%			34%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	25			24			24		
Annual kWh Saved - Generator	539,175			501,359			501,359		
Cost per Annual kWh Saved	$13.6712			$14.9251			$15.3249		
Measure Lifetime (Years)	8.7			9.0			9.0		
Lifetime kWh savings	4,684,154			4,495,072			4,495,072		
Cost per kWh Lifetime	$1.5736			$1.6647			$1.7093		
Average kW Savings per Participant	1.42			1.37			1.37		
Annual kW Savings - Generator	30,132			29,111			29,111		
Cost per KW Saved	$244.63			$257.04			$263.93		
Cost/Benefit Results									
Societal									
Net present value	$766			$768			$786		
B/C ratio	3.21			3.18			3.17		
Participant									
Net present value	$922			$900			$901		
B/C ratio	INF			INF			INF		
Rate Payer									
Net present value	($155)			($132)			($115)		
B/C ratio	0.88			0.89			0.91		
Utility									
Net present value	$766			$768			$785		
B/C ratio	3.21			3.18			3.17		

ELECTRIC CIP LOAD MANAGEMENT TOTAL — 2013 ELECTRIC GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$23,442,354	$23,442,354	$23,442,354	$23,442,354
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$200,241	$200,241	$200,241	$200,241
Environmental Externality	N/A	N/A	N/A	N/A	$7,158
Subtotal	N/A	$23,642,595	$23,642,595	$23,642,595	$23,649,753
Participant Benefits					
Bill Reduction - Electric	$19,573,594	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$19,573,594	N/A	N/A	$0	$0
Total Benefits	$19,573,594	$23,642,595	$23,642,595	$23,642,595	$23,649,753
Costs					
Utility Project Costs					
Customer Services	N/A	$2,212,000	$2,212,000	$2,212,000	$2,212,000
Project Administration	N/A	$4,326,101	$4,326,101	$4,326,101	$4,326,101
Advertising & Promotion	N/A	$468,067	$468,067	$468,067	$468,067
Measurement & Verification	N/A	$365,000	$365,000	$365,000	$365,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$7,371,168	$7,371,168	$7,371,168	$7,371,168
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$19,573,594	N/A	N/A
Subtotal	N/A	N/A	$19,573,594	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$7,371,168	$26,944,762	$7,371,168	$7,371,168
Net Benefit (Cost)	$19,573,594	$16,271,427	($3,302,167)	$16,271,427	$16,278,585
Benefit/Cost Ratio	INF	3.21	0.88	3.21	3.21

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	8.7 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	30.39%
Gross Load Factor at Customer	E	0.06%
Transmission Loss Factor (Energy)	F	7.193%
Transmission Loss Factor (Demand)	G	8.202%
Societal Net Benefit (Cost)	H	$179

Program Summary per Participant		
Gross kW Saved at Customer	I	4.29 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.42 kW
Gross Annual kWh Saved at Customer	(B x E x I)	24 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	25 kWh

Program Summary All Participants		
Total Participants	J	21,241
Total Budget	K	**$7,371,168**
Gross kW Saved at Customer	(J x I)	91,032 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**30,132 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	500,390 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**539,175 kWh**
Societal Net Benefits	(J x I x H)	**$16,278,585**

Utility Program Cost per kWh Lifetime	**$1.5736**
Utility Program Cost per kW at Gen	**$244.63**

ELECTRIC CIP LOAD MANAGEMENT TOTAL — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$23,582,780	$23,582,780	$23,582,780	$23,582,780
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$203,062	$203,062	$203,062	$203,062
Environmental Externality	N/A	N/A	N/A	N/A	$7,177
Subtotal	N/A	$23,785,842	$23,785,842	$23,785,842	$23,793,019
Participant Benefits					
Bill Reduction - Electric	$19,113,048	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$19,113,048	N/A	N/A	$0	$0
Total Benefits	$19,113,048	$23,785,842	$23,785,842	$23,785,842	$23,793,019
Costs					
Utility Project Costs					
Customer Services	N/A	$2,267,500	$2,267,500	$2,267,500	$2,267,500
Project Administration	N/A	$4,398,732	$4,398,732	$4,398,732	$4,398,732
Advertising & Promotion	N/A	$416,600	$416,600	$416,600	$416,600
Measurement & Verification	N/A	$400,000	$400,000	$400,000	$400,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$7,482,832	$7,482,832	$7,482,832	$7,482,832
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$19,113,048	N/A	N/A
Subtotal	N/A	N/A	$19,113,048	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$7,482,832	$26,595,880	$7,482,832	$7,482,832
Net Benefit (Cost)	$19,113,048	$16,303,010	($2,810,038)	$16,303,010	$16,310,187
Benefit/Cost Ratio	INF	3.18	0.89	3.18	3.18

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	9.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	30.01%
Gross Load Factor at Customer	E	0.06%
Transmission Loss Factor (Energy)	F	7.238%
Transmission Loss Factor (Demand)	G	8.229%
Societal Net Benefit (Cost)	H	$183

Program Summary per Participant		
Gross kW Saved at Customer	I	4.19 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.37 kW
Gross Annual kWh Saved at Customer	(B x E x I)	22 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	24 kWh

Program Summary All Participants		
Total Participants	J	21,231
Total Budget	K	**$7,482,832**
Gross kW Saved at Customer	(J x I)	89,032 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**29,111 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	465,070 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**501,359 kWh**
Societal Net Benefits	(J x I x H)	**$16,310,187**

Utility Program Cost per kWh Lifetime	**$1.6647**
Utility Program Cost per kW at Gen	**$257.04**

ELECTRIC CIP LOAD MANAGEMENT TOTAL — 2015 ELECTRIC GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$24,139,217	$24,139,217	$24,139,217	$24,139,217
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$215,503	$215,503	$215,503	$215,503
Environmental Externality	N/A	N/A	N/A	N/A	$6,901
Subtotal	N/A	$24,354,720	$24,354,720	$24,354,720	$24,361,621
Participant Benefits					
Bill Reduction - Electric	$19,122,248	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$19,122,248	N/A	N/A	$0	$0
Total Benefits	$19,122,248	$24,354,720	$24,354,720	$24,354,720	$24,361,621
Costs					
Utility Project Costs					
Customer Services	N/A	$2,327,188	$2,327,188	$2,327,188	$2,327,188
Project Administration	N/A	$4,503,989	$4,503,989	$4,503,989	$4,503,989
Advertising & Promotion	N/A	$417,098	$417,098	$417,098	$417,098
Measurement & Verification	N/A	$435,000	$435,000	$435,000	$435,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$7,683,274	$7,683,274	$7,683,274	$7,683,274
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$19,122,248	N/A	N/A
Subtotal	N/A	N/A	$19,122,248	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$7,683,274	$26,805,522	$7,683,274	$7,683,274
Net Benefit (Cost)	$19,122,248	$16,671,446	($2,450,802)	$16,671,446	$16,678,347
Benefit/Cost Ratio	INF	3.17	0.91	3.17	3.17

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	9.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	30.01%
Gross Load Factor at Customer	E	0.06%
Transmission Loss Factor (Energy)	F	7.238%
Transmission Loss Factor (Demand)	G	8.229%
Societal Net Benefit (Cost)	H	$187

Program Summary per Participant		
Gross kW Saved at Customer	I	4.19 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.37 kW
Gross Annual kWh Saved at Customer	(B x E x I)	22 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	24 kWh

Program Summary All Participants		
Total Participants	J	21,231
Total Budget	K	**$7,683,274**
Gross kW Saved at Customer	(J x I)	89,032 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**29,111 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	465,070 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**501,359 kWh**
Societal Net Benefits	(J x I x H)	**$16,678,347**

Utility Program Cost per kWh Lifetime	**$1.7093**
Utility Program Cost per kW at Gen	**$263.93**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Business Segment Total
Project Description:
(Note changes)

Type Conservation, Load Management and Indirect
Status: New and Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	3,850,116			4,425,571			4,671,315		
Utility Administration	9,428,104			9,735,749			10,040,134		
Advertising & Promotion	1,294,432			1,261,253			1,311,182		
Participant Incentives	25,195,679			25,822,367			26,692,621		
R&D	0			0			0		
Other	1,788,433			1,953,960			1,982,789		
Total Costs	$41,556,765			$43,198,901			$44,698,041		
Project Participants									
Total Participants	72,162			77,185			82,173		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	3,971			3,846			3,621		
Annual kWh Saved - Generator	286,545,465			296,888,998			297,568,573		
Cost per Annual kWh Saved	$0.1450			$0.1455			$0.1502		
Measure Lifetime (Years)	14.8			14.6			14.6		
Lifetime kWh savings	4,233,580,232			4,346,162,027			4,351,345,846		
Cost per kWh Lifetime	$0.0098			$0.0099			$0.0103		
Average kW Savings per Participant	0.74			0.69			0.64		
Annual kW Savings - Generator	53,167			53,088			52,840		
Cost per KW Saved	$781.63			$813.72			$845.91		
Cost/Benefit Results									
Societal									
Net present value	$1,516			$1,570			$1,559		
B/C ratio	1.90			1.97			2.01		
Participant									
Net present value	$2,853			$2,859			$2,759		
B/C ratio	3.28			3.37			3.38		
Rate Payer									
Net present value	($1,095)			($1,035)			($967)		
B/C ratio	0.70			0.71			0.72		
Utility									
Net present value	$1,963			$1,980			$1,945		
B/C ratio	4.41			4.54			4.58		

BUSINESS SEGMENT TOTAL | **2013** | **ELECTRIC** | **GOAL**

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$44,864,124	$44,864,124	$44,864,124	$44,864,124
T & D	N/A	$14,466,623	$14,466,623	$14,466,623	$14,466,623
Marginal Energy	N/A	$123,872,632	$123,872,632	$123,872,632	$123,872,632
Environmental Externality	N/A	N/A	N/A	N/A	$5,569,898
Subtotal	N/A	$183,203,379	$183,203,379	$183,203,379	$188,773,277
Participant Benefits					
Bill Reduction - Electric	$220,682,008	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$25,195,679	N/A	N/A	$25,195,679	$25,195,679
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$50,428,684	N/A	N/A	$17,106,593	$17,106,593
Subtotal	$296,306,371	N/A	N/A	$42,302,273	$42,302,273
Total Benefits	$296,306,371	$183,203,379	$183,203,379	$225,505,651	$231,075,550
Costs					
Utility Project Costs					
Customer Services	N/A	$3,850,116	$3,850,116	$3,850,116	$3,850,116
Project Administration	N/A	$9,428,104	$9,428,104	$9,428,104	$9,428,104
Advertising & Promotion	N/A	$1,294,432	$1,294,432	$1,294,432	$1,294,432
Measurement & Verification	N/A	$929,736	$929,736	$929,736	$929,736
Rebates	N/A	$25,195,679	$25,195,679	$25,195,679	$25,195,679
Other	N/A	$858,697	$858,697	$858,697	$858,697
Subtotal	N/A	$41,556,765	$41,556,765	$41,556,765	$41,556,765
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$220,682,008	N/A	N/A
Subtotal	N/A	N/A	$220,682,008	N/A	N/A
Participant Costs					
Incremental Capital Costs	$90,398,206	N/A	N/A	$80,131,606	$80,131,606
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$90,398,206	N/A	N/A	$80,131,606	$80,131,606
Total Costs	$90,398,206	$41,556,765	$262,238,772	$121,688,370	$121,688,370
Net Benefit (Cost)	$205,908,165	$141,646,614	($79,035,393)	$103,817,281	$109,387,179
Benefit/Cost Ratio	3.28	4.41	0.70	1.85	1.90

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	14.8 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	58.40%
Gross Load Factor at Customer	E	36.09%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,292

Program Summary per Participant		
Gross kW Saved at Customer	I	1.17 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.74 kW
Gross Annual kWh Saved at Customer	(B x E x I)	3,709 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	3,971 kWh

Program Summary All Participants		
Total Participants	J	72,162
Total Budget	K	**$41,556,765**
Gross kW Saved at Customer	(J x I)	84,665 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**53,167 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	267,633,464 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**286,545,465 kWh**
Societal Net Benefits	(J x I x H)	**$109,387,179**

Utility Program Cost per kWh Lifetime	**$0.0098**
Utility Program Cost per kW at Gen	**$781.63**

BUSINESS SEGMENT TOTAL | **2014** | **ELECTRIC** | **GOAL**

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$46,268,580	$46,268,580	$46,268,580	$46,268,580
T & D	N/A	$15,094,678	$15,094,678	$15,094,678	$15,094,678
Marginal Energy	N/A	$134,656,399	$134,656,399	$134,656,399	$134,656,399
Environmental Externality	N/A	N/A	N/A	N/A	$5,898,465
Subtotal	N/A	$196,019,657	$196,019,657	$196,019,657	$201,918,122
Participant Benefits					
Bill Reduction - Electric	$232,684,596	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$25,822,367	N/A	N/A	$25,822,367	$25,822,367
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$55,374,328	N/A	N/A	$18,637,694	$18,637,694
Subtotal	$313,881,291	N/A	N/A	$44,460,061	$44,460,061
Total Benefits	$313,881,291	$196,019,657	$196,019,657	$240,479,718	$246,378,183
Costs					
Utility Project Costs					
Customer Services	N/A	$4,425,571	$4,425,571	$4,425,571	$4,425,571
Project Administration	N/A	$9,735,749	$9,735,749	$9,735,749	$9,735,749
Advertising & Promotion	N/A	$1,261,253	$1,261,253	$1,261,253	$1,261,253
Measurement & Verification	N/A	$1,002,007	$1,002,007	$1,002,007	$1,002,007
Rebates	N/A	$25,822,367	$25,822,367	$25,822,367	$25,822,367
Other	N/A	$951,954	$951,954	$951,954	$951,954
Subtotal	N/A	$43,198,901	$43,198,901	$43,198,901	$43,198,901
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$232,684,596	N/A	N/A
Subtotal	N/A	N/A	$232,684,596	N/A	N/A
Participant Costs					
Incremental Capital Costs	$93,213,049	N/A	N/A	$81,965,767	$81,965,767
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$93,213,049	N/A	N/A	$81,965,767	$81,965,767
Total Costs	$93,213,049	$43,198,901	$275,883,497	$125,164,668	$125,164,668
Net Benefit (Cost)	$220,668,241	$152,820,756	($79,863,840)	$115,315,050	$121,213,515
Benefit/Cost Ratio	3.37	4.54	0.71	1.92	1.97

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	14.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	58.29%
Gross Load Factor at Customer	E	37.37%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,431

Program Summary per Participant		
Gross kW Saved at Customer	I	1.10 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.69 kW
Gross Annual kWh Saved at Customer	(B x E x I)	3,593 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	3,846 kWh

Program Summary All Participants		
Total Participants	J	77,185
Total Budget	K	**$43,198,901**
Gross kW Saved at Customer	(J x I)	84,696 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**53,088 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	277,294,324 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**296,888,998 kWh**
Societal Net Benefits	(J x I x H)	**$121,213,515**

Utility Program Cost per kWh Lifetime	**$0.0099**
Utility Program Cost per kW at Gen	**$813.72**

BUSINESS SEGMENT TOTAL | **2015** | **ELECTRIC** | **GOAL**

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$47,236,274	$47,236,274	$47,236,274	$47,236,274
T & D	N/A	$15,403,218	$15,403,218	$15,403,218	$15,403,218
Marginal Energy	N/A	$141,874,132	$141,874,132	$141,874,132	$141,874,132
Environmental Externality	N/A	N/A	N/A	N/A	$5,936,099
Subtotal	N/A	$204,513,624	$204,513,624	$204,513,624	$210,449,723
Participant Benefits					
Bill Reduction - Electric	$239,250,159	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$26,692,621	N/A	N/A	$26,692,621	$26,692,621
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$55,951,182	N/A	N/A	$18,388,506	$18,388,506
Subtotal	$321,893,962	N/A	N/A	$45,081,127	$45,081,127
Total Benefits	$321,893,962	$204,513,624	$204,513,624	$249,594,750	$255,530,850
Costs					
Utility Project Costs					
Customer Services	N/A	$4,671,315	$4,671,315	$4,671,315	$4,671,315
Project Administration	N/A	$10,040,134	$10,040,134	$10,040,134	$10,040,134
Advertising & Promotion	N/A	$1,311,182	$1,311,182	$1,311,182	$1,311,182
Measurement & Verification	N/A	$991,646	$991,646	$991,646	$991,646
Rebates	N/A	$26,692,621	$26,692,621	$26,692,621	$26,692,621
Other	N/A	$991,143	$991,143	$991,143	$991,143
Subtotal	N/A	$44,698,041	$44,698,041	$44,698,041	$44,698,041
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$239,250,159	N/A	N/A
Subtotal	N/A	N/A	$239,250,159	N/A	N/A
Participant Costs					
Incremental Capital Costs	$95,147,481	N/A	N/A	$82,699,549	$82,699,549
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$95,147,481	N/A	N/A	$82,699,549	$82,699,549
Total Costs	$95,147,481	$44,698,041	$283,948,200	$127,397,590	$127,397,590
Net Benefit (Cost)	$226,746,481	$159,815,582	($79,434,577)	$122,197,160	$128,133,259
Benefit/Cost Ratio	3.38	4.58	0.72	1.96	2.01

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	14.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	57.68%
Gross Load Factor at Customer	E	37.24%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,504

Program Summary per Participant		
Gross kW Saved at Customer	I	1.04 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.64 kW
Gross Annual kWh Saved at Customer	(B x E x I)	3,382 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	3,621 kWh

Program Summary All Participants		
Total Participants	J	82,173
Total Budget	K	**$44,698,041**
Gross kW Saved at Customer	(J x I)	85,201 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**52,840 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	277,929,047 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**297,568,573 kWh**
Societal Net Benefits	(J x I x H)	**$128,133,259**

Utility Program Cost per kWh Lifetime	**$0.0103**
Utility Program Cost per kW at Gen	**$845.91**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Business Segment w/ Indirect Participants
Project Description:
(Note changes)
Type 0
Status: 0

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	545,346			626,486			718,841		
Utility Administration	1,354,291			1,402,135			1,387,070		
Advertising & Promotion	178,829			185,715			215,662		
Participant Incentives	2,036,414			2,264,112			2,315,540		
R&D	0			0			0		
Other	154,905			165,984			172,586		
Total Costs	$4,269,785			$4,644,432			$4,809,699		
Project Participants									
Total Participants	2,775			2,902			2,900		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	56%			56%			56%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	56%			56%			56%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	155.12			169.19			171.07		
Annual Dth Saved	430,500			490,913			496,084		
Cost per Dth	$9.9182			$9.4608			$9.6953		
Project Life (Years)	10.2			10.4			10.5		
Lifetime Dth Saved	4,395,448			5,123,173			5,193,105		
Cost per Lifetime Dth Saved	$0.9714			$0.9066			$0.9262		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$65,650,707								
B/C ratio	2.43								
Participant									
Net present value	$107,425,817								
B/C ratio	3.10								
Rate Payer									
Net present value	($33,706,609)								
B/C ratio	0.68								
Utility									
Net present value	$56,611,658								
B/C ratio	5.13								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Business Segment w/ Indirect Participants**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$2,233,371	$2,380,320	$2,494,159
Incentive Costs =	$2,036,414	$2,264,112	$2,315,540
16) Total Utility Project Costs =	$4,269,785	$4,644,432	$4,809,699
17) Direct Participant Costs ($/Part.) =	$5,558	$5,968	$6,021
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$218	$265	$263
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	10.2	10.4	10.5
21) Avg. Dth/Part. Saved =	155.12	169.19	171.07
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	2,775	2,902	2,900
24) Total Annual Dth Saved =	430,500	490,913	496,084
25) Incentive/Participant =	$733.77	$780.31	$798.51

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$1,539	$1,601	$1,659
Cost per Participant per Dth =	$45.75	$44.74	$44.89
Lifetime Energy Reduction (Dth)	14,711,726		
Societal Cost per Dth	$3.12		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($33,706,609)	0.68
Utility Cost Test	$56,611,658	5.13
Societal Test	$65,650,707	2.43
Participant Test	$107,425,817	3.10

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Business Segment Direct Participants Only**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$2,195,959	$2,342,908	$2,456,747
Incentive Costs =	$2,036,414	$2,264,112	$2,315,540
16) Total Utility Project Costs =	$4,232,373	$4,607,020	$4,772,287
17) Direct Participant Costs ($/Part.) =	$17,624	$17,290	$17,463
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$690	$767	$764
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	10.2	10.4	10.5
21) Avg. Dth/Part. Saved =	491.85	490.16	496.18
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	875	1,002	1,000
24) Total Annual Dth Saved =	430,500	490,913	496,084
25) Incentive/Participant =	$2,326.63	$2,260.64	$2,315.98

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$4,836	$4,600	$4,773
Cost per Participant per Dth =	$45.66	$44.66	$44.82
Lifetime Energy Reduction (Dth)	14,711,726		
Societal Cost per Dth	$3.12		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($33,594,373)	0.68
Utility Cost Test	$56,723,894	5.17
Societal Test	$65,762,943	2.43
Participant Test	$107,425,817	3.10

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Business Segment Energy Efficiency Total
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	3,529,590			4,097,045			4,331,789		
Utility Administration	7,657,165			7,947,730			8,203,819		
Advertising & Promotion	805,004			825,259			876,388		
Participant Incentives	25,195,679			25,822,367			26,692,621		
R&D	0			0			0		
Other	1,562,503			1,702,904			1,706,601		
Total Costs	$38,749,942			$40,395,306			$41,811,218		
Project Participants									
Total Participants	6,921			6,954			6,942		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	41,348			42,650			42,815		
Annual kWh Saved - Generator	286,184,027			296,565,377			297,244,952		
Cost per Annual kWh Saved	$0.1354			$0.1362			$0.1407		
Measure Lifetime (Years)	14.8			14.6			14.6		
Lifetime kWh savings	4,231,562,144			4,344,333,021			4,349,516,839		
Cost per kWh Lifetime	$0.0092			$0.0093			$0.0096		
Average kW Savings per Participant	5.88			5.99			5.97		
Annual kW Savings - Generator	40,725			41,668			41,419		
Cost per KW Saved	$951.49			$969.47			$1,009.47		
Cost/Benefit Results									
Societal									
Net present value	$15,225			$16,892			$17,905		
B/C ratio	1.89			1.96			2.00		
Participant									
Net present value	$28,642			$30,699			$31,623		
B/C ratio	3.19			3.29			3.31		
Rate Payer									
Net present value	($10,890)			($10,989)			($10,955)		
B/C ratio	0.70			0.71			0.72		
Utility									
Net present value	$19,887			$21,438			$22,469		
B/C ratio	4.55			4.69			4.73		

BUSINESS SEGMENT ENERGY EFFICIENCY TOTAL — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$38,153,570	$38,153,570	$38,153,570	$38,153,570
T & D	N/A	$14,466,623	$14,466,623	$14,466,623	$14,466,623
Marginal Energy	N/A	$123,771,585	$123,771,585	$123,771,585	$123,771,585
Environmental Externality	N/A	N/A	N/A	N/A	$5,566,376
Subtotal	N/A	$176,391,778	$176,391,778	$176,391,778	$181,958,154
Participant Benefits					
Bill Reduction - Electric	$213,011,641	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$25,195,679	N/A	N/A	$25,195,679	$25,195,679
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$50,428,684	N/A	N/A	$17,106,593	$17,106,593
Subtotal	$288,636,004	N/A	N/A	$42,302,273	$42,302,273
Total Benefits	$288,636,004	$176,391,778	$176,391,778	$218,694,050	$224,260,427
Costs					
Utility Project Costs					
Customer Services	N/A	$3,529,590	$3,529,590	$3,529,590	$3,529,590
Project Administration	N/A	$7,657,165	$7,657,165	$7,657,165	$7,657,165
Advertising & Promotion	N/A	$805,004	$805,004	$805,004	$805,004
Measurement & Verification	N/A	$703,806	$703,806	$703,806	$703,806
Rebates	N/A	$25,195,679	$25,195,679	$25,195,679	$25,195,679
Other	N/A	$858,697	$858,697	$858,697	$858,697
Subtotal	N/A	$38,749,942	$38,749,942	$38,749,942	$38,749,942
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$213,011,641	N/A	N/A
Subtotal	N/A	N/A	$213,011,641	N/A	N/A
Participant Costs					
Incremental Capital Costs	$90,398,206	N/A	N/A	$80,131,606	$80,131,606
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$90,398,206	N/A	N/A	$80,131,606	$80,131,606
Total Costs	$90,398,206	$38,749,942	$251,761,583	$118,881,547	$118,881,547
Net Benefit (Cost)	$198,237,798	$137,641,836	($75,369,805)	$99,812,503	$105,378,879
Benefit/Cost Ratio	3.19	4.55	0.70	1.84	1.89

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	14.8 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	70.08%
Gross Load Factor at Customer	E	56.46%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,950

Program Summary per Participant

Gross kW Saved at Customer	I	7.81 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	5.88 kW
Gross Annual kWh Saved at Customer	(B x E x I)	38,619 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	41,348 kWh

Program Summary All Participants

Total Participants	J	6,921
Total Budget	K	**$38,749,942**
Gross kW Saved at Customer	(J x I)	54,045 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**40,725 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	267,295,882 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**286,184,027 kWh**
Societal Net Benefits	(J x I x H)	**$105,378,879**
Utility Program Cost per kWh Lifetime		**$0.0092**
Utility Program Cost per kW at Gen		**$951.49**

BUSINESS SEGMENT ENERGY EFFICIENCY TOTAL — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$39,812,644	$39,812,644	$39,812,644	$39,812,644
T & D	N/A	$15,094,678	$15,094,678	$15,094,678	$15,094,678
Marginal Energy	N/A	$134,557,986	$134,557,986	$134,557,986	$134,557,986
Environmental Externality	N/A	N/A	N/A	N/A	$5,895,126
Subtotal	N/A	$189,465,307	$189,465,307	$189,465,307	$195,360,433
Participant Benefits					
Bill Reduction - Electric	$225,481,845	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$25,822,367	N/A	N/A	$25,822,367	$25,822,367
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$55,374,328	N/A	N/A	$18,637,694	$18,637,694
Subtotal	$306,678,540	N/A	N/A	$44,460,061	$44,460,061
Total Benefits	$306,678,540	$189,465,307	$189,465,307	$233,925,368	$239,820,494
Costs					
Utility Project Costs					
Customer Services	N/A	$4,097,045	$4,097,045	$4,097,045	$4,097,045
Project Administration	N/A	$7,947,730	$7,947,730	$7,947,730	$7,947,730
Advertising & Promotion	N/A	$825,259	$825,259	$825,259	$825,259
Measurement & Verification	N/A	$750,951	$750,951	$750,951	$750,951
Rebates	N/A	$25,822,367	$25,822,367	$25,822,367	$25,822,367
Other	N/A	$951,954	$951,954	$951,954	$951,954
Subtotal	N/A	$40,395,306	$40,395,306	$40,395,306	$40,395,306
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$225,481,845	N/A	N/A
Subtotal	N/A	N/A	$225,481,845	N/A	N/A
Participant Costs					
Incremental Capital Costs	$93,213,049	N/A	N/A	$81,965,767	$81,965,767
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$93,213,049	N/A	N/A	$81,965,767	$81,965,767
Total Costs	$93,213,049	$40,395,306	$265,877,151	$122,361,073	$122,361,073
Net Benefit (Cost)	$213,465,491	$149,070,002	($76,411,844)	$111,564,296	$117,459,421
Benefit/Cost Ratio	3.29	4.69	0.71	1.91	1.96

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	14.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	69.10%
Gross Load Factor at Customer	E	56.39%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,095

Program Summary per Participant		
Gross kW Saved at Customer	I	8.06 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	5.99 kW
Gross Annual kWh Saved at Customer	(B x E x I)	39,835 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	42,650 kWh

Program Summary All Participants		
Total Participants	J	6,954
Total Budget	K	**$40,395,306**
Gross kW Saved at Customer	(J x I)	56,076 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**41,668 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	276,992,062 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**296,565,377 kWh**
Societal Net Benefits	(J x I x H)	**$117,459,421**

Utility Program Cost per kWh Lifetime	**$0.0093**
Utility Program Cost per kW at Gen	**$969.47**

BUSINESS SEGMENT ENERGY EFFICIENCY TOTAL — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$40,627,979	$40,627,979	$40,627,979	$40,627,979
T & D	N/A	$15,403,218	$15,403,218	$15,403,218	$15,403,218
Marginal Energy	N/A	$141,768,731	$141,768,731	$141,768,731	$141,768,731
Environmental Externality	N/A	N/A	N/A	N/A	$5,932,836
Subtotal	N/A	$197,799,928	$197,799,928	$197,799,928	$203,732,764
Participant Benefits					
Bill Reduction - Electric	$232,045,281	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$26,692,621	N/A	N/A	$26,692,621	$26,692,621
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$55,951,182	N/A	N/A	$18,388,506	$18,388,506
Subtotal	$314,689,084	N/A	N/A	$45,081,127	$45,081,127
Total Benefits	$314,689,084	$197,799,928	$197,799,928	$242,881,054	$248,813,891
Costs					
Utility Project Costs					
Customer Services	N/A	$4,331,789	$4,331,789	$4,331,789	$4,331,789
Project Administration	N/A	$8,203,819	$8,203,819	$8,203,819	$8,203,819
Advertising & Promotion	N/A	$876,388	$876,388	$876,388	$876,388
Measurement & Verification	N/A	$715,458	$715,458	$715,458	$715,458
Rebates	N/A	$26,692,621	$26,692,621	$26,692,621	$26,692,621
Other	N/A	$991,143	$991,143	$991,143	$991,143
Subtotal	N/A	$41,811,218	$41,811,218	$41,811,218	$41,811,218
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$232,045,281	N/A	N/A
Subtotal	N/A	N/A	$232,045,281	N/A	N/A
Participant Costs					
Incremental Capital Costs	$95,147,481	N/A	N/A	$82,699,549	$82,699,549
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$95,147,481	N/A	N/A	$82,699,549	$82,699,549
Total Costs	$95,147,481	$41,811,218	$273,856,499	$124,510,767	$124,510,767
Net Benefit (Cost)	$219,541,602	$155,988,709	($76,056,571)	$118,370,287	$124,303,123
Benefit/Cost Ratio	3.31	4.73	0.72	1.95	2.00

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	14.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	68.08%
Gross Load Factor at Customer	E	56.01%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,197

Program Summary per Participant		
Gross kW Saved at Customer	I	8.15 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	5.97 kW
Gross Annual kWh Saved at Customer	(B x E x I)	39,990 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	42,815 kWh

Program Summary All Participants		
Total Participants	J	6,942
Total Budget	K	**$41,811,218**
Gross kW Saved at Customer	(J x I)	56,581 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**41,419 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	277,626,785 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**297,244,952 kWh**
Societal Net Benefits	(J x I x H)	**$124,303,123**

Utility Program Cost per kWh Lifetime	**$0.0096**
Utility Program Cost per kW at Gen	**$1,009.47**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Business Segment Energy Efficiency Total
Project Description:
(Note changes)
Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	544,072			625,212			717,567		
Utility Administration	1,344,962			1,392,526			1,377,220		
Advertising & Promotion	152,020			159,186			189,374		
Participant Incentives	2,036,414			2,264,112			2,315,540		
R&D	0			0			0		
Other	154,905			165,984			172,586		
Total Costs	$4,232,373			$4,607,020			$4,772,287		
Project Participants									
Total Participants	875			1,002			1,000		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	56%			55%			56%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	56%			55%			56%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	491.85			490.16			496.18		
Annual Dth Saved	430,500			490,913			496,084		
Cost per Dth	$9.8313			$9.3846			$9.6199		
Project Life (Years)	10.2			10.4			10.5		
Lifetime Dth Saved	4,395,448			5,123,173			5,193,105		
Cost per Lifetime Dth Saved	$0.9629			$0.8993			$0.9190		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$65,762,943								
B/C ratio	2.43								
Participant									
Net present value	$107,425,817								
B/C ratio	3.10								
Rate Payer									
Net present value	($33,594,373)								
B/C ratio	0.68								
Utility									
Net present value	$56,723,894								
B/C ratio	5.17								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Business Segment Energy Efficiency Total**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$2,195,959	$2,342,908	$2,456,747
Incentive Costs =	$2,036,414	$2,264,112	$2,315,540
16) Total Utility Project Costs =	$4,232,373	$4,607,020	$4,772,287
17) Direct Participant Costs ($/Part.) =	$17,624	$17,290	$17,463
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$690	$767	$764
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	10.2	10.4	10.5
21) Avg. Dth/Part. Saved =	491.85	490.16	496.18
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	875	1,002	1,000
24) Total Annual Dth Saved =	430,500	490,913	496,084
25) Incentive/Participant =	$2,326.63	$2,260.64	$2,315.98

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$4,836	$4,600	$4,773
Cost per Participant per Dth =	$45.66	$44.66	$44.82
Lifetime Energy Reduction (Dth)	14,711,726		
Societal Cost per Dth	$3.12		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($33,594,373)	0.68
Utility Cost Test	$56,723,894	5.17
Societal Test	$65,762,943	2.43
Participant Test	$107,425,817	3.10

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Business New Construction
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	1,557,535			1,616,368			1,486,499		
Utility Administration	365,164			375,767			384,669		
Advertising & Promotion	30,184			30,752			31,337		
Participant Incentives	3,501,044			3,325,483			2,778,931		
R&D	0			0			0		
Other	691,192			707,364			655,699		
Total Costs	$6,145,119			$6,055,734			$5,337,135		
Project Participants									
Total Participants	53			49			43		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency	x			x			x		
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	499,335			511,943			489,511		
Annual kWh Saved - Generator	26,464,770			25,085,206			21,048,986		
Cost per Annual kWh Saved	$0.2322			$0.2414			$0.2536		
Measure Lifetime (Years)	20.0			20.0			20.0		
Lifetime kWh savings	529,295,402			501,704,113			420,979,711		
Cost per kWh Lifetime	$0.0116			$0.0121			$0.0127		
Average kW Savings per Participant	118.63			121.94			115.99		
Annual kW Savings - Generator	6,287			5,975			4,988		
Cost per KW Saved	$977.40			$1,013.51			$1,070.06		
Cost/Benefit Results									
Societal									
Net present value	$133,668			$151,160			$156,630		
B/C ratio	1.32			1.35			1.38		
Participant									
Net present value	$351,805			$373,913			$370,951		
B/C ratio	2.07			2.11			2.15		
Rate Payer									
Net present value	($126,202)			($128,209)			($124,987)		
B/C ratio	0.79			0.80			0.80		
Utility									
Net present value	$352,770			$376,198			$370,522		
B/C ratio	4.04			4.04			3.99		

BUSINESS NEW CONSTRUCTION — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$7,133,509	$7,133,509	$7,133,509	$7,133,509
T & D	N/A	$2,704,570	$2,704,570	$2,704,570	$2,704,570
Marginal Energy	N/A	$15,003,875	$15,003,875	$15,003,875	$15,003,875
Environmental Externality	N/A	N/A	N/A	N/A	$626,068
Subtotal	N/A	$24,841,955	$24,841,955	$24,841,955	$25,468,023
Participant Benefits					
Bill Reduction - Electric	$25,385,534	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,501,044	N/A	N/A	$3,501,044	$3,501,044
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$7,112,545	N/A	N/A	$0	$0
Subtotal	$35,999,123	N/A	N/A	$3,501,044	$3,501,044
Total Benefits	$35,999,123	$24,841,955	$24,841,955	$28,342,999	$28,969,067
Costs					
Utility Project Costs					
Customer Services	N/A	$1,557,535	$1,557,535	$1,557,535	$1,557,535
Project Administration	N/A	$365,164	$365,164	$365,164	$365,164
Advertising & Promotion	N/A	$30,184	$30,184	$30,184	$30,184
Measurement & Verification	N/A	$340,192	$340,192	$340,192	$340,192
Rebates	N/A	$3,501,044	$3,501,044	$3,501,044	$3,501,044
Other	N/A	$351,000	$351,000	$351,000	$351,000
Subtotal	N/A	$6,145,119	$6,145,119	$6,145,119	$6,145,119
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$25,385,534	N/A	N/A
Subtotal	N/A	N/A	$25,385,534	N/A	N/A
Participant Costs					
Incremental Capital Costs	$17,353,468	N/A	N/A	$15,739,552	$15,739,552
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$17,353,468	N/A	N/A	$15,739,552	$15,739,552
Total Costs	$17,353,468	$6,145,119	$31,530,653	$21,884,671	$21,884,671
Net Benefit (Cost)	$18,645,655	$18,696,836	($6,688,698)	$6,458,328	$7,084,396
Benefit/Cost Ratio	2.07	4.04	0.79	1.30	1.32

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	20.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	91.20%
Gross Load Factor at Customer	E	44.01%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,105

Program Summary per Participant

Gross kW Saved at Customer	I	120.97 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	118.63 kW
Gross Annual kWh Saved at Customer	(B x E x I)	466,379 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	499,335 kWh

Program Summary All Participants

Total Participants	J	53
Total Budget	K	**$6,145,119**
Gross kW Saved at Customer	(J x I)	6,412 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**6,287 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	24,718,095 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**26,464,770 kWh**
Societal Net Benefits	(J x I x H)	**$7,084,396**

Utility Program Cost per kWh Lifetime	**$0.0116**
Utility Program Cost per kW at Gen	**$977.40**

BUSINESS NEW CONSTRUCTION — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$6,939,241	$6,939,241	$6,939,241	$6,939,241
T & D	N/A	$2,630,916	$2,630,916	$2,630,916	$2,630,916
Marginal Energy	N/A	$14,919,287	$14,919,287	$14,919,287	$14,919,287
Environmental Externality	N/A	N/A	N/A	N/A	$608,597
Subtotal	N/A	$24,489,444	$24,489,444	$24,489,444	$25,098,041
Participant Benefits					
Bill Reduction - Electric	$24,715,949	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,325,483	N/A	N/A	$3,325,483	$3,325,483
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$6,718,082	N/A	N/A	$0	$0
Subtotal	$34,759,514	N/A	N/A	$3,325,483	$3,325,483
Total Benefits	$34,759,514	$24,489,444	$24,489,444	$27,814,927	$28,423,524
Costs					
Utility Project Costs					
Customer Services	N/A	$1,616,368	$1,616,368	$1,616,368	$1,616,368
Project Administration	N/A	$375,767	$375,767	$375,767	$375,767
Advertising & Promotion	N/A	$30,752	$30,752	$30,752	$30,752
Measurement & Verification	N/A	$356,364	$356,364	$356,364	$356,364
Rebates	N/A	$3,325,483	$3,325,483	$3,325,483	$3,325,483
Other	N/A	$351,000	$351,000	$351,000	$351,000
Subtotal	N/A	$6,055,734	$6,055,734	$6,055,734	$6,055,734
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$24,715,949	N/A	N/A
Subtotal	N/A	N/A	$24,715,949	N/A	N/A
Participant Costs					
Incremental Capital Costs	$16,437,789	N/A	N/A	$14,960,958	$14,960,958
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$16,437,789	N/A	N/A	$14,960,958	$14,960,958
Total Costs	$16,437,789	$6,055,734	$30,771,683	$21,016,692	$21,016,692
Net Benefit (Cost)	$18,321,725	$18,433,710	($6,282,239)	$6,798,235	$7,406,832
Benefit/Cost Ratio	2.11	4.04	0.80	1.32	1.35

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	20.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	91.35%
Gross Load Factor at Customer	E	43.97%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,218

Program Summary per Participant

Gross kW Saved at Customer	I	124.14 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	121.94 kW
Gross Annual kWh Saved at Customer	(B x E x I)	478,155 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	511,943 kWh

Program Summary All Participants

Total Participants	J	49
Total Budget	K	**$6,055,734**
Gross kW Saved at Customer	(J x I)	6,083 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**5,975 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	23,429,582 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**25,085,206 kWh**
Societal Net Benefits	(J x I x H)	**$7,406,832**
Utility Program Cost per kWh Lifetime		**$0.0121**
Utility Program Cost per kW at Gen		**$1,013.51**

BUSINESS NEW CONSTRUCTION — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$5,929,351	$5,929,351	$5,929,351	$5,929,351
T & D	N/A	$2,248,030	$2,248,030	$2,248,030	$2,248,030
Marginal Energy	N/A	$13,092,185	$13,092,185	$13,092,185	$13,092,185
Environmental Externality	N/A	N/A	N/A	N/A	$516,974
Subtotal	N/A	$21,269,567	$21,269,567	$21,269,567	$21,786,540
Participant Benefits					
Bill Reduction - Electric	$21,306,864	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$2,778,931	N/A	N/A	$2,778,931	$2,778,931
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$5,681,361	N/A	N/A	$0	$0
Subtotal	$29,767,155	N/A	N/A	$2,778,931	$2,778,931
Total Benefits	$29,767,155	$21,269,567	$21,269,567	$24,048,498	$24,565,471
Costs					
Utility Project Costs					
Customer Services	N/A	$1,486,499	$1,486,499	$1,486,499	$1,486,499
Project Administration	N/A	$384,669	$384,669	$384,669	$384,669
Advertising & Promotion	N/A	$31,337	$31,337	$31,337	$31,337
Measurement & Verification	N/A	$304,699	$304,699	$304,699	$304,699
Rebates	N/A	$2,778,931	$2,778,931	$2,778,931	$2,778,931
Other	N/A	$351,000	$351,000	$351,000	$351,000
Subtotal	N/A	$5,337,135	$5,337,135	$5,337,135	$5,337,135
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$21,306,864	N/A	N/A
Subtotal	N/A	N/A	$21,306,864	N/A	N/A
Participant Costs					
Incremental Capital Costs	$13,816,273	N/A	N/A	$12,493,229	$12,493,229
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$13,816,273	N/A	N/A	$12,493,229	$12,493,229
Total Costs	$13,816,273	$5,337,135	$26,643,999	$17,830,364	$17,830,364
Net Benefit (Cost)	$15,950,883	$15,932,432	($5,374,432)	$6,218,133	$6,735,107
Benefit/Cost Ratio	2.15	3.99	0.80	1.35	1.38

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	20.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	91.07%
Gross Load Factor at Customer	E	44.06%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,322

Program Summary per Participant		
Gross kW Saved at Customer	I	118.45 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	115.99 kW
Gross Annual kWh Saved at Customer	(B x E x I)	457,204 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	489,511 kWh

Program Summary All Participants		
Total Participants	J	43
Total Budget	K	**$5,337,135**
Gross kW Saved at Customer	(J x I)	5,094 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**4,988 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	19,659,752 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**21,048,986 kWh**
Societal Net Benefits	(J x I x H)	**$6,735,107**

Utility Program Cost per kWh Lifetime	**$0.0127**
Utility Program Cost per kW at Gen	**$1,070.06**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Business New Construction
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	173,059			179,596			165,167		
Utility Administration	65,901			67,849			69,855		
Advertising & Promotion	1,250			1,250			1,250		
Participant Incentives	126,679			122,765			110,285		
R&D	0			0			0		
Other	76,799			78,596			72,855		
Total Costs	$443,688			$450,056			$419,412		
Project Participants									
Total Participants	14			13			12		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency	x			x			x		
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	1715.57			1787.32			1728.27		
Annual Dth Saved	24,018			23,235			20,739		
Cost per Dth	$18.4732			$19.3696			$20.2231		
Project Life (Years)	20.0			20.0			20.0		
Lifetime Dth Saved	480,360			464,703			414,784		
Cost per Lifetime Dth Saved	$0.9237			$0.9685			$1.0112		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$1,159,989								
B/C ratio	1.14								
Participant									
Net present value	$15,609,815								
B/C ratio	2.16								
Rate Payer									
Net present value	($3,014,705)								
B/C ratio	0.67								
Utility									
Net present value	$4,675,998								
B/C ratio	4.56								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Business New Construction**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$317,009	$327,291	$309,127
Incentive Costs =	$126,679	$122,765	$110,285
16) Total Utility Project Costs =	$443,688	$450,056	$419,412
17) Direct Participant Costs ($/Part.) =	$343,277	$350,548	$341,624
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	20.0	20.0	20.0
21) Avg. Dth/Part. Saved =	1,715.57	1,787.32	1,728.27
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	14	13	12
24) Total Annual Dth Saved =	24,018	23,235	20,739
25) Incentive/Participant =	$9,048.50	$9,443.46	$9,190.42

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$31,692	$34,620	$34,951
Cost per Participant per Dth =	$218.57	$215.50	$217.89
Lifetime Energy Reduction (Dth)	1,359,847		
Societal Cost per Dth	$5.98		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($3,014,705)	0.67
Utility Cost Test	$4,675,998	4.56
Societal Test	$1,159,989	1.14
Participant Test	$15,609,815	2.16

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Commercial Efficiency
Project Description:
(Note changes)
Type Conservation
Status: New

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	324,000			616,000			1,038,000		
Utility Administration	287,003			325,254			331,629		
Advertising & Promotion	30,000			30,000			30,000		
Participant Incentives	396,948			841,422			1,722,616		
R&D	0			0			0		
Other	12,012			24,618			49,733		
Total Costs	$1,049,963			$1,837,293			$3,171,977		
Project Participants									
Total Participants	10			20			37		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air	x			x			x		
Energy Star Appliances									
Lighting	x			x			x		
Motors (including ASD, Fans, Pumps)	x			x			x		
Manufacturing Process	x			x			x		
Refrigeration	x			x			x		
Space Cooling	x			x			x		
Space Heating	x			x			x		
Water Heating	x			x			x		
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	425,907			449,481			439,177		
Annual kWh Saved - Generator	4,259,068			8,861,195			16,132,446		
Cost per Annual kWh Saved	$0.2465			$0.2073			$0.1966		
Measure Lifetime (Years)	13.1			13.8			14.9		
Lifetime kWh savings	55,672,837			122,477,415			240,416,155		
Cost per kWh Lifetime	$0.0189			$0.0150			$0.0132		
Average kW Savings per Participant	44.34			52.40			57.01		
Annual kW Savings - Generator	443			1,033			2,094		
Cost per KW Saved	$2,368.13			$1,778.43			$1,514.75		
Cost/Benefit Results									
Societal									
Net present value	$82,920			$127,584			$162,522		
B/C ratio	1.41			1.62			1.80		
Participant									
Net present value	$331,149			$376,737			$377,940		
B/C ratio	2.97			3.13			2.99		
Rate Payer									
Net present value	($176,018)			($157,785)			($143,864)		
B/C ratio	0.55			0.62			0.67		
Utility									
Net present value	$113,932			$169,180			$205,106		
B/C ratio	2.09			2.82			3.38		

COMMERCIAL EFFICIENCY — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$385,074	$385,074	$385,074	$385,074
T & D	N/A	$146,011	$146,011	$146,011	$146,011
Marginal Energy	N/A	$1,658,195	$1,658,195	$1,658,195	$1,658,195
Environmental Externality	N/A	N/A	N/A	N/A	$75,122
Subtotal	N/A	$2,189,280	$2,189,280	$2,189,280	$2,264,403
Participant Benefits					
Bill Reduction - Electric	$2,899,496	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$396,948	N/A	N/A	$396,948	$396,948
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,699,035	N/A	N/A	$191,676	$191,676
Subtotal	$4,995,479	N/A	N/A	$588,623	$588,623
Total Benefits	$4,995,479	$2,189,280	$2,189,280	$2,777,904	$2,853,026
Costs					
Utility Project Costs					
Customer Services	N/A	$324,000	$324,000	$324,000	$324,000
Project Administration	N/A	$287,003	$287,003	$287,003	$287,003
Advertising & Promotion	N/A	$30,000	$30,000	$30,000	$30,000
Measurement & Verification	N/A	$7,050	$7,050	$7,050	$7,050
Rebates	N/A	$396,948	$396,948	$396,948	$396,948
Other	N/A	$4,962	$4,962	$4,962	$4,962
Subtotal	N/A	$1,049,963	$1,049,963	$1,049,963	$1,049,963
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,899,496	N/A	N/A
Subtotal	N/A	N/A	$2,899,496	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,683,991	N/A	N/A	$973,866	$973,866
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,683,991	N/A	N/A	$973,866	$973,866
Total Costs	$1,683,991	$1,049,963	$3,949,459	$2,023,829	$2,023,829
Net Benefit (Cost)	$3,311,489	$1,139,317	($1,760,179)	$754,075	$829,197
Benefit/Cost Ratio	2.97	2.09	0.55	1.37	1.41

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	13.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	58.87%
Gross Load Factor at Customer	E	64.83%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,184

Program Summary per Participant		
Gross kW Saved at Customer	I	70.04 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	44.34 kW
Gross Annual kWh Saved at Customer	(B x E x I)	397,797 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	425,907 kWh

Program Summary All Participants		
Total Participants	J	10
Total Budget	K	**$1,049,963**
Gross kW Saved at Customer	(J x I)	700 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**443 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	3,977,969 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**4,259,068 kWh**
Societal Net Benefits	(J x I x H)	**$829,197**

Utility Program Cost per kWh Lifetime	**$0.0189**
Utility Program Cost per kW at Gen	**$2,368.13**

COMMERCIAL EFFICIENCY — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$987,364	$987,364	$987,364	$987,364
T & D	N/A	$374,351	$374,351	$374,351	$374,351
Marginal Energy	N/A	$3,810,833	$3,810,833	$3,810,833	$3,810,833
Environmental Externality	N/A	N/A	N/A	N/A	$165,930
Subtotal	N/A	$5,172,548	$5,172,548	$5,172,548	$5,338,478
Participant Benefits					
Bill Reduction - Electric	$6,445,872	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$841,422	N/A	N/A	$841,422	$841,422
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$3,622,889	N/A	N/A	$383,852	$383,852
Subtotal	$10,910,183	N/A	N/A	$1,225,274	$1,225,274
Total Benefits	$10,910,183	$5,172,548	$5,172,548	$6,397,822	$6,563,752
Costs					
Utility Project Costs					
Customer Services	N/A	$616,000	$616,000	$616,000	$616,000
Project Administration	N/A	$325,254	$325,254	$325,254	$325,254
Advertising & Promotion	N/A	$30,000	$30,000	$30,000	$30,000
Measurement & Verification	N/A	$14,100	$14,100	$14,100	$14,100
Rebates	N/A	$841,422	$841,422	$841,422	$841,422
Other	N/A	$10,518	$10,518	$10,518	$10,518
Subtotal	N/A	$1,837,293	$1,837,293	$1,837,293	$1,837,293
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$6,445,872	N/A	N/A
Subtotal	N/A	N/A	$6,445,872	N/A	N/A
Participant Costs					
Incremental Capital Costs	$3,483,082	N/A	N/A	$2,211,233	$2,211,233
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$3,483,082	N/A	N/A	$2,211,233	$2,211,233
Total Costs	$3,483,082	$1,837,293	$8,283,165	$4,048,526	$4,048,526
Net Benefit (Cost)	$7,427,102	$3,335,255	($3,110,617)	$2,349,296	$2,515,226
Benefit/Cost Ratio	3.13	2.82	0.62	1.58	1.62

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	13.8 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	62.90%
Gross Load Factor at Customer	E	61.85%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,647

Program Summary per Participant		
Gross kW Saved at Customer	I	77.48 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	52.40 kW
Gross Annual kWh Saved at Customer	(B x E x I)	419,815 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	449,481 kWh

Program Summary All Participants		
Total Participants	J	20
Total Budget	K	**$1,837,293**
Gross kW Saved at Customer	(J x I)	1,527 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,033 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	8,276,356 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**8,861,195 kWh**
Societal Net Benefits	(J x I x H)	**$2,515,226**

Utility Program Cost per kWh Lifetime	**$0.0150**
Utility Program Cost per kW at Gen	**$1,778.43**

COMMERCIAL EFFICIENCY — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$2,099,908	$2,099,908	$2,099,908	$2,099,908
T & D	N/A	$796,177	$796,177	$796,177	$796,177
Marginal Energy	N/A	$7,810,133	$7,810,133	$7,810,133	$7,810,133
Environmental Externality	N/A	N/A	N/A	N/A	$321,032
Subtotal	N/A	$10,706,218	$10,706,218	$10,706,218	$11,027,250
Participant Benefits					
Bill Reduction - Electric	$12,818,851	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,722,616	N/A	N/A	$1,722,616	$1,722,616
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$6,319,619	N/A	N/A	$708,793	$708,793
Subtotal	$20,861,085	N/A	N/A	$2,431,409	$2,431,409
Total Benefits	$20,861,085	$10,706,218	$10,706,218	$13,137,627	$13,458,659
Costs					
Utility Project Costs					
Customer Services	N/A	$1,038,000	$1,038,000	$1,038,000	$1,038,000
Project Administration	N/A	$331,629	$331,629	$331,629	$331,629
Advertising & Promotion	N/A	$30,000	$30,000	$30,000	$30,000
Measurement & Verification	N/A	$28,200	$28,200	$28,200	$28,200
Rebates	N/A	$1,722,616	$1,722,616	$1,722,616	$1,722,616
Other	N/A	$21,533	$21,533	$21,533	$21,533
Subtotal	N/A	$3,171,977	$3,171,977	$3,171,977	$3,171,977
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$12,818,851	N/A	N/A
Subtotal	N/A	N/A	$12,818,851	N/A	N/A
Participant Costs					
Incremental Capital Costs	$6,978,081	N/A	N/A	$4,316,708	$4,316,708
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$6,978,081	N/A	N/A	$4,316,708	$4,316,708
Total Costs	$6,978,081	$3,171,977	$15,990,828	$7,488,686	$7,488,686
Net Benefit (Cost)	$13,883,004	$7,534,241	($5,284,610)	$5,648,942	$5,969,974
Benefit/Cost Ratio	2.99	3.38	0.67	1.75	1.80

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	14.9 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	67.96%
Gross Load Factor at Customer	E	60.03%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,083

Program Summary per Participant		
Gross kW Saved at Customer	I	78.01 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	57.01 kW
Gross Annual kWh Saved at Customer	(B x E x I)	410,192 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	439,177 kWh

Program Summary All Participants		
Total Participants	J	37
Total Budget	K	**$3,171,977**
Gross kW Saved at Customer	(J x I)	2,865 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**2,094 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	15,067,705 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**16,132,446 kWh**
Societal Net Benefits	(J x I x H)	**$5,969,974**

Utility Program Cost per kWh Lifetime	**$0.0132**
Utility Program Cost per kW at Gen	**$1,514.75**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Commercial Efficiency
Project Description:
(Note changes)
Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	81,000			154,000			259,500		
Utility Administration	59,845			71,063			72,657		
Advertising & Promotion	10,000			5,000			5,000		
Participant Incentives	54,087			92,817			121,286		
R&D	0			0			0		
Other	6,246			12,300			23,796		
Total Costs	$211,178			$335,181			$482,239		
Project Participants									
Total Participants	4			8			13		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System	x			x			x		
Building Efficiency									
Food Service Equipment									
Heat Recovery	x			x			x		
Industrial Process Heating	x			x			x		
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination	x			x			x		
Water Heating	x			x			x		
Weatherization									
General/Other	x			x			x		
Energy Savings									
Avg. Dth/Part. Saved	3005.87			2537.61			1968.52		
Annual Dth Saved	12,023			20,301			25,591		
Cost per Dth	$17.5638			$16.5106			$18.8442		
Project Life (Years)	10.7			11.9			11.4		
Lifetime Dth Saved	128,908			240,787			292,463		
Cost per Lifetime Dth Saved	$1.6382			$1.3920			$1.6489		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$2,650,234								
B/C ratio	2.31								
Participant									
Net present value	$7,194,114								
B/C ratio	3.72								
Rate Payer									
Net present value	($1,942,481)								
B/C ratio	0.62								
Utility									
Net present value	$2,188,112								
B/C ratio	3.13								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Commercial Efficiency**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$157,091	$242,364	$360,953
Incentive Costs =	$54,087	$92,817	$121,286
16) Total Utility Project Costs =	$211,178	$335,181	$482,239
17) Direct Participant Costs ($/Part.) =	$102,004	$110,586	$102,099
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$3,667	$4,660	$2,190
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	10.7	11.9	11.4
21) Avg. Dth/Part. Saved =	3,005.87	2,537.61	1,968.52
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	4	8	13
24) Total Annual Dth Saved =	12,023	20,301	25,591
25) Incentive/Participant =	$13,521.75	$11,602.13	$9,329.69

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$52,794	$41,898	$37,095
Cost per Participant per Dth =	$51.50	$60.09	$70.71
Lifetime Energy Reduction (Dth)	662,158		
Societal Cost per Dth	$3.04		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($1,942,481)	0.62
Utility Cost Test	$2,188,112	3.13
Societal Test	$2,650,234	2.31
Participant Test	$7,194,114	3.72

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Computer Efficiency
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	606,526			655,816			690,532		
Advertising & Promotion	36,789			55,399			59,861		
Participant Incentives	312,000			312,000			312,000		
R&D	0			0			0		
Other	322,000			397,700			428,600		
Total Costs	$1,277,315			$1,420,915			$1,490,993		
Project Participants									
Total Participants	2,804			2,908			2,911		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances	x			x			x		
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	4,315			4,273			4,269		
Annual kWh Saved - Generator	12,098,358			12,426,585			12,426,585		
Cost per Annual kWh Saved	$0.1056			$0.1143			$0.1200		
Measure Lifetime (Years)	5.0			5.0			5.0		
Lifetime kWh savings	60,491,792			62,132,926			62,132,926		
Cost per kWh Lifetime	$0.0211			$0.0229			$0.0240		
Average kW Savings per Participant	0.59			0.59			0.59		
Annual kW Savings - Generator	1,662			1,707			1,707		
Cost per KW Saved	$768.57			$832.39			$873.44		
Cost/Benefit Results									
Societal									
Net present value	$550			$558			$593		
B/C ratio	1.66			1.65			1.67		
Participant									
Net present value	$1,196			$1,203			$1,232		
B/C ratio	4.18			4.21			4.29		
Rate Payer									
Net present value	($775)			($776)			($768)		
B/C ratio	0.56			0.57			0.59		
Utility									
Net present value	$532			$550			$586		
B/C ratio	2.17			2.13			2.14		

COMPUTER EFFICIENCY — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$657,044	$657,044	$657,044	$657,044
T & D	N/A	$249,148	$249,148	$249,148	$249,148
Marginal Energy	N/A	$1,863,204	$1,863,204	$1,863,204	$1,863,204
Environmental Externality	N/A	N/A	N/A	N/A	$107,648
Subtotal	N/A	$2,769,396	$2,769,396	$2,769,396	$2,877,044
Participant Benefits					
Bill Reduction - Electric	$3,664,920	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$312,000	N/A	N/A	$312,000	$312,000
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$430,112	N/A	N/A	$685,692	$685,692
Subtotal	$4,407,032	N/A	N/A	$997,692	$997,692
Total Benefits	$4,407,032	$2,769,396	$2,769,396	$3,767,088	$3,874,736
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$606,526	$606,526	$606,526	$606,526
Advertising & Promotion	N/A	$36,789	$36,789	$36,789	$36,789
Measurement & Verification	N/A	$7,000	$7,000	$7,000	$7,000
Rebates	N/A	$312,000	$312,000	$312,000	$312,000
Other	N/A	$315,000	$315,000	$315,000	$315,000
Subtotal	N/A	$1,277,315	$1,277,315	$1,277,315	$1,277,315
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$3,664,920	N/A	N/A
Subtotal	N/A	N/A	$3,664,920	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,054,240	N/A	N/A	$1,054,240	$1,054,240
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,054,240	N/A	N/A	$1,054,240	$1,054,240
Total Costs	$1,054,240	$1,277,315	$4,942,235	$2,331,555	$2,331,555
Net Benefit (Cost)	$3,352,792	$1,492,081	($2,172,839)	$1,435,533	$1,543,181
Benefit/Cost Ratio	4.18	2.17	0.56	1.62	1.66

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	5.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	100.00%
Gross Load Factor at Customer	E	83.46%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$998

Program Summary per Participant		
Gross kW Saved at Customer	I	0.55 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.59 kW
Gross Annual kWh Saved at Customer	(B x E x I)	4,030 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	4,315 kWh

Program Summary All Participants		
Total Participants	J	2,804
Total Budget	K	**$1,277,315**
Gross kW Saved at Customer	(J x I)	1,546 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,662 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	11,299,867 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**12,098,358 kWh**
Societal Net Benefits	(J x I x H)	**$1,543,181**

Utility Program Cost per kWh Lifetime	**$0.0211**
Utility Program Cost per kW at Gen	**$768.57**

COMPUTER EFFICIENCY — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$690,712	$690,712	$690,712	$690,712
T & D	N/A	$261,934	$261,934	$261,934	$261,934
Marginal Energy	N/A	$2,067,512	$2,067,512	$2,067,512	$2,067,512
Environmental Externality	N/A	N/A	N/A	N/A	$116,240
Subtotal	N/A	$3,020,158	$3,020,158	$3,020,158	$3,136,398
Participant Benefits					
Bill Reduction - Electric	$3,854,750	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$312,000	N/A	N/A	$312,000	$312,000
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$423,120	N/A	N/A	$685,692	$685,692
Subtotal	$4,589,870	N/A	N/A	$997,692	$997,692
Total Benefits	$4,589,870	$3,020,158	$3,020,158	$4,017,850	$4,134,090
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$655,816	$655,816	$655,816	$655,816
Advertising & Promotion	N/A	$55,399	$55,399	$55,399	$55,399
Measurement & Verification	N/A	$7,700	$7,700	$7,700	$7,700
Rebates	N/A	$312,000	$312,000	$312,000	$312,000
Other	N/A	$390,000	$390,000	$390,000	$390,000
Subtotal	N/A	$1,420,915	$1,420,915	$1,420,915	$1,420,915
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$3,854,750	N/A	N/A
Subtotal	N/A	N/A	$3,854,750	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,090,240	N/A	N/A	$1,090,240	$1,090,240
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,090,240	N/A	N/A	$1,090,240	$1,090,240
Total Costs	$1,090,240	$1,420,915	$5,275,665	$2,511,155	$2,511,155
Net Benefit (Cost)	$3,499,630	$1,599,243	($2,255,507)	$1,506,694	$1,622,934
Benefit/Cost Ratio	4.21	2.13	0.57	1.60	1.65

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	5.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	100.00%
Gross Load Factor at Customer	E	83.46%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,022

Program Summary per Participant		
Gross kW Saved at Customer	I	0.55 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.59 kW
Gross Annual kWh Saved at Customer	(B x E x I)	3,991 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	4,273 kWh

Program Summary All Participants		
Total Participants	J	2,908
Total Budget	K	**$1,420,915**
Gross kW Saved at Customer	(J x I)	1,588 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,707 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	11,606,431 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**12,426,585 kWh**
Societal Net Benefits	(J x I x H)	**$1,622,934**

Utility Program Cost per kWh Lifetime	**$0.0229**
Utility Program Cost per kW at Gen	**$832.39**

COMPUTER EFFICIENCY — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$707,134	$707,134	$707,134	$707,134
T & D	N/A	$268,082	$268,082	$268,082	$268,082
Marginal Energy	N/A	$2,221,666	$2,221,666	$2,221,666	$2,221,666
Environmental Externality	N/A	N/A	N/A	N/A	$113,980
Subtotal	N/A	$3,196,882	$3,196,882	$3,196,882	$3,310,862
Participant Benefits					
Bill Reduction - Electric	$3,941,194	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$312,000	N/A	N/A	$312,000	$312,000
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$423,120	N/A	N/A	$685,692	$685,692
Subtotal	$4,676,314	N/A	N/A	$997,692	$997,692
Total Benefits	$4,676,314	$3,196,882	$3,196,882	$4,194,574	$4,308,554
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$690,532	$690,532	$690,532	$690,532
Advertising & Promotion	N/A	$59,861	$59,861	$59,861	$59,861
Measurement & Verification	N/A	$8,600	$8,600	$8,600	$8,600
Rebates	N/A	$312,000	$312,000	$312,000	$312,000
Other	N/A	$420,000	$420,000	$420,000	$420,000
Subtotal	N/A	$1,490,993	$1,490,993	$1,490,993	$1,490,993
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$3,941,194	N/A	N/A
Subtotal	N/A	N/A	$3,941,194	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,090,240	N/A	N/A	$1,090,240	$1,090,240
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,090,240	N/A	N/A	$1,090,240	$1,090,240
Total Costs	$1,090,240	$1,490,993	$5,432,187	$2,581,233	$2,581,233
Net Benefit (Cost)	$3,586,074	$1,705,889	($2,235,305)	$1,613,341	$1,727,321
Benefit/Cost Ratio	4.29	2.14	0.59	1.63	1.67

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	5.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	100.00%
Gross Load Factor at Customer	E	83.46%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,088

Program Summary per Participant		
Gross kW Saved at Customer	I	0.55 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.59 kW
Gross Annual kWh Saved at Customer	(B x E x I)	3,987 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	4,269 kWh

Program Summary All Participants		
Total Participants	J	2,911
Total Budget	K	**$1,490,993**
Gross kW Saved at Customer	(J x I)	1,588 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,707 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	11,606,431 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**12,426,585 kWh**
Societal Net Benefits	(J x I x H)	**$1,727,321**

Utility Program Cost per kWh Lifetime	**$0.0240**
Utility Program Cost per kW at Gen	**$873.44**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Cooling Efficiency
Project Description:
(Note changes)
Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	333,259			341,984			351,366		
Advertising & Promotion	94,951			95,399			95,861		
Participant Incentives	1,433,261			1,415,476			1,417,941		
R&D	0			0			0		
Other	98,000			98,000			98,000		
Total Costs	$1,959,471			$1,950,860			$1,963,169		
Project Participants									
Total Participants	1,105			1,106			1,109		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration	x			x			x		
Space Cooling	x			x			x		
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	6,424			6,425			6,433		
Annual kWh Saved - Generator	7,097,985			7,106,359			7,134,438		
Cost per Annual kWh Saved	$0.2761			$0.2745			$0.2752		
Measure Lifetime (Years)	18.7			18.7			18.7		
Lifetime kWh savings	133,040,304			133,010,912			133,331,040		
Cost per kWh Lifetime	$0.0147			$0.0147			$0.0147		
Average kW Savings per Participant	1.50			1.49			1.48		
Annual kW Savings - Generator	1,661			1,644			1,645		
Cost per KW Saved	$1,179.83			$1,186.43			$1,193.21		
Cost/Benefit Results									
Societal									
Net present value	$2,401			$2,632			$2,857		
B/C ratio	1.48			1.53			1.58		
Participant									
Net present value	$3,968			$4,134			$4,301		
B/C ratio	2.24			2.30			2.36		
Rate Payer									
Net present value	($1,715)			($1,653)			($1,596)		
B/C ratio	0.78			0.79			0.80		
Utility									
Net present value	$4,153			$4,370			$4,592		
B/C ratio	3.34			3.48			3.59		

COOLING EFFICIENCY — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,841,657	$1,841,657	$1,841,657	$1,841,657
T & D	N/A	$698,241	$698,241	$698,241	$698,241
Marginal Energy	N/A	$4,008,422	$4,008,422	$4,008,422	$4,008,422
Environmental Externality	N/A	N/A	N/A	N/A	$163,198
Subtotal	N/A	$6,548,320	$6,548,320	$6,548,320	$6,711,518
Participant Benefits					
Bill Reduction - Electric	$6,483,653	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,433,261	N/A	N/A	$1,433,261	$1,433,261
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$7,916,914	N/A	N/A	$1,433,261	$1,433,261
Total Benefits	$7,916,914	$6,548,320	$6,548,320	$7,981,581	$8,144,779
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$333,259	$333,259	$333,259	$333,259
Advertising & Promotion	N/A	$94,951	$94,951	$94,951	$94,951
Measurement & Verification	N/A	$18,000	$18,000	$18,000	$18,000
Rebates	N/A	$1,433,261	$1,433,261	$1,433,261	$1,433,261
Other	N/A	$80,000	$80,000	$80,000	$80,000
Subtotal	N/A	$1,959,471	$1,959,471	$1,959,471	$1,959,471
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$6,483,653	N/A	N/A
Subtotal	N/A	N/A	$6,483,653	N/A	N/A
Participant Costs					
Incremental Capital Costs	$3,531,771	N/A	N/A	$3,531,771	$3,531,771
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$3,531,771	N/A	N/A	$3,531,771	$3,531,771
Total Costs	$3,531,771	$1,959,471	$8,443,124	$5,491,242	$5,491,242
Net Benefit (Cost)	$4,385,143	$4,588,849	($1,894,804)	$2,490,339	$2,653,537
Benefit/Cost Ratio	2.24	3.34	0.78	1.45	1.48

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	18.7 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	77.44%
Gross Load Factor at Customer	E	37.94%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,330

Program Summary per Participant

Gross kW Saved at Customer	I	1.80 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.50 kW
Gross Annual kWh Saved at Customer	(B x E x I)	6,000 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	6,424 kWh

Program Summary All Participants

Total Participants	J	1,105
Total Budget	K	**$1,959,471**
Gross kW Saved at Customer	(J x I)	1,994 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,661 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	6,629,518 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**7,097,985 kWh**
Societal Net Benefits	(J x I x H)	**$2,653,537**
Utility Program Cost per kWh Lifetime		**$0.0147**
Utility Program Cost per kW at Gen		**$1,179.83**

COOLING EFFICIENCY — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,865,623	$1,865,623	$1,865,623	$1,865,623
T & D	N/A	$707,329	$707,329	$707,329	$707,329
Marginal Energy	N/A	$4,210,761	$4,210,761	$4,210,761	$4,210,761
Environmental Externality	N/A	N/A	N/A	N/A	$167,349
Subtotal	N/A	$6,783,714	$6,783,714	$6,783,714	$6,951,063
Participant Benefits					
Bill Reduction - Electric	$6,660,901	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,415,476	N/A	N/A	$1,415,476	$1,415,476
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$8,076,377	N/A	N/A	$1,415,476	$1,415,476
Total Benefits	$8,076,377	$6,783,714	$6,783,714	$8,199,190	$8,366,539
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$341,984	$341,984	$341,984	$341,984
Advertising & Promotion	N/A	$95,399	$95,399	$95,399	$95,399
Measurement & Verification	N/A	$18,000	$18,000	$18,000	$18,000
Rebates	N/A	$1,415,476	$1,415,476	$1,415,476	$1,415,476
Other	N/A	$80,000	$80,000	$80,000	$80,000
Subtotal	N/A	$1,950,860	$1,950,860	$1,950,860	$1,950,860
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$6,660,901	N/A	N/A
Subtotal	N/A	N/A	$6,660,901	N/A	N/A
Participant Costs					
Incremental Capital Costs	$3,504,565	N/A	N/A	$3,504,565	$3,504,565
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$3,504,565	N/A	N/A	$3,504,565	$3,504,565
Total Costs	$3,504,565	$1,950,860	$8,611,761	$5,455,424	$5,455,424
Net Benefit (Cost)	$4,571,813	$4,832,854	($1,828,047)	$2,743,765	$2,911,114
Benefit/Cost Ratio	2.30	3.48	0.79	1.50	1.53

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	18.7 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	77.27%
Gross Load Factor at Customer	E	38.29%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,471

Program Summary per Participant		
Gross kW Saved at Customer	I	1.79 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.49 kW
Gross Annual kWh Saved at Customer	(B x E x I)	6,001 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	6,425 kWh

Program Summary All Participants		
Total Participants	J	1,106
Total Budget	K	**$1,950,860**
Gross kW Saved at Customer	(J x I)	1,979 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,644 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	6,637,339 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**7,106,359 kWh**
Societal Net Benefits	(J x I x H)	**$2,911,114**

Utility Program Cost per kWh Lifetime	**$0.0147**
Utility Program Cost per kW at Gen	**$1,186.43**

COOLING EFFICIENCY — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,910,368	$1,910,368	$1,910,368	$1,910,368
T & D	N/A	$724,284	$724,284	$724,284	$724,284
Marginal Energy	N/A	$4,420,514	$4,420,514	$4,420,514	$4,420,514
Environmental Externality	N/A	N/A	N/A	N/A	$169,339
Subtotal	N/A	$7,055,165	$7,055,165	$7,055,165	$7,224,505
Participant Benefits					
Bill Reduction - Electric	$6,861,644	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,417,941	N/A	N/A	$1,417,941	$1,417,941
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$8,279,585	N/A	N/A	$1,417,941	$1,417,941
Total Benefits	$8,279,585	$7,055,165	$7,055,165	$8,473,106	$8,642,446
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$351,366	$351,366	$351,366	$351,366
Advertising & Promotion	N/A	$95,861	$95,861	$95,861	$95,861
Measurement & Verification	N/A	$18,000	$18,000	$18,000	$18,000
Rebates	N/A	$1,417,941	$1,417,941	$1,417,941	$1,417,941
Other	N/A	$80,000	$80,000	$80,000	$80,000
Subtotal	N/A	$1,963,169	$1,963,169	$1,963,169	$1,963,169
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$6,861,644	N/A	N/A
Subtotal	N/A	N/A	$6,861,644	N/A	N/A
Participant Costs					
Incremental Capital Costs	$3,510,310	N/A	N/A	$3,510,310	$3,510,310
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$3,510,310	N/A	N/A	$3,510,310	$3,510,310
Total Costs	$3,510,310	$1,963,169	$8,824,813	$5,473,479	$5,473,479
Net Benefit (Cost)	$4,769,275	$5,091,997	($1,769,647)	$2,999,628	$3,168,967
Benefit/Cost Ratio	2.36	3.59	0.80	1.55	1.58

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	18.7 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	77.20%
Gross Load Factor at Customer	E	38.38%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,599

Program Summary per Participant		
Gross kW Saved at Customer	I	1.79 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.48 kW
Gross Annual kWh Saved at Customer	(B x E x I)	6,009 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	6,433 kWh

Program Summary All Participants		
Total Participants	J	1,109
Total Budget	K	**$1,963,169**
Gross kW Saved at Customer	(J x I)	1,982 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,645 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	6,663,565 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**7,134,438 kWh**
Societal Net Benefits	(J x I x H)	**$3,168,967**

Utility Program Cost per kWh Lifetime	**$0.0147**
Utility Program Cost per kW at Gen	**$1,193.21**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Custom Efficiency
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	1,247,850			1,279,465			1,312,030		
Advertising & Promotion	61,626			62,125			62,638		
Participant Incentives	1,609,922			1,637,675			1,702,991		
R&D	0			0			0		
Other	95,000			95,000			95,000		
Total Costs	$3,014,398			$3,074,265			$3,172,659		
Project Participants									
Total Participants	121			123			128		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	138,982			139,351			138,961		
Annual kWh Saved - Generator	16,816,821			17,140,222			17,787,022		
Cost per Annual kWh Saved	$0.1792			$0.1794			$0.1784		
Measure Lifetime (Years)	17.0			17.0			17.0		
Lifetime kWh savings	285,978,734			291,478,326			302,477,508		
Cost per kWh Lifetime	$0.0105			$0.0105			$0.0105		
Average kW Savings per Participant	14.37			14.41			14.37		
Annual kW Savings - Generator	1,739			1,773			1,840		
Cost per KW Saved	$1,733.20			$1,734.27			$1,724.70		
Cost/Benefit Results									
Societal									
Net present value	$48,581			$52,954			$57,025		
B/C ratio	1.63			1.68			1.74		
Participant									
Net present value	$106,865			$110,459			$113,490		
B/C ratio	2.63			2.68			2.73		
Rate Payer									
Net present value	($54,527)			($53,812)			($52,803)		
B/C ratio	0.62			0.64			0.65		
Utility									
Net present value	$65,909			$70,229			$74,257		
B/C ratio	3.65			3.81			4.00		

CUSTOM EFFICIENCY **2013** **ELECTRIC** **GOAL**

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,786,093	$1,786,093	$1,786,093	$1,786,093
T & D	N/A	$677,172	$677,172	$677,172	$677,172
Marginal Energy	N/A	$8,526,066	$8,526,066	$8,526,066	$8,526,066
Environmental Externality	N/A	N/A	N/A	N/A	$374,046
Subtotal	N/A	$10,989,331	$10,989,331	$10,989,331	$11,363,377
Participant Benefits					
Bill Reduction - Electric	$14,572,644	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,609,922	N/A	N/A	$1,609,922	$1,609,922
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$4,684,662	N/A	N/A	$2,284,342	$2,284,342
Subtotal	$20,867,229	N/A	N/A	$3,894,264	$3,894,264
Total Benefits	$20,867,229	$10,989,331	$10,989,331	$14,883,594	$15,257,641
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$1,247,850	$1,247,850	$1,247,850	$1,247,850
Advertising & Promotion	N/A	$61,626	$61,626	$61,626	$61,626
Measurement & Verification	N/A	$65,000	$65,000	$65,000	$65,000
Rebates	N/A	$1,609,922	$1,609,922	$1,609,922	$1,609,922
Other	N/A	$30,000	$30,000	$30,000	$30,000
Subtotal	N/A	$3,014,398	$3,014,398	$3,014,398	$3,014,398
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$14,572,644	N/A	N/A
Subtotal	N/A	N/A	$14,572,644	N/A	N/A
Participant Costs					
Incremental Capital Costs	$7,936,580	N/A	N/A	$6,364,896	$6,364,896
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$7,936,580	N/A	N/A	$6,364,896	$6,364,896
Total Costs	$7,936,580	$3,014,398	$17,587,042	$9,379,294	$9,379,294
Net Benefit (Cost)	$12,930,649	$7,974,933	($6,597,712)	$5,504,300	$5,878,347
Benefit/Cost Ratio	2.63	3.65	0.62	1.59	1.63

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	17.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	44.83%
Gross Load Factor at Customer	E	49.70%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,629

Program Summary per Participant		
Gross kW Saved at Customer	I	29.82 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	14.37 kW
Gross Annual kWh Saved at Customer	(B x E x I)	129,809 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	138,982 kWh

Program Summary All Participants		
Total Participants	J	121
Total Budget	K	**$3,014,398**
Gross kW Saved at Customer	(J x I)	3,608 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,739 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	15,706,911 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**16,816,821 kWh**
Societal Net Benefits	(J x I x H)	**$5,878,347**
Utility Program Cost per kWh Lifetime		**$0.0105**
Utility Program Cost per kW at Gen		**$1,733.20**

CUSTOM EFFICIENCY — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,863,403	$1,863,403	$1,863,403	$1,863,403
T & D	N/A	$706,484	$706,484	$706,484	$706,484
Marginal Energy	N/A	$9,142,549	$9,142,549	$9,142,549	$9,142,549
Environmental Externality	N/A	N/A	N/A	N/A	$393,084
Subtotal	N/A	$11,712,435	$11,712,435	$11,712,435	$12,105,519
Participant Benefits					
Bill Reduction - Electric	$15,256,990	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,637,675	N/A	N/A	$1,637,675	$1,637,675
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$4,774,752	N/A	N/A	$2,329,974	$2,329,974
Subtotal	$21,669,417	N/A	N/A	$3,967,649	$3,967,649
Total Benefits	$21,669,417	$11,712,435	$11,712,435	$15,680,084	$16,073,168
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$1,279,465	$1,279,465	$1,279,465	$1,279,465
Advertising & Promotion	N/A	$62,125	$62,125	$62,125	$62,125
Measurement & Verification	N/A	$65,000	$65,000	$65,000	$65,000
Rebates	N/A	$1,637,675	$1,637,675	$1,637,675	$1,637,675
Other	N/A	$30,000	$30,000	$30,000	$30,000
Subtotal	N/A	$3,074,265	$3,074,265	$3,074,265	$3,074,265
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$15,256,990	N/A	N/A
Subtotal	N/A	N/A	$15,256,990	N/A	N/A
Participant Costs					
Incremental Capital Costs	$8,082,972	N/A	N/A	$6,485,566	$6,485,566
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$8,082,972	N/A	N/A	$6,485,566	$6,485,566
Total Costs	$8,082,972	$3,074,265	$18,331,255	$9,559,831	$9,559,831
Net Benefit (Cost)	$13,586,445	$8,638,170	($6,618,820)	$6,120,253	$6,513,337
Benefit/Cost Ratio	2.68	3.81	0.64	1.64	1.68

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	17.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	44.83%
Gross Load Factor at Customer	E	49.70%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,771

Program Summary per Participant		
Gross kW Saved at Customer	I	29.90 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	14.41 kW
Gross Annual kWh Saved at Customer	(B x E x I)	130,154 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	139,351 kWh

Program Summary All Participants		
Total Participants	J	123
Total Budget	K	**$3,074,265**
Gross kW Saved at Customer	(J x I)	3,677 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,773 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	16,008,967 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**17,140,222 kWh**
Societal Net Benefits	(J x I x H)	**$6,513,337**

Utility Program Cost per kWh Lifetime	**$0.0105**
Utility Program Cost per kW at Gen	**$1,734.27**

CUSTOM EFFICIENCY — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,979,355	$1,979,355	$1,979,355	$1,979,355
T & D	N/A	$750,445	$750,445	$750,445	$750,445
Marginal Energy	N/A	$9,947,761	$9,947,761	$9,947,761	$9,947,761
Environmental Externality	N/A	N/A	N/A	N/A	$410,829
Subtotal	N/A	$12,677,562	$12,677,562	$12,677,562	$13,088,391
Participant Benefits					
Bill Reduction - Electric	$16,263,663	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,702,991	N/A	N/A	$1,702,991	$1,702,991
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$4,954,931	N/A	N/A	$2,418,057	$2,418,057
Subtotal	$22,921,585	N/A	N/A	$4,121,048	$4,121,048
Total Benefits	$22,921,585	$12,677,562	$12,677,562	$16,798,610	$17,209,439
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$1,312,030	$1,312,030	$1,312,030	$1,312,030
Advertising & Promotion	N/A	$62,638	$62,638	$62,638	$62,638
Measurement & Verification	N/A	$65,000	$65,000	$65,000	$65,000
Rebates	N/A	$1,702,991	$1,702,991	$1,702,991	$1,702,991
Other	N/A	$30,000	$30,000	$30,000	$30,000
Subtotal	N/A	$3,172,659	$3,172,659	$3,172,659	$3,172,659
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$16,263,663	N/A	N/A
Subtotal	N/A	N/A	$16,263,663	N/A	N/A
Participant Costs					
Incremental Capital Costs	$8,394,826	N/A	N/A	$6,737,564	$6,737,564
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$8,394,826	N/A	N/A	$6,737,564	$6,737,564
Total Costs	$8,394,826	$3,172,659	$19,436,322	$9,910,223	$9,910,223
Net Benefit (Cost)	$14,526,759	$9,504,903	($6,758,760)	$6,888,387	$7,299,216
Benefit/Cost Ratio	2.73	4.00	0.65	1.70	1.74

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	17.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	44.83%
Gross Load Factor at Customer	E	49.70%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,913

Program Summary per Participant

Gross kW Saved at Customer	I	29.81 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	14.37 kW
Gross Annual kWh Saved at Customer	(B x E x I)	129,790 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	138,961 kWh

Program Summary All Participants

Total Participants	J	128
Total Budget	K	**$3,172,659**
Gross kW Saved at Customer	(J x I)	3,816 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,840 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	16,613,079 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**17,787,022 kWh**
Societal Net Benefits	(J x I x H)	**$7,299,216**

Utility Program Cost per kWh Lifetime	**$0.0105**
Utility Program Cost per kW at Gen	**$1,724.70**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Custom Efficiency
Project Description:
(Note changes)
Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	319,157			325,011			331,042		
Advertising & Promotion	16,000			16,000			16,000		
Participant Incentives	263,549			337,205			337,205		
R&D	0			0			0		
Other	35,000			35,000			35,000		
Total Costs	$633,706			$713,216			$719,247		
Project Participants									
Total Participants	39			53			53		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	0%			0%			0%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy Savings									
Avg. Dth/Part. Saved	647.52			754.42			754.42		
Annual Dth Saved	25,253			39,984			39,984		
Cost per Dth	$25.0940			$17.8374			$17.9882		
Project Life (Years)	18.7			18.7			18.7		
Lifetime Dth Saved	471,568			746,649			746,649		
Cost per Lifetime Dth Saved	$1.3438			$0.9552			$0.9633		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$10,045,901								
B/C ratio	2.47								
Participant									
Net present value	$10,883,856								
B/C ratio	2.85								
Rate Payer									
Net present value	($4,583,758)								
B/C ratio	0.66								
Utility									
Net present value	$6,795,302								
B/C ratio	4.29								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Custom Efficiency**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$370,157	$376,011	$382,042
Incentive Costs =	$263,549	$337,205	$337,205
16) Total Utility Project Costs =	$633,706	$713,216	$719,247
17) Direct Participant Costs ($/Part.) =	$38,823	$41,148	$41,148
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$1,806	$2,105	$2,105
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	18.7	18.7	18.7
21) Avg. Dth/Part. Saved =	647.52	754.42	754.42
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	39	53	53
24) Total Annual Dth Saved =	25,253	39,984	39,984
25) Incentive/Participant =	$6,757.67	$6,362.36	$6,362.36

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$16,249	$13,457	$13,571
Cost per Participant per Dth =	$85.05	$72.38	$72.53
Lifetime Energy Reduction (Dth)	1,964,866		
Societal Cost per Dth	$3.49		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($4,583,758)	0.66
Utility Cost Test	$6,795,302	4.29
Societal Test	$10,045,901	2.47
Participant Test	$10,883,856	2.85

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Data Center Efficiency
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	140,801			145,026			149,377		
Advertising & Promotion	155,000			143,048			148,439		
Participant Incentives	417,666			517,988			668,470		
R&D	0			0			0		
Other	40,000			42,000			44,000		
Total Costs	$753,467			$848,062			$1,010,286		
Project Participants									
Total Participants	13			15			18		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	371,621			470,057			576,695		
Annual kWh Saved - Generator	4,831,078			7,050,853			10,380,517		
Cost per Annual kWh Saved	$0.1560			$0.1203			$0.0973		
Measure Lifetime (Years)	11.3			11.2			11.1		
Lifetime kWh savings	54,643,273			79,060,803			115,687,098		
Cost per kWh Lifetime	$0.0138			$0.0107			$0.0087		
Average kW Savings per Participant	30.59			37.13			44.21		
Annual kW Savings - Generator	398			557			796		
Cost per KW Saved	$1,894.43			$1,522.71			$1,269.58		
Cost/Benefit Results									
Societal									
Net present value	$371,466			$373,675			$378,487		
B/C ratio	3.20			3.10			3.01		
Participant									
Net present value	$488,052			$502,199			$520,432		
B/C ratio	5.40			5.14			4.93		
Rate Payer									
Net present value	($122,892)			($136,716)			($152,020)		
B/C ratio	0.56			0.60			0.63		
Utility									
Net present value	$97,675			$147,672			$204,414		
B/C ratio	2.69			3.61			4.64		

DATA CENTER EFFICIENCY — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$309,316	$309,316	$309,316	$309,316
T & D	N/A	$117,273	$117,273	$117,273	$117,273
Marginal Energy	N/A	$1,596,650	$1,596,650	$1,596,650	$1,596,650
Environmental Externality	N/A	N/A	N/A	N/A	$81,987
Subtotal	N/A	$2,023,238	$2,023,238	$2,023,238	$2,105,225
Participant Benefits					
Bill Reduction - Electric	$2,867,369	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$417,666	N/A	N/A	$417,666	$417,666
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$4,501,365	N/A	N/A	$4,501,365	$4,501,365
Subtotal	$7,786,401	N/A	N/A	$4,919,031	$4,919,031
Total Benefits	$7,786,401	$2,023,238	$2,023,238	$6,942,269	$7,024,256
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$140,801	$140,801	$140,801	$140,801
Advertising & Promotion	N/A	$155,000	$155,000	$155,000	$155,000
Measurement & Verification	N/A	$40,000	$40,000	$40,000	$40,000
Rebates	N/A	$417,666	$417,666	$417,666	$417,666
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$753,467	$753,467	$753,467	$753,467
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,867,369	N/A	N/A
Subtotal	N/A	N/A	$2,867,369	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,441,730	N/A	N/A	$1,441,730	$1,441,730
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,441,730	N/A	N/A	$1,441,730	$1,441,730
Total Costs	$1,441,730	$753,467	$3,620,836	$2,195,197	$2,195,197
Net Benefit (Cost)	$6,344,671	$1,269,771	($1,597,599)	$4,747,072	$4,829,059
Benefit/Cost Ratio	5.40	2.69	0.56	3.16	3.20

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	11.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	66.44%
Gross Load Factor at Customer	E	92.53%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$8,675

Program Summary per Participant		
Gross kW Saved at Customer	I	42.82 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	30.59 kW
Gross Annual kWh Saved at Customer	(B x E x I)	347,094 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	371,621 kWh

Program Summary All Participants		
Total Participants	J	13
Total Budget	K	**$753,467**
Gross kW Saved at Customer	(J x I)	557 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**398 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	4,512,227 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**4,831,078 kWh**
Societal Net Benefits	(J x I x H)	**$4,829,059**

Utility Program Cost per kWh Lifetime	**$0.0138**
Utility Program Cost per kW at Gen	**$1,894.43**

DATA CENTER EFFICIENCY — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$440,065	$440,065	$440,065	$440,065
T & D	N/A	$166,845	$166,845	$166,845	$166,845
Marginal Energy	N/A	$2,456,231	$2,456,231	$2,456,231	$2,456,231
Environmental Externality	N/A	N/A	N/A	N/A	$122,875
Subtotal	N/A	$3,063,141	$3,063,141	$3,063,141	$3,186,016
Participant Benefits					
Bill Reduction - Electric	$4,265,816	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$517,988	N/A	N/A	$517,988	$517,988
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$4,567,483	N/A	N/A	$4,567,483	$4,567,483
Subtotal	$9,351,287	N/A	N/A	$5,085,471	$5,085,471
Total Benefits	$9,351,287	$3,063,141	$3,063,141	$8,148,612	$8,271,487
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$145,026	$145,026	$145,026	$145,026
Advertising & Promotion	N/A	$143,048	$143,048	$143,048	$143,048
Measurement & Verification	N/A	$42,000	$42,000	$42,000	$42,000
Rebates	N/A	$517,988	$517,988	$517,988	$517,988
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$848,062	$848,062	$848,062	$848,062
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$4,265,816	N/A	N/A
Subtotal	N/A	N/A	$4,265,816	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,818,307	N/A	N/A	$1,818,307	$1,818,307
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,818,307	N/A	N/A	$1,818,307	$1,818,307
Total Costs	$1,818,307	$848,062	$5,113,878	$2,666,369	$2,666,369
Net Benefit (Cost)	$7,532,979	$2,215,079	($2,050,737)	$5,482,243	$5,605,118
Benefit/Cost Ratio	5.14	3.61	0.60	3.06	3.10

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	11.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	64.18%
Gross Load Factor at Customer	E	93.15%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$6,945

Program Summary per Participant		
Gross kW Saved at Customer	I	53.80 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	37.13 kW
Gross Annual kWh Saved at Customer	(B x E x I)	439,033 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	470,057 kWh

Program Summary All Participants		
Total Participants	J	15
Total Budget	K	**$848,062**
Gross kW Saved at Customer	(J x I)	807 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**557 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	6,585,497 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**7,050,853 kWh**
Societal Net Benefits	(J x I x H)	**$5,605,118**

Utility Program Cost per kWh Lifetime	**$0.0107**
Utility Program Cost per kW at Gen	**$1,522.71**

DATA CENTER EFFICIENCY — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$639,996	$639,996	$639,996	$639,996
T & D	N/A	$242,645	$242,645	$242,645	$242,645
Marginal Energy	N/A	$3,807,099	$3,807,099	$3,807,099	$3,807,099
Environmental Externality	N/A	N/A	N/A	N/A	$181,361
Subtotal	N/A	$4,689,740	$4,689,740	$4,689,740	$4,871,101
Participant Benefits					
Bill Reduction - Electric	$6,415,813	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$668,470	N/A	N/A	$668,470	$668,470
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$4,666,661	N/A	N/A	$4,666,661	$4,666,661
Subtotal	$11,750,944	N/A	N/A	$5,335,131	$5,335,131
Total Benefits	$11,750,944	$4,689,740	$4,689,740	$10,024,871	$10,206,231
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$149,377	$149,377	$149,377	$149,377
Advertising & Promotion	N/A	$148,439	$148,439	$148,439	$148,439
Measurement & Verification	N/A	$44,000	$44,000	$44,000	$44,000
Rebates	N/A	$668,470	$668,470	$668,470	$668,470
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,010,286	$1,010,286	$1,010,286	$1,010,286
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$6,415,813	N/A	N/A
Subtotal	N/A	N/A	$6,415,813	N/A	N/A
Participant Costs					
Incremental Capital Costs	$2,383,174	N/A	N/A	$2,383,174	$2,383,174
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$2,383,174	N/A	N/A	$2,383,174	$2,383,174
Total Costs	$2,383,174	$1,010,286	$7,426,099	$3,393,460	$3,393,460
Net Benefit (Cost)	$9,367,770	$3,679,454	($2,736,359)	$6,631,411	$6,812,772
Benefit/Cost Ratio	4.93	4.64	0.63	2.95	3.01

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	11.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	62.58%
Gross Load Factor at Customer	E	93.59%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$5,761

Program Summary per Participant		
Gross kW Saved at Customer	I	65.70 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	44.21 kW
Gross Annual kWh Saved at Customer	(B x E x I)	538,633 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	576,695 kWh

Program Summary All Participants		
Total Participants	J	18
Total Budget	K	**$1,010,286**
Gross kW Saved at Customer	(J x I)	1,183 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**796 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	9,695,403 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**10,380,517 kWh**
Societal Net Benefits	(J x I x H)	**$6,812,772**

Utility Program Cost per kWh Lifetime	**$0.0087**
Utility Program Cost per kW at Gen	**$1,269.58**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Efficiency Controls
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	361,850			371,135			392,149		
Advertising & Promotion	194,836			205,281			225,739		
Participant Incentives	806,998			834,578			853,838		
R&D	0			0			0		
Other	15,000			16,000			19,000		
Total Costs	$1,378,684			$1,426,994			$1,490,726		
Project Participants									
Total Participants	87			90			92		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	191,865			191,939			191,986		
Annual kWh Saved - Generator	16,692,249			17,274,536			17,662,728		
Cost per Annual kWh Saved	$0.0826			$0.0826			$0.0844		
Measure Lifetime (Years)	15.0			15.0			15.0		
Lifetime kWh savings	250,383,728			259,118,044			264,940,922		
Cost per kWh Lifetime	$0.0055			$0.0055			$0.0056		
Average kW Savings per Participant	3.89			3.89			3.89		
Annual kW Savings - Generator	338			350			358		
Cost per KW Saved	$4,077.80			$4,078.42			$4,166.93		
Cost/Benefit Results									
Societal									
Net present value	$54,970			$59,376			$63,237		
B/C ratio	2.09			2.17			2.24		
Participant									
Net present value	$152,633			$156,092			$159,596		
B/C ratio	3.06			3.11			3.16		
Rate Payer									
Net present value	($57,804)			($56,798)			($56,346)		
B/C ratio	0.59			0.61			0.62		
Utility									
Net present value	$66,771			$71,209			$75,171		
B/C ratio	5.21			5.49			5.64		

EFFICIENCY CONTROLS — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$319,779	$319,779	$319,779	$319,779
T & D	N/A	$121,239	$121,239	$121,239	$121,239
Marginal Energy	N/A	$6,746,714	$6,746,714	$6,746,714	$6,746,714
Environmental Externality	N/A	N/A	N/A	N/A	$340,527
Subtotal	N/A	$7,187,732	$7,187,732	$7,187,732	$7,528,259
Participant Benefits					
Bill Reduction - Electric	$10,837,962	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$806,998	N/A	N/A	$806,998	$806,998
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$8,071,190	N/A	N/A	$842,066	$842,066
Subtotal	$19,716,149	N/A	N/A	$1,649,064	$1,649,064
Total Benefits	$19,716,149	$7,187,732	$7,187,732	$8,836,796	$9,177,323
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$361,850	$361,850	$361,850	$361,850
Advertising & Promotion	N/A	$194,836	$194,836	$194,836	$194,836
Measurement & Verification	N/A	$10,000	$10,000	$10,000	$10,000
Rebates	N/A	$806,998	$806,998	$806,998	$806,998
Other	N/A	$5,000	$5,000	$5,000	$5,000
Subtotal	N/A	$1,378,684	$1,378,684	$1,378,684	$1,378,684
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$10,837,962	N/A	N/A
Subtotal	N/A	N/A	$10,837,962	N/A	N/A
Participant Costs					
Incremental Capital Costs	$6,437,042	N/A	N/A	$3,016,217	$3,016,217
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$6,437,042	N/A	N/A	$3,016,217	$3,016,217
Total Costs	$6,437,042	$1,378,684	$12,216,646	$4,394,901	$4,394,901
Net Benefit (Cost)	$13,279,107	$5,809,048	($5,028,914)	$4,441,895	$4,782,422
Benefit/Cost Ratio	3.06	5.21	0.59	2.01	2.09

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	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	15.03%
Gross Load Factor at Customer	E	85.08%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,286

Program Summary per Participant		
Gross kW Saved at Customer	I	24.04 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	3.89 kW
Gross Annual kWh Saved at Customer	(B x E x I)	179,202 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	191,865 kWh

Program Summary All Participants		
Total Participants	J	87
Total Budget	K	**$1,378,684**
Gross kW Saved at Customer	(J x I)	2,092 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**338 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	15,590,560 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**16,692,249 kWh**
Societal Net Benefits	(J x I x H)	**$4,782,422**

Utility Program Cost per kWh Lifetime	**$0.0055**
Utility Program Cost per kW at Gen	**$4,077.80**

EFFICIENCY CONTROLS — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$338,744	$338,744	$338,744	$338,744
T & D	N/A	$128,430	$128,430	$128,430	$128,430
Marginal Energy	N/A	$7,368,612	$7,368,612	$7,368,612	$7,368,612
Environmental Externality	N/A	N/A	N/A	N/A	$360,519
Subtotal	N/A	$7,835,785	$7,835,785	$7,835,785	$8,196,305
Participant Benefits					
Bill Reduction - Electric	$11,520,646	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$834,578	N/A	N/A	$834,578	$834,578
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$8,352,743	N/A	N/A	$876,165	$876,165
Subtotal	$20,707,967	N/A	N/A	$1,710,743	$1,710,743
Total Benefits	$20,707,967	$7,835,785	$7,835,785	$9,546,528	$9,907,048
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$371,135	$371,135	$371,135	$371,135
Advertising & Promotion	N/A	$205,281	$205,281	$205,281	$205,281
Measurement & Verification	N/A	$10,000	$10,000	$10,000	$10,000
Rebates	N/A	$834,578	$834,578	$834,578	$834,578
Other	N/A	$6,000	$6,000	$6,000	$6,000
Subtotal	N/A	$1,426,994	$1,426,994	$1,426,994	$1,426,994
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$11,520,646	N/A	N/A
Subtotal	N/A	N/A	$11,520,646	N/A	N/A
Participant Costs					
Incremental Capital Costs	$6,659,708	N/A	N/A	$3,136,174	$3,136,174
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$6,659,708	N/A	N/A	$3,136,174	$3,136,174
Total Costs	$6,659,708	$1,426,994	$12,947,640	$4,563,168	$4,563,168
Net Benefit (Cost)	$14,048,258	$6,408,791	($5,111,855)	$4,983,360	$5,343,879
Benefit/Cost Ratio	3.11	5.49	0.61	2.09	2.17

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	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	15.03%
Gross Load Factor at Customer	E	85.08%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,469

Program Summary per Participant		
Gross kW Saved at Customer	I	24.05 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	3.89 kW
Gross Annual kWh Saved at Customer	(B x E x I)	179,271 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	191,939 kWh

Program Summary All Participants		
Total Participants	J	90
Total Budget	K	**$1,426,994**
Gross kW Saved at Customer	(J x I)	2,165 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**350 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	16,134,417 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**17,274,536 kWh**
Societal Net Benefits	(J x I x H)	**$5,343,879**

Utility Program Cost per kWh Lifetime	**$0.0055**
Utility Program Cost per kW at Gen	**$4,078.42**

EFFICIENCY CONTROLS — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$354,530	$354,530	$354,530	$354,530
T & D	N/A	$134,415	$134,415	$134,415	$134,415
Marginal Energy	N/A	$7,917,515	$7,917,515	$7,917,515	$7,917,515
Environmental Externality	N/A	N/A	N/A	N/A	$366,918
Subtotal	N/A	$8,406,460	$8,406,460	$8,406,460	$8,773,378
Participant Benefits					
Bill Reduction - Electric	$12,099,596	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$853,838	N/A	N/A	$853,838	$853,838
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$8,540,445	N/A	N/A	$898,325	$898,325
Subtotal	$21,493,879	N/A	N/A	$1,752,163	$1,752,163
Total Benefits	$21,493,879	$8,406,460	$8,406,460	$10,158,622	$10,525,541
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$392,149	$392,149	$392,149	$392,149
Advertising & Promotion	N/A	$225,739	$225,739	$225,739	$225,739
Measurement & Verification	N/A	$12,000	$12,000	$12,000	$12,000
Rebates	N/A	$853,838	$853,838	$853,838	$853,838
Other	N/A	$7,000	$7,000	$7,000	$7,000
Subtotal	N/A	$1,490,726	$1,490,726	$1,490,726	$1,490,726
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$12,099,596	N/A	N/A
Subtotal	N/A	N/A	$12,099,596	N/A	N/A
Participant Costs					
Incremental Capital Costs	$6,811,030	N/A	N/A	$3,217,005	$3,217,005
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$6,811,030	N/A	N/A	$3,217,005	$3,217,005
Total Costs	$6,811,030	$1,490,726	$13,590,322	$4,707,731	$4,707,731
Net Benefit (Cost)	$14,682,849	$6,915,734	($5,183,862)	$5,450,891	$5,817,809
Benefit/Cost Ratio	3.16	5.64	0.62	2.16	2.24

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	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	15.03%
Gross Load Factor at Customer	E	85.08%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,628

Program Summary per Participant		
Gross kW Saved at Customer	I	24.06 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	3.89 kW
Gross Annual kWh Saved at Customer	(B x E x I)	179,315 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	191,986 kWh

Program Summary All Participants		
Total Participants	J	92
Total Budget	K	**$1,490,726**
Gross kW Saved at Customer	(J x I)	2,213 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**358 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	16,496,988 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**17,662,728 kWh**
Societal Net Benefits	(J x I x H)	**$5,817,809**

Utility Program Cost per kWh Lifetime	**$0.0056**
Utility Program Cost per kW at Gen	**$4,166.93**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Efficiency Controls
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	67,902			71,160			30,000		
Advertising & Promotion	19,000			35,000			65,000		
Participant Incentives	116,086			139,008			139,902		
R&D	0			0			0		
Other	4,000			4,000			4,000		
Total Costs	$206,988			$249,168			$238,902		
Project Participants									
Total Participants	27			33			33		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	0%			0%			0%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy Savings									
Avg. Dth/Part. Saved	752.73			757.99			757.99		
Annual Dth Saved	20,324			25,014			25,014		
Cost per Dth	$10.1846			$9.9612			$9.5508		
Project Life (Years)	15.0			15.0			15.0		
Lifetime Dth Saved	304,855			375,206			375,206		
Cost per Lifetime Dth Saved	$0.6790			$0.6641			$0.6367		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$4,254,237								
B/C ratio	2.09								
Participant									
Net present value	$10,154,323								
B/C ratio	2.54								
Rate Payer									
Net present value	($2,104,382)								
B/C ratio	0.70								
Utility									
Net present value	$4,265,515								
B/C ratio	7.14								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Efficiency Controls**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$90,902	$110,160	$99,000
Incentive Costs =	$116,086	$139,008	$139,902
16) Total Utility Project Costs =	$206,988	$249,168	$238,902
17) Direct Participant Costs ($/Part.) =	$70,766	$70,829	$70,929
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$2,189	$2,204	$2,204
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	15.0	15.0	15.0
21) Avg. Dth/Part. Saved =	752.73	757.99	757.99
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	27	33	33
24) Total Annual Dth Saved =	20,324	25,014	25,014
25) Incentive/Participant =	$4,299.48	$4,212.36	$4,239.45

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$7,666	$7,551	$7,239
Cost per Participant per Dth =	$104.20	$103.40	$103.13
Lifetime Energy Reduction (Dth)	1,055,267		
Societal Cost per Dth	$3.68		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($2,104,382)	0.70
Utility Cost Test	$4,265,515	7.14
Societal Test	$4,254,237	2.09
Participant Test	$10,154,323	2.54

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Fluid Systems Optimization
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	45,000			51,300			57,456		
Utility Administration	455,748			476,253			496,914		
Advertising & Promotion	60,749			54,629			74,562		
Participant Incentives	868,661			987,345			1,180,654		
R&D	0			0			0		
Other	40,216			45,846			51,348		
Total Costs	$1,470,374			$1,615,374			$1,860,934		
Project Participants									
Total Participants	451			494			551		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air	x			x			x		
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	28,946			29,367			30,190		
Annual kWh Saved - Generator	13,054,622			14,507,254			16,634,440		
Cost per Annual kWh Saved	$0.1126			$0.1113			$0.1119		
Measure Lifetime (Years)	13.6			14.2			14.9		
Lifetime kWh savings	177,308,531			205,513,321			247,412,289		
Cost per kWh Lifetime	$0.0083			$0.0079			$0.0075		
Average kW Savings per Participant	4.38			4.46			4.67		
Annual kW Savings - Generator	1,977			2,202			2,573		
Cost per KW Saved	$743.87			$733.59			$723.26		
Cost/Benefit Results									
Societal									
Net present value	$10,954			$12,636			$14,535		
B/C ratio	2.42			2.62			2.74		
Participant									
Net present value	$16,942			$18,531			$20,385		
B/C ratio	4.82			5.09			5.10		
Rate Payer									
Net present value	($6,492)			($6,440)			($6,435)		
B/C ratio	0.71			0.73			0.76		
Utility									
Net present value	$12,910			$14,568			$16,718		
B/C ratio	4.96			5.46			5.95		

FLUID SYSTEMS OPTIMIZATION — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,656,067	$1,656,067	$1,656,067	$1,656,067
T & D	N/A	$627,876	$627,876	$627,876	$627,876
Marginal Energy	N/A	$5,008,920	$5,008,920	$5,008,920	$5,008,920
Environmental Externality	N/A	N/A	N/A	N/A	$227,499
Subtotal	N/A	$7,292,863	$7,292,863	$7,292,863	$7,520,362
Participant Benefits					
Bill Reduction - Electric	$8,750,551	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$868,661	N/A	N/A	$868,661	$868,661
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$21,701	N/A	N/A	$21,701	$21,701
Subtotal	$9,640,913	N/A	N/A	$890,362	$890,362
Total Benefits	$9,640,913	$7,292,863	$7,292,863	$8,183,225	$8,410,724
Costs					
Utility Project Costs					
Customer Services	N/A	$45,000	$45,000	$45,000	$45,000
Project Administration	N/A	$455,748	$455,748	$455,748	$455,748
Advertising & Promotion	N/A	$60,749	$60,749	$60,749	$60,749
Measurement & Verification	N/A	$15,878	$15,878	$15,878	$15,878
Rebates	N/A	$868,661	$868,661	$868,661	$868,661
Other	N/A	$24,338	$24,338	$24,338	$24,338
Subtotal	N/A	$1,470,374	$1,470,374	$1,470,374	$1,470,374
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$8,750,551	N/A	N/A
Subtotal	N/A	N/A	$8,750,551	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,999,968	N/A	N/A	$1,999,968	$1,999,968
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,999,968	N/A	N/A	$1,999,968	$1,999,968
Total Costs	$1,999,968	$1,470,374	$10,220,925	$3,470,342	$3,470,342
Net Benefit (Cost)	$7,640,945	$5,822,489	($2,928,062)	$4,712,883	$4,940,382
Benefit/Cost Ratio	4.82	4.96	0.71	2.36	2.42

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	13.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	91.62%
Gross Load Factor at Customer	E	69.38%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,462

Program Summary per Participant		
Gross kW Saved at Customer	I	4.45 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	4.38 kW
Gross Annual kWh Saved at Customer	(B x E x I)	27,036 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	28,946 kWh

Program Summary All Participants		
Total Participants	J	451
Total Budget	K	**$1,470,374**
Gross kW Saved at Customer	(J x I)	2,006 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,977 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	12,193,017 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**13,054,622 kWh**
Societal Net Benefits	(J x I x H)	**$4,940,382**

Utility Program Cost per kWh Lifetime	**$0.0083**
Utility Program Cost per kW at Gen	**$743.87**

FLUID SYSTEMS OPTIMIZATION — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,951,926	$1,951,926	$1,951,926	$1,951,926
T & D	N/A	$740,046	$740,046	$740,046	$740,046
Marginal Energy	N/A	$6,119,963	$6,119,963	$6,119,963	$6,119,963
Environmental Externality	N/A	N/A	N/A	N/A	$269,093
Subtotal	N/A	$8,811,935	$8,811,935	$8,811,935	$9,081,028
Participant Benefits					
Bill Reduction - Electric	$10,378,033	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$987,345	N/A	N/A	$987,345	$987,345
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$27,127	N/A	N/A	$27,127	$27,127
Subtotal	$11,392,504	N/A	N/A	$1,014,472	$1,014,472
Total Benefits	$11,392,504	$8,811,935	$8,811,935	$9,826,407	$10,095,500
Costs					
Utility Project Costs					
Customer Services	N/A	$51,300	$51,300	$51,300	$51,300
Project Administration	N/A	$476,253	$476,253	$476,253	$476,253
Advertising & Promotion	N/A	$54,629	$54,629	$54,629	$54,629
Measurement & Verification	N/A	$18,101	$18,101	$18,101	$18,101
Rebates	N/A	$987,345	$987,345	$987,345	$987,345
Other	N/A	$27,745	$27,745	$27,745	$27,745
Subtotal	N/A	$1,615,374	$1,615,374	$1,615,374	$1,615,374
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$10,378,033	N/A	N/A
Subtotal	N/A	N/A	$10,378,033	N/A	N/A
Participant Costs					
Incremental Capital Costs	$2,238,060	N/A	N/A	$2,238,060	$2,238,060
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$2,238,060	N/A	N/A	$2,238,060	$2,238,060
Total Costs	$2,238,060	$1,615,374	$11,993,406	$3,853,434	$3,853,434
Net Benefit (Cost)	$9,154,444	$7,196,562	($3,181,471)	$5,972,974	$6,242,066
Benefit/Cost Ratio	5.09	5.46	0.73	2.55	2.62

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	14.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	91.10%
Gross Load Factor at Customer	E	68.81%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,777

Program Summary per Participant		
Gross kW Saved at Customer	I	4.55 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	4.46 kW
Gross Annual kWh Saved at Customer	(B x E x I)	27,429 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	29,367 kWh

Program Summary All Participants		
Total Participants	J	494
Total Budget	K	**$1,615,374**
Gross kW Saved at Customer	(J x I)	2,248 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**2,202 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	13,549,775 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**14,507,254 kWh**
Societal Net Benefits	(J x I x H)	**$6,242,066**

Utility Program Cost per kWh Lifetime	**$0.0079**
Utility Program Cost per kW at Gen	**$733.59**

FLUID SYSTEMS OPTIMIZATION — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$2,435,041	$2,435,041	$2,435,041	$2,435,041
T & D	N/A	$923,212	$923,212	$923,212	$923,212
Marginal Energy	N/A	$7,714,479	$7,714,479	$7,714,479	$7,714,479
Environmental Externality	N/A	N/A	N/A	N/A	$322,443
Subtotal	N/A	$11,072,732	$11,072,732	$11,072,732	$11,395,175
Participant Benefits					
Bill Reduction - Electric	$12,757,563	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,180,654	N/A	N/A	$1,180,654	$1,180,654
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$30,141	N/A	N/A	$30,141	$30,141
Subtotal	$13,968,357	N/A	N/A	$1,210,795	$1,210,795
Total Benefits	$13,968,357	$11,072,732	$11,072,732	$12,283,527	$12,605,970
Costs					
Utility Project Costs					
Customer Services	N/A	$57,456	$57,456	$57,456	$57,456
Project Administration	N/A	$496,914	$496,914	$496,914	$496,914
Advertising & Promotion	N/A	$74,562	$74,562	$74,562	$74,562
Measurement & Verification	N/A	$20,273	$20,273	$20,273	$20,273
Rebates	N/A	$1,180,654	$1,180,654	$1,180,654	$1,180,654
Other	N/A	$31,075	$31,075	$31,075	$31,075
Subtotal	N/A	$1,860,934	$1,860,934	$1,860,934	$1,860,934
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$12,757,563	N/A	N/A
Subtotal	N/A	N/A	$12,757,563	N/A	N/A
Participant Costs					
Incremental Capital Costs	$2,736,226	N/A	N/A	$2,736,226	$2,736,226
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$2,736,226	N/A	N/A	$2,736,226	$2,736,226
Total Costs	$2,736,226	$1,860,934	$14,618,497	$4,597,160	$4,597,160
Net Benefit (Cost)	$11,232,132	$9,211,798	($3,545,765)	$7,686,367	$8,008,810
Benefit/Cost Ratio	5.10	5.95	0.76	2.67	2.74

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	14.9 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	90.43%
Gross Load Factor at Customer	E	67.03%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$3,027

Program Summary per Participant		
Gross kW Saved at Customer	I	4.80 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	4.67 kW
Gross Annual kWh Saved at Customer	(B x E x I)	28,197 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	30,190 kWh

Program Summary All Participants		
Total Participants	J	551
Total Budget	K	**$1,860,934**
Gross kW Saved at Customer	(J x I)	2,646 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**2,573 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	15,536,567 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**16,634,440 kWh**
Societal Net Benefits	(J x I x H)	**$8,008,810**

Utility Program Cost per kWh Lifetime	**$0.0075**
Utility Program Cost per kW at Gen	**$723.26**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Foodservice Equipment
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	15,876			13,185			16,721		
Advertising & Promotion	7,500			7,500			7,500		
Participant Incentives	18,805			28,506			28,506		
R&D	0			0			0		
Other	6,000			6,000			6,000		
Total Costs	$48,181			$55,191			$58,727		
Project Participants									
Total Participants	46			72			72		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	10,690			10,138			10,138		
Annual kWh Saved - Generator	491,753			729,965			729,965		
Cost per Annual kWh Saved	$0.0980			$0.0756			$0.0805		
Measure Lifetime (Years)	15.5			15.1			15.1		
Lifetime kWh savings	7,634,333			11,039,712			11,039,712		
Cost per kWh Lifetime	$0.0063			$0.0050			$0.0053		
Average kW Savings per Participant	1.59			1.50			1.50		
Annual kW Savings - Generator	73			108			108		
Cost per KW Saved	$660.69			$509.83			$542.49		
Cost/Benefit Results									
Societal									
Net present value	$5,005			$5,187			$5,440		
B/C ratio	2.65			2.96			3.02		
Participant									
Net present value	$9,632			$8,902			$9,107		
B/C ratio	3.49			3.60			3.66		
Rate Payer									
Net present value	($1,888)			($1,452)			($1,407)		
B/C ratio	0.79			0.83			0.84		
Utility									
Net present value	$6,054			$6,144			$6,395		
B/C ratio	6.78			9.02			8.84		

FOODSERVICE EQUIPMENT — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$69,484	$69,484	$69,484	$69,484
T & D	N/A	$26,344	$26,344	$26,344	$26,344
Marginal Energy	N/A	$230,859	$230,859	$230,859	$230,859
Environmental Externality	N/A	N/A	N/A	N/A	$10,032
Subtotal	N/A	$326,688	$326,688	$326,688	$336,720
Participant Benefits					
Bill Reduction - Electric	$365,339	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$18,805	N/A	N/A	$18,805	$18,805
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$236,688	N/A	N/A	$14,266	$14,266
Subtotal	$620,832	N/A	N/A	$33,071	$33,071
Total Benefits	$620,832	$326,688	$326,688	$359,759	$369,791
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$15,876	$15,876	$15,876	$15,876
Advertising & Promotion	N/A	$7,500	$7,500	$7,500	$7,500
Measurement & Verification	N/A	$6,000	$6,000	$6,000	$6,000
Rebates	N/A	$18,805	$18,805	$18,805	$18,805
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$48,181	$48,181	$48,181	$48,181
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$365,339	N/A	N/A
Subtotal	N/A	N/A	$365,339	N/A	N/A
Participant Costs					
Incremental Capital Costs	$177,767	N/A	N/A	$91,374	$91,374
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$177,767	N/A	N/A	$91,374	$91,374
Total Costs	$177,767	$48,181	$413,520	$139,555	$139,555
Net Benefit (Cost)	$443,064	$278,507	($86,832)	$220,204	$230,236
Benefit/Cost Ratio	3.49	6.78	0.79	2.58	2.65

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	15.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	66.24%
Gross Load Factor at Customer	E	51.21%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,249

Program Summary per Participant		
Gross kW Saved at Customer	I	2.23 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.59 kW
Gross Annual kWh Saved at Customer	(B x E x I)	9,985 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	10,690 kWh

Program Summary All Participants		
Total Participants	J	46
Total Budget	K	**$48,181**
Gross kW Saved at Customer	(J x I)	102 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**73 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	459,297 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**491,753 kWh**
Societal Net Benefits	(J x I x H)	**$230,236**
Utility Program Cost per kWh Lifetime		**$0.0063**
Utility Program Cost per kW at Gen		**$660.69**

FOODSERVICE EQUIPMENT — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$103,738	$103,738	$103,738	$103,738
T & D	N/A	$39,331	$39,331	$39,331	$39,331
Marginal Energy	N/A	$354,511	$354,511	$354,511	$354,511
Environmental Externality	N/A	N/A	N/A	N/A	$15,072
Subtotal	N/A	$497,579	$497,579	$497,579	$512,652
Participant Benefits					
Bill Reduction - Electric	$546,945	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$28,506	N/A	N/A	$28,506	$28,506
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$311,972	N/A	N/A	$22,440	$22,440
Subtotal	$887,422	N/A	N/A	$50,946	$50,946
Total Benefits	$887,422	$497,579	$497,579	$548,526	$563,598
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$13,185	$13,185	$13,185	$13,185
Advertising & Promotion	N/A	$7,500	$7,500	$7,500	$7,500
Measurement & Verification	N/A	$6,000	$6,000	$6,000	$6,000
Rebates	N/A	$28,506	$28,506	$28,506	$28,506
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$55,191	$55,191	$55,191	$55,191
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$546,945	N/A	N/A
Subtotal	N/A	N/A	$546,945	N/A	N/A
Participant Costs					
Incremental Capital Costs	$246,479	N/A	N/A	$134,935	$134,935
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$246,479	N/A	N/A	$134,935	$134,935
Total Costs	$246,479	$55,191	$602,136	$190,126	$190,126
Net Benefit (Cost)	$640,943	$442,388	($104,556)	$358,399	$373,471
Benefit/Cost Ratio	3.60	9.02	0.83	2.89	2.96

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	15.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	68.31%
Gross Load Factor at Customer	E	52.80%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,534

Program Summary per Participant		
Gross kW Saved at Customer	I	2.05 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.50 kW
Gross Annual kWh Saved at Customer	(B x E x I)	9,469 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	10,138 kWh

Program Summary All Participants		
Total Participants	J	72
Total Budget	K	**$55,191**
Gross kW Saved at Customer	(J x I)	147 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**108 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	681,787 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**729,965 kWh**
Societal Net Benefits	(J x I x H)	**$373,471**

Utility Program Cost per kWh Lifetime	**$0.0050**
Utility Program Cost per kW at Gen	**$509.83**

FOODSERVICE EQUIPMENT — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$106,186	$106,186	$106,186	$106,186
T & D	N/A	$40,259	$40,259	$40,259	$40,259
Marginal Energy	N/A	$372,687	$372,687	$372,687	$372,687
Environmental Externality	N/A	N/A	N/A	N/A	$15,198
Subtotal	N/A	$519,132	$519,132	$519,132	$534,330
Participant Benefits					
Bill Reduction - Electric	$561,720	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$28,506	N/A	N/A	$28,506	$28,506
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$311,972	N/A	N/A	$22,448	$22,448
Subtotal	$902,198	N/A	N/A	$50,954	$50,954
Total Benefits	$902,198	$519,132	$519,132	$570,086	$585,284
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$16,721	$16,721	$16,721	$16,721
Advertising & Promotion	N/A	$7,500	$7,500	$7,500	$7,500
Measurement & Verification	N/A	$6,000	$6,000	$6,000	$6,000
Rebates	N/A	$28,506	$28,506	$28,506	$28,506
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$58,727	$58,727	$58,727	$58,727
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$561,720	N/A	N/A
Subtotal	N/A	N/A	$561,720	N/A	N/A
Participant Costs					
Incremental Capital Costs	$246,479	N/A	N/A	$134,848	$134,848
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$246,479	N/A	N/A	$134,848	$134,848
Total Costs	$246,479	$58,727	$620,447	$193,575	$193,575
Net Benefit (Cost)	$655,719	$460,405	($101,315)	$376,511	$391,709
Benefit/Cost Ratio	3.66	8.84	0.84	2.95	3.02

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	15.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	68.31%
Gross Load Factor at Customer	E	52.80%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,658

Program Summary per Participant		
Gross kW Saved at Customer	I	2.05 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.50 kW
Gross Annual kWh Saved at Customer	(B x E x I)	9,469 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	10,138 kWh

Program Summary All Participants		
Total Participants	J	72
Total Budget	K	**$58,727**
Gross kW Saved at Customer	(J x I)	147 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**108 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	681,787 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**729,965 kWh**
Societal Net Benefits	(J x I x H)	**$391,709**

Utility Program Cost per kWh Lifetime	**$0.0053**
Utility Program Cost per kW at Gen	**$542.49**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Foodservice Equipment
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	48,454			52,955			51,284		
Advertising & Promotion	10,000			10,000			10,000		
Participant Incentives	27,675			37,146			37,146		
R&D	0			0			0		
Other	6,000			8,000			9,000		
Total Costs	$92,129			$108,101			$107,430		
Project Participants									
Total Participants	58			82			82		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment	x			x			x		
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	92.90			87.89			87.89		
Annual Dth Saved	5,388			7,207			7,207		
Cost per Dth	$17.0988			$14.9992			$14.9061		
Project Life (Years)	12.4			12.2			12.2		
Lifetime Dth Saved	67,080			87,788			87,788		
Cost per Lifetime Dth Saved	$1.3734			$1.2314			$1.2237		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$883,405								
B/C ratio	2.19								
Participant									
Net present value	$1,279,213								
B/C ratio	3.16								
Rate Payer									
Net present value	($640,658)								
B/C ratio	0.65								
Utility									
Net present value	$864,436								
B/C ratio	3.81								

Conservation Improvement Program (CIP)

BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Foodservice Equipment**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$64,454	$70,955	$70,284
Incentive Costs =	$27,675	$37,146	$37,146
16) Total Utility Project Costs =	$92,129	$108,101	$107,430
17) Direct Participant Costs ($/Part.) =	$2,837	$2,602	$2,602
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$29	$32	$32
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	12.4	12.2	12.2
21) Avg. Dth/Part. Saved =	92.90	87.89	87.89
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	58	82	82
24) Total Annual Dth Saved =	5,388	7,207	7,207
25) Incentive/Participant =	$477.16	$453.00	$453.00

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$1,588	$1,318	$1,310
Cost per Participant per Dth =	$47.64	$44.60	$44.51
Lifetime Energy Reduction (Dth)	242,655		
Societal Cost per Dth	$3.06		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($640,658)	0.65
Utility Cost Test	$864,436	3.81
Societal Test	$883,405	2.19
Participant Test	$1,279,213	3.16

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Heating Efficiency
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	493,360			506,307			518,126		
Advertising & Promotion	89,652			85,290			85,947		
Participant Incentives	955,312			972,286			959,126		
R&D	0			0			0		
Other	15,000			15,000			15,000		
Total Costs	$1,553,325			$1,578,882			$1,578,199		
Project Participants									
Total Participants	633			704			691		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System	x			x			x		
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	300.07			283.98			282.05		
Annual Dth Saved	190,028			200,010			195,006		
Cost per Dth	$8.1742			$7.8940			$8.0931		
Project Life (Years)	8.1			7.8			7.8		
Lifetime Dth Saved	1,531,354			1,561,215			1,526,189		
Cost per Lifetime Dth Saved	$1.0143			$1.0113			$1.0341		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$16,838,746								
B/C ratio	2.26								
Participant									
Net present value	$19,792,789								
B/C ratio	2.72								
Rate Payer									
Net present value	($10,997,677)								
B/C ratio	0.67								
Utility									
Net present value	$17,419,685								
B/C ratio	4.70								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Heating Efficiency**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$598,013	$606,596	$619,073
Incentive Costs =	$955,312	$972,286	$959,126
16) Total Utility Project Costs =	$1,553,325	$1,578,882	$1,578,199
17) Direct Participant Costs ($/Part.) =	$5,550	$5,107	$5,150
18) Participant Non-Energy Costs (Annual $/Part.) =	$37	$42	$36
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	8.1	7.8	7.8
21) Avg. Dth/Part. Saved =	300.07	283.98	282.05
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	633	704	691
24) Total Annual Dth Saved =	190,028	200,010	195,006
25) Incentive/Participant =	$1,508.53	$1,380.48	$1,387.23

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$2,453	$2,242	$2,283
Cost per Participant per Dth =	$26.79	$26.03	$26.48
Lifetime Energy Reduction (Dth)	4,618,758		
Societal Cost per Dth	$2.89		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($10,997,677)	0.67
Utility Cost Test	$17,419,685	4.70
Societal Test	$16,838,746	2.26
Participant Test	$19,792,789	2.72

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Lighting Efficiency
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	1,452,796			1,494,858			1,541,024		
Advertising & Promotion	26,849			28,504			30,680		
Participant Incentives	5,371,789			3,822,960			3,225,615		
R&D	0			0			0		
Other	110,000			125,000			120,000		
Total Costs	$6,961,434			$5,471,322			$4,917,319		
Project Participants									
Total Participants	798			589			449		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting	x			x			x		
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	67,690			67,931			66,883		
Annual kWh Saved - Generator	54,022,924			40,022,385			30,027,945		
Cost per Annual kWh Saved	$0.1289			$0.1367			$0.1638		
Measure Lifetime (Years)	15.8			15.1			15.1		
Lifetime kWh savings	852,425,507			604,210,921			454,847,492		
Cost per kWh Lifetime	$0.0082			$0.0091			$0.0108		
Average kW Savings per Participant	11.28			11.33			11.23		
Annual kW Savings - Generator	9,000			6,675			5,041		
Cost per KW Saved	$773.53			$819.64			$975.37		
Cost/Benefit Results									
Societal									
Net present value	$23,621			$23,989			$22,660		
B/C ratio	1.81			1.83			1.70		
Participant									
Net present value	$38,434			$38,749			$38,282		
B/C ratio	2.89			2.98			2.79		
Rate Payer									
Net present value	($16,176)			($16,126)			($16,988)		
B/C ratio	0.73			0.74			0.73		
Utility									
Net present value	$35,818			$35,730			$35,453		
B/C ratio	5.11			4.85			4.24		

LIGHTING EFFICIENCY — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$8,242,113	$8,242,113	$8,242,113	$8,242,113
T & D	N/A	$3,126,126	$3,126,126	$3,126,126	$3,126,126
Marginal Energy	N/A	$24,178,873	$24,178,873	$24,178,873	$24,178,873
Environmental Externality	N/A	N/A	N/A	N/A	$1,088,180
Subtotal	N/A	$35,547,111	$35,547,111	$35,547,111	$36,635,291
Participant Benefits					
Bill Reduction - Electric	$41,495,922	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$5,371,789	N/A	N/A	$5,371,789	$5,371,789
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$46,867,711	N/A	N/A	$5,371,789	$5,371,789
Total Benefits	$46,867,711	$35,547,111	$35,547,111	$40,918,900	$42,007,080
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$1,452,796	$1,452,796	$1,452,796	$1,452,796
Advertising & Promotion	N/A	$26,849	$26,849	$26,849	$26,849
Measurement & Verification	N/A	$90,000	$90,000	$90,000	$90,000
Rebates	N/A	$5,371,789	$5,371,789	$5,371,789	$5,371,789
Other	N/A	$20,000	$20,000	$20,000	$20,000
Subtotal	N/A	$6,961,434	$6,961,434	$6,961,434	$6,961,434
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$41,495,922	N/A	N/A
Subtotal	N/A	N/A	$41,495,922	N/A	N/A
Participant Costs					
Incremental Capital Costs	$16,194,037	N/A	N/A	$16,194,037	$16,194,037
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$16,194,037	N/A	N/A	$16,194,037	$16,194,037
Total Costs	$16,194,037	$6,961,434	$48,457,356	$23,155,471	$23,155,471
Net Benefit (Cost)	$30,673,674	$28,585,677	($12,910,245)	$17,763,430	$18,851,610
Benefit/Cost Ratio	2.89	5.11	0.73	1.77	1.81

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	15.8 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	81.22%
Gross Load Factor at Customer	E	55.89%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,829

Program Summary per Participant		
Gross kW Saved at Customer	I	12.91 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	11.28 kW
Gross Annual kWh Saved at Customer	(B x E x I)	63,223 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	67,690 kWh

Program Summary All Participants		
Total Participants	J	798
Total Budget	K	**$6,961,434**
Gross kW Saved at Customer	(J x I)	10,305 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**9,000 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	50,457,411 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**54,022,924 kWh**
Societal Net Benefits	(J x I x H)	**$18,851,610**

Utility Program Cost per kWh Lifetime	**$0.0082**
Utility Program Cost per kW at Gen	**$773.53**

LIGHTING EFFICIENCY — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$6,010,769	$6,010,769	$6,010,769	$6,010,769
T & D	N/A	$2,279,465	$2,279,465	$2,279,465	$2,279,465
Marginal Energy	N/A	$18,231,468	$18,231,468	$18,231,468	$18,231,468
Environmental Externality	N/A	N/A	N/A	N/A	$804,985
Subtotal	N/A	$26,521,702	$26,521,702	$26,521,702	$27,326,688
Participant Benefits					
Bill Reduction - Electric	$30,551,354	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,822,960	N/A	N/A	$3,822,960	$3,822,960
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$34,374,314	N/A	N/A	$3,822,960	$3,822,960
Total Benefits	$34,374,314	$26,521,702	$26,521,702	$30,344,662	$31,149,648
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$1,494,858	$1,494,858	$1,494,858	$1,494,858
Advertising & Promotion	N/A	$28,504	$28,504	$28,504	$28,504
Measurement & Verification	N/A	$100,000	$100,000	$100,000	$100,000
Rebates	N/A	$3,822,960	$3,822,960	$3,822,960	$3,822,960
Other	N/A	$25,000	$25,000	$25,000	$25,000
Subtotal	N/A	$5,471,322	$5,471,322	$5,471,322	$5,471,322
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$30,551,354	N/A	N/A
Subtotal	N/A	N/A	$30,551,354	N/A	N/A
Participant Costs					
Incremental Capital Costs	$11,544,896	N/A	N/A	$11,544,896	$11,544,896
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$11,544,896	N/A	N/A	$11,544,896	$11,544,896
Total Costs	$11,544,896	$5,471,322	$36,022,676	$17,016,218	$17,016,218
Net Benefit (Cost)	$22,829,417	$21,050,380	($9,500,973)	$13,328,444	$14,133,429
Benefit/Cost Ratio	2.98	4.85	0.74	1.78	1.83

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	15.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	82.26%
Gross Load Factor at Customer	E	56.54%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,873

Program Summary per Participant		
Gross kW Saved at Customer	I	12.81 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	11.33 kW
Gross Annual kWh Saved at Customer	(B x E x I)	63,448 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	67,931 kWh

Program Summary All Participants		
Total Participants	J	589
Total Budget	K	**$5,471,322**
Gross kW Saved at Customer	(J x I)	7,547 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**6,675 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	37,380,907 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**40,022,385 kWh**
Societal Net Benefits	(J x I x H)	**$14,133,429**

Utility Program Cost per kWh Lifetime	**$0.0091**
Utility Program Cost per kW at Gen	**$819.64**

LIGHTING EFFICIENCY — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$4,684,408	$4,684,408	$4,684,408	$4,684,408
T & D	N/A	$1,775,616	$1,775,616	$1,775,616	$1,775,616
Marginal Energy	N/A	$14,374,183	$14,374,183	$14,374,183	$14,374,183
Environmental Externality	N/A	N/A	N/A	N/A	$613,032
Subtotal	N/A	$20,834,207	$20,834,207	$20,834,207	$21,447,239
Participant Benefits					
Bill Reduction - Electric	$23,543,792	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,225,615	N/A	N/A	$3,225,615	$3,225,615
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$26,769,407	N/A	N/A	$3,225,615	$3,225,615
Total Benefits	$26,769,407	$20,834,207	$20,834,207	$24,059,822	$24,672,854
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$1,541,024	$1,541,024	$1,541,024	$1,541,024
Advertising & Promotion	N/A	$30,680	$30,680	$30,680	$30,680
Measurement & Verification	N/A	$100,000	$100,000	$100,000	$100,000
Rebates	N/A	$3,225,615	$3,225,615	$3,225,615	$3,225,615
Other	N/A	$20,000	$20,000	$20,000	$20,000
Subtotal	N/A	$4,917,319	$4,917,319	$4,917,319	$4,917,319
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$23,543,792	N/A	N/A
Subtotal	N/A	N/A	$23,543,792	N/A	N/A
Participant Costs					
Incremental Capital Costs	$9,582,135	N/A	N/A	$9,582,135	$9,582,135
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$9,582,135	N/A	N/A	$9,582,135	$9,582,135
Total Costs	$9,582,135	$4,917,319	$28,461,111	$14,499,454	$14,499,454
Net Benefit (Cost)	$17,187,273	$15,916,888	($7,626,904)	$9,560,369	$10,173,401
Benefit/Cost Ratio	2.79	4.24	0.73	1.66	1.70

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	15.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	82.35%
Gross Load Factor at Customer	E	56.23%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,787

Program Summary per Participant		
Gross kW Saved at Customer	I	12.68 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	11.23 kW
Gross Annual kWh Saved at Customer	(B x E x I)	62,469 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	66,883 kWh

Program Summary All Participants		
Total Participants	J	449
Total Budget	K	**$4,917,319**
Gross kW Saved at Customer	(J x I)	5,694 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**5,041 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	28,046,101 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**30,027,945 kWh**
Societal Net Benefits	(J x I x H)	**$10,173,401**

Utility Program Cost per kWh Lifetime	**$0.0108**
Utility Program Cost per kW at Gen	**$975.37**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Motor Efficiency
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	629,519			647,328			665,671		
Advertising & Promotion	41,614			42,765			43,950		
Participant Incentives	3,618,675			3,618,675			3,618,675		
R&D	0			0			0		
Other	26,686			26,686			26,686		
Total Costs	$4,316,494			$4,335,454			$4,354,982		
Project Participants									
Total Participants	877			877			877		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)	x			x			x		
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	41,074			41,074			41,074		
Annual kWh Saved - Generator	36,021,638			36,021,638			36,021,638		
Cost per Annual kWh Saved	$0.1198			$0.1204			$0.1209		
Measure Lifetime (Years)	15.2			15.2			15.2		
Lifetime kWh savings	546,682,307			546,682,307			546,682,307		
Cost per kWh Lifetime	$0.0079			$0.0079			$0.0080		
Average kW Savings per Participant	6.91			6.91			6.91		
Annual kW Savings - Generator	6,057			6,057			6,057		
Cost per KW Saved	$712.69			$715.82			$719.05		
Cost/Benefit Results									
Societal									
Net present value	$17,665			$18,931			$20,147		
B/C ratio	2.14			2.22			2.30		
Participant									
Net present value	$26,962			$27,870			$28,802		
B/C ratio	3.55			3.63			3.72		
Rate Payer									
Net present value	($10,140)			($9,802)			($9,515)		
B/C ratio	0.74			0.75			0.76		
Utility									
Net present value	$23,278			$24,524			$25,743		
B/C ratio	5.73			5.96			6.18		

MOTOR EFFICIENCY — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$5,767,282	$5,767,282	$5,767,282	$5,767,282
T & D	N/A	$2,186,579	$2,186,579	$2,186,579	$2,186,579
Marginal Energy	N/A	$16,777,045	$16,777,045	$16,777,045	$16,777,045
Environmental Externality	N/A	N/A	N/A	N/A	$740,137
Subtotal	N/A	$24,730,905	$24,730,905	$24,730,905	$25,471,042
Participant Benefits					
Bill Reduction - Electric	$29,307,507	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,618,675	N/A	N/A	$3,618,675	$3,618,675
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$32,926,182	N/A	N/A	$3,618,675	$3,618,675
Total Benefits	$32,926,182	$24,730,905	$24,730,905	$28,349,580	$29,089,717
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$629,519	$629,519	$629,519	$629,519
Advertising & Promotion	N/A	$41,614	$41,614	$41,614	$41,614
Measurement & Verification	N/A	$26,686	$26,686	$26,686	$26,686
Rebates	N/A	$3,618,675	$3,618,675	$3,618,675	$3,618,675
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$4,316,494	$4,316,494	$4,316,494	$4,316,494
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$29,307,507	N/A	N/A
Subtotal	N/A	N/A	$29,307,507	N/A	N/A
Participant Costs					
Incremental Capital Costs	$9,280,660	N/A	N/A	$9,280,660	$9,280,660
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$9,280,660	N/A	N/A	$9,280,660	$9,280,660
Total Costs	$9,280,660	$4,316,494	$33,624,001	$13,597,154	$13,597,154
Net Benefit (Cost)	$23,645,522	$20,414,411	($8,893,095)	$14,752,426	$15,492,563
Benefit/Cost Ratio	3.55	5.73	0.74	2.08	2.14

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	15.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	78.04%
Gross Load Factor at Customer	E	53.22%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,147

Program Summary per Participant		
Gross kW Saved at Customer	I	8.23 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	6.91 kW
Gross Annual kWh Saved at Customer	(B x E x I)	38,363 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	41,074 kWh

Program Summary All Participants		
Total Participants	J	877
Total Budget	K	**$4,316,494**
Gross kW Saved at Customer	(J x I)	7,217 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**6,057 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	33,644,210 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**36,021,638 kWh**
Societal Net Benefits	(J x I x H)	**$15,492,563**

Utility Program Cost per kWh Lifetime	**$0.0079**
Utility Program Cost per kW at Gen	**$712.69**

MOTOR EFFICIENCY — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$5,903,380	$5,903,380	$5,903,380	$5,903,380
T & D	N/A	$2,238,184	$2,238,184	$2,238,184	$2,238,184
Marginal Energy	N/A	$17,701,206	$17,701,206	$17,701,206	$17,701,206
Environmental Externality	N/A	N/A	N/A	N/A	$757,372
Subtotal	N/A	$25,842,769	$25,842,769	$25,842,769	$26,600,141
Participant Benefits					
Bill Reduction - Electric	$30,103,558	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,618,675	N/A	N/A	$3,618,675	$3,618,675
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$33,722,233	N/A	N/A	$3,618,675	$3,618,675
Total Benefits	$33,722,233	$25,842,769	$25,842,769	$29,461,444	$30,218,816
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$647,328	$647,328	$647,328	$647,328
Advertising & Promotion	N/A	$42,765	$42,765	$42,765	$42,765
Measurement & Verification	N/A	$26,686	$26,686	$26,686	$26,686
Rebates	N/A	$3,618,675	$3,618,675	$3,618,675	$3,618,675
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$4,335,454	$4,335,454	$4,335,454	$4,335,454
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$30,103,558	N/A	N/A
Subtotal	N/A	N/A	$30,103,558	N/A	N/A
Participant Costs					
Incremental Capital Costs	$9,280,660	N/A	N/A	$9,280,660	$9,280,660
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$9,280,660	N/A	N/A	$9,280,660	$9,280,660
Total Costs	$9,280,660	$4,335,454	$34,439,012	$13,616,114	$13,616,114
Net Benefit (Cost)	$24,441,573	$21,507,315	($8,596,243)	$15,845,330	$16,602,702
Benefit/Cost Ratio	3.63	5.96	0.75	2.16	2.22

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	15.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	78.04%
Gross Load Factor at Customer	E	53.22%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,300

Program Summary per Participant		
Gross kW Saved at Customer	I	8.23 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	6.91 kW
Gross Annual kWh Saved at Customer	(B x E x I)	38,363 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	41,074 kWh

Program Summary All Participants		
Total Participants	J	877
Total Budget	K	**$4,335,454**
Gross kW Saved at Customer	(J x I)	7,217 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**6,057 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	33,644,210 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**36,021,638 kWh**
Societal Net Benefits	(J x I x H)	**$16,602,702**

Utility Program Cost per kWh Lifetime	**$0.0079**
Utility Program Cost per kW at Gen	**$715.82**

MOTOR EFFICIENCY — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$6,042,710	$6,042,710	$6,042,710	$6,042,710
T & D	N/A	$2,291,004	$2,291,004	$2,291,004	$2,291,004
Marginal Energy	N/A	$18,597,970	$18,597,970	$18,597,970	$18,597,970
Environmental Externality	N/A	N/A	N/A	N/A	$754,487
Subtotal	N/A	$26,931,685	$26,931,685	$26,931,685	$27,686,172
Participant Benefits					
Bill Reduction - Electric	$30,921,617	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,618,675	N/A	N/A	$3,618,675	$3,618,675
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$34,540,292	N/A	N/A	$3,618,675	$3,618,675
Total Benefits	$34,540,292	$26,931,685	$26,931,685	$30,550,360	$31,304,847
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$665,671	$665,671	$665,671	$665,671
Advertising & Promotion	N/A	$43,950	$43,950	$43,950	$43,950
Measurement & Verification	N/A	$26,686	$26,686	$26,686	$26,686
Rebates	N/A	$3,618,675	$3,618,675	$3,618,675	$3,618,675
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$4,354,982	$4,354,982	$4,354,982	$4,354,982
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$30,921,617	N/A	N/A
Subtotal	N/A	N/A	$30,921,617	N/A	N/A
Participant Costs					
Incremental Capital Costs	$9,280,660	N/A	N/A	$9,280,660	$9,280,660
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$9,280,660	N/A	N/A	$9,280,660	$9,280,660
Total Costs	$9,280,660	$4,354,982	$35,276,599	$13,635,642	$13,635,642
Net Benefit (Cost)	$25,259,632	$22,576,703	($8,344,914)	$16,914,718	$17,669,205
Benefit/Cost Ratio	3.72	6.18	0.76	2.24	2.30

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	15.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	78.04%
Gross Load Factor at Customer	E	53.22%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,448

Program Summary per Participant		
Gross kW Saved at Customer	I	8.23 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	6.91 kW
Gross Annual kWh Saved at Customer	(B x E x I)	38,363 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	41,074 kWh

Program Summary All Participants		
Total Participants	J	877
Total Budget	K	**$4,354,982**
Gross kW Saved at Customer	(J x I)	7,217 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**6,057 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	33,644,210 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**36,021,638 kWh**
Societal Net Benefits	(J x I x H)	**$17,669,205**

Utility Program Cost per kWh Lifetime	**$0.0080**
Utility Program Cost per kW at Gen	**$719.05**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Process Efficiency
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	1,235,000			1,406,000			1,311,000		
Utility Administration	1,091,183			1,134,578			1,166,616		
Advertising & Promotion	35,416			35,578			35,746		
Participant Incentives	3,579,415			4,238,090			4,007,106		
R&D	0			0			0		
Other	82,897			95,190			89,036		
Total Costs	$6,023,911			$6,909,437			$6,609,504		
Project Participants									
Total Participants	74			81			91		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air	x			x			x		
Energy Star Appliances									
Lighting	x			x			x		
Motors (including ASD, Fans, Pumps)	x			x			x		
Manufacturing Process	x			x			x		
Refrigeration	x			x			x		
Space Cooling	x			x			x		
Space Heating	x			x			x		
Water Heating	x			x			x		
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	891,513			936,495			782,692		
Annual kWh Saved - Generator	65,971,934			75,856,071			71,224,992		
Cost per Annual kWh Saved	$0.0913			$0.0911			$0.0928		
Measure Lifetime (Years)	14.3			14.5			14.5		
Lifetime kWh savings	945,498,563			1,099,234,968			1,029,486,682		
Cost per kWh Lifetime	$0.0064			$0.0063			$0.0064		
Average kW Savings per Participant	104.76			112.05			94.12		
Annual kW Savings - Generator	7,752			9,076			8,565		
Cost per KW Saved	$777.08			$761.26			$771.69		
Cost/Benefit Results									
Societal									
Net present value	$424,828			$475,627			$415,233		
B/C ratio	2.63			2.71			2.78		
Participant									
Net present value	$747,152			$802,506			$681,710		
B/C ratio	4.60			4.58			4.65		
Rate Payer									
Net present value	($226,734)			($229,281)			($186,575)		
B/C ratio	0.69			0.71			0.73		
Utility									
Net present value	$423,948			$479,317			$420,272		
B/C ratio	6.21			6.62			6.79		

PROCESS EFFICIENCY — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$6,960,630	$6,960,630	$6,960,630	$6,960,630
T & D	N/A	$2,638,958	$2,638,958	$2,638,958	$2,638,958
Marginal Energy	N/A	$27,796,502	$27,796,502	$27,796,502	$27,796,502
Environmental Externality	N/A	N/A	N/A	N/A	$1,257,629
Subtotal	N/A	$37,396,090	$37,396,090	$37,396,090	$38,653,718
Participant Benefits					
Bill Reduction - Electric	$48,150,500	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,579,415	N/A	N/A	$3,579,415	$3,579,415
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$18,919,497	N/A	N/A	$8,432,629	$8,432,629
Subtotal	$70,649,411	N/A	N/A	$12,012,044	$12,012,044
Total Benefits	$70,649,411	$37,396,090	$37,396,090	$49,408,133	$50,665,762
Costs					
Utility Project Costs					
Customer Services	N/A	$1,235,000	$1,235,000	$1,235,000	$1,235,000
Project Administration	N/A	$1,091,183	$1,091,183	$1,091,183	$1,091,183
Advertising & Promotion	N/A	$35,416	$35,416	$35,416	$35,416
Measurement & Verification	N/A	$65,000	$65,000	$65,000	$65,000
Rebates	N/A	$3,579,415	$3,579,415	$3,579,415	$3,579,415
Other	N/A	$17,897	$17,897	$17,897	$17,897
Subtotal	N/A	$6,023,911	$6,023,911	$6,023,911	$6,023,911
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$48,150,500	N/A	N/A
Subtotal	N/A	N/A	$48,150,500	N/A	N/A
Participant Costs					
Incremental Capital Costs	$15,360,185	N/A	N/A	$13,204,555	$13,204,555
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$15,360,185	N/A	N/A	$13,204,555	$13,204,555
Total Costs	$15,360,185	$6,023,911	$54,174,410	$19,228,465	$19,228,465
Net Benefit (Cost)	$55,289,227	$31,372,179	($16,778,320)	$30,179,668	$31,437,297
Benefit/Cost Ratio	4.60	6.21	0.69	2.57	2.63

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	14.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	67.96%
Gross Load Factor at Customer	E	66.31%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$2,964

Program Summary per Participant		
Gross kW Saved at Customer	I	143.35 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	104.76 kW
Gross Annual kWh Saved at Customer	(B x E x I)	832,673 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	891,513 kWh

Program Summary All Participants		
Total Participants	J	74
Total Budget	K	**$6,023,911**
Gross kW Saved at Customer	(J x I)	10,608 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**7,752 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	61,617,786 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**65,971,934 kWh**
Societal Net Benefits	(J x I x H)	**$31,437,297**

Utility Program Cost per kWh Lifetime	**$0.0064**
Utility Program Cost per kW at Gen	**$777.08**

PROCESS EFFICIENCY | **2014** | **ELECTRIC** | **GOAL**

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$8,413,729	$8,413,729	$8,413,729	$8,413,729
T & D	N/A	$3,189,580	$3,189,580	$3,189,580	$3,189,580
Marginal Energy	N/A	$34,130,782	$34,130,782	$34,130,782	$34,130,782
Environmental Externality	N/A	N/A	N/A	N/A	$1,495,489
Subtotal	N/A	$45,734,091	$45,734,091	$45,734,091	$47,229,580
Participant Benefits					
Bill Reduction - Electric	$57,396,450	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$4,238,090	N/A	N/A	$4,238,090	$4,238,090
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$21,510,022	N/A	N/A	$9,597,562	$9,597,562
Subtotal	$83,144,562	N/A	N/A	$13,835,652	$13,835,652
Total Benefits	$83,144,562	$45,734,091	$45,734,091	$59,569,744	$61,065,232
Costs					
Utility Project Costs					
Customer Services	N/A	$1,406,000	$1,406,000	$1,406,000	$1,406,000
Project Administration	N/A	$1,134,578	$1,134,578	$1,134,578	$1,134,578
Advertising & Promotion	N/A	$35,578	$35,578	$35,578	$35,578
Measurement & Verification	N/A	$74,000	$74,000	$74,000	$74,000
Rebates	N/A	$4,238,090	$4,238,090	$4,238,090	$4,238,090
Other	N/A	$21,190	$21,190	$21,190	$21,190
Subtotal	N/A	$6,909,437	$6,909,437	$6,909,437	$6,909,437
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$57,396,450	N/A	N/A
Subtotal	N/A	N/A	$57,396,450	N/A	N/A
Participant Costs					
Incremental Capital Costs	$18,141,549	N/A	N/A	$15,630,036	$15,630,036
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$18,141,549	N/A	N/A	$15,630,036	$15,630,036
Total Costs	$18,141,549	$6,909,437	$64,305,886	$22,539,473	$22,539,473
Net Benefit (Cost)	$65,003,013	$38,824,655	($18,571,795)	$37,030,271	$38,525,759
Benefit/Cost Ratio	4.58	6.62	0.71	2.64	2.71

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	14.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	68.55%
Gross Load Factor at Customer	E	65.68%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$3,129

Program Summary per Participant		
Gross kW Saved at Customer	I	152.02 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	112.05 kW
Gross Annual kWh Saved at Customer	(B x E x I)	874,686 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	936,495 kWh

Program Summary All Participants		
Total Participants	J	81
Total Budget	K	**$6,909,437**
Gross kW Saved at Customer	(J x I)	12,314 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**9,076 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	70,849,570 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**75,856,071 kWh**
Societal Net Benefits	(J x I x H)	**$38,525,759**

Utility Program Cost per kWh Lifetime	**$0.0063**
Utility Program Cost per kW at Gen	**$761.26**

PROCESS EFFICIENCY	2015	ELECTRIC	GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$8,120,590	$8,120,590	$8,120,590	$8,120,590
T & D	N/A	$3,078,909	$3,078,909	$3,078,909	$3,078,909
Marginal Energy	N/A	$33,654,779	$33,654,779	$33,654,779	$33,654,779
Environmental Externality	N/A	N/A	N/A	N/A	$1,401,527
Subtotal	N/A	$44,854,278	$44,854,278	$44,854,278	$46,255,805
Participant Benefits					
Bill Reduction - Electric	$55,223,067	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$4,007,106	N/A	N/A	$4,007,106	$4,007,106
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$19,790,594	N/A	N/A	$8,799,399	$8,799,399
Subtotal	$79,020,767	N/A	N/A	$12,806,505	$12,806,505
Total Benefits	$79,020,767	$44,854,278	$44,854,278	$57,660,783	$59,062,310
Costs					
Utility Project Costs					
Customer Services	N/A	$1,311,000	$1,311,000	$1,311,000	$1,311,000
Project Administration	N/A	$1,166,616	$1,166,616	$1,166,616	$1,166,616
Advertising & Promotion	N/A	$35,746	$35,746	$35,746	$35,746
Measurement & Verification	N/A	$69,000	$69,000	$69,000	$69,000
Rebates	N/A	$4,007,106	$4,007,106	$4,007,106	$4,007,106
Other	N/A	$20,036	$20,036	$20,036	$20,036
Subtotal	N/A	$6,609,504	$6,609,504	$6,609,504	$6,609,504
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$55,223,067	N/A	N/A
Subtotal	N/A	N/A	$55,223,067	N/A	N/A
Participant Costs					
Incremental Capital Costs	$16,985,163	N/A	N/A	$14,666,628	$14,666,628
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$16,985,163	N/A	N/A	$14,666,628	$14,666,628
Total Costs	$16,985,163	$6,609,504	$61,832,571	$21,276,131	$21,276,131
Net Benefit (Cost)	$62,035,604	$38,244,774	($16,978,293)	$36,384,651	$37,786,179
Benefit/Cost Ratio	4.65	6.79	0.73	2.71	2.78

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	14.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	68.75%
Gross Load Factor at Customer	E	65.55%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$3,261

Program Summary per Participant		
Gross kW Saved at Customer	I	127.32 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	94.12 kW
Gross Annual kWh Saved at Customer	(B x E x I)	731,035 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	782,692 kWh

Program Summary All Participants		
Total Participants	J	91
Total Budget	K	**$6,609,504**
Gross kW Saved at Customer	(J x I)	11,586 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**8,565 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	66,524,142 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**71,224,992 kWh**
Societal Net Benefits	(J x I x H)	**$37,786,179**

Utility Program Cost per kWh Lifetime	**$0.0064**
Utility Program Cost per kW at Gen	**$771.69**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Process Efficiency
Project Description:
(Note changes)
Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	275,000			275,000			275,000		
Utility Administration	228,828			235,149			239,661		
Advertising & Promotion	2,500			2,500			2,500		
Participant Incentives	301,094			329,436			336,033		
R&D	0			0			0		
Other	7,759			8,988			8,835		
Total Costs	$815,182			$851,073			$862,029		
Project Participants									
Total Participants	19			21			23		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	0%			0%			0%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System	x			x			x		
Building Efficiency									
Food Service Equipment									
Heat Recovery	x			x			x		
Industrial Process Heating	x			x			x		
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination	x			x			x		
Water Heating	x			x			x		
Weatherization									
General/Other	x			x			x		
Energy Savings									
Avg. Dth/Part. Saved	6316.52			6464.82			5973.71		
Annual Dth Saved	120,014			135,761			137,395		
Cost per Dth	$6.7924			$6.2689			$6.2741		
Project Life (Years)	8.9			8.9			8.9		
Lifetime Dth Saved	1,067,370			1,210,694			1,223,379		
Cost per Lifetime Dth Saved	$0.7637			$0.7030			$0.7046		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$23,945,421								
B/C ratio	3.88								
Participant									
Net present value	$33,073,200								
B/C ratio	5.06								
Rate Payer									
Net present value	($7,551,847)								
B/C ratio	0.70								
Utility									
Net present value	$15,153,776								
B/C ratio	6.99								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Process Efficiency**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$514,087	$521,637	$525,996
Incentive Costs =	$301,094	$329,436	$336,033
16) Total Utility Project Costs =	$815,182	$851,073	$862,029
17) Direct Participant Costs ($/Part.) =	$129,083	$129,750	$119,703
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$25,366	$27,308	$24,917
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	8.9	8.9	8.9
21) Avg. Dth/Part. Saved =	6,316.52	6,464.82	5,973.71
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	19	21	23
24) Total Annual Dth Saved =	120,014	135,761	137,395
25) Incentive/Participant =	$15,847.08	$15,687.45	$14,610.13

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$42,904	$40,527	$37,480
Cost per Participant per Dth =	$27.23	$26.34	$26.31
Lifetime Energy Reduction (Dth)	3,501,443		
Societal Cost per Dth	$2.37		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($7,551,847)	0.70
Utility Cost Test	$15,153,776	6.99
Societal Test	$23,945,421	3.88
Participant Test	$33,073,200	5.06

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Recommissioning
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	315,264			322,062			329,064		
Advertising & Promotion	16,093			20,629			16,166		
Participant Incentives	763,290			795,590			795,590		
R&D	0			0			0		
Other	10,500			10,500			10,500		
Total Costs	$1,105,147			$1,148,781			$1,151,320		
Project Participants									
Total Participants	119			124			124		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency	x			x			x		
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	96,738			96,278			96,278		
Annual kWh Saved - Generator	11,511,765			11,938,416			11,938,416		
Cost per Annual kWh Saved	$0.0960			$0.0962			$0.0964		
Measure Lifetime (Years)	7.0			7.0			7.0		
Lifetime kWh savings	80,582,356			83,568,915			83,568,915		
Cost per kWh Lifetime	$0.0137			$0.0137			$0.0138		
Average kW Savings per Participant	4.75			4.73			4.73		
Annual kW Savings - Generator	566			587			587		
Cost per KW Saved	$1,953.94			$1,958.58			$1,962.91		
Cost/Benefit Results									
Societal									
Net present value	$15,730			$17,364			$19,085		
B/C ratio	1.87			1.96			2.06		
Participant									
Net present value	$60,963			$61,665			$62,684		
B/C ratio	6.31			6.38			6.46		
Rate Payer									
Net present value	($25,564)			($24,728)			($24,006)		
B/C ratio	0.51			0.53			0.55		
Utility									
Net present value	$16,927			$18,538			$20,280		
B/C ratio	2.82			3.00			3.18		

RECOMMISSIONING **2013** **ELECTRIC** **GOAL**

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$298,699	$298,699	$298,699	$298,699
T & D	N/A	$113,248	$113,248	$113,248	$113,248
Marginal Energy	N/A	$2,707,490	$2,707,490	$2,707,490	$2,707,490
Environmental Externality	N/A	N/A	N/A	N/A	$133,648
Subtotal	N/A	$3,119,436	$3,119,436	$3,119,436	$3,253,085
Participant Benefits					
Bill Reduction - Electric	$5,056,409	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$763,290	N/A	N/A	$763,290	$763,290
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$2,800,707	N/A	N/A	$0	$0
Subtotal	$8,620,406	N/A	N/A	$763,290	$763,290
Total Benefits	$8,620,406	$3,119,436	$3,119,436	$3,882,726	$4,016,375
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$315,264	$315,264	$315,264	$315,264
Advertising & Promotion	N/A	$16,093	$16,093	$16,093	$16,093
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$763,290	$763,290	$763,290	$763,290
Other	N/A	$10,500	$10,500	$10,500	$10,500
Subtotal	N/A	$1,105,147	$1,105,147	$1,105,147	$1,105,147
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,056,409	N/A	N/A
Subtotal	N/A	N/A	$5,056,409	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,365,793	N/A	N/A	$1,039,301	$1,039,301
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,365,793	N/A	N/A	$1,039,301	$1,039,301
Total Costs	$1,365,793	$1,105,147	$6,161,556	$2,144,448	$2,144,448
Net Benefit (Cost)	$7,254,613	$2,014,289	($3,042,120)	$1,738,278	$1,871,927
Benefit/Cost Ratio	6.31	2.82	0.51	1.81	1.87

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	7.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	29.69%
Gross Load Factor at Customer	E	69.29%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,057

Program Summary per Participant		
Gross kW Saved at Customer	I	14.89 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	4.75 kW
Gross Annual kWh Saved at Customer	(B x E x I)	90,353 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	96,738 kWh

Program Summary All Participants		
Total Participants	J	119
Total Budget	K	**$1,105,147**
Gross kW Saved at Customer	(J x I)	1,771 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**566 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	10,751,989 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**11,511,765 kWh**
Societal Net Benefits	(J x I x H)	**$1,871,927**

Utility Program Cost per kWh Lifetime	**$0.0137**
Utility Program Cost per kW at Gen	**$1,953.94**

RECOMMISSIONING **2014** **ELECTRIC** **GOAL**

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$317,068	$317,068	$317,068	$317,068
T & D	N/A	$120,212	$120,212	$120,212	$120,212
Marginal Energy	N/A	$3,010,191	$3,010,191	$3,010,191	$3,010,191
Environmental Externality	N/A	N/A	N/A	N/A	$146,252
Subtotal	N/A	$3,447,471	$3,447,471	$3,447,471	$3,593,723
Participant Benefits					
Bill Reduction - Electric	$5,364,965	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$795,590	N/A	N/A	$795,590	$795,590
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$2,908,426	N/A	N/A	$0	$0
Subtotal	$9,068,981	N/A	N/A	$795,590	$795,590
Total Benefits	$9,068,981	$3,447,471	$3,447,471	$4,243,061	$4,389,313
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$322,062	$322,062	$322,062	$322,062
Advertising & Promotion	N/A	$20,629	$20,629	$20,629	$20,629
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$795,590	$795,590	$795,590	$795,590
Other	N/A	$10,500	$10,500	$10,500	$10,500
Subtotal	N/A	$1,148,781	$1,148,781	$1,148,781	$1,148,781
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,364,965	N/A	N/A
Subtotal	N/A	N/A	$5,364,965	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,422,568	N/A	N/A	$1,087,410	$1,087,410
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,422,568	N/A	N/A	$1,087,410	$1,087,410
Total Costs	$1,422,568	$1,148,781	$6,513,746	$2,236,191	$2,236,191
Net Benefit (Cost)	$7,646,413	$2,298,690	($3,066,275)	$2,006,870	$2,153,122
Benefit/Cost Ratio	6.38	3.00	0.53	1.90	1.96

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	7.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	29.68%
Gross Load Factor at Customer	E	69.26%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,172

Program Summary per Participant		
Gross kW Saved at Customer	I	14.82 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	4.73 kW
Gross Annual kWh Saved at Customer	(B x E x I)	89,923 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	96,278 kWh

Program Summary All Participants		
Total Participants	J	124
Total Budget	K	**$1,148,781**
Gross kW Saved at Customer	(J x I)	1,838 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**587 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	11,150,481 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**11,938,416 kWh**
Societal Net Benefits	(J x I x H)	**$2,153,122**

Utility Program Cost per kWh Lifetime	**$0.0137**
Utility Program Cost per kW at Gen	**$1,958.58**

RECOMMISSIONING **2015 ELECTRIC GOAL**

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$324,550	$324,550	$324,550	$324,550
T & D	N/A	$123,049	$123,049	$123,049	$123,049
Marginal Energy	N/A	$3,218,397	$3,218,397	$3,218,397	$3,218,397
Environmental Externality	N/A	N/A	N/A	N/A	$146,899
Subtotal	N/A	$3,665,996	$3,665,996	$3,665,996	$3,812,895
Participant Benefits					
Bill Reduction - Electric	$5,491,374	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$795,590	N/A	N/A	$795,590	$795,590
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$2,908,426	N/A	N/A	$0	$0
Subtotal	$9,195,390	N/A	N/A	$795,590	$795,590
Total Benefits	$9,195,390	$3,665,996	$3,665,996	$4,461,586	$4,608,485
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$329,064	$329,064	$329,064	$329,064
Advertising & Promotion	N/A	$16,166	$16,166	$16,166	$16,166
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$795,590	$795,590	$795,590	$795,590
Other	N/A	$10,500	$10,500	$10,500	$10,500
Subtotal	N/A	$1,151,320	$1,151,320	$1,151,320	$1,151,320
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,491,374	N/A	N/A
Subtotal	N/A	N/A	$5,491,374	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,422,568	N/A	N/A	$1,090,609	$1,090,609
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,422,568	N/A	N/A	$1,090,609	$1,090,609
Total Costs	$1,422,568	$1,151,320	$6,642,694	$2,241,929	$2,241,929
Net Benefit (Cost)	$7,772,822	$2,514,676	($2,976,698)	$2,219,656	$2,366,556
Benefit/Cost Ratio	6.46	3.18	0.55	1.99	2.06

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	7.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	29.68%
Gross Load Factor at Customer	E	69.26%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,288

Program Summary per Participant		
Gross kW Saved at Customer	I	14.82 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	4.73 kW
Gross Annual kWh Saved at Customer	(B x E x I)	89,923 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	96,278 kWh

Program Summary All Participants		
Total Participants	J	124
Total Budget	K	**$1,151,320**
Gross kW Saved at Customer	(J x I)	1,838 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**587 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	11,150,481 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**11,938,416 kWh**
Societal Net Benefits	(J x I x H)	**$2,366,556**

Utility Program Cost per kWh Lifetime	**$0.0138**
Utility Program Cost per kW at Gen	**$1,962.91**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Recommissioning
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	28,377			28,976			29,593		
Advertising & Promotion	1,722			2,224			1,727		
Participant Incentives	93,839			93,839			93,839		
R&D	0			0			0		
Other	2,100			2,100			2,100		
Total Costs	$126,038			$127,139			$127,259		
Project Participants									
Total Participants	30			30			30		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	0%			0%			0%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency	x			x			x		
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	469.03			469.03			469.03		
Annual Dth Saved	14,071			14,071			14,071		
Cost per Dth	$8.9574			$9.0357			$9.0442		
Project Life (Years)	7.0			7.0			7.0		
Lifetime Dth Saved	98,496			98,496			98,496		
Cost per Lifetime Dth Saved	$1.2796			$1.2908			$1.2920		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$1,262,923								
B/C ratio	3.20								
Participant									
Net present value	$4,604,237								
B/C ratio	8.87								
Rate Payer									
Net present value	($815,140)								
B/C ratio	0.65								
Utility									
Net present value	$1,149,645								
B/C ratio	4.02								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Recommissioning**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$32,199	$33,300	$33,420
Incentive Costs =	$93,839	$93,839	$93,839
16) Total Utility Project Costs =	$126,038	$127,139	$127,259
17) Direct Participant Costs ($/Part.) =	$6,498	$6,498	$6,498
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	7.0	7.0	7.0
21) Avg. Dth/Part. Saved =	469.03	469.03	469.03
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	30	30	30
24) Total Annual Dth Saved =	14,071	14,071	14,071
25) Incentive/Participant =	$3,127.97	$3,127.97	$3,127.97

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$4,201	$4,238	$4,242
Cost per Participant per Dth =	$22.81	$22.89	$22.90
Lifetime Energy Reduction (Dth)	295,487		
Societal Cost per Dth	$1.94		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($815,140)	0.65
Utility Cost Test	$1,149,645	4.02
Societal Test	$1,262,923	3.20
Participant Test	$4,604,237	8.87

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Self-Direct
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	134,131			138,608			143,244		
Advertising & Promotion	617			635			654		
Participant Incentives	1,736,120			2,604,180			3,472,239		
R&D	0			0			0		
Other	0			0			0		
Total Costs	$1,870,868			$2,743,423			$3,616,137		
Project Participants									
Total Participants	10			15			20		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	991,759			991,759			991,759		
Annual kWh Saved - Generator	9,917,591			14,876,387			19,835,182		
Cost per Annual kWh Saved	$0.1886			$0.1844			$0.1823		
Measure Lifetime (Years)	17.0			17.0			17.0		
Lifetime kWh savings	168,599,047			252,898,571			337,198,094		
Cost per kWh Lifetime	$0.0111			$0.0108			$0.0107		
Average kW Savings per Participant	217.18			217.18			217.18		
Annual kW Savings - Generator	2,172			3,258			4,344		
Cost per KW Saved	$861.42			$842.12			$832.51		
Cost/Benefit Results									
Societal									
Net present value	$315,263			$353,347			$388,803		
B/C ratio	1.46			1.52			1.57		
Participant									
Net present value	$524,012			$547,234			$571,098		
B/C ratio	2.04			2.09			2.14		
Rate Payer									
Net present value	($230,213)			($215,801)			($204,486)		
B/C ratio	0.78			0.80			0.81		
Utility									
Net present value	$623,332			$660,967			$696,146		
B/C ratio	4.33			4.61			4.85		

SELF-DIRECT **2013 ELECTRIC** **GOAL**

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$2,230,387	$2,230,387	$2,230,387	$2,230,387
T & D	N/A	$845,620	$845,620	$845,620	$845,620
Marginal Energy	N/A	$5,028,182	$5,028,182	$5,028,182	$5,028,182
Environmental Externality	N/A	N/A	N/A	N/A	$214,640
Subtotal	N/A	$8,104,188	$8,104,188	$8,104,188	$8,318,828
Participant Benefits					
Bill Reduction - Electric	$8,535,454	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,736,120	N/A	N/A	$1,736,120	$1,736,120
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$10,271,574	N/A	N/A	$1,736,120	$1,736,120
Total Benefits	$10,271,574	$8,104,188	$8,104,188	$9,840,308	$10,054,948
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$134,131	$134,131	$134,131	$134,131
Advertising & Promotion	N/A	$617	$617	$617	$617
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$1,736,120	$1,736,120	$1,736,120	$1,736,120
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,870,868	$1,870,868	$1,870,868	$1,870,868
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$8,535,454	N/A	N/A
Subtotal	N/A	N/A	$8,535,454	N/A	N/A
Participant Costs					
Incremental Capital Costs	$5,031,454	N/A	N/A	$5,031,454	$5,031,454
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$5,031,454	N/A	N/A	$5,031,454	$5,031,454
Total Costs	$5,031,454	$1,870,868	$10,406,322	$6,902,322	$6,902,322
Net Benefit (Cost)	$5,240,120	$6,233,320	($2,302,134)	$2,937,986	$3,152,626
Benefit/Cost Ratio	2.04	4.33	0.78	1.43	1.46

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	17.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	62.72%
Gross Load Factor at Customer	E	32.83%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$979

Program Summary per Participant		
Gross kW Saved at Customer	I	322.05 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	217.18 kW
Gross Annual kWh Saved at Customer	(B x E x I)	926,303 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	991,759 kWh

Program Summary All Participants		
Total Participants	J	10
Total Budget	K	**$1,870,868**
Gross kW Saved at Customer	(J x I)	3,220 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**2,172 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	9,263,030 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**9,917,591 kWh**
Societal Net Benefits	(J x I x H)	**$3,152,626**

Utility Program Cost per kWh Lifetime	**$0.0111**
Utility Program Cost per kW at Gen	**$861.42**

SELF-DIRECT **2014 ELECTRIC GOAL**

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$3,424,536	$3,424,536	$3,424,536	$3,424,536
T & D	N/A	$1,298,365	$1,298,365	$1,298,365	$1,298,365
Marginal Energy	N/A	$7,935,025	$7,935,025	$7,935,025	$7,935,025
Environmental Externality	N/A	N/A	N/A	N/A	$328,709
Subtotal	N/A	$12,657,926	$12,657,926	$12,657,926	$12,986,635
Participant Benefits					
Bill Reduction - Electric	$13,151,517	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$2,604,180	N/A	N/A	$2,604,180	$2,604,180
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$15,755,697	N/A	N/A	$2,604,180	$2,604,180
Total Benefits	$15,755,697	$12,657,926	$12,657,926	$15,262,106	$15,590,815
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$138,608	$138,608	$138,608	$138,608
Advertising & Promotion	N/A	$635	$635	$635	$635
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$2,604,180	$2,604,180	$2,604,180	$2,604,180
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,743,423	$2,743,423	$2,743,423	$2,743,423
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$13,151,517	N/A	N/A
Subtotal	N/A	N/A	$13,151,517	N/A	N/A
Participant Costs					
Incremental Capital Costs	$7,547,181	N/A	N/A	$7,547,181	$7,547,181
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$7,547,181	N/A	N/A	$7,547,181	$7,547,181
Total Costs	$7,547,181	$2,743,423	$15,894,940	$10,290,604	$10,290,604
Net Benefit (Cost)	$8,208,516	$9,914,503	($3,237,014)	$4,971,502	$5,300,211
Benefit/Cost Ratio	2.09	4.61	0.80	1.48	1.52

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	17.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	62.72%
Gross Load Factor at Customer	E	32.83%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,097

Program Summary per Participant		
Gross kW Saved at Customer	I	322.05 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	217.18 kW
Gross Annual kWh Saved at Customer	(B x E x I)	926,303 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	991,759 kWh

Program Summary All Participants		
Total Participants	J	15
Total Budget	K	**$2,743,423**
Gross kW Saved at Customer	(J x I)	4,831 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**3,258 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	13,894,545 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**14,876,387 kWh**
Societal Net Benefits	(J x I x H)	**$5,300,211**

Utility Program Cost per kWh Lifetime	**$0.0108**
Utility Program Cost per kW at Gen	**$842.12**

SELF-DIRECT **2015 ELECTRIC GOAL**

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$4,673,806	$4,673,806	$4,673,806	$4,673,806
T & D	N/A	$1,772,008	$1,772,008	$1,772,008	$1,772,008
Marginal Energy	N/A	$11,093,237	$11,093,237	$11,093,237	$11,093,237
Environmental Externality	N/A	N/A	N/A	N/A	$443,815
Subtotal	N/A	$17,539,052	$17,539,052	$17,539,052	$17,982,867
Participant Benefits					
Bill Reduction - Electric	$18,012,636	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,472,239	N/A	N/A	$3,472,239	$3,472,239
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$21,484,875	N/A	N/A	$3,472,239	$3,472,239
Total Benefits	$21,484,875	$17,539,052	$17,539,052	$21,011,291	$21,455,106
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$143,244	$143,244	$143,244	$143,244
Advertising & Promotion	N/A	$654	$654	$654	$654
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$3,472,239	$3,472,239	$3,472,239	$3,472,239
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$3,616,137	$3,616,137	$3,616,137	$3,616,137
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$18,012,636	N/A	N/A
Subtotal	N/A	N/A	$18,012,636	N/A	N/A
Participant Costs					
Incremental Capital Costs	$10,062,908	N/A	N/A	$10,062,908	$10,062,908
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$10,062,908	N/A	N/A	$10,062,908	$10,062,908
Total Costs	$10,062,908	$3,616,137	$21,628,773	$13,679,045	$13,679,045
Net Benefit (Cost)	$11,421,968	$13,922,915	($4,089,722)	$7,332,246	$7,776,061
Benefit/Cost Ratio	2.14	4.85	0.81	1.54	1.57

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	17.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	62.72%
Gross Load Factor at Customer	E	32.83%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,207

Program Summary per Participant		
Gross kW Saved at Customer	I	322.05 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	217.18 kW
Gross Annual kWh Saved at Customer	(B x E x I)	926,303 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	991,759 kWh

Program Summary All Participants		
Total Participants	J	20
Total Budget	K	**$3,616,137**
Gross kW Saved at Customer	(J x I)	6,441 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**4,344 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	18,526,060 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**19,835,182 kWh**
Societal Net Benefits	(J x I x H)	**$7,776,061**

Utility Program Cost per kWh Lifetime	**$0.0107**
Utility Program Cost per kW at Gen	**$832.51**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Self-Direct
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	6,766			6,993			7,229		
Advertising & Promotion	31			32			33		
Participant Incentives	78,941			118,412			157,883		
R&D	0			0			0		
Other	0			0			0		
Total Costs	$85,738			$125,437			$165,145		
Project Participants									
Total Participants	2			3			4		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	0%			0%			0%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy Savings									
Avg. Dth/Part. Saved	4933.83			4933.83			4933.83		
Annual Dth Saved	9,868			14,801			19,735		
Cost per Dth	$8.6888			$8.4746			$8.3680		
Project Life (Years)	17.0			17.0			17.0		
Lifetime Dth Saved	167,750			251,625			335,500		
Cost per Lifetime Dth Saved	$0.5111			$0.4985			$0.4922		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$3,736,237								
B/C ratio	3.75								
Participant									
Net present value	$3,493,537								
B/C ratio	3.61								
Rate Payer									
Net present value	($1,366,669)								
B/C ratio	0.72								
Utility									
Net present value	$3,109,539								
B/C ratio	9.26								

Conservation Improvement Program (CIP)

BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Self-Direct**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$6,797	$7,025	$7,262
Incentive Costs =	$78,941	$118,412	$157,883
16) Total Utility Project Costs =	$85,738	$125,437	$165,145
17) Direct Participant Costs ($/Part.) =	$148,656	$148,656	$148,656
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	17.0	17.0	17.0
21) Avg. Dth/Part. Saved =	4,933.83	4,933.83	4,933.83
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	2	3	4
24) Total Annual Dth Saved =	9,868	14,801	19,735
25) Incentive/Participant =	$39,470.50	$39,470.67	$39,470.75

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$42,869	$41,812	$41,286
Cost per Participant per Dth =	$38.82	$38.60	$38.50
Lifetime Energy Reduction (Dth)	754,876		
Societal Cost per Dth	$1.80		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($1,366,669)	0.72
Utility Cost Test	$3,109,539	9.26
Societal Test	$3,736,237	3.75
Participant Test	$3,493,537	3.61

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Turn Key Services
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	368,055			407,377			438,834		
Utility Administration	220,195			226,411			232,813		
Advertising & Promotion	12,780			13,014			13,255		
Participant Incentives	761,086			842,399			907,449		
R&D	0			0			0		
Other	13,000			13,000			13,000		
Total Costs	$1,375,116			$1,502,201			$1,605,351		
Project Participants									
Total Participants	353			391			421		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	19,626			19,628			19,629		
Annual kWh Saved - Generator	6,931,471			7,668,306			8,259,652		
Cost per Annual kWh Saved	$0.1984			$0.1959			$0.1944		
Measure Lifetime (Years)	12.0			12.0			12.0		
Lifetime kWh savings	83,325,430			92,201,768			99,315,989		
Cost per kWh Lifetime	$0.0165			$0.0163			$0.0162		
Average kW Savings per Participant	1.70			1.70			1.70		
Annual kW Savings - Generator	602			666			717		
Cost per KW Saved	$2,284.70			$2,255.54			$2,237.75		
Cost/Benefit Results									
Societal									
Net present value	$5,102			$5,657			$6,179		
B/C ratio	1.71			1.79			1.87		
Participant									
Net present value	$16,425			$16,774			$17,134		
B/C ratio	4.74			4.82			4.90		
Rate Payer									
Net present value	($7,611)			($7,412)			($7,248)		
B/C ratio	0.55			0.57			0.59		
Utility									
Net present value	$5,522			$6,073			$6,597		
B/C ratio	2.42			2.58			2.73		

TURN KEY SERVICES | **2013** | **ELECTRIC** | **GOAL**

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$496,438	$496,438	$496,438	$496,438
T & D	N/A	$188,218	$188,218	$188,218	$188,218
Marginal Energy	N/A	$2,640,590	$2,640,590	$2,640,590	$2,640,590
Environmental Externality	N/A	N/A	N/A	N/A	$126,013
Subtotal	N/A	$3,325,245	$3,325,245	$3,325,245	$3,451,258
Participant Benefits					
Bill Reduction - Electric	$4,638,381	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$761,086	N/A	N/A	$761,086	$761,086
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,951,182	N/A	N/A	$132,857	$132,857
Subtotal	$7,350,649	N/A	N/A	$893,943	$893,943
Total Benefits	$7,350,649	$3,325,245	$3,325,245	$4,219,188	$4,345,201
Costs					
Utility Project Costs					
Customer Services	N/A	$368,055	$368,055	$368,055	$368,055
Project Administration	N/A	$220,195	$220,195	$220,195	$220,195
Advertising & Promotion	N/A	$12,780	$12,780	$12,780	$12,780
Measurement & Verification	N/A	$13,000	$13,000	$13,000	$13,000
Rebates	N/A	$761,086	$761,086	$761,086	$761,086
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,375,116	$1,375,116	$1,375,116	$1,375,116
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$4,638,381	N/A	N/A
Subtotal	N/A	N/A	$4,638,381	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,549,520	N/A	N/A	$1,167,985	$1,167,985
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,549,520	N/A	N/A	$1,167,985	$1,167,985
Total Costs	$1,549,520	$1,375,116	$6,013,497	$2,543,101	$2,543,101
Net Benefit (Cost)	$5,801,129	$1,950,129	($2,688,252)	$1,676,087	$1,802,100
Benefit/Cost Ratio	4.74	2.42	0.55	1.66	1.71

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	12.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	29.38%
Gross Load Factor at Customer	E	38.79%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$946

Program Summary per Participant		
Gross kW Saved at Customer	I	5.40 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.70 kW
Gross Annual kWh Saved at Customer	(B x E x I)	18,330 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	19,626 kWh

Program Summary All Participants		
Total Participants	J	353
Total Budget	K	**$1,375,116**
Gross kW Saved at Customer	(J x I)	1,905 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**602 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	6,473,994 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**6,931,471 kWh**
Societal Net Benefits	(J x I x H)	**$1,802,100**

Utility Program Cost per kWh Lifetime	**$0.0165**
Utility Program Cost per kW at Gen	**$2,284.70**

TURN KEY SERVICES | **2014** | **ELECTRIC** | **GOAL**

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$562,347	$562,347	$562,347	$562,347
T & D	N/A	$213,207	$213,207	$213,207	$213,207
Marginal Energy	N/A	$3,099,055	$3,099,055	$3,099,055	$3,099,055
Environmental Externality	N/A	N/A	N/A	N/A	$143,559
Subtotal	N/A	$3,874,608	$3,874,608	$3,874,608	$4,018,167
Participant Benefits					
Bill Reduction - Electric	$5,268,101	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$842,399	N/A	N/A	$842,399	$842,399
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$2,157,711	N/A	N/A	$147,399	$147,399
Subtotal	$8,268,211	N/A	N/A	$989,798	$989,798
Total Benefits	$8,268,211	$3,874,608	$3,874,608	$4,864,406	$5,007,965
Costs					
Utility Project Costs					
Customer Services	N/A	$407,377	$407,377	$407,377	$407,377
Project Administration	N/A	$226,411	$226,411	$226,411	$226,411
Advertising & Promotion	N/A	$13,014	$13,014	$13,014	$13,014
Measurement & Verification	N/A	$13,000	$13,000	$13,000	$13,000
Rebates	N/A	$842,399	$842,399	$842,399	$842,399
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,502,201	$1,502,201	$1,502,201	$1,502,201
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,268,101	N/A	N/A
Subtotal	N/A	N/A	$5,268,101	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,714,993	N/A	N/A	$1,295,545	$1,295,545
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,714,993	N/A	N/A	$1,295,545	$1,295,545
Total Costs	$1,714,993	$1,502,201	$6,770,302	$2,797,746	$2,797,746
Net Benefit (Cost)	$6,553,218	$2,372,407	($2,895,694)	$2,066,660	$2,210,219
Benefit/Cost Ratio	4.82	2.58	0.57	1.74	1.79

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	12.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	29.38%
Gross Load Factor at Customer	E	38.78%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,048

Program Summary per Participant		
Gross kW Saved at Customer	I	5.40 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.70 kW
Gross Annual kWh Saved at Customer	(B x E x I)	18,333 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	19,628 kWh

Program Summary All Participants		
Total Participants	J	391
Total Budget	K	**$1,502,201**
Gross kW Saved at Customer	(J x I)	2,108 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**666 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	7,162,198 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**7,668,306 kWh**
Societal Net Benefits	(J x I x H)	**$2,210,219**

Utility Program Cost per kWh Lifetime	**$0.0163**
Utility Program Cost per kW at Gen	**$2,255.54**

TURN KEY SERVICES | **2015** | **ELECTRIC** | **GOAL**

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$620,046	$620,046	$620,046	$620,046
T & D	N/A	$235,082	$235,082	$235,082	$235,082
Marginal Energy	N/A	$3,526,124	$3,526,124	$3,526,124	$3,526,124
Environmental Externality	N/A	N/A	N/A	N/A	$155,001
Subtotal	N/A	$4,381,252	$4,381,252	$4,381,252	$4,536,253
Participant Benefits					
Bill Reduction - Electric	$5,825,887	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$907,449	N/A	N/A	$907,449	$907,449
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$2,323,913	N/A	N/A	$158,991	$158,991
Subtotal	$9,057,249	N/A	N/A	$1,066,440	$1,066,440
Total Benefits	$9,057,249	$4,381,252	$4,381,252	$5,447,692	$5,602,693
Costs					
Utility Project Costs					
Customer Services	N/A	$438,834	$438,834	$438,834	$438,834
Project Administration	N/A	$232,813	$232,813	$232,813	$232,813
Advertising & Promotion	N/A	$13,255	$13,255	$13,255	$13,255
Measurement & Verification	N/A	$13,000	$13,000	$13,000	$13,000
Rebates	N/A	$907,449	$907,449	$907,449	$907,449
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,605,351	$1,605,351	$1,605,351	$1,605,351
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,825,887	N/A	N/A
Subtotal	N/A	N/A	$5,825,887	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,847,409	N/A	N/A	$1,397,305	$1,397,305
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,847,409	N/A	N/A	$1,397,305	$1,397,305
Total Costs	$1,847,409	$1,605,351	$7,431,238	$3,002,656	$3,002,656
Net Benefit (Cost)	$7,209,840	$2,775,901	($3,049,986)	$2,445,036	$2,600,037
Benefit/Cost Ratio	4.90	2.73	0.59	1.81	1.87

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	12.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	29.38%
Gross Load Factor at Customer	E	38.78%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,145

Program Summary per Participant		
Gross kW Saved at Customer	I	5.40 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.70 kW
Gross Annual kWh Saved at Customer	(B x E x I)	18,333 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	19,629 kWh

Program Summary All Participants		
Total Participants	J	421
Total Budget	K	**$1,605,351**
Gross kW Saved at Customer	(J x I)	2,271 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**717 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	7,714,515 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**8,259,652 kWh**
Societal Net Benefits	(J x I x H)	**$2,600,037**

Utility Program Cost per kWh Lifetime	**$0.0162**
Utility Program Cost per kW at Gen	**$2,237.75**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Turn Key Services
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	15,013			16,616			17,900		
Utility Administration	26,372			27,063			27,773		
Advertising & Promotion	1,865			1,890			1,917		
Participant Incentives	19,152			21,198			22,835		
R&D	0			0			0		
Other	2,000			2,000			2,000		
Total Costs	$64,402			$68,767			$72,425		
Project Participants									
Total Participants	49			54			58		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy Savings									
Avg. Dth/Part. Saved	194.17			194.17			194.17		
Annual Dth Saved	9,513			10,529			11,342		
Cost per Dth	$6.7701			$6.5312			$6.3855		
Project Life (Years)	8.2			8.2			8.2		
Lifetime Dth Saved	77,708			86,010			92,652		
Cost per Lifetime Dth Saved	$0.8288			$0.7995			$0.7817		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$985,850								
B/C ratio	2.57								
Participant									
Net present value	$1,340,733								
B/C ratio	3.49								
Rate Payer									
Net present value	($577,055)								
B/C ratio	0.69								
Utility									
Net present value	$1,101,885								
B/C ratio	6.36								

Conservation Improvement Program (CIP)

BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Turn Key Services**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$45,250	$47,569	$49,590
Incentive Costs =	$19,152	$21,198	$22,835
16) Total Utility Project Costs =	$64,402	$68,767	$72,425
17) Direct Participant Costs ($/Part.) =	$3,329	$3,329	$3,329
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	8.2	8.2	8.2
21) Avg. Dth/Part. Saved =	194.17	194.17	194.17
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	49	54	58
24) Total Annual Dth Saved =	9,513	10,529	11,342
25) Incentive/Participant =	$390.92	$390.92	$390.92

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$1,315	$1,268	$1,240
Cost per Participant per Dth =	$23.92	$23.68	$23.53
Lifetime Energy Reduction (Dth)	256,369		
Societal Cost per Dth	$2.45		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($577,055)	0.69
Utility Cost Test	$1,101,885	6.36
Societal Test	$985,850	2.57
Participant Test	$1,340,733	3.49

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Business Segment Load Management Total
Project Description:
(Note changes)

Type Load Management
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	312,000			320,000			331,000		
Utility Administration	1,674,455			1,685,530			1,727,897		
Advertising & Promotion	316,870			265,367			265,828		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	225,000			250,000			275,000		
Total Costs	$2,528,325			$2,520,897			$2,599,725		
Project Participants									
Total Participants	1,241			1,231			1,231		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	291			263			263		
Annual kWh Saved - Generator	361,437			323,621			323,621		
Cost per Annual kWh Saved	$6.9952			$7.7897			$8.0332		
Measure Lifetime (Years)	5.6			5.7			5.7		
Lifetime kWh savings	2,018,088			1,829,006			1,829,006		
Cost per kWh Lifetime	$1.2528			$1.3783			$1.4214		
Average kW Savings per Participant	10.03			9.28			9.28		
Annual kW Savings - Generator	12,441			11,421			11,421		
Cost per KW Saved	$203.22			$220.73			$227.63		
Cost/Benefit Results									
Societal									
Net present value	$3,454			$3,279			$3,345		
B/C ratio	2.70			2.60			2.58		
Participant									
Net present value	$6,181			$5,851			$5,853		
B/C ratio	INF			INF			INF		
Rate Payer									
Net present value	($2,729)			($2,575)			($2,511)		
B/C ratio	0.67			0.67			0.68		
Utility									
Net present value	$3,451			$3,277			$3,342		
B/C ratio	2.69			2.60			2.58		

BUSINESS SEGMENT LOAD MANAGEMENT TOTAL — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$6,710,554	$6,710,554	$6,710,554	$6,710,554
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$101,047	$101,047	$101,047	$101,047
Environmental Externality	N/A	N/A	N/A	N/A	$3,522
Subtotal	N/A	$6,811,601	$6,811,601	$6,811,601	$6,815,123
Participant Benefits					
Bill Reduction - Electric	$7,670,367	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$7,670,367	N/A	N/A	$0	$0
Total Benefits	$7,670,367	$6,811,601	$6,811,601	$6,811,601	$6,815,123
Costs					
Utility Project Costs					
Customer Services	N/A	$312,000	$312,000	$312,000	$312,000
Project Administration	N/A	$1,674,455	$1,674,455	$1,674,455	$1,674,455
Advertising & Promotion	N/A	$316,870	$316,870	$316,870	$316,870
Measurement & Verification	N/A	$225,000	$225,000	$225,000	$225,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,528,325	$2,528,325	$2,528,325	$2,528,325
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$7,670,367	N/A	N/A
Subtotal	N/A	N/A	$7,670,367	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$2,528,325	$10,198,692	$2,528,325	$2,528,325
Net Benefit (Cost)	$7,670,367	$4,283,276	($3,387,091)	$4,283,276	$4,286,798
Benefit/Cost Ratio	INF	2.69	0.67	2.69	2.70

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	5.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	37.79%
Gross Load Factor at Customer	E	0.13%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$140

Program Summary per Participant		
Gross kW Saved at Customer	I	24.67 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	10.03 kW
Gross Annual kWh Saved at Customer	(B x E x I)	272 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	291 kWh

Program Summary All Participants		
Total Participants	J	1,241
Total Budget	K	**$2,528,325**
Gross kW Saved at Customer	(J x I)	30,620 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**12,441 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	337,583 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**361,437 kWh**
Societal Net Benefits	(J x I x H)	**$4,286,798**

Utility Program Cost per kWh Lifetime	**$1.2528**
Utility Program Cost per kW at Gen	**$203.22**

BUSINESS SEGMENT LOAD MANAGEMENT TOTAL — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$6,455,936	$6,455,936	$6,455,936	$6,455,936
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$98,414	$98,414	$98,414	$98,414
Environmental Externality	N/A	N/A	N/A	N/A	$3,339
Subtotal	N/A	$6,554,350	$6,554,350	$6,554,350	$6,557,689
Participant Benefits					
Bill Reduction - Electric	$7,202,751	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$7,202,751	N/A	N/A	$0	$0
Total Benefits	$7,202,751	$6,554,350	$6,554,350	$6,554,350	$6,557,689
Costs					
Utility Project Costs					
Customer Services	N/A	$320,000	$320,000	$320,000	$320,000
Project Administration	N/A	$1,685,530	$1,685,530	$1,685,530	$1,685,530
Advertising & Promotion	N/A	$265,367	$265,367	$265,367	$265,367
Measurement & Verification	N/A	$250,000	$250,000	$250,000	$250,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,520,897	$2,520,897	$2,520,897	$2,520,897
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$7,202,751	N/A	N/A
Subtotal	N/A	N/A	$7,202,751	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$2,520,897	$9,723,648	$2,520,897	$2,520,897
Net Benefit (Cost)	$7,202,751	$4,033,453	($3,169,298)	$4,033,453	$4,036,792
Benefit/Cost Ratio	INF	2.60	0.67	2.60	2.60

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	5.7 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	37.11%
Gross Load Factor at Customer	E	0.12%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$141

Program Summary per Participant		
Gross kW Saved at Customer	I	23.25 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	9.28 kW
Gross Annual kWh Saved at Customer	(B x E x I)	246 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	263 kWh

Program Summary All Participants		
Total Participants	J	1,231
Total Budget	K	**$2,520,897**
Gross kW Saved at Customer	(J x I)	28,620 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**11,421 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	302,262 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**323,621 kWh**
Societal Net Benefits	(J x I x H)	**$4,036,792**
Utility Program Cost per kWh Lifetime		**$1.3783**
Utility Program Cost per kW at Gen		**$220.73**

BUSINESS SEGMENT LOAD MANAGEMENT TOTAL — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$6,608,295	$6,608,295	$6,608,295	$6,608,295
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$105,401	$105,401	$105,401	$105,401
Environmental Externality	N/A	N/A	N/A	N/A	$3,263
Subtotal	N/A	$6,713,696	$6,713,696	$6,713,696	$6,716,959
Participant Benefits					
Bill Reduction - Electric	$7,204,879	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$7,204,879	N/A	N/A	$0	$0
Total Benefits	$7,204,879	$6,713,696	$6,713,696	$6,713,696	$6,716,959
Costs					
Utility Project Costs					
Customer Services	N/A	$331,000	$331,000	$331,000	$331,000
Project Administration	N/A	$1,727,897	$1,727,897	$1,727,897	$1,727,897
Advertising & Promotion	N/A	$265,828	$265,828	$265,828	$265,828
Measurement & Verification	N/A	$275,000	$275,000	$275,000	$275,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,599,725	$2,599,725	$2,599,725	$2,599,725
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$7,204,879	N/A	N/A
Subtotal	N/A	N/A	$7,204,879	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$2,599,725	$9,804,604	$2,599,725	$2,599,725
Net Benefit (Cost)	$7,204,879	$4,113,971	($3,090,908)	$4,113,971	$4,117,234
Benefit/Cost Ratio	INF	2.58	0.68	2.58	2.58

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	5.7 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	37.11%
Gross Load Factor at Customer	E	0.12%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$144

Program Summary per Participant		
Gross kW Saved at Customer	I	23.25 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	9.28 kW
Gross Annual kWh Saved at Customer	(B x E x I)	246 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	263 kWh

Program Summary All Participants		
Total Participants	J	1,231
Total Budget	K	**$2,599,725**
Gross kW Saved at Customer	(J x I)	28,620 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**11,421 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	302,262 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**323,621 kWh**
Societal Net Benefits	(J x I x H)	**$4,117,234**

Utility Program Cost per kWh Lifetime	**$1.4214**
Utility Program Cost per kW at Gen	**$227.63**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Electric Rate Savings
Project Description:
(Note changes)
Type Load Management
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	490,664			468,235			476,994		
Advertising & Promotion	66,870			15,367			15,828		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	0			0			0		
Total Costs	$557,534			$483,602			$492,822		
Project Participants									
Total Participants	90			80			80		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	3,782			3,782			3,782		
Annual kWh Saved - Generator	340,347			302,531			302,531		
Cost per Annual kWh Saved	$1.6381			$1.5985			$1.6290		
Measure Lifetime (Years)	5.0			5.0			5.0		
Lifetime kWh savings	1,701,737			1,512,655			1,512,655		
Cost per kWh Lifetime	$0.3276			$0.3197			$0.3258		
Average kW Savings per Participant	102.06			102.06			102.06		
Annual kW Savings - Generator	9,186			8,165			8,165		
Cost per KW Saved	$60.70			$59.23			$60.36		
Cost/Benefit Results									
Societal									
Net present value	$35,148			$36,329			$37,266		
B/C ratio	6.67			7.01			7.05		
Participant									
Net present value	$46,980			$47,003			$47,025		
B/C ratio	INF			INF			INF		
Rate Payer									
Net present value	($11,866)			($10,710)			($9,795)		
B/C ratio	0.78			0.80			0.82		
Utility									
Net present value	$35,114			$36,293			$37,230		
B/C ratio	6.67			7.00			7.04		

ELECTRIC RATE SAVINGS — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$3,631,293	$3,631,293	$3,631,293	$3,631,293
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$86,515	$86,515	$86,515	$86,515
Environmental Externality	N/A	N/A	N/A	N/A	$3,085
Subtotal	N/A	$3,717,808	$3,717,808	$3,717,808	$3,720,893
Participant Benefits					
Bill Reduction - Electric	$4,228,186	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$4,228,186	N/A	N/A	$0	$0
Total Benefits	$4,228,186	$3,717,808	$3,717,808	$3,717,808	$3,720,893
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$490,664	$490,664	$490,664	$490,664
Advertising & Promotion	N/A	$66,870	$66,870	$66,870	$66,870
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$557,534	$557,534	$557,534	$557,534
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$4,228,186	N/A	N/A
Subtotal	N/A	N/A	$4,228,186	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$557,534	$4,785,720	$557,534	$557,534
Net Benefit (Cost)	$4,228,186	$3,160,274	($1,067,911)	$3,160,274	$3,163,359
Benefit/Cost Ratio	INF	6.67	0.78	6.67	6.67

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	5.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	47.46%
Gross Load Factor at Customer	E	0.20%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$176

Program Summary per Participant		
Gross kW Saved at Customer	I	200.00 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	102.06 kW
Gross Annual kWh Saved at Customer	(B x E x I)	3,532 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	3,782 kWh

Program Summary All Participants		
Total Participants	J	90
Total Budget	K	**$557,534**
Gross kW Saved at Customer	(J x I)	18,000 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**9,186 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	317,884 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**340,347 kWh**
Societal Net Benefits	(J x I x H)	**$3,163,359**

Utility Program Cost per kWh Lifetime	**$0.3276**
Utility Program Cost per kW at Gen	**$60.70**

ELECTRIC RATE SAVINGS — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$3,303,993	$3,303,993	$3,303,993	$3,303,993
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$83,075	$83,075	$83,075	$83,075
Environmental Externality	N/A	N/A	N/A	N/A	$2,880
Subtotal	N/A	$3,387,068	$3,387,068	$3,387,068	$3,389,948
Participant Benefits					
Bill Reduction - Electric	$3,760,228	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$3,760,228	N/A	N/A	$0	$0
Total Benefits	$3,760,228	$3,387,068	$3,387,068	$3,387,068	$3,389,948
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$468,235	$468,235	$468,235	$468,235
Advertising & Promotion	N/A	$15,367	$15,367	$15,367	$15,367
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$483,602	$483,602	$483,602	$483,602
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$3,760,228	N/A	N/A
Subtotal	N/A	N/A	$3,760,228	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$483,602	$4,243,830	$483,602	$483,602
Net Benefit (Cost)	$3,760,228	$2,903,466	($856,762)	$2,903,466	$2,906,346
Benefit/Cost Ratio	INF	7.00	0.80	7.00	7.01

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	5.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	47.46%
Gross Load Factor at Customer	E	0.20%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$182

Program Summary per Participant		
Gross kW Saved at Customer	I	200.00 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	102.06 kW
Gross Annual kWh Saved at Customer	(B x E x I)	3,532 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	3,782 kWh

Program Summary All Participants		
Total Participants	J	80
Total Budget	K	**$483,602**
Gross kW Saved at Customer	(J x I)	16,000 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**8,165 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	282,564 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**302,531 kWh**
Societal Net Benefits	(J x I x H)	**$2,906,346**

Utility Program Cost per kWh Lifetime	**$0.3197**
Utility Program Cost per kW at Gen	**$59.23**

ELECTRIC RATE SAVINGS — 2015 ELECTRIC GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$3,381,967	$3,381,967	$3,381,967	$3,381,967
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$89,278	$89,278	$89,278	$89,278
Environmental Externality	N/A	N/A	N/A	N/A	$2,826
Subtotal	N/A	$3,471,246	$3,471,246	$3,471,246	$3,474,072
Participant Benefits					
Bill Reduction - Electric	$3,761,986	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$3,761,986	N/A	N/A	$0	$0
Total Benefits	$3,761,986	$3,471,246	$3,471,246	$3,471,246	$3,474,072
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$476,994	$476,994	$476,994	$476,994
Advertising & Promotion	N/A	$15,828	$15,828	$15,828	$15,828
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$492,822	$492,822	$492,822	$492,822
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$3,761,986	N/A	N/A
Subtotal	N/A	N/A	$3,761,986	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$492,822	$4,254,808	$492,822	$492,822
Net Benefit (Cost)	$3,761,986	$2,978,424	($783,563)	$2,978,424	$2,981,250
Benefit/Cost Ratio	INF	7.04	0.82	7.04	7.05

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	5.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	47.46%
Gross Load Factor at Customer	E	0.20%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$186

Program Summary per Participant		
Gross kW Saved at Customer	I	200.00 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	102.06 kW
Gross Annual kWh Saved at Customer	(B x E x I)	3,532 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	3,782 kWh

Program Summary All Participants		
Total Participants	J	80
Total Budget	K	**$492,822**
Gross kW Saved at Customer	(J x I)	16,000 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**8,165 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	282,564 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**302,531 kWh**
Societal Net Benefits	(J x I x H)	**$2,981,250**

Utility Program Cost per kWh Lifetime	**$0.3258**
Utility Program Cost per kW at Gen	**$60.36**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Saver's Switch for Business
Project Description:
(Note changes)

Type Load Management
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	312,000			320,000			331,000		
Utility Administration	1,183,791			1,217,295			1,250,903		
Advertising & Promotion	250,000			250,000			250,000		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	225,000			250,000			275,000		
Total Costs	$1,970,791			$2,037,295			$2,106,903		
Project Participants									
Total Participants	1,151			1,151			1,151		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	18			18			18		
Annual kWh Saved - Generator	21,090			21,090			21,090		
Cost per Annual kWh Saved	$93.4463			$96.5997			$99.9002		
Measure Lifetime (Years)	15.0			15.0			15.0		
Lifetime kWh savings	316,351			316,351			316,351		
Cost per kWh Lifetime	$6.2298			$6.4400			$6.6600		
Average kW Savings per Participant	2.83			2.83			2.83		
Annual kW Savings - Generator	3,256			3,256			3,256		
Cost per KW Saved	$605.35			$625.77			$647.16		
Cost/Benefit Results									
Societal									
Net present value	$976			$982			$987		
B/C ratio	1.57			1.55			1.54		
Participant									
Net present value	$2,991			$2,991			$2,991		
B/C ratio	INF			INF			INF		
Rate Payer									
Net present value	($2,015)			($2,009)			($2,005)		
B/C ratio	0.57			0.58			0.58		
Utility									
Net present value	$976			$982			$987		
B/C ratio	1.57			1.55			1.54		

SAVER'S SWITCH FOR BUSINESS — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$3,079,261	$3,079,261	$3,079,261	$3,079,261
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$14,532	$14,532	$14,532	$14,532
Environmental Externality	N/A	N/A	N/A	N/A	$437
Subtotal	N/A	$3,093,793	$3,093,793	$3,093,793	$3,094,230
Participant Benefits					
Bill Reduction - Electric	$3,442,181	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$3,442,181	N/A	N/A	$0	$0
Total Benefits	$3,442,181	$3,093,793	$3,093,793	$3,093,793	$3,094,230
Costs					
Utility Project Costs					
Customer Services	N/A	$312,000	$312,000	$312,000	$312,000
Project Administration	N/A	$1,183,791	$1,183,791	$1,183,791	$1,183,791
Advertising & Promotion	N/A	$250,000	$250,000	$250,000	$250,000
Measurement & Verification	N/A	$225,000	$225,000	$225,000	$225,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,970,791	$1,970,791	$1,970,791	$1,970,791
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$3,442,181	N/A	N/A
Subtotal	N/A	N/A	$3,442,181	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$1,970,791	$5,412,972	$1,970,791	$1,970,791
Net Benefit (Cost)	$3,442,181	$1,123,002	($2,319,179)	$1,123,002	$1,123,439
Benefit/Cost Ratio	INF	1.57	0.57	1.57	1.57

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	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	23.99%
Gross Load Factor at Customer	E	0.02%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$89

Program Summary per Participant

Gross kW Saved at Customer	I	10.96 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	2.83 kW
Gross Annual kWh Saved at Customer	(B x E x I)	17 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	18 kWh

Program Summary All Participants

Total Participants	J	1,151
Total Budget	K	**$1,970,791**
Gross kW Saved at Customer	(J x I)	12,620 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**3,256 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	19,698 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**21,090 kWh**
Societal Net Benefits	(J x I x H)	**$1,123,439**

Utility Program Cost per kWh Lifetime	**$6.2298**
Utility Program Cost per kW at Gen	**$605.35**

SAVER'S SWITCH FOR BUSINESS	2014	ELECTRIC	GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$3,151,943	$3,151,943	$3,151,943	$3,151,943
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$15,338	$15,338	$15,338	$15,338
Environmental Externality	N/A	N/A	N/A	N/A	$459
Subtotal	N/A	$3,167,282	$3,167,282	$3,167,282	$3,167,741
Participant Benefits					
Bill Reduction - Electric	$3,442,523	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$3,442,523	N/A	N/A	$0	$0
Total Benefits	$3,442,523	$3,167,282	$3,167,282	$3,167,282	$3,167,741
Costs					
Utility Project Costs					
Customer Services	N/A	$320,000	$320,000	$320,000	$320,000
Project Administration	N/A	$1,217,295	$1,217,295	$1,217,295	$1,217,295
Advertising & Promotion	N/A	$250,000	$250,000	$250,000	$250,000
Measurement & Verification	N/A	$250,000	$250,000	$250,000	$250,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,037,295	$2,037,295	$2,037,295	$2,037,295
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$3,442,523	N/A	N/A
Subtotal	N/A	N/A	$3,442,523	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$2,037,295	$5,479,818	$2,037,295	$2,037,295
Net Benefit (Cost)	$3,442,523	$1,129,987	($2,312,536)	$1,129,987	$1,130,446
Benefit/Cost Ratio	INF	1.55	0.58	1.55	1.55

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	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	23.99%
Gross Load Factor at Customer	E	0.02%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$90

Program Summary per Participant		
Gross kW Saved at Customer	I	10.96 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	2.83 kW
Gross Annual kWh Saved at Customer	(B x E x I)	17 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	18 kWh

Program Summary All Participants		
Total Participants	J	1,151
Total Budget	K	**$2,037,295**
Gross kW Saved at Customer	(J x I)	12,620 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**3,256 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	19,698 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**21,090 kWh**
Societal Net Benefits	(J x I x H)	**$1,130,446**

Utility Program Cost per kWh Lifetime	**$6.4400**
Utility Program Cost per kW at Gen	**$625.77**

SAVER'S SWITCH FOR BUSINESS	2015	ELECTRIC	GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$3,226,328	$3,226,328	$3,226,328	$3,226,328
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$16,122	$16,122	$16,122	$16,122
Environmental Externality	N/A	N/A	N/A	N/A	$437
Subtotal	N/A	$3,242,450	$3,242,450	$3,242,450	$3,242,887
Participant Benefits					
Bill Reduction - Electric	$3,442,892	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$3,442,892	N/A	N/A	$0	$0
Total Benefits	$3,442,892	$3,242,450	$3,242,450	$3,242,450	$3,242,887
Costs					
Utility Project Costs					
Customer Services	N/A	$331,000	$331,000	$331,000	$331,000
Project Administration	N/A	$1,250,903	$1,250,903	$1,250,903	$1,250,903
Advertising & Promotion	N/A	$250,000	$250,000	$250,000	$250,000
Measurement & Verification	N/A	$275,000	$275,000	$275,000	$275,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,106,903	$2,106,903	$2,106,903	$2,106,903
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$3,442,892	N/A	N/A
Subtotal	N/A	N/A	$3,442,892	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$2,106,903	$5,549,795	$2,106,903	$2,106,903
Net Benefit (Cost)	$3,442,892	$1,135,547	($2,307,345)	$1,135,547	$1,135,984
Benefit/Cost Ratio	INF	1.54	0.58	1.54	1.54

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	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	23.99%
Gross Load Factor at Customer	E	0.02%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$90

Program Summary per Participant		
Gross kW Saved at Customer	I	10.96 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	2.83 kW
Gross Annual kWh Saved at Customer	(B x E x I)	17 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	18 kWh

Program Summary All Participants		
Total Participants	J	1,151
Total Budget	K	**$2,106,903**
Gross kW Saved at Customer	(J x I)	12,620 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**3,256 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	19,698 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**21,090 kWh**
Societal Net Benefits	(J x I x H)	**$1,135,984**

Utility Program Cost per kWh Lifetime	**$6.6600**
Utility Program Cost per kW at Gen	**$647.16**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Business Education
Project Description: (Note changes)
Type Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	8,526			8,526			8,526		
Utility Administration	67,034			69,049			70,798		
Advertising & Promotion	171,938			169,923			168,174		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	0			0			0		
Total Costs	$247,498			$247,498			$247,498		
Project Participants									
Total Participants	14,000			14,000			14,000		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	0			0			0		
Annual kWh Saved - Generator	0			0			0		
Cost per Annual kWh Saved									
Measure Lifetime (Years)									
Lifetime kWh savings	0			0			0		
Cost per kWh Lifetime									
Average kW Savings per Participant	0.00			0.00			0.00		
Annual kW Savings - Generator									
Cost per KW Saved									
Cost/Benefit Results									
Societal									
Net present value	($18)			($18)			($18)		
B/C ratio									
Participant									
Net present value	$0			$0			$0		
B/C ratio									
Rate Payer									
Net present value	($18)			($18)			($18)		
B/C ratio									
Utility									
Net present value	($18)			($18)			($18)		
B/C ratio									

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Business Education
Project Description: (Note changes)
Type Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	1,274			1,274			1,274		
Utility Administration	9,329			9,609			9,850		
Advertising & Promotion	26,809			26,529			26,288		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	0			0			0		
Total Costs	$37,412			$37,412			$37,412		
Project Participants									
Total Participants	1,900			1,900			1,900		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	0.00			0.00			0.00		
Annual Dth Saved	0			0			0		
Cost per Dth									
Project Life (Years)									
Lifetime Dth Saved	0			0			0		
Cost per Lifetime Dth Saved									
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	($112,236)								
B/C ratio									
Participant									
Net present value	$0								
B/C ratio									
Rate Payer									
Net present value	($112,236)								
B/C ratio									
Utility									
Net present value	($112,236)								
B/C ratio									

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Small Business Lamp Recycling
Project Description:
(Note changes)

Type Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	29,450			33,440			37,620		
Advertising & Promotion	620			704			792		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	930			1,056			1,188		
Total Costs	$31,000			$35,200			$39,600		
Project Participants									
Total Participants	50,000			55,000			60,000		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	100%			100%			100%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	0			0			0		
Annual kWh Saved - Generator	0			0			0		
Cost per Annual kWh Saved									
Measure Lifetime (Years)									
Lifetime kWh savings	0			0			0		
Cost per kWh Lifetime									
Average kW Savings per Participant	0.00			0.00			0.00		
Annual kW Savings - Generator									
Cost per KW Saved									
Cost/Benefit Results									
Societal									
Net present value	($1)			($1)			($1)		
B/C ratio									
Participant									
Net present value	$0			$0			$0		
B/C ratio									
Rate Payer									
Net present value	($1)			($1)			($1)		
B/C ratio									
Utility									
Net present value	($1)			($1)			($1)		
B/C ratio									

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Residential Segment Total
Project Description:
(Note changes)

Type Conservation, Load Management and Indirect
Status: New and Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	3,299,092			3,394,639			3,492,473		
Utility Administration	5,778,844			5,773,538			6,382,058		
Advertising & Promotion	3,569,165			2,962,119			3,651,204		
Participant Incentives	7,254,800			7,433,505			7,708,534		
R&D	0			0			0		
Other	476,491			1,166,912			528,138		
Total Costs	$20,378,392			$20,730,713			$21,762,406		
Project Participants									
Total Participants	1,485,313			1,560,397			1,699,699		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	74			65			59		
Annual kWh Saved - Generator	109,575,754			101,190,600			100,401,037		
Cost per Annual kWh Saved	$0.1860			$0.2049			$0.2168		
Measure Lifetime (Years)	9.5			9.6			9.1		
Lifetime kWh savings	1,041,728,818			969,820,753			913,850,056		
Cost per kWh Lifetime	$0.0196			$0.0214			$0.0238		
Average kW Savings per Participant	0.03			0.03			0.02		
Annual kW Savings - Generator	40,845			39,869			39,647		
Cost per KW Saved	$498.92			$519.98			$548.91		
Cost/Benefit Results									
Societal									
Net present value	$24			$22			$20		
B/C ratio	1.89			1.85			1.80		
Participant									
Net present value	$64			$58			$52		
B/C ratio	5.24			4.94			4.71		
Rate Payer									
Net present value	($40)			($35)			($31)		
B/C ratio	0.53			0.54			0.56		
Utility									
Net present value	$31			$29			$26		
B/C ratio	3.23			3.18			3.06		

RESIDENTIAL SEGMENT TOTAL — 2013 ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$30,550,129	$30,550,129	$30,550,129	$30,550,129
T & D	N/A	$5,235,740	$5,235,740	$5,235,740	$5,235,740
Marginal Energy	N/A	$30,077,477	$30,077,477	$30,077,477	$30,077,477
Environmental Externality	N/A	N/A	N/A	N/A	$1,501,011
Subtotal	N/A	$65,863,347	$65,863,347	$65,863,347	$67,364,358
Participant Benefits					
Bill Reduction - Electric	$104,548,081	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$7,254,800	N/A	N/A	$7,254,800	$7,254,800
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$6,388,582	N/A	N/A	$295,021	$295,021
Subtotal	$118,191,462	N/A	N/A	$7,549,821	$7,549,821
Total Benefits	$118,191,462	$65,863,347	$65,863,347	$73,413,167	$74,914,179
Costs					
Utility Project Costs					
Customer Services	N/A	$3,299,092	$3,299,092	$3,299,092	$3,299,092
Project Administration	N/A	$5,778,844	$5,778,844	$5,778,844	$5,778,844
Advertising & Promotion	N/A	$3,569,165	$3,569,165	$3,569,165	$3,569,165
Measurement & Verification	N/A	$471,991	$471,991	$471,991	$471,991
Rebates	N/A	$7,254,800	$7,254,800	$7,254,800	$7,254,800
Other	N/A	$4,500	$4,500	$4,500	$4,500
Subtotal	N/A	$20,378,392	$20,378,392	$20,378,392	$20,378,392
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$104,548,081	N/A	N/A
Subtotal	N/A	N/A	$104,548,081	N/A	N/A
Participant Costs					
Incremental Capital Costs	$22,545,120	N/A	N/A	$19,298,472	$19,298,472
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$22,545,120	N/A	N/A	$19,298,472	$19,298,472
Total Costs	$22,545,120	$20,378,392	$124,926,473	$39,676,864	$39,676,864
Net Benefit (Cost)	$95,646,342	$45,484,955	($59,063,126)	$33,736,304	$35,237,315
Benefit/Cost Ratio	5.24	3.23	0.53	1.85	1.89

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	9.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	25.30%
Gross Load Factor at Customer	E	7.81%
Transmission Loss Factor (Energy)	F	8.055%
Transmission Loss Factor (Demand)	G	8.737%
Societal Net Benefit (Cost)	H	$239

Program Summary per Participant		
Gross kW Saved at Customer	I	0.10 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.03 kW
Gross Annual kWh Saved at Customer	(B x E x I)	68 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	74 kWh

Program Summary All Participants		
Total Participants	J	1,485,313
Total Budget	K	**$20,378,392**
Gross kW Saved at Customer	(J x I)	147,312 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**40,845 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	100,749,315 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**109,575,754 kWh**
Societal Net Benefits	(J x I x H)	**$35,237,315**

Utility Program Cost per kWh Lifetime	**$0.0196**
Utility Program Cost per kW at Gen	**$498.92**

RESIDENTIAL SEGMENT TOTAL — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$30,841,981	$30,841,981	$30,841,981	$30,841,981
T & D	N/A	$5,201,486	$5,201,486	$5,201,486	$5,201,486
Marginal Energy	N/A	$29,858,366	$29,858,366	$29,858,366	$29,858,366
Environmental Externality	N/A	N/A	N/A	N/A	$1,460,766
Subtotal	N/A	$65,901,833	$65,901,833	$65,901,833	$67,362,599
Participant Benefits					
Bill Reduction - Electric	$100,297,354	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$7,433,505	N/A	N/A	$7,433,505	$7,433,505
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$6,407,689	N/A	N/A	$297,356	$297,356
Subtotal	$114,138,548	N/A	N/A	$7,730,861	$7,730,861
Total Benefits	$114,138,548	$65,901,833	$65,901,833	$73,632,695	$75,093,461
Costs					
Utility Project Costs					
Customer Services	N/A	$3,394,639	$3,394,639	$3,394,639	$3,394,639
Project Administration	N/A	$5,773,538	$5,773,538	$5,773,538	$5,773,538
Advertising & Promotion	N/A	$2,962,119	$2,962,119	$2,962,119	$2,962,119
Measurement & Verification	N/A	$1,162,412	$1,162,412	$1,162,412	$1,162,412
Rebates	N/A	$7,433,505	$7,433,505	$7,433,505	$7,433,505
Other	N/A	$4,500	$4,500	$4,500	$4,500
Subtotal	N/A	$20,730,713	$20,730,713	$20,730,713	$20,730,713
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$100,297,354	N/A	N/A
Subtotal	N/A	N/A	$100,297,354	N/A	N/A
Participant Costs					
Incremental Capital Costs	$23,097,359	N/A	N/A	$19,804,100	$19,804,100
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$23,097,359	N/A	N/A	$19,804,100	$19,804,100
Total Costs	$23,097,359	$20,730,713	$121,028,066	$40,534,813	$40,534,813
Net Benefit (Cost)	$91,041,189	$45,171,121	($55,126,233)	$33,097,881	$34,558,647
Benefit/Cost Ratio	4.94	3.18	0.54	1.82	1.85

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	9.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	25.99%
Gross Load Factor at Customer	E	7.59%
Transmission Loss Factor (Energy)	F	8.066%
Transmission Loss Factor (Demand)	G	8.741%
Societal Net Benefit (Cost)	H	$247

Program Summary per Participant		
Gross kW Saved at Customer	I	0.09 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.03 kW
Gross Annual kWh Saved at Customer	(B x E x I)	60 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	65 kWh

Program Summary All Participants		
Total Participants	J	1,560,397
Total Budget	K	**$20,730,713**
Gross kW Saved at Customer	(J x I)	139,991 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**39,869 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	93,028,144 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**101,190,600 kWh**
Societal Net Benefits	(J x I x H)	**$34,558,647**
Utility Program Cost per kWh Lifetime		**$0.0214**
Utility Program Cost per kW at Gen		**$519.98**

RESIDENTIAL SEGMENT TOTAL — 2015 ELECTRIC GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$31,304,828	$31,304,828	$31,304,828	$31,304,828
T & D	N/A	$5,229,668	$5,229,668	$5,229,668	$5,229,668
Marginal Energy	N/A	$30,157,482	$30,157,482	$30,157,482	$30,157,482
Environmental Externality	N/A	N/A	N/A	N/A	$1,393,456
Subtotal	N/A	$66,691,978	$66,691,978	$66,691,978	$68,085,434
Participant Benefits					
Bill Reduction - Electric	$97,941,794	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$7,708,534	N/A	N/A	$7,708,534	$7,708,534
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$6,445,662	N/A	N/A	$313,023	$313,023
Subtotal	$112,095,990	N/A	N/A	$8,021,557	$8,021,557
Total Benefits	$112,095,990	$66,691,978	$66,691,978	$74,713,535	$76,106,991
Costs					
Utility Project Costs					
Customer Services	N/A	$3,492,473	$3,492,473	$3,492,473	$3,492,473
Project Administration	N/A	$6,382,058	$6,382,058	$6,382,058	$6,382,058
Advertising & Promotion	N/A	$3,651,204	$3,651,204	$3,651,204	$3,651,204
Measurement & Verification	N/A	$523,638	$523,638	$523,638	$523,638
Rebates	N/A	$7,708,534	$7,708,534	$7,708,534	$7,708,534
Other	N/A	$4,500	$4,500	$4,500	$4,500
Subtotal	N/A	$21,762,406	$21,762,406	$21,762,406	$21,762,406
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$97,941,794	N/A	N/A
Subtotal	N/A	N/A	$97,941,794	N/A	N/A
Participant Costs					
Incremental Capital Costs	$23,813,854	N/A	N/A	$20,468,928	$20,468,928
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$23,813,854	N/A	N/A	$20,468,928	$20,468,928
Total Costs	$23,813,854	$21,762,406	$119,704,200	$42,231,334	$42,231,334
Net Benefit (Cost)	$88,282,136	$44,929,572	($53,012,222)	$32,482,201	$33,875,657
Benefit/Cost Ratio	4.71	3.06	0.56	1.77	1.80

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	9.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	26.71%
Gross Load Factor at Customer	E	7.78%
Transmission Loss Factor (Energy)	F	8.087%
Transmission Loss Factor (Demand)	G	8.743%
Societal Net Benefit (Cost)	H	$250

Program Summary per Participant		
Gross kW Saved at Customer	I	0.08 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.02 kW
Gross Annual kWh Saved at Customer	(B x E x I)	54 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	59 kWh

Program Summary All Participants		
Total Participants	J	1,699,699
Total Budget	K	**$21,762,406**
Gross kW Saved at Customer	(J x I)	135,474 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**39,647 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	92,281,316 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**100,401,037 kWh**
Societal Net Benefits	(J x I x H)	**$33,875,657**

Utility Program Cost per kWh Lifetime	**$0.0238**
Utility Program Cost per kW at Gen	**$548.91**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Residential Segment with Indirect Participants
Project Description:
(Note changes)

Type 0
Status: 0

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	1,111,110			1,133,757			1,156,786		
Utility Administration	1,442,729			1,414,361			1,413,867		
Advertising & Promotion	1,087,093			1,125,308			1,112,017		
Participant Incentives	1,210,306			1,472,505			1,512,082		
R&D	0			0			0		
Other	413,817			427,600			438,176		
Total Costs	$5,265,055			$5,573,531			$5,632,928		
Project Participants									
Total Participants	581,243			573,836			566,752		
% of Spending by Customer Segment									
Residential	71%			68%			68%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	71%			68%			68%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	0.42			0.31			0.31		
Annual Dth Saved	242,281			177,360			177,115		
Cost per Dth	$21.7312			$31.4250			$31.8038		
Project Life (Years)	13.1			11.4			11.5		
Lifetime Dth Saved	3,175,117			2,019,055			2,034,079		
Cost per Lifetime Dth Saved	$1.6582			$2.7605			$2.7693		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$28,191,615								
B/C ratio	1.92								
Participant									
Net present value	$68,781,151								
B/C ratio	4.48								
Rate Payer									
Net present value	($30,034,073)								
B/C ratio	0.53								
Utility									
Net present value	$16,941,974								
B/C ratio	2.03								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Residential Segment with Indirect Participants**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$4,054,749	$4,101,026	$4,120,846
Incentive Costs =	$1,210,306	$1,472,505	$1,512,082
16) Total Utility Project Costs =	$5,265,055	$5,573,531	$5,632,928
17) Direct Participant Costs ($/Part.) =	$13	$10	$11
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$1	$1	$1
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	13.1	11.4	11.5
21) Avg. Dth/Part. Saved =	0.42	0.31	0.31
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	581,243	573,836	566,752
24) Total Annual Dth Saved =	242,281	177,360	177,115
25) Incentive/Participant =	$2.08	$2.57	$2.67

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$9	$10	$10
Cost per Participant per Dth =	$53.77	$64.93	$65.85
Lifetime Energy Reduction (Dth)	7,228,250		
Societal Cost per Dth	$4.24		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($30,034,073)	0.53
Utility Cost Test	$16,941,974	2.03
Societal Test	$28,191,615	1.92
Participant Test	$68,781,151	4.48

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Residential Segment Direct Participants Only**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$3,124,563	$3,157,481	$3,163,540
Incentive Costs =	$1,210,306	$1,472,505	$1,512,082
16) Total Utility Project Costs =	$4,334,869	$4,629,986	$4,675,622
17) Direct Participant Costs ($/Part.) =	$40	$32	$33
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$3	$3	$3
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	13.1	11.4	11.5
21) Avg. Dth/Part. Saved =	1.24	0.94	0.98
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	195,831	188,424	181,340
24) Total Annual Dth Saved =	242,281	177,360	177,115
25) Incentive/Participant =	$6.18	$7.81	$8.34

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$22	$25	$26
Cost per Participant per Dth =	$49.94	$59.61	$60.44
Lifetime Energy Reduction (Dth)	7,228,250		
Societal Cost per Dth	$3.85		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($27,203,036)	0.55
Utility Cost Test	$19,773,011	2.45
Societal Test	$31,022,652	2.12
Participant Test	$68,781,151	4.48

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Residential Segment Energy Efficiency Total
Project Description:
(Note changes)

Type Conservation
Status: New and Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	919,700			949,425			979,700		
Utility Administration	2,804,415			2,718,353			3,247,358		
Advertising & Promotion	2,706,682			2,763,899			2,804,782		
Participant Incentives	7,254,800			7,433,505			7,708,534		
R&D	0			0			0		
Other	330,911			348,625			361,703		
Total Costs	$14,016,508			$14,213,807			$15,102,077		
Project Participants									
Total Participants	728,159			788,243			917,545		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	150			128			109		
Annual kWh Saved - Generator	109,398,017			101,012,862			100,223,299		
Cost per Annual kWh Saved	$0.1281			$0.1407			$0.1507		
Measure Lifetime (Years)	9.5			9.6			9.1		
Lifetime kWh savings	1,039,062,752			967,154,687			911,183,990		
Cost per kWh Lifetime	$0.0135			$0.0147			$0.0166		
Average kW Savings per Participant	0.03			0.03			0.02		
Annual kW Savings - Generator	23,155			22,178			21,957		
Cost per KW Saved	$605.34			$640.89			$687.82		
Cost/Benefit Results									
Societal									
Net present value	$34			$30			$25		
B/C ratio	1.74			1.70			1.64		
Participant									
Net present value	$115			$100			$83		
B/C ratio	4.71			4.43			4.21		
Rate Payer									
Net present value	($79)			($68)			($57)		
B/C ratio	0.46			0.47			0.49		
Utility									
Net present value	$48			$44			$37		
B/C ratio	3.50			3.42			3.25		

RESIDENTIAL SEGMENT ENERGY EFFICIENCY TOTAL — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$13,818,329	$13,818,329	$13,818,329	$13,818,329
T & D	N/A	$5,235,740	$5,235,740	$5,235,740	$5,235,740
Marginal Energy	N/A	$29,978,283	$29,978,283	$29,978,283	$29,978,283
Environmental Externality	N/A	N/A	N/A	N/A	$1,497,375
Subtotal	N/A	$49,032,353	$49,032,353	$49,032,353	$50,529,728
Participant Benefits					
Bill Reduction - Electric	$92,644,854	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$7,254,800	N/A	N/A	$7,254,800	$7,254,800
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$6,388,582	N/A	N/A	$295,021	$295,021
Subtotal	$106,288,235	N/A	N/A	$7,549,821	$7,549,821
Total Benefits	$106,288,235	$49,032,353	$49,032,353	$56,582,173	$58,079,549
Costs					
Utility Project Costs					
Customer Services	N/A	$919,700	$919,700	$919,700	$919,700
Project Administration	N/A	$2,804,415	$2,804,415	$2,804,415	$2,804,415
Advertising & Promotion	N/A	$2,706,682	$2,706,682	$2,706,682	$2,706,682
Measurement & Verification	N/A	$326,411	$326,411	$326,411	$326,411
Rebates	N/A	$7,254,800	$7,254,800	$7,254,800	$7,254,800
Other	N/A	$4,500	$4,500	$4,500	$4,500
Subtotal	N/A	$14,016,508	$14,016,508	$14,016,508	$14,016,508
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$92,644,854	N/A	N/A
Subtotal	N/A	N/A	$92,644,854	N/A	N/A
Participant Costs					
Incremental Capital Costs	$22,545,120	N/A	N/A	$19,298,472	$19,298,472
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$22,545,120	N/A	N/A	$19,298,472	$19,298,472
Total Costs	$22,545,120	$14,016,508	$106,661,361	$33,314,980	$33,314,980
Net Benefit (Cost)	$83,743,115	$35,015,845	($57,629,009)	$23,267,194	$24,764,569
Benefit/Cost Ratio	4.71	3.50	0.46	1.70	1.74

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	9.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	24.33%
Gross Load Factor at Customer	E	13.21%
Transmission Loss Factor (Energy)	F	8.055%
Transmission Loss Factor (Demand)	G	8.693%
Societal Net Benefit (Cost)	H	$285

Program Summary per Participant		
Gross kW Saved at Customer	I	0.12 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.03 kW
Gross Annual kWh Saved at Customer	(B x E x I)	138 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	150 kWh

Program Summary All Participants		
Total Participants	J	728,159
Total Budget	K	**$14,016,508**
Gross kW Saved at Customer	(J x I)	86,900 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**23,155 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	100,586,507 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**109,398,017 kWh**
Societal Net Benefits	(J x I x H)	**$24,764,569**

Utility Program Cost per kWh Lifetime	**$0.0135**
Utility Program Cost per kW at Gen	**$605.34**

RESIDENTIAL SEGMENT ENERGY EFFICIENCY TOTAL — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$13,715,137	$13,715,137	$13,715,137	$13,715,137
T & D	N/A	$5,201,486	$5,201,486	$5,201,486	$5,201,486
Marginal Energy	N/A	$29,753,718	$29,753,718	$29,753,718	$29,753,718
Environmental Externality	N/A	N/A	N/A	N/A	$1,456,928
Subtotal	N/A	$48,670,341	$48,670,341	$48,670,341	$50,127,269
Participant Benefits					
Bill Reduction - Electric	$88,387,056	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$7,433,505	N/A	N/A	$7,433,505	$7,433,505
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$6,407,689	N/A	N/A	$297,356	$297,356
Subtotal	$102,228,251	N/A	N/A	$7,730,861	$7,730,861
Total Benefits	$102,228,251	$48,670,341	$48,670,341	$56,401,203	$57,858,131
Costs					
Utility Project Costs					
Customer Services	N/A	$949,425	$949,425	$949,425	$949,425
Project Administration	N/A	$2,718,353	$2,718,353	$2,718,353	$2,718,353
Advertising & Promotion	N/A	$2,763,899	$2,763,899	$2,763,899	$2,763,899
Measurement & Verification	N/A	$344,125	$344,125	$344,125	$344,125
Rebates	N/A	$7,433,505	$7,433,505	$7,433,505	$7,433,505
Other	N/A	$4,500	$4,500	$4,500	$4,500
Subtotal	N/A	$14,213,807	$14,213,807	$14,213,807	$14,213,807
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$88,387,056	N/A	N/A
Subtotal	N/A	N/A	$88,387,056	N/A	N/A
Participant Costs					
Incremental Capital Costs	$23,097,359	N/A	N/A	$19,804,100	$19,804,100
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$23,097,359	N/A	N/A	$19,804,100	$19,804,100
Total Costs	$23,097,359	$14,213,807	$102,600,863	$34,017,908	$34,017,908
Net Benefit (Cost)	$79,130,891	$34,456,534	($53,930,522)	$22,383,295	$23,840,223
Benefit/Cost Ratio	4.43	3.42	0.47	1.66	1.70

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	9.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	25.45%
Gross Load Factor at Customer	E	13.32%
Transmission Loss Factor (Energy)	F	8.066%
Transmission Loss Factor (Demand)	G	8.696%
Societal Net Benefit (Cost)	H	$300

Program Summary per Participant		
Gross kW Saved at Customer	I	0.10 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.03 kW
Gross Annual kWh Saved at Customer	(B x E x I)	118 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	128 kWh

Program Summary All Participants		
Total Participants	J	788,243
Total Budget	K	**$14,213,807**
Gross kW Saved at Customer	(J x I)	79,579 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**22,178 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	92,865,337 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**101,012,862 kWh**
Societal Net Benefits	(J x I x H)	**$23,840,223**

Utility Program Cost per kWh Lifetime	**$0.0147**
Utility Program Cost per kW at Gen	**$640.89**

RESIDENTIAL SEGMENT ENERGY EFFICIENCY TOTAL — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$13,773,906	$13,773,906	$13,773,906	$13,773,906
T & D	N/A	$5,229,668	$5,229,668	$5,229,668	$5,229,668
Marginal Energy	N/A	$30,047,380	$30,047,380	$30,047,380	$30,047,380
Environmental Externality	N/A	N/A	N/A	N/A	$1,389,818
Subtotal	N/A	$49,050,954	$49,050,954	$49,050,954	$50,440,772
Participant Benefits					
Bill Reduction - Electric	$86,024,425	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$7,708,534	N/A	N/A	$7,708,534	$7,708,534
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$6,445,662	N/A	N/A	$313,023	$313,023
Subtotal	$100,178,621	N/A	N/A	$8,021,557	$8,021,557
Total Benefits	$100,178,621	$49,050,954	$49,050,954	$57,072,511	$58,462,329
Costs					
Utility Project Costs					
Customer Services	N/A	$979,700	$979,700	$979,700	$979,700
Project Administration	N/A	$3,247,358	$3,247,358	$3,247,358	$3,247,358
Advertising & Promotion	N/A	$2,804,782	$2,804,782	$2,804,782	$2,804,782
Measurement & Verification	N/A	$357,203	$357,203	$357,203	$357,203
Rebates	N/A	$7,708,534	$7,708,534	$7,708,534	$7,708,534
Other	N/A	$4,500	$4,500	$4,500	$4,500
Subtotal	N/A	$15,102,077	$15,102,077	$15,102,077	$15,102,077
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$86,024,425	N/A	N/A
Subtotal	N/A	N/A	$86,024,425	N/A	N/A
Participant Costs					
Incremental Capital Costs	$23,813,854	N/A	N/A	$20,468,928	$20,468,928
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$23,813,854	N/A	N/A	$20,468,928	$20,468,928
Total Costs	$23,813,854	$15,102,077	$101,126,502	$35,571,005	$35,571,005
Net Benefit (Cost)	$76,364,766	$33,948,877	($52,075,547)	$21,501,506	$22,891,324
Benefit/Cost Ratio	4.21	3.25	0.49	1.60	1.64

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	9.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	26.71%
Gross Load Factor at Customer	E	14.01%
Transmission Loss Factor (Energy)	F	8.087%
Transmission Loss Factor (Demand)	G	8.697%
Societal Net Benefit (Cost)	H	$305

Program Summary per Participant		
Gross kW Saved at Customer	I	0.08 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.02 kW
Gross Annual kWh Saved at Customer	(B x E x I)	100 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	109 kWh

Program Summary All Participants		
Total Participants	J	917,545
Total Budget	K	**$15,102,077**
Gross kW Saved at Customer	(J x I)	75,061 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**21,957 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	92,118,508 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**100,223,299 kWh**
Societal Net Benefits	(J x I x H)	**$22,891,324**

Utility Program Cost per kWh Lifetime	**$0.0166**
Utility Program Cost per kW at Gen	**$687.82**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Residential Segment Energy Efficiency Total
Project Description:
(Note changes)
Type Conservation
Status: New and Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	779,547			789,462			799,377		
Utility Administration	1,352,411			1,321,306			1,318,073		
Advertising & Promotion	578,788			619,113			607,914		
Participant Incentives	1,210,306			1,472,505			1,512,082		
R&D	0			0			0		
Other	413,817			427,600			438,176		
Total Costs	$4,334,869			$4,629,986			$4,675,622		
Project Participants									
Total Participants	195,831			188,424			181,340		
% of Spending by Customer Segment									
Residential	65%			62%			61%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	65%			62%			61%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	1.24			0.94			0.98		
Annual Dth Saved	242,281			177,360			177,115		
Cost per Dth	$17.8919			$26.1050			$26.3988		
Project Life (Years)	13.1			11.4			11.5		
Lifetime Dth Saved	3,175,117			2,019,055			2,034,079		
Cost per Lifetime Dth Saved	$1.3653			$2.2931			$2.2986		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$31,022,652								
B/C ratio	2.12								
Participant									
Net present value	$68,781,151								
B/C ratio	4.48								
Rate Payer									
Net present value	($27,203,036)								
B/C ratio	0.55								
Utility									
Net present value	$19,773,011								
B/C ratio	2.45								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Residential Segment Energy Efficiency Total**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$3,124,563	$3,157,481	$3,163,540
Incentive Costs =	$1,210,306	$1,472,505	$1,512,082
16) Total Utility Project Costs =	$4,334,869	$4,629,986	$4,675,622
17) Direct Participant Costs ($/Part.) =	$40	$32	$33
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$3	$3	$3
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	13.1	11.4	11.5
21) Avg. Dth/Part. Saved =	1.24	0.94	0.98
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	195,831	188,424	181,340
24) Total Annual Dth Saved =	242,281	177,360	177,115
25) Incentive/Participant =	$6.18	$7.81	$8.34

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$22	$25	$26
Cost per Participant per Dth =	$49.94	$59.61	$60.44
Lifetime Energy Reduction (Dth)	7,228,250		
Societal Cost per Dth	$3.85		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($27,203,036)	0.55
Utility Cost Test	$19,773,011	2.45
Societal Test	$31,022,652	2.12
Participant Test	$68,781,151	4.48

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Energy Efficient Showerheads
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	8,287			8,588			8,947		
Advertising & Promotion	1,283			1,442			1,601		
Participant Incentives	4,778			4,841			5,030		
R&D	0			0			0		
Other	140			154			169		
Total Costs	$14,488			$15,025			$15,747		
Project Participants									
Total Participants	1,050			1,050			1,050		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating	x			x			x		
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	344			344			344		
Annual kWh Saved - Generator	360,781			360,781			360,781		
Cost per Annual kWh Saved	$0.0402			$0.0416			$0.0436		
Measure Lifetime (Years)	5.5			5.5			5.5		
Lifetime kWh savings	2,000,444			2,000,444			2,000,444		
Cost per kWh Lifetime	$0.0072			$0.0075			$0.0079		
Average kW Savings per Participant	0.00			0.00			0.00		
Annual kW Savings - Generator									
Cost per KW Saved									
Cost/Benefit Results									
Societal									
Net present value	$138			$142			$146		
B/C ratio	8.51			8.51			8.39		
Participant									
Net present value	$573			$584			$595		
B/C ratio	126.89			127.75			125.31		
Rate Payer									
Net present value	($438)			($446)			($453)		
B/C ratio	0.12			0.13			0.14		
Utility									
Net present value	$48			$52			$56		
B/C ratio	4.48			4.66			4.76		

ENERGY EFFICIENT SHOWERHEADS — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$0	$0	$0	$0
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$64,903	$64,903	$64,903	$64,903
Environmental Externality	N/A	N/A	N/A	N/A	$3,503
Subtotal	N/A	$64,903	$64,903	$64,903	$68,405
Participant Benefits					
Bill Reduction - Electric	$510,752	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$4,778	N/A	N/A	$4,778	$4,778
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$90,686	N/A	N/A	$90,686	$90,686
Subtotal	$606,216	N/A	N/A	$95,464	$95,464
Total Benefits	$606,216	$64,903	$64,903	$160,367	$163,870
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$8,287	$8,287	$8,287	$8,287
Advertising & Promotion	N/A	$1,283	$1,283	$1,283	$1,283
Measurement & Verification	N/A	$140	$140	$140	$140
Rebates	N/A	$4,778	$4,778	$4,778	$4,778
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$14,488	$14,488	$14,488	$14,488
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$510,752	N/A	N/A
Subtotal	N/A	N/A	$510,752	N/A	N/A
Participant Costs					
Incremental Capital Costs	$4,778	N/A	N/A	$4,778	$4,778
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$4,778	N/A	N/A	$4,778	$4,778
Total Costs	$4,778	$14,488	$525,240	$19,266	$19,266
Net Benefit (Cost)	$601,438	$50,415	($460,337)	$141,101	$144,604
Benefit/Cost Ratio	126.89	4.48	0.12	8.32	8.51

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	5.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	0.00%
Gross Load Factor at Customer	E	21.58%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$827

Program Summary per Participant

Gross kW Saved at Customer	I	0.17 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.00 kW
Gross Annual kWh Saved at Customer	(B x E x I)	315 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	344 kWh

Program Summary All Participants

Total Participants	J	1,050
Total Budget	K	**$14,488**
Gross kW Saved at Customer	(J x I)	175 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**0 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	330,476 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**360,781 kWh**
Societal Net Benefits	(J x I x H)	**$144,604**

Utility Program Cost per kWh Lifetime	**$0.0072**
Utility Program Cost per kW at Gen	**N/A**

ENERGY EFFICIENT SHOWERHEADS — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$0	$0	$0	$0
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$69,985	$69,985	$69,985	$69,985
Environmental Externality	N/A	N/A	N/A	N/A	$3,633
Subtotal	N/A	$69,985	$69,985	$69,985	$73,618
Participant Benefits					
Bill Reduction - Electric	$522,837	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$4,841	N/A	N/A	$4,841	$4,841
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$90,686	N/A	N/A	$90,686	$90,686
Subtotal	$618,364	N/A	N/A	$95,527	$95,527
Total Benefits	$618,364	$69,985	$69,985	$165,512	$169,145
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$8,588	$8,588	$8,588	$8,588
Advertising & Promotion	N/A	$1,442	$1,442	$1,442	$1,442
Measurement & Verification	N/A	$154	$154	$154	$154
Rebates	N/A	$4,841	$4,841	$4,841	$4,841
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$15,025	$15,025	$15,025	$15,025
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$522,837	N/A	N/A
Subtotal	N/A	N/A	$522,837	N/A	N/A
Participant Costs					
Incremental Capital Costs	$4,841	N/A	N/A	$4,841	$4,841
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$4,841	N/A	N/A	$4,841	$4,841
Total Costs	$4,841	$15,025	$537,862	$19,866	$19,866
Net Benefit (Cost)	$613,524	$54,960	($467,877)	$145,646	$149,279
Benefit/Cost Ratio	127.75	4.66	0.13	8.33	8.51

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	5.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	0.00%
Gross Load Factor at Customer	E	21.58%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$854

Program Summary per Participant		
Gross kW Saved at Customer	I	0.17 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.00 kW
Gross Annual kWh Saved at Customer	(B x E x I)	315 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	344 kWh

Program Summary All Participants		
Total Participants	J	1,050
Total Budget	K	**$15,025**
Gross kW Saved at Customer	(J x I)	175 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**0 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	330,476 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**360,781 kWh**
Societal Net Benefits	(J x I x H)	**$149,279**

Utility Program Cost per kWh Lifetime	**$0.0075**
Utility Program Cost per kW at Gen	**N/A**

ENERGY EFFICIENT SHOWERHEADS — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$0	$0	$0	$0
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$74,999	$74,999	$74,999	$74,999
Environmental Externality	N/A	N/A	N/A	N/A	$3,641
Subtotal	N/A	$74,999	$74,999	$74,999	$78,641
Participant Benefits					
Bill Reduction - Electric	$534,513	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$5,030	N/A	N/A	$5,030	$5,030
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$90,686	N/A	N/A	$90,686	$90,686
Subtotal	$630,229	N/A	N/A	$95,716	$95,716
Total Benefits	$630,229	$74,999	$74,999	$170,716	$174,357
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$8,947	$8,947	$8,947	$8,947
Advertising & Promotion	N/A	$1,601	$1,601	$1,601	$1,601
Measurement & Verification	N/A	$169	$169	$169	$169
Rebates	N/A	$5,030	$5,030	$5,030	$5,030
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$15,747	$15,747	$15,747	$15,747
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$534,513	N/A	N/A
Subtotal	N/A	N/A	$534,513	N/A	N/A
Participant Costs					
Incremental Capital Costs	$5,030	N/A	N/A	$5,030	$5,030
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$5,030	N/A	N/A	$5,030	$5,030
Total Costs	$5,030	$15,747	$550,260	$20,777	$20,777
Net Benefit (Cost)	$625,200	$59,252	($475,261)	$149,939	$153,581
Benefit/Cost Ratio	125.31	4.76	0.14	8.22	8.39

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	5.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	0.00%
Gross Load Factor at Customer	E	21.58%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$878

Program Summary per Participant		
Gross kW Saved at Customer	I	0.17 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.00 kW
Gross Annual kWh Saved at Customer	(B x E x I)	315 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	344 kWh

Program Summary All Participants		
Total Participants	J	1,050
Total Budget	K	**$15,747**
Gross kW Saved at Customer	(J x I)	175 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**0 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	330,476 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**360,781 kWh**
Societal Net Benefits	(J x I x H)	**$153,581**

Utility Program Cost per kWh Lifetime	**$0.0079**
Utility Program Cost per kW at Gen	**N/A**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Energy Efficient Showerheads
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	96,737			100,321			104,666		
Advertising & Promotion	13,432			15,410			17,388		
Participant Incentives	63,473			64,310			66,821		
R&D	0			0			0		
Other	1,860			2,046			2,251		
Total Costs	$175,502			$182,087			$191,126		
Project Participants									
Total Participants	13,950			13,950			13,950		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating	x			x			x		
Weatherization									
General/Other	x			x			x		
Energy Savings									
Avg. Dth/Part. Saved	1.64			1.64			1.64		
Annual Dth Saved	22,852			22,852			22,852		
Cost per Dth	$7.6799			$7.9681			$8.3636		
Project Life (Years)	5.5			5.5			5.5		
Lifetime Dth Saved	126,709			126,709			126,709		
Cost per Lifetime Dth Saved	$1.3851			$1.4371			$1.5084		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$5,942,929								
B/C ratio	11.83								
Participant									
Net present value	$7,251,365								
B/C ratio	38.26								
Rate Payer									
Net present value	($1,362,140)								
B/C ratio	0.60								
Utility									
Net present value	$1,455,285								
B/C ratio	3.65								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Energy Efficient Showerheads**

Input Data	
1) Retail Rate ($/Dth) =	$7.23
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$112,029	$117,777	$124,305
Incentive Costs =	$63,473	$64,310	$66,821
16) Total Utility Project Costs =	$175,502	$182,087	$191,126
17) Direct Participant Costs ($/Part.) =	$5	$5	$5
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$18	$18	$18
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	5.5	5.5	5.5
21) Avg. Dth/Part. Saved =	1.64	1.64	1.64
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	13,950	13,950	13,950
24) Total Annual Dth Saved =	22,852	22,852	22,852
25) Incentive/Participant =	$4.55	$4.61	$4.79

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$13	$13	$14
Cost per Participant per Dth =	$10.46	$10.78	$11.29
Lifetime Energy Reduction (Dth)	380,126		
Societal Cost per Dth	$1.44		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($1,362,140)	0.60
Utility Cost Test	$1,455,285	3.65
Societal Test	$5,942,929	11.83
Participant Test	$7,251,365	38.26

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Energy Feedback
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	1,089,777			983,171			1,488,293		
Advertising & Promotion	2,500			2,500			2,500		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	17,750			31,950			39,263		
Total Costs	$1,110,027			$1,017,621			$1,530,056		
Project Participants									
Total Participants	150,000			142,500			190,375		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	57			57			65		
Annual kWh Saved - Generator	8,570,819			8,142,278			12,406,647		
Cost per Annual kWh Saved	$0.1295			$0.1250			$0.1233		
Measure Lifetime (Years)	3.0			3.0			3.0		
Lifetime kWh savings	25,712,458			24,426,835			37,219,941		
Cost per kWh Lifetime	$0.0432			$0.0417			$0.0411		
Average kW Savings per Participant	0.00			0.00			0.01		
Annual kW Savings - Generator	668			635			967		
Cost per KW Saved	$1,661.14			$1,603.00			$1,581.79		
Cost/Benefit Results									
Societal									
Net present value	($0)			$1			$2		
B/C ratio	0.96			1.08			1.23		
Participant									
Net present value	$23			$24			$26		
B/C ratio	INF			INF			INF		
Rate Payer									
Net present value	($20)			($20)			($22)		
B/C ratio	0.25			0.27			0.30		
Utility									
Net present value	($1)			$0			$1		
B/C ratio	0.92			1.03			1.18		

ENERGY FEEDBACK **2013** **ELECTRIC** **GOAL**

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$175,050	$175,050	$175,050	$175,050
T & D	N/A	$65,550	$65,550	$65,550	$65,550
Marginal Energy	N/A	$785,550	$785,550	$785,550	$785,550
Environmental Externality	N/A	N/A	N/A	N/A	$44,100
Subtotal	N/A	$1,026,150	$1,026,150	$1,026,150	$1,070,250
Participant Benefits					
Bill Reduction - Electric	$2,923,050	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$561,722	N/A	N/A	$0	$0
Subtotal	$3,484,772	N/A	N/A	$0	$0
Total Benefits	$3,484,772	$1,026,150	$1,026,150	$1,026,150	$1,070,250
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$1,089,777	$1,089,777	$1,089,777	$1,089,777
Advertising & Promotion	N/A	$2,500	$2,500	$2,500	$2,500
Measurement & Verification	N/A	$17,750	$17,750	$17,750	$17,750
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,110,027	$1,110,027	$1,110,027	$1,110,027
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,923,050	N/A	N/A
Subtotal	N/A	N/A	$2,923,050	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$1,110,027	$4,033,077	$1,110,027	$1,110,027
Net Benefit (Cost)	$3,484,772	($83,877)	($3,006,927)	($83,877)	($39,777)
Benefit/Cost Ratio	INF	0.92	0.25	0.92	0.96

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	3.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	68.00%
Gross Load Factor at Customer	E	100.00%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	($44)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.01 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.00 kW
Gross Annual kWh Saved at Customer	(B x E x I)	52 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	57 kWh

Program Summary All Participants		
Total Participants	J	150,000
Total Budget	K	**$1,110,027**
Gross kW Saved at Customer	(J x I)	896 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**668 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	7,850,870 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**8,570,819 kWh**
Societal Net Benefits	(J x I x H)	**($39,777)**

Utility Program Cost per kWh Lifetime	**$0.0432**
Utility Program Cost per kW at Gen	**$1,661.14**

ENERGY FEEDBACK **2014** **ELECTRIC** **GOAL**

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$170,288	$170,288	$170,288	$170,288
T & D	N/A	$64,838	$64,838	$64,838	$64,838
Marginal Energy	N/A	$811,110	$811,110	$811,110	$811,110
Environmental Externality	N/A	N/A	N/A	N/A	$51,443
Subtotal	N/A	$1,046,235	$1,046,235	$1,046,235	$1,097,678
Participant Benefits					
Bill Reduction - Electric	$2,853,848	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$533,636	N/A	N/A	$0	$0
Subtotal	$3,387,484	N/A	N/A	$0	$0
Total Benefits	$3,387,484	$1,046,235	$1,046,235	$1,046,235	$1,097,678
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$983,171	$983,171	$983,171	$983,171
Advertising & Promotion	N/A	$2,500	$2,500	$2,500	$2,500
Measurement & Verification	N/A	$31,950	$31,950	$31,950	$31,950
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,017,621	$1,017,621	$1,017,621	$1,017,621
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,853,848	N/A	N/A
Subtotal	N/A	N/A	$2,853,848	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$1,017,621	$3,871,469	$1,017,621	$1,017,621
Net Benefit (Cost)	$3,387,484	$28,614	($2,825,234)	$28,614	$80,056
Benefit/Cost Ratio	INF	1.03	0.27	1.03	1.08

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	3.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	68.00%
Gross Load Factor at Customer	E	100.00%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$94

Program Summary per Participant		
Gross kW Saved at Customer	I	0.01 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.00 kW
Gross Annual kWh Saved at Customer	(B x E x I)	52 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	57 kWh

Program Summary All Participants		
Total Participants	J	142,500
Total Budget	K	**$1,017,621**
Gross kW Saved at Customer	(J x I)	851 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**635 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	7,458,327 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**8,142,278 kWh**
Societal Net Benefits	(J x I x H)	**$80,056**

Utility Program Cost per kWh Lifetime	**$0.0417**
Utility Program Cost per kW at Gen	**$1,603.00**

ENERGY FEEDBACK **2015 ELECTRIC GOAL**

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$264,031	$264,031	$264,031	$264,031
T & D	N/A	$100,899	$100,899	$100,899	$100,899
Marginal Energy	N/A	$1,433,981	$1,433,981	$1,433,981	$1,433,981
Environmental Externality	N/A	N/A	N/A	N/A	$76,117
Subtotal	N/A	$1,798,911	$1,798,911	$1,798,911	$1,875,028
Participant Benefits					
Bill Reduction - Electric	$4,443,414	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$506,954	N/A	N/A	$0	$0
Subtotal	$4,950,368	N/A	N/A	$0	$0
Total Benefits	$4,950,368	$1,798,911	$1,798,911	$1,798,911	$1,875,028
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$1,488,293	$1,488,293	$1,488,293	$1,488,293
Advertising & Promotion	N/A	$2,500	$2,500	$2,500	$2,500
Measurement & Verification	N/A	$39,263	$39,263	$39,263	$39,263
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,530,056	$1,530,056	$1,530,056	$1,530,056
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$4,443,414	N/A	N/A
Subtotal	N/A	N/A	$4,443,414	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$1,530,056	$5,973,470	$1,530,056	$1,530,056
Net Benefit (Cost)	$4,950,368	$268,855	($4,174,559)	$268,855	$344,971
Benefit/Cost Ratio	INF	1.18	0.30	1.18	1.23

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	3.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	68.00%
Gross Load Factor at Customer	E	100.00%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$266

Program Summary per Participant		
Gross kW Saved at Customer	I	0.01 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.01 kW
Gross Annual kWh Saved at Customer	(B x E x I)	60 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	65 kWh

Program Summary All Participants		
Total Participants	J	190,375
Total Budget	K	**$1,530,056**
Gross kW Saved at Customer	(J x I)	1,297 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**967 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	11,364,489 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**12,406,647 kWh**
Societal Net Benefits	(J x I x H)	**$344,971**
Utility Program Cost per kWh Lifetime		**$0.0411**
Utility Program Cost per kW at Gen		**$1,581.79**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Energy Feedback
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	445,495			402,323			382,997		
Advertising & Promotion	500			500			500		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	7,250			13,050			16,037		
Total Costs	$453,245			$415,873			$399,534		
Project Participants									
Total Participants	150,000			142,500			135,375		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy Savings									
Avg. Dth/Part. Saved	0.18			0.18			0.18		
Annual Dth Saved	27,220			25,859			24,566		
Cost per Dth	$16.6514			$16.0825			$16.2639		
Project Life (Years)	3.0			3.0			3.0		
Lifetime Dth Saved	81,659			77,576			73,697		
Cost per Lifetime Dth Saved	$5.5505			$5.3608			$5.4213		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$116,526								
B/C ratio	1.09								
Participant									
Net present value	$8,973,588								
B/C ratio	INF								
Rate Payer									
Net present value	($1,796,666)								
B/C ratio	0.42								
Utility									
Net present value	$32,195								
B/C ratio	1.03								

Conservation Improvement Program (CIP)

BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Energy Feedback**

Input Data	
1) Retail Rate ($/Dth) =	$7.23
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$453,245	$415,873	$399,534
Incentive Costs =	$0	$0	$0
16) Total Utility Project Costs =	$453,245	$415,873	$399,534
17) Direct Participant Costs ($/Part.) =	$0	$0	$0
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	3.0	3.0	3.0
21) Avg. Dth/Part. Saved =	0.18	0.18	0.18
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	150,000	142,500	135,375
24) Total Annual Dth Saved =	27,220	25,859	24,566
25) Incentive/Participant =	$0.00	$0.00	$0.00

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$3	$3	$3
Cost per Participant per Dth =	$16.65	$16.08	$16.26
Lifetime Energy Reduction (Dth)	232,932		
Societal Cost per Dth	$5.45		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($1,796,666)	0.42
Utility Cost Test	$32,195	1.03
Societal Test	$116,526	1.09
Participant Test	$8,973,588	INF

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: ENERGY STAR Homes
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	50,750			51,754			52,773		
Advertising & Promotion	60,000			67,000			60,000		
Participant Incentives	59,872			59,872			59,872		
R&D	0			0			0		
Other	25,000			25,750			26,500		
Total Costs	$195,622			$204,376			$199,145		
Project Participants									
Total Participants	860			860			860		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances	x			x			x		
Lighting	x			x			x		
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	1,065			1,047			1,030		
Annual kWh Saved - Generator	916,126			900,058			885,775		
Cost per Annual kWh Saved	$0.2135			$0.2271			$0.2248		
Measure Lifetime (Years)	18.0			18.2			18.3		
Lifetime kWh savings	16,487,079			16,350,703			16,229,485		
Cost per kWh Lifetime	$0.0119			$0.0125			$0.0123		
Average kW Savings per Participant	0.13			0.12			0.12		
Annual kW Savings - Generator	108			106			105		
Cost per KW Saved	$1,815.17			$1,924.71			$1,900.67		
Cost/Benefit Results									
Societal									
Net present value	$326			$341			$372		
B/C ratio	1.68			1.70			1.77		
Participant									
Net present value	$3,725			$3,750			$3,777		
B/C ratio	2.82			2.83			2.84		
Rate Payer									
Net present value	($1,009)			($1,019)			($1,016)		
B/C ratio	0.41			0.42			0.43		
Utility									
Net present value	$481			$496			$526		
B/C ratio	3.12			3.09			3.27		

ENERGY STAR HOMES	2013	ELECTRIC	GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$112,900	$112,900	$112,900	$112,900
T & D	N/A	$42,798	$42,798	$42,798	$42,798
Marginal Energy	N/A	$453,721	$453,721	$453,721	$453,721
Environmental Externality	N/A	N/A	N/A	N/A	$20,151
Subtotal	N/A	$609,419	$609,419	$609,419	$629,569
Participant Benefits					
Bill Reduction - Electric	$1,281,758	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$59,872	N/A	N/A	$59,872	$59,872
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$3,625,566	N/A	N/A	$2,825	$2,825
Subtotal	$4,967,196	N/A	N/A	$62,697	$62,697
Total Benefits	$4,967,196	$609,419	$609,419	$672,115	$692,266
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$50,750	$50,750	$50,750	$50,750
Advertising & Promotion	N/A	$60,000	$60,000	$60,000	$60,000
Measurement & Verification	N/A	$25,000	$25,000	$25,000	$25,000
Rebates	N/A	$59,872	$59,872	$59,872	$59,872
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$195,622	$195,622	$195,622	$195,622
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,281,758	N/A	N/A
Subtotal	N/A	N/A	$1,281,758	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,763,690	N/A	N/A	$216,000	$216,000
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,763,690	N/A	N/A	$216,000	$216,000
Total Costs	$1,763,690	$195,622	$1,477,380	$411,622	$411,622
Net Benefit (Cost)	$3,203,506	$413,797	($867,961)	$260,494	$280,644
Benefit/Cost Ratio	2.82	3.12	0.41	1.63	1.68

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	18.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	31.17%
Gross Load Factor at Customer	E	30.38%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$890

Program Summary per Participant		
Gross kW Saved at Customer	I	0.37 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.13 kW
Gross Annual kWh Saved at Customer	(B x E x I)	976 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,065 kWh

Program Summary All Participants		
Total Participants	J	860
Total Budget	K	**$195,622**
Gross kW Saved at Customer	(J x I)	315 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**108 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	839,172 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**916,126 kWh**
Societal Net Benefits	(J x I x H)	**$280,644**

Utility Program Cost per kWh Lifetime	**$0.0119**
Utility Program Cost per kW at Gen	**$1,815.17**

ENERGY STAR HOMES	2014	ELECTRIC	GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$114,597	$114,597	$114,597	$114,597
T & D	N/A	$43,458	$43,458	$43,458	$43,458
Marginal Energy	N/A	$472,641	$472,641	$472,641	$472,641
Environmental Externality	N/A	N/A	N/A	N/A	$20,460
Subtotal	N/A	$630,697	$630,697	$630,697	$651,157
Participant Benefits					
Bill Reduction - Electric	$1,303,044	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$59,872	N/A	N/A	$59,872	$59,872
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$3,625,566	N/A	N/A	$2,845	$2,845
Subtotal	$4,988,483	N/A	N/A	$62,717	$62,717
Total Benefits	$4,988,483	$630,697	$630,697	$693,414	$713,874
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$51,754	$51,754	$51,754	$51,754
Advertising & Promotion	N/A	$67,000	$67,000	$67,000	$67,000
Measurement & Verification	N/A	$25,750	$25,750	$25,750	$25,750
Rebates	N/A	$59,872	$59,872	$59,872	$59,872
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$204,376	$204,376	$204,376	$204,376
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,303,044	N/A	N/A
Subtotal	N/A	N/A	$1,303,044	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,763,690	N/A	N/A	$216,147	$216,147
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,763,690	N/A	N/A	$216,147	$216,147
Total Costs	$1,763,690	$204,376	$1,507,420	$420,523	$420,523
Net Benefit (Cost)	$3,224,793	$426,321	($876,724)	$272,891	$293,351
Benefit/Cost Ratio	2.83	3.09	0.42	1.65	1.70

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	18.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	32.57%
Gross Load Factor at Customer	E	31.66%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$987

Program Summary per Participant		
Gross kW Saved at Customer	I	0.35 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.12 kW
Gross Annual kWh Saved at Customer	(B x E x I)	959 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,047 kWh

Program Summary All Participants		
Total Participants	J	860
Total Budget	K	**$204,376**
Gross kW Saved at Customer	(J x I)	297 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**106 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	824,453 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**900,058 kWh**
Societal Net Benefits	(J x I x H)	**$293,351**

Utility Program Cost per kWh Lifetime	**$0.0125**
Utility Program Cost per kW at Gen	**$1,924.71**

ENERGY STAR HOMES — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$116,438	$116,438	$116,438	$116,438
T & D	N/A	$44,141	$44,141	$44,141	$44,141
Marginal Energy	N/A	$491,107	$491,107	$491,107	$491,107
Environmental Externality	N/A	N/A	N/A	N/A	$20,479
Subtotal	N/A	$651,686	$651,686	$651,686	$672,165
Participant Benefits					
Bill Reduction - Electric	$1,326,216	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$59,872	N/A	N/A	$59,872	$59,872
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$3,625,566	N/A	N/A	$2,862	$2,862
Subtotal	$5,011,655	N/A	N/A	$62,734	$62,734
Total Benefits	$5,011,655	$651,686	$651,686	$714,420	$734,899
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$52,773	$52,773	$52,773	$52,773
Advertising & Promotion	N/A	$60,000	$60,000	$60,000	$60,000
Measurement & Verification	N/A	$26,500	$26,500	$26,500	$26,500
Rebates	N/A	$59,872	$59,872	$59,872	$59,872
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$199,145	$199,145	$199,145	$199,145
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,326,216	N/A	N/A
Subtotal	N/A	N/A	$1,326,216	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,763,690	N/A	N/A	$215,902	$215,902
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,763,690	N/A	N/A	$215,902	$215,902
Total Costs	$1,763,690	$199,145	$1,525,361	$415,047	$415,047
Net Benefit (Cost)	$3,247,965	$452,541	($873,675)	$299,373	$319,852
Benefit/Cost Ratio	2.84	3.27	0.43	1.72	1.77

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	18.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	33.98%
Gross Load Factor at Customer	E	32.93%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$1,137

Program Summary per Participant		
Gross kW Saved at Customer	I	0.33 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.12 kW
Gross Annual kWh Saved at Customer	(B x E x I)	943 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,030 kWh

Program Summary All Participants		
Total Participants	J	860
Total Budget	K	**$199,145**
Gross kW Saved at Customer	(J x I)	281 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**105 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	811,370 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**885,775 kWh**
Societal Net Benefits	(J x I x H)	**$319,852**

Utility Program Cost per kWh Lifetime	**$0.0123**
Utility Program Cost per kW at Gen	**$1,900.67**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: ENERGY STAR Homes
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	330,500			340,415			350,330		
Utility Administration	51,011			51,530			52,065		
Advertising & Promotion	140,000			163,000			140,000		
Participant Incentives	23,378			23,378			23,378		
R&D	0			0			0		
Other	197,500			203,425			209,350		
Total Costs	$742,389			$781,748			$775,123		
Project Participants									
Total Participants	500			500			500		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)	x			x			x		
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization	x			x			x		
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	70.97			70.97			70.97		
Annual Dth Saved	35,485			35,485			35,485		
Cost per Dth	$20.9212			$22.0303			$21.8437		
Project Life (Years)	19.2			19.2			19.2		
Lifetime Dth Saved	680,077			680,077			680,077		
Cost per Lifetime Dth Saved	$1.0916			$1.1495			$1.1398		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$7,781,632								
B/C ratio	2.23								
Participant									
Net present value	$16,158,605								
B/C ratio	4.75								
Rate Payer									
Net present value	($5,976,545)								
B/C ratio	0.60								
Utility									
Net present value	$6,760,306								
B/C ratio	3.94								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **ENERGY STAR Homes**

Input Data	
1) Retail Rate ($/Dth) =	$7.23
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$719,011	$758,370	$751,745
Incentive Costs =	$23,378	$23,378	$23,378
16) Total Utility Project Costs =	$742,389	$781,748	$775,123
17) Direct Participant Costs ($/Part.) =	$2,874	$2,874	$2,874
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$17	$17	$17
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	19.2	19.2	19.2
21) Avg. Dth/Part. Saved =	70.97	70.97	70.97
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	500	500	500
24) Total Annual Dth Saved =	35,485	35,485	35,485
25) Incentive/Participant =	$46.76	$46.76	$46.76

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$1,485	$1,563	$1,550
Cost per Participant per Dth =	$61.42	$62.53	$62.34
Lifetime Energy Reduction (Dth)	2,040,230		
Societal Cost per Dth	$3.11		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($5,976,545)	0.60
Utility Cost Test	$6,760,306	3.94
Societal Test	$7,781,632	2.23
Participant Test	$16,158,605	4.75

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Heating System Rebates
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	36,950			37,410			37,870		
Advertising & Promotion	1,600			1,600			1,600		
Participant Incentives	700,000			700,000			700,000		
R&D	0			0			0		
Other	20,000			20,000			20,000		
Total Costs	$758,550			$759,010			$759,470		
Project Participants									
Total Participants	7,000			7,000			7,000		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating	x			x			x		
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	678			678			678		
Annual kWh Saved - Generator	4,745,263			4,745,263			4,745,263		
Cost per Annual kWh Saved	$0.1599			$0.1600			$0.1600		
Measure Lifetime (Years)	18.0			18.0			18.0		
Lifetime kWh savings	85,414,742			85,414,742			85,414,742		
Cost per kWh Lifetime	$0.0089			$0.0089			$0.0089		
Average kW Savings per Participant	0.19			0.19			0.19		
Annual kW Savings - Generator	1,343			1,343			1,343		
Cost per KW Saved	$564.73			$565.08			$565.42		
Cost/Benefit Results									
Societal									
Net present value	$229			$256			$283		
B/C ratio	1.40			1.45			1.49		
Participant									
Net present value	$696			$725			$754		
B/C ratio	2.50			2.56			2.62		
Rate Payer									
Net present value	($482)			($484)			($487)		
B/C ratio	0.59			0.60			0.60		
Utility									
Net present value	$578			$605			$632		
B/C ratio	6.33			6.58			6.83		

HEATING SYSTEM REBATES — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,430,030	$1,430,030	$1,430,030	$1,430,030
T & D	N/A	$542,150	$542,150	$542,150	$542,150
Marginal Energy	N/A	$2,831,710	$2,831,710	$2,831,710	$2,831,710
Environmental Externality	N/A	N/A	N/A	N/A	$106,610
Subtotal	N/A	$4,803,890	$4,803,890	$4,803,890	$4,910,500
Participant Benefits					
Bill Reduction - Electric	$7,422,030	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$700,000	N/A	N/A	$700,000	$700,000
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$8,122,030	N/A	N/A	$700,000	$700,000
Total Benefits	$8,122,030	$4,803,890	$4,803,890	$5,503,890	$5,610,500
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$36,950	$36,950	$36,950	$36,950
Advertising & Promotion	N/A	$1,600	$1,600	$1,600	$1,600
Measurement & Verification	N/A	$20,000	$20,000	$20,000	$20,000
Rebates	N/A	$700,000	$700,000	$700,000	$700,000
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$758,550	$758,550	$758,550	$758,550
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$7,422,030	N/A	N/A
Subtotal	N/A	N/A	$7,422,030	N/A	N/A
Participant Costs					
Incremental Capital Costs	$3,250,320	N/A	N/A	$3,250,320	$3,250,320
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$3,250,320	N/A	N/A	$3,250,320	$3,250,320
Total Costs	$3,250,320	$758,550	$8,180,580	$4,008,870	$4,008,870
Net Benefit (Cost)	$4,871,710	$4,045,340	($3,376,690)	$1,495,020	$1,601,630
Benefit/Cost Ratio	2.50	6.33	0.59	1.37	1.40

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	18.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	70.00%
Gross Load Factor at Customer	E	28.35%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$915

Program Summary per Participant		
Gross kW Saved at Customer	I	0.25 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.19 kW
Gross Annual kWh Saved at Customer	(B x E x I)	621 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	678 kWh

Program Summary All Participants		
Total Participants	J	7,000
Total Budget	K	**$758,550**
Gross kW Saved at Customer	(J x I)	1,750 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,343 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	4,346,661 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**4,745,263 kWh**
Societal Net Benefits	(J x I x H)	**$1,601,630**

Utility Program Cost per kWh Lifetime	**$0.0089**
Utility Program Cost per kW at Gen	**$564.73**

HEATING SYSTEM REBATES — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,463,770	$1,463,770	$1,463,770	$1,463,770
T & D	N/A	$554,960	$554,960	$554,960	$554,960
Marginal Energy	N/A	$2,975,910	$2,975,910	$2,975,910	$2,975,910
Environmental Externality	N/A	N/A	N/A	N/A	$109,900
Subtotal	N/A	$4,994,640	$4,994,640	$4,994,640	$5,104,540
Participant Benefits					
Bill Reduction - Electric	$7,624,120	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$700,000	N/A	N/A	$700,000	$700,000
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$8,324,120	N/A	N/A	$700,000	$700,000
Total Benefits	$8,324,120	$4,994,640	$4,994,640	$5,694,640	$5,804,540
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$37,410	$37,410	$37,410	$37,410
Advertising & Promotion	N/A	$1,600	$1,600	$1,600	$1,600
Measurement & Verification	N/A	$20,000	$20,000	$20,000	$20,000
Rebates	N/A	$700,000	$700,000	$700,000	$700,000
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$759,010	$759,010	$759,010	$759,010
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$7,624,120	N/A	N/A
Subtotal	N/A	N/A	$7,624,120	N/A	N/A
Participant Costs					
Incremental Capital Costs	$3,250,320	N/A	N/A	$3,250,320	$3,250,320
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$3,250,320	N/A	N/A	$3,250,320	$3,250,320
Total Costs	$3,250,320	$759,010	$8,383,130	$4,009,330	$4,009,330
Net Benefit (Cost)	$5,073,800	$4,235,630	($3,388,490)	$1,685,310	$1,795,210
Benefit/Cost Ratio	2.56	6.58	0.60	1.42	1.45

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	18.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	70.00%
Gross Load Factor at Customer	E	28.35%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$1,026

Program Summary per Participant		
Gross kW Saved at Customer	I	0.25 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.19 kW
Gross Annual kWh Saved at Customer	(B x E x I)	621 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	678 kWh

Program Summary All Participants		
Total Participants	J	7,000
Total Budget	K	**$759,010**
Gross kW Saved at Customer	(J x I)	1,750 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,343 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	4,346,661 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**4,745,263 kWh**
Societal Net Benefits	(J x I x H)	**$1,795,210**

Utility Program Cost per kWh Lifetime	**$0.0089**
Utility Program Cost per kW at Gen	**$565.08**

HEATING SYSTEM REBATES — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,498,280	$1,498,280	$1,498,280	$1,498,280
T & D	N/A	$568,050	$568,050	$568,050	$568,050
Marginal Energy	N/A	$3,117,170	$3,117,170	$3,117,170	$3,117,170
Environmental Externality	N/A	N/A	N/A	N/A	$110,670
Subtotal	N/A	$5,183,500	$5,183,500	$5,183,500	$5,294,170
Participant Benefits					
Bill Reduction - Electric	$7,831,530	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$700,000	N/A	N/A	$700,000	$700,000
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$8,531,530	N/A	N/A	$700,000	$700,000
Total Benefits	$8,531,530	$5,183,500	$5,183,500	$5,883,500	$5,994,170
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$37,870	$37,870	$37,870	$37,870
Advertising & Promotion	N/A	$1,600	$1,600	$1,600	$1,600
Measurement & Verification	N/A	$20,000	$20,000	$20,000	$20,000
Rebates	N/A	$700,000	$700,000	$700,000	$700,000
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$759,470	$759,470	$759,470	$759,470
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$7,831,530	N/A	N/A
Subtotal	N/A	N/A	$7,831,530	N/A	N/A
Participant Costs					
Incremental Capital Costs	$3,250,320	N/A	N/A	$3,250,320	$3,250,320
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$3,250,320	N/A	N/A	$3,250,320	$3,250,320
Total Costs	$3,250,320	$759,470	$8,591,000	$4,009,790	$4,009,790
Net Benefit (Cost)	$5,281,210	$4,424,030	($3,407,500)	$1,873,710	$1,984,380
Benefit/Cost Ratio	2.62	6.83	0.60	1.47	1.49

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	18.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	70.00%
Gross Load Factor at Customer	E	28.35%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$1,134

Program Summary per Participant		
Gross kW Saved at Customer	I	0.25 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.19 kW
Gross Annual kWh Saved at Customer	(B x E x I)	621 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	678 kWh

Program Summary All Participants		
Total Participants	J	7,000
Total Budget	K	**$759,470**
Gross kW Saved at Customer	(J x I)	1,750 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,343 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	4,346,661 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**4,745,263 kWh**
Societal Net Benefits	(J x I x H)	**$1,984,380**

Utility Program Cost per kWh Lifetime	**$0.0089**
Utility Program Cost per kW at Gen	**$565.42**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Heating System Rebates
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	178,495			180,989			183,536		
Advertising & Promotion	185,257			185,265			185,273		
Participant Incentives	499,600			741,825			766,350		
R&D	0			0			0		
Other	65,000			65,000			65,000		
Total Costs	$928,352			$1,173,079			$1,200,159		
Project Participants									
Total Participants	5,777			5,777			5,777		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	0%			0%			0%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)	x			x			x		
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	14.33			3.02			3.07		
Annual Dth Saved	82,800			17,418			17,736		
Cost per Dth	$11.2120			$67.3478			$67.6674		
Project Life (Years)	18.0			18.2			18.2		
Lifetime Dth Saved	1,494,357			317,483			323,205		
Cost per Lifetime Dth Saved	$0.6212			$3.6949			$3.7133		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$6,697,407								
B/C ratio	1.91								
Participant									
Net present value	$14,718,494								
B/C ratio	3.42								
Rate Payer									
Net present value	($7,124,408)								
B/C ratio	0.57								
Utility									
Net present value	$6,116,519								
B/C ratio	2.85								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Heating System Rebates**

Input Data	
1) Retail Rate ($/Dth) =	$7.23
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$428,752	$431,254	$433,809
Incentive Costs =	$499,600	$741,825	$766,350
16) Total Utility Project Costs =	$928,352	$1,173,079	$1,200,159
17) Direct Participant Costs ($/Part.) =	$572	$239	$243
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	18.0	18.2	18.2
21) Avg. Dth/Part. Saved =	14.33	3.02	3.07
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	5,777	5,777	5,777
24) Total Annual Dth Saved =	82,800	17,418	17,736
25) Incentive/Participant =	$86.48	$128.41	$132.66

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$161	$203	$208
Cost per Participant per Dth =	$51.14	$146.70	$146.80
Lifetime Energy Reduction (Dth)	2,135,045		
Societal Cost per Dth	$3.46		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($7,124,408)	0.57
Utility Cost Test	$6,116,519	2.85
Societal Test	$6,697,407	1.91
Participant Test	$14,718,494	3.42

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Home Energy Squad
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	589,700			589,425			589,700		
Utility Administration	186,490			192,390			195,052		
Advertising & Promotion	360,093			396,000			403,000		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	51,806			51,806			51,806		
Total Costs	$1,188,089			$1,229,621			$1,239,558		
Project Participants									
Total Participants	5,500			5,501			5,499		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting	x			x			x		
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling	x			x			x		
Space Heating	x			x			x		
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	513			513			434		
Annual kWh Saved - Generator	2,820,471			2,820,466			2,384,706		
Cost per Annual kWh Saved	$0.4212			$0.4360			$0.5198		
Measure Lifetime (Years)	11.3			11.4			11.5		
Lifetime kWh savings	31,900,560			32,291,012			27,391,452		
Cost per kWh Lifetime	$0.0372			$0.0381			$0.0453		
Average kW Savings per Participant	0.10			0.11			0.10		
Annual kW Savings - Generator	574			583			537		
Cost per KW Saved	$2,068.62			$2,108.20			$2,306.90		
Cost/Benefit Results									
Societal									
Net present value	$61			$67			$47		
B/C ratio	1.24			1.25			1.18		
Participant									
Net present value	$496			$508			$447		
B/C ratio	14.37			13.74			14.21		
Rate Payer									
Net present value	($443)			($449)			($408)		
B/C ratio	0.39			0.40			0.40		
Utility									
Net present value	$70			$77			$50		
B/C ratio	1.32			1.35			1.22		

HOME ENERGY SQUAD	2013	ELECTRIC	GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$438,580	$438,580	$438,580	$438,580
T & D	N/A	$166,348	$166,348	$166,348	$166,348
Marginal Energy	N/A	$967,479	$967,479	$967,479	$967,479
Environmental Externality	N/A	N/A	N/A	N/A	$49,536
Subtotal	N/A	$1,572,407	$1,572,407	$1,572,407	$1,621,942
Participant Benefits					
Bill Reduction - Electric	$2,822,110	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$110,988	N/A	N/A	$108,073	$108,073
Subtotal	$2,933,098	N/A	N/A	$108,073	$108,073
Total Benefits	$2,933,098	$1,572,407	$1,572,407	$1,680,479	$1,730,015
Costs					
Utility Project Costs					
Customer Services	N/A	$589,700	$589,700	$589,700	$589,700
Project Administration	N/A	$186,490	$186,490	$186,490	$186,490
Advertising & Promotion	N/A	$360,093	$360,093	$360,093	$360,093
Measurement & Verification	N/A	$51,806	$51,806	$51,806	$51,806
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,188,089	$1,188,089	$1,188,089	$1,188,089
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,822,110	N/A	N/A
Subtotal	N/A	N/A	$2,822,110	N/A	N/A
Participant Costs					
Incremental Capital Costs	$204,146	N/A	N/A	$203,930	$203,930
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$204,146	N/A	N/A	$203,930	$203,930
Total Costs	$204,146	$1,188,089	$4,010,199	$1,392,019	$1,392,019
Net Benefit (Cost)	$2,728,952	$384,318	($2,437,793)	$288,461	$337,996
Benefit/Cost Ratio	14.37	1.32	0.39	1.21	1.24

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	11.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	15.13%
Gross Load Factor at Customer	E	8.52%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$98

Program Summary per Participant		
Gross kW Saved at Customer	I	0.63 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.10 kW
Gross Annual kWh Saved at Customer	(B x E x I)	470 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	513 kWh

Program Summary All Participants		
Total Participants	J	5,500
Total Budget	K	**$1,188,089**
Gross kW Saved at Customer	(J x I)	3,461 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**574 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,583,552 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,820,471 kWh**
Societal Net Benefits	(J x I x H)	**$337,996**

Utility Program Cost per kWh Lifetime	**$0.0372**
Utility Program Cost per kW at Gen	**$2,068.62**

HOME ENERGY SQUAD	2014	ELECTRIC	GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$455,529	$455,529	$455,529	$455,529
T & D	N/A	$172,942	$172,942	$172,942	$172,942
Marginal Energy	N/A	$1,026,815	$1,026,815	$1,026,815	$1,026,815
Environmental Externality	N/A	N/A	N/A	N/A	$50,382
Subtotal	N/A	$1,655,286	$1,655,286	$1,655,286	$1,705,667
Participant Benefits					
Bill Reduction - Electric	$2,897,935	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$113,506	N/A	N/A	$110,367	$110,367
Subtotal	$3,011,441	N/A	N/A	$110,367	$110,367
Total Benefits	$3,011,441	$1,655,286	$1,655,286	$1,765,653	$1,816,034
Costs					
Utility Project Costs					
Customer Services	N/A	$589,425	$589,425	$589,425	$589,425
Project Administration	N/A	$192,390	$192,390	$192,390	$192,390
Advertising & Promotion	N/A	$396,000	$396,000	$396,000	$396,000
Measurement & Verification	N/A	$51,806	$51,806	$51,806	$51,806
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,229,621	$1,229,621	$1,229,621	$1,229,621
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,897,935	N/A	N/A
Subtotal	N/A	N/A	$2,897,935	N/A	N/A
Participant Costs					
Incremental Capital Costs	$219,095	N/A	N/A	$218,859	$218,859
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$219,095	N/A	N/A	$218,859	$218,859
Total Costs	$219,095	$1,229,621	$4,127,556	$1,448,480	$1,448,480
Net Benefit (Cost)	$2,792,346	$425,665	($2,472,270)	$317,173	$367,554
Benefit/Cost Ratio	13.74	1.35	0.40	1.22	1.25

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	11.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	15.34%
Gross Load Factor at Customer	E	8.51%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$106

Program Summary per Participant		
Gross kW Saved at Customer	I	0.63 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.11 kW
Gross Annual kWh Saved at Customer	(B x E x I)	470 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	513 kWh

Program Summary All Participants		
Total Participants	J	5,501
Total Budget	K	**$1,229,621**
Gross kW Saved at Customer	(J x I)	3,468 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**583 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,583,547 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,820,466 kWh**
Societal Net Benefits	(J x I x H)	**$367,554**

Utility Program Cost per kWh Lifetime	**$0.0381**
Utility Program Cost per kW at Gen	**$2,108.20**

HOME ENERGY SQUAD	2015	ELECTRIC	GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$430,248	$430,248	$430,248	$430,248
T & D	N/A	$163,216	$163,216	$163,216	$163,216
Marginal Energy	N/A	$919,642	$919,642	$919,642	$919,642
Environmental Externality	N/A	N/A	N/A	N/A	$43,170
Subtotal	N/A	$1,513,105	$1,513,105	$1,513,105	$1,556,275
Participant Benefits					
Bill Reduction - Electric	$2,517,165	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$129,366	N/A	N/A	$126,002	$126,002
Subtotal	$2,646,531	N/A	N/A	$126,002	$126,002
Total Benefits	$2,646,531	$1,513,105	$1,513,105	$1,639,108	$1,682,277
Costs					
Utility Project Costs					
Customer Services	N/A	$589,700	$589,700	$589,700	$589,700
Project Administration	N/A	$195,052	$195,052	$195,052	$195,052
Advertising & Promotion	N/A	$403,000	$403,000	$403,000	$403,000
Measurement & Verification	N/A	$51,806	$51,806	$51,806	$51,806
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,239,558	$1,239,558	$1,239,558	$1,239,558
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,517,165	N/A	N/A
Subtotal	N/A	N/A	$2,517,165	N/A	N/A
Participant Costs					
Incremental Capital Costs	$186,212	N/A	N/A	$185,957	$185,957
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$186,212	N/A	N/A	$185,957	$185,957
Total Costs	$186,212	$1,239,558	$3,756,723	$1,425,515	$1,425,515
Net Benefit (Cost)	$2,460,318	$273,547	($2,243,617)	$213,593	$256,762
Benefit/Cost Ratio	14.21	1.22	0.40	1.15	1.18

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	11.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	16.75%
Gross Load Factor at Customer	E	8.52%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$88

Program Summary per Participant		
Gross kW Saved at Customer	I	0.53 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.10 kW
Gross Annual kWh Saved at Customer	(B x E x I)	397 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	434 kWh

Program Summary All Participants		
Total Participants	J	5,499
Total Budget	K	**$1,239,558**
Gross kW Saved at Customer	(J x I)	2,925 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**537 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,184,390 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,384,706 kWh**
Societal Net Benefits	(J x I x H)	**$256,762**

Utility Program Cost per kWh Lifetime	**$0.0453**
Utility Program Cost per kW at Gen	**$2,306.90**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Home Energy Squad
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	449,047			449,047			449,047		
Utility Administration	153,044			152,380			152,001		
Advertising & Promotion	145,000			160,000			169,000		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	38,632			38,632			38,632		
Total Costs	$785,723			$800,059			$808,680		
Project Participants									
Total Participants	3,000			3,000			3,000		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)	x			x			x		
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	9.09			9.41			9.44		
Annual Dth Saved	27,263			28,229			28,328		
Cost per Dth	$28.8197			$28.3422			$28.5468		
Project Life (Years)	7.9			7.9			7.9		
Lifetime Dth Saved	214,561			223,403			224,284		
Cost per Lifetime Dth Saved	$3.6620			$3.5812			$3.6056		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$3,776,507								
B/C ratio	2.31								
Participant									
Net present value	$7,552,939								
B/C ratio	16.49								
Rate Payer									
Net present value	($3,771,157)								
B/C ratio	0.47								
Utility									
Net present value	$997,241								
B/C ratio	1.42								

Conservation Improvement Program (CIP)

BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Home Energy Squad**

Input Data	
1) Retail Rate ($/Dth) =	$7.23
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$785,723	$800,059	$808,680
Incentive Costs =	$0	$0	$0
16) Total Utility Project Costs =	$785,723	$800,059	$808,680
17) Direct Participant Costs ($/Part.) =	$53	$55	$55
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$36	$37	$37
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	7.9	7.9	7.9
21) Avg. Dth/Part. Saved =	9.09	9.41	9.44
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	3,000	3,000	3,000
24) Total Annual Dth Saved =	27,263	28,229	28,328
25) Incentive/Participant =	$0.00	$0.00	$0.00

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$262	$267	$270
Cost per Participant per Dth =	$34.63	$34.16	$34.37
Lifetime Energy Reduction (Dth)	662,248		
Societal Cost per Dth	$4.35		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($3,771,157)	0.47
Utility Cost Test	$997,241	1.42
Societal Test	$3,776,507	2.31
Participant Test	$7,552,939	16.49

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Home Lighting
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	521,145			524,499			534,564		
Advertising & Promotion	1,277,641			1,276,314			1,296,557		
Participant Incentives	2,639,383			2,772,655			3,001,312		
R&D	0			0			0		
Other	25,000			25,000			25,000		
Total Costs	$4,463,168			$4,598,468			$4,857,433		
Project Participants									
Total Participants	527,877			594,824			675,611		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting	x			x			x		
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	147			117			95		
Annual kWh Saved - Generator	77,675,154			69,378,126			64,376,286		
Cost per Annual kWh Saved	$0.0575			$0.0663			$0.0755		
Measure Lifetime (Years)	9.6			9.7			9.4		
Lifetime kWh savings	745,740,182			672,155,349			605,734,817		
Cost per kWh Lifetime	$0.0060			$0.0068			$0.0080		
Average kW Savings per Participant	0.02			0.02			0.01		
Annual kW Savings - Generator	10,273			9,176			8,520		
Cost per KW Saved	$434.45			$501.15			$570.13		
Cost/Benefit Results									
Societal									
Net present value	$38			$30			$24		
B/C ratio	2.78			2.53			2.27		
Participant									
Net present value	$112			$91			$73		
B/C ratio	9.73			8.49			7.29		
Rate Payer									
Net present value	($76)			($62)			($50)		
B/C ratio	0.41			0.41			0.42		
Utility									
Net present value	$44			$36			$30		
B/C ratio	6.17			5.69			5.14		

HOME LIGHTING | **2013** | **ELECTRIC** | **GOAL**

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$5,049,953	$5,049,953	$5,049,953	$5,049,953
T & D	N/A	$1,912,147	$1,912,147	$1,912,147	$1,912,147
Marginal Energy	N/A	$20,586,086	$20,586,086	$20,586,086	$20,586,086
Environmental Externality	N/A	N/A	N/A	N/A	$1,067,952
Subtotal	N/A	$27,548,186	$27,548,186	$27,548,186	$28,616,138
Participant Benefits					
Bill Reduction - Electric	$63,397,705	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$2,639,383	N/A	N/A	$2,639,383	$2,639,383
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$66,037,088	N/A	N/A	$2,639,383	$2,639,383
Total Benefits	$66,037,088	$27,548,186	$27,548,186	$30,187,569	$31,255,521
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$521,145	$521,145	$521,145	$521,145
Advertising & Promotion	N/A	$1,277,641	$1,277,641	$1,277,641	$1,277,641
Measurement & Verification	N/A	$25,000	$25,000	$25,000	$25,000
Rebates	N/A	$2,639,383	$2,639,383	$2,639,383	$2,639,383
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$4,463,168	$4,463,168	$4,463,168	$4,463,168
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$63,397,705	N/A	N/A
Subtotal	N/A	N/A	$63,397,705	N/A	N/A
Participant Costs					
Incremental Capital Costs	$6,788,369	N/A	N/A	$6,788,369	$6,788,369
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$6,788,369	N/A	N/A	$6,788,369	$6,788,369
Total Costs	$6,788,369	$4,463,168	$67,860,873	$11,251,537	$11,251,537
Net Benefit (Cost)	$59,248,719	$23,085,018	($40,312,687)	$18,936,032	$20,003,984
Benefit/Cost Ratio	9.73	6.17	0.41	2.68	2.78

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	9.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	13.96%
Gross Load Factor at Customer	E	12.15%
Transmission Loss Factor (Energy)	F	7.913%
Transmission Loss Factor (Demand)	G	8.662%
Societal Net Benefit (Cost)	H	$298

Program Summary per Participant		
Gross kW Saved at Customer	I	0.13 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.02 kW
Gross Annual kWh Saved at Customer	(B x E x I)	136 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	147 kWh

Program Summary All Participants		
Total Participants	J	527,877
Total Budget	K	**$4,463,168**
Gross kW Saved at Customer	(J x I)	67,206 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**10,273 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	71,528,365 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**77,675,154 kWh**
Societal Net Benefits	(J x I x H)	**$20,003,984**

Utility Program Cost per kWh Lifetime	**$0.0060**
Utility Program Cost per kW at Gen	**$434.45**

HOME LIGHTING — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$4,656,648	$4,656,648	$4,656,648	$4,656,648
T & D	N/A	$1,766,541	$1,766,541	$1,766,541	$1,766,541
Marginal Energy	N/A	$19,745,607	$19,745,607	$19,745,607	$19,745,607
Environmental Externality	N/A	N/A	N/A	N/A	$1,004,569
Subtotal	N/A	$26,168,796	$26,168,796	$26,168,796	$27,173,365
Participant Benefits					
Bill Reduction - Electric	$58,516,366	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$2,772,655	N/A	N/A	$2,772,655	$2,772,655
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$61,289,021	N/A	N/A	$2,772,655	$2,772,655
Total Benefits	$61,289,021	$26,168,796	$26,168,796	$28,941,451	$29,946,020
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$524,499	$524,499	$524,499	$524,499
Advertising & Promotion	N/A	$1,276,314	$1,276,314	$1,276,314	$1,276,314
Measurement & Verification	N/A	$25,000	$25,000	$25,000	$25,000
Rebates	N/A	$2,772,655	$2,772,655	$2,772,655	$2,772,655
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$4,598,468	$4,598,468	$4,598,468	$4,598,468
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$58,516,366	N/A	N/A
Subtotal	N/A	N/A	$58,516,366	N/A	N/A
Participant Costs					
Incremental Capital Costs	$7,217,860	N/A	N/A	$7,217,860	$7,217,860
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$7,217,860	N/A	N/A	$7,217,860	$7,217,860
Total Costs	$7,217,860	$4,598,468	$63,114,834	$11,816,328	$11,816,328
Net Benefit (Cost)	$54,071,161	$21,570,328	($36,946,038)	$17,125,123	$18,129,692
Benefit/Cost Ratio	8.49	5.69	0.41	2.45	2.53

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	9.7 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	13.96%
Gross Load Factor at Customer	E	12.15%
Transmission Loss Factor (Energy)	F	7.913%
Transmission Loss Factor (Demand)	G	8.662%
Societal Net Benefit (Cost)	H	$302

Program Summary per Participant		
Gross kW Saved at Customer	I	0.10 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.02 kW
Gross Annual kWh Saved at Customer	(B x E x I)	107 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	117 kWh

Program Summary All Participants		
Total Participants	J	594,824
Total Budget	K	**$4,598,468**
Gross kW Saved at Customer	(J x I)	60,027 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**9,176 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	63,887,919 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**69,378,126 kWh**
Societal Net Benefits	(J x I x H)	**$18,129,692**

Utility Program Cost per kWh Lifetime	**$0.0068**
Utility Program Cost per kW at Gen	**$501.15**

HOME LIGHTING — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$4,357,215	$4,357,215	$4,357,215	$4,357,215
T & D	N/A	$1,658,485	$1,658,485	$1,658,485	$1,658,485
Marginal Energy	N/A	$18,965,473	$18,965,473	$18,965,473	$18,965,473
Environmental Externality	N/A	N/A	N/A	N/A	$912,739
Subtotal	N/A	$24,981,173	$24,981,173	$24,981,173	$25,893,912
Participant Benefits					
Bill Reduction - Electric	$54,234,658	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,001,312	N/A	N/A	$3,001,312	$3,001,312
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$57,235,970	N/A	N/A	$3,001,312	$3,001,312
Total Benefits	$57,235,970	$24,981,173	$24,981,173	$27,982,485	$28,895,224
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$534,564	$534,564	$534,564	$534,564
Advertising & Promotion	N/A	$1,296,557	$1,296,557	$1,296,557	$1,296,557
Measurement & Verification	N/A	$25,000	$25,000	$25,000	$25,000
Rebates	N/A	$3,001,312	$3,001,312	$3,001,312	$3,001,312
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$4,857,433	$4,857,433	$4,857,433	$4,857,433
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$54,234,658	N/A	N/A
Subtotal	N/A	N/A	$54,234,658	N/A	N/A
Participant Costs					
Incremental Capital Costs	$7,850,057	N/A	N/A	$7,850,057	$7,850,057
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$7,850,057	N/A	N/A	$7,850,057	$7,850,057
Total Costs	$7,850,057	$4,857,433	$59,092,091	$12,707,490	$12,707,490
Net Benefit (Cost)	$49,385,913	$20,123,741	($34,110,917)	$15,274,995	$16,187,735
Benefit/Cost Ratio	7.29	5.14	0.42	2.20	2.27

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	9.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	13.98%
Gross Load Factor at Customer	E	12.16%
Transmission Loss Factor (Energy)	F	7.912%
Transmission Loss Factor (Demand)	G	8.661%
Societal Net Benefit (Cost)	H	$291

Program Summary per Participant		
Gross kW Saved at Customer	I	0.08 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.01 kW
Gross Annual kWh Saved at Customer	(B x E x I)	88 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	95 kWh

Program Summary All Participants		
Total Participants	J	675,611
Total Budget	K	**$4,857,433**
Gross kW Saved at Customer	(J x I)	55,664 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**8,520 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	59,282,645 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**64,376,286 kWh**
Societal Net Benefits	(J x I x H)	**$16,187,735**

Utility Program Cost per kWh Lifetime	**$0.0080**
Utility Program Cost per kW at Gen	**$570.13**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Home Performance with ENERGY STAR®
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	31,139			32,026			32,932		
Advertising & Promotion	10,175			10,180			10,186		
Participant Incentives	33,878			34,147			34,377		
R&D	0			0			0		
Other	22,500			22,500			22,500		
Total Costs	$97,692			$98,853			$99,995		
Project Participants									
Total Participants	225			225			225		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances	x			x			x		
Lighting	x			x			x		
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling	x			x			x		
Space Heating	x			x			x		
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	751			723			695		
Annual kWh Saved - Generator	169,025			162,570			156,325		
Cost per Annual kWh Saved	$0.5780			$0.6081			$0.6397		
Measure Lifetime (Years)	14.1			14.5			14.8		
Lifetime kWh savings	2,382,259			2,349,964			2,312,935		
Cost per kWh Lifetime	$0.0410			$0.0421			$0.0432		
Average kW Savings per Participant	0.63			0.62			0.61		
Annual kW Savings - Generator	141			140			138		
Cost per KW Saved	$690.43			$704.47			$725.27		
Cost/Benefit Results									
Societal									
Net present value	$269			$299			$322		
B/C ratio	1.26			1.29			1.31		
Participant									
Net present value	$1,149			$1,156			$1,158		
B/C ratio	1.35			1.35			1.35		
Rate Payer									
Net present value	($232)			($215)			($200)		
B/C ratio	0.83			0.84			0.86		
Utility									
Net present value	$702			$727			$746		
B/C ratio	2.62			2.66			2.68		

HOME PERFORMANCE WITH ENERGY STAR® — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$131,845	$131,845	$131,845	$131,845
T & D	N/A	$49,978	$49,978	$49,978	$49,978
Marginal Energy	N/A	$73,870	$73,870	$73,870	$73,870
Environmental Externality	N/A	N/A	N/A	N/A	$3,251
Subtotal	N/A	$255,693	$255,693	$255,693	$258,944
Participant Benefits					
Bill Reduction - Electric	$210,111	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$33,878	N/A	N/A	$33,878	$33,878
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$749,657	N/A	N/A	$1,655	$1,655
Subtotal	$993,646	N/A	N/A	$35,533	$35,533
Total Benefits	$993,646	$255,693	$255,693	$291,226	$294,477
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$31,139	$31,139	$31,139	$31,139
Advertising & Promotion	N/A	$10,175	$10,175	$10,175	$10,175
Measurement & Verification	N/A	$18,000	$18,000	$18,000	$18,000
Rebates	N/A	$33,878	$33,878	$33,878	$33,878
Other	N/A	$4,500	$4,500	$4,500	$4,500
Subtotal	N/A	$97,692	$97,692	$97,692	$97,692
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$210,111	N/A	N/A
Subtotal	N/A	N/A	$210,111	N/A	N/A
Participant Costs					
Incremental Capital Costs	$735,206	N/A	N/A	$136,199	$136,199
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$735,206	N/A	N/A	$136,199	$136,199
Total Costs	$735,206	$97,692	$307,803	$233,891	$233,891
Net Benefit (Cost)	$258,440	$158,001	($52,110)	$57,335	$60,586
Benefit/Cost Ratio	1.35	2.62	0.83	1.25	1.26

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	14.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	58.36%
Gross Load Factor at Customer	E	7.99%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$274

Program Summary per Participant		
Gross kW Saved at Customer	I	0.98 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.63 kW
Gross Annual kWh Saved at Customer	(B x E x I)	688 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	751 kWh

Program Summary All Participants		
Total Participants	J	225
Total Budget	K	**$97,692**
Gross kW Saved at Customer	(J x I)	221 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**141 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	154,827 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**169,025 kWh**
Societal Net Benefits	(J x I x H)	**$60,586**

Utility Program Cost per kWh Lifetime	**$0.0410**
Utility Program Cost per kW at Gen	**$690.43**

HOME PERFORMANCE WITH ENERGY STAR®	2014	ELECTRIC	GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$134,548	$134,548	$134,548	$134,548
T & D	N/A	$51,014	$51,014	$51,014	$51,014
Marginal Energy	N/A	$76,899	$76,899	$76,899	$76,899
Environmental Externality	N/A	N/A	N/A	N/A	$3,257
Subtotal	N/A	$262,460	$262,460	$262,460	$265,717
Participant Benefits					
Bill Reduction - Electric	$211,921	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$34,147	N/A	N/A	$34,147	$34,147
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$749,446	N/A	N/A	$1,675	$1,675
Subtotal	$995,514	N/A	N/A	$35,822	$35,822
Total Benefits	$995,514	$262,460	$262,460	$298,282	$301,539
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$32,026	$32,026	$32,026	$32,026
Advertising & Promotion	N/A	$10,180	$10,180	$10,180	$10,180
Measurement & Verification	N/A	$18,000	$18,000	$18,000	$18,000
Rebates	N/A	$34,147	$34,147	$34,147	$34,147
Other	N/A	$4,500	$4,500	$4,500	$4,500
Subtotal	N/A	$98,853	$98,853	$98,853	$98,853
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$211,921	N/A	N/A
Subtotal	N/A	N/A	$211,921	N/A	N/A
Participant Costs					
Incremental Capital Costs	$735,521	N/A	N/A	$135,505	$135,505
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$735,521	N/A	N/A	$135,505	$135,505
Total Costs	$735,521	$98,853	$310,774	$234,358	$234,358
Net Benefit (Cost)	$259,993	$163,607	($48,314)	$63,925	$67,181
Benefit/Cost Ratio	1.35	2.66	0.84	1.27	1.29

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	14.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	60.75%
Gross Load Factor at Customer	E	8.07%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$319

Program Summary per Participant		
Gross kW Saved at Customer	I	0.94 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.62 kW
Gross Annual kWh Saved at Customer	(B x E x I)	662 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	723 kWh

Program Summary All Participants		
Total Participants	J	225
Total Budget	K	**$98,853**
Gross kW Saved at Customer	(J x I)	211 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**140 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	148,914 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**162,570 kWh**
Societal Net Benefits	(J x I x H)	**$67,181**

Utility Program Cost per kWh Lifetime	**$0.0421**
Utility Program Cost per kW at Gen	**$704.47**

HOME PERFORMANCE WITH ENERGY STAR® 2015 ELECTRIC GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$136,698	$136,698	$136,698	$136,698
T & D	N/A	$51,831	$51,831	$51,831	$51,831
Marginal Energy	N/A	$79,347	$79,347	$79,347	$79,347
Environmental Externality	N/A	N/A	N/A	N/A	$3,171
Subtotal	N/A	$267,876	$267,876	$267,876	$271,047
Participant Benefits					
Bill Reduction - Electric	$212,985	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$34,377	N/A	N/A	$34,377	$34,377
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$748,814	N/A	N/A	$1,691	$1,691
Subtotal	$996,176	N/A	N/A	$36,068	$36,068
Total Benefits	$996,176	$267,876	$267,876	$303,943	$307,115
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$32,932	$32,932	$32,932	$32,932
Advertising & Promotion	N/A	$10,186	$10,186	$10,186	$10,186
Measurement & Verification	N/A	$18,000	$18,000	$18,000	$18,000
Rebates	N/A	$34,377	$34,377	$34,377	$34,377
Other	N/A	$4,500	$4,500	$4,500	$4,500
Subtotal	N/A	$99,995	$99,995	$99,995	$99,995
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$212,985	N/A	N/A
Subtotal	N/A	N/A	$212,985	N/A	N/A
Participant Costs					
Incremental Capital Costs	$735,590	N/A	N/A	$134,608	$134,608
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$735,590	N/A	N/A	$134,608	$134,608
Total Costs	$735,590	$99,995	$312,980	$234,603	$234,603
Net Benefit (Cost)	$260,586	$167,881	($45,105)	$69,340	$72,512
Benefit/Cost Ratio	1.35	2.68	0.86	1.30	1.31

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	14.8 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	62.91%
Gross Load Factor at Customer	E	8.18%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$363

Program Summary per Participant		
Gross kW Saved at Customer	I	0.89 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.61 kW
Gross Annual kWh Saved at Customer	(B x E x I)	636 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	695 kWh

Program Summary All Participants		
Total Participants	J	225
Total Budget	K	**$99,995**
Gross kW Saved at Customer	(J x I)	200 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**138 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	143,194 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**156,325 kWh**
Societal Net Benefits	(J x I x H)	**$72,512**

Utility Program Cost per kWh Lifetime	**$0.0432**
Utility Program Cost per kW at Gen	**$725.27**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Home Performance with ENERGY STAR®
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	44,339			45,613			46,903		
Advertising & Promotion	70,081			70,083			70,086		
Participant Incentives	106,028			108,476			110,926		
R&D	0			0			0		
Other	46,375			47,826			49,278		
Total Costs	$266,823			$271,998			$277,193		
Project Participants									
Total Participants	225			225			225		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	0%			0%			0%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)	x			x			x		
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating	x			x			x		
Weatherization	x			x			x		
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	31.77			32.05			32.26		
Annual Dth Saved	7,149			7,210			7,259		
Cost per Dth	$37.3239			$37.7239			$38.1882		
Project Life (Years)	16.9			17.0			17.0		
Lifetime Dth Saved	121,092			122,290			123,489		
Cost per Lifetime Dth Saved	$2.2035			$2.2242			$2.2447		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$433,133								
B/C ratio	1.21								
Participant									
Net present value	$2,012,402								
B/C ratio	2.08								
Rate Payer									
Net present value	($1,484,612)								
B/C ratio	0.53								
Utility									
Net present value	$831,182								
B/C ratio	2.02								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Home Performance with ENERGY STAR®**

Input Data	
1) Retail Rate ($/Dth) =	$7.23
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$160,795	$163,522	$166,267
Incentive Costs =	$106,028	$108,476	$110,926
16) Total Utility Project Costs =	$266,823	$271,998	$277,193
17) Direct Participant Costs ($/Part.) =	$2,759	$2,769	$2,773
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$5	$5	$5
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	16.9	17.0	17.0
21) Avg. Dth/Part. Saved =	31.77	32.05	32.26
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	225	225	225
24) Total Annual Dth Saved =	7,149	7,210	7,259
25) Incentive/Participant =	$471.24	$482.12	$493.00

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$1,186	$1,209	$1,232
Cost per Participant per Dth =	$124.15	$124.12	$124.13
Lifetime Energy Reduction (Dth)	366,871		
Societal Cost per Dth	$5.68		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($1,484,612)	0.53
Utility Cost Test	$831,182	2.02
Societal Test	$433,133	1.21
Participant Test	$2,012,402	2.08

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Insulation Rebate
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	3,687			3,757			3,828		
Advertising & Promotion	757			757			757		
Participant Incentives	80,767			83,568			87,571		
R&D	0			0			0		
Other	1,000			1,000			1,000		
Total Costs	$86,211			$89,082			$93,156		
Project Participants									
Total Participants	288			296			311		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization	x			x			x		
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	1,152			1,151			1,162		
Annual kWh Saved - Generator	331,717			340,788			361,265		
Cost per Annual kWh Saved	$0.2599			$0.2614			$0.2579		
Measure Lifetime (Years)	19.3			19.3			19.3		
Lifetime kWh savings	6,410,717			6,587,004			6,981,118		
Cost per kWh Lifetime	$0.0134			$0.0135			$0.0133		
Average kW Savings per Participant	0.80			0.81			0.80		
Annual kW Savings - Generator	231			240			250		
Cost per KW Saved	$372.88			$371.30			$372.30		
Cost/Benefit Results									
Societal									
Net present value	$610			$690			$767		
B/C ratio	1.37			1.41			1.46		
Participant									
Net present value	$985			$1,031			$1,101		
B/C ratio	1.19			1.20			1.21		
Rate Payer									
Net present value	($199)			($174)			($179)		
B/C ratio	0.91			0.92			0.92		
Utility									
Net present value	$1,672			$1,748			$1,812		
B/C ratio	6.59			6.81			7.05		

INSULATION REBATE — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$262,327	$262,327	$262,327	$262,327
T & D	N/A	$99,454	$99,454	$99,454	$99,454
Marginal Energy	N/A	$206,101	$206,101	$206,101	$206,101
Environmental Externality	N/A	N/A	N/A	N/A	$7,712
Subtotal	N/A	$567,882	$567,882	$567,882	$575,595
Participant Benefits					
Bill Reduction - Electric	$539,039	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$80,767	N/A	N/A	$80,767	$80,767
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,158,179	N/A	N/A	$0	$0
Subtotal	$1,777,985	N/A	N/A	$80,767	$80,767
Total Benefits	$1,777,985	$567,882	$567,882	$648,649	$656,362
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$3,687	$3,687	$3,687	$3,687
Advertising & Promotion	N/A	$757	$757	$757	$757
Measurement & Verification	N/A	$1,000	$1,000	$1,000	$1,000
Rebates	N/A	$80,767	$80,767	$80,767	$80,767
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$86,211	$86,211	$86,211	$86,211
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$539,039	N/A	N/A
Subtotal	N/A	N/A	$539,039	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,494,194	N/A	N/A	$394,459	$394,459
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,494,194	N/A	N/A	$394,459	$394,459
Total Costs	$1,494,194	$86,211	$625,250	$480,670	$480,670
Net Benefit (Cost)	$283,791	$481,671	($57,368)	$167,979	$175,692
Benefit/Cost Ratio	1.19	6.59	0.91	1.35	1.37

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	19.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	46.51%
Gross Load Factor at Customer	E	7.65%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$388

Program Summary per Participant		
Gross kW Saved at Customer	I	1.57 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.80 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,055 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,152 kWh

Program Summary All Participants		
Total Participants	J	288
Total Budget	K	**$86,211**
Gross kW Saved at Customer	(J x I)	453 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**231 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	303,853 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**331,717 kWh**
Societal Net Benefits	(J x I x H)	**$175,692**

Utility Program Cost per kWh Lifetime	**$0.0134**
Utility Program Cost per kW at Gen	**$372.88**

INSULATION REBATE — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$278,635	$278,635	$278,635	$278,635
T & D	N/A	$105,640	$105,640	$105,640	$105,640
Marginal Energy	N/A	$222,261	$222,261	$222,261	$222,261
Environmental Externality	N/A	N/A	N/A	N/A	$8,136
Subtotal	N/A	$606,536	$606,536	$606,536	$614,672
Participant Benefits					
Bill Reduction - Electric	$568,878	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$83,568	N/A	N/A	$83,568	$83,568
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,203,065	N/A	N/A	$0	$0
Subtotal	$1,855,511	N/A	N/A	$83,568	$83,568
Total Benefits	$1,855,511	$606,536	$606,536	$690,104	$698,240
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$3,757	$3,757	$3,757	$3,757
Advertising & Promotion	N/A	$757	$757	$757	$757
Measurement & Verification	N/A	$1,000	$1,000	$1,000	$1,000
Rebates	N/A	$83,568	$83,568	$83,568	$83,568
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$89,082	$89,082	$89,082	$89,082
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$568,878	N/A	N/A
Subtotal	N/A	N/A	$568,878	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,550,417	N/A	N/A	$404,953	$404,953
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,550,417	N/A	N/A	$404,953	$404,953
Total Costs	$1,550,417	$89,082	$657,960	$494,035	$494,035
Net Benefit (Cost)	$305,094	$517,454	($51,424)	$196,069	$204,205
Benefit/Cost Ratio	1.20	6.81	0.92	1.40	1.41

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	19.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	46.83%
Gross Load Factor at Customer	E	7.63%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$437

Program Summary per Participant		
Gross kW Saved at Customer	I	1.58 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.81 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,055 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,151 kWh

Program Summary All Participants		
Total Participants	J	296
Total Budget	K	**$89,082**
Gross kW Saved at Customer	(J x I)	467 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**240 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	312,162 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**340,788 kWh**
Societal Net Benefits	(J x I x H)	**$204,205**

Utility Program Cost per kWh Lifetime	**$0.0135**
Utility Program Cost per kW at Gen	**$371.30**

INSULATION REBATE — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$297,461	$297,461	$297,461	$297,461
T & D	N/A	$112,775	$112,775	$112,775	$112,775
Marginal Energy	N/A	$246,485	$246,485	$246,485	$246,485
Environmental Externality	N/A	N/A	N/A	N/A	$8,726
Subtotal	N/A	$656,721	$656,721	$656,721	$665,447
Participant Benefits					
Bill Reduction - Electric	$619,315	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$87,571	N/A	N/A	$87,571	$87,571
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,252,493	N/A	N/A	$0	$0
Subtotal	$1,959,379	N/A	N/A	$87,571	$87,571
Total Benefits	$1,959,379	$656,721	$656,721	$744,292	$753,018
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$3,828	$3,828	$3,828	$3,828
Advertising & Promotion	N/A	$757	$757	$757	$757
Measurement & Verification	N/A	$1,000	$1,000	$1,000	$1,000
Rebates	N/A	$87,571	$87,571	$87,571	$87,571
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$93,156	$93,156	$93,156	$93,156
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$619,315	N/A	N/A
Subtotal	N/A	N/A	$619,315	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,617,077	N/A	N/A	$421,178	$421,178
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,617,077	N/A	N/A	$421,178	$421,178
Total Costs	$1,617,077	$93,156	$712,471	$514,334	$514,334
Net Benefit (Cost)	$342,302	$563,565	($55,750)	$229,958	$238,685
Benefit/Cost Ratio	1.21	7.05	0.92	1.45	1.46

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	19.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	46.31%
Gross Load Factor at Customer	E	7.67%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$484

Program Summary per Participant		
Gross kW Saved at Customer	I	1.58 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.80 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,064 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,162 kWh

Program Summary All Participants		
Total Participants	J	311
Total Budget	K	**$93,156**
Gross kW Saved at Customer	(J x I)	493 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**250 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	330,919 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**361,265 kWh**
Societal Net Benefits	(J x I x H)	**$238,685**

Utility Program Cost per kWh Lifetime	**$0.0133**
Utility Program Cost per kW at Gen	**$372.30**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Insulation Rebate
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	36,870			37,570			38,284		
Advertising & Promotion	5,732			5,257			5,257		
Participant Incentives	253,049			263,238			273,329		
R&D	0			0			0		
Other	28,000			28,000			28,000		
Total Costs	$323,651			$334,065			$344,870		
Project Participants									
Total Participants	1,049			1,092			1,133		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	0%			0%			0%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)	x			x			x		
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization	x			x			x		
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	13.78			13.77			13.78		
Annual Dth Saved	14,455			15,033			15,615		
Cost per Dth	$22.3909			$22.2218			$22.0855		
Project Life (Years)	19.1			19.1			19.1		
Lifetime Dth Saved	275,599			286,631			297,732		
Cost per Lifetime Dth Saved	$1.1744			$1.1655			$1.1583		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$1,763,224								
B/C ratio	1.43								
Participant									
Net present value	$4,446,489								
B/C ratio	1.93								
Rate Payer									
Net present value	($2,551,773)								
B/C ratio	0.60								
Utility									
Net present value	$2,814,079								
B/C ratio	3.81								

Conservation Improvement Program (CIP)

BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Insulation Rebate**

Input Data	
1) Retail Rate ($/Dth) =	$7.23
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$70,602	$70,827	$71,541
Incentive Costs =	$253,049	$263,238	$273,329
16) Total Utility Project Costs =	$323,651	$334,065	$344,870
17) Direct Participant Costs ($/Part.) =	$1,463	$1,461	$1,463
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	19.1	19.1	19.1
21) Avg. Dth/Part. Saved =	13.78	13.77	13.78
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	1,049	1,092	1,133
24) Total Annual Dth Saved =	14,455	15,033	15,615
25) Incentive/Participant =	$241.23	$241.06	$241.24

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$309	$306	$304
Cost per Participant per Dth =	$128.53	$128.36	$128.23
Lifetime Energy Reduction (Dth)	859,962		
Societal Cost per Dth	$4.78		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($2,551,773)	0.60
Utility Cost Test	$2,814,079	3.81
Societal Test	$1,763,224	1.43
Participant Test	$4,446,489	1.93

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Refrigerator Recycling
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	330,000			360,000			390,000		
Utility Administration	12,575			13,057			13,341		
Advertising & Promotion	210,103			225,106			245,109		
Participant Incentives	192,500			210,000			227,500		
R&D	0			0			0		
Other	37,250			40,000			45,000		
Total Costs	$782,428			$848,163			$920,950		
Project Participants									
Total Participants	5,500			6,000			6,500		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration	x			x			x		
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	1,131			1,131			1,131		
Annual kWh Saved - Generator	6,221,426			6,787,010			7,352,594		
Cost per Annual kWh Saved	$0.1258			$0.1250			$0.1253		
Measure Lifetime (Years)	8.3			8.3			8.3		
Lifetime kWh savings	51,408,872			56,082,406			60,755,940		
Cost per kWh Lifetime	$0.0152			$0.0151			$0.0152		
Average kW Savings per Participant	0.13			0.13			0.13		
Annual kW Savings - Generator	713			778			843		
Cost per KW Saved	$1,096.88			$1,089.94			$1,092.44		
Cost/Benefit Results									
Societal									
Net present value	$296			$320			$343		
B/C ratio	3.08			3.26			3.42		
Participant									
Net present value	$912			$933			$955		
B/C ratio	INF			INF			INF		
Rate Payer									
Net present value	($631)			($629)			($629)		
B/C ratio	0.38			0.40			0.41		
Utility									
Net present value	$246			$270			$292		
B/C ratio	2.73			2.91			3.06		

REFRIGERATOR RECYCLING — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$427,152	$427,152	$427,152	$427,152
T & D	N/A	$161,953	$161,953	$161,953	$161,953
Marginal Energy	N/A	$1,546,809	$1,546,809	$1,546,809	$1,546,809
Environmental Externality	N/A	N/A	N/A	N/A	$83,028
Subtotal	N/A	$2,135,914	$2,135,914	$2,135,914	$2,218,942
Participant Benefits					
Bill Reduction - Electric	$4,822,928	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$192,500	N/A	N/A	$192,500	$192,500
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$5,015,428	N/A	N/A	$192,500	$192,500
Total Benefits	$5,015,428	$2,135,914	$2,135,914	$2,328,414	$2,411,442
Costs					
Utility Project Costs					
Customer Services	N/A	$330,000	$330,000	$330,000	$330,000
Project Administration	N/A	$12,575	$12,575	$12,575	$12,575
Advertising & Promotion	N/A	$210,103	$210,103	$210,103	$210,103
Measurement & Verification	N/A	$37,250	$37,250	$37,250	$37,250
Rebates	N/A	$192,500	$192,500	$192,500	$192,500
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$782,428	$782,428	$782,428	$782,428
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$4,822,928	N/A	N/A
Subtotal	N/A	N/A	$4,822,928	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$782,428	$5,605,356	$782,428	$782,428
Net Benefit (Cost)	$5,015,428	$1,353,486	($3,469,442)	$1,545,986	$1,629,014
Benefit/Cost Ratio	INF	2.73	0.38	2.98	3.08

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	8.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	55.00%
Gross Load Factor at Customer	E	55.00%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$1,377

Program Summary per Participant		
Gross kW Saved at Customer	I	0.22 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.13 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,036 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,131 kWh

Program Summary All Participants		
Total Participants	J	5,500
Total Budget	K	**$782,428**
Gross kW Saved at Customer	(J x I)	1,183 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**713 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	5,698,826 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**6,221,426 kWh**
Societal Net Benefits	(J x I x H)	**$1,629,014**

Utility Program Cost per kWh Lifetime	**$0.0152**
Utility Program Cost per kW at Gen	**$1,096.88**

REFRIGERATOR RECYCLING	2014	ELECTRIC	GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$477,000	$477,000	$477,000	$477,000
T & D	N/A	$180,876	$180,876	$180,876	$180,876
Marginal Energy	N/A	$1,807,308	$1,807,308	$1,807,308	$1,807,308
Environmental Externality	N/A	N/A	N/A	N/A	$93,948
Subtotal	N/A	$2,465,184	$2,465,184	$2,465,184	$2,559,132
Participant Benefits					
Bill Reduction - Electric	$5,389,188	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$210,000	N/A	N/A	$210,000	$210,000
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$5,599,188	N/A	N/A	$210,000	$210,000
Total Benefits	$5,599,188	$2,465,184	$2,465,184	$2,675,184	$2,769,132
Costs					
Utility Project Costs					
Customer Services	N/A	$360,000	$360,000	$360,000	$360,000
Project Administration	N/A	$13,057	$13,057	$13,057	$13,057
Advertising & Promotion	N/A	$225,106	$225,106	$225,106	$225,106
Measurement & Verification	N/A	$40,000	$40,000	$40,000	$40,000
Rebates	N/A	$210,000	$210,000	$210,000	$210,000
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$848,163	$848,163	$848,163	$848,163
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,389,188	N/A	N/A
Subtotal	N/A	N/A	$5,389,188	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$848,163	$6,237,351	$848,163	$848,163
Net Benefit (Cost)	$5,599,188	$1,617,021	($3,772,167)	$1,827,021	$1,920,969
Benefit/Cost Ratio	INF	2.91	0.40	3.15	3.26

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	8.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	55.00%
Gross Load Factor at Customer	E	55.00%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$1,489

Program Summary per Participant		
Gross kW Saved at Customer	I	0.22 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.13 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,036 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,131 kWh

Program Summary All Participants		
Total Participants	J	6,000
Total Budget	K	**$848,163**
Gross kW Saved at Customer	(J x I)	1,290 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**778 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	6,216,901 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**6,787,010 kWh**
Societal Net Benefits	(J x I x H)	**$1,920,969**

Utility Program Cost per kWh Lifetime	**$0.0151**
Utility Program Cost per kW at Gen	**$1,089.94**

REFRIGERATOR RECYCLING — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$528,931	$528,931	$528,931	$528,931
T & D	N/A	$200,577	$200,577	$200,577	$200,577
Marginal Energy	N/A	$2,087,501	$2,087,501	$2,087,501	$2,087,501
Environmental Externality	N/A	N/A	N/A	N/A	$102,843
Subtotal	N/A	$2,817,009	$2,817,009	$2,817,009	$2,919,852
Participant Benefits					
Bill Reduction - Electric	$5,982,925	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$227,500	N/A	N/A	$227,500	$227,500
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$6,210,425	N/A	N/A	$227,500	$227,500
Total Benefits	$6,210,425	$2,817,009	$2,817,009	$3,044,509	$3,147,352
Costs					
Utility Project Costs					
Customer Services	N/A	$390,000	$390,000	$390,000	$390,000
Project Administration	N/A	$13,341	$13,341	$13,341	$13,341
Advertising & Promotion	N/A	$245,109	$245,109	$245,109	$245,109
Measurement & Verification	N/A	$45,000	$45,000	$45,000	$45,000
Rebates	N/A	$227,500	$227,500	$227,500	$227,500
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$920,950	$920,950	$920,950	$920,950
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,982,925	N/A	N/A
Subtotal	N/A	N/A	$5,982,925	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$920,950	$6,903,875	$920,950	$920,950
Net Benefit (Cost)	$6,210,425	$1,896,059	($4,086,866)	$2,123,559	$2,226,402
Benefit/Cost Ratio	INF	3.06	0.41	3.31	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	8.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	55.00%
Gross Load Factor at Customer	E	55.00%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$1,593

Program Summary per Participant		
Gross kW Saved at Customer	I	0.22 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.13 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,036 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,131 kWh

Program Summary All Participants		
Total Participants	J	6,500
Total Budget	K	**$920,950**
Gross kW Saved at Customer	(J x I)	1,398 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**843 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	6,734,976 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**7,352,594 kWh**
Societal Net Benefits	(J x I x H)	**$2,226,402**

Utility Program Cost per kWh Lifetime	**$0.0152**
Utility Program Cost per kW at Gen	**$1,092.44**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Residential Cooling
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	467,644			475,320			483,095		
Advertising & Promotion	777,330			777,400			777,472		
Participant Incentives	3,358,400			3,383,200			3,407,650		
R&D	0			0			0		
Other	100,000			100,000			100,000		
Total Costs	$4,703,374			$4,735,920			$4,768,217		
Project Participants									
Total Participants	9,859			9,987			10,114		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling	x			x			x		
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	543			542			542		
Annual kWh Saved - Generator	5,355,937			5,417,907			5,479,306		
Cost per Annual kWh Saved	$0.8782			$0.8741			$0.8702		
Measure Lifetime (Years)	9.0			9.0			9.0		
Lifetime kWh savings	48,362,102			48,829,746			49,292,183		
Cost per kWh Lifetime	$0.0973			$0.0970			$0.0967		
Average kW Savings per Participant	0.90			0.90			0.90		
Annual kW Savings - Generator	8,921			9,022			9,121		
Cost per KW Saved	$527.22			$524.95			$522.75		
Cost/Benefit Results									
Societal									
Net present value	$19			$53			$87		
B/C ratio	1.01			1.04			1.07		
Participant									
Net present value	$18			$33			$47		
B/C ratio	1.02			1.04			1.06		
Rate Payer									
Net present value	($7)			$12			$31		
B/C ratio	0.99			1.01			1.03		
Utility									
Net present value	$494			$524			$555		
B/C ratio	2.04			2.11			2.18		

RESIDENTIAL COOLING — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$5,653,332	$5,653,332	$5,653,332	$5,653,332
T & D	N/A	$2,143,402	$2,143,402	$2,143,402	$2,143,402
Marginal Energy	N/A	$1,775,236	$1,775,236	$1,775,236	$1,775,236
Environmental Externality	N/A	N/A	N/A	N/A	$75,215
Subtotal	N/A	$9,571,970	$9,571,970	$9,571,970	$9,647,184
Participant Benefits					
Bill Reduction - Electric	$4,940,015	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,358,400	N/A	N/A	$3,358,400	$3,358,400
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$8,298,415	N/A	N/A	$3,358,400	$3,358,400
Total Benefits	$8,298,415	$9,571,970	$9,571,970	$12,930,370	$13,005,584
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$467,644	$467,644	$467,644	$467,644
Advertising & Promotion	N/A	$777,330	$777,330	$777,330	$777,330
Measurement & Verification	N/A	$100,000	$100,000	$100,000	$100,000
Rebates	N/A	$3,358,400	$3,358,400	$3,358,400	$3,358,400
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$4,703,374	$4,703,374	$4,703,374	$4,703,374
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$4,940,015	N/A	N/A
Subtotal	N/A	N/A	$4,940,015	N/A	N/A
Participant Costs					
Incremental Capital Costs	$8,119,196	N/A	N/A	$8,119,196	$8,119,196
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$8,119,196	N/A	N/A	$8,119,196	$8,119,196
Total Costs	$8,119,196	$4,703,374	$9,643,389	$12,822,570	$12,822,570
Net Benefit (Cost)	$179,219	$4,868,595	($71,420)	$107,800	$183,014
Benefit/Cost Ratio	1.02	2.04	0.99	1.01	1.01

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	9.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	89.90%
Gross Load Factor at Customer	E	6.19%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$20

Program Summary per Participant		
Gross kW Saved at Customer	I	0.92 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.90 kW
Gross Annual kWh Saved at Customer	(B x E x I)	498 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	543 kWh

Program Summary All Participants		
Total Participants	J	9,859
Total Budget	K	**$4,703,374**
Gross kW Saved at Customer	(J x I)	9,050 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**8,921 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	4,906,039 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**5,355,937 kWh**
Societal Net Benefits	(J x I x H)	**$183,014**

Utility Program Cost per kWh Lifetime	**$0.0973**
Utility Program Cost per kW at Gen	**$527.22**

RESIDENTIAL COOLING — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$5,844,124	$5,844,124	$5,844,124	$5,844,124
T & D	N/A	$2,215,737	$2,215,737	$2,215,737	$2,215,737
Marginal Energy	N/A	$1,910,521	$1,910,521	$1,910,521	$1,910,521
Environmental Externality	N/A	N/A	N/A	N/A	$79,212
Subtotal	N/A	$9,970,382	$9,970,382	$9,970,382	$10,049,594
Participant Benefits					
Bill Reduction - Electric	$5,113,361	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,383,200	N/A	N/A	$3,383,200	$3,383,200
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$8,496,561	N/A	N/A	$3,383,200	$3,383,200
Total Benefits	$8,496,561	$9,970,382	$9,970,382	$13,353,582	$13,432,794
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$475,320	$475,320	$475,320	$475,320
Advertising & Promotion	N/A	$777,400	$777,400	$777,400	$777,400
Measurement & Verification	N/A	$100,000	$100,000	$100,000	$100,000
Rebates	N/A	$3,383,200	$3,383,200	$3,383,200	$3,383,200
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$4,735,920	$4,735,920	$4,735,920	$4,735,920
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,113,361	N/A	N/A
Subtotal	N/A	N/A	$5,113,361	N/A	N/A
Participant Costs					
Incremental Capital Costs	$8,170,394	N/A	N/A	$8,170,394	$8,170,394
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$8,170,394	N/A	N/A	$8,170,394	$8,170,394
Total Costs	$8,170,394	$4,735,920	$9,849,281	$12,906,314	$12,906,314
Net Benefit (Cost)	$326,167	$5,234,462	$121,101	$447,268	$526,480
Benefit/Cost Ratio	1.04	2.11	1.01	1.03	1.04

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	9.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	89.90%
Gross Load Factor at Customer	E	6.19%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$58

Program Summary per Participant		
Gross kW Saved at Customer	I	0.92 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.90 kW
Gross Annual kWh Saved at Customer	(B x E x I)	497 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	542 kWh

Program Summary All Participants		
Total Participants	J	9,987
Total Budget	K	**$4,735,920**
Gross kW Saved at Customer	(J x I)	9,153 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**9,022 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	4,962,803 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**5,417,907 kWh**
Societal Net Benefits	(J x I x H)	**$526,480**

Utility Program Cost per kWh Lifetime	**$0.0970**
Utility Program Cost per kW at Gen	**$524.95**

RESIDENTIAL COOLING — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$6,040,204	$6,040,204	$6,040,204	$6,040,204
T & D	N/A	$2,290,093	$2,290,093	$2,290,093	$2,290,093
Marginal Energy	N/A	$2,049,263	$2,049,263	$2,049,263	$2,049,263
Environmental Externality	N/A	N/A	N/A	N/A	$80,312
Subtotal	N/A	$10,379,560	$10,379,560	$10,379,560	$10,459,873
Participant Benefits					
Bill Reduction - Electric	$5,293,093	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,407,650	N/A	N/A	$3,407,650	$3,407,650
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$8,700,743	N/A	N/A	$3,407,650	$3,407,650
Total Benefits	$8,700,743	$10,379,560	$10,379,560	$13,787,210	$13,867,523
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$483,095	$483,095	$483,095	$483,095
Advertising & Promotion	N/A	$777,472	$777,472	$777,472	$777,472
Measurement & Verification	N/A	$100,000	$100,000	$100,000	$100,000
Rebates	N/A	$3,407,650	$3,407,650	$3,407,650	$3,407,650
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$4,768,217	$4,768,217	$4,768,217	$4,768,217
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,293,093	N/A	N/A
Subtotal	N/A	N/A	$5,293,093	N/A	N/A
Participant Costs					
Incremental Capital Costs	$8,220,656	N/A	N/A	$8,220,656	$8,220,656
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$8,220,656	N/A	N/A	$8,220,656	$8,220,656
Total Costs	$8,220,656	$4,768,217	$10,061,310	$12,988,873	$12,988,873
Net Benefit (Cost)	$480,087	$5,611,343	$318,251	$798,338	$878,650
Benefit/Cost Ratio	1.06	2.18	1.03	1.06	1.07

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	9.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	89.90%
Gross Load Factor at Customer	E	6.19%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$95

Program Summary per Participant		
Gross kW Saved at Customer	I	0.91 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.90 kW
Gross Annual kWh Saved at Customer	(B x E x I)	496 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	542 kWh

Program Summary All Participants		
Total Participants	J	10,114
Total Budget	K	**$4,768,217**
Gross kW Saved at Customer	(J x I)	9,254 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**9,121 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	5,019,044 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**5,479,306 kWh**
Societal Net Benefits	(J x I x H)	**$878,650**

Utility Program Cost per kWh Lifetime	**$0.0967**
Utility Program Cost per kW at Gen	**$522.75**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: School Education Kits
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	395,971			396,381			396,663		
Advertising & Promotion	5,200			5,600			6,000		
Participant Incentives	185,222			185,222			185,222		
R&D	0			0			0		
Other	30,465			30,465			30,465		
Total Costs	$616,858			$617,668			$618,350		
Project Participants									
Total Participants	20,000			20,000			20,000		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting	x			x			x		
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling	x			x			x		
Space Heating	x			x			x		
Water Heating	x			x			x		
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	112			98			86		
Annual kWh Saved - Generator	2,231,297			1,957,614			1,714,351		
Cost per Annual kWh Saved	$0.2765			$0.3155			$0.3607		
Measure Lifetime (Years)	10.4			10.6			10.4		
Lifetime kWh savings	23,243,337			20,666,483			17,850,934		
Cost per kWh Lifetime	$0.0265			$0.0299			$0.0346		
Average kW Savings per Participant	0.01			0.01			0.01		
Annual kW Savings - Generator	181			155			131		
Cost per KW Saved	$3,406.94			$3,989.56			$4,702.31		
Cost/Benefit Results									
Societal									
Net present value	$19			$15			$11		
B/C ratio	1.48			1.38			1.28		
Participant									
Net present value	$193			$174			$156		
B/C ratio	21.88			19.77			17.85		
Rate Payer									
Net present value	($176)			($160)			($146)		
B/C ratio	0.20			0.20			0.20		
Utility									
Net present value	$13			$9			$5		
B/C ratio	1.42			1.30			1.17		

SCHOOL EDUCATION KITS — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$137,160	$137,160	$137,160	$137,160
T & D	N/A	$51,960	$51,960	$51,960	$51,960
Marginal Energy	N/A	$686,819	$686,819	$686,819	$686,819
Environmental Externality	N/A	N/A	N/A	N/A	$36,318
Subtotal	N/A	$875,939	$875,939	$875,939	$912,258
Participant Benefits					
Bill Reduction - Electric	$3,775,356	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$185,222	N/A	N/A	$185,222	$185,222
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$91,783	N/A	N/A	$91,783	$91,783
Subtotal	$4,052,361	N/A	N/A	$277,005	$277,005
Total Benefits	$4,052,361	$875,939	$875,939	$1,152,944	$1,189,262
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$395,971	$395,971	$395,971	$395,971
Advertising & Promotion	N/A	$5,200	$5,200	$5,200	$5,200
Measurement & Verification	N/A	$30,465	$30,465	$30,465	$30,465
Rebates	N/A	$185,222	$185,222	$185,222	$185,222
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$616,858	$616,858	$616,858	$616,858
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$3,775,356	N/A	N/A
Subtotal	N/A	N/A	$3,775,356	N/A	N/A
Participant Costs					
Incremental Capital Costs	$185,222	N/A	N/A	$185,222	$185,222
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$185,222	N/A	N/A	$185,222	$185,222
Total Costs	$185,222	$616,858	$4,392,214	$802,080	$802,080
Net Benefit (Cost)	$3,867,139	$259,081	($3,516,275)	$350,864	$387,182
Benefit/Cost Ratio	21.88	1.42	0.20	1.44	1.48

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	10.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	7.54%
Gross Load Factor at Customer	E	10.66%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$177

Program Summary per Participant		
Gross kW Saved at Customer	I	0.11 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.01 kW
Gross Annual kWh Saved at Customer	(B x E x I)	102 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	112 kWh

Program Summary All Participants		
Total Participants	J	20,000
Total Budget	K	**$616,858**
Gross kW Saved at Customer	(J x I)	2,189 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**181 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,043,868 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,231,297 kWh**
Societal Net Benefits	(J x I x H)	**$387,182**

Utility Program Cost per kWh Lifetime	**$0.0265**
Utility Program Cost per kW at Gen	**$3,406.94**

SCHOOL EDUCATION KITS — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$120,000	$120,000	$120,000	$120,000
T & D	N/A	$45,480	$45,480	$45,480	$45,480
Marginal Energy	N/A	$634,661	$634,661	$634,661	$634,661
Environmental Externality	N/A	N/A	N/A	N/A	$31,990
Subtotal	N/A	$800,141	$800,141	$800,141	$832,131
Participant Benefits					
Bill Reduction - Electric	$3,385,558	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$185,222	N/A	N/A	$185,222	$185,222
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$91,783	N/A	N/A	$91,783	$91,783
Subtotal	$3,662,563	N/A	N/A	$277,005	$277,005
Total Benefits	$3,662,563	$800,141	$800,141	$1,077,145	$1,109,136
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$396,381	$396,381	$396,381	$396,381
Advertising & Promotion	N/A	$5,600	$5,600	$5,600	$5,600
Measurement & Verification	N/A	$30,465	$30,465	$30,465	$30,465
Rebates	N/A	$185,222	$185,222	$185,222	$185,222
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$617,668	$617,668	$617,668	$617,668
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$3,385,558	N/A	N/A
Subtotal	N/A	N/A	$3,385,558	N/A	N/A
Participant Costs					
Incremental Capital Costs	$185,222	N/A	N/A	$185,222	$185,222
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$185,222	N/A	N/A	$185,222	$185,222
Total Costs	$185,222	$617,668	$4,003,226	$802,890	$802,890
Net Benefit (Cost)	$3,477,341	$182,473	($3,203,085)	$274,255	$306,246
Benefit/Cost Ratio	19.77	1.30	0.20	1.34	1.38

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	10.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	7.47%
Gross Load Factor at Customer	E	10.83%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$162

Program Summary per Participant		
Gross kW Saved at Customer	I	0.09 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.01 kW
Gross Annual kWh Saved at Customer	(B x E x I)	90 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	98 kWh

Program Summary All Participants		
Total Participants	J	20,000
Total Budget	K	**$617,668**
Gross kW Saved at Customer	(J x I)	1,890 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**155 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,793,175 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,957,614 kWh**
Societal Net Benefits	(J x I x H)	**$306,246**

Utility Program Cost per kWh Lifetime	**$0.0299**
Utility Program Cost per kW at Gen	**$3,989.56**

SCHOOL EDUCATION KITS — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$104,400	$104,400	$104,400	$104,400
T & D	N/A	$39,600	$39,600	$39,600	$39,600
Marginal Energy	N/A	$582,413	$582,413	$582,413	$582,413
Environmental Externality	N/A	N/A	N/A	N/A	$27,950
Subtotal	N/A	$726,413	$726,413	$726,413	$754,362
Participant Benefits					
Bill Reduction - Electric	$3,028,610	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$185,222	N/A	N/A	$185,222	$185,222
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$91,783	N/A	N/A	$91,783	$91,783
Subtotal	$3,305,615	N/A	N/A	$277,005	$277,005
Total Benefits	$3,305,615	$726,413	$726,413	$1,003,417	$1,031,367
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$396,663	$396,663	$396,663	$396,663
Advertising & Promotion	N/A	$6,000	$6,000	$6,000	$6,000
Measurement & Verification	N/A	$30,465	$30,465	$30,465	$30,465
Rebates	N/A	$185,222	$185,222	$185,222	$185,222
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$618,350	$618,350	$618,350	$618,350
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$3,028,610	N/A	N/A
Subtotal	N/A	N/A	$3,028,610	N/A	N/A
Participant Costs					
Incremental Capital Costs	$185,222	N/A	N/A	$185,222	$185,222
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$185,222	N/A	N/A	$185,222	$185,222
Total Costs	$185,222	$618,350	$3,646,960	$803,572	$803,572
Net Benefit (Cost)	$3,120,393	$108,063	($2,920,547)	$199,845	$227,795
Benefit/Cost Ratio	17.85	1.17	0.20	1.25	1.28

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	10.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	7.39%
Gross Load Factor at Customer	E	11.04%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$140

Program Summary per Participant		
Gross kW Saved at Customer	I	0.08 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.01 kW
Gross Annual kWh Saved at Customer	(B x E x I)	79 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	86 kWh

Program Summary All Participants		
Total Participants	J	20,000
Total Budget	K	**$618,350**
Gross kW Saved at Customer	(J x I)	1,624 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**131 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,570,345 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,714,351 kWh**
Societal Net Benefits	(J x I x H)	**$227,795**

Utility Program Cost per kWh Lifetime	**$0.0346**
Utility Program Cost per kW at Gen	**$4,702.31**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: School Education Kits
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	304,260			304,483			304,617		
Advertising & Promotion	10,400			11,200			12,000		
Participant Incentives	143,778			143,778			143,778		
R&D	0			0			0		
Other	23,600			23,621			23,628		
Total Costs	$482,038			$483,082			$484,023		
Project Participants									
Total Participants	20,000			20,000			20,000		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)	x			x			x		
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating	x			x			x		
Weatherization									
General/Other	x			x			x		
Energy Savings									
Avg. Dth/Part. Saved	1.08			1.08			1.08		
Annual Dth Saved	21,597			21,597			21,597		
Cost per Dth	$22.3198			$22.3681			$22.4117		
Project Life (Years)	5.8			5.8			5.8		
Lifetime Dth Saved	124,471			124,471			124,471		
Cost per Lifetime Dth Saved	$3.8727			$3.8811			$3.8886		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$5,070,395								
B/C ratio	4.50								
Participant									
Net present value	$7,267,390								
B/C ratio	17.85								
Rate Payer									
Net present value	($2,246,110)								
B/C ratio	0.47								
Utility									
Net present value	$514,310								
B/C ratio	1.35								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **School Education Kits**

Input Data	
1) Retail Rate ($/Dth) =	$7.23
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$338,260	$339,304	$340,245
Incentive Costs =	$143,778	$143,778	$143,778
16) Total Utility Project Costs =	$482,038	$483,082	$484,023
17) Direct Participant Costs ($/Part.) =	$7	$7	$7
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$12	$12	$12
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	5.8	5.8	5.8
21) Avg. Dth/Part. Saved =	1.08	1.08	1.08
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	20,000	20,000	20,000
24) Total Annual Dth Saved =	21,597	21,597	21,597
25) Incentive/Participant =	$7.19	$7.19	$7.19

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$24	$24	$24
Cost per Participant per Dth =	$28.98	$29.03	$29.07
Lifetime Energy Reduction (Dth)	373,413		
Societal Cost per Dth	$3.88		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($2,246,110)	0.47
Utility Cost Test	$514,310	1.35
Societal Test	$5,070,395	4.50
Participant Test	$7,267,390	17.85

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Water Heater Rebate
Project Description:
(Note changes)

Type Conservation
Status: New

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	42,160			46,097			53,004		
Advertising & Promotion	8,386			8,398			8,410		
Participant Incentives	121,000			127,500			127,500		
R&D	0			0			0		
Other	5,600			6,000			6,000		
Total Costs	$177,146			$187,995			$194,914		
Project Participants									
Total Participants	1,330			1,380			1,380		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating	x			x			x		
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	2.60			2.66			2.66		
Annual Dth Saved	3,461			3,677			3,677		
Cost per Dth	$51.1883			$51.1276			$53.0093		
Project Life (Years)	16.4			16.4			16.4		
Lifetime Dth Saved	56,594			60,415			60,415		
Cost per Lifetime Dth Saved	$3.1301			$3.1117			$3.2263		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	($559,100)								
B/C ratio	0.68								
Participant									
Net present value	$399,881								
B/C ratio	1.26								
Rate Payer									
Net present value	($889,626)								
B/C ratio	0.48								
Utility									
Net present value	$251,894								
B/C ratio	1.45								

Conservation Improvement Program (CIP)

BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Water Heater Rebate**

Input Data	
1) Retail Rate ($/Dth) =	$7.23
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$56,146	$60,495	$67,414
Incentive Costs =	$121,000	$127,500	$127,500
16) Total Utility Project Costs =	$177,146	$187,995	$194,914
17) Direct Participant Costs ($/Part.) =	$376	$386	$386
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	16.4	16.4	16.4
21) Avg. Dth/Part. Saved =	2.60	2.66	2.66
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	1,330	1,380	1,380
24) Total Annual Dth Saved =	3,461	3,677	3,677
25) Incentive/Participant =	$90.98	$92.39	$92.39

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$133	$136	$141
Cost per Participant per Dth =	$195.60	$195.96	$197.84
Lifetime Energy Reduction (Dth)	177,423		
Societal Cost per Dth	$9.86		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($889,626)	0.48
Utility Cost Test	$251,894	1.45
Societal Test	($559,100)	0.68
Participant Test	$399,881	1.26

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Residential Segment Load Management - Saver's Switch
Project Description:
(Note changes)

Type Load Management
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	1,900,000			1,947,500			1,996,188		
Utility Administration	2,651,646			2,713,202			2,776,092		
Advertising & Promotion	151,197			151,233			151,270		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	140,000			150,000			160,000		
Total Costs	$4,842,843			$4,961,935			$5,083,549		
Project Participants									
Total Participants	20,000			20,000			20,000		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	9			9			9		
Annual kWh Saved - Generator	177,738			177,738			177,738		
Cost per Annual kWh Saved	$27.2471			$27.9172			$28.6014		
Measure Lifetime (Years)	15.0			15.0			15.0		
Lifetime kWh savings	2,666,066			2,666,066			2,666,066		
Cost per kWh Lifetime	$1.8165			$1.8611			$1.9068		
Average kW Savings per Participant	0.88			0.88			0.88		
Annual kW Savings - Generator	17,690			17,690			17,690		
Cost per KW Saved	$273.76			$280.49			$287.36		
Cost/Benefit Results									
Societal									
Net present value	$600			$614			$628		
B/C ratio	3.48			3.47			3.47		
Participant									
Net present value	$595			$596			$596		
B/C ratio	INF			INF			INF		
Rate Payer									
Net present value	$4			$18			$32		
B/C ratio	1.01			1.02			1.04		
Utility									
Net present value	$599			$613			$628		
B/C ratio	3.48			3.47			3.47		

RESIDENTIAL SEGMENT LOAD MANAGEMENT - SAVER'S SWITCH — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$16,731,800	$16,731,800	$16,731,800	$16,731,800
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$99,194	$99,194	$99,194	$99,194
Environmental Externality	N/A	N/A	N/A	N/A	$3,636
Subtotal	N/A	$16,830,994	$16,830,994	$16,830,994	$16,834,630
Participant Benefits					
Bill Reduction - Electric	$11,903,227	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$11,903,227	N/A	N/A	$0	$0
Total Benefits	$11,903,227	$16,830,994	$16,830,994	$16,830,994	$16,834,630
Costs					
Utility Project Costs					
Customer Services	N/A	$1,900,000	$1,900,000	$1,900,000	$1,900,000
Project Administration	N/A	$2,651,646	$2,651,646	$2,651,646	$2,651,646
Advertising & Promotion	N/A	$151,197	$151,197	$151,197	$151,197
Measurement & Verification	N/A	$140,000	$140,000	$140,000	$140,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$4,842,843	$4,842,843	$4,842,843	$4,842,843
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$11,903,227	N/A	N/A
Subtotal	N/A	N/A	$11,903,227	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$4,842,843	$16,746,070	$4,842,843	$4,842,843
Net Benefit (Cost)	$11,903,227	$11,988,151	$84,924	$11,988,151	$11,991,787
Benefit/Cost Ratio	INF	3.48	1.01	3.48	3.48

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	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	26.71%
Gross Load Factor at Customer	E	0.03%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$198

Program Summary per Participant		
Gross kW Saved at Customer	I	3.02 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.88 kW
Gross Annual kWh Saved at Customer	(B x E x I)	8 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	9 kWh

Program Summary All Participants		
Total Participants	J	20,000
Total Budget	K	**$4,842,843**
Gross kW Saved at Customer	(J x I)	60,413 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**17,690 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	162,808 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**177,738 kWh**
Societal Net Benefits	(J x I x H)	**$11,991,787**

Utility Program Cost per kWh Lifetime	**$1.8165**
Utility Program Cost per kW at Gen	**$273.76**

RESIDENTIAL SEGMENT LOAD MANAGEMENT - SAVER'S SWITCH — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$17,126,844	$17,126,844	$17,126,844	$17,126,844
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$104,648	$104,648	$104,648	$104,648
Environmental Externality	N/A	N/A	N/A	N/A	$3,838
Subtotal	N/A	$17,231,492	$17,231,492	$17,231,492	$17,235,330
Participant Benefits					
Bill Reduction - Electric	$11,910,297	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$11,910,297	N/A	N/A	$0	$0
Total Benefits	$11,910,297	$17,231,492	$17,231,492	$17,231,492	$17,235,330
Costs					
Utility Project Costs					
Customer Services	N/A	$1,947,500	$1,947,500	$1,947,500	$1,947,500
Project Administration	N/A	$2,713,202	$2,713,202	$2,713,202	$2,713,202
Advertising & Promotion	N/A	$151,233	$151,233	$151,233	$151,233
Measurement & Verification	N/A	$150,000	$150,000	$150,000	$150,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$4,961,935	$4,961,935	$4,961,935	$4,961,935
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$11,910,297	N/A	N/A
Subtotal	N/A	N/A	$11,910,297	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$4,961,935	$16,872,232	$4,961,935	$4,961,935
Net Benefit (Cost)	$11,910,297	$12,269,557	$359,260	$12,269,557	$12,273,395
Benefit/Cost Ratio	INF	3.47	1.02	3.47	3.47

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	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	26.71%
Gross Load Factor at Customer	E	0.03%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$203

Program Summary per Participant		
Gross kW Saved at Customer	I	3.02 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.88 kW
Gross Annual kWh Saved at Customer	(B x E x I)	8 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	9 kWh

Program Summary All Participants		
Total Participants	J	20,000
Total Budget	K	**$4,961,935**
Gross kW Saved at Customer	(J x I)	60,413 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**17,690 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	162,808 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**177,738 kWh**
Societal Net Benefits	(J x I x H)	**$12,273,395**

Utility Program Cost per kWh Lifetime	**$1.8611**
Utility Program Cost per kW at Gen	**$280.49**

RESIDENTIAL SEGMENT LOAD MANAGEMENT - SAVER'S SWITCH — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$17,530,922	$17,530,922	$17,530,922	$17,530,922
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$110,102	$110,102	$110,102	$110,102
Environmental Externality	N/A	N/A	N/A	N/A	$3,638
Subtotal	N/A	$17,641,024	$17,641,024	$17,641,024	$17,644,662
Participant Benefits					
Bill Reduction - Electric	$11,917,369	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$11,917,369	N/A	N/A	$0	$0
Total Benefits	$11,917,369	$17,641,024	$17,641,024	$17,641,024	$17,644,662
Costs					
Utility Project Costs					
Customer Services	N/A	$1,996,188	$1,996,188	$1,996,188	$1,996,188
Project Administration	N/A	$2,776,092	$2,776,092	$2,776,092	$2,776,092
Advertising & Promotion	N/A	$151,270	$151,270	$151,270	$151,270
Measurement & Verification	N/A	$160,000	$160,000	$160,000	$160,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$5,083,549	$5,083,549	$5,083,549	$5,083,549
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$11,917,369	N/A	N/A
Subtotal	N/A	N/A	$11,917,369	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$5,083,549	$17,000,918	$5,083,549	$5,083,549
Net Benefit (Cost)	$11,917,369	$12,557,475	$640,106	$12,557,475	$12,561,113
Benefit/Cost Ratio	INF	3.47	1.04	3.47	3.47

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	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	26.71%
Gross Load Factor at Customer	E	0.03%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$208

Program Summary per Participant		
Gross kW Saved at Customer	I	3.02 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.88 kW
Gross Annual kWh Saved at Customer	(B x E x I)	8 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	9 kWh

Program Summary All Participants		
Total Participants	J	20,000
Total Budget	K	**$5,083,549**
Gross kW Saved at Customer	(J x I)	60,413 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**17,690 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	162,808 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**177,738 kWh**
Societal Net Benefits	(J x I x H)	**$12,561,113**

Utility Program Cost per kWh Lifetime	**$1.9068**
Utility Program Cost per kW at Gen	**$287.36**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Consumer Education
Project Description: (Note changes)
Type Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	111,001			114,401			117,761		
Advertising & Promotion	664,639			0			647,879		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	0			662,239			0		
Total Costs	$775,640			$776,640			$765,640		
Project Participants									
Total Participants	433,854			433,854			433,854		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	0			0			0		
Annual kWh Saved - Generator	0			0			0		
Cost per Annual kWh Saved									
Measure Lifetime (Years)									
Lifetime kWh savings	0			0			0		
Cost per kWh Lifetime									
Average kW Savings per Participant	0.00			0.00			0.00		
Annual kW Savings - Generator									
Cost per KW Saved									
Cost/Benefit Results									
Societal									
Net present value	($2)			($2)			($2)		
B/C ratio									
Participant									
Net present value	$0			$0			$0		
B/C ratio									
Rate Payer									
Net present value	($2)			($2)			($2)		
B/C ratio									
Utility									
Net present value	($2)			($2)			($2)		
B/C ratio									

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Consumer Education
Project Description:
(Note changes)

Type Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	69,001			71,111			73,203		
Advertising & Promotion	471,805			469,695			467,603		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	0			0			0		
Total Costs	$540,806			$540,806			$540,806		
Project Participants									
Total Participants	382,912			382,912			382,912		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	0.00			0.00			0.00		
Annual Dth Saved	0			0			0		
Cost per Dth									
Project Life (Years)									
Lifetime Dth Saved	0			0			0		
Cost per Lifetime Dth Saved									
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	($1,622,418)								
B/C ratio									
Participant									
Net present value	$0								
B/C ratio									
Rate Payer									
Net present value	($1,622,418)								
B/C ratio									
Utility									
Net present value	($1,622,418)								
B/C ratio									

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Home Energy Audit
Project Description:
(Note changes)

Type Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	479,392			497,714			516,585		
Utility Administration	35,082			36,062			37,072		
Advertising & Promotion	42,927			42,955			42,983		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	0			0			0		
Total Costs	$557,401			$576,731			$596,640		
Project Participants									
Total Participants	3,300			3,300			3,300		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	0			0			0		
Annual kWh Saved - Generator	0			0			0		
Cost per Annual kWh Saved									
Measure Lifetime (Years)									
Lifetime kWh savings	0			0			0		
Cost per kWh Lifetime									
Average kW Savings per Participant	0.00			0.00			0.00		
Annual kW Savings - Generator									
Cost per KW Saved									
Cost/Benefit Results									
Societal									
Net present value	($169)			($175)			($181)		
B/C ratio									
Participant									
Net present value	$0			$0			$0		
B/C ratio									
Rate Payer									
Net present value	($169)			($175)			($181)		
B/C ratio									
Utility									
Net present value	($169)			($175)			($181)		
B/C ratio									

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Home Energy Audit
Project Description:
(Note changes)

Type Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	331,563			344,295			357,409		
Utility Administration	21,317			21,944			22,591		
Advertising & Promotion	36,500			36,500			36,500		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	0			0			0		
Total Costs	$389,380			$402,739			$416,500		
Project Participants									
Total Participants	2,500			2,500			2,500		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	0.00			0.00			0.00		
Annual Dth Saved	0			0			0		
Cost per Dth									
Project Life (Years)									
Lifetime Dth Saved	0			0			0		
Cost per Lifetime Dth Saved									
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	($1,208,619)								
B/C ratio									
Participant									
Net present value	$0								
B/C ratio									
Rate Payer									
Net present value	($1,208,619)								
B/C ratio									
Utility									
Net present value	($1,208,619)								
B/C ratio									

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Residential Lamp Recycling
Project Description:
(Note changes)

Type Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	176,700			191,520			203,775		
Advertising & Promotion	3,720			4,032			4,290		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	5,580			6,048			6,435		
Total Costs	$186,000			$201,600			$214,500		
Project Participants									
Total Participants	300,000			315,000			325,000		
% of Spending by Customer Segment									
Residential	100%			100%			100%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	0			0			0		
Annual kWh Saved - Generator	0			0			0		
Cost per Annual kWh Saved									
Measure Lifetime (Years)									
Lifetime kWh savings	0			0			0		
Cost per kWh Lifetime									
Average kW Savings per Participant	0.00			0.00			0.00		
Annual kW Savings - Generator									
Cost per KW Saved									
Cost/Benefit Results									
Societal									
Net present value	($1)			($1)			($1)		
B/C ratio									
Participant									
Net present value	$0			$0			$0		
B/C ratio									
Rate Payer									
Net present value	($1)			($1)			($1)		
B/C ratio									
Utility									
Net present value	($1)			($1)			($1)		
B/C ratio									

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Low-Income Segment Total
Project Description:
(Note changes)

Type Conservation
Status: New and Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	691,107			687,753			670,567		
Utility Administration	367,026			451,937			451,028		
Advertising & Promotion	99,936			116,873			119,394		
Participant Incentives	1,044,966			1,184,300			1,151,598		
R&D	0			0			0		
Other	118,000			128,000			128,000		
Total Costs	$2,321,035			$2,568,863			$2,520,587		
Project Participants									
Total Participants	4,146			4,346			4,246		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	100%			100%			100%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	100%			100%			100%		
Budget % (% of Row 30)	100%			100%			100%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	628			606			576		
Annual kWh Saved - Generator	2,602,248			2,633,067			2,445,325		
Cost per Annual kWh Saved	$0.8919			$0.9756			$1.0308		
Measure Lifetime (Years)	12.0			12.1			12.2		
Lifetime kWh savings	31,248,697			31,948,183			29,714,419		
Cost per kWh Lifetime	$0.0743			$0.0804			$0.0848		
Average kW Savings per Participant	0.12			0.11			0.11		
Annual kW Savings - Generator	477			498			476		
Cost per KW Saved	$4,862.11			$5,154.78			$5,297.69		
Cost/Benefit Results									
Societal									
Net present value	($187)			($211)			($213)		
B/C ratio	0.77			0.75			0.75		
Participant									
Net present value	$772			$763			$745		
B/C ratio	4.06			3.80			3.75		
Rate Payer									
Net present value	($873)			($892)			($878)		
B/C ratio	0.29			0.29			0.29		
Utility									
Net present value	($207)			($231)			($232)		
B/C ratio	0.63			0.61			0.61		

LOW-INCOME SEGMENT TOTAL — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$381,366	$381,366	$381,366	$381,366
T & D	N/A	$144,679	$144,679	$144,679	$144,679
Marginal Energy	N/A	$934,816	$934,816	$934,816	$934,816
Environmental Externality	N/A	N/A	N/A	N/A	$46,493
Subtotal	N/A	$1,460,862	$1,460,862	$1,460,862	$1,507,355
Participant Benefits					
Bill Reduction - Electric	$2,757,430	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,044,966	N/A	N/A	$1,044,966	$1,044,966
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$444,572	N/A	N/A	$0	$0
Subtotal	$4,246,968	N/A	N/A	$1,044,966	$1,044,966
Total Benefits	$4,246,968	$1,460,862	$1,460,862	$2,505,828	$2,552,321
Costs					
Utility Project Costs					
Customer Services	N/A	$691,107	$691,107	$691,107	$691,107
Project Administration	N/A	$367,026	$367,026	$367,026	$367,026
Advertising & Promotion	N/A	$99,936	$99,936	$99,936	$99,936
Measurement & Verification	N/A	$118,000	$118,000	$118,000	$118,000
Rebates	N/A	$1,044,966	$1,044,966	$1,044,966	$1,044,966
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,321,035	$2,321,035	$2,321,035	$2,321,035
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,757,430	N/A	N/A
Subtotal	N/A	N/A	$2,757,430	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,044,967	N/A	N/A	$1,005,370	$1,005,370
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,044,967	N/A	N/A	$1,005,370	$1,005,370
Total Costs	$1,044,967	$2,321,035	$5,078,465	$3,326,405	$3,326,405
Net Benefit (Cost)	$3,202,002	($860,173)	($3,617,604)	($820,578)	($774,085)
Benefit/Cost Ratio	4.06	0.63	0.29	0.75	0.77

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	12.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	18.80%
Gross Load Factor at Customer	E	11.75%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	($334)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.56 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.12 kW
Gross Annual kWh Saved at Customer	(B x E x I)	575 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	628 kWh

Program Summary All Participants		
Total Participants	J	4,146
Total Budget	K	**$2,321,035**
Gross kW Saved at Customer	(J x I)	2,315 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**477 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,383,659 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,602,248 kWh**
Societal Net Benefits	(J x I x H)	**($774,085)**

Utility Program Cost per kWh Lifetime	**$0.0743**
Utility Program Cost per kW at Gen	**$4,862.11**

LOW-INCOME SEGMENT TOTAL — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$405,407	$405,407	$405,407	$405,407
T & D	N/A	$153,666	$153,666	$153,666	$153,666
Marginal Energy	N/A	$1,003,933	$1,003,933	$1,003,933	$1,003,933
Environmental Externality	N/A	N/A	N/A	N/A	$48,088
Subtotal	N/A	$1,563,007	$1,563,007	$1,563,007	$1,611,094
Participant Benefits					
Bill Reduction - Electric	$2,869,930	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,184,300	N/A	N/A	$1,184,300	$1,184,300
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$444,572	N/A	N/A	$0	$0
Subtotal	$4,498,802	N/A	N/A	$1,184,300	$1,184,300
Total Benefits	$4,498,802	$1,563,007	$1,563,007	$2,747,307	$2,795,394
Costs					
Utility Project Costs					
Customer Services	N/A	$687,753	$687,753	$687,753	$687,753
Project Administration	N/A	$451,937	$451,937	$451,937	$451,937
Advertising & Promotion	N/A	$116,873	$116,873	$116,873	$116,873
Measurement & Verification	N/A	$128,000	$128,000	$128,000	$128,000
Rebates	N/A	$1,184,300	$1,184,300	$1,184,300	$1,184,300
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,568,863	$2,568,863	$2,568,863	$2,568,863
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,869,930	N/A	N/A
Subtotal	N/A	N/A	$2,869,930	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,184,300	N/A	N/A	$1,144,599	$1,144,599
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,184,300	N/A	N/A	$1,144,599	$1,144,599
Total Costs	$1,184,300	$2,568,863	$5,438,793	$3,713,462	$3,713,462
Net Benefit (Cost)	$3,314,502	($1,005,856)	($3,875,786)	($966,155)	($918,067)
Benefit/Cost Ratio	3.80	0.61	0.29	0.74	0.75

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	12.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	20.03%
Gross Load Factor at Customer	E	12.13%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	($405)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.52 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.11 kW
Gross Annual kWh Saved at Customer	(B x E x I)	555 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	606 kWh

Program Summary All Participants		
Total Participants	J	4,346
Total Budget	K	**$2,568,863**
Gross kW Saved at Customer	(J x I)	2,269 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**498 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,411,889 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,633,067 kWh**
Societal Net Benefits	(J x I x H)	**($918,067)**

Utility Program Cost per kWh Lifetime	**$0.0804**
Utility Program Cost per kW at Gen	**$5,154.78**

LOW-INCOME SEGMENT TOTAL — 2015 ELECTRIC GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$396,011	$396,011	$396,011	$396,011
T & D	N/A	$149,960	$149,960	$149,960	$149,960
Marginal Energy	N/A	$987,525	$987,525	$987,525	$987,525
Environmental Externality	N/A	N/A	N/A	N/A	$45,266
Subtotal	N/A	$1,533,496	$1,533,496	$1,533,496	$1,578,762
Participant Benefits					
Bill Reduction - Electric	$2,739,142	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,151,598	N/A	N/A	$1,151,598	$1,151,598
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$425,243	N/A	N/A	$0	$0
Subtotal	$4,315,983	N/A	N/A	$1,151,598	$1,151,598
Total Benefits	$4,315,983	$1,533,496	$1,533,496	$2,685,094	$2,730,360
Costs					
Utility Project Costs					
Customer Services	N/A	$670,567	$670,567	$670,567	$670,567
Project Administration	N/A	$451,028	$451,028	$451,028	$451,028
Advertising & Promotion	N/A	$119,394	$119,394	$119,394	$119,394
Measurement & Verification	N/A	$128,000	$128,000	$128,000	$128,000
Rebates	N/A	$1,151,598	$1,151,598	$1,151,598	$1,151,598
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,520,587	$2,520,587	$2,520,587	$2,520,587
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,739,142	N/A	N/A
Subtotal	N/A	N/A	$2,739,142	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,151,598	N/A	N/A	$1,113,519	$1,113,519
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,151,598	N/A	N/A	$1,113,519	$1,113,519
Total Costs	$1,151,598	$2,520,587	$5,259,729	$3,634,106	$3,634,106
Net Benefit (Cost)	$3,164,385	($987,091)	($3,726,234)	($949,013)	($903,746)
Benefit/Cost Ratio	3.75	0.61	0.29	0.74	0.75

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	12.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	20.90%
Gross Load Factor at Customer	E	12.32%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	($435)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.49 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.11 kW
Gross Annual kWh Saved at Customer	(B x E x I)	528 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	576 kWh

Program Summary All Participants		
Total Participants	J	4,246
Total Budget	K	**$2,520,587**
Gross kW Saved at Customer	(J x I)	2,076 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**476 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,239,918 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,445,325 kWh**
Societal Net Benefits	(J x I x H)	**($903,746)**

Utility Program Cost per kWh Lifetime	**$0.0848**
Utility Program Cost per kW at Gen	**$5,297.69**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Low-Income Segment Total
Project Description:
(Note changes)

Type Conservation
Status: New and Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	428,111			428,111			423,765		
Utility Administration	201,775			205,442			209,154		
Advertising & Promotion	104,069			99,603			99,603		
Participant Incentives	853,325			853,325			833,999		
R&D	0			0			0		
Other	69,700			69,700			69,700		
Total Costs	$1,656,980			$1,656,181			$1,636,221		
Project Participants									
Total Participants	2,050			2,050			2,050		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	100%			100%			100%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	100%			100%			100%		
Budget % (% of Row 30)	100%			100%			100%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	11.53			11.53			11.35		
Annual Dth Saved	23,635			23,635			23,275		
Cost per Dth	$70.1085			$70.0747			$70.2987		
Project Life (Years)	12.5			12.5			12.4		
Lifetime Dth Saved	296,520			296,520			289,334		
Cost per Lifetime Dth Saved	$5.5881			$5.5854			$5.6551		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$2,420,113								
B/C ratio	1.51								
Participant									
Net present value	$9,371,716								
B/C ratio	4.69								
Rate Payer									
Net present value	($6,629,628)								
B/C ratio	0.38								
Utility									
Net present value	($809,834)								
B/C ratio	0.84								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Low-Income Segment Total**

Input Data	
1) Retail Rate ($/Dth) =	$6.60
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$803,655	$802,856	$802,222
Incentive Costs =	$853,325	$853,325	$833,999
16) Total Utility Project Costs =	$1,656,980	$1,656,181	$1,636,221
17) Direct Participant Costs ($/Part.) =	$416	$416	$407
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$28	$28	$28
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	12.5	12.5	12.4
21) Avg. Dth/Part. Saved =	11.53	11.53	11.35
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	2,050	2,050	2,050
24) Total Annual Dth Saved =	23,635	23,635	23,275
25) Incentive/Participant =	$416.26	$416.26	$406.83

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$808	$808	$798
Cost per Participant per Dth =	$106.21	$106.18	$106.13
Lifetime Energy Reduction (Dth)	882,373		
Societal Cost per Dth	$5.37		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($6,629,628)	0.38
Utility Cost Test	($809,834)	0.84
Societal Test	$2,420,113	1.51
Participant Test	$9,371,716	4.69

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Home Energy Savings Program
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	368,654			361,909			344,723		
Utility Administration	149,270			153,598			151,884		
Advertising & Promotion	67,593			75,096			75,099		
Participant Incentives	691,643			691,038			658,336		
R&D	0			0			0		
Other	77,000			77,000			77,000		
Total Costs	$1,354,160			$1,358,641			$1,307,042		
Project Participants									
Total Participants	2,100			2,100			2,000		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	100%			100%			100%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	100%			100%			100%		
Budget % (% of Row 30)	100%			100%			100%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting	x			x			x		
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration	x			x			x		
Space Cooling	x			x			x		
Space Heating	x			x			x		
Water Heating	x			x			x		
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	447			436			421		
Annual kWh Saved - Generator	938,843			915,688			842,035		
Cost per Annual kWh Saved	$1.4424			$1.4837			$1.5522		
Measure Lifetime (Years)	13.0			13.1			13.2		
Lifetime kWh savings	12,220,040			11,997,849			11,079,710		
Cost per kWh Lifetime	$0.1108			$0.1132			$0.1180		
Average kW Savings per Participant	0.09			0.09			0.09		
Annual kW Savings - Generator	188			186			174		
Cost per KW Saved	$7,221.97			$7,315.53			$7,496.92		
Cost/Benefit Results									
Societal									
Net present value	($335)			($329)			($330)		
B/C ratio	0.65			0.66			0.66		
Participant									
Net present value	$721			$723			$721		
B/C ratio	3.19			3.20			3.19		
Rate Payer									
Net present value	($871)			($867)			($866)		
B/C ratio	0.25			0.25			0.26		
Utility									
Net present value	($362)			($356)			($357)		
B/C ratio	0.44			0.45			0.45		

HOME ENERGY SAVINGS PROGRAM — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$166,620	$166,620	$166,620	$166,620
T & D	N/A	$63,173	$63,173	$63,173	$63,173
Marginal Energy	N/A	$364,128	$364,128	$364,128	$364,128
Environmental Externality	N/A	N/A	N/A	N/A	$17,373
Subtotal	N/A	$593,921	$593,921	$593,921	$611,294
Participant Benefits					
Bill Reduction - Electric	$1,069,668	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$691,643	N/A	N/A	$691,643	$691,643
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$444,572	N/A	N/A	$0	$0
Subtotal	$2,205,883	N/A	N/A	$691,643	$691,643
Total Benefits	$2,205,883	$593,921	$593,921	$1,285,564	$1,302,937
Costs					
Utility Project Costs					
Customer Services	N/A	$368,654	$368,654	$368,654	$368,654
Project Administration	N/A	$149,270	$149,270	$149,270	$149,270
Advertising & Promotion	N/A	$67,593	$67,593	$67,593	$67,593
Measurement & Verification	N/A	$77,000	$77,000	$77,000	$77,000
Rebates	N/A	$691,643	$691,643	$691,643	$691,643
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,354,160	$1,354,160	$1,354,160	$1,354,160
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,069,668	N/A	N/A
Subtotal	N/A	N/A	$1,069,668	N/A	N/A
Participant Costs					
Incremental Capital Costs	$691,643	N/A	N/A	$652,047	$652,047
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$691,643	N/A	N/A	$652,047	$652,047
Total Costs	$691,643	$1,354,160	$2,423,828	$2,006,207	$2,006,207
Net Benefit (Cost)	$1,514,239	($760,239)	($1,829,907)	($720,643)	($703,270)
Benefit/Cost Ratio	3.19	0.44	0.25	0.64	0.65

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	13.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	29.29%
Gross Load Factor at Customer	E	16.82%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	($1,205)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.28 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.09 kW
Gross Annual kWh Saved at Customer	(B x E x I)	410 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	447 kWh

Program Summary All Participants		
Total Participants	J	2,100
Total Budget	K	**$1,354,160**
Gross kW Saved at Customer	(J x I)	584 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**188 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	859,980 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**938,843 kWh**
Societal Net Benefits	(J x I x H)	**($703,270)**

Utility Program Cost per kWh Lifetime	**$0.1108**
Utility Program Cost per kW at Gen	**$7,221.97**

HOME ENERGY SAVINGS PROGRAM — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$169,186	$169,186	$169,186	$169,186
T & D	N/A	$64,158	$64,158	$64,158	$64,158
Marginal Energy	N/A	$377,359	$377,359	$377,359	$377,359
Environmental Externality	N/A	N/A	N/A	N/A	$17,444
Subtotal	N/A	$610,703	$610,703	$610,703	$628,146
Participant Benefits					
Bill Reduction - Electric	$1,073,400	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$691,038	N/A	N/A	$691,038	$691,038
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$444,572	N/A	N/A	$0	$0
Subtotal	$2,209,011	N/A	N/A	$691,038	$691,038
Total Benefits	$2,209,011	$610,703	$610,703	$1,301,741	$1,319,184
Costs					
Utility Project Costs					
Customer Services	N/A	$361,909	$361,909	$361,909	$361,909
Project Administration	N/A	$153,598	$153,598	$153,598	$153,598
Advertising & Promotion	N/A	$75,096	$75,096	$75,096	$75,096
Measurement & Verification	N/A	$77,000	$77,000	$77,000	$77,000
Rebates	N/A	$691,038	$691,038	$691,038	$691,038
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,358,641	$1,358,641	$1,358,641	$1,358,641
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,073,400	N/A	N/A
Subtotal	N/A	N/A	$1,073,400	N/A	N/A
Participant Costs					
Incremental Capital Costs	$691,038	N/A	N/A	$651,337	$651,337
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$691,038	N/A	N/A	$651,337	$651,337
Total Costs	$691,038	$1,358,641	$2,432,041	$2,009,978	$2,009,978
Net Benefit (Cost)	$1,517,972	($747,938)	($1,821,339)	($708,237)	($690,794)
Benefit/Cost Ratio	3.20	0.45	0.25	0.65	0.66

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	13.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	30.06%
Gross Load Factor at Customer	E	16.99%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	($1,226)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.27 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.09 kW
Gross Annual kWh Saved at Customer	(B x E x I)	399 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	436 kWh

Program Summary All Participants		
Total Participants	J	2,100
Total Budget	K	**$1,358,641**
Gross kW Saved at Customer	(J x I)	563 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**186 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	838,770 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**915,688 kWh**
Societal Net Benefits	(J x I x H)	**($690,794)**
Utility Program Cost per kWh Lifetime		**$0.1132**
Utility Program Cost per kW at Gen		**$7,315.53**

HOME ENERGY SAVINGS PROGRAM — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$163,047	$163,047	$163,047	$163,047
T & D	N/A	$61,796	$61,796	$61,796	$61,796
Marginal Energy	N/A	$367,862	$367,862	$367,862	$367,862
Environmental Externality	N/A	N/A	N/A	N/A	$16,206
Subtotal	N/A	$592,706	$592,706	$592,706	$608,912
Participant Benefits					
Bill Reduction - Electric	$1,016,860	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$658,336	N/A	N/A	$658,336	$658,336
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$425,243	N/A	N/A	$0	$0
Subtotal	$2,100,439	N/A	N/A	$658,336	$658,336
Total Benefits	$2,100,439	$592,706	$592,706	$1,251,042	$1,267,248
Costs					
Utility Project Costs					
Customer Services	N/A	$344,723	$344,723	$344,723	$344,723
Project Administration	N/A	$151,884	$151,884	$151,884	$151,884
Advertising & Promotion	N/A	$75,099	$75,099	$75,099	$75,099
Measurement & Verification	N/A	$77,000	$77,000	$77,000	$77,000
Rebates	N/A	$658,336	$658,336	$658,336	$658,336
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,307,042	$1,307,042	$1,307,042	$1,307,042
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,016,860	N/A	N/A
Subtotal	N/A	N/A	$1,016,860	N/A	N/A
Participant Costs					
Incremental Capital Costs	$658,336	N/A	N/A	$620,257	$620,257
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$658,336	N/A	N/A	$620,257	$620,257
Total Costs	$658,336	$1,307,042	$2,323,902	$1,927,299	$1,927,299
Net Benefit (Cost)	$1,442,103	($714,336)	($1,731,197)	($676,258)	($660,052)
Benefit/Cost Ratio	3.19	0.45	0.26	0.65	0.66

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	13.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	31.49%
Gross Load Factor at Customer	E	17.44%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	($1,307)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.25 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.09 kW
Gross Annual kWh Saved at Customer	(B x E x I)	386 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	421 kWh

Program Summary All Participants		
Total Participants	J	2,000
Total Budget	K	**$1,307,042**
Gross kW Saved at Customer	(J x I)	505 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**174 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	771,304 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**842,035 kWh**
Societal Net Benefits	(J x I x H)	**($660,052)**

Utility Program Cost per kWh Lifetime	**$0.1180**
Utility Program Cost per kW at Gen	**$7,496.92**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Home Energy Savings Program
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	116,658			116,658			112,312		
Utility Administration	117,600			121,062			124,540		
Advertising & Promotion	52,500			45,000			45,000		
Participant Incentives	853,325			853,325			833,999		
R&D	0			0			0		
Other	52,000			52,000			52,000		
Total Costs	$1,192,083			$1,188,045			$1,167,851		
Project Participants									
Total Participants	400			400			400		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	100%			100%			100%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	100%			100%			100%		
Budget % (% of Row 30)	100%			100%			100%		
End-Use Target -- Enter "X"									
Boiler System	x			x			x		
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)	x			x			x		
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating	x			x			x		
Weatherization	x			x			x		
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	23.40			23.40			22.50		
Annual Dth Saved	9,360			9,360			9,001		
Cost per Dth	$127.3543			$126.9229			$129.7453		
Project Life (Years)	19.7			19.7			19.7		
Lifetime Dth Saved	184,221			184,221			177,036		
Cost per Lifetime Dth Saved	$6.4709			$6.4490			$6.5967		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$389,000								
B/C ratio	1.12								
Participant									
Net present value	$5,250,230								
B/C ratio	3.07								
Rate Payer									
Net present value	($4,527,849)								
B/C ratio	0.35								
Utility									
Net present value	($1,133,917)								
B/C ratio	0.68								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Home Energy Savings Program**

Input Data	
1) Retail Rate ($/Dth) =	$7.23
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$338,758	$334,720	$333,852
Incentive Costs =	$853,325	$853,325	$833,999
16) Total Utility Project Costs =	$1,192,083	$1,188,045	$1,167,851
17) Direct Participant Costs ($/Part.) =	$2,133	$2,133	$2,085
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	19.7	19.7	19.7
21) Avg. Dth/Part. Saved =	23.40	23.40	22.50
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	400	400	400
24) Total Annual Dth Saved =	9,360	9,360	9,001
25) Incentive/Participant =	$2,133.31	$2,133.31	$2,085.00

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$2,980	$2,970	$2,920
Cost per Participant per Dth =	$218.52	$218.09	$222.40
Lifetime Energy Reduction (Dth)	545,478		
Societal Cost per Dth	$6.11		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($4,527,849)	0.35
Utility Cost Test	($1,133,917)	0.68
Societal Test	$389,000	1.12
Participant Test	$5,250,230	3.07

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Low-Income Home Energy Squad
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	254,826			254,826			254,826		
Utility Administration	87,994			88,705			89,448		
Advertising & Promotion	27,343			31,777			34,295		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	16,000			16,000			16,000		
Total Costs	$386,163			$391,308			$394,569		
Project Participants									
Total Participants	1,650			1,650			1,650		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	100%			100%			100%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	100%			100%			100%		
Budget % (% of Row 30)	100%			100%			100%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting	x			x			x		
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling	x			x			x		
Space Heating	x			x			x		
Water Heating	x			x			x		
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	670			603			561		
Annual kWh Saved - Generator	1,105,499			994,948			925,303		
Cost per Annual kWh Saved	$0.3493			$0.3933			$0.4264		
Measure Lifetime (Years)	11.1			11.3			11.3		
Lifetime kWh savings	12,269,392			11,222,542			10,437,200		
Cost per kWh Lifetime	$0.0315			$0.0349			$0.0378		
Average kW Savings per Participant	0.12			0.11			0.11		
Annual kW Savings - Generator	196			184			177		
Cost per KW Saved	$1,972.47			$2,127.55			$2,229.14		
Cost/Benefit Results									
Societal									
Net present value	$130			$111			$103		
B/C ratio	1.56			1.47			1.43		
Participant									
Net present value	$666			$615			$587		
B/C ratio	INF			INF			INF		
Rate Payer									
Net present value	($547)			($514)			($493)		
B/C ratio	0.39			0.40			0.40		
Utility									
Net present value	$118			$100			$93		
B/C ratio	1.51			1.42			1.39		

LOW-INCOME HOME ENERGY SQUAD — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$148,219	$148,219	$148,219	$148,219
T & D	N/A	$56,282	$56,282	$56,282	$56,282
Marginal Energy	N/A	$376,883	$376,883	$376,883	$376,883
Environmental Externality	N/A	N/A	N/A	N/A	$19,448
Subtotal	N/A	$581,384	$581,384	$581,384	$600,832
Participant Benefits					
Bill Reduction - Electric	$1,098,530	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$1,098,530	N/A	N/A	$0	$0
Total Benefits	$1,098,530	$581,384	$581,384	$581,384	$600,832
Costs					
Utility Project Costs					
Customer Services	N/A	$254,826	$254,826	$254,826	$254,826
Project Administration	N/A	$87,994	$87,994	$87,994	$87,994
Advertising & Promotion	N/A	$27,343	$27,343	$27,343	$27,343
Measurement & Verification	N/A	$16,000	$16,000	$16,000	$16,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$386,163	$386,163	$386,163	$386,163
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,098,530	N/A	N/A
Subtotal	N/A	N/A	$1,098,530	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$386,163	$1,484,693	$386,163	$386,163
Net Benefit (Cost)	$1,098,530	$195,221	($903,309)	$195,221	$214,669
Benefit/Cost Ratio	INF	1.51	0.39	1.51	1.56

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	11.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	13.08%
Gross Load Factor at Customer	E	8.47%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$157

Program Summary per Participant		
Gross kW Saved at Customer	I	0.83 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.12 kW
Gross Annual kWh Saved at Customer	(B x E x I)	614 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	670 kWh

Program Summary All Participants		
Total Participants	J	1,650
Total Budget	K	**$386,163**
Gross kW Saved at Customer	(J x I)	1,365 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**196 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,012,637 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,105,499 kWh**
Societal Net Benefits	(J x I x H)	**$214,669**

Utility Program Cost per kWh Lifetime	**$0.0315**
Utility Program Cost per kW at Gen	**$1,972.47**

LOW-INCOME HOME ENERGY SQUAD — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$142,694	$142,694	$142,694	$142,694
T & D	N/A	$54,046	$54,046	$54,046	$54,046
Marginal Energy	N/A	$360,310	$360,310	$360,310	$360,310
Environmental Externality	N/A	N/A	N/A	N/A	$17,730
Subtotal	N/A	$557,050	$557,050	$557,050	$574,780
Participant Benefits					
Bill Reduction - Electric	$1,014,300	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$1,014,300	N/A	N/A	$0	$0
Total Benefits	$1,014,300	$557,050	$557,050	$557,050	$574,780
Costs					
Utility Project Costs					
Customer Services	N/A	$254,826	$254,826	$254,826	$254,826
Project Administration	N/A	$88,705	$88,705	$88,705	$88,705
Advertising & Promotion	N/A	$31,777	$31,777	$31,777	$31,777
Measurement & Verification	N/A	$16,000	$16,000	$16,000	$16,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$391,308	$391,308	$391,308	$391,308
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,014,300	N/A	N/A
Subtotal	N/A	N/A	$1,014,300	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$391,308	$1,405,608	$391,308	$391,308
Net Benefit (Cost)	$1,014,300	$165,742	($848,558)	$165,742	$183,472
Benefit/Cost Ratio	INF	1.42	0.40	1.42	1.47

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	11.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	13.66%
Gross Load Factor at Customer	E	8.47%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$149

Program Summary per Participant		
Gross kW Saved at Customer	I	0.74 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.11 kW
Gross Annual kWh Saved at Customer	(B x E x I)	552 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	603 kWh

Program Summary All Participants		
Total Participants	J	1,650
Total Budget	K	**$391,308**
Gross kW Saved at Customer	(J x I)	1,228 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**184 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	911,372 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**994,948 kWh**
Societal Net Benefits	(J x I x H)	**$183,472**

Utility Program Cost per kWh Lifetime	**$0.0349**
Utility Program Cost per kW at Gen	**$2,127.55**

LOW-INCOME HOME ENERGY SQUAD — 2015 — ELECTRIC — GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$140,604	$140,604	$140,604	$140,604
T & D	N/A	$53,155	$53,155	$53,155	$53,155
Marginal Energy	N/A	$354,653	$354,653	$354,653	$354,653
Environmental Externality	N/A	N/A	N/A	N/A	$16,861
Subtotal	N/A	$548,412	$548,412	$548,412	$565,273
Participant Benefits					
Bill Reduction - Electric	$967,937	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$967,937	N/A	N/A	$0	$0
Total Benefits	$967,937	$548,412	$548,412	$548,412	$565,273
Costs					
Utility Project Costs					
Customer Services	N/A	$254,826	$254,826	$254,826	$254,826
Project Administration	N/A	$89,448	$89,448	$89,448	$89,448
Advertising & Promotion	N/A	$34,295	$34,295	$34,295	$34,295
Measurement & Verification	N/A	$16,000	$16,000	$16,000	$16,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$394,569	$394,569	$394,569	$394,569
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$967,937	N/A	N/A
Subtotal	N/A	N/A	$967,937	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$394,569	$1,362,506	$394,569	$394,569
Net Benefit (Cost)	$967,937	$153,843	($814,094)	$153,843	$170,704
Benefit/Cost Ratio	INF	1.39	0.40	1.39	1.43

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	11.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	14.14%
Gross Load Factor at Customer	E	8.48%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	$150

Program Summary per Participant		
Gross kW Saved at Customer	I	0.69 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.11 kW
Gross Annual kWh Saved at Customer	(B x E x I)	514 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	561 kWh

Program Summary All Participants		
Total Participants	J	1,650
Total Budget	K	**$394,569**
Gross kW Saved at Customer	(J x I)	1,142 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**177 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	847,577 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**925,303 kWh**
Societal Net Benefits	(J x I x H)	**$170,704**

Utility Program Cost per kWh Lifetime	**$0.0378**
Utility Program Cost per kW at Gen	**$2,229.14**

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Low-Income Home Energy Squad
Project Description:
(Note changes)
Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	311,453			311,453			311,453		
Utility Administration	84,175			84,380			84,614		
Advertising & Promotion	51,569			54,603			54,603		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	17,700			17,700			17,700		
Total Costs	$464,897			$468,136			$468,370		
Project Participants									
Total Participants	1,650			1,650			1,650		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	100%			100%			100%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	100%			100%			100%		
Budget % (% of Row 30)	100%			100%			100%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)	x			x			x		
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating	x			x			x		
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved	8.65			8.65			8.65		
Annual Dth Saved	14,274			14,274			14,274		
Cost per Dth	$32.5692			$32.7961			$32.8125		
Project Life (Years)	7.9			7.9			7.9		
Lifetime Dth Saved	112,299			112,299			112,299		
Cost per Lifetime Dth Saved	$4.1398			$4.1687			$4.1708		
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	$2,031,112								
B/C ratio	2.45								
Participant									
Net present value	$4,121,486								
B/C ratio	INF								
Rate Payer									
Net present value	($2,101,779)								
B/C ratio	0.45								
Utility									
Net present value	$324,083								
B/C ratio	1.23								

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**
Project: **Low-Income Home Energy Squad**

Input Data	
1) Retail Rate ($/Dth) =	$7.23
Escalation Rate =	4.28%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	2.80%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.34
Escalation Rate =	4.28%
4) Demand Cost ($/Unit/Yr) =	$74.00
Escalation Rate =	4.28%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0600
Escalation Rate =	4.28%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.027
Escalation Rate =	2.80%
8) Non-Gas Fuel Loss Factor	5.80%
9) Gas Environmental Damage Factor =	$0.3500
Escalation Rate =	1.73%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0213
Escalation Rate =	1.73%
11) Participant Discount Rate =	2.67%
12) Utility Discount Rate =	7.04%
13) Societal Discount Rate =	2.67%
14) General Input Data Year =	2012
15a) Project Analysis Year 1 =	2013
15b) Project Analysis Year 2 =	2014
15c) Project Analysis Year 3 =	2015

	First Year	Second Year	Third Year
Administrative & Operating Costs =	$464,897	$468,136	$468,370
Incentive Costs =	$0	$0	$0
16) Total Utility Project Costs =	$464,897	$468,136	$468,370
17) Direct Participant Costs ($/Part.) =	$0	$0	$0
18) Participant Non-Energy Costs (Annual $/Part.) =	$0	$0	$0
Escalation Rate =	1.73%	1.73%	1.73%
19) Participant Non-Energy Savings (Annual $/Part) =	$35	$35	$35
Escalation Rate =	1.73%	1.73%	1.73%
20) Project Life (Years) =	7.9	7.9	7.9
21) Avg. Dth/Part. Saved =	8.65	8.65	8.65
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh	0 kWh	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh	0 kWh	0 kWh
23) Number of Participants =	1,650	1,650	1,650
24) Total Annual Dth Saved =	14,274	14,274	14,274
25) Incentive/Participant =	$0.00	$0.00	$0.00

Cost Summary	1st Yr	2nd Yr	3rd Yr
Utility Cost per Participant =	$282	$284	$284
Cost per Participant per Dth =	$32.57	$32.80	$32.81
Lifetime Energy Reduction (Dth)	336,896		
Societal Cost per Dth	$4.16		

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($2,101,779)	0.45
Utility Cost Test	$324,083	1.23
Societal Test	$2,031,112	2.45
Participant Test	$4,121,486	INF

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Multi-Family Energy Savings Program
Project Description:
(Note changes)

Type Conservation
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	67,627			71,018			71,018		
Utility Administration	129,762			209,634			209,696		
Advertising & Promotion	5,000			10,000			10,000		
Participant Incentives	353,323			493,262			493,262		
R&D	0			0			0		
Other	25,000			35,000			35,000		
Total Costs	$580,712			$818,914			$818,976		
Project Participants									
Total Participants	396			596			596		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	100%			100%			100%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	100%			100%			100%		
Budget % (% of Row 30)	100%			100%			100%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting	x			x			x		
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration	x			x			x		
Space Cooling	x			x			x		
Space Heating	x			x			x		
Water Heating	x			x			x		
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	1,409			1,212			1,138		
Annual kWh Saved - Generator	557,906			722,431			677,988		
Cost per Annual kWh Saved	$1.0409			$1.1336			$1.2080		
Measure Lifetime (Years)	12.1			12.1			12.1		
Lifetime kWh savings	6,759,264			8,727,792			8,197,509		
Cost per kWh Lifetime	$0.0859			$0.0938			$0.0999		
Average kW Savings per Participant	0.24			0.22			0.21		
Annual kW Savings - Generator	94			129			124		
Cost per KW Saved	$6,171.88			$6,362.89			$6,581.25		
Cost/Benefit Results									
Societal									
Net present value	($721)			($689)			($695)		
B/C ratio	0.69			0.69			0.68		
Participant									
Net present value	$1,488			$1,312			$1,266		
B/C ratio	2.67			2.59			2.53		
Rate Payer									
Net present value	($2,233)			($2,023)			($1,981)		
B/C ratio	0.24			0.25			0.25		
Utility									
Net present value	($745)			($711)			($716)		
B/C ratio	0.49			0.48			0.48		

MULTI-FAMILY ENERGY SAVINGS PROGRAM — 2013 — ELECTRIC — GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$66,527	$66,527	$66,527	$66,527
T & D	N/A	$25,224	$25,224	$25,224	$25,224
Marginal Energy	N/A	$193,806	$193,806	$193,806	$193,806
Environmental Externality	N/A	N/A	N/A	N/A	$9,672
Subtotal	N/A	$285,557	$285,557	$285,557	$295,229
Participant Benefits					
Bill Reduction - Electric	$589,233	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$353,323	N/A	N/A	$353,323	$353,323
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$942,556	N/A	N/A	$353,323	$353,323
Total Benefits	$942,556	$285,557	$285,557	$638,880	$648,552
Costs					
Utility Project Costs					
Customer Services	N/A	$67,627	$67,627	$67,627	$67,627
Project Administration	N/A	$129,762	$129,762	$129,762	$129,762
Advertising & Promotion	N/A	$5,000	$5,000	$5,000	$5,000
Measurement & Verification	N/A	$25,000	$25,000	$25,000	$25,000
Rebates	N/A	$353,323	$353,323	$353,323	$353,323
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$580,712	$580,712	$580,712	$580,712
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$589,233	N/A	N/A
Subtotal	N/A	N/A	$589,233	N/A	N/A
Participant Costs					
Incremental Capital Costs	$353,323	N/A	N/A	$353,323	$353,323
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$353,323	N/A	N/A	$353,323	$353,323
Total Costs	$353,323	$580,712	$1,169,945	$934,035	$934,035
Net Benefit (Cost)	$589,233	($295,155)	($884,388)	($295,155)	($285,484)
Benefit/Cost Ratio	2.67	0.49	0.24	0.68	0.69

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	12.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	23.42%
Gross Load Factor at Customer	E	15.92%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	($779)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.93 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.24 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,291 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,409 kWh

Program Summary All Participants		
Total Participants	J	396
Total Budget	K	**$580,712**
Gross kW Saved at Customer	(J x I)	366 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**94 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	511,042 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**557,906 kWh**
Societal Net Benefits	(J x I x H)	**($285,484)**
Utility Program Cost per kWh Lifetime		**$0.0859**
Utility Program Cost per kW at Gen		**$6,171.88**

MULTI-FAMILY ENERGY SAVINGS PROGRAM — 2014 — ELECTRIC — GOAL

2014 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$93,527	$93,527	$93,527	$93,527
T & D	N/A	$35,462	$35,462	$35,462	$35,462
Marginal Energy	N/A	$266,265	$266,265	$266,265	$266,265
Environmental Externality	N/A	N/A	N/A	N/A	$12,915
Subtotal	N/A	$395,254	$395,254	$395,254	$408,169
Participant Benefits					
Bill Reduction - Electric	$782,230	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$493,262	N/A	N/A	$493,262	$493,262
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$1,275,492	N/A	N/A	$493,262	$493,262
Total Benefits	$1,275,492	$395,254	$395,254	$888,516	$901,431
Costs					
Utility Project Costs					
Customer Services	N/A	$71,018	$71,018	$71,018	$71,018
Project Administration	N/A	$209,634	$209,634	$209,634	$209,634
Advertising & Promotion	N/A	$10,000	$10,000	$10,000	$10,000
Measurement & Verification	N/A	$35,000	$35,000	$35,000	$35,000
Rebates	N/A	$493,262	$493,262	$493,262	$493,262
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$818,914	$818,914	$818,914	$818,914
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$782,230	N/A	N/A
Subtotal	N/A	N/A	$782,230	N/A	N/A
Participant Costs					
Incremental Capital Costs	$493,262	N/A	N/A	$493,262	$493,262
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$493,262	N/A	N/A	$493,262	$493,262
Total Costs	$493,262	$818,914	$1,601,144	$1,312,176	$1,312,176
Net Benefit (Cost)	$782,230	($423,660)	($1,205,890)	($423,660)	($410,745)
Benefit/Cost Ratio	2.59	0.48	0.25	0.68	0.69

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	12.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	24.55%
Gross Load Factor at Customer	E	15.80%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	($859)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.80 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.22 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,110 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,212 kWh

Program Summary All Participants		
Total Participants	J	596
Total Budget	K	**$818,914**
Gross kW Saved at Customer	(J x I)	478 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**129 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	661,747 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**722,431 kWh**
Societal Net Benefits	(J x I x H)	**($410,745)**

Utility Program Cost per kWh Lifetime	**$0.0938**
Utility Program Cost per kW at Gen	**$6,362.89**

MULTI-FAMILY ENERGY SAVINGS PROGRAM — 2015 ELECTRIC GOAL

2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$92,360	$92,360	$92,360	$92,360
T & D	N/A	$35,009	$35,009	$35,009	$35,009
Marginal Energy	N/A	$265,010	$265,010	$265,010	$265,010
Environmental Externality	N/A	N/A	N/A	N/A	$12,199
Subtotal	N/A	$392,378	$392,378	$392,378	$404,577
Participant Benefits					
Bill Reduction - Electric	$754,345	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$493,262	N/A	N/A	$493,262	$493,262
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$1,247,607	N/A	N/A	$493,262	$493,262
Total Benefits	$1,247,607	$392,378	$392,378	$885,640	$897,839
Costs					
Utility Project Costs					
Customer Services	N/A	$71,018	$71,018	$71,018	$71,018
Project Administration	N/A	$209,696	$209,696	$209,696	$209,696
Advertising & Promotion	N/A	$10,000	$10,000	$10,000	$10,000
Measurement & Verification	N/A	$35,000	$35,000	$35,000	$35,000
Rebates	N/A	$493,262	$493,262	$493,262	$493,262
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$818,976	$818,976	$818,976	$818,976
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$754,345	N/A	N/A
Subtotal	N/A	N/A	$754,345	N/A	N/A
Participant Costs					
Incremental Capital Costs	$493,262	N/A	N/A	$493,262	$493,262
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$493,262	N/A	N/A	$493,262	$493,262
Total Costs	$493,262	$818,976	$1,573,321	$1,312,238	$1,312,238
Net Benefit (Cost)	$754,345	($426,598)	($1,180,943)	($426,598)	($414,399)
Benefit/Cost Ratio	2.53	0.48	0.25	0.67	0.68

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	12.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	26.42%
Gross Load Factor at Customer	E	16.51%
Transmission Loss Factor (Energy)	F	8.400%
Transmission Loss Factor (Demand)	G	8.800%
Societal Net Benefit (Cost)	H	($965)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.72 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.21 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,042 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,138 kWh

Program Summary All Participants		
Total Participants	J	596
Total Budget	K	**$818,976**
Gross kW Saved at Customer	(J x I)	430 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**124 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	621,037 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**677,988 kWh**
Societal Net Benefits	(J x I x H)	**($414,399)**
Utility Program Cost per kWh Lifetime		**$0.0999**
Utility Program Cost per kW at Gen		**$6,581.25**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Planning Segment Total
Project Description:
(Note changes)

Type Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	1,766,099			1,781,435			1,801,543		
Advertising & Promotion	2,388,532			2,434,796			2,488,614		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	111			112			111		
Total Costs	$4,154,742			$4,216,343			$4,290,268		
Project Participants									
Total Participants	0			0			0		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	100%			100%			100%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant									
Annual kWh Saved - Generator	0			0			0		
Cost per Annual kWh Saved									
Measure Lifetime (Years)									
Lifetime kWh savings	0			0			0		
Cost per kWh Lifetime									
Average kW Savings per Participant									
Annual kW Savings - Generator									
Cost per KW Saved									
Cost/Benefit Results									
Societal									
Net present value	($4,154,742)			($4,216,343)			($4,290,268)		
B/C ratio									
Participant									
Net present value	$0			$0			$0		
B/C ratio									
Rate Payer									
Net present value	($4,154,742)			($4,216,343)			($4,290,268)		
B/C ratio									
Utility									
Net present value	($4,154,742)			($4,216,343)			($4,290,268)		
B/C ratio									

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Planning Segment Total
Project Description:
(Note changes)

Type Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	465,222			472,780			480,526		
Advertising & Promotion	545,524			557,014			577,407		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	0			0			0		
Total Costs	$1,010,746			$1,029,794			$1,057,933		
Project Participants									
Total Participants	0			0			0		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	100%			100%			100%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved									
Annual Dth Saved	0			0			0		
Cost per Dth									
Project Life (Years)									
Lifetime Dth Saved	0			0			0		
Cost per Lifetime Dth Saved									
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	($3,098,473)								
B/C ratio									
Participant									
Net present value	$0								
B/C ratio									
Rate Payer									
Net present value	($3,098,473)								
B/C ratio									
Utility									
Net present value	($3,098,473)								
B/C ratio									

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Research, Evaluations & Pilots Segment Total
Project Description:
(Note changes)

Type Indirect
Status: New and Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	420,910			457,986			441,207		
Advertising & Promotion	0			0			0		
Participant Incentives	0			0			0		
R&D	807,000			807,000			807,000		
Other	743,628			116,934			557,781		
Total Costs	$1,971,538			$1,381,920			$1,805,988		
Project Participants									
Total Participants	0			0			0		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	100%			100%			100%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other									
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant									
Annual kWh Saved - Generator	0			0			0		
Cost per Annual kWh Saved									
Measure Lifetime (Years)									
Lifetime kWh savings	0			0			0		
Cost per kWh Lifetime									
Average kW Savings per Participant									
Annual kW Savings - Generator									
Cost per KW Saved									
Cost/Benefit Results									
Societal									
Net present value	($1,971,538)			($1,381,920)			($1,805,988)		
B/C ratio									
Participant									
Net present value	$0			$0			$0		
B/C ratio									
Rate Payer									
Net present value	($1,971,538)			($1,381,920)			($1,805,988)		
B/C ratio									
Utility									
Net present value	($1,971,538)			($1,381,920)			($1,805,988)		
B/C ratio									

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Research, Evaluations & Pilots Segment Total
Project Description:
(Note changes)

Type Indirect
Status: New and Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	128,295			139,034			149,555		
Advertising & Promotion	0			0			0		
Participant Incentives	0			0			0		
R&D	227,972			227,972			227,972		
Other	326,595			304,300			39,515		
Total Costs	$682,862			$671,305			$417,042		
Project Participants									
Total Participants	0			0			0		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	100%			100%			100%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved									
Annual Dth Saved	0			0			0		
Cost per Dth									
Project Life (Years)									
Lifetime Dth Saved	0			0			0		
Cost per Lifetime Dth Saved									
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	($1,771,210)								
B/C ratio									
Participant									
Net present value	$0								
B/C ratio									
Rate Payer									
Net present value	($1,771,210)								
B/C ratio									
Utility									
Net present value	($1,771,210)								
B/C ratio									

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Renewable Energy Segment - Solar*Rewards
Project Description:
(Note changes)

Type Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0								
Utility Administration	200,000								
Advertising & Promotion	0								
Participant Incentives	2,300,000								
R&D	0								
Other	0								
Total Costs	$2,500,000								
Project Participants									
Total Participants	116								
% of Spending by Customer Segment									
Residential	0%								
Commercial	0%								
Industrial									
Farm									
Other	0%								
Total % of Spending (must equal 100%)	0%								
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%								
Budget % (% of Row 30)	0%								
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other	x								
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant	18,359								
Annual kWh Saved - Generator	2,121,127								
Cost per Annual kWh Saved	$1.1786								
Measure Lifetime (Years)	20.0								
Lifetime kWh savings	42,422,540								
Cost per kWh Lifetime	$0.0589								
Average kW Savings per Participant	6.78								
Annual kW Savings - Generator	783								
Cost per KW Saved	$3,191.33								
Cost/Benefit Results									
Societal									
Net present value	($51,812)								
B/C ratio	0.45								
Participant									
Net present value	($31,469)								
B/C ratio	0.57								
Rate Payer									
Net present value	($20,777)								
B/C ratio	0.52								
Utility									
Net present value	$449								
B/C ratio	1.02								

RENEWABLE ENERGY SEGMENT - SOLAR*REWARDS	2013	ELECTRIC	GOAL

2013 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Cost Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$888,817	$888,817	$888,817	$888,817
T & D	N/A	$336,983	$336,983	$336,983	$336,983
Marginal Energy	N/A	$1,326,088	$1,326,088	$1,326,088	$1,326,088
Environmental Externality	N/A	N/A	N/A	N/A	$50,164
Subtotal	N/A	$2,551,888	$2,551,888	$2,551,888	$2,602,052
Participant Benefits					
Bill Reduction - Electric	$2,452,467	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$2,300,000	N/A	N/A	$2,300,000	$2,300,000
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$4,752,467	N/A	N/A	$2,300,000	$2,300,000
Total Benefits	$4,752,467	$2,551,888	$2,551,888	$4,851,888	$4,902,052
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$200,000	$200,000	$200,000	$200,000
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$2,300,000	$2,300,000	$2,300,000	$2,300,000
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,500,000	$2,500,000	$2,500,000	$2,500,000
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,452,467	N/A	N/A
Subtotal	N/A	N/A	$2,452,467	N/A	N/A
Participant Costs					
Incremental Capital Costs	$8,388,333	N/A	N/A	$8,388,333	$8,388,333
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$8,388,333	N/A	N/A	$8,388,333	$8,388,333
Total Costs	$8,388,333	$2,500,000	$4,952,467	$10,888,333	$10,888,333
Net Benefit (Cost)	($3,635,867)	$51,888	($2,400,579)	($6,036,445)	($5,986,282)
Benefit/Cost Ratio	0.57	1.02	0.52	0.45	0.45

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	20.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	47.29%
Gross Load Factor at Customer	E	14.68%
Transmission Loss Factor (Energy)	F	7.037%
Transmission Loss Factor (Demand)	G	7.437%
Societal Net Benefit (Cost)	H	($3,904)

Program Summary per Participant		
Gross kW Saved at Customer	I	13.27 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	6.78 kW
Gross Annual kWh Saved at Customer	(B x E x I)	17,067 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	18,359 kWh

Program Summary All Participants		
Total Participants	J	116
Total Budget	K	**$2,500,000**
Gross kW Saved at Customer	(J x I)	1,533 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**783 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,971,867 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,121,127 kWh**
Societal Net Benefits	(J x I x H)	**($5,986,282)**

Utility Program Cost per kWh Lifetime	**$0.0589**
Utility Program Cost per kW at Gen	**$3,191.33**

Electric Conservation Project Information Sheet

Utility Name: Xcel Energy ID 85
Project Name: Assessments Segment
Project Description:
(Note changes)

Type Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No kWh or kW Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (kWh or kW Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	0			0			0		
Advertising & Promotion	0			0			0		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	1,736,000			1,736,000			1,736,000		
Total Costs	$1,736,000			$1,736,000			$1,736,000		
Project Participants									
Total Participants	0			0			0		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	0%			0%			0%		
Total % of Spending (must equal 100%)	0%			0%			0%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X" or %									
Building Efficiency									
Compressed Air									
Energy Star Appliances									
Lighting									
Motors (including ASD, Fans, Pumps)									
Manufacturing Process									
Refrigeration									
Space Cooling									
Space Heating									
Water Heating									
Weatherization									
General/Other	x			x			x		
Energy and Demand Savings - Generator									
Average Annual kWh Savings per Participant									
Annual kWh Saved - Generator	0			0			0		
Cost per Annual kWh Saved									
Measure Lifetime (Years)									
Lifetime kWh savings	0			0			0		
Cost per kWh Lifetime									
Average kW Savings per Participant									
Annual kW Savings - Generator									
Cost per KW Saved									
Cost/Benefit Results									
Societal									
Net present value	($1,736,000)			($1,736,000)			($1,736,000)		
B/C ratio									
Participant									
Net present value	$0			$0			$0		
B/C ratio									
Rate Payer									
Net present value	($1,736,000)			($1,736,000)			($1,736,000)		
B/C ratio									
Utility									
Net present value	($1,736,000)			($1,736,000)			($1,736,000)		
B/C ratio									

Gas Conservation Project Information Sheet

Utility Name: Xcel Energy ID 885
Project Name: Assessments Segment
Project Description:
(Note changes)

Type Indirect
Status: Existing

	2013 Proposed	2013 Approved	2013 Actual	2014 Proposed	2014 Approved	2014 Actual	2015 Proposed	2015 Approved	2015 Actual
Project Type -- Enter "X"									
Indirect (No Dth Savings)									
Audit/Info									
Education									
Classroom Training/Instructional									
R&D									
Renewable									
Other									
Direct (Mcf Savings)									
Cost Components -- Enter Dollars									
Customer Services	0			0			0		
Utility Administration	0			0			0		
Advertising & Promotion	0			0			0		
Participant Incentives	0			0			0		
R&D	0			0			0		
Other	345,600			345,600			345,600		
Total Costs	$345,600			$345,600			$345,600		
Project Participants									
Total Participants	0			0			0		
% of Spending by Customer Segment									
Residential	0%			0%			0%		
Commercial	0%			0%			0%		
Industrial									
Farm									
Other	100%			100%			100%		
Total % of Spending (must equal 100%)	100%			100%			100%		
Low-Income & Renter Participation									
Participants % (% of Row 32)	0%			0%			0%		
Budget % (% of Row 30)	0%			0%			0%		
End-Use Target -- Enter "X"									
Boiler System									
Building Efficiency									
Food Service Equipment									
Heat Recovery									
Industrial Process Heating									
Space Heating (only)									
Space Cooling (only)									
Space Heating & Cooling Combination									
Water Heating									
Weatherization									
General/Other									
Energy Savings									
Avg. Dth/Part. Saved									
Annual Dth Saved	0			0			0		
Cost per Dth									
Project Life (Years)									
Lifetime Dth Saved	0			0			0		
Cost per Lifetime Dth Saved									
Total Demand Savings									
Cost/Benefit Results									
Societal									
Net present value	($1,036,800)								
B/C ratio									
Participant									
Net present value	$0								
B/C ratio									
Rate Payer									
Net present value	($1,036,800)								
B/C ratio									
Utility									
Net present value	($1,036,800)								
B/C ratio									

➢ Technical Assumptions

This section contains the forecast planning and deemed savings technical assumptions for the proposed programs:

- **Forecast Planning Assumptions**- These assumptions describe the predicted participation, savings, and costs of the measures proposed in the Plan. They represent an average of the values for the expected product mix that we anticipate customers will implement. These assumptions are used to estimate the energy consumption impacts and other measure-specific factors in order to calculate the benefit-cost analyses. The forecasted impacts are derived by applying the anticipated participation for each measure to the Deemed Savings technical assumptions for that measure. The impacts from each of the measures are aggregated and inputted into the benefit-cost model for the program level analysis.

- **Deemed Savings Technical Assumptions**- These assumptions describe how actual energy savings, cost, and other values will be calculated for each measure that is implemented. For **prescriptive** DSM measures, the deemed savings technical assumptions contain the algorithms that will be used to calculate energy and demand savings, as well as all assumed or customer-provided values to be used as inputs to these algorithms. Additionally, the Deemed Savings technical assumptions describe how incremental capital and incremental operation and maintenance costs will be determined for each implemented measure, and detail the values which will be used for the measure life. For **custom** products, the Deemed Savings technical assumptions describe the methodology to be used to calculate project specific savings, as well as any values to be used for all implemented projects under a specific DSM product.

The supporting tables for Lighting Efficiency and Motor Efficiency have been omitted due to their size, but are available upon request.

The following table describes each column in the Forecasted Technical Assumptions:

Column Label	Column Description
Type of Measure	Program name and individual measures
High Efficiency Product Description/Rating	High efficiency product description
Hours of operation for High efficiency	High efficiency product hours of operation
Efficient Product Consumption	Consumption of high efficiency product in either watts (electric) or Dth/yr (gas)
Baseline Product Description/Rating	Baseline product description
Hours of operation for Baseline	Baseline equipment hours of operation
Baseline Product Consumption	Consumption of baseline product in either watts (electric) or Dth/yr (gas)
Measure Lifetime (years)	High efficiency product lifetime
Rebate Amount	Average dollar amount of rebate given to participants
Rebate as a % of Incremental Cost	Percent of incremental cost that is equal to the rebate amount
Incremental Cost Payback Period w/o Rebate	Payback period expressed in years after a participant acquires the high efficiency product using the incremental cost of the product
Incremental Cost Payback Period w/ Rebate	Payback period expressed in years after a participant acquires the high efficiency product with the incremental cost reduced by the rebate amount
Annual Customer kWh/Dth Savings	Annual kWh or Dth savings customer realizes after implementing high efficiency product
Rebated Cost per Annual Cust kWh/Dth Saved	Rebate cost per annual kWh or Dth saved by the high efficiency product at the customer meter
Rebated Lifetime Cost per Cust kWh/Dth Saved	Rebate cost per kWh or Dth saved by the high efficiency product over the lifetime of the product at the customer meter
Customer kW Savings (Electric Only)	Consumption savings in kW customer realizes after implementing high efficiency product
Generator Peak kW Savings (Electric Only)	Annual kW savings utility realizes on annual peak day after customer implements high efficiency product
# Units Rebated in Rpt. Yr.	Total # of actual Units rebated – populated only for Status Reports
Total kWh/Dth Saved All Units Rpt. Yr.	Total annual kWh or Dth saved by the actual units rebated – populated only for Status Reports
Part. Test	2013 Benefit-Cost analysis results for the Participant Test
Utility Test	2013 Benefit-Cost analysis results for the Utility Test
Rate Impact Test	2013 Benefit-Cost analysis results for the Rate Impact Test
Soc. Test	2013 Benefit-Cost analysis results for the Societal Test

Electric Forecast Planning Assumptions																							
Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)	Measure Lifetime (years)	Rebate Amount ($)	Average Baseline Product Cost ($)	Incremental Cost of Efficient Product ($)	Assumed Energy Cost ($/kWh)	Rebate as a % of Incremental Cost (%)	Incremt'l Cost Payback Period w/o Rebate (yrs)	Incremt'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved ($/kWh)	Rebated Lifetime cost /Cust KWh Saved ($/kWh)	Customer kW Savings (kW)	Generator Peak kW Savings (kW)	Soc. Test	Part. Test	Rate Impact Test	Utility Test
BUSINESS SEGMENT																							
BUSINESS NEW CONSTRUCTION																				1.32	2.07	0.79	4.04
EDA Standard Track	High Efficiency Building	866,164	4,051	Code Level Efficiency Building	1,019,017	4,051	20	$85,908	$0	$457,648	$0.077	19%	7.16	5.82	619,185	$0.139	$0.007	152.85	152.52				
EDA Enhanced Track	High Efficiency Building	1,622,398	3,068	Code Level Efficiency Building	1,908,704	3,068	20	$149,661	$0	$542,172	$0.083	28%	6.36	4.60	878,467	$0.170	$0.009	286.31	285.69				
EDA Quick Track	High Efficiency Building	519,530	4,522	Code Level Efficiency Building	611,212	4,522	20	$53,258	$0	$248,754	$0.075	21%	6.90	5.42	414,624	$0.128	$0.006	91.68	91.48				
EEB Average Project	High Efficiency Building	238,594	3,025	Code Level Efficiency Building	280,699	3,025	20	$18,198	$0	$104,639	$0.083	17%	6.68	5.52	127,352	$0.143	$0.007	42.10	34.11				
COMMERCIAL EFFICIENCY																				1.41	2.97	0.55	2.09
Medium Custom Custom projects including Efficiency Controls	New energy efficient systems or equipment	351,705	5,792	Old or less efficient systems or equipment	363,750	5,792	18	$5,662	$0	$34,910	$0.071	16%	3.07	2.57	69,757	$0.081	$0.005	12.04	6.85				
Large Custom Custom projects including Efficiency Controls	New energy efficient systems or equipment	2,978,761	5,717	Old or less efficient systems or equipment	3,024,892	5,717	16	$34,666	$0	$207,551	$0.071	17%	5.28	4.40	263,722	$0.131	$0.008	46.13	26.24				
Lighting - Total	High Efficiency Product	39	5,078	Standard Efficiency Product	68	5,078	16	$18	$3	$45	$0.073	39%	4.33	2.64	144	$0.123	$0.008	0.03	0.03				
Lighting Redesign Implementation	Redesign Lighting Solution Installed	35,736	6,844	Existing Overlit Lighting System	71,472	6,844	20	$27,605	$0	$139,295	$0.069	20%	8.30	6.66	244,584	$0.113	$0.006	35.74	32.82				
Fluid System Optimization - Total	System optimized	31,264	5,945	System not optimized	35,492	5,945	18	$1,281	$3,153	$1,943	$0.070	66%	1.09	0.37	25,140	$0.051	$0.003	4.23	4.08				
Motor & Drive Efficiency - Total	New Equipment	13,156	4,675	Old or less efficient systems or equipment	16,647	4,675	15	$2,057	$333	$4,364	$0.074	47%	3.62	1.91	16,323	$0.126	$0.008	3.49	2.93				
Implementation of ECO's found in studies	Optimized Building Systems	668,071	6,011	Existing Building System - Not Tuned or Optimized	701,217	6,011	7	$7,079	$0	$12,694	$0.070	56%	0.54	0.24	199,246	$0.036	$0.005	33.15	10.47				
Cooling Efficiency - TOTAL	High Efficiency Product	2,828	6,425	Standard Efficiency Product	3,169	6,425	17	$324	$3,452	$495	$0.069	66%	3.26	1.12	2,192	$0.148	$0.009	0.34	0.30				
Energy Design Assistance	High Efficiency Building	1,244,281	3,475	Code Level Efficiency Building	1,463,860	3,475	20	$147,231	$0	$499,910	$0.080	29%	6.63	4.68	762,932	$0.193	$0.010	219.58	219.11				
Electric Food Service Equipment	High Efficiency Equipment	4,247	4,647	Standard Efficiency Equipment	7,094	4,647	17	$518	$3,449	$5,248	$0.074	10%	3.12	2.81	13,229	$0.039	$0.002	2.85	2.02				
Computer Efficiency - End User Rebates	High Efficiency Equipment	22	7,311	Standard Efficiency Equipment	96	7,311	5	$75	$600	$116	$0.068	65%	3.17	1.13	540	$0.139	$0.028	0.07	0.08				
Phase 2 Customer Contribution	0	0	0	0	0	0	0	$0	$0	$6,000	$0.000	0%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Behavioral Changes	Behavior changes that reduce energy use	2,962,572	8,760	No change in behavior	3,024,892	8,760	1	$0	$0	$0	$0.066	0%	0.00	0.00	545,921	$0.000	$0.000	62.32	19.43				
Behavioral Adjustment	Behavior changes that reduce energy use	-1,975,048	8,760	No change in behavior	-2,016,594	8,760	0	$0	$0	$0	$0.066	0%	0.00	0.00	-363,947	$0.000	$0.000	-41.55	-12.96				

Electric Forecast Planning Assumptions																						
Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)	Measure Lifetime (years)	Rebate Amount ($)	Average Baseline Product Cost ($)	Incremental Cost of Efficient Product ($)	Assumed Energy Cost ($/kWh)	Rebate as a % of Incremental Cost (%)	Incremt'l Cost Payback Period w/o Rebate (yrs)	Incremt'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved ($/kWh)	Rebated Lifetime cost /Cust KWh Saved ($/kWh)	Customer kW Savings (kW)	Generator Peak kW Savings (kW)	Soc. Test	Part. Test	Rate Impact Test	Utility Test
COMPUTER EFFICIENCY																				1.66	4.18	0.56	2.17
Desktop PC; with 80 Plus power supply	desktop computer meeting with an 80 Plus level power supply	55	7,311	desktop computer meeting ENERGY STAR version 3.0 with a standard efficiency power supply	96	7,311	5	$0	$600	$16	$0.068	0%	0.85	0.85	303	$0.000	$0.000	0.04	0.04				
Desktop PC; with 80 Plus level power supply	desktop computer meeting with an 80 Plus level power supply	55	7,311	desktop computer meeting ENERGY STAR version 3.0 with a standard efficiency power supply	96	7,311	5	$0	$600	$17	$0.068	0%	0.88	0.88	303	$0.000	$0.000	0.04	0.04				
Desktop PC; with 80 Plus level power supply	desktop computer meeting with an 80 Plus level power supply	55	7,311	desktop computer meeting ENERGY STAR version 3.0 with a standard efficiency power supply	96	7,311	5	$0	$600	$17	$0.068	0%	0.88	0.88	303	$0.000	$0.000	0.04	0.04				
Desktop PC Virtualization	Hardware and/or software replacing desktop PC	22	7,311	Desktop PCs meeting ENERGY STAR 3.0 specifications	96	7,311	5	$60	$600	$116	$0.068	52%	1.81	0.87	540	$0.111	$0.022	0.07	0.08				
COOLING EFFICIENCY																				1.48	2.24	0.78	3.34
DX Units less than 5.4 tons	Unit size 3.6 tons, 14.1 SEER, 12 EER	3,600	708	Unit size 3.6 tons, 13 SEER, 11.05 EER	3,910	708	20	$378	$4,500	$594	$0.169	64%	16.05	5.84	219	$1.726	$0.086	0.31	0.30				
DX Units 5.5-11.3 tons	Unit size 8.5 tons, 13.1 SEER, 11.1 EER	9,189	762	Unit size 8.5 tons, 12.1 SEER, 10.3 EER	9,903	762	20	$765	$13,500	$1,275	$0.161	60%	14.56	5.83	544	$1.407	$0.070	0.71	0.69				
DX Units11.4-19.9 tons	Unit size 14.9 tons, 13.1 SEER, 11.1 EER	16,108	740	Unit size 14.9 tons, 11.4 SEER, 9.7 EER	18,433	740	20	$1,416	$22,500	$2,086	$0.164	68%	7.39	2.38	1,720	$0.823	$0.041	2.32	2.25				
DX Units 20-63.3 tons	Unit size 29.3 tons, 12.2 SEER, 10.4 EER	33,808	679	Unit size 29.3 tons, 11.2 SEER, 9.5 EER	37,011	679	20	$2,491	$45,000	$3,663	$0.174	68%	9.70	3.10	2,174	$1.146	$0.057	3.20	3.10				
DX Units greater than 63.3 tons	Unit size 117 tons, 11.3 SEER, 9.6 EER	146,250	764	Unit size 117 tons, 10.8 SEER, 9.2 EER	152,609	764	20	$9,360	$187,500	$12,870	$0.161	73%	16.48	4.50	4,860	$1.926	$0.096	6.36	6.15				
RTU Economizer w/ Demand Control Ventilation	RTU with Demand Control	2,398	475	RTU with Standard Economizer	4,795	475	15	$600	$1,000	$1,500	$0.224	40%	5.89	3.53	1,138	$0.527	$0.035	2.40	2.32				
Water-source Heat Pumps	Unit size 2.5 tons, 14.4 SEER, 13 EER	2,308	195	Unit size 2.5 tons, 14.1 SEER, 12 EER	2,500	195	20	$163	$4,500	$500	$0.464	33%	28.78	19.43	37	$4.339	$0.217	0.19	0.19				
PTAC	Condensing Units size 0.75 tons, 13.5 SEER, 11.5 EER	783	678	Condensing Units 0.75 tons, 12.5 SEER, 10.6 EER	849	678	20	$83	$1,125	$188	$0.174	44%	23.94	13.40	45	$1.831	$0.092	0.07	0.06				
Scroll/Screw Chiller < 150 tons	Chiller size 77.1 tons, 0.61 full load kW/ton, 0.50 IPLV	47,031	826	Chiller size 77.1 tons, 0.79 full load kW/ton, 0.68 IPLV	60,917	826	20	$4,665	$75,000	$7,710	$0.153	61%	4.40	1.74	11,470	$0.407	$0.020	13.89	13.44				
Scroll/Screw chiller 150 to 300 tons	Chiller size 225 tons, 0.54 full load kW/ton, 0.45 IPLV	121,500	820	Chiller size 225 tons, 0.72 full load kW/ton, 0.63 IPLV	161,448	820	20	$13,613	$108,000	$22,500	$0.154	61%	4.47	1.77	32,746	$0.416	$0.021	39.95	38.66				

Electric Forecast Planning Assumptions																						
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Centrifugal Chillers < 150 tons	Chiller size 125 tons, 0.60 full load kW/ton, 0.57 IPLV	75,000	833	Chiller size 125 tons, 0.70 full load kW/ton, 0.67 IPLV	87,500	833	20	$5,550	$75,000	$12,500	$0.152	44%	7.89	4.39	10,410	$0.533	$0.027	12.50	12.10				
Centrifugal Chillers 150- 300 tons	Chiller size 225 tons, 0.55 full load kW/ton, 0.51 IPLV	123,032	846	Chiller size 225 tons, 0.63 full load kW/ton, 0.60 IPLV	142,650	846	20	$8,981	$135,000	$22,500	$0.151	40%	9.00	5.41	16,590	$0.541	$0.027	19.62	18.99				
Centrifugal Chillers > 300 tons	Chiller size 750 tons, 0.55 full load kW/ton, 0.52 IPLV	409,500	825	Chiller size 750 tons, 0.58 full load kW/ton, 0.55 IPLV	432,291	825	20	$19,125	$450,000	$56,250	$0.153	34%	19.55	12.90	18,799	$1.017	$0.051	22.79	22.06				
Air-Cooled Chillers - avg. capacity 250 tons	Air-cooled chiller average capacity 250 tons, 1.15 kW/ton	297,030	2,703	Air-cooled chiller average capacity 250 tons, 1.26 kW/ton	314,000	2,703	20	$5,375	$250,000	$10,000	$0.086	54%	2.53	1.17	45,869	$0.117	$0.006	16.97	16.42				
Cooling Studies	Customer has Study	0	0	No Study	0	0	0	$13,316	$0	$19,310	$0.000	69%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Plate & Frame Heat Exchangers - Office Building	Install plate & frame heat exchanger to allow cooling tower to meet cooling load	64,819	8,760	Chiller-based cooling	66,250	8,760	20	$21,200	$0	$81,963	$0.066	26%	99.03	73.41	12,532	$1.692	$0.085	1.43	0.00				
Plate & Frame Heat Exchangers - Data Center	Install plate & frame heat exchanger to allow cooling tower to meet cooling load	32,412	8,760	Chiller-based cooling	53,000	8,760	20	$21,200	$0	$65,571	$0.066	32%	5.50	3.72	180,351	$0.118	$0.006	20.59	0.00				
Plate & Frame Heat Exchangers - Process Load	Install plate & frame heat exchanger to allow cooling tower to meet cooling load	39,275	8,760	Chiller-based cooling	53,000	8,760	20	$21,200	$0	$65,571	$0.066	32%	8.26	5.59	120,234	$0.176	$0.009	13.73	0.00				
VFD Chiller Retro Fit	Chiller size 378 tons, 0.576 full load kW/ton, 0.426 IPLV with VFD	161,028	762	Chiller size 378 tons, 0.588 full load kW/ton, 0.568 IPLV	214,704	762	20	$8,051	$0	$27,172	$0.161	30%	4.13	2.90	40,883	$0.197	$0.010	53.68	0.00				
Custom Cooling Projects - (Managed Accounts)	Varies By Project	169,158	4,614	Varies By project	254,579	4,614	20	$29,975	$6,960	$168,462	$0.074	18%	5.76	4.74	394,165	$0.076	$0.004	85.42	63.36				
ECM Motors - Medium Temp Display Case	ECM Motor	24	8,672	Shaded Pole	71	8,672	15	$40	$0	$88	$0.066	45%	3.22	1.76	413	$0.097	$0.006	0.05	0.05				
ECM Motors - Low Temp Display Case	ECM Motor	27	8,672	Shaded Pole	81	8,672	15	$40	$0	$88	$0.066	45%	2.84	1.55	468	$0.086	$0.006	0.05	0.06				
ECM Motors - Medium Temp Walk-in, Evap fan <= 15" Diameter	ECM Motor	44	8,585	Shaded Pole	136	8,585	15	$70	$0	$180	$0.066	39%	3.44	2.10	791	$0.089	$0.006	0.09	0.10				
ECM Motors - Low Temp Walk-in, Evap fan <= 15" Diameter	ECM Motor	50	8,585	Shaded Pole	154	8,585	15	$70	$0	$180	$0.066	39%	3.03	1.85	896	$0.078	$0.005	0.10	0.11				
ECM Motors - Medium Temp Walk-in, Evap fan > 15" Diameter	ECM Motor	69	8,585	Perm. Split Cap	138	8,585	15	$70	$0	$180	$0.066	39%	4.60	2.81	591	$0.118	$0.008	0.07	0.07				
ECM Motors - Low Temp Walk-in, Evap fan > 15" Diameter	ECM Motor	78	8,585	Perm. Split Cap	156	8,585	15	$70	$0	$180	$0.066	39%	4.06	2.48	670	$0.105	$0.007	0.08	0.08				
Anti-Sweat Heater Controls	Anti-Sweat Heater Controls	27	8,760	Anti-Sweat Heaters running constantly	150	8,760	12	$60	$0	$180	$0.066	33%	2.52	1.68	1,081	$0.056	$0.005	0.12	0.00				
Energy Efficient Case Doors	No heat Case Doors	0	8,760	Standard Case Doors with Anti-Sweat Heaters	179	8,760	10	$125	$0	$538	$0.066	23%	5.18	3.97	1,571	$0.080	$0.008	0.18	0.19				

Electric Forecast Planning Assumptions																						
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CUSTOM EFFICIENCY																				1.63	2.63	0.62	3.65
Custom Efficiency Electric	High Efficiency Product/system	37,037	4,353	Less Efficient Product/Systems	71,729	4,353	17	$13,877	$48,767	$73,196	$0.075	19%	4.76	3.86	151,028	$0.092	$0.005	34.69	16.72				
Custom Studies Electric	0	0	0	0	0	0	0	$9,808	$0	$19,069	$0.000	51%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
DATA CENTER EFFICIENCY																				3.20	5.40	0.56	2.69
Data Center Efficiency Study <= 5000 sq ft	0	0	0	0	0	0	0	$16,301	$0	$21,735	$0.000	75%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Data Center Efficiency Study > 5000 sq ft	0	0	0	0	0	0	0	$40,289	$0	$53,718	$0.000	75%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Data Center Bundled Project Implementation	Multiple Energy Conservation Measures Implemented	760,144	7,743	Existing Data Center Facility or New Facility with Standard Systems	941,262	7,743	12	$48,510	$0	$585,298	$0.067	8%	0.99	0.91	1,402,321	$0.035	$0.003	181.12	158.90				
Historical Averages from past custom projects	Historical Averages from past custom projects	385,537	8,281	Historical Averages from past custom projects	510,725	8,281	11	$50,161	$255,991	$188,289	$0.067	27%	2.58	1.89	1,036,635	$0.048	$0.004	125.19	79.61				
EFFICIENCY CONTROLS																				2.09	3.06	0.59	5.21
Efficiency Controls - Electric	New Digital Controls System	2,038,896	7,453	Obsolete Controls System	2,063,219	7,453	15	$9,193	$0	$74,222	$0.068	12%	3.48	3.05	181,286	$0.051	$0.003	24.32	3.93				
Efficiency Controls - Study Allocation	Study Allocation	0	0	0	0	0	0	$16,362	$0	$53,941	$0.000	30%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
FLUID SYSTEMS OPTIMIZATION																				2.42	4.82	0.71	4.96
Identification of supply-side efficiency improvements, leak identification and repair	Study Completed	78,007	6,996	No Study Completed	78,007	6,996	5	$5,169	$0	$6,021	$0.000	86%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Leak identification and repair	Optimized Compressed Air System	58,060	6,996	Inefficient Compressed Air System	78,007	6,996	5	$0	$0	$1,828	$0.068	0%	0.19	0.19	139,545	$0.000	$0.000	19.95	21.45				
VFD Compressor - Plan A	VFD Compressor	12,748	2,923	Modulation or load no-load with less than 3gal of storage per CFM of Capacity	18,692	2,923	20	$2,357	$15,080	$4,789	$0.084	49%	3.28	1.66	17,372	$0.136	$0.007	5.94	5.68				
VFD Compressor - Plan B	VFD Compressor	12,748	2,923	Modulation or load no-load with less than 3gal of storage per CFM of Capacity	18,692	2,923	20	$4,283	$0	$18,939	$0.084	23%	12.96	10.03	17,372	$0.247	$0.012	5.94	5.68				
No Loss Air Drains	No-Air Loss Drains	77,003	6,996	Electronic Solenoid/Timed Drains	78,007	6,996	20	$200	$125	$323	$0.068	62%	0.67	0.26	7,026	$0.028	$0.001	1.00	0.94				
Cycling Refrigerated Dryer	Cycling Dryer	1,437	7,009	Non-Cycling Dryer	2,279	7,009	20	$640	$5,308	$902	$0.068	71%	2.24	0.65	5,897	$0.109	$0.005	0.84	0.90				
Dewpoint Demand Control	Purge Control	37,601	6,865	No Purge Control	42,920	6,865	10	$1,500	$0	$3,271	$0.069	46%	1.31	0.71	36,512	$0.041	$0.004	5.32	5.72				
Mist Eliminator Filter	Mist Eliminator Filter	78,883	7,278	General Purpose Filter	80,186	7,278	15	$2,060	$1,183	$4,386	$0.068	47%	6.25	3.31	9,483	$0.217	$0.014	1.30	1.40				
Identification of system opportunities	Non-Optimized System	74,338	5,380	Optimized System	74,338	5,380	20	$10,938	$0	$12,500	$0.000	88%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Implementation of efficiency measures with less than 9 months payback (Study driven credit)	Non-Optimized System	48,385	5,380	Optimized System	74,338	5,380	20	$0	$0	$0	$0.072	0%	0.00	0.00	139,619	$0.000	$0.000	25.95	23.62				
Implementation of efficiency measures with greater than 9 months payback	Non-Optimized System	48,385	5,380	Optimized System	74,338	5,380	20	$10,381	$4,295	$38,267	$0.072	27%	3.82	2.78	139,619	$0.074	$0.004	25.95	23.62				

Electric Forecast Planning Assumptions																							
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FOODSERVICE EQUIPMENT																				2.65	3.49	0.79	6.78
Commercial Dishwasher - Under Counter, Electric Only or Combo Customer	ENERGY STAR qualified unit	1,254	6,570	Conventional unit as defined by ENERGY STAR	1,898	6,570	10	$196	$4,943	$866	$0.069	23%	2.11	1.63	4,228	$0.046	$0.005	0.64	0.59				
Commercial Dishwasher - Door Type, Electric Only or Combo Customer	ENERGY STAR qualified unit	3,330	6,570	Conventional unit as defined by ENERGY STAR	4,982	6,570	15	$196	$6,786	$509	$0.069	39%	0.49	0.30	10,853	$0.018	$0.001	1.65	1.52				
Hot Food Holding Cabinet	ENERGY STAR qualified unit	640	5,475	Conventional unit as defined by ENERGY STAR	1,900	5,475	12	$400	$2,069	$1,713	$0.071	23%	3.47	2.66	6,899	$0.058	$0.005	1.26	1.16				
Demand Controlled Ventilation - Electric Only or Combo Customer	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	11,766	3,307	Commercial kitchen ventilation hoods without Demand Controlled Ventilation with 8.65 HP Motor	19,597	3,307	20	$865	$0	$17,903	$0.081	5%	3.97	3.78	25,896	$0.033	$0.002	7.83	4.16				
LIGHTING EFFICIENCY																				1.81	2.89	0.73	5.11
T8 Ballasts, 4 ft. or less, 1 and 2 lamp 2012	T8 1 and 2 Lamp systems	49	4,468	T12 1 and 2 Lamp systems, incandescents	98	4,468	20	$18	$0	$42	$0.075	42%	2.62	1.51	217	$0.083	$0.004	0.05	0.04				
T8 Ballasts, 4 ft. or less, 3 and 4 lamp 2012	T8 Lighting Systems	115	4,468	T12 3 and 4 Lamp systems	180	4,468	20	$24	$0	$56	$0.075	43%	2.56	1.45	290	$0.083	$0.004	0.07	0.06				
T8 Ballasts, Length > 4 ft. and <= 8 ft., 1 lamp 2012	T8 8 FT 1 Lamp systems	61	4,468	T12 8 Ft 1 Lamp systems	121	4,468	20	$28	$0	$93	$0.075	30%	4.66	3.27	268	$0.104	$0.005	0.06	0.06				
T8 Ballasts, Length > 4 ft. and <= 8 ft., 2 lamp 2012	T8 8 Ft 2 Lamp Systems	122	4,468	T12 8 Ft 2 Lamp systems	212	4,468	20	$28	$0	$103	$0.075	27%	3.43	2.50	404	$0.069	$0.003	0.09	0.08				
Low Wattage T8 4' lamps	T8 25W and 28W Lamps	29	4,468	T8 32W Lamps	35	4,468	7	$1	$2	$2	$0.075	25%	0.99	0.74	27	$0.019	$0.003	0.01	0.01				
T8 to T8 Lighting Optimization	High Efficiency T8 with less lamps (3,2,1)	62	4,468	Standard T8 with more lamps (4,3,2)	113	4,468	20	$12	$0	$46	$0.075	26%	2.73	2.02	225	$0.053	$0.003	0.05	0.05				
T12 to T8 Optimization 1 and 2 Lamp 2012	T8 Lighting Systems with less lamps	49	4,468	T12 Fluorescents with more lamps	98	4,468	20	$20	$0	$41	$0.075	48%	2.52	1.31	220	$0.091	$0.005	0.05	0.05				
T12 to T8 Optimization 3 Lamp 2012	T8 Lighting Systems with less lamps	99	4,468	T12 Fluorescents with more lamps	184	4,468	20	$26	$0	$53	$0.075	49%	1.88	0.97	380	$0.068	$0.003	0.08	0.08				
T5 Ballasts 1 and 2 Lamp 2012	T5 1 and 2 Lamp Lighting Systems	52	4,468	T12 Fluorescents	77	4,468	20	$18	$0	$42	$0.075	43%	4.98	2.85	113	$0.160	$0.008	0.03	0.02				
T5 Ballasts 3 and 4 Lamp 2012	T5 Lighting Systems	143	4,468	T12 Fluorescents	162	4,468	20	$24	$0	$70	$0.075	34%	11.18	7.35	84	$0.286	$0.014	0.02	0.02				
High Bay Fluorescents replacing 150, 175, 250 Watt HID	High Bay Fluorescent Fixtures with Electronic Ballasts replacing 250W HID systems	180	4,468	250W Lamp HID	367	4,468	20	$85	$0	$188	$0.075	45%	3.01	1.65	837	$0.102	$0.005	0.19	0.17				
High Bay Fluorescents replacing 320, 350, 400 Watt HID	High Bay Fluorescent fixtures with Electronic Ballasts replacing 310-400W HID Systems	322	4,468	HID: 320, 350, 400W Lamp	561	4,468	19	$125	$0	$278	$0.075	45%	3.46	1.90	1,072	$0.117	$0.006	0.24	0.22				
High Bay Fluorescents replacing 750 Watt HID	High Bay Fluorescents with Electronic Ballasts replacing 750W HID Systems	517	4,468	HID: 750W Lamp	1,082	4,468	20	$175	$0	$405	$0.075	43%	2.15	1.22	2,522	$0.069	$0.003	0.56	0.52				
High Bay Fluorescents replacing 1000 Watt HID	High Bay Fluorescent fixtures with Electronic Ballasts replacing 1000W HID Systems	757	4,468	HID: 1000W Lamp	1,419	4,468	20	$175	$0	$407	$0.075	43%	1.84	1.05	2,958	$0.059	$0.003	0.66	0.61				

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2 and 3 lamp fluorescents replacing HID systems between 150 Watts and 175 Watts	High Efficiency Fluorescent T8 or T5 Systems	104	8,760	150W or 175W High Intensity Discharge	197	8,760	20	$85	$0	$335	$0.066	25%	6.25	4.66	812	$0.105	$0.005	0.09	0.10				
Low Wattage T8 lamps 28 Watts and Less used in Parking Garage fixtures	T8 25W and 28W Lamps	23	8,760	T8 32W Lamps	27	8,760	4	$1	$0	$2	$0.066	25%	0.83	0.62	36	$0.014	$0.003	0.00	0.00				
CFL Pin-Based < 19W Retrofit	Compact Fluorescent Fixtures 18W or less Pin Based	15	4,468	Incandescent	49	4,468	20	$25	$0	$84	$0.075	30%	7.56	5.32	149	$0.168	$0.008	0.03	0.03				
CFL Pin-Based 19 to 32W Retrofit	Pin Based Compact Fluorescent 19 to 32 Watts	37	4,468	Incandescent	118	4,468	20	$30	$0	$76	$0.075	40%	2.79	1.69	364	$0.082	$0.004	0.08	0.07				
CFL Pin-Based Greater than 32 Watt Retrofit	Pin Based Compact Fluorescent Fixtures 33 Watts or more	72	4,468	Incandescent	263	4,468	20	$35	$0	$103	$0.075	34%	1.62	1.07	855	$0.041	$0.002	0.19	0.18				
2-foot Low Wattage CFL 25 Watt to 28 Watt	PL 25W CFL	32	4,468	PL 40W CFL	52	4,468	6	$1	$6	$4	$0.075	14%	0.54	0.46	87	$0.006	$0.001	0.02	0.02				
HID, 151 to 250W	Metal Halide	270	4,468	High Pressure Sodium	382	4,468	20	$30	$0	$161	$0.075	19%	4.34	3.53	497	$0.060	$0.003	0.11	0.10				
HID, 251 to 1000W	High Intensity Discharge 250 to 1000 Watts	590	4,468	High Pressure Sodium	1,410	4,468	20	$45	$0	$253	$0.075	18%	0.92	0.76	3,663	$0.012	$0.001	0.82	0.75				
Ceramic Metal Halide <=150W	Ceramic Metal Halide <= 150 Watts	66	4,468	Incandescent	225	4,468	20	$50	$0	$141	$0.075	35%	2.66	1.71	711	$0.070	$0.004	0.16	0.15				
Ceramic Metal Halide 151-250W	Ceramic Metal Halide	67	4,468	Incandescent	474	4,468	20	$80	$0	$248	$0.075	32%	1.83	1.24	1,817	$0.044	$0.002	0.41	0.37				
Ceramic Metal Halide 251W-	Ceramic Metal Halide	509	4,468	Metal Halide	924	4,468	20	$100	$0	$292	$0.075	34%	2.11	1.38	1,855	$0.054	$0.003	0.42	0.38				
Integrated 25W Ceramic Metal Halide	Ceramic Metal Halide	32	4,468	Incandescent	69	4,468	7	$25	$0	$57	$0.075	44%	4.71	2.65	162	$0.155	$0.022	0.04	0.03				
Pulse-Start Metal Halide, <= 175W	175W or Less Pulse Start Metal Halide	238	4,468	Metal Halide	438	4,468	20	$60	$0	$161	$0.075	37%	2.41	1.51	894	$0.067	$0.003	0.20	0.18				
Pulse-Start Metal Halide, 176W-319W	Pulse Start Metal Halide	300	4,468	Metal Halide	378	4,468	20	$90	$0	$280	$0.075	32%	10.70	7.26	350	$0.257	$0.013	0.08	0.07				
Pulse-Start Metal Halide, 320W-749W	Pulse Start Metal Halide	488	4,468	Metal Halide	589	4,468	20	$100	$0	$283	$0.075	35%	8.34	5.39	454	$0.220	$0.011	0.10	0.09				
Pulse-Start Metal Halide, 750W+	Pulse Start Metal Halide	1,053	4,468	Metal Halide	1,404	4,468	20	$120	$0	$381	$0.075	31%	3.25	2.22	1,571	$0.076	$0.004	0.35	0.32				
Wall mount occupancy sensor - 50 Watts to 300 Watts Controlled Load	Lighting System with Occupancy Sensor	39	4,468	Lighting System without Occupancy Sensor	56	4,468	8	$15	$0	$55	$0.075	27%	9.76	7.10	75	$0.199	$0.025	0.02	0.02				
Wall mount occupancy sensor - Greater than 300 Watts Controlled Load	Lighting System with Occupancy Sensor	153	4,468	Lighting System without Occupancy Sensor	219	4,468	8	$25	$0	$55	$0.075	45%	2.51	1.37	293	$0.085	$0.011	0.07	0.06				
Ceiling mount occupancy sensor - 50 Watts to 300 Watts Controlled Load	Lighting System with Occupancy Sensor	39	4,468	Lighting System without Occupancy Sensor	75	4,468	8	$30	$0	$125	$0.075	24%	10.51	7.98	159	$0.188	$0.024	0.04	0.03				
Ceiling mount occupancy sensor - Greater than 300 Watts Controlled Load	Lighting System with Occupancy Sensor	186	4,468	Lighting System without Occupancy Sensor	265	4,468	8	$40	$0	$125	$0.075	32%	4.70	3.20	356	$0.112	$0.014	0.08	0.07				
Photocell	Lighting System with Photocell	400	4,468	Lighting System without Photocell	496	4,468	8	$25	$0	$65	$0.075	38%	2.01	1.24	432	$0.058	$0.007	0.10	0.09				
Stairwell Fixture with Integral Occupancy Sensor	Stairwell Fixture with an integrated occupancy sensor	12	7,293	Fixture without an occupancy sensor	77	7,293	14	$25	$0	$229	$0.068	11%	7.02	6.25	480	$0.052	$0.004	0.07	0.06				
Exit sign retrofit and replacement	LED	2	8,760	Incandescent	45	8,760	20	$25	$0	$80	$0.066	31%	3.22	2.22	376	$0.067	$0.003	0.04	0.05				
LED Interior Lamp < 5W Energy Star Rated	LED lamp	5	4,468	Incandescent or Halogen lamp	55	4,468	10	$7	$6	$20	$0.075	35%	1.20	0.78	222	$0.031	$0.003	0.05	0.05				
LED Interior Lamp Greater than 5W to 10W Energy Start Rated	LED lamp	9	4,468	Incandescent or Halogen lamp	52	4,468	11	$12	$4	$40	$0.075	30%	2.73	1.91	195	$0.062	$0.006	0.04	0.04				

Electric Forecast Planning Assumptions																						
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LED Interior Lamp Greater than 10W to 20W Energy Star Rated	LED lamp	19	4,468	Incandescent or Halogen lamp	140	4,468	10	$15	$5	$52	$0.075	29%	1.29	0.92	538	$0.028	$0.003	0.12	0.11				
LED Interior Screw In Fixture Retrofit	ENERGY STAR Qualified LED Downlight Retrofit Luminaire with min 35,000 hours lifetime	15	4,468	Incandescent Luminaire	89	4,468	8	$15	$0	$80	$0.075	19%	3.29	2.68	327	$0.046	$0.006	0.07	0.07				
LED Interior Fixture 25 Watts or Less Energy Star Rated	LED Downlight Luminaire	22	4,468	Incandescent Luminaire	65	4,468	20	$35	$0	$196	$0.075	18%	13.67	11.23	192	$0.182	$0.009	0.04	0.04				
LED Interior Fixture Greater than 25 Watts to 50 Watts Energy Star Rated	LED Downlight Luminaire	38	4,468	Incandescent Luminaire	97	4,468	20	$50	$0	$272	$0.075	18%	13.90	11.35	262	$0.191	$0.010	0.06	0.05				
LED Refrigerated Case Lighting 2012	LED Strip lighting	39	5,478	T8 or T12 Fluorescent	94	5,478	20	$100	$0	$243	$0.071	41%	11.27	6.63	302	$0.331	$0.017	0.06	0.06				
Parking Garage and Exterior LED Wall Packs less than or equal to 150 Watts	LED Wall Pack Fixture	39	6,570	HID Wall Pack Fixture	225	6,570	20	$75	$0	$401	$0.069	19%	4.74	3.85	1,225	$0.061	$0.003	0.19	0.10				
Exterior LED Canopy and Soffit Fixtures from 25 watts to 150 Watts	LED	79	4,380	Metal Halide	348	4,380	20	$175	$0	$654	$0.075	27%	7.38	5.40	1,181	$0.148	$0.007	0.27	0.00				
LED Pedestrian Signals -9" (Walk/Don't Walk)	LED Pedestrian Signals -9" (Walk/Don't Walk)	8	4,380	Incandescent Pedestrian Signals - Large	69	4,380	20	$30	$0	$78	$0.075	38%	3.89	2.39	267	$0.112	$0.006	0.06	0.04				
LED Pedestrian Signals -12" (Walk/Don't Walk)	LED Pedestrian Signals -12" (Walk/Don't Walk)	10	4,380	Incandescent Pedestrian Signals - Large	116	4,380	20	$40	$0	$107	$0.075	37%	3.07	1.92	464	$0.086	$0.004	0.11	0.07				
LED Traffic Balls and Arrows - 8" Red	LED Traffic Balls and Arrows - 8" Red	8	4,820	Incandescent Traffic Balls and Arrows 8" Red	69	4,820	20	$25	$0	$68	$0.073	37%	3.15	1.99	294	$0.085	$0.004	0.06	0.04				
LED Traffic Balls and Arrows - 12" Red	LED Traffic Balls and Arrows - 12" Red	11	4,820	Incandescent Traffic Balls and Arrows 12" Red	135	4,820	20	$25	$0	$87	$0.073	29%	1.98	1.41	598	$0.042	$0.002	0.12	0.07				
LED Traffic Balls and Arrows - 8" Green	LED Traffic Balls and Arrows - 8" Green	8	3,675	Incandescent Traffic Balls and Arrows 8" Green	69	3,675	20	$32	$0	$68	$0.079	47%	3.86	2.04	224	$0.143	$0.007	0.06	0.03				
LED Traffic Balls and Arrows - 12" Green	LED Traffic Balls and Arrows - 12" Green	11	3,675	Incandescent Traffic Balls and Arrows 12" Green	135	3,675	20	$32	$0	$87	$0.079	37%	2.43	1.54	456	$0.070	$0.004	0.12	0.06				
LED Traffic Arrows - 12" Red	LED Traffic Arrows - 12" Red	11	7,885	Incandescent Traffic Balls and Arrows 12" Red	135	7,885	20	$50	$0	$134	$0.067	37%	2.04	1.28	978	$0.051	$0.003	0.12	0.12				
Low Wattage T8 4' lamps	Low Wattage T8 Lamps	29	4,468	Standard T8 32 watt lamps	35	4,468	7	$1	$2	$2	$0.075	25%	0.99	0.74	27	$0.019	$0.003	0.01	0.01				
High Bay Fluorescents <= 300 Watts	New Construction High Bay Less Than 300W	373	3,099	Metal Halide	592	3,099	20	$40	$182	$98	$0.083	41%	1.75	1.04	679	$0.059	$0.003	0.22	0.20				
High Bay Fluorescents <= 610 Watts	New Construction High Bay Less than 610W	718	3,102	Metal Halide	1,100	3,102	20	$40	$270	$128	$0.083	31%	1.30	0.90	1,186	$0.034	$0.002	0.38	0.35				
High Bay Fluorescents <= 900 Watts	New Construction High Bay Less Than 900W	954	3,099	Metal Halide	1,397	3,099	20	$65	$360	$172	$0.083	38%	1.52	0.95	1,371	$0.047	$0.002	0.44	0.41				
Compact Fluorescent, Pin Based <19 Watts	NC Pin Based Equal to or Less than 18 Watts	15	4,468	Incandescent	55	4,468	20	$10	$2	$33	$0.075	31%	2.46	1.71	178	$0.056	$0.003	0.04	0.04				
Compact Fluorescent, Pin Based 19-32 Watts	New Construction Compact Fluorescent 19-32 Watts	38	4,468	Incandescent	115	4,468	20	$11	$36	$40	$0.075	28%	1.55	1.13	344	$0.032	$0.002	0.08	0.07				
Compact Fluorescent, Pin Based 33-100 Watts	New Construction Pin Based Compact Fluorescent 33 Watts or more	66	4,468	Incandescent	217	4,468	20	$12	$47	$50	$0.075	24%	0.99	0.75	675	$0.018	$0.001	0.15	0.14				
2-foot Low Wattage CFL 25 Watt to 28 Watt	PL 25W CFL	32	4,468	PL 40W CFL	52	4,468	6	$1	$7	$3	$0.075	20%	0.39	0.31	87	$0.006	$0.001	0.02	0.02				
LED Interior Lamp < 5W Energy Star Rated	LED lamp	5	4,468	Incandescent or Halogen lamp	55	4,468	10	$7	$6	$20	$0.075	35%	1.20	0.78	222	$0.031	$0.003	0.05	0.05				

Electric Forecast Planning Assumptions																						
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LED Interior Lamp Greater than 5W to 10W Energy Start Rated	LED lamp	9	4,468	Incandescent or Halogen lamp	52	4,468	11	$12	$4	$40	$0.075	30%	2.73	1.91	195	$0.062	$0.006	0.04	0.04				
LED Interior Lamp Greater than 10W to 20W Energy Star Rated	LED lamp	21	4,468	Incandescent or Halogen lamp	154	4,468	10	$15	$5	$56	$0.075	27%	1.27	0.93	594	$0.025	$0.003	0.13	0.12				
LED Interior Screw In Fixture New Construction	LED Downlight Retrofit Luminaire 35,000 Hours	15	4,468	Incandescent Luminaire	89	4,468	8	$15	$17	$80	$0.075	19%	3.29	2.68	327	$0.046	$0.006	0.07	0.07				
LED Interior Fixture 25 Watts or Less Energy Star Rated	LED Downlight Luminaire	22	4,468	Incandescent Luminaire	65	4,468	20	$25	$50	$126	$0.075	20%	8.80	7.05	192	$0.130	$0.007	0.04	0.04				
LED Interior Fixture Greater than 25W to 50 Watts Energy Star Rated	LED Downlight Luminaire	47	4,468	Incandescent Luminaire	113	4,468	20	$40	$50	$202	$0.075	20%	9.15	7.34	296	$0.135	$0.007	0.07	0.06				
LED Refrigerated Case Lighting 2012	LED Strip lighting	27	5,478	T8 or T12 Fluorescent	94	5,478	20	$70	$38	$136	$0.071	52%	5.19	2.51	366	$0.191	$0.010	0.07	0.07				
Parking Garage and Exterior LED Wall Packs less than or equal to 150 Watts	LED Wall Pack Fixture	39	6,570	HID Wall Pack Fixture	173	6,570	20	$30	$225	$176	$0.069	17%	2.90	2.40	879	$0.034	$0.002	0.13	0.07				
Exterior LED Canopy and Soffit Fixtures from 25 watts to 150 Watts	LED	80	4,380	Metal Halide	344	4,380	20	$75	$252	$374	$0.075	20%	4.31	3.45	1,157	$0.065	$0.003	0.26	0.00				
Ceramic Metal Halide <=150W	Ceramic Metal Halide <= 150 Watts	66	4,468	Incandescent	235	4,468	20	$45	$59	$145	$0.075	31%	2.58	1.78	753	$0.060	$0.003	0.17	0.15				
Ceramic Metal Halide 151-250W	Ceramic Metal Halide 151 to 250 Watts	300	4,468	Metal Halide	483	4,468	20	$55	$192	$152	$0.075	36%	2.49	1.59	818	$0.067	$0.003	0.18	0.17				
Ceramic Metal Halide 251W-	Ceramic Metal Halide 151 to 250 Watts	505	4,468	Ceramic Metal Halide	590	4,468	20	$20	$253	$42	$0.075	48%	1.48	0.77	377	$0.053	$0.003	0.08	0.08				
Integrated 25W Ceramic Metal Halide	Integrated Ceramic Metal Halide	32	4,468	Incandescent	97	4,468	7	$15	$15	$45	$0.075	33%	2.08	1.39	289	$0.052	$0.007	0.06	0.06				
Pulse-Start Metal Halide, 176W-319W	Pulse Start Metal Halide	274	4,468	High Pressure Sodium, Metal Halide	376	4,468	20	$12	$191	$30	$0.075	40%	0.87	0.52	459	$0.026	$0.001	0.10	0.09				
Pulse-Start Metal Halide, 320W-749W	Pulse Start Metal Halide 320 to 749W	508	4,468	High Pressure Sodium, Mercury Vapor, Metal Halide	590	4,468	20	$12	$253	$30	$0.075	40%	1.09	0.66	367	$0.033	$0.002	0.08	0.08				
Pulse-Start Metal Halide, 750W+	750W Pulse Start Metal Halide	1,053	4,468	1000W Metal Halide	1,393	4,468	20	$28	$351	$70	$0.075	40%	0.62	0.37	1,520	$0.018	$0.001	0.34	0.31				
Custom Lighting & Recommissioning	Engineering Study	0	0	Existing Overlit Lighting System	0	0	0	$52,585	$0	$142,104	$0.000	37%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Custom Lighting	Custom Lighting Solution	10,664	5,373	Existing Overlit Lighting System	27,599	5,373	16	$5,811	$1,736	$19,438	$0.072	30%	2.98	2.09	90,995	$0.064	$0.004	16.94	13.75				
Lighting Redesign Studies	Redesign Lighting Solution Study	0	0	Existing Overlit Lighting System	0	0	0	$8,718	$0	$24,387	$0.000	36%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Lighting Redesign Implementation	Redesign Lighting Solution Installed	35,736	6,844	Existing Overlit Lighting System	71,472	6,844	20	$22,084	$0	$139,295	$0.069	16%	8.30	6.99	244,584	$0.090	$0.005	35.74	32.82				

Electric Forecast Planning Assumptions

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MOTOR EFFICIENCY																				2.14	3.55	0.74	5.73
Plan A Enhanced (1 to 500 HP)	NEMA Premium plus 1% Efficient Motors	9,925	4,143	NEMA Premium	10,031	4,143	20	$105	$2,434	$1,033	$0.076	10%	30.87	27.72	439	$0.240	$0.012	0.11	0.09				
Plan B (1 to 500 HP)	NEMA Premium Efficient Motors	20,127	4,435	EPACT	20,400	4,435	20	$1,108	$989	$2,474	$0.075	45%	27.32	15.08	1,210	$0.916	$0.046	0.27	0.23				
Plan B Enhanced (1 to 500 HP)	NEMA Premium plus 1% Efficient Motors	11,693	4,212	EPACT	12,023	4,212	20	$799	$767	$2,824	$0.076	28%	26.80	19.21	1,390	$0.575	$0.029	0.33	0.28				
VFD	Equipment coupled with an ASD/VFD	10,124	4,635	Equipment without an ASD/VFD	15,110	4,635	15	$1,916	$0	$5,178	$0.074	37%	3.02	1.91	23,109	$0.083	$0.006	4.99	4.18				
Motor Controllers	Motor with Voltage Controller	5,238	4,563	Motor without Voltage Controller	6,069	4,563	20	$338	$0	$1,481	$0.074	23%	5.25	4.06	3,792	$0.089	$0.004	0.83	0.72				
Study	Motor Study	0	0	No Study	0	0	7	$147,457	$0	$259,366	$0.000	57%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Custom	New Equipment	79,168	6,481	Existing or New Inefficient	121,882	6,481	17	$12,521	$1,199	$62,204	$0.069	20%	3.25	2.59	276,854	$0.045	$0.003	42.71	36.93				
PROCESS EFFICIENCY																				2.63	4.60	0.69	6.21
Custom	New Equipment	2,012,742	6,363	Old or less efficient systems or equipment	2,088,385	6,363	15	$19,243	$69,830	$121,062	$0.069	16%	2.11	1.78	481,296	$0.040	$0.003	75.64	47.94				
Lighting	New Equipment	39	4,817	Old or less efficient systems or equipment	68	4,817	16	$14	$3	$44	$0.073	31%	4.40	3.03	137	$0.101	$0.006	0.03	0.03				
Motors	New Equipment	13,060	4,560	Old or less efficient systems or equipment	16,494	4,560	17	$1,630	$331	$4,280	$0.074	38%	3.67	2.28	15,663	$0.104	$0.006	3.43	2.88				
Implementation of ECO's found in studies	Optimized System	668,071	6,011	Existing System - Not Tuned or Optimized	701,217	6,011	7	$7,079	$0	$12,694	$0.070	56%	0.54	0.24	199,246	$0.036	$0.005	33.15	10.47				
Cooling	New Equipment	15,172	742	Old or less efficient systems or equipment	16,732	1,169	20	$1,392	$18,660	$2,432	$0.072	57%	4.07	1.74	8,309	$0.168	$0.008	1.56	1.50				
Fluid System Optimization	New Equipment	56,719	5,948	Old or less efficient systems or equipment	58,149	5,948	18	$667	$2,186	$1,281	$0.070	52%	2.12	1.02	8,506	$0.078	$0.004	1.43	1.41				
Compressed Air Leaks	Leaks & Waste Found and Repaired	0	8,504	Existing System in with Leaks & Waste that have not been repaired	30,783	8,504	5	$0	$0	$0	$0.066	0%	0.00	0.00	261,785	$0.000	$0.000	30.78	33.10				
Computer Efficiency - End User Rebates	High Efficiency Equipment	0	0	Standard Efficiency Equipment	0	0	0	$0	$0	$0	$0.000	0%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Energy Design Assistance	High Efficiency Building	685,522	3,855	Code Level Efficiency Building	806,497	3,855	20	$66,057	$0	$327,424	$0.078	20%	6.97	5.56	466,379	$0.142	$0.007	120.97	118.63				
Behavioral Changes	Behavior changes that reduce energy use	2,962,572	8,760	No change in behavior	3,024,892	8,760	1	$0	$0	$0	$0.066	0%	0.00	0.00	545,921	$0.000	$0.000	62.32	19.43				
Behavioral Adjustment	Behavior changes that reduce energy use	-1,975,048	8,760	No change in behavior	-2,016,594	8,760	0	$0	$0	$0	$0.066	0%	0.00	0.00	-363,947	$0.000	$0.000	-41.55	-12.96				
Desktop PC Virtualization	Hardware and/or software replacing desktop PC	22	7,311	Desktop PCs meeting ENERGY STAR 3.0 specifications	96	7,311	5	$60	$600	$116	$0.068	52%	1.81	0.87	540	$0.111	$0.022	0.07	0.08				
Phase 2 new customer contribution	0	0	0	0	0	0	0	$0	$0	$6,000	$0.000	0%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Food Service	High Efficiency Equipment	2,608	4,486	Standard Efficiency Equipment	4,699	4,590	15	$399	$2,955	$3,530	$0.074	11%	3.19	2.83	9,865	$0.040	$0.003	2.09	1.52				

Electric Forecast Planning Assumptions																							
Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)	Measure Lifetime (years)	Rebate Amount ($)	Average Baseline Product Cost ($)	Incremental Cost of Efficient Product ($)	Assumed Energy Cost ($/kWh)	Rebate as a % of Incremental Cost (%)	Incremt'l Cost Payback Period w/o Rebate (yrs)	Incremt'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved ($/kWh)	Rebated Lifetime cost /Cust KWh Saved ($/kWh)	Customer kW Savings (kW)	Generator Peak kW Savings (kW)	Soc. Test	Part. Test	Rate Impact Test	Utility Test
RECOMMISSIONING																				1.87	6.31	0.51	2.82
Implementation of ECO's found in studies	Optimized Building Systems	668,071	6,011	Existing Building System - Not Tuned or Optimized	701,217	6,011	7	$5,663	$0	$12,694	$0.070	45%	0.54	0.30	199,246	$0.028	$0.004	33.15	10.47				
RCx Studies	0	0	0	0	0	0	0	$6,991	$0	$10,463	$0.000	67%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Refrigeration Recommissioning	Optimized Refrigeration Systems	371,580	8,165	Existing Refrigeration Systems - Not Tuned or Optimized	395,535	8,165	7	$7,190	$0	$12,827	$0.067	56%	0.98	0.43	195,595	$0.037	$0.005	23.96	10.59				
SELF-DIRECT																				1.46	2.04	0.78	4.33
Average Project	New Equipment	828,135	2,876	Old or less efficient systems or equipment	1,150,184	2,876	17	$173,612	$0	$503,145	$0.085	35%	6.42	4.21	926,303	$0.187	$0.011	322.05	217.18				
TURN KEY SERVICES																				1.71	4.74	0.55	2.42
Identification ~ Walk through, ASHREA LV1 & Eng Assistant Studies	Identification of opportunities	0	0	Do nothing	0	0	7	$0	$0	$487	$0.000	0%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Identification and repair~ Walk through, ASHREA LV1 & Eng Assistant LCNC measures	Identification and quick payback fixes	0	6,133	Current Operation	2,339	6,077	7	$0	$0	$305	$0.070	0%	0.13	0.13	14,215	$0.000	$0.000	2.34	0.74				
Project Scoping	Project Scoping	0	0	Customer not interested in implementing identified measure	0	0	0	$0	$0	$198	$0.000	0%	0.00	0.00	0	$0.000	$0.000	0.00	0.00				
Implementation	High Eff Project	0	3,113	Low Eff or Current Operation	7,073	3,113	13	$3,089	$0	$5,678	$0.082	54%	2.37	1.08	22,019	$0.140	$0.011	7.07	2.23				
ELECTRIC RATE SAVINGS																				6.67	INF	0.78	6.67
Average New Customer - Assumed PDL of 150 kW	Utility Load Control for control period	150,000	18	No Control	350,000	18	5	$0	$0	$0	$4.543	0%	0.00	0.00	3,532	$0.000	$0.000	200.00	102.06				
SAVER'S SWITCH FOR BUSINESS																				1.57	INF	0.57	1.57
Single Stage Customer	Utility Load Control for control period	0	2	No Control, No Switch	5,407	2	15	$0	$0	$0	$50.069	0%	0.00	0.00	9	$0.000	$0.000	5.41	1.39				
Multi-Stage Customer	Utility Load Control for control period	0	1	No Control, No Switch	908	1	15	$0	$0	$0	$78.860	0%	0.00	0.00	1	$0.000	$0.000	0.91	0.23				

RESIDENTIAL SEGMENT

ENERGY EFFICIENT SHOWERHEADS																				8.51	126.89	0.12	4.48
Provide Energy Efficient Showerhead - 1.5 GPM	1.5 GPM Showerhead	4,500	143	2.5 GPM Showerhead	4,500	238	6	$3	$0	$3	$0.106	100%	0.04	0.00	429	$0.007	$0.001	0.00	0.00				
Provide Energy Efficient Showerhead - 1.5 GPM	1.5 GPM Showerhead	4,500	143	2.5 GPM Showerhead	4,500	238	6	$3	$0	$3	$0.106	100%	0.04	0.00	429	$0.007	$0.001	0.00	0.00				
Provide Energy Efficient Showerhead - 1.5 GPM	1.5 GPM Showerhead	4,500	143	2.5 GPM Showerhead	4,500	238	6	$3	$0	$3	$0.106	100%	0.04	0.00	429	$0.007	$0.001	0.00	0.00				
Provide Energy Efficient Kitchen Aerator 1.5 GPM	1.5 GPM Kitchen Faucet Aerator	4,500	63	2.2 GPM Kitchen Faucet Aerator	4,500	92	5	$1	$0	$1	$0.106	100%	0.06	0.00	132	$0.010	$0.002	0.00	0.00				
Provide Energy Efficient Kitchen Aerator 1.5 GPM	1.5 GPM Kitchen Faucet Aerator	4,500	63	2.2 GPM Kitchen Faucet Aerator	4,500	92	5	$1	$0	$1	$0.106	100%	0.06	0.00	132	$0.010	$0.002	0.00	0.00				
Provide Energy Efficient Kitchen Aerator 1.5 GPM	1.5 GPM Kitchen Faucet Aerator	4,500	63	2.2 GPM Kitchen Faucet Aerator	4,500	92	5	$1	$0	$1	$0.106	100%	0.06	0.00	132	$0.010	$0.002	0.00	0.00				
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM	1.0 GPM Bath Faucet Aerator	4,500	42	2.2 GPM Bath Faucet Aerator	4,500	92	5	$0	$0	$0	$0.106	100%	0.01	0.00	226	$0.002	$0.000	0.00	0.00				
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM	1.0 GPM Bath Faucet Aerator	4,500	42	2.2 GPM Bath Faucet Aerator	4,500	92	5	$0	$0	$0	$0.106	100%	0.01	0.00	226	$0.002	$0.000	0.00	0.00				
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM	1.0 GPM Bath Faucet Aerator	4,500	42	2.2 GPM Bath Faucet Aerator	4,500	92	5	$0	$0	$0	$0.106	100%	0.01	0.00	226	$0.002	$0.000	0.00	0.00				

Electric Forecast Planning Assumptions																						
Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)	Measure Lifetime (years)	Rebate Amount ($)	Average Baseline Product Cost ($)	Incremental Cost of Efficient Product ($)	Assumed Energy Cost ($/kWh)	Rebate as a % of Incremental Cost (%)	Incremt'l Cost Payback Period w/o Rebate (yrs)	Incremt'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved ($/kWh)	Rebated Lifetime cost /Cust KWh Saved ($/kWh)	Customer kW Savings (kW)	Generator Peak kW Savings (kW)	Soc. Test	Part. Test	Rate Impact Test	Utility Test
ENERGY FEEDBACK																				0.96	INF	0.25	0.92
Print Reports	Aware use	950	8,760	Normal use	969	8,760	1	$0	$0	$0	$0.106	0%	0.00	0.00	166	$0.000	$0.000	0.02	0.01				
Electronic Reports	Aware use	960	8,760	Normal use	969	8,760	1	$0	$0	$0	$0.106	0%	0.00	0.00	81	$0.000	$0.000	0.01	0.01				
New Electric Print Reports	Aware use	942	8,760	Normal use	969	8,760	1	$0	$0	$0	$0.106	0%	0.00	0.00	233	$0.000	$0.000	0.03	0.02				
Print Reports Behavioral Adjustment	Aware use	-633	8,760	Normal use	-646	8,760	0	$0	$0	$0	$0.106	0%	0.00	0.00	-110	$0.000	$0.000	-0.01	-0.01				
Electronic Reports Behavioral Adjustment	Aware use	-640	8,760	Normal use	-646	8,760	0	$0	$0	$0	$0.106	0%	0.00	0.00	-54	$0.000	$0.000	-0.01	0.00				
New Electric Print Reports Behavioral Adjustment	Aware use	-628	8,760	Normal use	-646	8,760	0	$0	$0	$0	$0.106	0%	0.00	0.00	-156	$0.000	$0.000	-0.02	-0.01				
ENERGY STAR HOMES																				1.68	2.82	0.41	3.12
Energy Star New Homes (>2000 sq ft) - Electric Only Customer	Energy Efficient Home	211	8,760	2006 IECC	358	8,760	20	$250	$0	$2,800	$0.106	9%	4.60	4.19	1,290	$0.194	$0.010	0.15	0.16				
Energy Star New Homes (<2000 sq ft) - Electric Only Customer	Energy Efficient Home	121	8,760	2006 IECC	165	8,760	20	$150	$0	$1,900	$0.106	8%	10.22	9.41	388	$0.387	$0.019	0.04	0.05				
Energy Star New Homes (Regular) - Combo Customer	Energy Efficient Home	204	8,760	2006 IECC	329	8,760	20	$0	$0	$2,800	$0.106	0%	4.76	4.76	1,097	$0.000	$0.000	0.13	0.14				
Energy Star New Homes (Low Income) - Combo Customer	Energy Efficient Home	121	8,760	2006 IECC	165	8,760	20	$21	$0	$1,900	$0.106	1%	10.22	10.10	388	$0.055	$0.003	0.04	0.05				
ECM Furnace Fan Efficiency	ECM Furnace Fan (variable speed motor)	150	2,484	78 AFUE gas furnace with typical permanent split capacitor fan motor	400	2,484	15	$350	$1,866	$750	$0.106	47%	11.36	6.06	621	$0.564	$0.038	0.25	0.19				
CFLs-Quantity of 20 (Required) - 2013	High efficiency CFL bulbs	15	814	baseline is incandescent bulbs	59	814	8	$1	$1	$2	$0.106	60%	0.56	0.23	35	$0.035	$0.004	0.04	0.00				
CFLs-Quantity of 20 (Required) - 2014	High efficiency CFL bulbs	15	814	baseline is incandescent bulbs	52	814	8	$1	$1	$2	$0.106	60%	0.65	0.26	30	$0.041	$0.005	0.04	0.00				
CFLs-Quantity of 20 (Required) - 2015	High efficiency CFL bulbs	15	814	baseline is incandescent bulbs	47	814	8	$1	$1	$2	$0.106	60%	0.77	0.31	26	$0.049	$0.006	0.03	0.00				
Energy Star Clothes Washer	Energy Star Clothes washer	143	392	standard clothes washer	209	392	11	$19	$56	$200	$0.106	9%	10.99	9.96	26	$0.729	$0.066	0.07	0.00				
Energy Star Dishwasher	0.65 Energy Factor - energy star recommended	870	215	0.46 Energy Factor - Federal Minimum Standard	1,229	215	11	$0	$26	$25	$0.106	2%	0.25	0.24	77	$0.006	$0.001	0.36	0.01				
Energy Star Refrigerator	Energy Star Refrigerator	60	8,760	standard refrigerator	71	8,760	13	$15	$1,070	$35	$0.106	43%	3.52	2.01	93	$0.161	$0.012	0.01	0.01				
HEATING SYSTEM REBATES																				1.40	2.50	0.59	6.33
New 92% AFUE Energy Star Furnace W/ ECM - Electric Only Customers	92 AFUE Furnace w/ EC Motor	150	2,484	78 AFUE Furnace w/ PSC Motor	400	2,484	18	$100	$0	$464	$0.106	22%	7.03	5.52	621	$0.161	$0.009	0.25	0.19				
New 96% AFUE Energy Star Furnace W/ ECM - Electric Only Customers	96 AFUE Furnace w/ EC Motor	150	2,484	78 AFUE Furnace w/ PSC Motor	400	2,484	18	$100	$0	$464	$0.106	22%	7.03	5.52	621	$0.161	$0.009	0.25	0.19				
New 92% AFUE Energy Star Furnace W/ ECM - Combo Customers	92 AFUE Furnace w/ EC Motor	150	2,484	78 AFUE Furnace w/ PSC Motor	400	2,484	18	$100	$0	$464	$0.106	22%	7.03	5.52	621	$0.161	$0.009	0.25	0.19				
New 96% AFUE Energy Star Furnace W/ ECM - Combo Customers	96 AFUE Furnace w/ EC Motor	150	2,484	78 AFUE Furnace w/ PSC Motor	400	2,484	18	$100	$0	$464	$0.106	22%	7.03	5.52	621	$0.161	$0.009	0.25	0.19				

Electric Forecast Planning Assumptions																						
Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)	Measure Lifetime (years)	Rebate Amount ($)	Average Baseline Product Cost ($)	Incremental Cost of Efficient Product ($)	Assumed Energy Cost ($/kWh)	Rebate as a % of Incremental Cost (%)	Incremt'l Cost Payback Period w/o Rebate (yrs)	Incremt'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved ($/kWh)	Rebated Lifetime cost /Cust KWh Saved ($/kWh)	Customer kW Savings (kW)	Generator Peak kW Savings (kW)	Soc. Test	Part. Test	Rate Impact Test	Utility Test
HOME ENERGY SQUAD																				1.24	14.37	0.39	1.32
NEC Energy Squad Service 2013	weighted average Energy Efficient measures by participant	173	743	weighted average Baseline measures by participant	222	743	11	$0	$0	$2	$0.106	0%	0.41	0.41	36	$0.000	$0.000	0.05	0.01				
NEC Energy Squad Service 2014	weighted average Energy Efficient measures by participant	174	740	weighted average Baseline measures by participant	219	740	11	$0	$0	$2	$0.106	0%	0.44	0.44	33	$0.000	$0.000	0.04	0.01				
NEC Energy Squad Service 2015	weighted average Energy Efficient measures by participant	174	740	weighted average Baseline measures by participant	216	740	11	$0	$0	$2	$0.106	0%	0.47	0.47	31	$0.000	$0.000	0.04	0.01				
TV peripherals turned off with Timer (replacing power strip)	TV peripherals turned off with Timer (replacing power strip)	3	4,420	Power used in "standby" mode while equipment is unused	41	4,420	15	$0	$0	$5	$0.106	0%	0.28	0.28	166	$0.000	$0.000	0.04	0.03				
LED EcoSmart 13W 2013	LED EcoSmart 13W	13	778	60 W Incandescent DER deemed wattage	59	778	20	$0	$0	$25	$0.106	0%	6.64	6.64	35	$0.000	$0.000	0.05	0.00				
LED EcoSmart 13W 2014	LED EcoSmart 13W	13	778	60 W Incandescent DER deemed wattage	52	778	20	$0	$0	$25	$0.106	0%	7.70	7.70	31	$0.000	$0.000	0.04	0.00				
LED EcoSmart 13W 2015	LED EcoSmart 13W	13	778	60 W Incandescent DER deemed wattage	47	778	20	$0	$0	$25	$0.106	0%	8.96	8.96	26	$0.000	$0.000	0.03	0.00				
Install Second Programmable Thermostat	Second T-state w/ Auto setup by 1 F for cooling assume 3 ton AC, 10 SEER	3,789	325	Base modeled home w/ 10 SEER AC and no setup temp	4,091	325	15	$0	$0	$30	$0.106	0%	1.41	1.41	98	$0.000	$0.000	0.30	0.30				
CEE Energy Squad Service 2013	weighted average Energy Efficient measures by participant	104	727	weighted average Baseline measures by participant	151	727	11	$0	$0	$4	$0.106	0%	0.91	0.91	34	$0.000	$0.000	0.05	0.01				
CEE Energy Squad Service 2014	weighted average Energy Efficient measures by participant	98	728	weighted average Baseline measures by participant	144	728	11	$0	$0	$4	$0.106	0%	0.93	0.93	33	$0.000	$0.000	0.05	0.01				
CEE Energy Squad Service 2015	weighted average Energy Efficient measures by participant	117	725	weighted average Baseline measures by participant	160	726	11	$0	$0	$3	$0.106	0%	0.91	0.91	31	$0.000	$0.000	0.04	0.01				
Dimmable CFL (assume 23W) 2013	Dimmable CFL (assume 23W)	23	737	100 W Incandescent DER deemed wattage	59	737	11	$0	$0	$5	$0.106	0%	1.80	1.80	26	$0.000	$0.000	0.04	0.00				
Dimmable CFL (assume 23W) 2014	Dimmable CFL (assume 23W)	23	737	100 W Incandescent DER deemed wattage	52	737	12	$0	$0	$5	$0.106	0%	2.18	2.18	22	$0.000	$0.000	0.03	0.00				
Dimmable CFL (assume 23W) 2015	Dimmable CFL (assume 23W)	23	737	100 W Incandescent DER deemed wattage	47	737	12	$0	$0	$5	$0.106	0%	2.69	2.69	17	$0.000	$0.000	0.02	0.00				
TV peripherals turned off with Timer (replacing power strip)	TV peripherals turned off with Timer (replacing power strip)	3	4,420	Power used in "standby" mode while equipment is unused	41	4,420	15	$0	$0	$20	$0.106	0%	1.13	1.13	166	$0.000	$0.000	0.04	0.03				

Electric Forecast Planning Assumptions																							
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LED EcoSmart 13W	LED EcoSmart 13W	13	778	60 W Incandescent DER deemed wattage	59	778	20	$0	$0	$25	$0.106	0%	6.64	6.64	35	$0.000	$0.000	0.05	0.00				
LED EcoSmart 13W	LED EcoSmart 13W	13	778	60 W Incandescent DER deemed wattage	52	778	20	$0	$0	$25	$0.106	0%	7.70	7.70	31	$0.000	$0.000	0.04	0.00				
LED EcoSmart 13W	LED EcoSmart 13W	13	778	60 W Incandescent DER deemed wattage	47	778	20	$0	$0	$25	$0.106	0%	8.96	8.96	26	$0.000	$0.000	0.03	0.00				
Install Second Programmable Thermostat	Second T-state w/ Auto setup by 1 F for cooling assume 3 ton AC, 10 SEER	3,789	325	Base modeled home w/ 10 SEER AC and no setup temp	4,091	325	15	$0	$0	$35	$0.106	0%	1.65	1.65	98	$0.000	$0.000	0.30	0.30				
HOME LIGHTING																				2.78	9.73	0.41	6.17
Residential Home Lighting 2013	CFL Bulb	15	838	Incandescent light bulb	59	838	12	$1	$1	$3	$0.106	40%	0.80	0.48	36	$0.034	$0.003	0.04	0.00				
Residential Home Lighting 2013 6% business	CFL Bulb	20	3,729	Incandescent light bulb	78	3,729	2	$1	$1	$3	$0.106	40%	0.14	0.08	215	$0.006	$0.003	0.06	0.05				
Residential Home Lighting 2013 Non EISA	CFL Bulb	21	838	Incandescent light bulb	72	838	12	$3	$1	$7	$0.106	41%	1.62	0.96	43	$0.070	$0.006	0.05	0.00				
Residential Home Lighting 2013 6% business NON EISA	CFL Bulb	28	3,729	Incandescent light bulb	96	3,729	2	$3	$1	$7	$0.106	41%	0.27	0.16	254	$0.012	$0.005	0.07	0.06				
Residential Home Lighting 2013 LEDs	LED Bulb	12	838	Incandescent light bulb	59	838	20	$10	$1	$25	$0.106	40%	6.08	3.64	39	$0.259	$0.013	0.05	0.00				
Residential Home Lighting 2013 6% business LEDs	LED Bulb	16	3,729	Incandescent light bulb	78	3,729	2	$10	$1	$25	$0.106	40%	1.03	0.62	229	$0.044	$0.020	0.06	0.06				
Residential Home Lighting 2013 LEDs Non EISA	LED Bulb	18	838	Incandescent light bulb	75	838	20	$10	$1	$35	$0.106	29%	6.88	4.91	48	$0.209	$0.010	0.06	0.01				
Residential Home Lighting 2013 6% business LEDs Non EISA	LED Bulb	24	3,729	Incandescent light bulb	100	3,729	6	$10	$1	$35	$0.106	29%	1.16	0.83	283	$0.035	$0.006	0.08	0.07				
Residential Home Lighting 2014	CFL Bulb	15	838	Incandescent light bulb	52	838	12	$1	$1	$3	$0.106	39%	0.94	0.57	31	$0.039	$0.003	0.04	0.00				
Residential Home Lighting 2014 6% business	CFL Bulb	20	3,729	Incandescent light bulb	70	3,729	2	$1	$1	$3	$0.106	39%	0.16	0.10	184	$0.007	$0.003	0.05	0.05				
Residential Home Lighting 2014 Non EISA	CFL Bulb	21	838	Incandescent light bulb	72	838	12	$3	$1	$7	$0.106	41%	1.62	0.96	43	$0.070	$0.006	0.05	0.00				
Residential Home Lighting 2014 6% business NON EISA	CFL Bulb	28	3,729	Incandescent light bulb	96	3,729	2	$3	$1	$7	$0.106	41%	0.27	0.16	254	$0.012	$0.005	0.07	0.06				
Residential Home Lighting 2014 LEDs	LED Bulb	12	838	Incandescent light bulb	52	838	20	$9	$1	$21	$0.106	40%	5.97	3.58	33	$0.254	$0.013	0.04	0.00				
Residential Home Lighting 2014 6% business LEDs	LED Bulb	16	3,729	Incandescent light bulb	70	3,729	2	$9	$1	$21	$0.106	40%	1.01	0.61	198	$0.043	$0.019	0.05	0.05				
Residential Home Lighting 2014 LEDs Non EISA	LED Bulb	18	838	Incandescent light bulb	75	838	20	$10	$1	$31	$0.106	32%	6.19	4.23	48	$0.209	$0.010	0.06	0.01				
Residential Home Lighting 2014 6% business LEDs Non EISA	LED Bulb	24	3,729	Incandescent light bulb	100	3,729	6	$10	$1	$31	$0.106	32%	1.05	0.71	283	$0.035	$0.006	0.08	0.07				
Residential Home Lighting 2015	CFL Bulb	15	838	Incandescent light bulb	47	838	12	$1	$1	$3	$0.106	37%	1.10	0.69	27	$0.043	$0.004	0.03	0.00				
Residential Home Lighting 2015 6% business	CFL Bulb	20	3,729	Incandescent light bulb	62	3,729	2	$1	$1	$3	$0.106	37%	0.19	0.12	157	$0.007	$0.003	0.04	0.04				
Residential Home Lighting 2015 Non EISA	CFL Bulb	21	838	Incandescent light bulb	72	838	12	$3	$1	$7	$0.106	41%	1.62	0.96	43	$0.070	$0.006	0.05	0.00				
Residential Home Lighting 2015 6% business NON EISA	CFL Bulb	28	3,729	Incandescent light bulb	96	3,729	2	$3	$1	$7	$0.106	41%	0.27	0.16	254	$0.012	$0.005	0.07	0.06				
Residential Home Lighting 2015 LEDs	LED Bulb	12	838	Incandescent light bulb	47	838	20	$7	$1	$18	$0.106	40%	5.90	3.53	29	$0.251	$0.013	0.03	0.00				
Residential Home Lighting 2015 6% business LEDs	LED Bulb	16	3,729	Incandescent light bulb	62	3,729	6	$7	$1	$18	$0.106	40%	1.00	0.60	170	$0.042	$0.008	0.05	0.04				
Residential Home Lighting 2015 LEDs Non EISA	LED Bulb	18	838	Incandescent light bulb	75	838	6	$10	$1	$28	$0.106	35%	5.58	3.61	48	$0.209	$0.037	0.06	0.01				
Residential Home Lighting 2015 6% business LEDs Non EISA	LED Bulb	18	3,729	Incandescent light bulb	100	3,729	6	$10	$1	$28	$0.106	35%	0.87	0.57	305	$0.033	$0.006	0.08	0.08				
HOME PERFORMANCE WITH ENERGY STAR																				1.26	1.35	0.83	2.62
ECM Furnace Fan Efficiency	ECM Furnace Fan (variable speed motor)	150	2,484	78 AFUE gas furnace with typical permanent split capacitor fan motor	400	2,484	15	$100	$0	$464	$0.106	22%	7.03	5.52	621	$0.161	$0.011	0.25	0.19				
Quality Installation of High Efficiency AC =>14.5 SEER, < 15 SEER	Quality Installation of 2 Ton 14.5 SEER AC	1,444	753	Non- Quality Installation of 2 Ton 13 SEER AC	2,147	753	14	$175	$0	$445	$0.106	39%	7.90	4.79	529	$0.331	$0.024	0.70	0.69				

Electric Forecast Planning Assumptions																						
Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)	Measure Lifetime (years)	Rebate Amount ($)	Average Baseline Product Cost ($)	Incremental Cost of Efficient Product ($)	Assumed Energy Cost ($/kWh)	Rebate as a % of Incremental Cost (%)	Incremt'l Cost Payback Period w/o Rebate (yrs)	Incremt'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved ($/kWh)	Rebated Lifetime cost /Cust KWh Saved ($/kWh)	Customer kW Savings (kW)	Generator Peak kW Savings (kW)	Soc. Test	Part. Test	Rate Impact Test	Utility Test
Quality Installation of High Efficiency AC =>15 SEER, < 16 SEER	Quality Installation of 2 Ton 15 SEER AC	1,386	739	Non-Quality Installation of 2 Ton 13 SEER AC	2,147	739	14	$375	$0	$593	$0.106	63%	9.92	3.64	562	$0.668	$0.048	0.76	0.75				
Quality Installation of High Efficiency AC =>16, < 17 SEER	Quality Installation of 2 Ton 16 SEER AC	1,333	762	Non-Quality Installation of 2 Ton 13 SEER AC	2,147	762	14	$425	$0	$889	$0.106	48%	13.48	7.03	620	$0.685	$0.049	0.81	0.80				
Quality Installation of High Efficiency AC =>17	Quality Installation of 2 Ton 17 SEER AC	1,238	739	Non-Quality Installation of 2 Ton 13 SEER AC	2,147	739	14	$0	$0	$1,259	$0.106	0%	17.62	17.62	672	$0.000	$0.000	0.91	0.90				
Clothes Washer	Energy Star rated Clothes washer	143	392	Conventional Clothes Washer	209	392	11	$8	$300	$200	$0.106	4%	3.48	3.34	26	$0.323	$0.029	0.07	0.00				
Dishwasher	Energy Star rated Dishwasher	870	215	Conventional Dishwasher	1,229	215	11	$5	$545	$30	$0.106	16%	1.47	1.24	77	$0.061	$0.006	0.36	0.01				
Refrigerator Replacement	Energy Star qualified Refrigerator	110	4,818	Conventional Refrigerator	129	4,818	13	$15	$1,070	$30	$0.106	50%	3.02	1.51	93	$0.161	$0.012	0.02	0.01				
Refrigerator Removal	Removal of Second Refrigerator	0	4,818	existing unit vintage from 7-18 years old	227	4,818	8	$35	$0	$0	$0.106	0%	0.00	-0.30	1,094	$0.032	$0.004	0.23	0.14				
Remove freezer from service and recycle	removal of freezer	0	0	existing secondary unit - age mostly >10 years	167	4,818	10	$35	$0	$0	$0.106	0%	0.00	-0.41	803	$0.044	$0.004	0.17	0.10				
TV peripherals turned off with Timer Power Strip (replacing power strip)	TV peripherals turned off with Timer (replacing power strip)	3	4,420	Power used in "standby" mode while equipment is unused	41	4,420	15	$10	$0	$20	$0.106	50%	1.13	0.57	166	$0.060	$0.004	0.04	0.03				
CFLs (15 Required) - 2013	High Efficiency CFL (15.5 watt average bulb)	16	752	Incandescent bulbs (per bulb 2013)	59	752	13	$1	$0	$2	$0.106	52%	0.56	0.27	32	$0.031	$0.002	0.04	0.00				
CFLs (15 Required) - 2014	High Efficiency CFL (15.5 watt average bulb)	16	752	Incandescent bulbs (per bulb 2014)	52	752	14	$1	$0	$2	$0.106	52%	0.65	0.31	28	$0.036	$0.003	0.04	0.00				
CFLs (15 Required) - 2015	High Efficiency CFL (15.5 watt average bulb)	16	752	Incandescent bulbs (per bulb 2015)	47	752	15	$1	$0	$2	$0.106	52%	0.77	0.37	23	$0.043	$0.003	0.03	0.00				
Attic insulation and Bypass Sealing - Combo Customer	Add insulation to R44	3,201	384	Existing Avg R12 in attic	3,458	384	20	$75	$0	$1,410	$0.106	5%	16.05	15.19	99	$0.760	$0.038	0.26	0.25				
Wall Insulation - Combo Customer	Filled cavity - add R 11	3,333	384	Empty cavity	3,458	384	20	$19	$0	$1,690	$0.106	1%	8.96	8.86	48	$0.400	$0.020	0.13	0.12				
LED Indoor bulbs 2013	LED bulb to replace indoor type A lamp	12	752	Incandescent bulb DER deemed wattage	59	752	20	$15	$0	$37	$0.106	40%	10.16	6.09	35	$0.433	$0.022	0.05	0.00				
LED Indoor bulbs 2014	LED bulb to replace indoor type A lamp	12	752	Incandescent bulb DER deemed wattage	52	752	20	$15	$0	$37	$0.106	40%	11.75	7.05	30	$0.500	$0.025	0.04	0.00				
LED Indoor bulbs 2015	LED bulb to replace indoor type A lamp	12	752	Incandescent bulb DER deemed wattage	47	752	20	$15	$0	$37	$0.106	40%	13.64	8.18	26	$0.581	$0.029	0.03	0.00				
Programmable Thermostat	New T-state w/ Auto setback by 1 F for heating	3,789	325	Existing non-programmable thermostat	4,091	325	5	$7	$0	$50	$0.106	14%	1.56	1.35	98	$0.069	$0.014	0.30	0.30				

Electric Forecast Planning Assumptions																						
Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)	Measure Lifetime (years)	Rebate Amount ($)	Average Baseline Product Cost ($)	Incremental Cost of Efficient Product ($)	Assumed Energy Cost ($/kWh)	Rebate as a % of Incremental Cost (%)	Incremt'l Cost Payback Period w/o Rebate (yrs)	Incremt'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved ($/kWh)	Rebated Lifetime cost /Cust KWh Saved ($/kWh)	Customer kW Savings (kW)	Generator Peak kW Savings (kW)	Soc. Test	Part. Test	Rate Impact Test	Utility Test
Programmable Thermostat Setback	Auto setback existing thermostat by 1 F for heating	3,789	325	no thermostat setback	4,091	325	5	$7	$0	$0	$0.106	0%	0.00	-0.21	98	$0.069	$0.014	0.30	0.30				
INSULATION REBATE																				1.37	1.19	0.91	6.59
Attic insulation and Bypass Sealing - Electric Only Customers with Electric Resistance Heat	Add insulation to R44	18,937	937	Existing Avg R12 in attic	21,430	937	20	$282	$0	$1,410	$0.106	20%	5.68	4.54	2,336	$0.121	$0.006	2.49	0.25				
Air Sealing to Reduce Infiltration by 30% Electric Only Customers with Electric Resistance Heat	3.5 ACH50	20,523	937	5.0 ACH50	21,430	937	7	$70	$0	$350	$0.106	20%	3.87	3.10	850	$0.082	$0.012	0.91	0.00				
Wall Insulation - Electric Only Customers with Electric Resistance Heat	Filled cavity - add R 11	15,505	937	Empty cavity	21,430	937	20	$300	$0	$1,690	$0.106	18%	2.86	2.35	5,551	$0.054	$0.003	5.92	0.12				
Attic insulation and Bypass Sealing - Gas and Electric Customer	Add insulation to R44	3,201	384	Existing Avg R12 in attic	3,458	384	20	$74	$0	$1,410	$0.106	5%	16.05	15.20	99	$0.752	$0.038	0.26	0.25				
Wall Insulation - Gas and Electric Customer	Filled cavity - add R 11	3,333	384	Empty cavity	3,458	384	20	$19	$0	$1,690	$0.106	1%	8.96	8.86	48	$0.395	$0.020	0.13	0.12				
REFRIGERATOR RECYCLING																				3.08	INF	0.38	2.73
Remove second refrigerator from service and recycle	removal of second refrigerator	0	0	existing secondary unit - age mostly >10 years	227	4,818	8	$35	$0	$0	$0.106	0%	0.00	-0.30	1,094	$0.032	$0.004	0.23	0.14				
Remove freezer from service and recycle	removal of freezer	0	0	existing secondary unit - age mostly >10 years	167	4,818	10	$35	$0	$0	$0.106	0%	0.00	-0.41	803	$0.044	$0.004	0.17	0.10				
RESIDENTIAL COOLING																				1.01	1.02	0.99	2.04
Installation of High Efficiency AC equipment New Home	Non - Quality Installation of 2.5 Ton 15 SEER AC	2,400	706	Non-Quality Installation of 2.5 Ton 13 SEER AC	2,683	706	14	$200	$2,125	$686	$0.106	29%	32.22	22.82	200	$1.000	$0.071	0.28	0.28				
Installation of High Efficiency AC equipment New Home	Non - Quality Installation of 2.5 Ton AC 16 or above SEER	2,308	749	Non-Quality Installation of 2.5 Ton 13 SEER AC	2,683	749	14	$300	$2,125	$782	$0.106	38%	26.12	16.09	281	$1.066	$0.076	0.38	0.37				
Installation of High Efficiency ASHP equipment New Home	Non - Quality Installation of 2.5 Ton 15 SEER ASHP	2,400	706	Non-Quality Installation of 2.5 Ton 13 SEER ASHP	2,683	706	12	$200	$2,125	$686	$0.106	29%	32.22	22.82	200	$1.000	$0.083	0.28	0.28				
Installation of High Efficiency ASHP equipment New Home	Non - Quality Installation of 2.5 Ton ASHP 16 or above SEER	2,308	749	Non-Quality Installation of 2.5 Ton 13 SEER ASHP	2,683	749	12	$300	$2,125	$782	$0.106	38%	26.12	16.09	281	$1.066	$0.089	0.38	0.37				
Installation of High Efficiency GSHP equipment New Home	Non - Quality Installation of 2 Ton, closed loop, 16.89 EER GSHP	1,500	502	Non-Quality Installation of 2 Ton 13 SEER AC	2,147	502	20	$675	$2,125	$1,168	$0.106	58%	33.82	14.27	325	$2.079	$0.104	0.65	0.64				
Quality Install of AC Unit New Home	Quality Installation of 2.5 Ton AC above 13.0 SEER & below 14.0 SEER	1,865	559	Non-Quality Installation of 2.5 Ton AC above 13.0 SEER & below 14.0 SEER	2,683	559	7	$150	$0	$250	$0.106	60%	5.14	2.05	458	$0.328	$0.047	0.82	0.81				
Quality Install of AC Unit New Home	Quality Installation of 2.5 Ton AC above 14.0 SEER & below 14.5 SEER	1,773	546	Non-Quality Installation of 2.5 Ton AC above 14.0 SEER & below 14.5 SEER	2,551	546	7	$150	$0	$250	$0.106	60%	5.53	2.21	425	$0.353	$0.050	0.78	0.77				
Quality Install of AC Unit New Home	Quality Installation of 2.5 Ton 14.5 SEER AC	1,738	538	Non-Quality Installation of 2.5 Ton 14.5 SEER AC	2,500	538	7	$150	$0	$250	$0.106	60%	5.73	2.29	410	$0.366	$0.052	0.76	0.75				
Quality Install of AC Unit New Home	Quality Installation of 2.5 Ton 15 SEER AC	1,668	542	Non-Quality Installation of 2.5 Ton 15 SEER AC	2,400	542	7	$150	$0	$250	$0.106	60%	5.93	2.37	397	$0.378	$0.054	0.73	0.72				
Quality Install of AC Unit New Home	Quality Installation of 2.5 Ton AC 16 SEER or above and below 17 SEER	1,604	528	Non-Quality Installation of 2.5 Ton AC 16 SEER or above and below 17 SEER	2,308	528	7	$150	$0	$250	$0.106	60%	6.32	2.53	372	$0.403	$0.058	0.70	0.69				

Electric Forecast Planning Assumptions																						
Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)	Measure Lifetime (years)	Rebate Amount ($)	Average Baseline Product Cost ($)	Incremental Cost of Efficient Product ($)	Assumed Energy Cost ($/kWh)	Rebate as a % of Incremental Cost (%)	Incremt'l Cost Payback Period w/o Rebate (yrs)	Incremt'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved ($/kWh)	Rebated Lifetime cost /Cust KWh Saved ($/kWh)	Customer kW Savings (kW)	Generator Peak kW Savings (kW)	Soc. Test	Part. Test	Rate Impact Test	Utility Test
Quality Install of ASHP Unit New Home	Quality Installation of 2.5 Ton ASHP above 13.0 SEER & below 14.0 SEER	1,865	559	Non Quality Installation of 2.5 Ton ASHP above 13.0 SEER & below 14.0 SEER	2,683	559	6	$150	$0	$250	$0.106	60%	5.14	2.05	458	$0.328	$0.055	0.82	0.81				
Quality Install of ASHP Unit New Home	Quality Installation of 2.5 Ton ASHP above 14.0 SEER & below 14.5 SEER	1,773	546	Non-Quality Installation of 2.5 Ton ASHP above 14.0 SEER & below 14.5 SEER	2,551	546	6	$150	$0	$250	$0.106	60%	5.53	2.21	425	$0.353	$0.059	0.78	0.77				
Quality Install of ASHP Unit New Home	Quality Installation of 2.5 Ton 14.5 SEER ASHP	1,738	538	Non-Quality Installation of 2.5 Ton 14.5 SEER ASHP	2,500	538	6	$150	$0	$250	$0.106	60%	5.73	2.29	410	$0.366	$0.061	0.76	0.75				
Quality Install of ASHP Unit New Home	Quality Installation of 2.5 Ton 15 SEER ASHP	1,668	542	Non-Quality Installation of 2.5 Ton 15 SEER ASHP	2,400	542	6	$150	$0	$250	$0.106	60%	5.93	2.37	397	$0.378	$0.063	0.73	0.72				
Quality Install of ASHP Unit New Home	Quality Installation of 2.5 Ton ASHP 16 SEER or above and below 17 SEER	1,604	528	Non-Quality Installation of 2.5 Ton ASHP 16 SEER or above and below 17 SEER	2,308	528	6	$150	$0	$250	$0.106	60%	6.32	2.53	372	$0.403	$0.067	0.70	0.69				
Quality Install of GSHP Unit New Home	Quality Installation of 2 Ton, closed loop, 14.1 EER GSHP	1,043	784	Non-Quality Installation of 2 Ton, closed loop, 14.1 EER GSHP	1,500	784	10	$0	$0	$250	$0.106	0%	6.55	6.55	359	$0.000	$0.000	0.46	0.45				
Installation of High Efficiency AC equipment Existing Home	Non - Quality Installation of 2.5 Ton 15 SEER AC	2,400	542	Non-Quality Installation of 2.5 Ton 13 SEER AC	2,683	542	14	$200	$4,312	$686	$0.106	29%	41.98	29.74	154	$1.302	$0.093	0.28	0.28				
Installation of High Efficiency AC equipment Existing Home	Non - Quality Installation of 2.5 Ton AC 16 or above SEER	2,308	528	Non-Quality Installation of 2.5 Ton 13 SEER AC	2,683	528	14	$300	$4,312	$782	$0.106	38%	37.02	22.81	198	$1.511	$0.108	0.38	0.37				
Installation of High Efficiency ASHP equipment Existing Home	Non - Quality Installation of 2.5 Ton 15 SEER ASHP	2,400	542	Non-Quality Installation of 2.5 Ton 13 SEER ASHP	2,683	542	12	$200	$4,312	$686	$0.106	29%	41.98	29.74	154	$1.302	$0.109	0.28	0.28				
Installation of High Efficiency ASHP equipment Existing Home	Non - Quality Installation of 2.5 Ton ASHP 16 or above SEER	2,308	528	Non-Quality Installation of 2.5 Ton 13 SEER ASHP	2,683	528	12	$300	$4,312	$782	$0.106	38%	37.02	22.81	198	$1.511	$0.126	0.38	0.37				
Installation of High Efficiency GSHP equipment Existing Home	Non - Quality Installation of 2 Ton, closed loop, 14.1 EER GSHP	1,500	502	Non-Quality Installation of 2 Ton 13 SEER AC	2,147	502	20	$675	$4,312	$1,168	$0.106	58%	33.82	14.27	325	$2.079	$0.104	0.65	0.64				
Quality Install of AC Unit Existing Home	Quality Installation of 2.5 Ton AC above 13.0 SEER & below 14.0 SEER	1,938	559	Non-Quality Installation of 2.5 Ton AC above 13.0 SEER & below 14.0 SEER	2,683	559	7	$150	$0	$250	$0.106	60%	5.64	2.25	417	$0.360	$0.051	0.75	0.74				
Quality Install of AC Unit Existing Home	Quality Installation of 2.5 Ton AC above 14.0 SEER & below 14.5 SEER	1,842	546	Non-Quality Installation of 2.5 Ton AC above 14.0 SEER & below 14.5 SEER	2,551	546	7	$150	$0	$250	$0.106	60%	6.07	2.43	387	$0.387	$0.055	0.71	0.70				
Quality Install of AC Unit Existing Home	Quality Installation of 2.5 Ton 14.5 SEER AC	1,805	538	Non-Quality Installation of 2.5 Ton 14.5 SEER AC	2,500	538	7	$150	$0	$250	$0.106	60%	6.29	2.51	374	$0.401	$0.057	0.69	0.68				
Quality Install of AC Unit Existing Home	Quality Installation of 2.5 Ton 15 SEER AC	1,733	542	Non-Quality Installation of 2.5 Ton 15 SEER AC	2,400	542	7	$150	$0	$250	$0.106	60%	6.50	2.60	361	$0.415	$0.059	0.67	0.66				
Quality Install of AC Unit Existing Home	Quality Installation of 2.5 Ton AC 16 SEER or above and below 17 SEER	1,666	528	Non-Quality Installation of 2.5 Ton AC 16 SEER or above and below 17 SEER	2,308	528	7	$150	$0	$250	$0.106	60%	6.94	2.77	339	$0.443	$0.063	0.64	0.63				

Electric Forecast Planning Assumptions																							
Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)	Measure Lifetime (years)	Rebate Amount ($)	Average Baseline Product Cost ($)	Incremental Cost of Efficient Product ($)	Assumed Energy Cost ($/kWh)	Rebate as a % of Incremental Cost (%)	Incremt'l Cost Payback Period w/o Rebate (yrs)	Incremt'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved ($/kWh)	Rebated Lifetime cost /Cust KWh Saved ($/kWh)	Customer kW Savings (kW)	Generator Peak kW Savings (kW)	Soc. Test	Part. Test	Rate Impact Test	Utility Test
Quality Install of ASHP Unit Existing Home	Quality Installation of 2.5 Ton ASHP above 13.0 SEER & below 14.0 SEER	1,938	559	Non Quality Installation of 2.5 Ton ASHP above 13.0 SEER & below 14.0 SEER	2,683	559	6	$150	$0	$250	$0.106	60%	5.64	2.25	417	$0.360	$0.060	0.75	0.74				
Quality Install of ASHP Unit Existing Home	Quality Installation of 2.5 Ton ASHP above 14.0 SEER & below 14.5 SEER	1,842	546	Non-Quality Installation of 2.5 Ton ASHP above 14.0 SEER & below 14.5 SEER	2,551	546	6	$150	$0	$250	$0.106	60%	6.07	2.43	387	$0.387	$0.065	0.71	0.70				
Quality Install of ASHP Unit Existing Home	Quality Installation of 2.5 Ton 14.5 SEER ASHP	1,805	538	Non-Quality Installation of 2.5 Ton 14.5 SEER ASHP	2,500	538	6	$150	$0	$250	$0.106	60%	6.29	2.51	374	$0.401	$0.067	0.69	0.68				
Quality Install of ASHP Unit Existing Home	Quality Installation of 2.5 Ton 15 SEER ASHP	1,733	542	Non-Quality Installation of 2.5 Ton 15 SEER ASHP	2,400	542	6	$150	$0	$250	$0.106	60%	6.50	2.60	361	$0.415	$0.069	0.67	0.66				
Quality Install of ASHP Unit Existing Home	Quality Installation of 2.5 Ton ASHP 16 SEER or above and below 17 SEER	1,666	528	Non-Quality Installation of 2.5 Ton ASHP 16 SEER or above and below 17 SEER	2,308	528	6	$150	$0	$250	$0.106	60%	6.94	2.77	339	$0.443	$0.074	0.64	0.63				
SCHOOL EDUCATION KITS																				1.48	21.88	0.20	1.42
Replace incandescent lamps with CFLs 2013	High efficiency CFL lighting (4 bulbs; 2 13W; 2 18W)	62	838	4 incandescent bulbs with a weighted average wattage = 58.50 W per bulb	234	838	11	$9	$0	$9	$0.106	100%	0.57	0.00	144	$0.060	$0.005	0.17	0.02				
Replace incandescent lamps with CFLs 2014	High efficiency CFL lighting (4 bulbs; 2 13W; 2 18W)	62	838	4 incandescent bulbs with a weighted average wattage = 52.27 W per bulb	209	838	12	$9	$0	$9	$0.106	100%	0.67	0.00	123	$0.071	$0.006	0.15	0.01				
Replace incandescent lamps with CFLs 2015	High efficiency CFL lighting (4 bulbs; 2 13W; 2 18W)	62	838	4 incandescent bulbs with a weighted average wattage = 46.73 W per bulb	187	838	12	$9	$0	$9	$0.106	100%	0.78	0.00	105	$0.083	$0.007	0.12	0.01				
Provide Efficient Showerhead	Low Flow Shower head - 1.5 GPM	4,500	143	Federal Minimum Standard flow rate 2.5 GPM	4,500	238	6	$6	$0	$6	$0.106	100%	0.08	0.00	429	$0.014	$0.002	0.00	0.00				

Electric Forecast Planning Assumptions																							
Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)	Measure Lifetime (years)	Rebate Amount ($)	Average Baseline Product Cost ($)	Incremental Cost of Efficient Product ($)	Assumed Energy Cost ($/kWh)	Rebate as a % of Incremental Cost (%)	Incremt'l Cost Payback Period w/o Rebate (yrs)	Incremt'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved ($/kWh)	Rebated Lifetime cost /Cust KWh Saved ($/kWh)	Customer kW Savings (kW)	Generator Peak kW Savings (kW)	Soc. Test	Part. Test	Rate Impact Test	Utility Test
Provide Efficient Faucet Aerators	1.5 GPM flow rate aerator	4,500	63	Federal Minimum Standard flow rate 2.2 GPM	4,500	92	5	$2	$0	$2	$0.106	100%	0.08	0.00	132	$0.013	$0.003	0.00	0.00				
RESIDENTIAL SAVER'S SWITCH																				3.48	INF	1.01	3.48
AC Control	Utility Load Control for control period	0	3	No Control, No Switch	2,990	3	15	$0	$0	$0	$0.106	0%	0.00	0.00	8	$0.000	$0.000	2.99	0.88				
Water Heater Control	Utility Load Control for control period	0	3	No Control, No Switch	3,020	3	15	$0	$0	$0	$0.106	0%	0.00	0.00	8	$0.000	$0.000	3.02	0.32				

LOW-INCOME SEGMENT

HOME ENERGY SAVINGS PROGRAM																				0.65	3.19	0.25	0.44
Refrigerator Replacements	Energy Star standard refrigerator	110	4,818	existing unit vintage from 7-18 years old	234	4,818	13	$574	$0	$574	$0.106	100%	9.02	0.00	599	$0.959	$0.074	0.12	0.07				
Freezer Replacement	Compact Upright Freezers with Auto Defrost	154	4,818	Compact Upright Freezers with Auto Defrost	171	4,818	11	$303	$0	$303	$0.106	100%	34.55	0.00	82	$3.675	$0.334	0.02	0.01				
Refrigerator Recycling	removal of second refrigerator	0	0	existing secondary unit - age mostly >10 years	234	4,818	8	$35	$0	$35	$0.106	100%	0.29	0.00	1,128	$0.031	$0.004	0.23	0.14				
Freezer Recycling	removal of freezer	0	4,818	Compact Chest Freezers	114	4,818	8	$35	$0	$35	$0.106	100%	0.60	0.00	550	$0.064	$0.008	0.11	0.07				
Window Air Conditioner Replacement	Energy Star 10,000 Btu/hr 10.8 EER Window AC Unit	926	662	Standard 10,000 Btu/hr 9.8 EER Window AC Unit	1,020	662	9	$368	$0	$368	$0.106	100%	55.34	0.00	63	$5.885	$0.654	0.09	0.09				
Window Air Conditioner Recycling	Removal of Standard 10,000 Btu/hr 9.8 EER Window AC Unit	0	662	Standard 10,000 Btu/hr 9.8 EER Window AC Unit	1,020	662	5	$87	$0	$87	$0.106	100%	1.21	0.00	676	$0.129	$0.029	1.02	1.01				
Attic Insulation for Electrically Heated Homes	Addition of attic insulation to R-44	19,380	815	R-13 Avg baseline level of insulation based on market study	24,651	815	20	$1,410	$0	$1,410	$0.106	100%	3.09	0.00	4,294	$0.328	$0.016	5.27	0.00				
ECM furnace fan	EC Fan Motor	150	2,484	PSC Motor	400	2,484	15	$464	$0	$464	$0.106	100%	7.03	0.00	621	$0.748	$0.050	0.25	0.19				
Attic Insulation for Electrically Cooled Homes	Addition of attic insulation to R-44	4,851	384	R-13 Avg baseline level of insulation based on market study	5,241	384	20	$302	$0	$302	$0.106	100%	1.91	0.00	150	$2.012	$0.101	0.39	0.39				
Wall R-3 to R-11	Assuming 2x4 construction, up to R-11 insulation can fit in wall cavity	5,052	384	No insulation in wall cavity	5,241	384	20	$107	$0	$107	$0.106	100%	0.37	0.00	73	$1.469	$0.073	0.19	0.19				
CFLs - 2013	High efficiency CFL lighting	19	876	Incandescent/Halogen Lighting	66	876	11	$4	$0	$4	$0.106	100%	0.82	0.00	41	$0.087	$0.008	0.05	0.00				
CFLs - 2014	High efficiency CFL lighting	19	864	Incandescent/Halogen Lighting	64	864	12	$4	$0	$4	$0.106	100%	0.86	0.00	39	$0.092	$0.008	0.05	0.00				
CFLs - 2015	High efficiency CFL lighting	19	864	Incandescent/Halogen Lighting	59	864	12	$4	$0	$4	$0.106	100%	0.98	0.00	34	$0.104	$0.009	0.04	0.00				

Electric Forecast Planning Assumptions																						
Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)	Measure Lifetime (years)	Rebate Amount ($)	Average Baseline Product Cost ($)	Incremental Cost of Efficient Product ($)	Assumed Energy Cost ($/kWh)	Rebate as a % of Incremental Cost (%)	Incremt'l Cost Payback Period w/o Rebate (yrs)	Incremt'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved ($/kWh)	Rebated Lifetime cost /Cust KWh Saved ($/kWh)	Customer kW Savings (kW)	Generator Peak kW Savings (kW)	Soc. Test	Part. Test	Rate Impact Test	Utility Test
LOW-INCOME HOME ENERGY SQUAD																				1.56	INF	0.39	1.51
NEC Tier One Energy Squad Service 2013	weighted average Energy Efficient measures by participant	99	741	weighted average Baseline measures by participant	145	741	11	$0	$0	$0	$0.106	0%	0.00	0.00	34	$0.000	$0.000	0.05	0.01				
NEC Tier One Energy Squad Service 2014	weighted average Energy Efficient measures by participant	101	741	weighted average Baseline measures by participant	144	741	11	$0	$0	$0	$0.106	0%	0.00	0.00	32	$0.000	$0.000	0.04	0.01				
NEC Tier One Energy Squad Service 2015	weighted average Energy Efficient measures by participant	101	741	weighted average Baseline measures by participant	141	741	11	$0	$0	$0	$0.106	0%	0.00	0.00	30	$0.000	$0.000	0.04	0.01				
MULTI-FAMILY ENERGY SAVINGS PROGRAM																				0.69	2.67	0.24	0.49
2008 Energy Star standard refrigerator	2008 Energy Star standard refrigerator	110	4,818	existing unit vintage from 7-18 years old	234	4,818	13	$574	$0	$574	$0.106	100%	9.02	0.00	599	$0.959	$0.074	0.12	0.07				
Replace existing freezer with new high efficient	Compact Upright Freezers with Auto Defrost	154	4,818	Compact Upright Freezers with Auto Defrost	171	4,818	11	$303	$0	$303	$0.106	100%	34.55	0.00	82	$3.675	$0.334	0.02	0.01				
removal of second refrigerator	removal of second refrigerator	0	4,818	existing unit vintage from 7-18 years old	234	4,818	8	$35	$0	$35	$0.106	100%	0.29	0.00	1,128	$0.031	$0.004	0.23	0.14				
removal of freezer	removal of freezer	0	4,818	Compact Chest Freezers	114	4,818	8	$35	$0	$35	$0.106	100%	0.60	0.00	550	$0.064	$0.008	0.11	0.07				
Energy Star 10,000 Btu/hr 10.8 EER Window AC Unit	Energy Star 10,000 Btu/hr 10.8 EER Window AC Unit	926	662	Standard 10,000 Btu/hr 9.8 EER Window AC Unit	1,020	662	9	$368	$0	$368	$0.106	100%	55.34	0.00	63	$5.885	$0.654	0.09	0.09				
Removal of Standard 10,000 Btu/hr 9.8 EER Window AC Unit	Removal of Standard 10,000 Btu/hr 9.8 EER Window AC Unit	0	0	Standard 10,000 Btu/hr 9.8 EER Window AC Unit	1,020	662	5	$87	$0	$87	$0.106	100%	1.21	0.00	676	$0.129	$0.029	1.02	1.01				
Addition of attic insulation to R-44	Addition of attic insulation to R-44	21,087	815	R-13 Avg baseline level of insulation based on market study	24,651	815	20	$1,410	$0	$1,410	$0.106	100%	4.57	0.00	2,903	$0.486	$0.024	3.56	0.00				
High efficiency CFL lighting - 4 bulbs	High efficiency CFL lighting - 4 bulbs	62	838	High efficiency CFL lighting - 4 bulbs	234	838	12	$4	$0	$4	$0.106	100%	0.24	0.00	144	$0.025	$0.002	0.17	0.02				
High efficiency CFL lighting - 4 bulbs	High efficiency CFL lighting - 4 bulbs	62	838	High efficiency CFL lighting - 4 bulbs	209	838	12	$4	$0	$4	$0.106	100%	0.27	0.00	123	$0.029	$0.002	0.15	0.01				
High efficiency CFL lighting - 4 bulbs	High efficiency CFL lighting - 4 bulbs	62	838	High efficiency CFL lighting - 4 bulbs	189	838	12	$4	$0	$4	$0.106	100%	0.32	0.00	106	$0.034	$0.003	0.13	0.01				

RENEWABLE ENERGY SEGMENT

SOLAR*REWARDS																				0.45	0.57	0.52	1.02
Solar PV Installation Residential (4.8 kW) - $1.50/Watt rebate	4.8 kW(dc) Solar PV System	0	1,286	Load without PV System	4,800	1,286	20	$7,200	$0	$31,920	$0.106	23%	48.63	37.66	6,173	$1.166	$0.058	4.80	2.49				
Solar PV Installation Retail - Commercial(29.8 kW) - $1.50/Watt rebate	29.8 kW(dc) Solar PV System	0	1,286	Load without PV System	29,800	1,286	20	$44,700	$0	$151,980	$0.119	29%	33.43	23.60	38,323	$1.166	$0.058	29.80	15.15				

Gas Forecast Planning Assumptions													
Natural Gas Measure Description	High Efficiency Product Description / Rating	High Efficiency Product Consumption (Dth/yr)	Baseline Product Description / Rating	Baseline Product Consumption (Dth/yr)	Life of Product (years)	Rebate Amount	Incremental Cost of Efficient Product	Rebate as a % of Incremental Cost	Incremt'l Cost Payback Period w/o Rebate	Incremt'l Cost Payback Period with Rebate	Average Annual Customer Dth Savings	Rebated Cost per Annual Cust Dth Saved	Rebated Lifetime Cost per Cust Dth Saved

BUSINESS SEGMENT

BUSINESS NEW CONSTRUCTION

EDA Standard Track	High Efficiency Building	22,463	Code Level Efficiency Building	24,959	20	$12,480	$457,648	3%	7.08	6.89	2,496	$5.00	$0.25
EDA Enhanced Track	High Efficiency Building	17,025	Code Level Efficiency Building	18,917	20	$9,459	$542,172	2%	6.27	6.16	1,892	$5.00	$0.25
EDA Quick Track	High Efficiency Building	7,046	Code Level Efficiency Building	7,829	20	$3,914	$248,754	2%	6.81	6.70	783	$5.00	$0.25
EEB Average Project	High Efficiency Building	6,919	Code Level Efficiency Building	7,688	20	$6,040	$104,639	6%	6.60	6.22	769	$7.86	$0.39

COMMERCIAL EFFICIENCY

Custom Gas Project	New Equipment	20,013	Old Equipment	20,812	16	$4,145	$58,054	7%	3.68	3.42	799	$5.19	$0.33
Heating Efficiency - Total	New equipment	3,344	Old or less efficient equipment	3,466	9	$632	$2,815	22%	3.61	2.80	122	$5.18	$0.58
Implementation of ECO's found in studies	Optimized Building Systems	5,978	Existing Building System - Not Tuned or Optimized	7,060	7	$3,519	$4,897	72%	0.25	0.07	1,082	$3.25	$0.46
Energy Design Assistance	High Efficiency Building	19,744	Code Level Efficiency Building	21,938	20	$13,711	$499,910	3%	6.62	6.43	2,194	$6.25	$0.31
Gas Food Service Equipment	High-efficiency equipment	882	Standard-efficiency equipment	1,035	15	$1,107	$6,727	16%	4.97	4.15	152	$7.27	$0.50
Phase 2 Customer Contribution	0%	0	0%	0	0	$0	$1,500	0%	0.00	0.00	0	$0.00	$0.00
Behavioral Changes	Behavior changes that reduce energy use	19,771	No change in behavior	20,812	1	$0	$0	0%	0.00	0.00	1,041	$0.00	$0.00
Behavioral Adjustment	Behavior changes that reduce energy use	-13,181	No change in behavior	-13,875	0	$0	$0	0%	0.00	0.00	-694	$0.00	$0.00

CUSTOM EFFICIENCY

Custom Efficiency Gas	High Efficiency Product/system	1,637	Less Efficient Product/Systems	2,690	19	$5,261	$47,625	11%	4.54	4.04	1,052	$5.00	$0.27
Custom Studies Gas	0%	0	0%	0	0	$9,152	$24,740	37%	0.00	0.00	0	$0.00	$0.00

EFFICIENCY CONTROLS

Efficiency Controls - Gas	New Digital Controls System	13,637	Obsolete Controls System	14,419	15	$3,820	$71,113	5%	4.75	4.50	782	$4.89	$0.33
Efficiency Controls - Study Allocation	Study Allocation	0	0%	0	0	$16,756	$61,739	27%	0.00	0.00	0	$0.00	$0.00

Gas Forecast Planning Assumptions													
Natural Gas Measure Description	High Efficiency Product Description / Rating	High Efficiency Product Consumption (Dth/yr)	Baseline Product Description / Rating	Baseline Product Consumption (Dth/yr)	Life of Product (years)	Rebate Amount	Incremental Cost of Efficient Product	Rebate as a % of Incremental Cost	Incremt'l Cost Payback Period w/o Rebate	Incremt'l Cost Payback Period with Rebate	Average Annual Customer Dth Savings	Rebated Cost per Annual Cust Dth Saved	Rebated Lifetime Cost per Cust Dth Saved
FOODSERVICE EQUIPMENT													
Convection Oven	Convection Oven	71	Deck Oven	175	11	$500	$2,060	24%	2.74	2.07	104	$4.81	$0.44
Conveyor Oven	Conveyor Oven	217	Pizza Deck Oven	402	11	$750	$7,080	11%	5.30	4.73	185	$4.05	$0.37
Combi-Oven	Combination Oven	227	Steamer	369	11	$1,000	$4,272	23%	4.16	3.19	142	$7.04	$0.64
Rotisserie Oven	Rotisserie Oven - Infrared	255	Open Flame Rotisserie Oven	291	11	$500	$2,665	19%	10.21	8.29	36	$13.84	$1.26
Rotating Rack Oven	Rotating Rack Oven	161	Deck Oven	299	11	$500	$2,977	17%	2.98	2.48	138	$3.62	$0.33
Commercial Gas Fryer	High Efficiency Unit	255	Standard Efficiency Unit	291	11	$250	$1,714	15%	6.57	5.61	36	$6.92	$0.63
Upright Broiler	Upright Broiler	196	Standard Radiant Broiler	304	11	$600	$4,413	14%	5.64	4.87	108	$5.54	$0.50
Charbroiler	High Efficiency Charbroiler	132	Standard Charbroiler	208	11	$300	$2,173	14%	3.99	3.44	75	$3.98	$0.36
Salamander Broiler	High Efficiency Salamander Broiler	50	Standard Salamander Broiler	74	11	$150	$1,006	15%	5.83	4.96	24	$6.28	$0.57
Commercial Gas Pasta Cooker	Pasta Cooker	1,551	Gas Range	1,689	11	$200	$2,413	8%	2.42	2.22	138	$1.45	$0.13
Commercial Dishwasher - Under Counter, Gas Only or Combo Customer	ENERGY STAR qualified unit	29	Conventional unit as defined by ENERGY STAR	47	10	$196	$866	23%	4.50	3.48	19	$10.39	$1.04
Commercial Dishwasher - Door Type, Gas Only or Combo Customer	ENERGY STAR qualified unit	91	Conventional unit as defined by ENERGY STAR	139	15	$196	$509	39%	0.87	0.53	48	$4.06	$0.27
Demand Controlled Ventilation - Gas Only or Combo Customer	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	4,267	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	4,634	20	$2,163	$19,759	11%	4.17	3.71	366	$5.91	$0.30
HEATING EFFICIENCY													
Non-Condensing Boiler	85% Efficient Boiler	1,810	80% Efficient Boiler	1,924	20	$954	$4,792	20%	6.42	5.14	113	$8.43	$0.42
Condensing Boiler	92% Efficient Boiler	1,807	80% Efficient Boiler	2,123	20	$2,976	$10,447	28%	5.00	3.58	316	$9.41	$0.47
Condensing Boiler	92% Efficient Boiler	266	78% Efficient Boiler	312	20	$438	$1,600	27%	5.21	3.79	47	$9.41	$0.47
Low Pressure Steam Boiler	84% Efficient Boiler	3,340	80% Efficient Boiler	3,507	20	$5,000	$16,500	30%	14.97	10.43	167	$29.94	$1.50
High Pressure Steam Boiler	83% Efficient Boiler	3,340	80% Efficient Boiler	3,466	20	$5,000	$16,500	30%	19.96	13.91	125	$39.91	$2.00
Commercial Water Heaters - Total	96% Efficient Storage or 95% Efficient Tankless Water Heater	484	80% Efficient Storage Water Heater	597	15	$943	$4,528	21%	10.51	8.32	113	$8.37	$0.56
90% Efficient Furnaces	90% Efficient Furnace	66	78% Efficient Furnace	76	18	$100	$1,254	8%	18.64	17.16	10	$9.81	$0.55
92% Efficient Furnaces	92.37% Avg. Efficient Furnace	65	78% Efficient Furnace	76	18	$200	$1,342	15%	17.09	14.54	12	$16.81	$0.93
94% Efficient Furnaces	94.92% Avg. Efficient Furnace	63	78% Efficient Furnace	76	18	$250	$1,429	17%	15.89	13.11	14	$18.34	$1.02
96% Efficient Furnaces	96% Efficient Furnace	62	78% Efficient Furnace	76	18	$300	$1,517	20%	16.03	12.86	14	$20.92	$1.16
Custom Boilers	Various	34,917	Various	36,481	18	$7,818	$101,454	8%	9.83	9.07	1,564	$5.00	$0.28
Boiler Tune-up	Boiler Tune-up - 2% additive improvement in efficiency; Boiler now at 80% efficiency	5,908	Existing boiler Poorly functioning at 78% efficiency	6,060	2	$127	$512	25%	0.51	0.39	151	$0.84	$0.42
Outdoor Air Reset	83% Efficient Boiler	1,044	80% Efficient existing boiler	1,083	20	$200	$1,004	20%	3.89	3.11	39	$5.11	$0.26
Stack Dampers	81% Efficient Boiler	10,745	80% Efficient existing boiler	10,879	12	$128	$1,209	11%	1.36	1.22	134	$0.96	$0.08
Modulating Burners	83% Efficient Boiler	5,595	80% Efficient existing boiler	5,805	20	$3,067	$11,619	26%	8.39	6.17	210	$14.62	$0.73
Turbulators	83% Efficient Boiler	2,005	80% Efficient existing boiler	2,080	20	$239	$1,031	23%	2.08	1.60	75	$3.18	$0.16
O2 Trim	82% Efficient Boiler	20,018	80% Efficient existing boiler	20,518	20	$1,046	$4,185	25%	1.27	0.95	500	$2.09	$0.10
Steam Traps	New Steam Traps	1,596	Existing Boiler, malfunctioning steam traps	1,640	5	$50	$263	19%	0.90	0.73	44	$1.13	$0.23
Pipe Insulation	Pipe with new insulation	81	Pipe with no or old insulation	613	13	$3,405	$9,156	37%	2.60	1.64	533	$6.39	$0.49
Heating System Optimization Study	implement recommended measures	21,177	Existing system	21,880	7	$10,064	$14,933	67%	3.22	1.05	702	$14.33	$2.05

Gas Forecast Planning Assumptions													
Natural Gas Measure Description	High Efficiency Product Description / Rating	High Efficiency Product Consumption (Dth/yr)	Baseline Product Description / Rating	Baseline Product Consumption (Dth/yr)	Life of Product (years)	Rebate Amount	Incremental Cost of Efficient Product	Rebate as a % of Incremental Cost	Incremt'l Cost Payback Period w/o Rebate	Incremt'l Cost Payback Period with Rebate	Average Annual Customer Dth Savings	Rebated Cost per Annual Cust Dth Saved	Rebated Lifetime Cost per Cust Dth Saved
PROCESS EFFICIENCY													
Custom	New System	269,606	Old System	274,059	9	$6,515	$81,519	8%	1.22	1.13	4,453	$1.46	$0.16
Commercial Heating	New System	3,163	Old System	3,272	8	$440	$1,893	23%	2.73	2.09	109	$4.04	$0.52
Recommissioning	Optimized Building Systems	5,978	Existing Building System - Not Tuned or Optimized	7,060	7	$3,519	$4,897	72%	0.25	0.07	1,082	$3.25	$0.46
Behavioral Changes	Behavior changes that reduce energy use	19,771	No change in behavior	20,812	1	$0	$0	0%	0.00	0.00	1,041	$0.00	$0.00
Behavioral Adjustment	Behavior changes that reduce energy use	-13,181	No change in behavior	-13,875	0	$0	$0	0%	0.00	0.00	-694	$0.00	$0.00
Energy Design Assistance	High Efficiency Building	15,440	Code Level Efficiency Building	17,156	20	$9,048	$343,277	3%	6.90	6.72	1,716	$5.27	$0.26
Phase 2 customer contribution	0%	0	0%	0	0	$0	$1,500	0%	0.00	0.00	0	$0.00	$0.00
Food Service	High Efficiency Equipment	345	Standard Efficiency Equipment	434	12	$459	$2,663	17%	3.90	3.23	89	$5.15	$0.42
RECOMMISSIONING													
Recommissioning - Implementation	Optimized Building Systems	5,978	Existing Building System - Not Tuned or Optimized	7,060	7	$2,815	$4,897	57%	0.25	0.11	1,082	$2.60	$0.37
Recommissioning - Studies	0%	0	0%	0	0	$3,367	$7,722	44%	0.00	0.00	0	$0.00	$0.00
SELF-DIRECT													
Average Project	New Equipment	12,721	Old or less efficient systems or equipment	17,655	17	$39,471	$148,656	27%	4.56	3.35	4,934	$8.00	$0.47
TURN KEY SERVICES													
Identification ~ Walk through, ASHREA LV1 & Eng Assistant Studies	Perform Study + Low Cost No Cost	0	No Study or Current operation	0	7	$0	$84	0%	0.00	0.00	0	$0.00	$0.00
Identification and repair~ Walk through, ASHREA LV1 & Eng Assistant LCNC measures	High Efficiency Solution	0	Current operation	1,130	7	$0	$2,104	0%	0.27	0.27	1,130	$0.00	$0.00
Project Scoping Services	Project Scoping	0	Customer not interested in implementing identified measure	0	15	$0	$166	0%	0.00	0.00	0	$0.00	$0.00
Implementation	High Eff Project	0	Low Eff or Current Operation	367	10	$1,835	$14,123	13%	5.05	4.39	367	$4.99	$0.50

Gas Forecast Planning Assumptions													
Natural Gas Measure Description	High Efficiency Product Description / Rating	High Efficiency Product Consumption (Dth/yr)	Baseline Product Description / Rating	Baseline Product Consumption (Dth/yr)	Life of Product (years)	Rebate Amount	Incremental Cost of Efficient Product	Rebate as a % of Incremental Cost	Incremt'l Cost Payback Period w/o Rebate	Incremt'l Cost Payback Period with Rebate	Average Annual Customer Dth Savings	Rebated Cost per Annual Cust Dth Saved	Rebated Lifetime Cost per Cust Dth Saved

RESIDENTIAL SEGMENT

ENERGY EFFICIENT SHOWERHEADS

Provide Energy Efficient Showerhead - 1.5 GPM	1.5 GPM Showerhead	3	2.5 GPM Showerhead	6	6	$3	$3	100%	0.07	0.00	2	$1.27	$0.21
Provide Energy Efficient Showerhead - 1.5 GPM	1.5 GPM Showerhead	3	2.5 GPM Showerhead	6	6	$3	$3	100%	0.07	0.00	2	$1.27	$0.21
Provide Energy Efficient Showerhead - 1.5 GPM	1.5 GPM Showerhead	3	2.5 GPM Showerhead	6	6	$3	$3	100%	0.07	0.00	2	$1.33	$0.22
Provide Energy Efficient Kitchen Aerator - 1.5 GPM	1.5 GPM Kitchen Faucet Aerator	1	2.2 GPM Kitchen Faucet Aerator	2	5	$1	$1	100%	0.11	0.00	1	$1.89	$0.38
Provide Energy Efficient Kitchen Aerator - 1.5 GPM	1.5 GPM Kitchen Faucet Aerator	1	2.2 GPM Kitchen Faucet Aerator	2	5	$1	$1	100%	0.11	0.00	1	$1.95	$0.39
Provide Energy Efficient Kitchen Aerator - 1.5 GPM	1.5 GPM Kitchen Faucet Aerator	1	2.2 GPM Kitchen Faucet Aerator	2	5	$1	$1	100%	0.11	0.00	1	$1.98	$0.40
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM	1.0 GPM Bath Faucet Aerator	1	2.2 GPM Bath Faucet Aerator	2	5	$0	$0	100%	0.02	0.00	1	$0.36	$0.07
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM	1.0 GPM Bath Faucet Aerator	1	2.2 GPM Bath Faucet Aerator	2	5	$0	$0	100%	0.02	0.00	1	$0.37	$0.07
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM	1.0 GPM Bath Faucet Aerator	1	2.2 GPM Bath Faucet Aerator	2	5	$0	$0	100%	0.02	0.00	1	$0.39	$0.08

ENERGY FEEDBACK

Print Reports	Aware use	89	Normal use	89	1	$0	$0	0%	0.00	0.00	1	$0.00	$0.00
Electronic Reports	Aware use	89	Normal use	89	1	$0	$0	0%	0.00	0.00	0	$0.00	$0.00
Print Reports Behavioral Adjustment	Aware use	-59	Normal use	-59	0	$0	$0	0%	0.00	0.00	0	$0.00	$0.00
Electronic Reports Behavioral Adjustment	Aware use	-59	Normal use	-59	0	$0	$0	0%	0.00	0.00	0	$0.00	$0.00

ENERGY STAR HOMES

Energy Star New Homes (Regular) - Combo	Energy Efficient Home	84	2006 IECC	149	20	$0	$2,800	0%	5.38	5.38	65	$0.00	$0.00
Energy Star New Homes (Low Income) - Combo	Energy Efficient Home	49	2006 IECC	69	20	$479	$1,900	25%	11.86	8.87	20	$23.89	$1.19
Energy Star New Homes (Regular) - Gas only	Energy Efficient Home	84	2006 IECC	149	20	$0	$2,800	0%	5.38	5.38	65	$0.00	$0.00
Energy Star New Homes (Low Income) - Gas only	Energy Efficient Home	49	2006 IECC	69	20	$500	$1,900	26%	11.86	8.74	20	$24.96	$1.25
Energy Star Clothes Washer	Energy Star Clothes washer	2	standard clothes washer	3	11	$81	$200	41%	4.14	2.46	1	$92.25	$8.39
Energy Star Dishwasher	0.65 Energy Factor - energy star recommended	6	0.46 Energy Factor - Federal Minimum Standard	19	11	$10	$25	38%	0.24	0.15	13	$0.75	$0.07

Gas Forecast Planning Assumptions													
Natural Gas Measure Description	High Efficiency Product Description / Rating	High Efficiency Product Consumption (Dth/yr)	Baseline Product Description / Rating	Baseline Product Consumption (Dth/yr)	Life of Product (years)	Rebate Amount	Incremental Cost of Efficient Product	Rebate as a % of Incremental Cost	Incremt'l Cost Payback Period w/o Rebate	Incremt'l Cost Payback Period with Rebate	Average Annual Customer Dth Savings	Rebated Cost per Annual Cust Dth Saved	Rebated Lifetime Cost per Cust Dth Saved
HEATING SYSTEM REBATES													
New 92% AFUE Energy Star Furnace Gas Only Customers	92 AFUE 70.545 mbh Furnace w/ 4.9% oversize factor	78	78 AFUE Furnace w/ PSC Motor 61.74 MBH and 20.6% oversize factor	92	18	$50	$489	10%	4.85	4.36	14	$3.58	$0.20
New 92% AFUE Energy Star Furnace Combo Customers	92 AFUE 70.545 mbh Furnace w/ 4.9% oversize factor	78	78 AFUE Furnace w/ PSC Motor 61.74 MBH and 20.6% oversize factor	92	18	$50	$489	10%	4.85	4.36	14	$3.58	$0.20
New 96% AFUE Energy Star Furnace Gas Only Customers	96 AFUE Furnace	75	78 AFUE Furnace w/ PSC Motor	92	18	$300	$706	42%	5.68	3.27	17	$17.44	$0.97
New 96% AFUE Energy Star Furnace Combo Customers	96 AFUE Furnace	75	78 AFUE Furnace w/ PSC Motor	92	18	$300	$706	42%	5.68	3.27	17	$17.44	$0.97
New 84% Boiler	84% Efficient Boiler	102	80% Efficient boiler	107	20	$100	$500	20%	13.58	10.86	5	$19.62	$0.98
New 90% Boiler	90% condensing Boiler	95	80% Efficient boiler	107	20	$100	$2,167	5%	25.21	24.05	12	$8.41	$0.42
New 95% Boiler	95% condensing Boiler	90	80% Efficient boiler	107	20	$100	$4,000	3%	32.76	31.94	17	$5.92	$0.30
New 92% AFUE Furnace Gas Only Customers Post new DOE Install Standards	92 AFUE 70.545 mbh Furnace w/ 4.9% oversize factor	78	90% AFUE Furnace w/o ECM	80	18	$50	$109	46%	8.69	4.68	2	$28.93	$1.61
New 92% AFUE Furnace Combo Customers Post new DOE Install Standards	92 AFUE 70.545 mbh Furnace w/ 4.9% oversize factor	78	90% AFUE Furnace w/o ECM	80	18	$50	$109	46%	8.69	4.68	2	$28.93	$1.61
New 96% AFUE Furnace Gas Only Customers Post new DOE Install Standards	96 AFUE Furnace	75	90% AFUE Furnace w/o ECM	80	18	$300	$326	92%	9.06	0.71	5	$60.37	$3.35
New 96% AFUE Furnace Combo Customers Post new DOE Install Standards	96 AFUE Furnace	75	90% AFUE Furnace w/o ECM	80	18	$300	$326	92%	9.06	0.71	5	$60.37	$3.35
HOME ENERGY SQUAD													
NEC Energy Squad Service 2013	weighted average Energy Efficient Gas measures by participant	34	weighted average Baseline Gas measures by participant	36	8	$0	$13	0%	0.51	0.51	2	$0.00	$0.00
NEC Energy Squad Service 2014	weighted average Energy Efficient Gas measures by participant	35	weighted average Baseline Gas measures by participant	37	8	$0	$13	0%	0.52	0.52	2	$0.00	$0.00
NEC Energy Squad Service 2015	weighted average Energy Efficient Gas measures by participant	35	weighted average Baseline Gas measures by participant	37	8	$0	$13	0%	0.52	0.52	2	$0.00	$0.00
Weatherstrip 1 additional door	Weatherstrip for one additional exterior door reduce air infiltration by an additional 10%	87	base program with two doors weather sealed	88	10	$0	$10	0%	1.06	1.06	1	$0.00	$0.00
Install Second Programmable Thermostat	Install second T-stat and Auto setback thermostat by 1 F for heating	44	Existing non-programmable thermostat	46	15	$0	$30	0%	1.38	1.38	2	$0.00	$0.00

Gas Forecast Planning Assumptions													
Natural Gas Measure Description	High Efficiency Product Description / Rating	High Efficiency Product Consumption (Dth/yr)	Baseline Product Description / Rating	Baseline Product Consumption (Dth/yr)	Life of Product (years)	Rebate Amount	Incremental Cost of Efficient Product	Rebate as a % of Incremental Cost	Incremt'l Cost Payback Period w/o Rebate	Incremt'l Cost Payback Period with Rebate	Average Annual Customer Dth Savings	Rebated Cost per Annual Cust Dth Saved	Rebated Lifetime Cost per Cust Dth Saved
HOME PERFORMANCE WITH ENERGY STAR													
Attic insulation and Bypass Sealing - Combo Customer	Add R32 to make R44 total in attic	81	R12 insulation in existing attic	92	20	$225	$1,410	16%	16.05	13.49	11	$21.01	$1.05
Air Sealing to Reduce Infiltration by 30% - Combo Customer	3.5 ACH50	88	5.0 ACH50	92	7	$40	$350	11%	12.42	11.00	4	$10.26	$1.47
Wall Insulation - Combo Customer	Filled cavity - add R 11	66	No insulation in cavity	92	20	$281	$1,690	17%	8.96	7.47	25	$11.06	$0.55
Water Heater – (0.62 EF)	0.62 EF Standard tank type water heater	20	for 40 gallon tank .594 EF	21	13	$50	$80	62%	12.50	4.72	1	$56.24	$4.33
Water Heater – (0.64 EF)	0.64 EF Standard tank type water heater	20	for 40 gallon tank .594 EF	21	13	$70	$136	52%	12.34	5.98	2	$45.94	$3.53
Water Heater – (0.67 EF)	0.67 EF Standard tank type water heater	19	for 40 gallon tank .594 EF	21	13	$170	$551	31%	31.69	21.91	2	$70.69	$5.44
Water Heater – (0.70 EF)	0.70 EF Hot Water Heater	18	for 40 gallon tank .594 EF	21	13	$0	$548	0%	23.60	23.60	3	$0.00	$0.00
Water Heater – Tankless (0.82 EF)	0.82 EF Hot Water Heater	15	for 40 gallon tank .594 EF	21	20	$0	$1,921	0%	45.49	45.49	6	$0.00	$0.00
Water Heater – Tankless (0.90 EF)	0.90 EF Hot Water Heater	14	for 40 gallon tank .594 EF	21	20	$125	$1,418	9%	27.22	24.82	7	$17.34	$0.87
Water Heater Setback	Reduced water heater setpoint to 120 F if greater than 130 F	18	water heater with operating set point of 130 or greater	21	5	$15	$0	0%	0.00	-0.75	3	$5.45	$1.09
Furnace - 92% - 95.9%	Furnace with 92% AFUE or up to 95.9% AFUE	78	78% AFUE furnace	92	18	$70	$954	7%	9.45	8.76	14	$5.01	$0.28
Furnace - 96% and higher w/out EC Motor	96 AFUE Furnace	75	78% AFUE furnace	92	18	$325	$706	46%	5.68	3.07	17	$18.89	$1.05
Boiler 84% Efficiency	84% Efficient Boiler	102	80% Efficient Boiler	107	20	$125	$500	25%	13.58	10.18	5	$24.53	$1.23
Programmable Thermostat	New T-state w/ Auto setback by 1 F for heating	89	Existing non-programmable thermostat	92	5	$3	$50	6%	1.56	1.46	3	$1.08	$0.22
Programmable Thermostat Setback	Auto setback existing thermostat by 1 F for heating	89	no thermostat setback	92	5	$3	$0	0%	0.00	-0.10	3	$1.08	$0.22
Clothes Washer	Energy Star rated Clothes washer	2	Conventional Clothes Washer	3	11	$42	$200	21%	3.48	2.76	1	$47.36	$4.31
Dishwasher	Energy Star rated Dishwasher	1	Conventional Dishwasher	2	11	$10	$30	34%	1.47	0.97	1	$8.11	$0.74
INSULATION REBATE													
Attic insulation and Bypass Sealing - Gas Only Customer	Add R32 to make R44 total in attic	81	R12 insulation in existing attic	92	20	$282	$1,410	20%	16.05	12.84	11	$26.36	$1.32
Air Sealing to Reduce Infiltration by 30% - Gas Only Customer	3.5 ACH50	88	5.0 ACH50	92	7	$70	$350	20%	12.42	9.94	4	$17.95	$2.56
Wall Insulation - Gas Only Customer	Filled cavity - add R 11	66	No insulation in cavity	92	20	$300	$1,690	18%	8.96	7.37	25	$11.81	$0.59
Attic insulation and Bypass Sealing - Gas and Electric Customer	Add R32 to make R44 total in attic	81	R12 insulation in existing attic	92	20	$226	$1,410	16%	16.05	13.48	11	$21.08	$1.05
Air Sealing to Reduce Infiltration by 30% - Gas and Electric Customer	3.5 ACH50	88	5.0 ACH50	92	7	$70	$350	20%	12.42	9.94	4	$17.95	$2.56
Wall Insulation - Gas and Electric Customer	Filled cavity - add R 11	66	No insulation in cavity	92	20	$281	$1,690	17%	8.96	7.47	25	$11.06	$0.55
SCHOOL EDUCATION KITS													
Provide Efficient Showerhead	Low Flow Shower head - 1.5 GPM	3	Federal Maximum Standard flow rate 2.5 GPM	6	6	$6	$6	100%	0.14	0.00	2	$2.69	$0.45
Provide Efficient Faucet Aerator	1.5 GPM flow rate aerator	1	Federal Maximum Standard flow rate 2.2 GPM	2	5	$2	$2	100%	0.15	0.00	1	$2.56	$0.51

Gas Forecast Planning Assumptions													
Natural Gas Measure Description	High Efficiency Product Description / Rating	High Efficiency Product Consumption (Dth/yr)	Baseline Product Description / Rating	Baseline Product Consumption (Dth/yr)	Life of Product (years)	Rebate Amount	Incremental Cost of Efficient Product	Rebate as a % of Incremental Cost	Incremt'l Cost Payback Period w/o Rebate	Incremt'l Cost Payback Period with Rebate	Average Annual Customer Dth Savings	Rebated Cost per Annual Cust Dth Saved	Rebated Lifetime Cost per Cust Dth Saved
WATER HEATER REBATE													
0.62 EF Storage Water Heater	0.62 EF Storage Water Heater	20	for 40 gallon tank .594 EF	21	13	$40	$80	50%	12.50	6.27	1	$44.99	$3.46
0.64 EF Storage Water Heater	0.64 EF Storage Water Heater	20	for 40 gallon tank .594 EF	21	13	$60	$136	44%	12.34	6.89	2	$39.38	$3.03
0.67 EF Storage Water Heater	0.67 EF Storage Water Heater	19	for 40 gallon tank .594 EF	21	13	$150	$551	27%	31.69	23.06	2	$62.38	$4.80
0.70 EF Storage Water Heater	0.70 EF Storage Water Heater	18	for 40 gallon tank .594 EF	21	13	$0	$548	0%	23.60	23.60	3	$0.00	$0.00
0.82 EF Tankless Water Heater	0.82 EF Tankless Water Heater	15	for 40 gallon tank .594 EF	21	20	$0	$1,317	0%	31.20	31.20	6	$0.00	$0.00
0.90 EF Tankless Water Heater	0.90 EF Tankless Water Heater	14	for 40 gallon tank .594 EF	21	20	$100	$814	12%	15.63	13.71	7	$13.87	$0.69

LOW-INCOME SEGMENT

HOME ENERGY SAVINGS PROGRAM

Ceiling R-13 to R-44	Addition of attic insulation to R-44	72	R-13 Avg baseline level of insulation based on market study	92	20	$1,229	$1,229	100%	7.77	0.00	20	$62.47	$3.12
Wall R-3 to R-11	Assuming 2x4 construction, up to R-11 insulation can fit in wall cavity	53	No insulation in wall cavity	92	20	$1,626	$1,626	100%	5.69	0.00	38	$42.23	$2.11
0.67 EF Hot Water Heater	0.67 EF Hot Water Heater Energy Star Standard	19	for 40 gallon tank .59 EF is IECC code	21	15	$1,617	$1,617	100%	101.71	0.00	2	$734.99	$49.00
Replace Furnace AFUE 78 to 92	92 AFUE ENERGY STAR	78	78 AFUE is the baseline efficiency for gas furnaces	92	18	$2,550	$2,550	100%	25.20	0.00	14	$182.11	$10.12
New 84% boiler	84 AFUE High Efficiency Unit	82	80 AFUE is federal baseline efficiency for boilers	86	18	$6,000	$6,000	100%	202.51	0.00	4	$1,463.41	$81.30
LOW-INCOME HOME ENERGY SQUAD													
NEC Tier One Energy Squad Service 2013	weighted average Energy Efficient Gas measures by participant	33	weighted average Baseline Gas measures by participant	35	8	$0	$0	0%	0.00	0.00	2	$0.00	$0.00
NEC Tier One Energy Squad Service 2014	weighted average Energy Efficient Gas measures by participant	33	weighted average Baseline Gas measures by participant	35	8	$0	$0	0%	0.00	0.00	2	$0.00	$0.00
NEC Tier One Energy Squad Service 2015	weighted average Energy Efficient Gas measures by participant	33	weighted average Baseline Gas measures by participant	35	8	$0	$0	0%	0.00	0.00	2	$0.00	$0.00

Product: Business New Construction

Description:

This is a custom program including electric and gas measures. Third-party consultants work with customer design teams to optimize the energy performance of new buildings or retrofits of existing buildings. Depending on building size, project schedule, and scope, the project will fit into one of the following tracks: Energy Design Assistance Enhanced, Energy Design Assistance Standard, Energy Design Assitance Quick, or Energy Efficient Buildings.

Algorithms:

Customer kW	= Baseline_kW - Proposed_kW
Peak kW Coincident at the Customer	= Customer_kW · CF
Customer kWh	= Baseline_kWh - Proposed_kWh
Customer Dth	= Baseline_Dth - Proposed_Dth

Variables:

Baseline_kW	= Energy simulation output corresponding with the peak baseline building electrical load coincident with summer cooling design conditions.
Proposed_kW	= Energy simulation output corresponding with the peak proposed building electrical load coincident with summer cooling design conditions.
CF	= Probability that the Customer kW value will be realized during NSP-MN peak generation periods. Based on historical studies, this value is 92.8%.
Baseline_kWh	= Energy simulation output corresponding with the annual baseline building electrical consumption.
Proposed_kWh	= Energy simulation output corresponding with the annual proposed building electrical consumption.
Baseline_Dth	= Energy simulation output corresponding with the annual baseline building natural gas consumption.
Proposed_Dth	= Energy simulation output corresponding with the annual proposed building natural gas consumption.

Inputs:

- Building Characteristics for the proposed building are defined by building design team, which includes mechanical engineers, electrical engineers, and architects.
- Characteristics for the baseline building are defined by the energy consultant, utilizing methodology described by ASHRAE 90.1 Standard Appendix G and supplemented by Xcel Energy where required to accomodate regulatory requirements.

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Product: Commercial Efficiency

Description:

The Commercial Efficiency Business Program targets energy use at large commercial facilities Customers who implement identified upgrades may receive rebates for large energy efficiency improvements that are not completed through Custom Efficiency or the prescriptive programs. The are also incentives for energy savings from behavioral measures.

Algorithms:

Electrical energy savings, electrical demand savings and gas savings will be calculated based on the methodologies presented in each of the end use programs. Please consult the the Deemed Savings Technical Assumptions of the other end uses for more details.

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Product: Computer Efficiency

Description:
Manufacturer incentives will be offered for desktop computers that are either Energy Star or 80 Plus labeled. Incentives are administered via Ecos Plug Load Solutions PLS. Prescriptive rebates offered for end-use customers for installing VDI (Virtual Desktop Infrastructure) devices, also know as "Thin Client" systems instead of new PCs.

Algorithms:

Upstream Manufacturer Incentives:	
Desktop Computer Electrical Demand Savings (Customer kW Savings)	= (Baseline Computer kW - Efficient PS Computer kW) * Cooling kW factor Values listed in Table 3.
Desktop Computer Electrical Energy Savings (Customer kWh Savings)	= (Baseline Computer kWh - Efficient PS Computer kWh) * Cooling kWh factor Values listed in Table 3.
Desktop PC Virtualization:	
VDI Electrical Demand Savings (Customer kW)	= Baseline Computer kW - Virtualized kW * Cooling kW factor
VDI Electrical Energy Savings (Customer kWh)	= Baseline Computer kWh - Virtualized kWh * Cooling kWh factor

Variables:

Cooling kW factor	Average annual demand of cooling system necessary to cool the heat gain from the equipment = 33% of baseline and VDI kW = 1.33 (Reference 13)
Cooling kWh factor	= Average annual energy of cooling system necessary to cool the heat gain from the equipment = 11% of baseline and VDI kWh = 1.11 (Reference 13)
CF	Coincidence Factor = 100%
PC Frequency	PC Frequency of Operating Patterns = assumed % of the population that enables power management software in one of four available configurations (power management enabled, computer turned off; power management not enabled, computer turned off; power management enabled, computer left on; power management not enabled, computer left on (Ref 4); this is used to estimate average kWh usage over the entire population. Values listed in Table 2.
UEC	Unit Energy Consumption = sum of the products of the wattages and the annual hours in the four states of operation (active, idle, sleep, off) = (Active Wattage *Active Annual Hours of Operation)+(Idle Wattage * Idle Annual Hours of Operation)+(Sleep Wattage * Sleep Annual Hours of Operation)+(Off Wattage*Off Annual Hours of Operation) = Wattages are shown in Table 1 and Hours in each state are shown in Table 2. UEC for each computer model is shown in Table 3

Upstream Manufacturer Incentives (Desktops):

Baseline Computer kW	= Baseline Computer kWh/8760 = = 72.3 watts
Baseline Computer kWh	= UEC * PC Frequency = 633.7
Measure Life	= 5 years for desktop computers (Ref 1)
Hrs	Hours of Operation = Determined by dividing the average kWh by the average kW (Assumption 2)
Incremental Costs	Cost of high efficiency model over baseline model as listed in Table 1.
NTG	Net-to-Gross = 100%
O&M savings	Operation and Maintenance savings are assumed to be zero for desktop computers. The additional costs associated with the additional heating costs due to the reduced heat generation from the equipment is treated as an energy O & M penalty (reference 13)

Desktop PC Virtualization:

Baseline Computer kW	= Baseline Computer kWh/8760 = = 66.9 watts
Baseline Computer kWh	= UEC * PC Frequency for ENERGY STAR 3.0 Computers = 586
VDI kW	= kW of VDI product (provided by the customer)
Incremental Server kW	Server load per installed VDI device = Total average server Watts (303W) / 68 desktops per server = 4.46 Watts (Ref 9)
Virtualized kW	VDI kW + Incremental Server kW
Virtualized kWh	Virtualized kW x hours
Hours	Hours of Operation of efficient equipment = VDI equipment assumed to be on 8,760 hours per year
Incremental Costs	Cost of higher efficiency option over baseline option = $117 (Ref 6)
O&M savings	Operation and Maintenance savings are assumed to be 1/2 hour per year per desktop, O/S licenses assumed to be $12/year per desktop. The additional costs associated with the additional heating costs due to the reduced heat generation from the equipment is also treated as O & M penalty (reference 13)

Inputs:
# of VDI (thin client) devices installed instead of a desktop PC computer
kW of VDI device

Tables:
Table 1: Desktop Computer Wattages

Desktop Computer	Avg Active Watts (W)	Idle (W)	Sleep (W)	Off /Standby (W)	Incremental Cost (reference 5)
Baseline: ES 3.0	115	84	6	3	
80 Plus Bronze Qualified	89	46	2	0.9	$9.00
80 Plus Silver Qualified	86	46	2	0.9	$18.00
80 Plus Gold Qualified	84	46	2	0.9	$27.00
80 Plus Platinum Qualified	82	46	2	0.9	$36.00

Table 2: Annual Hours in each Operational State and Frequency of PC Operation Patterns (PC Frequency)

Computer State	Active (Hrs/year)	Idle (Hrs/year)	Sleep (Hrs/year)	Standby / Off (Hrs/year)	PC Frequency
Power managed, turned off	586	5,276	431	2,467	8%
Not power managed, turned off	586	5,707	0	2,467	43%
Power managed, left on	586	5,276	2,898	0	8%
Not power managed, left on	586	8,174	0	0	43%
Weighted average	586	6691	250	1234	100%

Table 3: Energy and Demand Savings (Reference 1-5)

Desktop Computer	Customer kW Savings	Customer kWh Savings
Baseline: ES 3.0		
80 Plus Bronze Qualified	0.0371	271
80 Plus Silver Qualified	0.0394	288
80 Plus Gold Qualified	0.0406	296
80 Plus Platinum Qualified	0.0417	305

References::

1. Koomey, J., M. Cramer, M.A. Piette and J. Eto. 1995. "Efficiency Improvements in U.S. Office Equipment: Expected Policy Impacts and Uncertainties." Lawrence Berkeley Laboratory. LBL-37383. December. Table 3.

2. Energy Star Calculator Tool; LBNL 2007 or Energy Star Specification

3. Hours of operation for desktop computers from office desktops/laptops and office monitors from Piette, M. A., M. Cramer, J. Eto and J. Koomey. 1995. "Office Technology Energy Use and Savings Potential in New York." Prepared for the NY State Energy R&D Authority and Con-Ed by LBNL. Lawrence Berkeley Laboratory. LBL-36752. January 1995. p. 4-2

4. Esource

5. Ecos Consulting information from manufacturers

6. Vendor data; see "Ref Cost-PC Virt" worksheet

7. Baseline desktop PC cost assumed at $600; info from the internet indicates a PC with keyboard averages between $300-$1,000 or $650; assumed the keyboard is $50 of that (Ref 6)

8. Costhelper.com

9. Server Wattages from Custom Efficiency program participant; average wattage of 42 models

10. 10-year life for thin-client and zero-client based on conversation with MN vendor Nowmicro

11. Assumed server utilization rate of 80% of nameplate capacity based on custom efficiency projects in MN and CO 2008-2011

12. Minnesota market penetration initially assumed as 50% of current market penetration in Minnesota because Minnesota is a more mature market; Minnesota data from Ecos Consulting

13. Minnesota Commercial Lighting Program (cooling benefit is 33% of equipment kW savings, 11% of equipment kWh savings and heating penalty is 0.00088738 MMBtu/kWh)

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Product: Cooling Efficiency

Prescriptive rebates will be offered for new cooling equipment. Rebates for most measures are dependent on size and on meeting a minimum efficiency. Additional rebates are available for better efficiencies than the minimum qualifying efficiencies.
Custom rebates are available for cooling-related improvements that are not covered by the aforementioned prescriptive rebates. These would include such applications as heat recovery.

Algorithms:

Energy Efficiency Ratio (EER)	= Seasonal Energy Efficiency Ratio x 0.85 (.90 is used for WSHP see 'Assumptions' below for details)
kW/ton	= 12 / Energy Efficiency Ratio (EER)
Energy Efficiency Ratio (EER)	= 3.413 x Coefficent of Performance
For Direct Expansion (DX) Units, Water Source Heat Pumps	
Cooling Electrical Energy Savings (Customer kWh)	= Size x EFLH x (12/SEER_Baseline - 12/SEER_Eff)
Cooling Electrical Demand Savings (Customer kW)	= Size x (12/EER_Baseline - 12/EER_Eff)
For Chillers	
Cooling Electrical Energy Savings (Customer kWh)	= Size x EFLH x (IPLV_Baseline - IPLV_Eff)
Cooling Electrical Demand Savings (Customer kW)	= Size x (FLV_Baseline - FLV_Eff)
For Centrifugal Chillers	
FLV_Baseline	=FLV_ARI/(6.1507-0.30244*T_var+0.0062692*T_var^2-0.000045595*T_var^3)
IPLV_Baseline	=IPLV_ARI/(6.1507-0.30244*T_var+0.0062692*T_var^2-
Temperature Variable, T_var	=Chiller Lift + CWTD
For DX Economizers with Demand Ventilation	
Cooling Electrical Energy Savings (Customer kWh)	= Size x FLV_DX x (Base_OA_Load - Reduced_OA_Load) x Cooling_RTU_Op_Hours
Cooling Electrical Demand Savings (Customer kW)	= Size x FLV_DX x (Base_OA_Load - Reduced_OA_Load)

Variables:

Size	= The equipment capacity in tons, provided by customer
EFLH	= Equivalent Full Load Hours. The equivalent number of hours that the equipment would be running at full load over the course of the year. Values are shown in Table 2 for different building types and locations, to be provided by the customer.
SEER_Baseline	= Seasonal Energy Efficiency Ratio in Btu/Wh of standard equipment, based upon the minimum acceptable efficiency defined by ASHRAE 90.1-2004. Value determined from Table 1 based on customer provided equipment type and size.
SEER_Eff	= Seasonal Energy Efficiency Ratio in Btu/Wh of High Efficiency equipment that the customer will install, provided by customer.
EER_Baseline	= EER of standard equipment, based upon the minimum acceptable efficiency defined by the ASHRAE 90.1-2004, for a specific type of equipment and size. Table 1.
EER_Eff	= EER of High Efficiency that the customer will install, provided by customer.

FLV_Baseline	= Full load cooling efficiency in kW/ton of standard equipment, based upon the minimum acceptable efficiency defined by ASHRAE 90.1-2004 for selected chiller type and size as shown in Table 1. NOTE: For non-centrifugal chillers, FLV_Baseline is the value in ASHRAE 90.1-2004. For centrifugal chillers, condenser water temperature, chilled water temperature, and condenser flow rate are used in the formula given in Algorithms in order to transform the efficiency from values at standard ARI conditions given in Table 1 to customer operating conditions.
FLV_ARI (same as IPLV_ARI)	=ASHRAE Standard 90.1-2004 minimum acceptable FLV (or IPLV) for centrifugal chillers at the ARI Standard 550/590 rated condition of 85 degree F condensing water temperature, 44 degree F chilled water temperature, and 3 gpm.
CWTD	=Condenser Water Temperature Difference, degrees F. equal to 28.08 divided by condenser water flow in gallons per minute, supplied by customer. Equation from ASHRAE 90.1-2004.
Chiller Lift	= The entering condensing water temperature minus the leaving chilled water temperature, supplied by the customer.
FLV_Eff	= Full Load Value cooling efficiency in kW/ton, representing the efficiency at design conditions, provided by customer at customer operating conditions.
IPLV_Baseline	= Integrated Part Load Value (representing the average efficiency over a range of loaded states) based upon the minimum acceptable efficiency defined by ASHRAE 90.1-2004 for selected chiller type and size as shown in Table 1. NOTE: For non-centrifugal chillers, IPLV_Baseline is the value in ASHRAE 90.1-2004. For centrifugal chillers, condenser water temperature, chilled water temperature, and condenser flow rate are used in the formula given in Algorithms in order to transform the efficiency from values at standard ARI conditions given in Table 1 to customer operating conditions.
IPLV_Eff	= Integrated Part Load Value (representing the average efficiency over a range of loaded states) cooling efficiency in kW/ton of High Efficiency equipment, provided by customer at customer operating conditions.
Base_OA_Load	= 10% - ratio of outside air ventilation load of the RTU to the peak cooling load
Reduced_OA_Load	= 5% - ratio of outside air ventilation load of the RTU to the peak cooling load
Cooling_RTU_Op_Hours	= 3700 hours - The total operating hours that the RTU runs in mechanical cooling mode, based on all hours in which outside air dry bulb temperature is greater than 55F.
FLV_DX	= 1.2 kW/ton - Efficiency of DX unit when operating. For use in the DX Economizers with CO_2-based Demand Ventilation
CF	= Coincidence Factor, the probability that peak demand of the measure will coincide with peak utility system demand. 0.90 will be used for prescriptive rebates (Reference 1).
Measure Life	= Measure life is taken at 20 years for all cooling equipment. (Reference 2)
Baseline Costs of Equipment	The cost of equipment that would exactly meet code requirements. Not applicable for RTU Economizers.
Incremental Costs of Equipment	The incremental cost of equipment above the code requirements, typically expressed on a dollar per ton basis, as seen in Table 1.
Incremental operation and maintenance cost	= 0 - conservative approach, taking no credit for improved mean time between failure.

Needed from Customer/Vendor/Administrator for Calculations:
Cooling equipment type
Cooling equipment size (tons)

Cooling equipment efficiency (SEER, EER, or FLV, IPLV in kW/ton - dependent on the technology)
Climate zone
Building type
Equipment quantity

For Centrifigul Chillers (in addition to above):
Condenser water entering temperature
Chilled water leaving temperature
Condenser water flow in gpm

The three values listed above represent customer operating conditions for efficiency adjustment between ARI and customer operating conditions.

Assumptions:

- Each piece of cooling equipment is going in instead of a machine of the same size that only met minimum ASHRAE Standard 90.1-2004 requirements.
- Prescriptive rebates are not given for backup cooling equipment.

- Some equipment is rated in only EER or SEER. To convert a Seasonal Energy Efficiency Ratio (SEER) to an Energy Efficiency Ratio (EER), multiply SEER by 0.85. The conversion factor of 0.85 a generally accepted factor for converting from SEER to EER {The exception is for Water Source Heat Pumps, which uses a value of 0.90 A higher value is used since there will be less temperature variation in the condenser water loop than ambient conditions}. Once EER is obtained, convert EER to kW/ton using the following equation: kW/ton = 12/EER. To convert kW/ton to kW, multiply by tons.
- Chillers are rated at specified ARI conditions, but these may not match what the customer's actual operating conditions would be. A corresponding baseline efficiency will be determined based on a formula dependent on the condenser water flow, the condenser water temperature difference and chilled water supply temperature. Formula given by ASHRAE Standard 90.1-2004 Tables 6.8.1H through 6.8.1J in order to convert FLV_ARI to FLV_Baseline and IPV_ARI to IPLV_Baseline.

References

1. NYSERDA (New York State Energy Research and Development Authority); NY Energy $mart Programs Deemed Savings Database - Source for coincidence factor
2. ASHRAE, 2007, Applications Handbook, Ch. 36, table 4, Comparison of Service Life Estimates

3. Arkansas Deemed Savings Quick Start Program Draft Report Commercial Measures Final Report - source of equivalent full load hour methodology for segments

4. CBECS (Commercial Buildings Energy Consumption Survey), 2003 - Total Floor space of Cooled Buildings by Principal Building Activity - source of market segment distributions

Product: Cooling Efficiency: Plate & Frame Heat Exchangers & VFD

Description

Prescriptive rebates will be offered for installation of plate & frame heat exchangers on existing chiller systems to allow cooling towers to provide "free cooling" in lieu of chiller operation. Eligible systems will NOT have air-side economizers install

Algorithms:

Slope	= $(Load_{onset} - 0) / (T_{onset} - T_{balance})$
Intercept	= -Slope x $T_{balance}$
Cooling Load (OADB) [tons]	= Slope x (OADB) + Intercept Office customers will have a 1.25 factor applied to the load given to account for oversizing in the deemed EFLH from the DER Process and Data Centers will have a .8 factor applied to the given load
$Load_{design}$ [tons]	= Slope x (T_{design}) + Intercept
Top [ton-hours]	=S [Cooling Load (OADB) x hours(OADB)] for OADB: $T_{balance}$ -> T_{onset}
Bottom [ton-hours]	=S [Cooling Load (OADB) x hours(OADB)] for OADB: $T_{balance}$ -> T_{design}
EFLH [hours]	= $EFLH_{segment}$ x Top / Bottom (Process customers will have a 2/3 factor applied to account for 2shifts of operati
Cooling Electrical Energy Savings (Customer kWh)	= EFLH x $Load_{design}$ x ($IPLV_{Chiller}$ - Added Tower kW/ton)
Cooling Electrical Demand Savings (Customer kW)	= Cooling Electrical Energy Savings/8760
Average Energy Cost	= [kWh savings * ($/Annual kWh) + Max kW Savings * Equivalent Month of Demand Savings * ($/ Annual kW)] / kWh Savings
For VFDs on Centrifugal Chillers	
Cooling Electrical Energy Savings (Customer kWh)	= Size x EFLH x (IPLV_Baseline - IPLV_VFD_Eff)
Cooling Electrical Demand Savings (Customer kW)	= Size x (FLV_Baseline - FLV_VFD_Eff)

Variables:

Measure Life	Measure life is taken at 20 years for all cooling equipment. (Reference 1)
Incremental operation and maintenance cost	= $0
Baseline Cost of Equipment	The cost of equipment that would exactly meet code requirements.
Incremental Cost of Equipment	The incremental cost of equipment above the code requirements. (Plate and Frame $737/Hx ton, VFD - $71.88/ton)
CF	Coincidence Factor, the probability that peak demand of the equipment will coincide with peak utility system demand. Because this technology is used when temperatures are at or below 65 F, the CF =0%.
T_{onset}	Mean Coincident Dry Bulb Temperature (as determined from binned TMY3 data for the location, shown in Table 3) corresponding to the Onset Wet Bulb Temperature provided by the customer
$T_{balance}$	Building Balance Point Temperature, the outside air dry bulb temperature at which there is no cooling load customer input for all segments except Industrial and Data Center (20°F default); Not used for Industrial and Data Centers since Load (OADB) = Load
T_{design}	Design Temperature for cooling, taken to be 92°F
$EFLH_{segment}$	= Equivalent Full Load Hours. The equivalent number of hours that the equipment would be running at full load over the course of the year. Values are shown in Table 2 for different building types and locations, to be provided by the customer.
OADB	Outside Air Dry Bulb Temperature (°F)
hours(OADB)	Number of hours in for that OADB bin from TMY3 data for the location
Added Tower kW/ton	Average additional power use of the Cooling Tower due to the installation of the heat exchanger (tower fans will need to run more to bring down the water temperature to meet the cooling load directly as opposed to providing condenser water for the chiller
FLV_Baseline	= Full Load Value cooling efficiency in kW/ton, representing the efficiency of existing chiller with a VFD at 95% load, provided by customer.
FLV_VFD_Eff	= Full Load Value cooling efficiency in kW/ton, representing the efficiency of existing chiller without a VFD at 95% load, provided by customer.
IPLV_Baseline	= Integrated Part Load Value (representing the average efficiency over a range of loaded states) cooling efficiency in kW/ton of existing chiller without a VFD, provided by customer.
IPLV_VFD_EFF	= Integrated Part Load Value (representing the average efficiency over a range of loaded states) cooling efficiency in kW/ton of existing chiller with VFD, provided by customer.

Provided by Customer: for plate and frame

Chiller IPLV [kW/ton]

Onset Wet-bulb Temperature for the Heat Exchanger [°F]

Heat Exchanger tonnage [tons]

Building balance point temperature [°F] $T_{balance}$

Cooling load at onset wet-bulb temp [tons] $Load_{onset}$

Market segment

Provided by Customer: for VFD

FLV_Baseline

FLV_VFD_Eff

IPLV_Baseline

IPLV_VFD_EFF

Chiller_Tons

Assumptions:

No airside economizers are in operation

Projects will not have peak kW savings as wet bulb temp will be too high in most cases and chiller will need to be on

Heat exchanger is installed in parallel with the chiller and additional cooling towers are not required

References:

1. ASHRAE, 2007, Applications Handbook, Ch. 36, table 4, Comparison of Service Life Estimates
2. Data from historic Xcel Energy Custom Efficiency cooling tower projects

Product: Cooling Efficiency; EC Motors for Evaporators, Anti-Sweat Heater Controls, No Heat Doors

Description:

Prescriptive rebates will be offered for installation of EC Motors in for Refrigeration Evaporators, Anti-Sweat Heater Controls and/or replacement of standard refrigeration case doors with No Heat Case Doors.

Algorithms:

Anti-Sweat Heater Controls (Customer kW)	ASHC_kWh/ASHC_Hours
Anti-Sweat Heater Controls (Customer kWh)	= ASHC_kWh = ASHC_Baseline_kW x Refrigeration_Factor x ASHC_Hours x %_Off
Electronically Commutated Motor Electrical Demand Savings (Customer kW)	= (ECM_Baseline_Fan_ Watts - ECM_Efficient_Fan_ Watts) x Refrigeration_Factor
Electronically Commutated Motor Electrical Demand Savings (Customer kWh)	= (ECM_Baseline_Fan_ Watts - ECM_Efficient_Fan_ Watts) x Refrigeration_Factor x ECM_Hours
No Heat Case Doors (Customer kW, NHD_kW)	= (NHD_Baseline_kW - NHD_Efficient_kW) x Refrigeration_Factor
No Heat Case Doors (Customer kWh)	= NHD_kW x NHD_Hours
Electrical Energy Savings (Gross Generator kWh)	= Customer kWh / (1-ELF)
Electrical Demand Savings (Gross Generator kW)	= Customer kW x CF / (1-DLF)

Variables:

ECM_Baseline_Fan_ Watts	= Average input watts for shaded pole or permanent split capacitor motor, Table 1 (Reference 2)
ECM_Efficient_Fan_Watts	= Average input watts for efficient motor, Table 1 (Reference 2)
ECM_Hours	= Hours per year (freezer subtracts defrost time), Table 1 (Reference 2)
Refrigeration_Factor	= Multiplier to include interactive effects of refrigeration energy to remove heat from the motor. Reduction in motor energy results in a reduction in refrigeration energy. = 1 + R_H/COP (See assumptions for values)
COP	= Coefficient of Performance = refrigeration capacity(btu/hr)/energy input(btu/hr)
ASHC_Baseline_kW	= Average anti-sweat heater kW per door, Table 2 (Reference 10 and 11)
ASHC_Hours	= Hours per year for anti-sweat heaters, Table 2 (Reference 10)
%_Off	= Percent of time the anti-sweat heaters are turned off by the controller, Table 2 (Reference 9)
R_H	= Residual Heat fraction; estimated percentage of the heat produced by the heaters or motors that remains in the freezer or cooler case and must be removed by the refrigeration unit. = 100% for evaporator motors and 35% for anti-sweat heaters and no heat
NHD_Baseline_kW	= Average kW for a standard case door, Table 3 (Reference 10 and 11)
NHD_Efficient_kW	= Average kW for a no heat door, Table 3 (Reference 4)
NHD_Hours	= Hours per year for no heat doors, Table 3 (Reference 4)
NHD_kW	= No heat doors kW savings
Coincidence Factor	= Probability that peak demand savings will coincide with peak utility system demand. 0.99 for EC Motors (Based upon a monitored project) 0.00 for Anti-Sweat Heater Controls (Based on past custom projects with summer operation) 1.00 for No Heat Doors (Based upon complete elimination of constantly running heater)
Measure Life	= Length of time the measure will be operational: 15 years for EC Motors, (Reference 1); 12 years for ASHC (Reference 7); 10 years for No Heat Doors (Reference 6).
Incremental operation and maintenance costs or savings	= 0 value assumed for these products
Incremental cost	See Tables 1, 2 and 3

Provided by Customer:	Verified during M&V:
For Electronically Commutated Evaporator Fan Motors:	
Size of motor	Yes
Application of motor (Display Case or Walk-in)	Yes
Case or Walk-in temperature (Medium Temp or Low Temp)	Yes
For Walk-in's: Fan diameter (<= 15 inches or >15 inches	Yes
Cost	
For Anti-Sweat Heaters:	
Number of doors controlled	Yes
Number of controllers	Yes
Cost	
For No Heat Doors:	
Number of doors replaced	Yes
Door kW	Yes
Cost	Yes

Assumptions:
- Each motor is replaced with the same size on a 1 for 1 basis.
- Rebates do not apply to rewound or repaired motors.
- COP Deemed at 1.4 for Low Temperature Applications and 2.3 for Medium Temperature Applications (Reference 6)

Table 1: Baseline Watts, Efficient Watts, Operating Hours and Incremental Cost for EC Motors by Application (Reference 2 and 3)

Motor Application	ECM_Baseline_Fan_ Watts	ECM_Efficient_Fan_Watts	ECM_Hours	ECM Incremental Cost
EC Motors - Medium Temp Display Case	71	24	8,672	$ 88.00
EC Motors - Low Temp Display Case	81	27	8,672	$ 88.00
EC Motors - Medium Temp Walk-in, Evap fan <= 15" Diameter	136	44	8,585	$ 180.00
EC Motors - Low Temp Walk-in, Evap fan <= 15" Diameter	154	50	8,585	$ 180.00
EC Motors - Medium Temp Walk-in, Evap fan > 15" Diameter	138	69	8,585	$ 180.00
EC Motors - Low Temp Walk-in, Evap fan > 15" Diameter	156	78	8,585	$ 180.00

Table 2: Baseline kW, % Off, Operating Hours and Incremental Cost for Anti-Sweat Heater Controls by Application (Reference 10 and 11)

Anti-Sweat Heater Control Application	ASHC_Baseline_kW	%_Off	ASHC_Hours	ASH Incremental Cost
Medium Temp Display Case	0.105	90%	8,760	$ 180.00
Low Temp Display Case	0.191	70%	8,760	$ 180.00

Table 3: Baseline Watts, Efficient Watts, Operating Hours and Incremental Cost for No Heat Doors by Application (Reference 4, 10 and 11)

Door Application	NHD_Baseline_kW	NHD_Efficient_kW	NHD_Hours	NHD Incremental Cost
Medium Temp Display Case	0.105	0.052	8,760	$ 275.00
Low Temp Display Case	0.191	0.054	8,760	$ 800.00

- COP Deemed at 1.6 for Low Temperature Applications and 2.3 for Medium Temperature Applications, from our anti-sweat heater projects, EC Motor custom projects and are consistent with custom projects from various custom refrigeration applications.

References:

1. Comprehensive Process and Impact Evaluation of the (Xcel Energy) Colorado Motor and Drive Efficiency Program, FINAL, March 28, 2011, TetraTech
2. ECM baseline and efficient watts and hours are from monitored data from Custom Efficiency projects
3. ECM incremental costs are from Southern California Edison Work Paper WPSCNRRN0011: Evaporator Fan Motors
4. State of Wisconsin, Public Service Commission of Wisconsin, Focus on Energy Evaluation, Business Programs Deemed Savings Manual, March 22, 2010.
5. New York Standard Approach for Estimating Energy Savings from Energy Efficiency Measures in Commercial and Industrial Programs, Sept 1, 2009.
6. Energy Savings Potential and R&D Opportunities for Commercial Refrigeration, Final Report; Submitted to: U.S. Department of Energy, Energy Efficiency and Renewable Energy Building Technologies Program; Navigant Consulting, Inc.; September 23, 2009
7. DEER 2008
8. A Study of Energy Efficient Solutions for Anti-Sweat Heaters. Southern California Edison RTTC. December 1999
9. Custom Efficiency Projects
10. Pennsylvania PUC Technical Reference Manual, June 2011
11. SCE Workpaper WPSCNRRN0009, Revision 0, Anti-Sweat Heat (ASH) Controls, October 15, 2007

Product: Custom Efficiency

Description:

Customer may apply for rebate under the Custom Efficiency Program for electric or gas projects not listed under prescriptive rebate programs. Each Custom Efficiency project will be analyzed individually by Xcel Energy. Technical variables required for the analysis will be obtained from the customer or vendor. Analysis will be based on standard engineering methodologies.

Description:

Electrical energy savings and electrical demand savings will be calculated based on the project specific details. Each project will undergo an engineering review in accordance with standard engineering practices. The review will be in accordance with the calculation methodologies detailed in the prescriptive programs where applicable.

Natural Gas savings savings will be calculated based on the project specific details. Each project will undergo an engineering review in accordance with standard engineering practices. The review will be in accordance with the calculation methodologies detailed in the prescriptive programs where applicable.

Variables:
Product Life will be evaluated for each project, lives for end use technologies will be in accordance with prescriptive programs where applicable
Coincident factor will be evaluated for each project.
Operation and Maintenance Savings will be evaluated for each project.

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Product: Data Center Efficiency

Description:

This is a custom product. Customers may apply for rebates under the Data Center Efficiency product for projects not listed under prescriptive rebate products. Each Data Center efficiency project will be analyzed individually by Xcel Energy. Technical variables required for the analysis will be obtained from the customer or vendor. Analysis will be based on standard engineering methodologies.

Algorithms:

project will undergo an engineering review in accordance with standard engineering practices. Where prescriptive elements exist, the review will be in accordance with the calculation methodologies detailed in the prescriptive products.

Operation and Maintenance Savings will be calculated for each specific project based on project details.

Product: Efficiency Controls

Description

This is a custom product including both gas and electric measures. Customer may apply for rebate under the EC product. Each EMS project will be analyzed individually by Xcel Energy. Technical variables required for the analysis will be obtained from the customer or vendor. Analysis will be based on good engineering practices and standards. The Efficiency Controls Program looks at saving energy through the use of automatic scheduling and energy management routines available in current EMS Offered in the marketplace. Energy savings are divided by 8760 to get to a marketing kW value to which actual kW reduction is added if the project contains savings to outside air conditioning costs.

Algorithms:
Determined on a case by case basis

Assumptions:
Program lifetime is 15 years

References:

The Efficiency Controls Model was developed by Xcel Energy to reflect the average bulding performance in the State of Minnesota and uses a generic template and specific inputs for each building analyzed, essentially making all results custom.

Product: Fluid System Optimization

Description:
Custom and prescriptive rebates will be offered under the fluid system optimization program. Prescriptive rebates are available for Variable Frequency Drive Compressors that are up to and including 40 hp, no air loss drain valves, cycling refrigerated dryers, mist eliminator filters, and dewpoint demand control for dessicant regenerative dryers. Demand side measures for Compressed Air, Pump, Fan, and Vacuum systems will be identified through studies and implemented as custom projects. Each custom efficiency project will be analyzed individually by Xcel Energy. Engineering variables required for the analysis will be obtained from the customer or vendor. Analysis will be based on standard engineering methodologies.

Algorithms:

VFD Comp Electrical Demand Savings (Customer kW)	= HP x Service Factor x kW/HP x (%_Load_b / Motor_Effb - %_Load_h / Motor_Effh)
VFD Comp Electrical Energy Savings (Customer kWh)	= Customer kW x VFD_Hours
No Loss Air Drains Electrical Energy Savings (Customer kWh)	= Number_of_Drains x kW_per_Drain x Drain_Hours
No Loss Air Drains Electrical Demand Savings (Customer kW)	= Number_of_Drains x kW_per_Drain
Cycling Dryer Electrical Energy Savings (Customer kWh)	=Historical system information gathered through four years of compressed air study data was utilized to estimate savings. Based on dryer size, an average connected system flowrate was determined. Savings due to the reduction in average operating kW for the cycling dryer are proportional to the average flowrate divided by the dryer rated flowrate. See Table 1 for savings results.
Cycling Dryer Electrical Demand Savings (Customer kW)	=Historical system information gathered through four years of compressed air study data was utilized to estimate savings. Based on dryer size, an average connected system flowrate was determined. Savings due to the reduction in average operating kW for the cycling dryer are proportional to the average flowrate divided by the dryer rated flowrate. See Table 1 for savings results.
Mist Eliminator Filter Electrical Energy Savings (Customer kWh)	=Historical system information gathered through four years of compressed air study data was utilized to estimate savings. Based on filter size, an average connected system flowrate and compressor discharge pressure were determined. Savings are due to the reduction in compressor discharge pressure resulting from a smaller pressure drop across the dryer. See Table 2 for savings results.
Mist Eliminator Filter Electrical Demand Savings (Customer kW)	=Historical system information gathered through four years of compressed air study data was utilized to estimate savings. Based on filter size, an average connected system flowrate and compressor discharge pressure were determined. Savings are due to the reduction in compressor discharge pressure resulting from a smaller pressure drop across the dryer. See Table 2 for savings results.
Dewpoint Demand Control Electrical Energy Savings (Customer kWh)	=Historical system information gathered through four years of compressed air study data was utilized to estimate savings. Based on dryer size, an average connected system flowrate was determined. Savings are due to the reduction in required purge air to regenerate the dessicant bed. See Table 3 for savings results.
Dewpoint Demand Control Electrical Demand Savings (Customer kW)	=Historical system information gathered through four years of compressed air study data was utilized to estimate savings. Based on dryer size, an average connected system flowrate was determined. Savings are due to the reduction in required purge air to regenerate the dessicant bed. See Table 3 for savings results.
Peak kW Coincident at the Customer	=Customer kW x CF

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Variables:

HP	= Rated nominal horsepower of new compressor
Service_Factor	= Service factor of the motor, we will use 1.1 (Reference 1)
kW/HP	= Standard conversion from horsepower to kW. 1 HP = .746 kW
%_Load_b	= Average load factor for baseline compressor = 89.52% (Reference 2)
%_Load_h	= Average load factor for VFD compressor = 61.00% (Reference 2)
Motor_Eff_b	= Efficiency of existing compressor motor. See Table 4
Motor_Eff_h	= Efficiency of new compressor motor. See Table 4
VFD_Hours	= Operating hours of 40hp and smaller compressors. See Table 4
Drain_Hours	= Operating hours of compressed air systems. We will use 6996 hrs/yr (Reference 3)
Number_of_Drains	= Number of drains replaced
kW_per_Drain	= kW savings per drain, we will use 1.00 kW (Reference 3)
CF	= Coincidence Factor - Probability that the measure peak demand reduction will occur at the same time as the grid peak demand. See Table 5.
Incremental operation and maintenance cost	= See Tables 6-10
Incremental Cost of Efficient Equipment	= See Tables 6-10

Inputs:

VFD	Customer will Specify Size of VFD compressor (HP)
No Loss Air Drain	Customer will Specify Number of Drains
Cycling Dryer	Customer will Specify Dryer Rated Flowrate (cfm)
Mist Eliminator	Customer will Specify Filter Rated Flowrate (cfm)
Dewpoint Demand Control	Customer will Specify Dryer Rated Flowrate (cfm)

Assumptions:

VFD Compressors =< 40 hp	- Compressed air system in which VFD compressor is installed must have a capacity <= 40hp - Existing compressor was a non-reciprocating load/no load type with a minimum of 1 gallon of storage per cfm capacity, or modulation with or without unload
No Loss Air Drains	- Compressor must be defined as one of the following: - Load/No-Load Control will at least 5 gallons/cfm storage capacity) - Variable Speed Drive - Variable Capacity - Centrifugal - 2.81 SCFM loss from existing timed drain (Reference 3) - existing timed drain is open 15 seconds every 7.5 minutes (Reference 3) - connected system efficiency is 4.25 CFM/HP (Reference 2)
Cycling Dryer	- Rated Flowrate of Dryer is equal to the connected system peak flowrate - Non-cycling dryer load factor of 100% (Reference 3)
Mist Eliminator Filter	- Rated Flowrate of filter is equal to the connected system peak flowrate - Baseline filter pressure drop of 4 psig (Reference 3) - Efficient filter pressure drop of 0.75 psig (Reference 3)
Dewpoint Demand Control	- Rated Flowrate of Dryer is equal to the connected system peak flowrate - Uncontrolled dryer purge rate of 17% (Reference 3)

Tables:

1: Energy Savings For Cycling Dryers (Reference 4)

Dryer CFM	Customer kW	Customer kWh
75	0.19	1,316
100	0.38	2,599
125	0.45	3,042
150	0.57	3,851
200	0.51	3,502
250	0.85	5,853
300	1.01	6,990
400	1.39	9,689
500	1.47	10,400
600	1.72	12,427
700	2.21	16,298
800	2.17	16,342
1000	2.45	19,381
1200	2.22	18,562
1600	0.21	1,822
2000	0.46	3,989
2400	1.34	11,741

2: Energy Savings for Mist Eliminator Filters (Reference 4)

Filter CFM	Customer kW	Customer kWh
125	0.38	2,554
250	0.59	4,046
500	0.94	6,603
800	1.50	11,034
1100	2.06	15,927
1500	2.81	23,167
1900	3.56	31,073

3: Energy Savings for Dewpoint Demand Control (Reference 4)

Dryer CFM	Customer kW	Customer kWh
90	2.81	19,046
120	3.58	24,324
160	4.47	30,449
200	5.28	36,120
250	6.09	41,810
300	6.83	47,120
400	8.20	57,168
500	9.86	69,549
600	11.82	84,539
800	15.79	116,331
1000	19.71	150,000
1250	24.66	195,517
1500	29.57	243,985
2000	39.43	345,381

4: Motor Efficiencies and Operating Hours for VSD Compressors (Reference 5, 6)

Motor Description	Existing Motor Efficiency	New Motor Efficiency	Operating Hours
10 HP 1800 RPM ODP	86.3%	89.5%	2131
15 HP 1800 RPM ODP	87.2%	91.0%	2131
20 HP 1800 RPM ODP	88.1%	91.0%	2131
25 HP 1800 RPM ODP	88.9%	91.7%	3528
30 HP 1800 RPM ODP	89.4%	92.4%	3528
40 HP 1800 RPM ODP	89.7%	93.0%	3528

5: Coincidence Factor By Measure (Reference 3)

VFD Compressors =< 40 hp	88.80%
No Loss Air Drains	88.00%
Cycling Dryer	100%
Mist Eliminator Filter	100%
Dewpoint Demand Control	100%

6: Incremental Cost and Operations and Maintainence for VSD Compressors (Reference 7)

Description	Incremental Cost	Incremental O&M
10 HP VFD Compressor	$10,841	$0
15 HP VFD Compressor	$14,018	$0
20 HP VFD Compressor	$16,879	$0
25 HP VFD Compressor	$19,561	$0
30 HP VFD Compressor	$24,357	$0
40 HP VFD Compressor	$27,429	$0

7: Incremental Cost and Operations and Maintainence for No Loss Air Drains (Reference 7)

Description	Incremental Cost	Incremental O&M
No Loss Air Drain	$448	$0

8: Incremental Cost and Operations and Maintainence for Cycling Dryers (Reference 7)

Description	Incremental Cost	Incremental O&M
75	$426	$0
100	$616	$0
125	$659	$0
150	$779	$0
200	$1,361	$0
250	$1,189	$0
300	$1,288	$0
400	$1,407	$0
500	$1,460	$0
600	$752	$0
700	$1,399	$0
800	$1,592	$0
1000	$2,926	$0
1200	$3,791	$0
1600	$3,573	$0
2000	$6,154	$0
2400	$3,498	$0

References:

(1) Compressed Air & Gas Institute (CAGI)
(2) Best Practices for Compressed Air Systems. Compressed Air Challenge, Inc. 2003
(3) Historic compressed air product experience
(4) Analysis of Compressed Air Study participants 2008 - 2011
(5) National Electric Manufacturers Association. Motor efficiency standards from Pre-EPAct 2005 and after.
(6) United States Industrial Electric Motor Systems Market Opportunities Assessment. US DOE, Dec 2002, Appendix B2
(7) Various anonymous retailer and vendor quotes

Product: Commercial Food Service Equipment; Electric Measures

Description

This prescriptive program includes the electric measures for high efficiency commercial dishwashers, hot food holding cabinets and demand-controlled ventilation.

Algorithms:

Electrical Demand Savings (Customer kW)	= Baseline kW - Efficient kW
Electrical Energy Savings (Customer kWh)	= Customer kW x Hours
Peak Coincident kW at the Customer (PC_KW_CUST)	= Customer kW x CF
Baseline kWh	= Baseline kW x Hours
Efficient kWh	= Efficient kW x Hours
Demand Controlled Ventilation (DCV):	
Customer kW_{DCV}	=Total Exhaust Fan HP * ESF_{DCV}
Customer kWh_{DCV}	=Customer kW_{DCV}*Hours

Variables:

Baseline kW	standard or baseline equipment wattage
Efficient kW	energy efficiency equipment wattage
CF	Coincidence Factor (Table 1)
Hours	Annual Hours of Operation (Table 2)
ESF_{DCV}	Demand Controlled Ventilation Electric Savings Factor = 0.9054 kW per name plate HP.
O&M savings	see Table 1
Incremental costs	Difference in cost between the standard equipment and the more efficient equipment. Table 3
Measure Life	see Table 1

Inputs:
All equipment:
- model Name
- model Number
- quantity
- size

Dishwashers:
- Primary water heating fuel
- Secondary water heating (booster water heating) fuel

Demand Controlled Ventilation:
- total exhaust fan HP

Tables:

Table 1: Deemed Equipment Information

	Baseline Cost	Incremental Cost	Incremental Cost Per Name Plate HP	Measure Life (yrs)	Coincidence Factor (CF)	Non-Energy O&M Savings	Energy O&M Savings	O&M Savings - non energy Per Name Plate HP	O&M Savings - energy Per Name Plate HP
Dishwasher: Electric Water Heating without Booster Heater (Low Temperature) - Ref 3									
Under Counter	$4,800	$530	n/a	10	85.58%	$27.08	$0.00	n/a	n/a
Door Type	$6,500	$530	n/a	15	85.58%	$270.91	$0.00	n/a	n/a
Dishwasher: Electric Water Heating with Electric Booster Heater (High Temperature) - Ref 3									
Under Counter	$5,000	$1,000	n/a	10	85.58%	$106.14	$0.00	n/a	n/a
Door Type	$6,900	$500	n/a	15	85.58%	$198.13	$0.00	n/a	n/a
Dishwasher: Electric Water Heating with Gas Booster Heater (High Temperature) - Ref 3									
Under Counter	$5,000	$1,000	n/a	10	85.58%	$106.14	$125.45	n/a	n/a
Door Type	$6,900	$500	n/a	15	85.58%	$198.13	$234.17	n/a	n/a
Hot Food Holding Cabinet (Ref 3)	$2,069	$1,713	n/a	12	85.58%	$0	$0	n/a	n/a
Demand Controlled Ventilation - Combo Customer - Elec	$0	n/a	$ 828.97	20	49.46%	n/a	n/a	$0	$0
Demand Controlled Ventilation - Electric Only Customer	$0	n/a	$ 2,451.55	20	49.46%	n/a	n/a	$0	$482

Table 2: Pre and Post Retrofit Equipment

Post-retrofit technology	Efficient kW	Pre-retrofit technology	Baseline kW	Hours (Baseline & Efficient)
Energy Star Rated Dishwasher: Electric Water Heating without Booster Heater (Low Temperature) - Reference 3		**Standard Dishwasher: Electric Water Heating without Booster Heater (Low Temperature)**		
Under Counter	1.38	Under Counter	1.57	6570
Door Type	3.32	Door Type	5.17	6570
Energy Star Rated Dishwasher: Electric Water Heating with Electric Booster Heater (High Temperature) - Reference 3		**Standard Dishwasher: Electric Water Heating with Electric Booster Heater (High Temperature)**		
Under Counter	1.52	Under Counter	2.66	6570
Door Type	4.45	Door Type	6.61	6570
Energy Star Rated Dishwasher: Electric Water Heating with Gas Booster Heater (High Temperature) - Reference 3		**Standard Dishwasher: Electric Water Heating with Gas Booster Heater (High Temperature)**		
Under Counter	1.10	Under Counter	1.82	6570
Door Type	2.96	Door Type	4.34	6570
Hot Food Holding Cabinet (Ref 3)	0.53	**Hot Food Holding Cabinet**	1.50	5475
Demand Controlled Ventilation (Ref 6)	n/a	**Standard Ventilation (Ref 6)**	n/a	3,307

Table 3: Avoided Revenue Requirement % applied to Baseline Cost, O&M Cost, Incremental Cost and Rebate Level

Type of Measure	%
Commercial Dishwasher - Under Counter, Electric Only or Combo Custome	61%
Commercial Dishwasher - Door Type, Electric Only or Combo Customer	61%
Demand Contolled Ventilation - Electric Only or Combo Customer	35%

References:

1. Food Service Technology Center (FSTC) research on available models, 2009
2. Consortium for Energy Efficiency, 2010
3. ENERGY STAR
4. Custom Efficiency Projects, 2010-2011
5. Cadmus Group, 2009
6. Custom DCV Projects, 2010-2011

Product: Commercial Food Service Equipment; Gas Measures

Description

This prescriptive program includes natural gas measures for high efficiency commercial ovens, fryers, pasta cookers, dishwashers and demand-controlled ventilation.

Algorithms:

Customer $Dth_{cooking\_appliance}$ Savings	$BTU_{Cooking\_Appliance}$ Savings Factor X Btuh_In/1000000
Customer $Dth_{dishwasher}$ Savings	$Dth/yr_{baseline}$ - $Dth/yr_{efficient}$
Customer $Dth_{Demand\_Controlled\_Ventilation}$ Savings	Total Exhaust Fan HP * GSF_{DCV}

Variables:

GSF_{DCV}	Demand Controlled Ventilation Gas Savings Factor =42.3224 Dth per name plate HP.
$BTU_{Cooking\_Appliance}$ Savings Factor	Annual BTU savings per Btuh input of cooking appliance. See Table 1.
$HVAC_{Cooking\_Appliance}$ Savings Factor	Annual Watt-hour interactive HVAC savings per Btuh input of cooking appliance; This factor is ignored being insignificant. See Table 1.
O&M savings	See Tables 3a & 3b.
Incremental costs	Cost of the higher efficiency option over the baseline option for the end-use customer. See Table 3a & 3b
Measure Life	See Tables 3a & 3b.

Inputs:
All equipment:
Model Name
Model Number
quantity
size
Dishwashers:
Primary water heating fuel
Secondary water heating (booster water heating) fuel

Demand Controlled Ventilation (DCV):
total exhaust fan hp

Cooking Equipment
Input Capacity (Btuh_In)

Tables:
Table 1: Pre- and Post-retrofit Cooking Appliance, Savings Factors, and Incremental Costs (Ref 4)

Post-retrofit Cooking Technology	Pre-retrofit technology	$BTU_{Cooking\_Appliance}$ Savings Factor (Btu per Btuh_In per year)	$HVAC_{Cooking\_Appliance}$ Savings Factor (Watt-hours per Btuh_In per year)
Convection Oven	Deck Oven	1,892	168
Conveyor Oven	Pizza Deck oven	1,542	12
Combi-Oven	Steamer	1,183	32
Fryer	Standard Fryer	328	9
Pasta Cooker	Range	1,689	46
Upright Broiler	Standard Radiant Broiler	1,041	30
Charbroiler	Standard Charbroiler	1,078	29
Salamander Broiler	Standard Salamander Broiler	885	28
Rotisserie Oven	Open Flame Rotisserie Oven	554	15
Rotating Rack Oven	Deck Oven	948	26

Table 2: Pre- and Post-retrofit Dishwasher (Ref 8)

Post-retrofit Technology	Dth/yr Efficient	Pre-retrofit technology	Dth/yr Baseline
Energy Star Rated Dishwasher: Gas Water Heating without Booster Heater (Low Temperature)		**Standard Dishwasher: Gas Water Heating without Booster Heater (Low Temperature)**	
Under Counter	38.20	Under Counter	43.82
Door Type	98.99	Door Type	155.20
Energy Star Rated Dishwasher: Gas Water Heating with Electric Booster Heater (High Temperature)		**Standard Dishwasher: Gas Water Heating with Electric Booster Heater (High Temperature)**	
Under Counter	22.47	Under Counter	44.49
Door Type	79.70	Door Type	120.80
Energy Star Rated Dishwasher: Gas Water Heating with Gas Booster Heater (High Temperature) - Ref 3		**Standard Dishwasher: Gas Water Heating with Gas Booster Heater (High Temperature)**	
Under Counter	33.71	Under Counter	66.74
Door Type	119.55	Door Type	181.21

Table 3a: Measure Life, Cost, O&M Savings - Cooking Appliance (Ref 4)

	Measure Life (years)	Baseline Cost	Incremental Cost	Incremental Cost Per Name Plate Input Btuh ($/Btuh_In)	Non-Energy O&M Savings	Energy O&M Savings	Non-Energy O&M Savings ($/Name Plate Input Btuh)	Energy O&M Savings ($/Name Plate Input Btuh)
Convection Oven	11	$7,870	n/a	$0.0375	$0	$0	n/a	n/a
Conveyor Oven	11	$25,000	n/a	$0.0590	$0	$0	n/a	n/a
Combi-Oven	11	$20,828	n/a	$0.0356	$0	$0	n/a	n/a
Rotisserie Oven	11	$15,500	n/a	$0.0267	$0	$0	n/a	n/a
Rotating Rack Oven	11	$18,530	n/a	$0.0165	$0	$0	n/a	n/a
Fryer	11	$3,630	n/a	$0.0156	$0	$0	n/a	n/a
Pasta Cooker	11	$2,317	n/a	$0.0295	$0	$0	n/a	n/a
Upright Broiler	11	$12,587	n/a	$0.0424	$0	$0	n/a	n/a
Charbroiler	11	$1,800	n/a	$0.0310	$0	$0	n/a	n/a
Salamander Broiler	11	$5,002	n/a	$0.0373	$0	$0	n/a	n/a

Table 3b: Measure Life, Cost, O&M Savings - Dishwasher (Ref 8)

	Measure Life (years)	Baseline Cost	Incremental Cost	Incremental Cost Per Name Plate HP	Non-Energy O&M Savings	Energy O&M Savings	Non-Energy O&M Savings ($/Name Plate HP)	Energy O&M Savings ($/Name Plate HP)
Dishwasher: Gas Water Heating without Booster Heater (Low Temperature)								
Under Counter	10	$4,800	$530	n/a	$27.08	$0.00	n/a	n/a
Door Type	15	$6,500	$530	n/a	$270.91	$0.00	n/a	n/a
Dishwasher: Gas Water Heating with Electric Booster Heater (High Temperature)								
Under Counter	10	$5,000	$1,000	n/a	$106.14	$157.59	n/a	n/a
Door Type	15	$6,900	$500	n/a	$198.13	$305.63	n/a	n/a
Dishwasher: Gas Water Heating with Gas Booster Heater (High Temperature)								
Under Counter	10	$5,000	$1,000	n/a	$106.14	$0.00	n/a	n/a
Door Type	15	$6,900	$500	n/a	$198.13	$11.46	n/a	n/a

Table 3c: Measure Life, Cost, O&M Savings - Demand Controlled Ventilation (Ref 9)

	Measure Life (years)	Baseline Cost	Incremental Cost	Incremental Cost Per Name Plate HP	Non-Energy O&M Savings	Energy O&M Savings	Non-Energy O&M Savings ($/Name Plate HP)	Energy O&M Savings ($/Name Plate HP)
Demand Controlled Ventilation - Combo Customer - Gas Allocation	20	$0	n/a	$1,623	n/a	n/a	$ -	$ -
Demand Controlled Ventilation -Gas Only Customer	20	$0	n/a	$2,452	n/a	n/a	$ -	$ 173.66

Table 4: Avoided Revenue Requirement % applied to Baseline Cost, O&M Cost, Incremental Cost and Rebate Level

Commercial Dishwasher - Under Counter, Gas Only or Combo Customer	39%
Commercial Dishwasher - Door Type, Gas Only or Combo Customer	39%
Demand Controlled Ventilation - Gas Only or Combo Customer	65%

References:

1. Savings per installed BTU derived from the Arkansas Food Service Deemed Savings table
2. Measure life left per CenterPoint Energy assumptions; their values are consistent with the Arkansas Deemed Savings assumptions as reported in "PROPOSED
3. Incremental costs confirmed using "Commercial Cooking Appliance Technology Assessment, FSTC Report #5011.02.2, Food Service Technology Center, 2002" and product manufacturer Web sites
4. MN DER, 2012 Deemed Savings

5. "Commercial Cooking Appliance Technology Assessment, FSTC Report #5011.02.2, Food Service Technology Center, 2002" and product manufacturer Web sites
6. Consortium for Energy Efficiency
7. CenterPoint Energy, Food Service Program
8. ENERGY STAR
9. Custom Efficiency projects from 2010-2011

Product: Commercial Heating Efficiency Program

Description:

Prescriptive rebates will be offered for Hot Water Boilers (Condensing and non-condensing), Steam Boilers (Low and High Pressure), and various heating system improvements.

Algorithms:

BTUH_upgraded	= Input BTUH for the upgraded boiler to generate the same output as existing boiler that is being retrofitted = BTUH_existing x EFFb/EFFh
BTUH_base	= Input BTUH for the baseline boiler to generate the same output as the new high efficient boiler = BTUH_new x EFFh/EFFb
BTUH_pre tune up	= Input BTUH required for the existing boiler to generate the same output after receiving tune up = BTUH_existing x EFFh/EFFb
New Boiler Savings (Dth)	= (BTUH_base - BTUH_new) x Hrs / 1,000,000
Boiler Tune Up savings (Dth)	= (BTUH_pre tune up - BTUH_existing) x Hrs / 1,000,000
Outdoor Air Reset savings (Dth)	= (BTUH_existing - BTUH_upgraded) x Hrs / 1,000,000
Stack Dampers savings (Dth)	= (BTUH_existing - BTUH_upgraded) x Hrs / 1,000,000
Modulating Burners savings (Dth)	= (BTUH_existing - BTUH_upgraded) x Hrs / 1,000,000
Turbulators savings (Dth)	= (BTUH_existing - BTUH_upgraded) x Hrs / 1,000,000
O2 Trim Control savings (Dth)	= (BTUH_existing - BTUH_upgraded) x Hrs / 1,000,000
Steam Traps savings (Dth)	= Leak_Rate x Leak_Hours x BTU_per_Pound / EFFb/1,000,000
Pipe Insulation Savings (Dth)	= LF x Hrs x (BTU_per_foot_U - BTU_per_foot_I) x Existing / EFFb
DeltaT	= (Tfluid - Tambient)
BTU_per_Foot	= [Coef0 + (Coef1 x DeltaT) + (Coef2 x DeltaT^2) + (Coef3 x DeltaT^3)] / EFFb The U or I designation after the name indicates Uninsulated or Insulated.
Custom Boiler savings (Dth)	Gas energy savings and any associated savings or increase in electrical energy will be calculated based on the project specific details. Each project will undergo an engineering review in accordance with standard engineering practices. The review will be in accordance with the calculation methodologies detailed in the prescriptive programs where applicable.
Heating System Optimization Savings	Gas energy savings and any associated savings or increase in electrical energy will be calculated based on the project specific details. Each project will undergo an engineering review in accordance with standard engineering practices. The review will be in accordance with the calculation methodologies detailed in the prescriptive programs where applicable.

Variables:

BTUH_new	= Rated boiler Input BTUH nameplate data for the new boiler.
BTUH_existing	= Rated boiler Input BTUH nameplate data for the existing boiler that is being retrofitted with OA Reset dampers, Modulating Burner Controls, Tabulators or O2 Trim Controls.
Hrs	= 948 hrs/yr for space heating only boilers = 2,187 hrs/yr for domestic hot water only boilers = 1,519 hrs/yr for space heating & domestic hot water boilers Pipe insulation hours are given in Table 2.
EFFb	= Efficiency of Baseline boiler. Refer Table 1 below
EFFh	= Efficiency for higher efficiency boiler. Refer Table 1 below.
Leak_Hours	= Annual hours boiler lines are pressurized = 6000 hours for space heating only boilers, 8760 for space and domestic water heating boilers
Leak_Rate	=Leakage rate, pounds of steam per hour. High Pressure = 11, Low Pressure = 5 (Reference 2)

BTU_Per_Pound	Low Pressure Applications: = 1164 BTU per pound for lost to atmosphere, 964 BTU per pound lost to condensate. Assume 50/50 mix = 1064 BTU per pound. (Reference 2) High Pressure Applications: = 1181 BTU per pound for lost to atmosphere, 981 BTU per pound lost to condensate. Assume 50/50 mix = 1081 BTU per pound. (Reference 2)
LF	= Linear feet of insulation installed, provided by the customer.
Coef	= Heat loss polynomial equation coefficient. The number represents the power to which DeltaT is raised. Values for insulation/pipe combinations allowed in the program are listed in Table 6. Coefficients will be selected based on the pipe diameter and insulation thickness provided by the customer.
Tfluid	= Average temperature of the fluid in the pipe receiving insulation in degrees F, provided by the customer.
Tambient	= Average temperature of the space surrounding the pipe. We will ask the customer if the pipe is in a conditioned space or outside. We will use 70 degrees for conditioned spaces and 46 degrees for outside domestic hot water (full year average) and 38 degrees for outside space heating (average excluding June-September) which are the average TMY3 temperatures for Minnesota.
Existing	= Pipe insulation savings multiplier to determine credit if existing deteriorated insulation is being replaced. We will use 1 if no existing insulation is present and 0.25 if existing insulation is being replaced.
1,000,000	= Conversion from BTU to Dth
Measure Life	= Length of time the boiler equipment will be operational = See table 7.
Incremental Cost	= Refer Tables 3 to 6

Inputs:
For boilers:
Boiler size rated at sea level (BTUH)
New boiler type (Non-Condensing or Condensing)
Boiler Use (Space heating and/or water heating)
For steam traps:
High or low pressure
Incremental cost
Space heating only or space and domestic water heating
For Insulation:
Linear feet of insulation added
Nominal diameter of pipe
Thickness of insulation
Average fluid temperature
Pipe location (conditioned space or not)
Pipe use (Space heating and/or water heating)
Was existing insulation replaced
For all but boilers, steam traps, and insulation:
Boiler size rated at sea level(BTUH)
Boiler Use (Space heating and/or water heating)
Implemented measure
Incremental cost

Assumptions:

- Each boiler is replaced with the same size on a 1 for 1 basis.

- Only boilers used for space and/or domestic water heating can receive prescriptive rebates; other boilers must go through Custom Efficiency.
- Climate zone assumed to be Minneapolis for all boilers
- Steam boiler has condensate return.

- Thermal Efficiency indicates the heat exchangers effectiveness to transfer heat from the combustion process to the water in the boiler, exclusive radiation and convection losses

- Assumed savings for boiler tune-up = 2% for non condensing boiler. This is an average value of the two years, 4% initial to no savings at the end of the two years. Life of product is 2 years. DOE states up to 5%.

- Assumed savings for outdoor air reset on non condensing boilers = 3%. The Natural Gas consortium states up to 5% savings.
- Assumed savings for installing stack dampers on non condensing boilers = 1%. Canada energy council states up to 4%.
- Assumed savings for modulating burners on non condensing boilers = 3%. The Natural Gas consortium states up to 4% savings.
- Assumed savings for O2 trim controls on non condensing boilers = 2%. . The Natural Gas consortium states 2 to 4% savings.
- Assumed savings for turbulators = 3%.
-The full load efficiency of condensing boiler is assumed to be 92%. For savings calculations, partload efficiency of 96.2% was used.

Table 1: Boiler Efficiencies

	Baseline Boiler Efficiency (EFFb)	Efficient Boiler Efficiency (EFFh)
New Boilers (Non-Condensing)	80.00%	85.00%
New Boilers Plan A (Condensing)	80.00%	94.00%
New Boilers Plan B (Condensing)	78.00%	94.00%
New Boilers (Low Pressure Steam)	80.00%	84.00%
New Boilers (High Pressure Steam)	80.00%	83.00%
Boiler Tune Up	78.00%	80.00%
Outdoor Air Reset	80.00%	83.00%
Stack Dampers	80.00%	81.00%
Modulating Burner Controls	80.00%	83.00%
Turbulators	80.00%	83.00%
O2 Trim Control	80.00%	82.00%
Steam Traps	80.00%	N/A
Pipe Insulation	80.00%	N/A

Table 2: Hours for Pipe Insulation

Use of Pipe	Location	Pipe Insulation Hours	Explanation
Domestic Hot Water	Inside	4,823	Hours when outside temp is above building balance point. Heat loss from pipe is wasted
Domestic Hot Water	Outside	8,760	Domestic hot water available year round, outside temp is always less than 120 F.
Space Heating	Inside	1,883	Hours when boiler is running but outdoor temp is above building balance point
Space Heating	Outside	6,000	Hours that boiler is running

References:

1. The baseline efficiency for the boiler is based on 2006 IECC, ASHRAE 90.1, and Federal Energy Management Program (FEMP).
2. Leakage data from Energy Management Handbook, by Wayne Turner
3. 2007 ASHRAE Handbook - HVAC Applications Table 36-4 - A maximum life of 20 years is used.
4. "Understanding Steam Traps", James R. Risko, CEP, February 2011

Table 3: Hot water boiler costs, Vendor supplied, Engineered Products.

	Non-condensing		Condensing	Incremental	Incremental
Boiler Nameplate Capacity	Baseline	High Efficient - Non Condensing	High Efficient - Condensing	Baseline to High Efficient - Non Condensing	Baseline to High Efficient - Condensing
175,000 Btuh	$3,000	$3,500	$4,600	$500	$1,600
500,000 Btuh	$5,000	$9,000	$11,200	$4,000	$6,200
1,000,000 Btuh	$7,300	$11,700	$15,000	$4,400	$7,700
2,000,000 Btuh	$12,000	$17,000	$26,500	$5,000	$14,500
4,000,000 Btuh	$24,000	$34,000	$53,000	$10,000	$29,000
6,000,000 Btuh	$36,000	$51,000	$79,500	$15,000	$43,500
8,000,000 Btuh	$48,000	$68,000	$106,000	$20,000	$58,000

Table 4: Steam boiler costs, Vendor supplied, Engineered Products.

Boiler Nameplate Capacity	Baseline	High Efficient	Incremental
Low Pressure Steam Boiler - 300	$2,920	$4,240	$1,320
Low Pressure Steam Boiler - 1 MMBTUH	$5,275	$8,443	$3,168
Low Pressure Steam Boiler - 10 MMBTUH	$18,757	$35,257	$16,500
High Pressure Steam Boiler - 300 MBTUH	$3,211	$4,531	$1,320
High Pressure Steam Boiler - 1	$5,802	$8,970	$3,168
High Pressure Steam Boiler - 10 MMBTUH	$20,633	$37,133	$16,500

Table 5: Other Heating System Improvements.

Custom Boiler	Actual costs will be provided by customer
Boiler Tune Up	Actual costs will be provided by customer
Outdoor Air Reset	Actual costs will be provided by customer
Stack Dampers	Actual costs will be provided by customer
Modulating Burner Controls	Actual costs will be provided by customer
Turbulators	Actual costs will be provided by customer
O2 Trim Control	Actual costs will be provided by customer
Steam Traps	Actual costs will be provided by customer
Pipe Insulation	Actual costs will be provided by customer
Heating System Optimization Study	Actual costs will be provided by customer

Table 6: Pipe Insulation polynomial equation coefficients and incremental cost

Pipe Nominal Diameter (inches)	Insulation Thickness (Inches)	Polynomial Coefficients, Uninsulated				Polynomial Coefficients, Insulated				Incremental Cost for Materials and Installation
		Coef0	Coef1	Coef2	Coef3	Coef0	Coef1	Coef2	Coef3	
0.50	1.0	-5.16993E-01	4.32767E-01	1.31057E-03	-2.82203E-07	-5.06792E-03	9.31439E-02	1.02935E-04	1.44743E-07	$ 8.38
0.50	1.5	-5.16993E-01	4.32767E-01	1.31057E-03	-2.82203E-07	3.98499E-03	7.51861E-02	8.91729E-05	9.74056E-08	$ 13.06
0.75	1.0	-6.41016E-01	5.25694E-01	1.53657E-03	-8.79988E-08	-7.62203E-03	1.12370E-01	1.17924E-04	2.01487E-07	$ 8.09
0.75	1.5	-6.41016E-01	5.25694E-01	1.53657E-03	-8.79988E-08	-8.49852E-03	8.88072E-02	8.10579E-05	1.76301E-07	$ 11.02
1.00	1.0	-7.28366E-01	6.24724E-01	2.06770E-03	-7.03990E-07	-1.52071E-02	1.17310E-01	1.17809E-04	2.06949E-07	$ 9.87
1.00	1.5	-7.28366E-01	6.24724E-01	2.06770E-03	-7.03990E-07	-9.41903E-03	9.60519E-02	9.35275E-05	1.71142E-07	$ 14.51
1.25	1.0	-8.18941E-01	7.67967E-01	2.47500E-03	-4.58201E-07	-1.41910E-03	1.47521E-01	1.81817E-04	2.01183E-07	$ 9.14
1.25	1.5	-8.18941E-01	7.67967E-01	2.47500E-03	-4.58201E-07	-2.57736E-03	1.06352E-01	1.11172E-04	1.72660E-07	$ 13.03
1.50	1.0	-1.08947E+00	8.78264E-01	2.72781E-03	-3.94477E-07	-1.16690E-02	1.51853E-01	1.58962E-04	2.58534E-07	$ 11.12
1.50	1.5	-1.08947E+00	8.78264E-01	2.72781E-03	-3.94477E-07	-5.71611E-04	1.19950E-01	1.29735E-04	1.88439E-07	$ 15.77
2.00	1.0	-1.16894E+00	1.06400E+00	3.50497E-03	-6.97921E-07	-1.88967E-02	1.76817E-01	1.98555E-04	2.80079E-07	$ 12.17
2.00	1.5	-1.16894E+00	1.06400E+00	3.50497E-03	-6.97921E-07	-5.82090E-03	1.37370E-01	1.44615E-04	2.17569E-07	$ 16.51
2.50	1.5	-1.36423E+00	1.26112E+00	4.22519E-03	-9.46746E-07	-1.11167E-02	1.42115E-01	1.38841E-04	2.41845E-07	$ 16.75
2.50	2.0	-1.36423E+00	1.26112E+00	4.22519E-03	-9.46746E-07	-1.56850E-02	1.23575E-01	1.11288E-04	2.33652E-07	$ 23.52
3.00	1.5	-1.71306E+00	1.51886E+00	4.91379E-03	-6.43301E-07	-2.06505E-02	1.83546E-01	1.76359E-04	3.32878E-07	$ 19.21
3.00	2.0	-1.71306E+00	1.51886E+00	4.91379E-03	-6.43301E-07	-1.24762E-03	1.51944E-01	1.53453E-04	2.56107E-07	$ 24.92
4.00	1.5	-2.11759E+00	1.91713E+00	6.24197E-03	-8.25368E-07	-1.85921E-02	2.20043E-01	2.24585E-04	3.67167E-07	$ 21.36
4.00	2.0	-2.11759E+00	1.91713E+00	6.24197E-03	-8.25368E-07	-7.84584E-03	1.81743E-01	1.74355E-04	3.33485E-07	$ 30.22
6.00	1.5	-3.08910E+00	2.76905E+00	9.07289E-03	-9.71021E-07	-2.21320E-02	3.10347E-01	3.33273E-04	5.03717E-07	$ 26.87
6.00	2.0	-3.08910E+00	2.76905E+00	9.07289E-03	-9.71021E-07	-2.01056E-02	2.45576E-01	2.46973E-04	4.18753E-07	$ 37.71

Coefficients from 3E Plus developed by North American Insulation Manufacturers Association (NAIMA)
Coefficients shown in table have been rounded for convenience
Coefficients are based on an assumed R value of 3.5 per inch

Table 7: Measure Lives

Hot Water Boilers (Non Condensing)	Product Life (yrs)	Source of Information
Hot Water Boiler - Non-condensing 175 MBTUH	20	Reference 3
Hot Water Boiler - Non-condensing 500 MBTUH	20	Reference 3
Hot Water Boiler - Non-condensing 1MMBTUH	20	Reference 3
Hot Water Boiler - Non-condensing 2 MMBTUH	20	Reference 3
Hot Water Boiler - Non-condensing 4 MMBTUH	20	Reference 3
Hot Water Boiler - Non-condensing 6 MMBTUH	20	Reference 3
Hot Water Boiler - Non-condensing 8, MMBTUH	20	Reference 3
Hot Water Boilers (Condensing)		
Hot Water Boiler - Condensing 175 MBTUH	20	Reference 3
Hot Water Boiler - Condensing 500 MBTUH	20	Reference 3
Hot Water Boiler - Condensing 1 MMBTUH	20	Reference 3
Hot Water Boiler - Condensing 2 MMBTUH	20	Reference 3
Hot Water Boiler - Condensing 4 MMBTUH	20	Reference 3
Hot Water Boiler - Condensing 6 MMBTUH	20	Reference 3
Hot Water Boiler - Condensing 8 MMBTUH	20	Reference 3
Low Pressure Steam Boilers		
Low Pressure Steam Boiler - 300 MBTUH	20	Reference 3
Low Pressure Steam Boiler - 1 MMBTUH	20	Reference 3
Low Pressure Steam Boiler - 10 MMBTUH	20	Reference 3
High Pressure Steam Boilers		
High Pressure Steam Boiler - 300 MBTUH	20	Reference 3
High Pressure Steam Boiler - 1 MMBTUH	20	Reference 3
High Pressure Steam Boiler - 10 MMBTUH	20	Reference 3
Custom Boiler		
Heating System Optimization Custom Measures	18	Past projects (we will use actual values)
Other Custom Boiler Measures	18	Past projects (we will use actual values)
Boiler Tune up		
Gas Boiler less than or equal to 300 MBTUH (assumed an average of 1-HW boiler at 80% eff, 250 MBTUH, 1-LP steam boiler at 80% eff, 250 MBTUH, 1-HP steam boiler at 80% eff, 250 MBTUH)	2	D.O.E
Gas Boiler greater than 300 MBTUH or less than 1 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 540 MBTUH, 1-LP steam boiler at 80% eff, 540 MBTUH, 1-HP steam boiler at 80% eff, 540 MBTUH)	2	D.O.E
Gas Boiler greater than or equal to 1 MMBTUH less than 10 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 2.2 MMBTUH, 1-LP steam boiler at 80% eff, 2.2 MMBTUH, 1-HP steam boiler at 80% eff, 2.2 MMBTUH)	2	D.O.E
Gas Boiler greater than or equal to 10 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 20 MMBTUH, 1-LP steam boiler at 80% eff, 20 MMBTUH, 1-HP steam boiler at 80% eff, 20 MMBTUH)	2	D.O.E

Outdoor Air Reset		
Gas Boiler less than or equal to 300 MBTUH (assumed an average of 1-HW boiler at 80% eff, 250 MBTUH, 1-LP steam boiler at 80% eff, 250 MBTUH, 1-HP steam boiler at 80% eff, 250 MBTUH)	20	2011 Tetratech Program Evaluation
Gas Boiler greater than 300 MBTUH or less than 1 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 540 MBTUH, 1-LP steam boiler at 80% eff, 540 MBTUH, 1-HP steam boiler at 80% eff, 540 MBTUH)	20	2011 Tetratech Program Evaluation
Gas Boiler greater than or equal to 1 MMBTUH less than 10 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 2.2 MMBTUH, 1-LP steam boiler at 80% eff, 2.2 MMBTUH, 1-HP steam boiler at 80% eff, 2.2 MMBTUH)	20	2011 Tetratech Program Evaluation
Gas Boiler greater than or equal to 10 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 20 MMBTUH, 1-LP steam boiler at 80% eff, 20 MMBTUH, 1-HP steam boiler at 80% eff, 20 MMBTUH)	20	2011 Tetratech Program Evaluation
Stack Dampers		
Gas Boiler less than or equal to 300 MBTUH (assumed an average of 1-HW boiler at 80% eff, 250 MBTUH, 1-LP steam boiler at 80% eff, 250 MBTUH, 1-HP steam boiler at 80% eff, 250 MBTUH)	12	2011 Tetratech Program Evaluation
Gas Boiler greater than 300 MBTUH or less than 1 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 540 MBTUH, 1-LP steam boiler at 80% eff, 540 MBTUH, 1-HP steam boiler at 80% eff, 540 MBTUH)	12	2011 Tetratech Program Evaluation
Gas Boiler greater than or equal to 1 MMBTUH less than 10 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 2.2 MMBTUH, 1-LP steam boiler at 80% eff, 2.2 MMBTUH, 1-HP steam boiler at 80% eff, 2.2 MMBTUH)	12	2011 Tetratech Program Evaluation
Gas Boiler greater than or equal to 10 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 20 MMBTUH, 1-LP steam boiler at 80% eff, 20 MMBTUH, 1-HP steam boiler at 80% eff, 20 MMBTUH)	12	2011 Tetratech Program Evaluation
Modulating Burners		
Gas Boiler less than or equal to 300 MBTUH (assumed an average of 1-HW boiler at 80% eff, 250 MBTUH, 1-LP steam boiler at 80% eff, 250 MBTUH, 1-HP steam boiler at 80% eff, 250 MBTUH)	20	Reference 3
Gas Boiler greater than 300 MBTUH or less than 1 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 540 MBTUH, 1-LP steam boiler at 80% eff, 540 MBTUH, 1-HP steam boiler at 80% eff, 540 MBTUH)	20	Reference 3
Gas Boiler greater than or equal to 1 MMBTUH less than 10 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 2.2 MMBTUH, 1-LP steam boiler at 80% eff, 2.2 MMBTUH, 1-HP steam boiler at 80% eff, 2.2 MMBTUH)	20	Reference 3
Gas Boiler greater than or equal to 10 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 20 MMBTUH, 1-LP steam boiler at 80% eff, 20 MMBTUH, 1-HP steam boiler at 80% eff, 20	20	Reference 3

Turbulators		
Gas Boiler less than or equal to 300 MBTUH (assumed an average of 1-HW boiler at 80% eff, 250 MBTUH, 1-LP steam boiler at 80% eff, 250 MBTUH, 1-HP steam boiler at 80% eff, 250 MBTUH)	20	Reference 3
Gas Boiler greater than 300 MBTUH or less than 1 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 540 MBTUH, 1-LP steam boiler at 80% eff, 540 MBTUH, 1-HP steam boiler at 80% eff, 540 MBTUH)	20	Reference 3
Gas Boiler greater than or equal to 1 MMBTUH less than 10 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 2.2 MMBTUH, 1-LP steam boiler at 80% eff, 2.2 MMBTUH, 1-HP steam boiler at 80% eff, 2.2 MMBTUH)	20	Reference 3
Gas Boiler greater than or equal to 10 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 20 MMBTUH, 1-LP steam boiler at 80% eff, 20 MMBTUH, 1-HP steam boiler at 80% eff, 20 MMBTUH)	20	Reference 3
O2 Trim Control		
Gas Boiler less than or equal to 300 MBTUH (assumed an average of 1-HW boiler at 80% eff, 250 MBTUH, 1-LP steam boiler at 80% eff, 250 MBTUH, 1-HP steam boiler at 80% eff, 250 MBTUH)	20	2011 Tetratech Program Evaluation
Gas Boiler greater than 300 MBTUH or less than 1 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 540 MBTUH, 1-LP steam boiler at 80% eff, 540 MBTUH, 1-HP steam boiler at 80% eff, 540 MBTUH)	20	2011 Tetratech Program Evaluation
Gas Boiler greater than or equal to 1 MMBTUH less than 10 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 2.2 MMBTUH, 1-LP steam boiler at 80% eff, 2.2 MMBTUH, 1-HP steam boiler at 80% eff, 2.2 MMBTUH)	20	2011 Tetratech Program Evaluation
Gas Boiler greater than or equal to 10 MMBTUH (assumed an average of 1-HW boiler at 80% eff, 20 MMBTUH, 1-LP steam boiler at 80% eff, 20 MMBTUH, 1-HP steam boiler at 80% eff, 20 MMBTUH)	20	2011 Tetratech Program Evaluation
Steam Traps		
Gas Boiler - Steam Traps - Low Pressure - average of 10 and 15	5	Reference 4
Gas Boiler - Steam Traps - High Pressure - average of 50 PSI and 65 PSI	5	Reference 4
Pipe Insulation		
Insulation - Hot Water System	13	2011 Tetratech Program Evaluation
Insulation - Steam System	13	2011 Tetratech Program Evaluation
Heating System Optimization Study		
Heating System Optimization Study	0	
Implementation - Boiler measures	7	Past Recommissioning projects
Implementation - Steam System measures	7	Past Recommissioning projects
Implementation - Heat Recovery measures	7	Past Recommissioning projects

Product: Commercial Heating Efficiency; Commercial Water Heaters

Description:
Prescriptive rebates will be offered for Commercial Storage and Tankless Water Heaters (Condensing units only).

Algorithms:

Gas Energy Heating Savings (MMBTU/yr)	= {density x C_p x Volume_Daily_SqFt_Usage x Days_Year x SqFt_Served x (T_setpoint - T_supply) x (1/ Eff_Rating_Standard - 1 / Eff_Rating_High) + [(SL_base - SL_new) x 8760 hours]} x (1 MMBTU / 1,000,000 BTU)

Variables:

density	Density of water = 8.33 lbs/gal
C_p	Specific heat of water = 1 Btu / lb - F
Volume_Daily_SqFt_Usage	Average daily hot water consumption, use values from Table 1 [gallons / 1,000 ft2 /
Days_Year	Applicable days per year of building operation, if unkonw use values from Table 1.
SqFt_Served	Number of Square feet served by water heater in thousands of square feet, site
T_setpoint	Water heater setpoint = 140 deg F (1).
T_supply	Supply temperature of water heater = 58 deg F (1).
Eff_Rating_Standard	Efficiency Rating of standard replacement water heater, Thermal Efficiency = 80%
Eff_Rating_High	Efficiency Rating of high efficiency replacement water heater, Thermal Efficiency,
SL_base	Standby Losses for baseline storage water heater = 13.21 BTUH per gallon of storage (
SL_new	Standby Losses for efficient water heater = 8.90 BTUH per gallon of storage (ref 7)
1,000,000	Conversion from BTU to Dth
Measure Life	Length of time the equipment will be operational = 15 years (Ref 3)
Incremental Cost	Cost of the higher efficiency option over the baseline option for the end-use customer. (Table 3,4)
NTG	Net-to-gross = 100%
O&M Cost	Operating and Maintenance Cost is for tankless units only; annual cost = $100 trip char
Baseline new construction water heater	= a 100 gallon non-condensing storage water heater

Inputs:
Building type
Square footage served by water heater
Storage capacity (gallons); 0 if tankless
BTUH input
Thermal efficiency rating

Tables:
Table 1: Annual Hot Water Use Data (Ref 3)

Building Type	Applicable Days/Year	Gallons / 1,000 ft2 / day
Small Office	250	2.3
Large Office	250	2.3
Fast Food Restaurant	365	549.2
Sit-Down Restaurant	365	816.0
Retail	365	2.0
Grocery	365	2.2
Warehouse	250	1.0
Elementary School	200	5.7
Jr. High/High School/College	200	17.1
Health	365	342.0
Motel	365	100.0
Hotel	365	30.8
Other Commercial	250	0.7
Industrial	Site Specific	Site Specific

Table 2: Baseline Equipment Sizing compared to New Construction Tankless

Customer Segment	Sizing multiplier for equivalent Storage System with 100 gallons of storage
Fast Food Restaurant	48%
Sit-Down Restaurant	54%
Elementary School	52%
Junior High School	88%
Motel	98%
Apartment Building	51%
Fitness Center	65%
Other	65%

Table 3: Incremental Cost per Nameplate Input BTUH for Storage Water Heater per 100 gallons of storage

Customer Segment	$/BTUH
Fast Food Restaurant	0.0326
Sit-Down Restaurant	0.0056
Elementary School	0.0056
Junior High School	0.0085
Motel	0.0056
Apartment Building	0.0340
Fitness Center	0.0085
Other	0.0144

Table 4: Incremental Cost per Nameplate Input BTUH for Tankless Water Heater

Customer Segment	$/BTUH
Fast Food Restaurant	0.0105
Sit-Down Restaurant	0.0044
Elementary School	0.0044
Junior High School	-0.0049
Motel	-0.0080
Apartment Building	0.0105
Fitness Center	0.0037
Other	0.0029

References:

1. Arkansas Deemed Savings Quick Start Program Draft Report Commercial Measures Final Report, Nexant.
2. Baseline and Energy Efficient equipment costs provided by vendors
3. Minnesota DER Deemed Values
4. Bradford White RightSpec® commercial water heater sizing software
5. Bosch tankless water heater sizing software
6. Commercial Buildings Energy Consumption Study (CBECS), 2006
7. AHRI Directory of Certified Product Performance; average of Standby Loss in BTUH per gallon of storage calculated for units with 80% or less thermal efficiency for baseline unit and <96% thermal efficiency for efficient unit

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Product: Commercial Heating Efficiency; Furnaces

Description
Prescriptive rebates will be offered for new Condensing Furnaces.

Algorithms:

Furnace Savings (Dth)	= ((BTUH_b - BTUH_h) x Hrs / 1,000,000

Variables:

BTUH_h	= Rated furnace Input BTUH nameplate data for the new furnace provided by customer on rebate form.
BTUH_b	= Input BTUH for the baseline furnace to generate the same output as the new high efficient furnace = BTUH_h x EFFh/EFFb
Hrs	= Annual Full Load Equivalent Hours (FLEH) per year of the furnace = 849.45 (Reference 1).
EFFb	= Efficiency of Baseline furnace = 78% (Reference 4)
EFFh	= Efficiency for higher efficiency furnace provided by the customer.
1,000,000	=Conversion from BTU to dekatherms = 1,000,000
Measure Life	= Length of time the furnace equipment will be operational = 18 years (Reference 3)
Incremental Cost	= Incremental costs based on customer provided efficiency. Refer Table 1 below.

Table 1: Incremental cost (Reference 2)

	Standard Unit Cost	High Efficient Unit Cost	Incremental Cost
New Energy Star Furnace => 90% AFUE, < 92% AFUE	$ 1,866	$ 3,121	$ 1,254
New Energy Star Furnace => 92% AFUE, < 94% AFUE	$ 1,866	$ 3,208	$ 1,342
New Energy Star Furnace => 94% AFUE, < 96% AFUE	$ 1,866	$ 3,296	$ 1,429
New Energy Star Furnace => 94% AFUE	$ 1,866	$ 3,383	$ 1,517

Inputs:
New furnace size at sea level (BTUH)
New furnace efficiency at sea level

Assumptions:
- Each furnace is replaced with the same size on a 1 for 1 basis.
- Prescriptive rebates are only given for furnaces put into service, rebates are not given for backup furnaces.
- Furnaces must have a minimum efficiency of 90% AFUE for a rebate, 92% AFUE and 94% AFUE or higher efficiency will receive a larger rebate.
- Efficiency of all furnaces is Annual Fuel Utilization Efficiency ("AFUE")

References:

1. MN Bin Temp Bin Hrs are taken from the "Thermal Environmental Engineering, Third Edition, Thomas H. Kuehn, James W. Ramsey and James L. Threlkeld, Pages 717-718, Table B.5" to determine full load equivalent hours (FLEH) in Minnesota area. See Forecast furnace operating hours for calculation

2. The average baseline and high efficiency costs are based on the California DEER database & estimated incremental installation cost for high efficient furnaces.

3. 2007 ASHRAE HVAC Applications Handbook Chapter 36, page 36.3, Table 4
4. 2006 IECC

Product: Lighting Efficiency

Description:

Prescriptive rebates will be offered for replacement lighting equipment. New Construction rebates will be offered for new facilities or spaces overhauled for a new purpose.
Custom rebates are available for lighting-related improvements that are not prescriptive.

Algorithms:

Electrical Demand Savings (Customer kW)	= (kW_Base - kW_EE) x HVAC_cooling_kWsavings_factor
Electrical Energy Savings (Customer kWh/yr)	= (kW_Base - kW_EE) x Hrs x HVAC_cooling_kWhsavings_factor
Natural Gas Savings (Dth)	= (kW_Base - kW_EE) x Hrs x HVAC_heating_penalty_factor
Lighting Controls -Electrical Energy Savings (Customer kWh/yr)	=(kW connected) x (1-PAF) x Hrs x HVAC_cooling_kWhsavings_factor
Lighting Controls -Electrical Demand Savings (Customer kW)	=(kW connected) x (1-PAF) x HVAC_cooling_kWsavings_factor
Lighting Controls -Natural Gas Savings (Dth)	=(kW connected) x (1-PAF) x Hrs x HVAC_heating_penalty_factor
Stairwell Fixtures w/Controls -Electrical Energy Savings (Customer kWh/yr)	=(kW_saved) x Hrs x HVAC_cooling_kWhsavings_factor
Stairwell Fixtures w/ Controls -Electrical Demand Savings (Customer kW)	=(kW_saved) x HVAC_cooling_kWsavings_factor
Stairwell Fixtures w/ Controls -Natural Gas Savings (Dth)	=(kW_saved) x Hrs x HVAC_heating_penalty_factor
kW_saved	=kW_Base - kW_EE
Hrs_Base	=Hrs *HVAC_cooling_kWhsavings_factor/HVAC_cooling_kWsavings_factor
Hrs_EE	=Hrs *HVAC_cooling_kWhsavings_factor/HVAC_cooling_kWsavings_factor

Variables:

Hrs	= Annual Operating Hours. Hours to be obtained from Table 2. The type of facility is to be supplied by the customer.
kW_Base	= Baseline fixture wattage (kW per fixture) determined from deemed fixture table.
kW_EE	= High Efficiency fixture wattage (kW per fixture) determined from deemed fixture table
Hrs_full_power	=263 per year
Hrs_dimmed	=8497 per year
kW_saved	=base wattage minus the energy efficient wattage.
HVAC_cooling_kWhsavings_factor	= Cooling system energy savings factor resulting from efficient lighting from Table 1. Reduction in lighting energy results in a reduction in cooling energy, if the customer has air conditioning. Existence
HVAC_cooling_kWsavings_factor	= Cooling system demand savings factor resulting from efficient lighting from Table 1. Reduction in lighting demand results in a reduction in cooling demand, if the customer has air conditioning. Existence of air conditioning to be provided by customer.
HVAC_heating_kWsavings_factor	= Heating system penalty factor resulting from efficient lighting. Reduction in lighting demand results in an increase in heating usage, if the customer has air conditioning. A value of -0.00088738 Dth/kWh given by (Reference 4).
CF	= Coincidence Factor, the probability that peak demand of the lights will coincide with peak utility system demand. CF will be determined based on customer provided building type in table 2. CF for Stairwell Fixtures with Occupancy Sensors calculated at 91.7 %
Measure Life	= Length of time the lighting equipment will be operational, see Table 3 for Measure Lifetimes
Baseline Cost	= Cost of the baseline technology. For Retrofit, the cost is 0 since the baseline is to continue to operate the existing system. For New Construction, the cost is given in the deemed fixture table. (Reference 5)
High Efficiency Cost	= Cost of the High Efficiency technology. Costs given in Deemed Fixture Table (Reference 4)
kW connected	Total connected fixture load, determined as the sum of stipulated fixture wattages from Deemed Fixture Table.
PAF	Stipulated power adjustment factor based on control type from Table 4.
Incremental operation and maintenance cost	= Other annual savings or costs associated with the electrical savings. For Lighting, this consists of additional natural gas for heating. Methodology given by (Reference 4).

Inputs:
Number of Fixtures
Lighting equipment type
Building type
Existence of air conditioning

Assumptions:
- Each replacement lighting fixture is going in on a one-for-one basis for existing fixtures. New construction fixtures are put in on a one-for-one basis instead of lower efficiency options.
- In the Technical Assumptions, one will note that the Operating Hours does not appear, but rather a modified version. The methodology defines kW Savings on the basis of difference in kW with the HVAC Cooling demand factor. The Annual Energy Savings takes into account any heating that has to be added.

Table 1: HVAC Interactive Factors (Reference 2)

HVAC system	HVAC_cooling_kWhsavings_factor	HVAC_cooling_kWsavings_factor
Heating only	1.00	1.00
Heating and cooling	1.11	1.33
LED Refrigerated Case Door	1.41	1.41
LEDFreezer Case Door	1.59	1.59

Table 2: Coincident Peak Demand Factors and Annual Operating Hours by Building Type (Reference 1 and 3)

Building Type	CF	Annual Operating Hours
Office	78%	3435
Restaurant	94%	4156
Retail	94%	3068
Grocery/Supermarket	94%	5478
Warehouse	96%	2388
Elemen./Second. School	73%	2080
College	71%	5010
Health	84%	3392
Hospital	84%	4532
Hotel/Motel	51%	2697
Manufacturing	96%	5913
Other/Misc.	96%	2278
24-Hour Facility	94%	8234
Safety or Code Required	100%	8760
Night Time Exterior (LED Canopy/Soffit Lights Only)	0%	4380
Parking Garages	100%	8760

Table 3: Measure Lifetimes in Years (Reference 4)

Measure	Lifetime in Years
CFL less than 19W	5
Low Wattage T8 Lamps	8
Integrated 25W Ceramic Metal Halide	7
T8 Lighting Systems	20
T5 Lighting Systems	20
Lighting Controls	8
Stiarwell Fixtures with Occupancy Sensors	14.4

Table 4: Stipulated Power Adjustment Factors (Reference 1 and 7)

Control Type	PAF
no controls	1.00
Occupancy Sensor - Wall Mount	0.70
Occupancy Sensor - Ceiling Mount	0.70
Daylighting - Continuous Dimming	0.70
Daylighting - Multiple Step Dimming	0.80
Daylighting - On/Off	0.90

Table 5: Coincidnece Factors For Traffic Signals (Reference 8)

LED Lamp Type	CF
Red Balls, always changing or flashing	0.55
Red Arrows	0.90
Green Arrows	0.10
Green, always changing or flashing	0.43
Flashing Yellow	0.50
Yellow	0.02
"Hand" Don't Walk Signal	0.75
"Man" walk Signal	0.21

Incandescent Lamp Wattages

Year	100W	75W	60W	40W
2013	0.0805	0.0645	0.0550	0.0370
2014	0.0760	0.0575	0.0485	0.0330
2015	0.0720	0.0530	0.0430	0.0290
	0.0762	0.0583	0.0488	0.0330

References

1. Arkansas Deemed Savings Quick Start Program Draft Report Commercial Measures Final Report, Nexant. CF and hours

2. HVAC Interactive Factors developed based on the Rundquist Simplified HVAC Interaction Factor method for Minnesota, presented on page 28 of the 11/93 issue of the ASHRAE Journal - "Calculating lighting and HVAC interactions".
3. Technical Reference User Manual No. 2004-31, Efficiency Vermont, 12/31/04. CF and Hours
4. Deemed Savings Database, Minnesota Office of Energy Security, 2008. CF, Hours, kW, Costs, Measure life
5. Net-to-Gross factor from National Energy Efficiency Best Practices Study(http://www.eebestpractices.com)
6. Lighting Efficiency input wattage guide, Xcel Energy, July, 2008, kW
7. CL&P and UI program Savings Documentation modified for 3022 Daylight Hours in Denver CO
8. 2010 Ohio TRM (created by Vermont Energy Investment Corporation) Coincidence factors for Traffic Signals

Product: Motor & Drive Efficiency

Description:

Prescriptive rebates will be offered for new motors (Plan A) up to 500 hp and replacement of currently operating motors (Plan B) up to 500 hp, installation of new variable frequency drives (VFD) up to 200 hp, replacement of standard refrigeration evaporator fan motors with electronically commutated motors (ECM) and Constant Speed Motor Controllers up to 500HP.

Algorithms:

Motor Electrical Energy Savings (Customer kWh)	= HP x LF_Motors x Conversion x (1/Standard_Eff - 1/ High_Eff) x Hrs
Motor Electrical Demand Savings (Customer kW)	= HP x LF_Motors x Conversion x (1/Standard_Eff - 1/ High_Eff)
VFD Drive Electrical Energy Savings (Customer kWh)	= HP x LF_Drives x Conversion x (1/Standard_Eff) x Hrs x %_Savings_Drives
VFD Drive Electrical Demand Savings (Customer kW)	= HP x LF_Drives x Conversion x (1/Standard_Eff) x %_Savings_Drives
Constant Speed Motor Controller Electrical Energy Savings (Customer kWh)	= HP x kW_per_HP x Hrs
Constant Speed Motor Controller Electrical Demand Savings (Customer kW)	= HP x kW_per_HP

Variables:

Hrs	= Annual operational hours per year of the motor. Deemed values are used for hours based on the type and use of the motor as seen in Tables 1, 2, & 3. The customer provides the following information on the rebate form (HP, Industrial/non industrial, building type, and compressor/pump/fan/other)
LF_Motors	= Motor load factor as percentage (0 - 100). The assumed value of 75% will be used for prescriptive motors. (Reference 3)
LF_Drives	= Drive load factor as percentage (0 - 100). The assumed value of 75% will be used for prescriptive pumping drives and 65% will be used for prescriptive fan drives. (Reference 5)
HP	= Rated motor horsepower provided by customer on rebate form.
High_Eff	= Efficiency of high efficiency replacement motor as percentage (0-100). Plan A high efficiency is NEMA Premium plus 1%. Plan B high efficiency is NEMA Premium. Plan B Enhanced high efficiency is NEMA Premium plus 1%. Efficiencies shown in the Deemed Motor Tables. The customer will provide the model and serial number of the motor along with actual nameplate efficiency from the new motor. If the actual efficiency is not provided by the customer, it will be determined from specification sheet.
Standard_Eff	= Efficiency of standard replacement motor as percentage (0 - 100). Plan A is NEMA Premium. Plan B is EPACT. Plan B Enhanced is EPACT. Efficiencies shown in Deemed Motor Tables. Based on customer provided motor size, speed, and type.
%_Savings_Drives	= Average savings achieved by installing a variable frequency drive on a fan or pumping motor. 33% will be used for prescriptive drive rebates. (Reference 5)
kW_per_HP	= Demand savings per horsepower for constant speed motor controller applications. We will use 0.10 for escalators (Reference 9) and 0.013 for all other qualifying applications (Reference 10)
Conversion	= Standard conversion from horsepower to kW. 1 HP = .746 kW
Coincidence Factor	= Probability that peak demand of the motor will coincide with peak utility system demand. 78% will be used for prescriptive rebates in motors, drives and contant speed motor controllers on all applications except escilators which will use a reduction of .046 kW/HP of peak reduction, see Reference 2 & 11.
Measure Life	= Length of time the motor/drive will be operational = 20 years for new, replacement motors, CS motor controllers & 15 years for VFDs, (Reference 3,11)
Baseline and incremental cost assumptions	= The customer will provide the model and serial number of the motor and from that the size, type and rpm of the motor/drive will determine the deemed baseline cost or incremental cost. (Reference 8-motor replacement, and VFDs , 10-CS Motor Controllers, and 13-EC Motors)
Incremental operation and maintenance costs or savings	= 0 value assumed for this product
Incremental cost	Motors - see Deemed Motor Table 6. VFDs - see Deemed ASD Table 7. Motor Controllers - see Deemed Motor Controller Table 3.

Inputs:
For Motors:
New motor model and serial number (HP, efficiency, type, and speed can then be looked up in a database)
Application of motor (Industrial/non Industrial)
Building type where motor is installed for non industrial motors
Use of motor (pump, fan, other) for non industrial motors
Equipment is installed
For Variable Frequency Drives (VFD):
Size, speed, type and use of motor drive is connected to
Application of motor (Industrial/non Industrial)
Building type where motor is installed for non industrial motors
Use of motor (pump, fan, other) for non industrial motors
Equipment is installed
For Constant Speed Motor Controllers:
Size of motor
Application of motor (Escalator/Other that qualify)

Assumptions:
- Each motor is replaced with the same size on a 1 for 1 basis. Motors replaced with different sizes can participate in the Custom Efficiency product.
- Prescriptive rebates are only given for motors put into service, rebates are not given for backup motors.
- Prescriptive rebates are only given to variable frequency drives installed on centrifugal pump or fan applications.
- Rebates do not apply to rewound or repaired motors.
- Constant speed motor controllers are only eligible if installed on escalators, or industrial/commercial applications that cannot be shut of or slowed down during normal business operation, and operate at a load factor of less than 20% more than 65% of the time.

Table 1: Operating Hours by Motor Size, Industrial Applications (5)

HP	Fans	Pumps	Air Compressor	Other
1	4,550	3,380	1,257	2,435
1.5	4,550	3,380	1,257	2,435
2	4,550	3,380	1,257	2,435
3	4,550	3,380	1,257	2,435
5	4,550	3,380	1,257	2,435
7.5	4,316	4,121	2,131	2,939
10	4,316	4,121	2,131	2,939
15	4,316	4,121	2,131	2,939
20	4,316	4,121	2,131	2,939
25	5,101	4,889	3,528	3,488
30	5,101	4,889	3,528	3,488
40	5,101	4,889	3,528	3,488
50	5,101	4,889	3,528	3,488
60	6,151	5,667	4,520	5,079
75	6,151	5,667	4,520	5,079
100	6,151	5,667	4,520	5,079
125	5,964	5,126	4,685	5,137
150	5,964	5,126	4,685	5,137
200	5,964	5,126	4,685	5,137
250	7,044	5,968	6,148	6,102
300	7,044	5,968	6,148	6,102
350	7,044	5,968	6,148	6,102
400	7,044	5,968	6,148	6,102
450	7,044	5,968	6,148	6,102
500	7,044	5,968	6,148	6,102

Table 2: Operating Hours by Application for all products other than motor controllers, Non-industrial (3)

Building Type	Operating Hours
Office HVAC Pump	2,000
Retail HVAC Pump	2,000
Hospitals HVAC Pump	2,754
Elem/Sec Schools HVAC Pump	2,190
Restaurant HVAC Pump	2,000
Warehouse HVAC Pump	2,241
Hotels/Motels HVAC Pump	4,231
Grocery HVAC Pump	2,080
Health HVAC Pump	2,559
College/Univ HVAC Pump	3,641
Office Ventilation Fan	6,192
Retail Ventilation Fan	3,261
Hospitals Ventilation Fan	8,374
Elem/Sec Schools Ventilation Fan	3,699
Restaurant Ventilation Fan	4,155
Warehouse Ventilation Fan	6,389
Hotels/Motels Ventilation Fan	3,719
Grocery Ventilation Fan	6,389
Health Ventilation Fan	2,000
College/Univ Ventilation Fan	3,631
Office Other Application	4,500
Retail Other Application	4,500
Hospitals Other Application	4,500
Elem/Sec Schools Other Application	4,500
Restaurant Other Application	4,500
Warehouse Other Application	4,500
Hotels/Motels Other Application	4,500
Grocery Other Application	4,500
Health Other Application	4,500
College/Univ Other Application	4,500

Table 3: Operating Hours & Incremental Cost for Motor Controllers by Application, Non-industrial (Reference 4 ,10)

Building Type and motor application	Escalator	Industrial	Incremental Cost
5	4,500	2,435	$918
7.5	4,500	2,939	$918
10	4,500	2,939	$918
15	4,500	2,939	$918
20	4,500	2,939	$933
25	4,500	3,488	$1,012
30	4,500	3,488	$1,091
40	4,500	3,488	$1,300
50	4,500	3,488	$1,497
60	4,500	5,079	$1,796
75	4,500	5,079	$1,943
100	4,500	5,079	$2,389
125	4,500	5,137	$3,087
150	4,500	5,137	$3,784
200	4,500	5,137	$4,555
250	4,500	6,102	$4,655
300	4,500	6,102	$4,755
350	4,500	6,102	$4,855
400	4,500	6,102	$4,955
450	4,500	6,102	$5,055
500	4,500	6,102	$5,155

References:

1. CEE (Consortium for Energy Efficiency) Premium Efficiency Motors Initiative - Source for premium motor efficiencies, EPAct Standard Motor Efficiencies and baseline/incremental costs

2. NYSERDA (New York State Energy Research and Development Authority), Energy $mart Programs Deemed Savings Database - Source for Coincidence Factor

3. Efficiency Vermont's Technical Reference User Manual, 2004 - Source for operating hours for non-industrial motors (p.15) and source for measure life, Source for load factor (75%) and baseline/incremental costs

4. United States Industrial Electric Motor Systems Market Opportunities Assessment, EERE, US DOE, Dec 2002 - Source for operating hours for industrial motors and source for load factor (Table 1-18 and 1-19)

5. Office of Industrial Electric Motor Systems Market Opportunities Assessment : Department of Energy (assessment of 265 Industrial facilities in 1997) - Source for VSD opportunity in the US market along with Load Factors for Fans and Pumps along with average savings.

6. NWPCC (Northwest Power Conservation Council) RTF's (Regional Technical Forum) Archived Measures - Source for full motor cost

7. not used

8. Average cost for VFD's and Motor Cost information from April 2011 effort local vendors

9. Engineering analysis performed by Xcel energy on installation of 164 controllers, Colorado custom project 404, 2009.

10. Methodology for demand savings from Esource TAS-F-1, March 2007 - Identifying Cost-Effective Applications for Motor Voltage Controllers

11. Comprehensive Process and Impact Evaluation of the (Xcel Energy) Colorado Motor and Drive Efficiency Program, FINAL, March 28, 2011, TetraTech

12. Rewind Costs from http://www.greenmotors.org/downloads/RTFSubmittalMay_08%20_2_.pdf website

Product: Process Efficiency

Description:
The Process Efficiency Business Program targets energy intensive processes at large industrial facilities Customers who implement identified upgrades may receive rebates for large process changes that are not completed through Custom Efficiency or the prescriptive programs.

Algorithms:
Electrical energy savings, electrical demand savings and gas savings will be calculated based on the methodologies presented in each of the end use programs. Please consult the the Deemed tabs of the other end uses for more details.

References:

Average Participant Size for the Cooling, Lighting Redesign, Compressed Air, and Boilers components were scaled up from those of the end use programs to reflect the predicted average participant in the Process Efficiency program.

Product: Recommissioning

Description:

Recommissioning is a program that involves a Study phase and an Implementation phase. The customer may apply for rebate under the Recommissioning Program. Each Recommissioning project will be analyzed individually by Xcel Energy. A qualified engineering vendor will perform the study and provide a report and technical calculations to Xcel Energy for review. Analysis will be based on standard engineering methodologies. Customer may also submit for implementation a proposed "Fast Track" project without going through the Recommissioning Study phase, as long as they have performed a study. Recommissioning projects do not need to pass a Societal cost benefit test on a project by project basis.

Algorithms:

Electric and Gas energy savings and electrical demand savings will be calculated by a study vendor based on the project specific details. Each project will undergo an engineering review by Xcel Energy in accordance with standard engineering practices.

References:

1. "Recommissioning Persistence - Task 1 Benchmarking Deliverable 040607.pdf", created by NEXANT, March 6, 2007.

Product: Self-Direct

Description:
The Self-Direct program will provide large commercial and industrial customers in Minnesota the opportunity to self-fund electric energy conservation projects at their facilities. Customers who engineer, implement, and commission qualifying projects will receive rebates to offset their costs to implement efficient projects.

Algorithms:
Electrical energy savings and electrical demand savings will be calculated based on the actual savings from a project.
Measure life and operation and maintenance savings will be calculated for each project.

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Product: Turn Key Services

Description:

Turn key is a program that involves an Assessment or Study phase and an Implementation phase. The customer may apply for direct impact rebates based on the existing program portfolio offerings under the Turn Key Program. Each Turn Key project will receive implementation assistance through Xcel Energy. A qualified project management vendor will assist the customer with the implemmentation of the project. Customer may also submit for implementation a project that was identified through a previous study. Turn Key prescriptive measures do not need to pass a Societal cost benefit test on a project by project basis.

Algorithms:

Prescriptive or Custom Basis	Electrical energy savings,electrical demand savings and gas savings will be calculated based on the methodologies presented in each of the end use products.

Variables:

Life Time	Persistence of the Turn Key product (product life) will use the prescriptive product lfe for any prescriptive measures and determine the product life for any Custom measures on a project by project basis.
CF	Coincidence Factor = Probability that the measure peak demand reduction will occur at the same time as the grid peak demand. We will use the prescriptive CF for any prescriptive measures and determine the CF for any Custom measures on a project by project basis.

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Product: Electric Rate Savings

Description:

Participants receive a monthly discount on their demand charges in return for reducing electric loads when notified by Xcel Energy.

Algorithms:

Electrical Demand Savings (Customer kW)	= Average kW per customer
Electrical Energy Savings (Customer kWh)	= Average kW per Unit x Full Load Hours of Operation
Peak Coincident kW at the Customer (PC_KW_CUST)	= Customer kW x CF

Variables:

Average kW per customer	= Contracted Demand Reduction. Amount of electric load reduction pledged by the customer. Average is 200 kW (Reference 1)
Full Load Hours of Operation	Full Load Hours of Operation = 18, the equivalent full load hours during a typical year that a customer achieves energy savings at the Contracted Demand Reduction by controlling their electric load. (Reference 2)
CF	Coincidence Factor = 47.5%, percentage of the kW savings that occur during the annual hour of system peak (Reference 1)
Life of Product	= Length of contract period = 5 years

Inputs:
-Contracted Demand Reduction
-Rate Group

References:
(1) Market Operations Peak Control goals
(2) Control Period history along with customer survey data

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Product: Saver's Switch for Business

Description:
Prescriptive rebates will be offered to customers who install a Saver's Switch on their AC system.

Algorithms:

Electrical Demand Savings (Customer kW)	= Tons per Unit * kW per Ton
Electrical Energy Savings (Customer kWh)	= Customer kW x Full Load Hours of Operation
Peak Coincident kW at the Customer (PC_KW_CUST)	= Customer kW x CF

Variables:

Tons per Unit	= A/C Tons per Unit. 6.73 per customer database.
kW per Ton	= 1.17 kW per Ton (Reference 1)
Full Load Hours of Operation	= Full Load Hours of Operation = 1.6 for a single stage customer and 1.0 for a multi-stage customer. Full Load Hours of Operation are the equivalent full load hours during a typical year that a Switch achieves energy savings at the Average kW per Unit by controlling an a/c unit during a typical year. (Reference 2)
CF	Coincidence Factor = Percentage of the kW savings that occur during the annual hour of system peak. = 25.6%. Based on analysis of metered data for actual historical Business Saver's Switch customers.
Measure Life	= Length of time the switch will be operational = 15 years

Inputs:
-Number of units with switch installed and the tons of those units.

References:
(1) Xcel Energy Cooling Product Average Baseline for 6 ton DX unit
(2) Xcel Energy Market Operations Projection

Product: Energy Efficient Showerheads

Description:

Residential customers are eligible to receive a free kit containing a high-efficiency showerhead, kitchen aerator, and bath lavatory aerator to reduce energy and water use. Because we will not be able to determine how (gas or electric) each customer heats their water, we will assume that 93% of the units go to houses that use gas to heat water and 7% of units go to houses that use electricity to heat water.

Algorithms:

Total Natural Gas Savings - (Dth)	= Baseline consumption - Energy Eff consumption = 2.23 + 0.69 + 1.18 = 4.2 Dth/kit
Modified Natural Gas Savings - (Dth)	= Total Natural Gas Savings x 93.0% Nat. Gas = 3.8 Dth/kit
Total Electric Energy Savings - (kWh)	= Baseline Consumption - Energy Eff Consumption = 429 + 132 + 226 = 787 kWh/kit
Modified Electric Energy Savings - (kWh)	= Total Electric Energy Savings x 7.0% = 55 kWh/kit
Aerator Electric Savings (Customer kWh)	= (GPY_Saved_Aerator x Delta_T x 8.33) / HE_Electric /3412
Aerator Electric Savings (Modified Customer kWh)	= (GPY_Saved_Aerator x Delta_T x 8.33) / HE_Electric /3412 x %Elec HW
Aerator Gas Savings (Dth)	= (GPY_Saved_Aerator x Delta_T x 8.33) / HE_Gas/1,000,000
Aerator Gas Savings (Modified Dth)	= (GPY_Saved_Aerator x Delta_T x 8.33) / HE_Gas x % G HW/1,000,000
Conversion	1 Dth = 1,000,000 Btu
Conversion	kWh = 3,412 Btu

Variables:

CF	= Coincidence Factor, the probability that peak demand of the hot water heater will coincide with peak utility system demand. A CF of 0.0 will be used for showerheads and aerators.
Hrs_Hot water_use_Baseline	= Total Electric Energy_baseline / 4.5 kW water heater element = (GPY_Hot Water_Baseline x Delta_T x 8.33) / (3412 x HGE) / 4.5 kW baseline Showerhead = 238 hours Baseline Aerator (both Kitchen and Bath) = 92 hours
Hrs_Hot water_use_Eff	= Total Electric Energy_Eff / 4.5 kW water heater element = (GPY_Hot Water_Eff x Delta_T x 8.33) / (3412 x HGE) / 4.5 kW Eff Showerhead = 143 hours Eff 1.5 gpm Aerator (Kitchen) = 63 hours Eff 1.0 gpm Aerator (Bath) = 42 hours
% Electric HW heating (Reference 6)	7%
% Gas HW heating (Reference 6)	93%
Incremental Costs	See Table 1 below
Non-Energy O&M savings	See Table 1 below
Total Natural Gas Savings - (Dth)	= (GPY_Hot Water Saved x Delta_T x 8.33) / HGE / 1,000,000)
Modified Showerhead Natural Gas Savings - (Net Dth/unit)	= Total Natural Gas Savings x Gas Factor
Total Electric Energy Savings - (Customer kWh)	= (GPY_Hot Water Saved x Delta_T x 8.33) / (3412 x HGE)
Modified Electric Energy Savings - (Customer kWh)	=((Total Customer kWh/yr)) x Elec_Factor
Gas/Electric split	We assume that 93% of the houses use gas to heat water and 7% of houses use electric to heat water. For each showerhead that is distributed we will take credit equal to 7% of the electric savings and 93% of the gas savings. We will not determine what type of fuel is used to heat water in each house that receives a showerhead (Reference 8.)
Gas_Factor	Gas multiplying factor = 0.93 (based on Gas/Electric split above)
Elec_Factor	Electric multiplying factor = 0.07 (based on Gas/Electric split above)
GPY_ Total Saved	= Gallons per year of total water saved with 1.5 gpm showerhead = 3,806 gallons per year. = Gallons per year of hot water saved with 1.5 gpm kitchen aerator = 1,014 gallons per year = Gallons per year of hot water saved with 1.0 gpm bath aerator = 1,738 gallons per year (Reference 1, 2)
GPY_ Hot Water Saved	= Gallons per year of hot water saved with 1.5 gpm showerhead = 2,135 gallons per year. = Gallons per year of hot water saved with 1.5 gpm kitchen aerator = 657 gallons per year. = Gallons per year of hot water saved with 1.0 gpm bath aerator = 1,127 gallons per year (Reference 1, 2)
Delta_T	= Change in temperature of water from incoming water temperature to water heater temperature setting. Delta_T is 74 degrees F. (Reference 1,2)
HGE	= Heat generation efficiency based on Minimum Federal Efficiency Standards for water heater efficiency. Used value of 0.59 for gas; value of 0.90 for electric (Reference 6)
Showerhead replacement	One 2.5 gpm showerhead replaced with one 1.5 gpm showerhead
Kitchen Aerator replacement	One 2.2 gpm aerator replaced with one 1.5 gpm aerator
Bath Aerator replacement	One 2.2 gpm aerator replaced with one 1.0 gpm aerator
Water heating efficiency - natural gas	59% federal minimum manufacturer's standard
Water heating efficiency - electric	90% federal minimum manufacturer's standard

Inputs:

Showerhead shipped

1.5 gpm Aerator shipped

1.0 gpm Aerator shipped

Assumptions:

- 93% of the houses use gas to heat water and 7% of houses use electric to heat water. For each showerhead that is distributed we will take credit equal to 7% of the electric savings and 93% of the gas savings. We will not determine what type of fuel is used to heat water in each house that receives a showerhead and aerator kit (Reference 8.)

- Water heating efficiency is based on federal minimum manufacturer's standards for a 40 gallong storage tank type heater of 59% for natural gas and 90% for electric.

Tables:

Table 1: Incremental capital costs, Operation and Maintenance costs

	Showerhead plus Teflon Tape	1.5 gpm Aerator	1.0 gpm Aerator
2013 Incremental Costs	$2.83	$1.30	$0.42
2014 Incremental Costs	$2.83	$1.34	$0.44
2015 Incremental Costs	$2.97	$1.36	$0.46
2013 O & M Costs (Reference 7)	$26.35	$7.02	$12.03
2014 O & M Costs (Reference 7)	$26.35	$7.02	$12.03
2015 O & M Costs (Reference 7)	$26.35	$7.02	$12.03

Table 2: Measure Life

Shower Head	= 6 years (Reference 5)
Low Flow Aerators	= 5 years (Reference 5)

References:

1. Department of Energy Domestic Hot Water Appliance Calculator

2. "The effects of variation in body temperature on the preferred water temperature and flow rate during showering" Authors: Tadakatsu Ohnaka, Yutaka Tochihara, Yumiko Watanabe. Affiliations: a) Department of Physiological Hygiene, The Institute of Public Health, Minato-ku, Tokyo, Japan; b) Faculty of Home Economics, Jissen Women's University, Hino, Tokyo, Japan.
3. Handbook of Water Use and Conservation, Denver Water Conservation
4. Xcel Energy Customer End Use Study 2006
5. California Measurement Advisory Committee (CALMAC)
6. http://www1.eere.energy.gov/buildings/appliance_standards/residential/pdfs/htg_products_frmwk_presentation_2007-01-10ver4.pdf
7. St. Paul Water Rates from http://mn-stpaul.civicplus.com/DocumentView.asp?DID=3493
8. Xcel Energy Home Use Study
9. SPS New Mexico Residential Showerhead Pilot Report dated 10/21/2010

Product: Energy Feedback

Description:
Program will employ energy use feedback to customer groups and measure the difference in energy use between Participants that receive Home Energy Reports and a simalarly sized Control Group that does not. Program will include residential customers with both gas and electric service from Xcel.

Algorithms:

Electrical Energy Savings (Customer kWh)	= (Group_Consumption - Group_Rebate_Product_Participation)Control_Group - (Group_Consumption - Group_Rebate_Product_Participation)Test Group, kWh as determined through multi-variate regression analysis with a fixed effect.
Electrical Demand Savings (Customer kW)	= Customer kWh / 8760 (Actual kW demand is determined with actual load data from participants, residential load curve data and system coincident data after the fact)
Natural Gas Energy Savings (Customer Dth)	= (Group_Consumption - Group_Rebate_Product_Participation)Control_Group - (Group_Consumption - Group_Rebate_Product_Participation)Test Group, Dth

Variables:

Group_A	Group of 135,000 of electric and gas participating customers receiving periodic paper reports of feedback on their energy use. In addtion, 55,000 electric-only customers may be added to this group in 2015.
Group_B	Group of 15,000 of electric and gas participating customers receiving internet delivered reports and web feedback on their energy use.
Control_Groups	Uninformed random sample of gas & electric customers receiving no specific information or treatment from this program of similar size to Participant group.
Attrition Rate	5% per year of customers who leave the program
Group_Consumption	Gross consumption for each group (A, B or Control), kWh and Dth resulting from multi-variate regression analysis of participant and control.
Group_Rebate_Product_Participation	Energy savings generated by participation in our rebate products for both Participant and Control groups, kWh and Dth. Rebated product participation from other products, (e.g.new furnace), are savings that will be included in the regression anlysis and deducted from the EFP results if statsitaclly sigficant. DSM Product participation from other Public Service DSM products will come from Company database, kWh and Dth.
Note: Calculation methodology	Calculations of energy use are in units of average energy use/customer-yr
CF	= Coincidence Factor = 68%; probability that conservative electric behaviors will occur during the peak period hours.
NTG	Net to Gross = 100%
Total number of hours in one year	= 8760
Measure Life	= Measure life is assumed to be 3.0 years.
O&M savings	= Operation and Maintenance savings are assumed to be zero.

References:

Needed from Customer/Vendor/Administrator for Calculations:
Results of ongoing muti-variate regression analysis from vendor for Participant and Control groups

Product: ENERGY STAR Homes

Description:

The ENERGY STAR Homes program provides free inspection and testing services to regular home builders who construct homes to ENERGY STAR standards. Subsidized home builders receive the same services listed and are eligible for a rebate if the house meet an air tightness threshold of 0.15 CFM/surface area. Additionally, prescriptive electric rebates are offered to regular and subsidized builders for installing ENERGY STAR appliances and CFL bulbs. Single-family, duplex, triplex, fourplex, town homes or condo units that have individual heating systems and residential meters that receive electric and/or gas service from Xcel Energy are eligible to participate in the program. Credit for single fuel customers will only be calculated for the fuel served by Xcel Energy.

To obtain a prescriptive electric rebate of up to $500 dollars, regular and subsidized builders must install a combination of three items from the following list: ECM or variable speed furnace fan or air handler, ENERGY STAR clothes washer, dishwasher, refrigerator and 20 ENERGY STAR rated fixtures or bulbs

Algorithms:

Envelope Measures Electric Energy Savings (kWh), Electric Demand Savings (kW) and Natural Gas Savings (Dth)	The subject home will be modeled and tested to determine whether it meets the ENERGY STAR standards, and quantify the level of energy savings are achieved. The Electric Energy Savings (kWh), Electric Demand Savings (kW) and Natural Gas Savings (Dth) for the envelope measures be determined from the modeled savings of the individual home.
ECM Furnace Fan Efficiency Electric Energy Savings (kWh) and Electric Demand Savings (kW)	Energy savings are 621 kWh and demand savings are .250 kW.
Efficient Lighting Electric Energy Savings (Customer kWh)	= Number_of_Bulbs x (kW_base - kW_EE) x Lamp_Hrs
Efficient Lighting Electric Demand Savings (Customer kW)	= Number_of_Bulbs x (kW_base - kW_EE)
20 CFLs Electric Energy Savings (kWh) and Electric Demand Savings (kW)	Energy and demand savings and annual hours of operation for compact fluorescent lamps are based on twenty (20) CFLs installed at the WECC average watts/bulb. Energy savings and demand savings vary by year (2013, 2014 and 2015), see Table 2.
Clothes washer natural gas savings (Dth), electric demand (kW) and electric energy savings (kWh)	Energy savings for the clothes washer were based on the Energy Star Clothes washer Savings Calculator: http://www.energystar.gov/index.cfm?c=clotheswash.pr_clothes_washers. This assumed a gas water heater home, so savings are calculated for both gas and electric. Savings are 0.9 Dth, 0.066 kW and 26 kWh.
Dishwasher natural gas savings (Dth) electric demand (kW) and electric energy savings (kWh)	Energy savings for the dishwasher were based on the Energy Star Dishwasher Savings Calculator: http://www.energystar.gov/index.cfm?c=dishwash.pr_dishwashers. This assumed a gas water heater home, so savings are generated for gas and electric. Savings are 12.7 Dth, .358 kW and 77 kWh.
Refrigerator electric demand (kW) and electric energy savings (kWh)	Energy savings for the refrigerator were based on the Energy Star Refrigerator Savings Calculator: http://www.energystar.gov/index.cfm?c=refrig.pr_refrigerators. Savings are 93 kWh and 0.011 kW.

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Variables:

CF	Coincidence Factor = the probability that peak demand of the lights will coincide with peak utility system demand from Table 2
kW_EE	Average (kW) for the energy efficient lights / CFL's installed. See Table 2.
kW_Base	Average (kW) for the incandescent bulbs that the energy efficient lights / CFL's will replace. Varies by year - See Table 2.
Lamp_Hrs	Annual Operational Hours of the CFL's or other energy efficient lamp installed. See Table 2.
Envelope O&M savings	Operation and Maintenance electric envelope savings for gas or electric only customers will be custom calculated. Envelope O&M savings for combo gas and electric customers is assumed to be 0.
Appliance Water O&M savings -Total	Total O & M savings for clothes washer = 6,978 gallons/yr saved x $0.00693/gallon = $48.32 /yr Total O & M cost for the Dish Washer = 430 gallons/yr saved x 0.00693/gallon = $2.98/yr
Appliance Water O&M savings -Gas	Total O & M savings for clothes washer = $48.32 of which 91% is allocated to gas = $43.93; Total O & M cost for the Dish Washer = $2.98 of which 83% is allocated to gas = $2.47
Appliance Water O&M savings -Electric	Total O & M savings for clothes washer = $48.32 of which 9% is allocated to electric = $4.39; Total O & M cost for the Dish Washer = $2.98 of which 17% is allocated to electric = $0.51

Inputs:
Envelope measure kW, kWh, and Dth savings
Was ECM furnace fan measure completed
Was 20 CFL measure completed?
Was clothes washer measure implemented?
Was dishwasher measure implemented?
Was refrigerator measure implemented?

Assumptions:
No existing CFLs in new home
All homes have gas fuels hot water heaters

Tables:
Table 1. Measure Life, Cost, and Coincidence Factor

Type of measure:	Measure life:	Incremental cost:	Coincidence factor:
Gas Envelope Measures			
Energy Star New Homes (Regular) - Combo	20.00	$ 2,800	N/A
Energy Star New Homes (Low Income) - Combo	20.00	$ 1,900	N/A
Energy Star New Homes (Regular) - Gas only	20.00	$ 2,800	N/A
Energy Star New Homes (Low Income) - Gas only	20.00	$ 1,900	N/A
Gas Prescriptive Measures			
Energy Star Clothes Washer	11.00	$ 200	N/A
Energy Star Dishwasher	11.00	$ 25	N/A
Electric Prescriptive Measures			
ECM Furnace Fan Efficiency	15.00	$ 750	100.00%
CFLs-Quantity of 20 (Required)	8.49	$ 2	8.00%
Energy Star Clothes Washer	11.00	$ 200	4.47%
Energy Star Dishwasher	11.00	$ 25	2.45%
Energy Star Refrigerator	13.00	$ 35	100.00%
Electric Envelope Measures			
Energy Star New Homes (Regular) - Electric Only Customer	20.00	$ 2,800	100.00%
Energy Star New Homes (Low Income) - Electric Only Customer	20.00	$ 1,900	100.00%
Energy Star New Homes (Regular) - Combo Customer	20.00	$ 2,800	100.00%
Energy Star New Homes (Low Income) - Combo Customer	20.00	$ 1,900	100.00%

Table 2. Deemed Watts for CFL Replacement (Reference 17)	quantity	DER Baseline Watts per Bulb	DER Baseline Watts	Energy Efficient CFL Watts	Operational Hours
2013 CFLs	20	58.50	1,170.03	301.76	814.47
2014 CFLs	20	52.27	1,045.40	301.76	814.47
2015 CFLs	20	46.73	934.62	301.76	814.47

Table 3: Existing lighting wattage for residential lights (Reference 17)

CFL Wattage Range	Replaced Incandescent Bulb Wattage (2013)	Replaced Incandescent Bulb Wattage (2014)	Replaced Incandescent Bulb Wattage (2015)	LED Wattage
9 - 12	37.0	33.0	29.0	10.00
13 - 16	55.0	48.5	43.0	13.00
17 - 22	64.5	57.5	53.0	n/a
23 - 30	80.5	76.0	72.0	n/a
31 - 52	150	150	150.0	n/a

References:

1. California Measurement Advisory Committee (CALMAC) Protocols, Appendix F (www.calmac.org/events/APX_F.pdf).
2. 2006 Residential Energy Use Colorado Service Area - Xcel: Bruce Neilson
3. American Housing Survey for Denver - US Census Bureau
4. Xcel Energy CO DSM Potential 2006 - prepared by Kema
5. National Energy Efficiency Best Practices Study - Residential Single-Family Comprehensive Weatherization Best Practices Report from December 2004.
6. RS Means Repair and Remodeling 2007 at a cost of $0.028 per square foot per increase in R-value.
7. National Energy Audit Tool (NEAT) and Frontier estimates.
8. EEBP web site - Tacoma Residential Weatherization program.
9. US Lighting Market Characterization Study performed for the Department of Energy in 2002
10. MEEA/ES Change A Light campaign
info
11. Xcel Energy estimate
12. Draft Technical Support Document: Energy Conservation Standards for Residential Furnaces and Boilers, Efficiency Standards for Consumer Products. Prepared for US DOE, September 2006
13. California Energy Commission's Database for Energy Efficient Resources (DEER)
14. www.energystar.gov
15. DOE 2007
16. Appliance Magazine, September 2007
17. DER Agreement with Joe Plummer. Based on a DOE report table
18. US DOE, US Lighting Market Characterization, Navigant Consulting, 2010. Annual operating hours

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Product: Heating System Rebate

Description:
Prescriptive rebates will be offered for new high-efficiency heating equipment. Rebates for all measures are dependent on equipment efficiency.

Algorithms:

New Furnace & Boiler Savings (Dth)	= ((BTUH x EFFh/EFFb) - BTUH) x (1 - oversize factor) x Hrs / 1,000,000
ECM Furnace Fan Efficiency Electric Energy Savings (kWh) and Electric Demand Savings (kW)	Energy savings are 621 kWh and demand savings are .250 kW.

Variables:

BTUH	= Rated new furnace or boiler Input BTUH nameplate data provided by customer on rebate form.
Oversize Factor	= Oversizing factor on new furnace or boiler Input BTUH nameplate. See Table 2
EFFb	EFFb = 78% for furnaces before new DOE install standards and 90% after New DOE Install Standards; EFFb = 80% for boilers.
EFFh	= Efficiency for higher efficiency furnace will be provided by the customer on the rebate form.
Hrs	= Furnace EC Motor full load hours per year = 2,484 hours = Heating Equivalent Full Load Hours per year = 1,159
Measure Life	= Length of time the furnace equipment will be operational = 18 years (Reference 2); = Length of time the boiler equipment will be operational = 20 years (Reference 2)
Incremental Cost	= Incremental costs based on customer provided efficiency. Refer Table 1 below.

Inputs:
Efficiency of new unit (EFFh)
Furnace or Boiler Nameplate Capacity of new unit at sea level (BTUH, Input)
Was ECM furnace fan motor provided

Assumptions:
Furnace Fan Operating hours include heating hours, cooling hours and ventilation hours
Furnace and Boiler equipment is oversized for safety factor and due to selection size ranges available.

Tables:

Table 1: Incremental cost (Reference 3)	Before DOE's Newest Install Standards	After DOE's New Install Standards
New Energy Star Furnace => 92% AFUE, < 96% AFUE without ECM	$953.76	$108.50
New Energy Star Furnace => 96% AFUE	$1,170.76	$325.50
New Furnace EC Motor	$464.33	$464.33
New boilers => 84% AFUE	$500.00	$500.00
New boilers => 90% AFUE	$2,166.67	$2,166.67
New boilers => 95% AFUE	$4,000.00	$4,000.00

Table 2: Oversize Factor	Oversize factor
New Energy Star Furnace => 92% AFUE, < 96% AFUE	4.9%
New Energy Star Furnace => 96% AFUE	8.8%
New boilers => 84% AFUE	15.3%
New boilers => 90% AFUE	20.9%
New boilers => 95% AFUE	25.1%

References:
1. not used

2. 2007 ASHRAE HVAC Applications Handbook Chapter 36, page 36.3, Table 4 (Boiler life time was reduced to 20 years from 24 years in the ASHRAE Handbook)

3. The incremental costs are based on the California DEER database & estimated incremental installation cost for high efficient furnaces.

Product: Home Energy Squad Services

Description:

Residential natural gas and electric customers can have energy efficiency measures installed while paying for the material costs.

Algorithms:

Efficient Lighting Electrical Energy Savings (Customer kWh)	=Number_of_Bulbs x (kW_Savings_per_Bulb) x lamp_Hours
Efficient Lighting Electrical Demand Savings	=Number_of_Bulbs x (kW_Savings_per_Bulb)
Lighting Measure Life (Years)	= Bulb_Life / CFL_Hours
TV Controller Electrical Energy Savings (Customer kWh)	= (Measured_Watts_WO - Measured_Watts_WITH) / 1000 x Controller_Hours
TV Controller Electrical Demand Savings (Customer kW)	= (Measured_Watts_WO - Measured_Watts_WITH) / 1000
Programmable Thermostat Electrical Energy Savings (Customer kWh)	=Cooling_Delta_T x kWh_Savings_per_Degree
Programmable Thermostat Electric Demand Savings (Customer kW)	=Customer kWh/ Cooling_Hours
Programmable Thermostat Gas Savings (Customer Dth)	=Heating_Delta_T x Dth_Savings_per_Degree
Water Heater Blanket Electrical Energy Savings (Customer kWh)	= (HLF before - HLF with blanket) x 8760 / HE_Elec / 3412 = 550 kWh
Water Heater Blanket Electrical Demand Savings (Customer kW)	= (HLF before - HLF with blanket) x 8760 / HE_Elec / 3412 / Hr Operation = 0.06 kW
Water Heater Blanket Gas Savings (Customer Dth)	= (HLF before - HLF with blanket) x 8760 / HE_Gas / 1,000,000 = 2.17 Dth
Weatherstripping two exterior doors (Customer Dth)	Calculated by MN Ref Home for one door and square root of the sum of squares for subsequent doors. Two exterior doors = 24.6% reduction in air infiltration = 3.2 Dth (Reference 12)
Weatherstripping a third exterior door (Customer Dth)	Calculated by MN Ref Home for one door and square root of the sum of squares for subsequent doors. A third exterior door = 10% further reduction in air infiltration = 1.3 Dth (Reference 12)
Showerhead Electric Savings (Customer kWh)	(GPY_Saved_Shower x Delta_T x 8.33) / HGE_Elec /3412 = 429 kWh
Showerhead Gas Savings (Customer Dth)	= (GPY_Saved_Shower x Delta_T x 8.33) / HGE_Gas / 1,000,000 = 2.23 Dth
Aerator Electric Savings (Customer kWh)	= (GPY_Saved)Aerator x Delta_T x 8.33) / HGE_Elec /3412 = 132 kWh
Aerator Gas Savings (Customer Dth)	= (GPY_Saved_Aerator x Delta_T x 8.33) / HGE_Gas / 1,000,000 = 0.69 Dth

Variables:

Number_of_Bulbs	= Number of CFL bulbs installed, provided by vendor
Bulb Life	10,000 hours (Reference 15)
Reduction Factor	Factor used to reduce the measure life to account for the federal standard increasing minimum bulb efficiency. Values are listed in Table 5.
kW_Savings_per_bulb	= sum of differences between installed CFL wattage and incandescent equivialent wattage as listed in Table 1.
Measured_Watts_WO	= Measured demand for appliancesthat will be connected to controller before controller is installed
Measured_Watts_WITH	= Measured demand for controller with appliances connected when controller is in off state
Lamp_Hours	=The number of hours for lighting lamps will be determined from Table 4. Locations will be provided by the vendor.
Total_hours_existing	=Total hours for the existing efficient lighting bulbs. Vendor will provide number of existing. Hours will be determined from total hours column of Table 4.
Controller_Hours	Hours of operation for the controller determined for each customer based on interview results.
Cooling_Hours	= Full load cooling hours based on average equipment in an average house = 320 (Reference 12)
Hr Operation_Shower	=Annual water heater "on" time to meet hot water demand. For baseline showerhead = 238 Hrs. For Energy Efficient Showerhead = 143 Hours.
Hr Operation_1.5 gpm Aerator	=Annual water heater "on" time to meet hot water demand. For baseline aerator = 92 Hrs. For Energy Efficient 1.5 gpm aerator = 63 Hours.
Hr Operation_1.0 gpm Aerator	=Annual water heater "on" time to meet hot water demand. For baseline aerator = 92 Hrs. For Energy Efficient 1.0 gpm aerator = 42 Hours.
Cooling_Delta_T	Average difference between normal operation and cooling setback temperature in degrees F based on information provided by the customer during the interview.
kWh_Savings_per_Degree	= 98 kWh per degree F of setback (Reference 12)
Heating_Delta_T	Average difference between normal operation and heating setback temperature in degrees F based on information provided by the customer during the interview.
Dth_Savings_per_Degree	= 3.0 Dth per degree F of setback (Reference 12)
HGE_Elec	Steady state efficiency of electric water heater = 0.90
HGE_Gas	Steady state efficiency of gas water heater = 0.59
GPY_Saved_Shower	3,806 gallons of hot water saved per year for Showerheads (Reference 13)
GPY_Saved_Aerator	1,014 gallons of hot water saved per year for Aerator (Reference 13)
8.33	Conversion from gallons to pounds - 1 gallon weighs 8.33 pounds
1,000,000	Conversion from BTU to Dth
Delta_T	= Temperature difference in water from incoming cold to heated in WH tank in Degrees F. = 74 (Reference 13,14)
O&M savings Showerhead	= Showerhead has 3806 gallons per year of total (hot plus cold) water savings or $26.37 based on water savings and St Paul Water/Sewer rates.
O&M savings Aerator	= Aerator has 1,014 gallons per year of total (hot plus cold) water savings or $6.96 based on water savings and St Paul Water/Sewer rates.
Splt of Incremental cost for Thermostat	Assumes 25% electric and 75% gas
Conversion Factor from btu to kWh or kW	1 kWh = 3412 Btu

Inputs:

Hot water energy source (gas/electric)
Number of new CFLs installed.
Size of newly installed CFL bulbs
Room in which new CFLs are installed
Wattage and hours of use of TV cluster with and without controller
Temperature setup/setback pattern for each day of week for heating and cooling seasons.
Was door weather stripping measure completed?
Number of low flow showerheads installed
Number of low flow aerators installed
Was a water heater blanket installed?
Water Heater setback starting and ending temperature
Occupancy sensor for CFLs installed

Assumptions:
All homes have at least one door weather sealed and 55% of the homes will have a second exterior door weather sealed.

Tables:
Table 1: Existing lighting wattage for residential lights (Reference 17)

CFL Wattage Range	Replaced Incandescent Bulb Wattage (2013)	Replaced Incandescent Bulb Wattage (2014)	Replaced Incandescent Bulb Wattage (2015)	LED Wattage
9 - 12	37.0	33.0	29.0	10.00
13 - 16	55.0	48.5	43.0	13.00
17 - 22	64.5	57.5	53.0	n/a
23 - 30	80.5	76.0	72.0	n/a
31 - 52	150	150	150.0	n/a

Table 2: Measure Life, Coincidence Factor, and Hours (Reference 6, 11)

Type of measure:	Measure life:	Coincidence Factor:	Hours of Operation
CFLs		8% (Reference 11)	
TV cluster power controller	15	80%	Varies
Programmable thermostat (Cooling)	15	90%	EFLH=320
Programmable thermostat (Heating)	15	na	
Weatherstripping	10	0%	
Low flow showerheads elec HW	6	0%	See Variables
Low flow aerators (1.5 & 1.0 gpm) elec HW	5	0%	See Variables
Water heater blanket elec HW	7.5	0%	8760

Table 3: Measure Costs / Allocations to Gas/Elec

	Vendor CEE Cost ($/Unit)	Vendor NEC Cost ($/Unit)	Cost Allocation
Dimmable CFL's	5.00	5.00	Electric
LED Lights	25.00	25.00	Electric
TV Smart Controller	20.00	5.00	Electric
Programmable Thermostat	35.00	35.00	25% Electric 75% Gas
Weatherstripping	N/A	10.00	Gas

Table 4: CFL Hours (Reference 1)

Location	Lamp-hr/space
Exterior(s)	959
Kitchen(s)	853
Living / Family Room(s)	737
Dining Room(s)	700
Office(s)	673
Basement(s)	591
Bedroom(s)	576
Bathroom(s)	572
Garage(s)	554
Laundry / Utility Room(s)	552
Hall(s)	535
Closet(s)	503
Other / Unknown	359

References:
1. US Lighting Market Characterization Study performed for the Department of Energy in 2010
2. California Measurement Advisory Committee (CALMAC) Protocols, Appendix F (www.calmac.org/events/APX_F.pdf).
3. National Energy Efficiency Best Practices Study - Residential Single-Family Comprehensive Weatherization Best 4. Practices Report from December 2004.
4. RS Means Repair and Remodeling 2007 at a cost of $0.028 per square foot per increase in R-value.
5. National Energy Audit Tool (NEAT) and Frontier estimates
6. Consumer Electronics Characteristics http://standby.lbl.gov/summary-table.html
7. Draft Technical Support Document: Energy Conservation Standards for Residential Furnaces and Boilers, Efficiency Standards for Consumer Products. Prepared for US DOE, September 2006
8. California Energy Commission's Database for Energy Efficient Resources (DEER)
9. www.energystar.gov
10. Not Used
11.CFL METERING STUDY FINAL REPORT, Prepared for: Pacific Gas & Electric Company, San Diego Gas & Electric Company, Southern California Edison Company, 2005 - Composite wattages and coincidence factor
12. Average home matching the consumption characteristicts for MN was modeled in RemRate, home characteristicts: 1440 SF 0.78 AFUE furnace, 3 ton, 10 SEER AC unit
13. Department of Energy Domestic Hot Water Appliance Calculator
14. "The effects of variation in body temperature on the preferred water temperature and flow rate during showering" Authors: Tadakatsu Ohnaka, Yutaka Tochihara, Yumiko Watanabe. Affiliations: a) Department of Physiological Hygiene, The Institute of Public Health, Minato-ku, Tokyo, Japan; b) Faculty of Home Economics, Jissen Women's University, Hino, Tokyo, Japan.
15. Hours used represent the life expectancy for the CFL bulbs for the majority of bulbs from manufacturers.
16. Internal Analysis of declining savings with new incandescent efficiency standards. See home lighting program for more details.
17. DER Agreement with Joe Plummer. Based on a DOE report table

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Product: Home Lighting

Description:

Home Lighting product encourages the purchase of compact fluorescent lamps (CFLs) and Light Emitting Diodes (LEDs) and recycling of all fluorescent lamps.

Algorithms:

Electrical Energy Savings (Customer kWh)	=Number_of_Bulbs x (kW_Savings_per_Bulb) x Hours x cooling_kWh_factor
Electrical Demand Savings (Customer kW)	=Number_of_Bulbs x (kW_Savings_per_Bulb) x cooling_kW_factor
Measure Life (Years)	= (Bulb_Life / Hours) - Reduction Factor

Variables:

Number_of_Bulbs	= Number of bulbs sold (94% Residential 6% Business)
kW_Savings_per_Bulb	= kW savings per replaced bulb. We will subtract the manufacturer provided wattage for each CFL/LED from the wattage of the incadesent bulb it replaces. The incadescent wattages will be determined based on the CFL/LED wattage as seen in Table 1.
Hours	= Residential hours of operation per year for the bulb based on 4 bulbs being installed with an average operating hours of 838, Non residential hours are 3,729.
cooling_kWh_factor	Cooling system energy savings factor from energy efficient lighting. Reduction in lighting energy results in a reduction in cooling energy. We will use 1.0 for residential and 1.11 for business.
cooling_kW_factor	Cooling system demand savings factor from energy efficient lighting. Reduction in lighting demand results in a reduction in cooling demand. We will use 1.0 for residential and 1.33 for business.
CF	= Coincident factor - Probability that peak demand of the bulb will coincide with peak utility system demand. 0.08 will be used for all CFLs based on Reference 1. and 85.58% for non residential lights.
Incremental Cost of Bulbs	= From Table 2 for CFLs, $37.47 for LEDs
Bulb Life	10,000 hours for a CFL (Reference 4) 25,000 for a LED
O&M savings	= Operation and Maintenance savings are assumed to be zero for residential. For business, we will take an O&M $ penalty for the extra gas used to offset the heating load from the higher wattage bulb in the baseline case. The additional cost will be calculated by multiplying the appropriate gas rate by 0.00088738 Dth/kWh.

Inputs:

Number and size of bulbs purchased

Assumptions:

Average house in MN already has 7 CFLs installed

Customers purchase 4 bulbs at a time

Table 1 - Existing lighting wattage for residential lights (Reference 1)

CFL Wattage Range	Replaced Incandescent Bulb Wattage (2013)	Replaced Incandescent Bulb Wattage (2014)	Replaced Incandescent Bulb Wattage (2015)	LED Wattage
9 - 12	37.0	33.0	29.0	10.00
13 - 16	55.0	48.5	43.0	13.00
17 - 22	64.5	57.5	53.0	n/a
23 - 30	80.5	76.0	72.0	n/a
31 - 52	150	150	150.0	n/a

Table 2 - Average Cost Table (Reference 3)

	60 W Incan	75 W Incan	Avg (50% 60W & 50% 75W)
Baseline Watts	60	75	63.15
CFL Watts	13	18	15.55
Baseline Price	$0.50	$0.50	$ 0.50
CFL Retail Price*	$2.84	$3.75	$ 3.03
Mfgrs Discount	$0.44	$1.24	0.61
CFL Incremental Price	$2.40	$2.51	$2.42
Rebate	$1.20	$1.20	$1.20
Net Retail	$1.20	$1.31	$1.22

References:

1. DER Agreement with Joe Plummer. Based on a DOE report table
2. US DOE, US Lighting Market Characterization, Navigant Consulting, 2010. Annual operating hours
3. Cost Data Source: www.bulbs.com
4. Hours used represent the life expectancy for the CFL bulbs for the majority of bulbs from manufacturers.

Product: Home Performance with ENERGY STAR Rebates

Description:

Residential natural gas and electric combo customers receive a cash rebate for implementing multiple energy efficiency improvements. Customers must have at least 20 CFLs (new or installed), and complete attic insulation and bypass sealing, and air sealing and weatherization measures to receive rebate.

Algorithms:

CFL Electric Energy Savings (Customer kWh)	= Number_of_Bulbs x (kW_Base - kW_EE) x CFL_Hours
CFL Electric Demand Savings (Customer kW)	= Number_of_Bulbs x (kW_Base - kW_EE)
CFL_Hours	= (Total_hours_all - Total_hours_existing) / Number_of_Bulbs
Refrigerator recycling electric energy and demand savings (Customer kWh and Customer kW)	Energy savings for the refrigerator are based on shipment-weighted average efficiencies of units manufactured from 1993-2000 with appropriate degradation factors applied to calculate baseline energy consumption (http://enduse.lbl.gov/Projects/RED.html) Demand savings are based on using an Average kW/Peak kW ratio from Deemed Refrigerator Savings for Texas developed by Frontier Associates. Reference 8. Savings is 988.9 kWh and 0.13 kW.
Refrigerator replacement electric energy and demand savings (Customer kWh and Customer kW)	Energy savings for the refrigerator were based on the Energy Star Refrigerator Savings Calculator: http://www.energystar.gov/index.cfm?c=refrig.pr_refrigerators. Savings is 93.41 kWh and 0.011 kW.
ECM Furnace Fan Efficiency Electric Energy Savings (Customer kWh) and Electric Demand Savings (Customer kW)	Energy savings are 621 kWh and demand savings are .21 kW.
Dishwasher natural gas savings (Dth) and electric energy and demand savings (Customer kWh and Customer kW)	Energy savings for the dishwasher were based on the Energy Star Dishwasher Savings Calculator: http://www.energystar.gov/index.cfm?c=dishwash.pr_dishwashers. This assumed a gas water heater home, so savings are generated for gas and electric. Savings is 1.27 Dth, 77 kWh and 0.36 kW.
Clothes washer natural gas savings (Dth) and electric energy and demand savings (Customer kWh and Customer kW)	Energy savings for the clotherswasher were based on the Energy Star Clotherswasher Savings Calculator: http://www.energystar.gov/index.cfm?c=clotheswash.pr_clothes_washers. This assumed a gas water heater home, so savings are generated for gas and electric. Savings is 0.88 Dth, 26 kWh and 0.66 kW.
Quality Installation of High Efficiency AC Electrical Energy Savings (Customer kWh)	= Tons x kWh_standard/ton x (SEER_Eff / (1-Loss_No_QI) - SEER_Standard / (1-Loss_QI)) / SEER_Eff
Quality Installation of High Efficiency AC Electrical Demand Savings (Customer kW)	= Tons x (12/EER_Standard - 12/EER_Eff x ((1-Loss_No_QI)/(1-Loss_QI)))
EER =	= Energy Efficiency Ratio = -0.02*SEER^2 + 1.12 * SEER
Occupancy Sensor electric energy savings (kWh) and electric demand savings (kW)	Occupancy sensor savings are based on installing the sensors on 3-13 Watt CFL bulbs in high use areas yielding 20% reduction in electric energy use. Savings are 9 kWh and 0 kW.
Life Expectancy (years)	= (Bulb_Life / CFL_Hours)
CFL Measure Life (years)	= (Bulb_Life / CFL_Hours) - Reduction Factor
REQUIRED: Attic insulation and bypass sealing natural gas savings (Dth).	= (1 / (2 +Attic_Pre_R) - 1 / (2+Attic_Post_R)) x Attic SF x Dth_Per_SF_Attic
Attic insulation and bypass sealing electric cooling savings - Customer_kWh_cool	= (1 / (2 +Attic_Pre_R) - 1 / (2+Attic_Post_R)) x Attic SF x kWh_Per_SF_Attic_cool
REQUIRED: Air sealing and weather-stripping natural gas savings (Dth).	= (Baseline Dth/yr - High Efficient Dth/yr) = 80.9 - 74.4 = 6.5 Dth/yr
Wall insulation natural gas savings (Dth).	=Dth_Per_SF_Wall x Wall_SF
Wall insulation electric cooling savings - Customer_kWh_cool	=kWh_Per_SF_Wall_cool x Wall_SF
Setback thermostat natural gas savings (Dth).	Energy savings for the thermostat setback were calculated in RemRate modeling using a baseline model home calibrated to typical home size and characteristics for the Minneapolis/St.Paul area. Natural gas savings = 74.4 - 71.8 = 2.6 Dth/yr
New HE Furnace & Boiler Savings (Dth)	= ((BTUH x EFFh/EFFb) - BTUH) x (1 - Oversize Factor) x Hrs / 1,000,000
Storage Water Heater Baseline Efficiency Factor (EF_Base)	= .67 - 0.0019 x Volume (Reference 4)
Storage Water Heater Baseline Natural Gas consumption (Baseline_WH Dth)	Baseline consumption for tank water heaters = Volume x Dth_per_gallon / EF_Base
Tankless Water Heater Baseline Natural Gas consumption (Baseline_WH Dth)	Tankless water heater baseline is assumed to be a 40 gallon storage tank water heater = 21.2 Dth (Using equation above and Reference 2)
Storage & Tankless Water Heater Energy Efficient Natural Gas Consumption (Efficient_WH Dth)	= Baseline_WH Dth x EF_Base / EF_Eff
Storage & Tankless Water Heater Natural Gas Savings (Dth)	= Baseline_WH Dth - Efficient_WH Dth

Variables:

Number_of_Bulbs	= Number of newly installed CFL bulbs provided by the vendor
Total_hours_all	=Total hours for the existing plus new CFL bulbs. vendor will provide the total number of cfl bulbs (new plus existing). Hours will be determined from total hours column of Table 5.
Total_hours_existing	=Total hours for the existing CFL bulbs. vendor will provide number of existing. Hours will be determined from total hours column of Table 5.
Hours_Electric_cool	Hours of electric cooling operations to meet cooling requirements = 384
Bulb Life	10,000 hours (Reference 3)
kW_EE	= Actual kW for the installed CFLs provided by vendor
kW_Base	= kW for the incandecent equivilant bulbs. vendor will provide sizes of the installed CFLS and the incandecent equivilants will be determined from Table 1.
Tons	= AC capacity in tons, provided by vendor
SEER_Standard	= Seasonal Energy Efficiency Ratio of standard equipment, based upon the minimum Federal standard for efficiency as manufactured. For residential AC units, we will use 13 SEER.
SEER_Eff	= Seasonal Energy Efficiency Ratio of High Efficiency equipment that the vendor will install, provided by the vendor
EER_Standard	= EER of standard equipment, based upon the minimum Federal acceptable efficiency. We will use 11.18 based on the federal standard 13 SEER and the conversion given in above.
EER_Eff	= EER of High Efficiency that the vendor will install, provided by vendor. If value is not provided by the vendor we will use the conversion listed above.
Loss_No_QI	Efficiency of average unit lost due to improper installation. We will use 30.5% which is the summation of the following losses: Equipment sizing = 3%, Refrigeration Charge = 13%, Improper air flow = 7%, Duct leaks = 7.5%
Loss_QI	Efficiency of average unit lost due to improper installation. In existing homes all non-QI losses will be eliminated except for the duct leakage losses. Duct leakage losses in an existing home will be cut in half resulting in a Loss_QI for existing homes of 3.75%.
kWh_Standard/Ton	The kWh for the modeled home with 2 Ton 13 SEER AC unit was 1043. We will use 1043/2 = 521.5 kWh/ton. Modeling used is RemRate simulation model.
CF	= Coincidence Factor, the probability that peak demand savings will coincide with peak utility system demand. Refer Table 3.
Non-Energy O&M savings	Operation and Maintenance savings are due to water savings. For efficient clothes washer = $48.36 and dishwasher = $2.98 .
Energy O&M savings	Energy O&M is assumed to be zero.
Attic_Pre_R	= Insulation R value for the attic before installation of additional insulation provided by vendor. Vendor provided value increased by 2R to account for ceiling structure.
Attic_Post_R	= Insulation R value for the attic after project is complete provided by vendor. Vendor provided value increased by 2R to account for ceiling structure.
Dth_Per_SF_Attic_per_dU-value	= Dth loss per square foot of attic per change in U-value coefficient for home in MN heated with 0.78 AFUE furnace from REMRate model = 0.3308
kWh_Per_SF_Attic_cool	= kWh loss per square foot of attic coefficient for home in MN cooled with electricicty from REMRate model = 3.06 This value does not incorporate insulation.
Attic SF	= Square footage of the attic to which insulation was added, provided by vendor
Wall_SF	= Square footage of the wall to which insulation was added, provided by vendor
Dth_Per_SF_Wall	= Dth loss per square foot of wall coefficient for home in MN heated with 0.78 AFUE furnace from REMRate model = 0.02964. This value incorporates the change from R-3 to R-11 insulation in the wall.
kWh_Per_SF_Wall_cool	= kWh loss per square foot of wall coefficient for home in MN cooled with electricity from REMRate model = 0.055. This value incorporates the change from R-3 to R-11 insulation in the wall.
BTUH	= Rated furnace boiler Input BTUH nameplate data provided by vendor.
EFFb	= 78% for furnaces; = 80% for boilers.
EFFh	= Efficiency for higher efficiency furnace will be provided by the vendor.
Oversize Factor	= See Table 6 for boiler and furnace oversize factors.
Hrs	Tables 3 & 4
Measure Life	Tables 3 & 4
Incremental Cost	Tables 3 & 4
Volume	= Volume of the new storage tank water heater provided by the vendor
Dth_per_gallon	Dekatherms of output required per gallon of storage tank water heaters. A value of 0.3148 will be used. This values was derived from the DOE WH Calcs.
EF_Eff	= Energy Factor of the Efficient water heater (Storage Tank or Tankless) provided by the vendor.

Inputs:
Type of Measures Implemented
Curent and installed Number & Wattages of CFLs (Completion Required)
Tons, SEER_Eff, EER_Eff of AC
Type of Measures Implemented
Attic insulation and bypass sealing was completed (Completion Required)
Attic-sf area:Insulated attic space square feet (Completion Required)
R beginning: R value of original insulation in attic
R finish: R value of attic insulation added
Air sealing and weather stripping was completed
Wall insulation was completed
Wall-sf area: Sq Ft wall insulated
BTUH (Rated furnace or boiler Input BTUH)
EFFh (Efficiency for higher efficiency furnace or boiler)
EF_Eff (Energy Factor of the Efficient water heater - Storage Tank/Tankless)
Volume of new water heater

Assumptions:

Adjusted were made to the CFL lifetime to reflect the new Federal Mandates on the phase out of the standard incandescent light bulbs.
Attic Insulation calculations based on an average 1440 SF house with a 0.78 AFUE furnace and 10 SEER AC Unit
Wall insulation projects will increase insulation from R-3 to R-11

For attic insulation calculations, the 2 added to the existing and new insulation R values represents the air film and insulative properties of the ceiling structure.

The baseline home had an existing ACH of 5.0 and the change case had a 30% reduction to 3.5 ACH.
Baseline Water Heater for tankless type WH is a 40 gallon storage tank water heater with EF = 0.594
Home Hot Water usage is proportional to the size of the storage tank selected, for example a home with a 60 gallon tank will use 50% more water than the baseline home with a 40 gallon storage tank

Tables:

Table 1: Existing lighting wattage for residential lights (Reference 17)

CFL Wattage Range	Replaced Incandescent Bulb Wattage (2013)	Replaced Incandescent Bulb Wattage (2014)	Replaced Incandescent Bulb Wattage (2015)	LED Wattage
9 - 12	37.0	33.0	29.0	10.00
13 - 16	55.0	48.5	43.0	13.00
17 - 22	64.5	57.5	53.0	n/a
23 - 30	80.5	76.0	72.0	n/a
31 - 52	150	150	150.0	n/a

Table 2 - Not Used

Table 3: Measure Life, Incremental Cost, Concidence Factor & Hours of Operation for Electric Measures

Electric Measures	Measure Life	Incremental Cost	Coincidence Factor	Hours
CFLs - 2013 (Required)	Calculated	$1.92 per bulb	8%	Calculated
CFLs - 2014 (Required)	Calculated	$1.92 per bulb	8%	Calculated
CFLs - 2015 (Required)	Calculated	$1.92 per bulb	8%	Calculated
Attic/Wall Insulation	20.00	collected	81% for cooling	384 for cooling
LED Lights	28.74	$ 37.47	8%	870
Refrigerator Recycling	8.00	$ -	55%	4,818
Energy Star Refrigerator	13.00	$ 30.00	55%	4,818
Freezer Recycling	9.70	$ -	55%	4,818
ECM Furnace Fan Efficiency	15.00	$ 464.33	70%	2,484
Dishwasher	11.00	$ 30.00	2%	215
Clothes Washer	11.00	$200	2%	392
Quality Installation of High Efficiency AC =>14.5 SEER, < 15 SEER	14.00	$ 444.50	90%	753
Quality Installation of High Efficiency AC =>15 SEER, < 16 SEER	14.00	$ 592.67	90%	739
Quality Installation of High Efficiency AC =>16, < 17 SEER	14.00	$ 1,259.00	90%	762
Quality Installation of High Efficiency AC =>17	14.00	$ 889.00	90%	762
Occupancy Sensors in high use area	10.00	$ 116.00	8%	1,210
Timer Power Strip	15.00	$ 5.00	80%	4,420

Table 4 Measure Life, Incremental Cost, & Hours of Operation for Gas Measures (reference 6-11)

Gas Measures	Measure Life	Incremental Cost	Hours
Attic insulation & bypass sealing (Required)	20.00	collected	4,704.00
Air sealing & weather-stripping (Required)	7.00	collected	4,704.00
Wall insulation; sub-siding or cavity	20.00	collected	4,704.00
Setback thermostat	5.00	$ 50.00	4,704.00
New Energy Star Furnace => 92% AFUE, < 94% AFUE	18.00	$ 953.76	1,159.33
New Energy Star Furnace => 94% AFUE	18.00	$ 706.43	1,159.33
New boilers => 84% AFUE	18.00	$ 500.00	1,159.33
Tankless hot water heater 0.82 EF	20.00	$ 1,920.85	N/A
Tankless hot water heater 0.90 EF	20.00	$ 1,417.66	N/A
Storage Water Heater .62 EF	13.00	$ 80.30	N/A
Storage Water Heater .64 EF	13.00	$ 135.82	N/A
Storage Water Heater .67 EF	13.00	$ 550.72	N/A
Storage Water Heater 0.70 EF	13.00	$ 547.52	N/A

Table 5: CFL Hours (Reference 1)

Location	Lamp-hr/space
Exterior(s)	959
Kitchen(s)	853
Living / Family Room(s)	737
Dining Room(s)	700
Office(s)	673
Basement(s)	591
Bedroom(s)	576
Bathroom(s)	572
Garage(s)	554
Laundry / Utility Room(s)	552
Hall(s)	535
Closet(s)	503
Other / Unknown	359

Table 6: Oversize Factor	**Oversize factor**
New Energy Star Furnace => 92% AFUE, < 96% AFUE	4.9%
New Energy Star Furnace => 96% AFUE	8.8%
New boilers => 84% AFUE	15.3%
New boilers => 90% AFUE	20.9%
New boilers => 95% AFUE	25.1%

References:

1. CFL METERING STUDY FINAL REPORT, Prepared for: Pacific Gas & Electric Company, San Diego Gas & Electric Company, Southern California Edison Company, 2005 - Composite wattages and coincidence factor

2. Building America, Research Benchmark Definitions, p. 9, http://www.eere.energy.gov/buildings/building_america/pdfs/37529.pdf
3. CFL Hours used represent the life expectancy for the CFL bulbs for the majority of bulbs from manufacturers.
4. RemRate Model for average MN Home
5. energystar.gov
6. Xcel Energy Assumption
7. CADMAC
8. Source: Draft Technical Support Document: Energy Conservation Standards for Residential Furnaces and Boilers, Efficiency Standards for Consumer Products: Residential Central Air Conditioners And Heat Pumps, Prepared for US DOE, September 2006.
9. CADMAC limied by Xcel Policies
10. http://www.aceee.org/consumerguide/waterheating.htm
11. Source http://www.calmac.org/events/EULs_for_DEER_07-19-05.xls.

Product: Insulation Rebate Program

Description:

Residential natural gas and electric customers receive a cash rebate for installing insulation in their existing single-family home or one-to-four unit property.

Algorithms:

Attic insulation natural gas savings (Dth)	= (1 / (2 +Attic_Pre_R) - 1 / (2+Attic_Post_R)) x Attic SF x Dth_Per_SF_Attic
Attic insulation and bypass sealing electric heating savings - Customer_kWh_heat	= (1 / (2 +Attic_Pre_R) - 1 / (2+Attic_Post_R)) x Attic SF x kWh_Per_SF_Attic_heat
Attic insulation and bypass sealing electric cooling savings - Customer_kWh_cool	= (1 / (2 +Attic_Pre_R) - 1 / (2+Attic_Post_R)) x Attic SF x kWh_Per_SF_Attic_cool
Attic insulation and bypass sealing electric savings - Customer kWh	= Customer_kWh_heat + Customer_kWh_cool
Attic insulation and bypass sealing savings - Electric Resistance Heating - Customer kW	= Customer_kWh_heat / Hours_Electric_heat OR Customer_kWh_cool / Hours_Electric_cool (whichever is greater)
Air sealing and weather-stripping natural gas savings (Dth)	Energy savings for the air sealing were calculated with REM/Rate using a Standard Reference MN home model with typical home characteristics and calibrated to match energy use for the area. = 3.9 Dth
Air sealing and weather-stripping savings - Electric Resistance Heating - Customer kWh	Energy savings for the air sealing and weather-stripping were calculated with REM/Rate using a Standard Reference MN home model with typical home characteristics, calibrated to match energy use for the area and using resistance electric heating and standard 10 SEER AC Unit. = 850 kWh for heating and 0 kWh for cooling
Air sealing and weather-stripping savings - Electric Resistance Heating - Customer kW	= Electric demand savings = Air Sealing Customer kWh / Hours_Electric
Wall insulation natural gas savings (Dth)	=Dth_Per_SF_Wall x Wall_SF
Wall insulation electric heating savings - Customer_kWh_heat	=kWh_Per_SF_Wall_heat x Wall_SF
Wall insulation electric cooling savings - Customer_kWh_cool	=kWh_Per_SF_Wall_cool x Wall_SF
Wall insulation electric energy savings - Customer kWh	= Customer_kWh_heat + Customer_kWh_cool
Wall insulation savings - Electric Resistance Heating - Customer kW	= Customer_kWh_heat / Hours_Electric_heat OR Customer_kWh_cool / Hours_Electric_cool (whichever is greater)

Variables:

Hours_Gas	Hours of furnace operation to meet heating requirements = 977
Hours_Electric	Hours of electric heating operations to meet heating requirements = 937
Hours_Electric_cool	Hours of electric cooling operations to meet cooling requirements = 384
Dth_Per_SF_Attic	= Dth loss per square foot of attic coefficient for home in MN heated with 0.78 AFUE furnace from REMRate model = 0.3308 Dth / sq.ft. / delta U-value.
kWh_Per_SF_Attic_heat	= kWh loss per square foot of attic coefficient for home in MN heated with electric resistive heat from REMRate model = 72.215 kWh / sq.ft. / delta U-value.
kWh_Per_SF_Attic_cool	= kWh loss per square foot of attic coefficient for home in MN cooled with electricicty from REMRate model = 3.06 kWh / sq.ft. / delta U-value.
Dth_Per_SF_Wall	= Dth loss per square foot of wall coefficient for home in MN heated with 0.78 AFUE furnace from REMRate model = 0.02936. This value incorporates the change from R-4 to R-11 insulation in the wall.
kWh_Per_SF_Wall_heat	= kWh loss per square foot of wall coefficient for home in MN heated with electric resistance heat from REMRate model = 6.417. This value incorporates the change from R-4 to R-11 insulation in the wall.
kWh_Per_SF_Wall_cool	= kWh loss per square foot of wall coefficient for home in MN cooled with electricity from REMRate model = 0.055. This value incorporates the change from R-4 to R-11 insulation in the wall.
Coincidence Factor (CF)	Probability that savings will occur during Xcel's system peak periods (90% for cooling savings impact)
Non-Energy O&M savings	= Operation and Maintenance savings are assumed to be zero for the insulation rebates.
Energy O&M savings	For those homes in NSP gas-only territory with mechanical cooling systems, energy O&M will be associated with the electric cooling savings for reduction of conduction through the building envelope. It will be calculated by applying the average residential rate of $0.108467/kWh to the kWh savings.

Inputs:
Heating System Fuel - gas or electric?
Was attic insulation and bypass sealing completed?
Attic insulation square footage
Attic insulation existing R value
Post insulation attic R value
Was air sealing and weather stripping completed?
Was wall insulation completed?
Wall insulation square footage
Cost of attic insulation
Cost of air sealing and weather sealing
Cost of wall insulation

Assumptions:
For attic insulation, we will take actual existing R values for the baseline and actual complete R values for the high efficiency.
The baseline home had an existing ACH natural of 0.60 and the change case had a 25% reduction to 0.45 ACH natural.
The baseline home had an existing level of insulation in the walls of R-4 and the change case had an elevated insulation level of R-11.
Hypothetical MN home that meets energy use with common construction features
Energy modeling with REM RATE 12
For attic insulation calculations, the 2 added to the existing and new insulation R values represents the air film and insulative properties of the ceiling structure.

Tables:
Table 1: Measure lives and incremental costs

Type of insulation:	Measure life:	Incremental cost:
Attic insulation and bypass sealing	20 years (Reference 1)	Will use actual Costs
Air sealing and weather-stripping	7 years (Reference 1)	Will use actual Costs
Wall insulation	20 years (Reference 1)	Will use actual Costs

References:
1. California Measurement Advisory Committee (CALMAC) Protocols, Appendix F (www.calmac.org/events/APX_F.pdf).
2. 2005 Residential Home Use Study MN - Xcel Energy: Bruce Neilson
3. National Energy Efficiency Best Practices Study - Residential Single-Family Comprehensive Weatherization Best Practices Report from December 2004.

Product: Refrigerator Recycling

Description:

Rebates will be offered for pickup of a secondary working refrigerator or freezer that will be demanufactured and re-cycled. Program will be offerd only during select periods throughout the year to reduce the liklihood of a customer moving an old primary unit soley to participate in the program.

Algorithms:

Refrigerator Electrical Energy Savings (Customer kWh)	= Base kWh - Efficient kWh
Refrigerator Electrical Demand Savings (Customer kW)	= Customer kWh / Hours_of_operation

Variables:

Baseline Product Consumption - Base kWh	= Baseline Product Consumption is the predicted future consumption of refrigerator being removed as seen in Table 1 based on the year of manufacture which will be provided by the vendor for each refrigerator. (Reference 1) Freezer base kWh is 85% of that for refrigerators
Efficient Product Consumption - Efficent kWh	= Efficient Product Consumption is 0 kWh when unit has been demanufacturered.
Measure Life	= Measure life is assumed to be the remaining service life of the existing refrigerators that are removed under this program. = 8.0 years. Freezers = 9.7 years (Reference 2)
Incremental Costs	= $0
O&M savings	= Operation and Maintenance savings are assumed to be zero for refrigerator recycling.
CF	= Coincidence Factor = 55%; probability that refrigerator will be operating during the peak period. (Reference 3)
Hours of Operation	= 4,818 hr/yr (Reference 3)

Needed from Customer/Vendor/Administrator for Calculations:

Confirm removal of working refrigerator
Year of manufacture for the working refrigerator

Assumptions:

Rebates are available only for working secondary units released by owners.

Table 1
Deemed Savings by Age of Refrigerator (Reference 1)

Year of Manufacture	Deemed Savings kWh
1970	2,546
1971	2,530
1972	2,515
1973	2,375
1974	2,304
1975	2,183
1976	2,029
1977	1,933
1978	1,844
1979	1,729
1980	1,599
1981	1,485
1982	1,452
1983	1,398
1984	1,369
1985	1,320
1986	1,274
1987	1,165
1988	1,143
1989	1,096
1990	1,187
1991	1,180
1992	1,173
1993	822
1994	815
1995	809
1996	804
1997	799
1998	794
1999	790
2000	785
2001 to present	540

Changes From 2011:

Added Freezers

References

1. Baseline kWh and Average to peak kW ratio from Energy Data Sourcebook for the U.S. Residential Sector. Berkeley, CA: Lawrence Berkeley National Laboratory. LBNL-40297

2. 9th year Persistence Study for Southern California Edison KEMA - Xenergy; 2004
3. Coincidence factor is Average load factor from Appliance Recycling Centers of America (ARCA)

Product: High Efficiency Air Conditioning

Description:
Prescriptive rebates will be offered for new cooling equipment. Rebates for all measures except Ground Source Heat Pump (GSHP) are dependent on equipment efficiency and size. Rebate for GSHP is based on equipment size.

Algorithms:
Conversions

Seasonal Energy Efficiency Ratio (SEER)	= Total seasonal cooling output (kBtuh) / Total electrical input (kWh); for estimating seasonal performance
Energy Efficiency Ratio (EER)	= Rated cooling output (kBtuh) / Rated electrical input (kW) for equipment tested at 95F estimating peak cooling performance; EER = -0.02 x SEER^2 + 1.12 x SEER .This equation relating EER to SEER applies to all equipment in this program, and will be used if EER rating is not available. (Reference 1)
kW/ton	= 12 / Energy Efficiency Ratio
Energy Efficiency Ratio	= 3.413 x Coefficient of Performance

For Split System Air Conditioners and Heat Pumps

New Equipment Electrical Energy Savings (Customer kWh)	= Size x EFLH x (12/SEER_Standard - 12/SEER_Eff) / (1-Loss_No_QI)
New Equipment Electrical Demand Savings (Customer kW)	= Size x (12/EER_Standard - 12/EER_Eff)
Quality Install Electrical Energy Savings (Customer kWh)	= Size x EFLH x (12/SEER_Eff) x (1/(1-Loss_No_QI) - 1/(1-Loss_QI))
Quality Install Electrical Demand Savings (Customer kW)	= Size x (12/EER_Eff) x (1 - ((1-Loss_No_QI) / (1-Loss_QI)))
Ground Source Heat Pump Energy Savings (Customer kWh)	= Size x EFLH x (12/SEER_Standard - 12/EER_Eff)

Variables:

Size	= The equipment capacity in tons, provided by customer
EFLH	= Equivalent Full Load Hours. The Equivalent number of hours that equipment would be running at Full Load over the course of the year. We will use 564.96 EFLH which was determined by modeling a home in Minneapolis with a 2 ton 13 SEER AC unit. The resulting kWh were divided by the connected load to derive the EFLH value. Modeling used is RemRate simulation model.
SEER_Standard	= Seasonal Energy Efficiency Ratio of standard equipment, based upon the minimum Federal standard for efficiency as manufactured. For residential AC units, we will use 13 SEER.
SEER_Eff	= Seasonal Energy Efficiency Ratio of High Efficiency equipment that the customer will install, provided by the customer
EER_Standard	= EER of standard equipment, based upon the minimum Federal acceptable efficiency. We will use 11.18 based on the federal standard 13 SEER and the conversion listed above.
EER_Eff	= EER of High Efficiency that the customer will install, provided by customer. If value is not provided by the customer we will use the conversion listed above. For GSHP the unit must have an EER of 14.1 or greater.
Loss_No_QI	Efficiency of average unit lost due to improper installation. We will use 30.5% which is the summation of the following losses: Equipment sizing = 3%, Refrigeration Charge = 13%, Improper air flow = 7%, Duct leaks = 7.5%
Loss_QI	Efficiency of average unit lost due to improper installation. All non-QI losses will be eliminated with quality install in a new home so the Loss_QI for a new home will be 0. In existing homes all non-QI losses will be eliminated except for the duct leakage losses. Duct leakage losses in an existing home will be cut in half resulting in a Loss_QI for existing homes of 3.75% because we assume only half of the leaks will be reachable to be fixed.
CF	= Coincidence Factor, the probability that peak demand savings will coincide with peak utility system demand. 0.899 will be used for prescriptive rebates.
Measure Life	Measure life is taken at 14 years for all AC units, 12 years for ASHP units and 20 years for GSHP units. Measure life for Quality Installation is taken at 7 years for all AC units, 6 years for ASHP units and 10 years for GSHP units . (Reference 2)
Equipment Costs	See Table 1
Incremental operation and maintenance cost	= 0 - conservative approach, taking no credit for improved mean time between failure.

Needed from Customer/Vendor/Administrator for Calculations:
Cooling equipment type
Cooling equipment size (tons)
Cooling equipment efficiency (SEER, EER)
Type of home (Existing or New Construction)

Table 1 - Incremental Costs

Equipment Incremental Costs	Baseline	Incremental Cost per Ton
Central AC 13 Baseline	$ 2,125.00	
Central AC 15 SEER		$ 685.64
Central AC 16 SEER		$ 781.57
Ground Source Heat Pump *		$ 584.00
Quality install	$ 250.00	

Incremental costs for unit installed will be taken from the above table or will be calculated using a ratio from the above table if not given in the table.

* Total incremental costs for ground source heat pumps are higher. Because we are not claiming heating savings we only consider the portion of the incremental cost attributed to the cooling. Likewise, the additional incremental costs for air source heat pumps due to the reversing valve were not considered.

Assumptions:
Baseline equipment meets applicable minimum Federal standards for efficiency

High efficiency equipment exceeds minimum Federal standards for efficiency

Installed equipment does not operate at optimum efficiency until a Quality Installation is completed

To qualify for a rebate, all AC equipment must meet the minimum EER and SEER requirements, all ASHP equipment must meet SEER requirement and the GSHP equipment must meet EER requirement. The customer should provide EER and/or SEER values as applicable for the particular piece of equipment. If the customer is unable to provide both values, the value(s) not provided will be calculated using the equations shown above. If a value is not provided by the customer, the calculated value still must meet the minimum requirement.

Ground Source Heat Pumps are limited to less than or equal to 5 tons.

References
1. Building America, Research Benchmark Definitions, p. 9
2. Energy Star & Other Websites

Product: School Education Kits

Description:

A package of energy efficiency and water conservation classroom activities combined with projects for home that is targeted at sixth grade students. Each student receives a School Education Kit containing a 1.5 gpm low flow showerhead, a 1.5 gpm low flow kitchen sink aerator, and four compact fluorescent bulbs (2 each 13W and 2 each 18 Watts) and other educational items such as a thermometer, filter alarm, leak detection tablet, night light and tape measure.

Algorithms:

Conversion	1 Dth = 1,000,000 btu
Conversion	kWh = 3,412 btu

CFL Electric Energy Savings (Customer kWh)	= Number_of_Bulbs x (kW_base - kW_EE) x Hrs
CFL Electric Demand Savings (Customer kW)	= Number_of_Bulbs x (kW_base - kW_EE)

Showerhead Electric Savings (Customer kWh)	= (GPY_Saved_Showerhead x Delta_T x 8.33) / HE_Electric /3412 = 429 kWh
Showerhead Demand Savings (Customer kW)	= (GPY_Saved_Showerhead x Delta_T x 8.33) / HE_Electric / 3412/ Hr Operation = 0.000 kW
Showerhead Electric Savings (Modified Customer kWh)	= (GPY_Saved_Showerhead x Delta_T x 8.33) / HE_Electric /3412 x % Elec HW = 30 kWh
Showerhead Demand Savings (Modified Customer kW)	= (GPY_Saved_Showerhead x Delta_T x 8.33) / HE_Electric / 3412 /Hr Operation x %Elec HW = 0.000

Aerator Electric Savings (Customer kWh)	= (GPY_Saved_Aerator x Delta_T x 8.33) / HE_Electric /3412 = 132 kWh
Aerator Demand Savings (Customer kW)	= (GPY_Saved_Aerator x Delta_T x 8.33) / HE_Electric / 3412/ Hr_Operation_Aerator = 0.000
Aerator Electric Savings (Modified Customer kWh)	= (GPY_Saved_Aerator x Delta_T x 8.33) / HE_Electric /3412 x %Elec HW = 9 kWh
Aerator Demand Savings (Modified Customer kW)	= (GPY_Saved_Aerator x Delta_T x 8.33) / HE_Electric / 3412 /Hr Operation_Aerator x %Elec HW = 0.000 kW

Showerhead Gas Savings (Dth)	= (GPY_Saved_Showerhead x Delta_T x 8.33) / HGE/1,000,000 = 2.22 Dth
Showerhead Gas Savings (Modified Dth)	= (GPY_Saved_Showerhead x Delta_T x 8.33) / HE_Gas x % G HW/1,000,000 = 2.06 Dth

Aerator Gas Savings (Dth)	= (GPY_Saved_Aerator x Delta_T x 8.33) / HE_Gas/1,000,000 = 0.69 Dth
Aerator Gas Savings (Modified Dth)	= (GPY_Saved_Aerator x Delta_T x 8.33) / HE_Gas x % G HW/1,000,000 = 0.64 Dth

Total Kit Electrical Energy Savings (Modifiec Customer kWh)	= CFL Customer kWh + Modified Customer kWh Showerhead + Modified Customer kWh Aerator
Total Kit Electrical Demand Savings (Modified Customer kW)	= CFL Customer kW + Modified Customer kW Showerhead + Modified Customer kW Aerator
Total Kit Gas Energy Savings (Dth)	= Modified Showerhead Dth + Modified Aerator Dth

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Variables:

Hrs	= Annual operational hours per year of the fixture. Varies by year. See Table 1 below. (Reference 1&6)
CF	= Coincidence Factor, the probability that peak demand of the lights will coincide with peak utility system demand. See Table 1 below (Reference 1)
kW_EE	Average (kW) for the four CFL's provided in the kit. Varies by year - See Table 3.
kW_Base	Average (kW) for the four incandescent bulbs that the CFL's will replace. Varies by year - See Table 3.
Number_of_Bulbs	= Number of CFLs in the kit. See Table 3.
GPY_Saved_Showerhead_Total Water	= Gallons per year of total water saved with 1.5 gpm showerhead. 3,806 gal/yr.
GPY_Saved_Showerhead	= Gallons per year of hot water saved with 1.5 gpm showerhead. 2,135 gal/yr of Hot Water.
GPY_Saved_Aerator_Total water	= Gallons per year of total water saved with 1.5 gpm aerator. 1,014 gal/yr.
GPY_Saved_Aerator	= Gallons per year of hot water saved with 1.5 gpm aerator. 657 gal/yr of Hot Water
Delta_T	= Change in temperature of water from incoming water temperature to water heater temperature setting. Delta_T = 74 F. (Reference 4)
HE_Electric	= Heat generation efficiency for electric water heater based on steady-state water heater efficiency. HE_Electric = 0.90
HE_Gas	= Heat generation efficiency for gas water heater based on steady-state water heater efficiency. HE_Gas = 0.594
Hr Operation_Shower	=Annual water heater "on" time to meet hot water demand. For baseline showerhead = 238 Hrs. For Energy Efficient Showerhead = 143 Hours.
Hr Operation_Aerator	=Annual water heater "on" time to meet hot water demand. For baseline showerhead = 92 Hrs. For Energy Efficient Showerhead = 63 Hours.
Measure Life	Measure lives are shown in Table 1.
O&M savings - Showerhead	Showerhead total water savings of 3806 gallons/yr and Inc O&M Savings = $26.35
O&M savings - Aerator	Aerator total water savings of 1014 gallons/yr and Inc. O&M Savings = $7.02
% Electric Hot Water Heating (% Elec HW)	% Customers that use electricity for domestic water heating = 7%
% Gas Hot Water Heating (% Gas HW)	% Customers that use gas for domestic water heating = 93%

Inputs:

Was CFL #1 installed
Was CFL #2 installed
Was CFL #3 installed
Was CFL #4 installed
Was showerhead installed
Was aerator installed

Assumptions:

Because we will not be able to determine how (gas or electric) each customer heats their water, we will assume that 93% of the kits go to houses that use gas to heat water and 7% of kits go to houses that use electricity to heat water. The modified savings described below, for aerators and showerheads) represent the total savings for each measure split between 93% gas and 7% electric. CFL savings contribute only to electricity savings.
Customer HW energy source; 7% electric; 93% gas
Light hours per year based on assumption that there are already 7 CFL bulbs installed in the home.

Tables:

Table 1. Operational Hours / Coincidence Factor / Measure Life

Measure	Operational Hours	Coincidence Factor	Measure Life	Source
School Education Kit-Shower head	See Variables	0%	6	Reference 1& 5
School Education Kit-Faucet Aerator	See Variables	0%	5	Reference 1& 5
School Education Kit-CFL's 2013	838.0	8%	11.3	Reference 1 & 6
School Education Kit-CFL's 2014	838.0	8%	11.6	Reference 1 & 6
School Education Kit-CFL's 2015	838.0	8%	11.6	Reference 1 & 6

	Material Costs			Administration Delivery Cost		
Table 2 Measure Cost	**Total**	**Electric**	**Gas**	**Total**	**Electic**	**Gas**
LivingWise Program Kit						
School Education Kit- 13 W CFLs	$3.96	$3.96	$0.00	$8.61	$8.61	$0.00
School Education Kit- 18 W CFLs	$4.76	$4.76	$0.00	$10.34	$10.34	$0.00
Shower head	$5.97	$0.42	$5.55	$12.97	$0.91	$12.07
Faucet aerator	$1.76	$0.12	$1.64	$3.82	$0.27	$3.56
Electric Total = $29.39		$9.26			$20.13	
Gas Total = $22.81			$7.19			$15.62
LivingWise Kit Total = $52.20	$16.45			$35.75		

Table 3 - Existing lighting wattage for residential lights (Reference 8)

CFL Wattage Range	Replaced Incandescent Bulb Wattage (2013)	Replaced Incandescent Bulb Wattage (2014)	Replaced Incandescent Bulb Wattage (2015)	LED Wattage
9 - 12	37.0	33.0	29.0	10.00
13 - 16	55.0	48.5	43.0	13.00
17 - 22	64.5	57.5	53.0	n/a
23 - 30	80.5	76.0	72.0	n/a
31 - 52	150	150	150.0	n/a

Table 4: CFL Hours (Reference 1)

Location	Lamp-hr/space
Exterior(s)	959
Kitchen(s)	853
Living / Family Room(s)	737
Dining Room(s)	700
Office(s)	673
Basement(s)	591
Bedroom(s)	576
Bathroom(s)	572
Garage(s)	554
Laundry / Utility Room(s)	552
Hall(s)	535
Closet(s)	503
Other / Unknown	359

References:

1. US DOE, US Lighting Market Characterization, Navigant Consulting, 2010. Annual operating hours
2. Department of Energy - Minimum hot water heater efficiency standards

3. "The effects of variation in body temperature on the preferred water temperature and flow rate during showering" Authors: Tadakatsu Ohnaka, Yutaka Tochihara, Yumiko Watanabe. Affiliations: a) Department of Physiological Hygiene, The Institute of Public Health, Minato-ku, Tokyo, Japan; b) Faculty of Home Economics, Jissen Women's University, Hino, Tokyo, Japan.
4. Handbook of Water Use and Conservation, Denver Water Conservation

5. California Measurement Advisory Committee (CALMAC) Protocols, Appendix F (www.calmac.org/events/APX_F.pdf).

6. CFL vendor websites; life reduced per Federal incandescent efficiency legislation beginning in 2012. See home lighiting program for more information about measure life reductions.
7. DOE HW Appliance calculator
8. Lighting Baseline Watts per DER Agreement with Joe Plummer. Based on a DOE report table

Product: Water Heater Rebate

Description:
Residential natural gas customers receive a rebate for purchasing high-efficiency natural gas water heating equipment.

Algorithms:

Storage Water Heater Baseline Efficiency Factor (EF_Base)	= .67 - 0.0019 x Volume (Reference 3)
Storage Water Heater Baseline Natural Gas consumption (Baseline_WH Dth)	Baseline consumption for tank water heaters = Volume x Dth_per_gallon / EF_Base
Tankless Water Heater Baseline Natural Gas consumption (Baseline_WH Dth)	Tankless water heater baseline is assumed to be a 40 gallon storage tank water heater = 21.2 Dth (Using equation above and Reference 2)
Storage & Tankless Water Heater Energy Efficient Natural Gas Consumption (Efficient_WH Dth)	= Baseline_WH Dth x EF_Base / EF_Eff
Storage & Tankless Water Heater Natural Gas Savings (Dth)	= Baseline_WH Dth - Efficient_WH Dth

Variables:

Volume	= Volume of the new storage tank water heater provided by the customer
Dth_per_gallon	Dekatherms of output required per gallon size of storage tank water heaters. A value of 0.3148 will be used. This values was derived from the baseline case output of a RemRate model for an average home. (Reference 2)
EF_Eff	= Energy Factor of the Efficient water heater (Storage Tank or Tankless) provided by the customer.
Measure life	= 13 years for storage tank water heater and 20 years for tankless water heaters. (References 3 and 4)

Inputs:
Type of unit installed
Energy Factor (EF) of unit
Tank size for Storage Water Heater Unit

Assumptions:
Baseline for tankless cases is a 40 gallon storage tank water heater using 21.2 Dth.
Household hot water consumption is scaled by the size of their water heater, for example a household with a 60 gallon water heater will use 50% more hot water than a household with a 40 gallon unit.
Baseline for Storage Tank water heater is assumed to be the same volume as the new unit

Tables:

Unit Type	Incremental Cost (Reference 1)
Standard tank water heater 0.62 EF	$80.30
Standard tank water heater 0.64 EF	$135.82
Standard tank water heater 0.67 EF	$550.72
Standard tank water heater 0.70 EF	$547.52
Tankless water heater 0.82 EF	$1,317.27
Tankless water heater 0.90 EF	$814.08

Note: Incremental cost of tank water heaters will be calculated based on the units above for units within the range of the EFs listed.

References:
1. California Energy Commission's Database for Energy Efficient Resources (DEER) http//www.energy.ca.gov/deer (Does not include labor of equipment rental fees as this measure is considered a replace on burnout)

2. RemRate Model for average MN Home

3. http://www.aceee.org/consumerguide/waterheating.htm
4. http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw_code=WH

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Product: MN Saver's Switch ®

Description:

Prescriptive rebates will be offered to customers who install a Saver's Switch on their AC system.

Algorithms:

AC Electrical Demand Savings (Customer kW)	= Tons per Unit * kW per Ton
Water Heater Electrical Demand Savings (Water Heater Customer kW)	= kW per Unit
Electrical Energy Savings (Customer kWh)	= Customer kW x Full Load Hours of Operation
Peak Coincident kW at the Customer (PC_KW_CUST)	= Customer kW x CF

Variables:

Tons per AC	= A/C Tons per AC = 2.5 (Reference 1)
kW per AC Ton	= 1.07 kW per Ton (Reference 1)
Water Heater Customer kW	= 0.2 kW (Reference 2)
Full Load Hours of Operation	= Full Load Hours of Operation = 2.67, the equivalent full load hours during a typical year that a Switch achieves energy savings at the Average kW per Unit by controlling an a/c unit during a typical year. (Reference 3)
CF	Coincidence Factor = Percentage of the kW savings that occur during the annual hour of system peak. = 31.8% for AC and 9.77% for water heat control. (Reference 4)
Measure Life	= Length of time the switch will be operational = 15 years

Inputs:
Number of units with switch installed and the tons of those units.

References:
(1) Xcel Energy MN Residential Cooling Program
(2) Analysis of sample of water heater customers
(3) Xcel Energy Market Operations Analysis
(4) Analysis of metered data for actual historical Business Saver's Switch customers.

Product: Home Energy Savings Program

Description:
Home Energy Savings program offers low-income qualified customers products and services that will lower their monthly electric and natural gas bills. The customers receive a home visit from a qualified auditor who will analyze of the energy bills, provide client assistance, and recommend energy savings measures for implementation.

Algorithms:

Refrigerator replacement electric demand savings (Ref Customer kW)	= (Old Refrigerator kW - New Refrigerator kW) = 0.234 - 0.110 =0.124 kW (Reference 1 & 2)
Refrigerator replacement electric energy savings (Ref Customer kWh)	= Ref Customer kW Savings x Hours of Operation = .124 x 4818 = 597 kWh (Reference 1&2)
Freezer replacement electric demand savings (Frez Customer kW)	= (Old Freezer kW - New Freezer kW) = 0.171 - 0.154 =0.017 kW (Reference 1&2)
Freezer replacement electric energy savings (Frez Customer kWh)	= Frez Customer kW Savings x Hours of Operation = .017 x 4818 = 81.9 kWh (Reference 1&2)
Refrigerator recycling electric demand savings (Ref reclc Customer kW)	= Old Refrigerator kW = 0.234 kW (Reference 1&2)
Refrigerator recycling electric energy savings (Ref recyc Customer kWh)	= Ref recyc Customer kW Savings x Hours of Operation = .234 x 4818 = 1127 kWh (Reference 1&2)
Freezer recycling electric demand savings (Frez recyc Customer kW)	= Old Freezer kW = 0.114 kW (Reference 1&2)
Freezer recycling electric energy savings (Ref recyc Customer kWh)	= Frez recyc Customer kW Savings x Hours of Operation = .114 x 4818 = 549.2 kWh (Reference 1&2)
2013 CFL electric demand savings (Lit Customer kW)	=(Baseline wattage - Energy Efficient Wattage) = (0.066 - 0.019) = 0.047 kW (Reference 2)
2013 CFL electric energy savings (Lit Customer kWh)	= Lit Customer kW savings x Hours = 0.047 x 876 = 41 kWh/yr (Reference 2)
2014 CFL electric demand savings (Lit Customer kW)	=(Baseline wattage - Energy Efficient Wattage) = (0.064 - 0.019) = 0.045 kW (Reference 2)
2014 CFL electric energy savings (Lit Customer kWh)	= Lit Customer kW savings x Hours = 0.045 x 864 = 39 kWh/yr (Reference 2)
2015 CFL electric demand savings (Lit Customer kW)	=(Baseline wattage - Energy Efficient Wattage) = (0.059 - 0.019) = 0.040 kW (Reference 2)
2015 CFL electric energy savings (Lit Customer kWh)	= Lit Customer kW savings x Hours = 0.040 x 864 = 34 kWh/yr (Reference 2)
Window Air Conditioner Replacement electric demand savings (Win Customer kW)	= (Old AC kW - New AC kW) = 1.02 - 0.926 =0.094 kW (Reference 1&2)
Window Air Conditioner Replacement electric energy savings (Win Customer kWh)	= Win Customer kW Savings x Hours of Operation = .094 x 662 = 62.2 kWh (Reference 1&2)
Window Air Conditioner Recycling electric demand savings (Win Customer kW)	= Old AC kW = 1.02 kW (Reference 1&2)
Window Air Conditioner Recycling electric demand savings (Win recyc Customer kW)	= Win recyc Customer kW Savings x Hours of Operation = 1.02 x 662 = 675.2 kWh (Reference 1)
Electric demand (Ins Customer kW) savings by increasing Attic Insulation for Electrically Heated Homes	=(Baseline wattage - Energy Efficient Wattage) = (4.268 - 3.772) = .496 kW (Reference 3)
Electric energy (Ins Customer kWh) savings by increasing Attic Insulation for Electrically Heated Homes	= Ins Customer kW savings x Hours = .496 x 4704 = 2333.2 kWh/yr (Reference 3)
Attic insulation natural gas savings (Dth)	= (1 / (2 +Attic_Pre_R) - 1 / (2+Attic_Post_R)) x Attic SF x Dth_Per_SF_Attic
Wall insulation natural gas savings (Dth)	=Dth_Per_SF_Wall x Wall_SF
HE Furnace AFUE 92% natural gas savings (Dth)	= (Baseline Dth - High Efficient Dth) = 91.6 - 77.6 = 14 Dth
New 0.67 EF Hot Water Heater natural gas savings (Dth)	= (Baseline Dth - High Efficient Dth) = 21.2 - 19.0 = 2.2 Dth
New 84% boiler natural gas savings (Dth)	= (Baseline Dth - High Efficient Dth) = 85.7 - 81.6 = 4.1 Dth

Variables:

CF	Coincidence Factor = Probability that the Customer kW savings will coincide with peak utility system demand. As seen in Table 2.
Attic_Pre_R	= Insulation R value for the attic before installation of additional insulation provided by vendor. Vendor provided value increased by 2R to account for ceiling structure.
Attic_Post_R	= Insulation R value for the attic after project is complete provided by vendor. Vendor provided value increased by 2R to account for ceiling structure.
Dth_Per_SF_Attic	= Dth loss per square foot of attic coefficient for home in MN heated with 0.78 AFUE furnace from REMRate model = 0.3308 This value does not incorporate insulation.
Attic SF	= Square footage of the attic to which insulation was added, provided by vendor
Wall_SF	= Square footage of the wall to which insulation was added, provided by vendor
Dth_Per_SF_Wall	= Dth loss per square foot of wall coefficient for home in MN heated with 0.78 AFUE furnace from REMRate model = 0.02964. This value incorporates the change from R-3 to R-11 insulation in the wall.
O&M savings	Operation and Maintenance savings = We will assume no O&M

Inputs:

Type of Measures Implemented
Attic insulation square footage
Attic insulation existing R value
Attic insulation post R value
Wall insulation square footage

Tables:

1: Measure Life

Measure	Life (yrs)
Refrigerator Replacements	13 (Reference 1)
Freezer Replacement	11(Reference 1)
Refrigerator Recycling	8 (Reference 1)
Freezer Recycling	8 (Reference 1)
Compact Fluorescent Lighting Package	11 (Reference 2)
Window Air Conditioner Replacement	9 (Reference 1)
Window Air Conditioner Recycling	4.5 (Reference 2)
Attic Insulation for Electrically Heated Homes	20 (Reference 2)
Ceiling insulation	20 (Reference 2)
Wall insulation	20 (Reference 2)
HE furnace AFUE 92%	18 (Reference 2)
.67 EF Hot Water Heater	15 (Reference 2)
New 84% Boiler	18 (Reference 2)

2: Coincidence Factor

Measure	Coincidence Factor (Reference 2)
Refrigerator Replacements	55%
Freezer Replacement	55%
Refrigerator Recycling	55%
Freezer Recycling	55%
Compact Fluorescent Lighting Package	8%
Window Air Conditioner Replacement	90%
Window Air Conditioner Recycling	90%
ECM Fan Motor	70%
Attic Insulation for Electrically Heated Homes	0%

3: Measure Costs

Measure	Cost (Reference 2)
Refrigerator Replacements	$574.20
Freezer Replacement	$303.12
Refrigerator Recycling (Removal)	$35.00
Freezer Recycling (Removal)	$35.00
Window/Wall Air Conditioner Replacement	$368.08
Window/Wall Air Conditioner Recycling (Removal)	$87.00
ECM	$464.33
Attic Insulation / Air Sealing	$1,410.00
Wall Insulation	$1,690.00
CFLs - 2013	$3.60
Water Heater Replacement	$1,616.97
Furnace Replacement	$2,549.59
Boiler Replacement	$6,000.00

Assumptions:

The baseline wattage is the sum of 2 60W and 2 75W incandescent bulbs = 270 Watts
The energy efficient wattage is the sum of 2 13W and 2 18W CFLs = 62 Watts
The CFL average burning hours per year = 1,210 Hours - assumes no CFLs in house at time.
The baseline home had an existing level of insulation in the attic of R-13 and the change case had an elevat
Attic Insulation calculations based on an average 1440 SF house with a 0.78 AFUE furnace
Wall insulation projects will increase insulation from R-3 to R-11

For attic insulation calculations, the 2 added to the existing and new insulation R values represents the air film and insulative properties of the ceiling structure.

References:

1) www.energystar.gov
2) Existing MN Residential Program Assumption

Product: Residential Quick Fix Efficiency Services

Description:

Residential natural gas and electric customers can have energy efficiency measures installed while paying for the material costs.

Algorithms:

Efficient Lighting Electrical Energy Savings (Customer kWh)	=Number_of_Bulbs x (kW_Savings_per_Bulb) x Lamp_Hours
Efficient Lighting Electrical Demand Savings (Cust	=Number_of_Bulbs x (kW_Savings_per_Bulb)
Lighting Measure Life (Years)	= (Bulb_Life / Lamp_Hours)
TV Controller Electrical Energy Savings (Customer kWh)	= (Measured_Watts_WO - Measured_Watts_WITH) / 1000 x Controller_Hours
TV Controller Electrical Demand Savings (Customer kW)	= (Measured_Watts_WO - Measured_Watts_WITH) / 1000
Programmable Thermostat Electrical Energy Savings (Customer kWh)	=Cooling_Delta_T x kWh_Savings_per_Degree
Programmable Thermostat Electric Demand Savings (Customer kW)	=Customer kWh/ Cooling_Hours
Programmable Thermostat Gas Savings (Customer Dth)	=Heating_Delta_T x Dth_Savings_per_Degree
Water Heater Blanket Electrical Energy Savings (Customer kWh)	= (HLF before - HLF with blanket) x 8760 / HE_Elec / 3412 = 550 kWh
Water Heater Blanket Electrical Demand Savings (Customer kW)	= (HLF before - HLF with blanket) x 8760 / HE_Elec / 3412 / Hr Operation = 0.06 kW
Water Heater Blanket Gas Savings (Customer Dth)	= (HLF before - HLF with blanket) x 8760 / HE_Gas / 1,000,000 = 2.17 Dth
Weatherstripping two exterior doors (Customer Dth)	Calculated by MN Ref Home for one door and square root of the sum of squares for subsequent doors. Two exterior doors = 24.6% reduction in air infiltration = 3.2 Dth (Reference 12)
Showerhead Electric Savings (Customer kWh)	(GPY_Saved_Shower x Delta_T x 8.33) / HGE_Elec /3412 = 429 kWh
Showerhead Demand Savings (Customer kW)	= (GPY_Saved_Shower x Delta_T x 8.33) / HGE_Elec / 3412 / Showerhead_Hours = 1.80 kW
Showerhead Gas Savings (Customer Dth)	= (GPY_Saved_Shower x Delta_T x 8.33) / HGE_Gas / 1,000,000 = 2.32 Dth
Aerator Electric Savings (Customer kWh)	= (GPY_Saved)Aerator x Delta_T x 8.33) / HGE_Elec /3412 = 132 kWh
Aerator Demand Savings (Customer kW)	= (GPY_Saved_Aerator x Delta_T x 8.33) / HGE_Elec /3412/ Aerator_Hours = 1.43 kW
Aerator Gas Savings (Customer Dth)	= (GPY_Saved_Aerator x Delta_T x 8.33) / HGE_Gas / 1,000,000 = 0.69 Dth
Electrical Energy Savings (Generator kWh)	= Customer kWh / (1-ELF)
Electrical Demand Savings (Generator kW)	= Customer kWh x CF / (1-DLF)

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Variables:

Number_of_Bulbs	= Number of CFL bulbs installed, provided by vendor
Bulb Life	10,000 hours (Reference 15)
Reduction Factor	Factor used to reduce the measure life to account for the federal standard increasing minimum bulb efficiency. Values are listed in Table 5.
kW_Savings_per_bulb	= sum of differences between installed CFL wattage and incandescent equivialent wattage as listed in Table 1.
Measured_Watts_WO	= Measured demand for appliancesthat will be connected to controller before controller is installed
Measured_Watts_WITH	= Measured demand for controller with appliances connected when controller is in off state
Lamp_Hours	=The number of hours for lighting lamps will be determined from Table 4. Locations will be provided by the vendor.
Total_hours_existing	=Total hours for the existing CFL bulbs. Vendor will provide number of existing. Hours will be determined from total hours column of Table 4.
Controller_Hours	Hours of operation for the controller determined for each customer based on interview results.
Cooling_Hours	= Full load cooling hours based on average equipment in an average house = 320 (Reference 12)
Showerhead_Hours	Full load electric water heater hours for showerhead consumption = 238 (Reference 12)
Aerator_Hours	Full load electric water heater hours for aerator consumption = 92 (Reference 12)
Cooling_Delta_T	Average difference between normal operation and cooling setback temperature in degrees F based on information provided by the customer during the interview.
kWh_Savings_per_Degree	= 98 kWh per degree F of setback (Reference 12)
Heating_Delta_T	Average difference between normal operation and heating setback temperature in degrees F based on information provided by the customer during the interview.
Dth_Savings_per_Degree	= 3.0 Dth per degree F of setback (Reference 12)
HGE_Elec	Steady state efficiency of electric water heater = 0.90
HGE_Gas	Steady state efficiency of gas water heater = 0.59
GPY_Saved_Shower	3,806 gallons of hot water saved per year for Showerheads (Reference 13)
GPY_Saved_Aerator	1,014 gallons of hot water saved per year for Aerator (Reference 13)
8.33	Conversion from gallons to pounds - 1 gallon weighs 8.33 pounds
1,000,000	Conversion from BTU to Dth
Delta_T	= Temperature difference in water from incoming cold to heated in WH tank in Degrees F. = 74 (Reference 13,14)
O&M savings Showerhead	= Showerhead has 3806 gallons per year of total (hot plus cold) water savings or $26.37 based on water savings and St Paul Water/Sewer rates.
O&M savings Aerator	= Aerator has 1,014 gallons per year of total (hot plus cold) water savings or $6.96 based on water savings and St Paul Water/Sewer rates.
Splt of Incremental cost for Thermostat	Assumes 25% electric and 75% gas
ELF	= Energy Loss Factor = 8.40%; energy losses from generator to customer at non-peak times
DLF	= Demand Loss Factor = 8.80%; energy losses from generator to customer at peak times
Conversion Factor from btu to kWh or kW	1 kWh = 3412 Btu

Inputs:

Hot water energy source (gas/electric)
Number of new CFLs installed.
Size of newly installed CFL bulbs
Room in which new CFLs are installed
Wattage and hours of use of TV cluster with and without controller
Temperature setup/setback pattern for each day of week for heating and cooling seasons.
Was Door Weather stripping measure completed?
Number of low flow showerheads installed
Number of low flow aerators installed
Was a water heater blanket installed?
Water Heater setback starting and ending temperature

Tables:

Table 1: Existing lighting wattage for residential lights (Reference 11)

CFL Wattage Range	Replaced Incandescent Bulb Wattage (2013)	Replaced Incandescent Bulb Wattage (2014)	Replaced Incandescent Bulb Wattage (2015)	LED Wattage
9 - 12	37.0	33.0	29.0	10.00
13 - 16	55.0	48.5	43.0	13.00
17 - 22	64.5	57.5	53.0	n/a
23 - 30	80.5	76.0	72.0	n/a
31 - 52	150	150	150.0	n/a

Table 2: Measure Life, Coincidence Factor, and Hours (Reference 6,10,11)

Type of measure:	Measure life:	Coincidence Factor:	Hours of Operation
CFLs		8% (Reference 11)	
TV cluster power controller	15	80%	Varies
Programmable thermostat (Cooling)	15	90%	EFLH=320
Programmable thermostat (Heating)	15	na	
Weatherstripping	10	0%	
Low flow showerheads elec HW	6	0%	140
Low flow aerators elec HW	5	0%	92
Water heater blanket elec HW	7.5	0%	8760

Table 3: Measure Costs / Allocations to Gas/Elec

	Vendor CEE Cost ($/Unit)	Vendor NEC Cost ($/Unit)	Cost Allocation
Dimmable CFL's	5.00	5.00	Electric
LED Lights	25.00	25.00	Electric
TV Smart Controller	20.00	5.00	Electric
Programmable Thermostat	35.00	35.00	25% Electric 75% Gas
Weatherstripping	N/A	10.00	Gas

Table 4: CFL Hours (Reference 1)

Location	Lamp-hr/space
Kitchen	**959**
Outdoor	**853**
Utility Room	**737**
Living Room	**700**
Dining Room	**673**
Family Room	**591**
Garage	**576**
Office	**572**
Bathroom	**554**
Hall	**552**
closet	**535**
Other	**503**
Bedroom	**359**

References:

1. US Lighting Market Characterization Study performed for the Department of Energy in 2010
2. California Measurement Advisory Committee (CALMAC) Protocols, Appendix F (www.calmac.org/events/APX_F.pdf).
3. National Energy Efficiency Best Practices Study - Residential Single-Family Comprehensive Weatherization Best 4. Practices Report from December 2004.
4. RS Means Repair and Remodeling 2007 at a cost of $0.028 per square foot per increase in R-value.
5. National Energy Audit Tool (NEAT) and Frontier estimates
6. Consumer Electronics Characteristics http://standby.lbl.gov/summary-table.html
7. Draft Technical Support Document: Energy Conservation Standards for Residential Furnaces and Boilers, Efficiency Standards for Consumer Products. Prepared for US DOE, September 2006
8. California Energy Commission's Database for Energy Efficient Resources (DEER)
9. www.energystar.gov
10. Not used
11.CFL METERING STUDY FINAL REPORT, Prepared for: Pacific Gas & Electric Company, San Diego Gas & Electric Company, Southern California Edison Company, 2005 - Composite wattages and coincidence factor
12. Average home matching the consumption characteristicts for MN was modeled in RemRate, home characteristicts: 1440 SF 0.78 AFUE furnace, 3 ton, 10 SEER AC unit
13. Department of Energy Domestic Hot Water Appliance Calculator
14. "The effects of variation in body temperature on the preferred water temperature and flow rate during showering" Authors: Tadakatsu Ohnaka, Yutaka Tochihara, Yumiko Watanabe. Affiliations: a) Department of Physiological Hygiene, The Institute of Public Health, Minato-ku, Tokyo, Japan; b) Faculty of Home Economics, Jissen Women's University, Hino, Tokyo, Japan.
15. Hours used represent the life expectancy for the CFL bulbs for the majority of bulbs from manufacturers.
16. Internal Analysis of declining savings with new incandescent efficiency standards. See home lighting program for more details.

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Product: Multi-Family Electric Savings Program

Description:

Home Electric Savings program offers low-income qualified customers products and services that will lower their monthly electric bills. The customers receive a home visit from a qualified auditor who will analyze of the electric bill, provide client assessment and education, inspection and evaluation of major appliances, installation of 4 CFL bulbs, written energy saving recommendations and Distribution of Energy Conservation Educational Materials.

Algorithms:

Refrigerator replacement electric demand savings (Ref Customer kW)	= (Old Refrigerator kW - New Refrigerator kW) = 0.234 - 0.110 =0.124 kW (Reference 1 & 2)
Refrigerator replacement electric energy savings (Ref Customer kWh)	= Ref Customer kW Savings x Hours of Operation = .124 x 4818 = 597 kWh (Reference 1&2)
Freezer replacement electric demand savings (Frez Customer kW)	= (Old Freezer kW - New Freezer kW) = 0.171 - 0.154 =0.017 kW (Reference 1&2)
Freezer replacement electric energy savings (Frez Customer kWh)	= Frez Customer kW Savings x Hours of Operation = .017 x 4818 = 81.9 kWh (Reference 1&2)
Refrigerator recycling electric demand savings (Ref reclc Customer kW)	= Old Refrigerator kW = 0.234 kW (Reference 1&2)
Refrigerator recycling electric energy savings (Ref recyc Customer kWh)	= Ref recyc Customer kW Savings x Hours of Operation = .234 x 4818 = 1127 kWh (Reference 1&2)
Freezer recycling electric demand savings (Frez recyc Customer kW)	= Old Freezer kW = 0.114 kW (Reference 1&2)
Freezer recycling electric energy savings (Ref recyc Customer kWh)	= Frez recyc Customer kW Savings x Hours of Operation = .114 x 4818 = 549.2 kWh (Reference 1&2)
Multi Family lighting electric demand savings per bulb installed (Lit Customer kW)	=(Baseline wattage - Energy Efficient Wattage) = (0.0585 - 0.0155) = 0.0430 kW [2013] (0.0523 - 0.0155) = 0.0368 kW [2014] (0.0473 - 0.0155) = 0.0318 kW [2015]
Multi Family lighting electric energy savings per bulb installed (Lit Customer kWh)	= Lit Customer kW savings x Hours = .0430 x 838 = 36 kWh/yr [2013] .0368 x 838 = 31 kWh/yr [2014] .0318 x 838 = 27 kWh/yr [2015]
Window Air Conditioner Replacement electric demand savings (Win Customer kW)	= (Old AC kW - New AC kW) = 1.02 - 0.926 =0.094 kW (Reference 1&2)
Window Air Conditioner Replacement electric energy savings (Win Customer kWh)	= Win Customer kW Savings x Hours of Operation = .094 x 662 = 62.2 kWh (Reference 1&2)
Window Air Conditioner Recycling electric demand savings (Win Customer kW)	= Old AC kW = 1.02 kW (Reference 1&2)
Window Air Conditioner Recycling electric demand savings (Win recyc Customer kW)	= Win recyc Customer kW Savings x Hours of Operation = 1.02 x 662 = 675.2 kWh (Reference 1)
Electric demand (Ins Customer kW) savings by increasing Attic Insulation for Electrically Heated Homes	=(Baseline wattage - Energy Efficient Wattage) = (4.268 - 3.772) = .496 kW (Reference 3)
Electric energy (Ins Customer kWh) savings by increasing Attic Insulation for Electrically Heated Homes	= Ins Customer kW savings x Hours = .496 x 4704 = 2333.2 kWh/yr (Reference 3)
Electrical Energy Savings (Generator kWh)	= Customer kWh / (1-ELF)
Electrical Demand Savings (Generator kW)	= Customer kW x CF / (1-DLF)

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

Variables:

CF	Coincidence Factor = Probability that peak demand of the bulb will coincide with peak utility system demand. As seen in Table 1 based on Reference 1.
O&M savings	Operation and Maintenance savings = We will assume no O&M savings.

Needed from Customer/Vendor/Administrator for Calculations:
Type of Measures Implemented

Assumptions:
The baseline wattage is the sum of 2 60W and 2 75W incandescent bulbs = 270 Watts
The energy efficient wattage is the sum of 2 13W and 2 18W CFLs = 62 Watts
The CFL average burning hours per year = 1,210 Hours - assumes no CFLs in house at time.
The baseline home had an existing level of insulation in the attic of R-13 and the change case had an elevated insulation level of R-

Tables:

1: Measure Life and Coincidence Factors

Measure	Life (Reference 1&4)
Refrigerator Replacements	13.00
Freezer Replacement	11.00
Refrigerator Recycling	8.00
Freezer Recycling	8.00
Compact Fluorescent Lighting Package	7.27
Window Air Conditioner Replacement	9.00
Window Air Conditioner Recycling	4.50
Attic Insulation for Electrically Heated Homes	20.00
Multifamily Housing Lighting	7.27

Measure	Coincidence Factor (Reference 1&4)
Refrigerator Replacements	55%
Freezer Replacement	55%
Refrigerator Recycling	55%
Freezer Recycling	55%
Compact Fluorescent Lighting Package	8%
Window Air Conditioner Replacement	90%
Window Air Conditioner Recycling	90%
Attic Insulation for Electrically Heated Homes	0%
Multifamily Housing Lighting	8%

* Bulb lifetime includes lifetime reduction factor, see home lighting program for details.

References:
1. www.energystar.gov
2. 9th year Persistence Study For Southern California Edison KEMA - Xenergy 7/23/2008
3. RemRate Modeling
4) Existing MN Residential Product Assumption

Product: Solar Rewards MN - Residential and Business

Description:

Prescriptive rebates will be offered to customers who install grid tied solar photovoltaic (PV) systems using the companies net metering guidelines. The minimum allowable system size will be 500 watts. The maximum allowable will be 40 watts. This cap is dictated by the States net-metering restriction of up to 40 kW.

Algorithms:

Electrical Energy Savings (Customer kWh)	= PV system size kW(dc) x Full Load Hours of Operation
Electrical Demand Savings (Customer kW)	= PV system size kW(dc) X CF/(1-TDLF)

Variables:

PV system size kW(dc)	= Actual PV system size kW(dc) installed by customer
Full Load Hours of Operation	= annual equivalent operaitng hours of PV system at nameplate rating based on modelling at PVWatts website for Minneapolis (http://rredc.nrel.gov/solar/codes_algs/PVWATTS/version1/US/Minnesota/Minneapolis.html) = 1285.61
CF	Coincidence Factor = Percentage of the kW savings that occur during the annual hour of system peak. = 47.29%
Measure Life	= Length of time the PV installation will be operational = 20 years

Inputs:

Installed kW of the PV installation, including number, type, and specifications of the panels.

Assumptions:

Annual output for solar PV systems is modeled using PVWatts modeling program (http://rredc.nrel.gov/solar/codes_algs/PVWATTS/version1/US/Minnesota/Minneapolis.html)

Tables:

	Residential	Commercial	Notes:
System type	PV	PV	
Minimum system size (Watts dc)	500	500	Minimum system size allowed into the program will be 500 watts
Maximum Size(Watts dc)	40000	40000	Maximum system size is dictated by the 40 kW net metering limitation ir
Average system size (Watts dc)	4800	29800	System size represents the average size PV installation for customers participating in the Minnesota 2011 Solar Rewards program.
Full load Hours of operation	1285.61	1285.61	Hours of operation determined from PVWatts modeling data. Effective operating hours calculated as the systems annual energy production divided by the system size (kWdc).
Non Fuel O&M Savings	0	0	
Energy O&M Savings	0	0	
Coincidence factor6	47.29%	47.29%	Coincidence factor = % of PV systems average output during the utilities "system" peak.
Product life (years)	20	20	Product life assumed at 20 years based on industry standards.
Rebate Amount (per watt dc)	$1.50	$1.50	
Rebate amount per customer	$7,200.00	$44,700.00	
Total Program Rebate	$550,000.00	$1,750,000.00	allocation is 22% residential, 70% business (rebates) and 8% program administration.
System cost (per watt dc)	$6.65	$5.10	System cost based on average cost of installed PV systems (non MN Bonus) participating in the 2011 Minnesotta Solar Rewards program.
Initial system cost	$31,920.00	$151,980.00	
Investment tax Credit (ITC)	$7,416.00	$32,184.00	30% ITC approved by Congress in 2008 for 8 years. Applies to net investment, minus any utility rebates.
Net installed cost	$24,504.00	$119,796.00	
Number of Units per participant	1	1	
Number of participants 2013	76	39	Number of participants estimated using Xcel Energy market penetration model, calibrated against known results of Minnesota's Solar Rewards program.
Number of participants 2014	-	-	Program funding only extended through 2013
Number of participants 2015	-	-	Program funding only extended through 2013

Electric Cost-Benefit Analysis Key

2013-2015 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	A1	A1	A1	A1
T & D	N/A	A2	A2	A2	A2
Marginal Energy	N/A	A3	A3	A3	A3
Environmental Externality	N/A	N/A	N/A	N/A	A4
Subtotal	N/A	A	A	A	A
Participant Benefits					
Bill Reduction - Electric	B1	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	B2	N/A	N/A	B2	B2
Incremental Capital Savings	B3	N/A	N/A	B3	B3
Incremental O&M Savings	B4	N/A	N/A	B5	B5
Subtotal	B	N/A	N/A	B	B
Total Benefits	C	C	C	C	C
Costs					
Utility Project Costs					
Customer Services	N/A	D1	D1	D1	D1
Project Administration	N/A	D2	D2	D2	D2
Advertising & Promotion	N/A	D3	D3	D3	D3
Measurement & Verification	N/A	D4	D4	D4	D4
Rebates	N/A	D5	D5	D5	D5
Other	N/A	D6	D6	D6	D6
Subtotal	N/A	D	D	D	D
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	E1	N/A	N/A
Subtotal	N/A	N/A	E	N/A	N/A
Participant Costs					
Incremental Capital Costs	F1	N/A	N/A	F2	F2
Incremental O&M Costs	F3	N/A	N/A	F4	F4
Subtotal	F	N/A	N/A	F	F
Total Costs	G	G	G	G	G
Net Benefit (Cost)	H	H	H	H	H
Benefit/Cost Ratio	I	I	I	I	I

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

Explanation of Inputs

N/A = Not applicable
A1 = Generation Avoided
A2 = Transmission and Distribution Avoided
A3 = Marginal Energy Reduced
A4 = Environmental Factors (Emissions) Avoided
A = Total Avoided Revenue Requirements
B1 = Reduced Electric Revenues from Project
B2 = Rebate paid by Xcel Energy
B3 = Incremental Capital Savings
B4 = Incremental Participant Non-Energy O&M Savings plus Natural Gas Savings
B5 = Incremental Participant Non-Energy O&M Savings * Electric Share of Avoided Revenue Requirements
B = Total Benefits realized by Participant
C = Total Benefits = A + B
D1 = Product Delivery Costs
D2 = Project Administration Costs
D3 = Advertising & Promotion Costs
D4 = Measurement & Verification Costs
D5 = Rebate Costs
D6 = Other Costs
D = Xcel Energy's Total Project Costs
E1 = Reduced Electric Revenues from Project = B1
E = Total Reduced Electric Revenues from Project
F1 = Incremental Participant Capital Investment before Rebate
F2 = Incremental Participant Capital Investment before Rebate * Electric Share of Avoided Revenue Requirements
F3 = Incremental Participant Non-Energy O&M Costs plus Natural Gas Costs
F4 = Incremental Participant Non-Energy O&M Costs * Electric Share of Avoided Revenue Requirements
F = Total Costs realized by Participant
G = Total Costs = D + E + F
H = Net Benefit or Cost = C - G
I = Benefit / Cost Ratio = C / G

General Assumptions

Discount Rate = 7.53%
Inflation Rate = Varies by year and input
Transmission and Distribution Avoided Costs = $33.00/kW-year in 2013, escalated by 2.36%
Generation Avoided Capacity Costs = $87.04/kW-year in 2013, escalated by 2.36%
Marginal Energy and Environmental Externality = Varies by year

➢ General Inputs for the 2013-2015 Gas CIP BENCOST Model

The margins, rates and "costs included in rates" used in the General Inputs of the Gas CIP BENCOST model were approved as part of Xcel Energy's most recent gas rate case (Docket No. G002/GR-09-1153) and went into effect in May 2011. The Company has updated these rates according to the guidelines provided in the Department of Commerce Advocacy Staff's April 3rd, 2012 BENCOST memo to Minnesota public utilities ("Staff BENCOST Memo").

BENCOST Input 1 (Retail Rate)

The Retail Rate represents the sum of the Company's currently approved tariff rate for each customer class, the Commodity Cost of $4.34 per Dth and a Demand Cost for firm non-demand billed customers of $1.03 per Dth. This value does not include the annual true-up adjustment, the annual CIP Adjustment Factor, or any other riders.

Retail Rate ($/Dth)

Customer Class	Tariff Rate	Commodity Cost	Demand Cost	BENCOST Retail Rate
Residential	$1.86/Dth	$4.34/Dth	$1.03/Dth	$7.23/Dth
Small Commercial Firm	$1.23/Dth	$4.34/Dth	$1.03/Dth	$6.60/Dth
Large Commercial Firm	$1.23/Dth	$4.34/Dth	$1.03/Dth	$6.60/Dth
Small Commercial Demand Billed[1]	$1.16/Dth	$4.34/Dth	$0.50/Dth	$6.01/Dth
Large Commercial Demand Billed[1]	$1.24/Dth	$4.34/Dth	$0.56/Dth	$6.13/Dth
Small Interruptible	$0.96/Dth	$4.34/Dth	N/A	$5.30/Dth
Medium Interruptible	$0.48/Dth	$4.34/Dth	N/A	$4.82/Dth
Large Interruptible	$0.43/Dth	$4.34/Dth	N/A	$4.77/Dth

The rate for Small Commercial Firm / Large Commercial Firm of $6.60/Dth was applied to all Business programs as it is expected that the vast majority of participants would be from these customer classes.

Annual Escalation Rate

The Annual Escalation Rate of 4.28 percent was provided in the Staff BENCOST Memo. This value was calculated using the average of escalation rates from five sources of natural gas price projections, Wood Mackenzie, CERA, ICF, EIA and Global Insights.

BENCOST Input 2 (Non-Gas Fuel Retail Rate)

The Non-Gas Fuel Retail Rate represents the non-gas (normally electricity) retail rate paid by a customer or customer class. This value would be used to account for electric savings associated with gas conservation programs. Because the Company has separate electric conservation programs, we did not include any electric benefits in the BENCOST model. Therefore, the Non-Gas Fuel Retail Rate is zero for all of our analyses.

[1] The Demand Billed classes' rates include both the commodity and demand components of their rates. The demand portion was calculated by dividing annual demand revenue by commodity sales.

Annual Escalation Rate

The Annual Escalation Rate of 2.8 percent was provided in the Staff BENCOST Memo. This value was calculated using the average projected annual change between 2013 and 2034 of a the "Chained Price Index-Household Electricity" provided by Global Insight.

BENCOST Input 3 (Commodity Cost)

The Commodity Cost, $4.34 per MCF, was provided in the Staff BENCOST Memo. This value is the weighted average of CenterPoint Energy, Minnesota Energy Resources Corporation-PNG, and Northern States Power Company (Xcel Energy) purchased gas adjustments (PGAs) from April 2010 through March 2012, weighted by each utility's gas sales to non-exempt customers. The Commodity Cost input is also multiplied by the Annual Escalation Rate of 4.28 percent.

BENCOST Input 4 (Demand Cost)

The Demand Cost equals the Minnesota Total Demand (line 7) divided by the MN State Design Day (line 8) in Schedule A, Page 3 of the Company's March 1, 2011 Derivation of Current PGA Costs. Interruptible customers do not have demand costs. The Demand Cost is multiplied by the Annual Escalation Rate of 4.28 percent discussed in Input 1 above. The resulting 2011 demand cost of $70.96 was escalated one year at 4.28 percent to get a final 2012 BENCOST input value of $74.00.

BENCOST Input 5 (Peak Reduction Factor)

The Peak Reduction Conversion Factor, 1 percent, was provided in the Staff BENCOST Memo. This value represents an estimate of the percent of energy savings occurring on system peak.

BENCOST Input 6 (Variable O&M)

The Variable O&M input, $0.0314 per MCF, is the Company's estimate of its variable Operations and Maintenance (O&M) costs, and is generally equal to its minimum transportation flexible rate for the Large Firm Transportation class. The Variable O&M input is multiplied by the Annual Escalation Rate of 4.28 percent discussed in Input 1 above.

BENCOST Input 7 (Non-Gas Fuel Cost)

The Non-Gas Fuel Cost, $0.02682 per kWh, represents the added or avoided costs of non-natural gas fuel associated with the Conservation Improvement Program. This value was provided in the Staff BENCOST Memo. The Non-Gas Fuel Cost is multiplied by an Annual Escalation Rate of 2.80 percent, as presented in the Staff BENCOST Memo.

BENCOST Input 8 (Non-Gas Fuel Loss Factor)

The Non-Gas Fuel Loss Factor, 5.8 percent as provided in the Staff BENCOST Memo, represents the transmission and distribution line losses associated with non-natural gas (electric) fuels associated with the Conservation Improvement Program.

BENCOST Input 9 (Gas Environmental Damage Factor)

The Environmental Damage Factor, $0.35 per MCF saved, was provided in the Staff BENCOST Memo. This value represents the societal and environmental cost of burning natural gas. It includes the costs of some emissions (SO_2, PM, CO, NO_X, Pb, and CO_2), but not others (methane, propane,

VOCs). The Gas Environmental Damage Factor is multiplied by an Annual Escalation Rate of 1.73 percent as presented in the Staff BENCOST Memo.

BENCOST Input 10 (Non-Gas Fuel Environmental Damage Factor)

The Non-Gas Fuel Environmental Damage Factor, $21.32 per MWh, represents the cost to society and the environment for generating electricity. This value was provided in the Staff BENCOST Memo. The Non-Gas Fuel Environmental Damage Factor is multiplied by an Annual Escalation Rate of 1.73 percent, as presented in the Staff BENCOST Memo.

BENCOST Input 11 (Participant Discount Rate)

The Participant Discount Rate for business customers is represented by the Utility Discount Rate, discussed in Input 12. For residential customers, it is represented by the Societal Discount Rate, discussed in Input 13.

BENCOST Input 12 (Utility Discount Rate)

The Discount Rate of 7.04 percent is Xcel Energy's after-tax weighted average cost of capital from its 2010 rate case (Docket No. G002/GR-09-1153).

BENCOST Input 13 (Societal Discount Rate)

The Social Discount Rate, 2.67 percent, was provided in the Staff BENCOST Memo.

BENCOST Input 14 (General Input Data Year)

The General Input Data Year for the 2013-2015 CIP Triennial Plan, 2012, was provided in the Staff BENCOST Memo.

BENCOST Input 15, 15a, and 15b (Project Analysis Years 1, 2, and 3)

The Project Analysis Years are the years over which Xcel Energy's CIP Triennial Plan will be effective, 2013, 2014, and 2015, respectively.

➢ Budget Categories

The following chart indicates which expenses are attributed to each CIP budget category in this filing.

Budget Category	Components
Customer Services	• Consulting costs for customer scoping and project management, subsidies for assessments and engineering studies. • Costs to purchase EE equipment and to install efficient equipment at the customer site.
Utility Administration	• Project planning, development and implementation. Marketing and support staff including program managers, marketing assistants, developers, technical support staff, rebate processing, sales and call center representatives, inside contract labor, and other fulfillment associated with delivering a product directly to the customer. • Auditors, installation contractors, vendors, technical consultants, fulfillment contractors and alternative providers that Xcel Energy contracts with to provide DSM services. • Equipment purchase costs and repair; hardware and software; supplies; and other employee expenses.
Advertising & Promotion	• TV, radio, newspaper and print media; direct promotion and sales support materials; postage, promotional events; contracted outbound telephone sales. • Customer education through seminars, pamphlets, videos and computer games. • Communication staff and other supporting labor.
Participant Incentives	Customer rebates and incentives given in the form of subsidized products or equipment.
Measurement & Verification (M&V)	Program evaluation expenses and consultants performing M&V.
Research & Development (R&D)	Internal product development staff, product development external consultants, product development research activities & Market Research potential studies.
Other	• Vendor and trade incentives. • Direct and indirect regulatory fees.