

Full Executive Summary Table - 2016 Actual Achievements

2016	GOAL				ACTUAL										TEST RESULTS			
	Participants	Electric Budget	Generator kW	Generator kWh	Participants	% of Goal	Electric Spend	% of Goal	Generator kW	% of Goal	Generator kWh	Lifetime years	Lifetime kWh	% of Goal	Part Ratio	Utility Ratio	RIM Ratio	TRC Ratio
<b>Business Segment</b>																		
Lighting Efficiency	2,565	\$ 433,191	1,448	8,367,645	183	7%	\$ 485,750	112%	645	45%	3,493,233	17.30	60,432,937	42%	1.74	5.91	0.80	1.32
Business Saver's Switch	20	\$ 30,950	30	224	70	350%	\$ 48,239	156%	176	588%	1,313	15.00	19,695	586%	INF	3.73	3.27	3.73
Peak and Energy Control	1	\$ 6,000	101	2,612	1	100%	\$ 2,178	36%	158	156%	5,815	5.00	29,075	223%	INF	43.17	0.71	43.17
<b>Business Segment Total</b>	<b>2,586</b>	<b>\$ 470,141</b>	<b>1,579</b>	<b>8,370,481</b>	<b>254</b>	<b>10%</b>	<b>\$ 536,167</b>	<b>114%</b>	<b>979</b>	<b>62%</b>	<b>3,500,361</b>	<b>17.30</b>	<b>60,481,706</b>	<b>42%</b>	<b>1.81</b>	<b>5.87</b>	<b>0.83</b>	<b>1.40</b>
<b>Residential Segment</b>																		
Ground Source Heat Pump	12	\$ 25,050	19	102,398	11	92%	\$ 16,940	68%	29	152%	68,269	20.00	1,365,380	67%	0.71	6.01	1.43	1.02
Residential Home Lighting	7,851	\$ 56,035	108	828,699	18,416	235%	\$ 74,962	134%	144	133%	1,162,819	12.80	14,884,078	140%	2.21	10.11	1.21	2.32
Residential Saver's Switch	758	\$ 181,650	502	3,954	628	83%	\$ 168,133	93%	431	86%	3,493	15.00	52,400	88%	INF	3.60	1.00	3.60
Consumer Education	68,000	\$ 27,165	0	0	71,500	105%	\$ 15,243	56%	0		0				-	-	-	-
<b>Residential Segment Total</b>	<b>76,621</b>	<b>\$ 289,900</b>	<b>629</b>	<b>935,051</b>	<b>90,555</b>	<b>118%</b>	<b>\$ 275,279</b>	<b>95%</b>	<b>604</b>	<b>96%</b>	<b>1,234,581</b>	<b>13.20</b>	<b>16,301,857</b>	<b>132%</b>	<b>2.99</b>	<b>5.32</b>	<b>1.11</b>	<b>2.37</b>
<b>Planning Segment</b>																		
Regulatory Affairs	0	\$ 15,000	0	0	-	0%	\$ 8,472	56%	-	-	-	-	-	-	-	-	-	-
<b>Planning Segment Total</b>	<b>0</b>	<b>\$ 15,000</b>	<b>0</b>	<b>0</b>	<b>-</b>	<b>0%</b>	<b>\$ 8,472</b>	<b>56%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>PORTFOLIO TOTAL</b>	<b>79,207</b>	<b>\$ 775,041</b>	<b>2,208</b>	<b>9,305,532</b>	<b>90,809</b>	<b>115%</b>	<b>\$ 819,918</b>	<b>106%</b>	<b>1582</b>	<b>72%</b>	<b>4,734,942</b>	<b>16.30</b>	<b>76,783,563</b>	<b>51%</b>	<b>1.99</b>	<b>5.62</b>	<b>0.90</b>	<b>1.59</b>

2016 SD DSM Plan Cost-Effectiveness Analysis

<b>LIGHTING EFFICIENCY</b>						<b>2016 ELECTRIC</b>		<b>ACTUAL</b>
<b>2016 Net Present Cost Benefit Summary Analysis For All Participants</b>						<b>Input Summary and Totals</b>		
	<b>Participant</b>	<b>Utility</b>	<b>Rate</b>	<b>Total</b>				
	<b>Test</b>	<b>Test</b>	<b>Impact</b>	<b>Resource</b>	<b>Societal</b>			
	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>Test</b>			
	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>			
<b>Benefits</b>								
<b>Avoided Revenue Requirements</b>								
Generation	N/A	\$677,114	\$677,114	\$677,114	\$677,114			
T & D	N/A	\$256,728	\$256,728	\$256,728	\$256,728			
Marginal Energy	N/A	\$1,937,751	\$1,937,751	\$1,937,751	\$1,937,751			
Environmental Externality	N/A	N/A	N/A	N/A	N/A			\$0
Subtotal	N/A	\$2,871,594	\$2,871,594	\$2,871,594	\$2,871,594			
<b>Participant Benefits</b>								
Bill Reduction - Electric	\$3,108,410	N/A	N/A	N/A	N/A			
Rebates from Xcel Energy	\$464,854	N/A	N/A	\$464,854	\$464,854			
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0			
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0			
Subtotal	\$3,573,264	N/A	N/A	\$464,854	\$464,854			
<b>Total Benefits</b>	<b>\$3,573,264</b>	<b>\$2,871,594</b>	<b>\$2,871,594</b>	<b>\$3,336,448</b>	<b>\$3,336,448</b>			
<b>Costs</b>								
<b>Utility Project Costs</b>								
Customer Services	N/A	\$0	\$0	\$0	\$0			
Utility Administration	N/A	\$20,896	\$20,896	\$20,896	\$20,896			
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0			
Measurement & Verification	N/A	\$0	\$0	\$0	\$0			
Rebates	N/A	\$464,854	\$464,854	\$464,854	\$464,854			
Other	N/A	\$0	\$0	\$0	\$0			
Subtotal	N/A	\$485,750	\$485,750	\$485,750	\$485,750			
<b>Utility Revenue Reduction</b>								
Revenue Reduction - Electric	N/A	N/A	\$3,108,410	N/A	N/A			
Subtotal	N/A	N/A	\$3,108,410	N/A	N/A			
<b>Participant Costs</b>								
Incremental Capital Costs	\$1,952,700	N/A	N/A	\$1,952,700	\$1,952,700			
Incremental O&M Costs	\$96,780	N/A	N/A	\$96,780	\$96,780			
Subtotal	\$2,049,480	N/A	N/A	\$2,049,480	\$2,049,480			
<b>Total Costs</b>	<b>\$2,049,480</b>	<b>\$485,750</b>	<b>\$3,594,159</b>	<b>\$2,535,229</b>	<b>\$2,535,229</b>			
<b>Net Benefit (Cost)</b>	<b>\$1,523,784</b>	<b>\$2,385,844</b>	<b>(\$722,566)</b>	<b>\$801,218</b>	<b>\$801,218</b>			
<b>Benefit/Cost Ratio</b>	<b>1.74</b>	<b>5.91</b>	<b>0.80</b>	<b>1.32</b>	<b>1.32</b>			

  

<b>Program "Inputs" per Customer kW</b>		
Lifetime (Weighted on Generator kWh)	A	17.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	69.40%
Gross Load Factor at Customer	E	43.35%
Transmission Loss Factor (Energy)	F	5.330%
Transmission Loss Factor (Demand)	G	6.290%
Societal Net Benefit (Cost)	H	\$920

  

<b>Program Summary per Participant</b>		
Gross kW Saved at Customer	I	4.76 kW
Net coincident kW Saved at Generator	$(I \times D) / (1 - G)$	3.52 kW
Gross Annual kWh Saved at Customer	$(B \times E \times I)$	18,071 kWh
Net Annual kWh Saved at Generator	$(B \times E \times I) / (1 - F)$	19,089 kWh

  

<b>Program Summary All Participants</b>		
Total Participants	J	183
<b>Total Budget</b>	<b>K</b>	<b>\$485,750</b>
Gross kW Saved at Customer	$(J \times I)$	870.77 kW
<b>Net coincident kW Saved at Generator</b>	<b><math>(I \times D) / (1 - G) \times J</math></b>	<b>645 kW</b>
Gross Annual kWh Saved at Customer	$(B \times E \times I) \times J$	3,307,044 kWh
<b>Net Annual kWh Saved at Generator</b>	<b><math>((B \times E \times I) / (1 - F)) \times J</math></b>	<b>3,493,233 kWh</b>
<b>Societal Net Benefits</b>	<b><math>(J \times I \times H)</math></b>	<b>\$801,218</b>

  

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0080</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$753</b>

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

<b>BUSINESS SAVER'S SWITCH</b>						<b>2016</b>	<b>ELECTRIC</b>	<b>ACTUAL</b>
<b>2016 Net Present Cost Benefit Summary Analysis For All Participants</b>						<b>Input Summary and Totals</b>		
	<b>Participant Test (\$Total)</b>	<b>Utility Test (\$Total)</b>	<b>Rate Impact Test (\$Total)</b>	<b>Total Resource Test (\$Total)</b>	<b>Societal Test (\$Total)</b>	<b>Program "Inputs" per Customer kW</b>		
<b>Benefits</b>						Lifetime (Weighted on Generator kWh)	A	15.0 years
<b>Avoided Revenue Requirements</b>						Annual Hours	B	8760
Generation	N/A	\$178,962	\$178,962	\$178,962	\$178,962	Gross Customer kW	C	1 kW
T & D	N/A	\$0	\$0	\$0	\$0	Generator Peak Coincidence Factor	D	18.52%
Marginal Energy	N/A	\$1,169	\$1,169	\$1,169	\$1,169	Gross Load Factor at Customer	E	0.02%
Environmental Externality	N/A	N/A	N/A	N/A	\$0	Transmission Loss Factor (Energy)	F	5.330%
Subtotal	N/A	\$180,131	\$180,131	\$180,131	\$180,131	Transmission Loss Factor (Demand)	G	6.290%
<b>Participant Benefits</b>						Societal Net Benefit (Cost)	H	\$148
Bill Reduction - Electric	\$6,822	N/A	N/A	N/A	N/A	<b>Program Summary per Participant</b>		
Rebates from Xcel Energy	\$0	N/A	N/A	\$0	\$0	Gross kW Saved at Customer	I	12.75 kW
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0	Net coincident kW Saved at Generator	$(I \times D) / (1 - G)$	
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0	Gross Annual kWh Saved at Customer	$(B \times E \times I)$	
Subtotal	\$6,822	N/A	N/A	\$0	\$0	Net Annual kWh Saved at Generator	$(B \times E \times I) / (1 - F)$	
<b>Total Benefits</b>	<b>\$6,822</b>	<b>\$180,131</b>	<b>\$180,131</b>	<b>\$180,131</b>	<b>\$180,131</b>	<b>Program Summary All Participants</b>		
<b>Costs</b>						Total Participants	J	70
<b>Utility Project Costs</b>						<b>Total Budget</b>	K	<b>\$48,239</b>
Customer Services	N/A	\$0	\$0	\$0	\$0	Gross kW Saved at Customer	$(J \times I)$	
Utility Administration	N/A	\$48,239	\$48,239	\$48,239	\$48,239	<b>Net coincident kW Saved at Generator</b>	$(I \times D) / (1 - G) \times J$	
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0	Gross Annual kWh Saved at Customer	$(B \times E \times I) \times J$	
Measurement & Verification	N/A	\$0	\$0	\$0	\$0	<b>Net Annual kWh Saved at Generator</b>	$((B \times E \times I) / (1 - F)) \times J$	
Rebates	N/A	\$0	\$0	\$0	\$0	<b>Societal Net Benefits</b>	$(J \times I \times H)$	
Other	N/A	\$0	\$0	\$0	\$0	<b>Utility Program Cost per kWh Lifetime</b>		
Subtotal	N/A	\$48,239	\$48,239	\$48,239	\$48,239	<b>Utility Program Cost per kW at Gen</b>		
<b>Utility Revenue Reduction</b>								<b>\$2,4493</b>
Revenue Reduction - Electric	N/A	N/A	\$6,822	N/A	N/A			<b>\$273</b>
Subtotal	N/A	N/A	\$6,822	N/A	N/A			
<b>Participant Costs</b>								
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			
<b>Total Costs</b>	<b>\$0</b>	<b>\$48,239</b>	<b>\$55,061</b>	<b>\$48,239</b>	<b>\$48,239</b>			
<b>Net Benefit (Cost)</b>	<b>\$6,822</b>	<b>\$131,892</b>	<b>\$125,070</b>	<b>\$131,892</b>	<b>\$131,892</b>			
<b>Benefit/Cost Ratio</b>	<b>INF</b>	<b>3.73</b>	<b>3.27</b>	<b>3.73</b>	<b>3.73</b>			

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

<b>PEAK AND ENERGY CONTROL</b>						<b>2016</b>	<b>ELECTRIC</b>	<b>ACTUAL</b>
<b>2016 Net Present Cost Benefit Summary Analysis For All Participants</b>						<b>Input Summary and Totals</b>		
	<b>Participant Test (\$Total)</b>	<b>Utility Test (\$Total)</b>	<b>Rate Impact Test (\$Total)</b>	<b>Total Resource Test (\$Total)</b>	<b>Societal Test (\$Total)</b>	<b>Program "Inputs" per Customer kW</b>		
<b>Benefits</b>						Lifetime (Weighted on Generator kWh)	A	5.0 years
<b>Avoided Revenue Requirements</b>						Annual Hours	B	8760
Generation	N/A	\$66,778	\$66,778	\$66,778	\$66,778	Gross Customer kW	C	1 kW
T & D	N/A	\$25,320	\$25,320	\$25,320	\$25,320	Generator Peak Coincidence Factor	D	47.46%
Marginal Energy	N/A	\$1,934	\$1,934	\$1,934	\$1,934	Gross Load Factor at Customer	E	0.20%
Environmental Externality	N/A	N/A	N/A	N/A	N/A	Transmission Loss Factor (Energy)	F	5.330%
Subtotal	N/A	\$94,031	\$94,031	\$94,031	\$94,031	Transmission Loss Factor (Demand)	G	6.290%
<b>Participant Benefits</b>						Societal Net Benefit (Cost)	H	\$295
Bill Reduction - Electric	\$130,763	N/A	N/A	N/A	N/A	<b>Program Summary per Participant</b>		
Rebates from Xcel Energy	\$0	N/A	N/A	\$0	\$0	Gross kW Saved at Customer	I	311.00 kW
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0	Net coincident kW Saved at Generator	$(I \times D) / (1 - G)$	
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0	Gross Annual kWh Saved at Customer	$(B \times E \times I)$	
Subtotal	\$130,763	N/A	N/A	\$0	\$0	Net Annual kWh Saved at Generator	$(B \times E \times I) / (1 - F)$	
<b>Total Benefits</b>	<b>\$130,763</b>	<b>\$94,031</b>	<b>\$94,031</b>	<b>\$94,031</b>	<b>\$94,031</b>	<b>Program Summary All Participants</b>		
<b>Costs</b>						Total Participants	J	1
<b>Utility Project Costs</b>						<b>Total Budget</b>	K	<b>\$2,178</b>
Customer Services	N/A	\$0	\$0	\$0	\$0	Gross kW Saved at Customer	$(J \times I)$	
Utility Administration	N/A	\$2,178	\$2,178	\$2,178	\$2,178	<b>Net coincident kW Saved at Generator</b>	$(I \times D) / (1 - G) \times J$	
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0	Gross Annual kWh Saved at Customer	$(B \times E \times I) \times J$	
Measurement & Verification	N/A	\$0	\$0	\$0	\$0	<b>Net Annual kWh Saved at Generator</b>	$((B \times E \times I) / (1 - F)) \times J$	
Rebates	N/A	\$0	\$0	\$0	\$0	<b>Societal Net Benefits</b>	$(J \times I \times H)$	
Other	N/A	\$0	\$0	\$0	\$0	<b>Utility Program Cost per kWh Lifetime</b>		
Subtotal	N/A	\$2,178	\$2,178	\$2,178	\$2,178	<b>Utility Program Cost per kW at Gen</b>		
<b>Utility Revenue Reduction</b>								<b>\$0.0749</b>
Revenue Reduction - Electric	N/A	N/A	\$130,763	N/A	N/A			<b>\$14</b>
Subtotal	N/A	N/A	\$130,763	N/A	N/A			
<b>Participant Costs</b>								
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			
<b>Total Costs</b>	<b>\$0</b>	<b>\$2,178</b>	<b>\$132,942</b>	<b>\$2,178</b>	<b>\$2,178</b>			
<b>Net Benefit (Cost)</b>	<b>\$130,763</b>	<b>\$91,853</b>	<b>(\$38,911)</b>	<b>\$91,853</b>	<b>\$91,853</b>			
<b>Benefit/Cost Ratio</b>	<b>INF</b>	<b>43.17</b>	<b>0.71</b>	<b>43.17</b>	<b>43.17</b>			

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

2016 SD DSM Plan Cost-Effectiveness Analysis

<b>BUSINESS SEGMENT TOTAL</b>						<b>2016</b>	<b>ELECTRIC</b>	<b>ACTUAL</b>
<b>2016 Net Present Cost Benefit Summary Analysis For All Participants</b>						<b>Input Summary and Totals</b>		
	<b>Participant</b>	<b>Utility</b>	<b>Rate</b>	<b>Total</b>				
	<b>Test</b>	<b>Test</b>	<b>Impact</b>	<b>Resource</b>	<b>Societal</b>			
	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>Test</b>			
	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>			
<b>Benefits</b>								
<b>Avoided Revenue Requirements</b>								
Generation	N/A	\$922,854	\$922,854	\$922,854	\$922,854			
T & D	N/A	\$282,048	\$282,048	\$282,048	\$282,048			
Marginal Energy	N/A	\$1,940,854	\$1,940,854	\$1,940,854	\$1,940,854			
Environmental Externality	N/A	N/A	N/A	N/A	N/A			\$0
Subtotal	N/A	\$3,145,755	\$3,145,755	\$3,145,755	\$3,145,755			
<b>Participant Benefits</b>								
Bill Reduction - Electric	\$3,245,995	N/A	N/A	N/A	N/A			
Rebates from Xcel Energy	\$464,854	N/A	N/A	\$464,854	\$464,854			
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0			
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0			
Subtotal	\$3,710,849	N/A	N/A	\$464,854	\$464,854			
<b>Total Benefits</b>	<b>\$3,710,849</b>	<b>\$3,145,755</b>	<b>\$3,145,755</b>	<b>\$3,610,609</b>	<b>\$3,610,609</b>			
<b>Costs</b>								
<b>Utility Project Costs</b>								
Customer Services	N/A	\$0	\$0	\$0	\$0			
Utility Administration	N/A	\$71,313	\$71,313	\$71,313	\$71,313			
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0			
Measurement & Verification	N/A	\$0	\$0	\$0	\$0			
Rebates	N/A	\$464,854	\$464,854	\$464,854	\$464,854			
Other	N/A	\$0	\$0	\$0	\$0			
Subtotal	N/A	\$536,167	\$536,167	\$536,167	\$536,167			
<b>Utility Revenue Reduction</b>								
Revenue Reduction - Electric	N/A	N/A	\$3,245,995	N/A	N/A			
Subtotal	N/A	N/A	\$3,245,995	N/A	N/A			
<b>Participant Costs</b>								
Incremental Capital Costs	\$1,952,700	N/A	N/A	\$1,952,700	\$1,952,700			
Incremental O&M Costs	\$96,780	N/A	N/A	\$96,780	\$96,780			
Subtotal	\$2,049,480	N/A	N/A	\$2,049,480	\$2,049,480			
<b>Total Costs</b>	<b>\$2,049,480</b>	<b>\$536,167</b>	<b>\$3,782,162</b>	<b>\$2,585,647</b>	<b>\$2,585,647</b>			
<b>Net Benefit (Cost)</b>	<b>\$1,661,370</b>	<b>\$2,609,588</b>	<b>(\$636,407)</b>	<b>\$1,024,963</b>	<b>\$1,024,963</b>			
<b>Benefit/Cost Ratio</b>	<b>1.81</b>	<b>5.87</b>	<b>0.83</b>	<b>1.40</b>	<b>1.40</b>			

  

<b>Program "Inputs" per Customer kW</b>		
Lifetime (Weighted on Generator kWh)	A	17.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	44.22%
Gross Load Factor at Customer	E	18.24%
Transmission Loss Factor (Energy)	F	5.330%
Transmission Loss Factor (Demand)	G	6.290%
Societal Net Benefit (Cost)	H	\$494

  

<b>Program Summary per Participant</b>		
Gross kW Saved at Customer	I	8.17 kW
Net coincident kW Saved at Generator	( I x D ) / ( 1 - G )	3.85 kW
Gross Annual kWh Saved at Customer	( B x E x I )	13,046 kWh
Net Annual kWh Saved at Generator	( B x E x I ) / ( 1 - F )	13,781 kWh

  

<b>Program Summary All Participants</b>		
Total Participants	J	254
<b>Total Budget</b>	<b>K</b>	<b>\$536,167</b>
Gross kW Saved at Customer	( J x I )	2,074.48 kW
<b>Net coincident kW Saved at Generator</b>	<b>( I x D ) / ( 1 - G ) x J</b>	<b>979 kW</b>
Gross Annual kWh Saved at Customer	( B x E x I ) x J	3,313,792 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>( ( B x E x I ) / ( 1 - F ) ) x J</b>	<b>3,500,361 kWh</b>
<b>Societal Net Benefits</b>	<b>( J x I x H )</b>	<b>\$1,024,963</b>

  

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0088</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$548</b>

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

<b>GROUND SOURCE HEAT PUMP</b>						<b>2016</b>	<b>ELECTRIC</b>	<b>ACTUAL</b>
<b>2016 Net Present Cost Benefit Summary Analysis For All Participants</b>						<b>Input Summary and Totals</b>		
	<b>Participant</b>	<b>Utility</b>	<b>Rate</b>	<b>Total</b>				
	<b>Test</b>	<b>Test</b>	<b>Impact</b>	<b>Resource</b>	<b>Societal</b>			
	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>Test</b>			
	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>			
<b>Benefits</b>								
<b>Avoided Revenue Requirements</b>								
Generation	N/A	\$35,126	\$35,126	\$35,126	\$35,126			
T & D	N/A	\$13,318	\$13,318	\$13,318	\$13,318			
Marginal Energy	N/A	\$53,437	\$53,437	\$53,437	\$53,437			
Environmental Externality	N/A	N/A	N/A	N/A	N/A			\$0
Subtotal	N/A	\$101,881	\$101,881	\$101,881	\$101,881			
<b>Participant Benefits</b>								
Bill Reduction - Electric	\$54,368	N/A	N/A	N/A	N/A			
Rebates from Xcel Energy	\$16,200	N/A	N/A	\$16,200	\$16,200			
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0			
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0			
Subtotal	\$70,568	N/A	N/A	\$16,200	\$16,200			
<b>Total Benefits</b>	<b>\$70,568</b>	<b>\$101,881</b>	<b>\$101,881</b>	<b>\$118,081</b>	<b>\$118,081</b>			
<b>Costs</b>								
<b>Utility Project Costs</b>								
Customer Services	N/A	\$0	\$0	\$0	\$0			
Utility Administration	N/A	\$740	\$740	\$740	\$740			
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0			
Measurement & Verification	N/A	\$0	\$0	\$0	\$0			
Rebates	N/A	\$16,200	\$16,200	\$16,200	\$16,200			
Other	N/A	\$0	\$0	\$0	\$0			
Subtotal	N/A	\$16,940	\$16,940	\$16,940	\$16,940			
<b>Utility Revenue Reduction</b>								
Revenue Reduction - Electric	N/A	N/A	\$54,368	N/A	N/A			
Subtotal	N/A	N/A	\$54,368	N/A	N/A			
<b>Participant Costs</b>								
Incremental Capital Costs	\$98,764	N/A	N/A	\$98,764	\$98,764			
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0			
Subtotal	\$98,764	N/A	N/A	\$98,764	\$98,764			
<b>Total Costs</b>	<b>\$98,764</b>	<b>\$16,940</b>	<b>\$71,308</b>	<b>\$115,704</b>	<b>\$115,704</b>			
<b>Net Benefit (Cost)</b>	<b>(\$28,196)</b>	<b>\$84,941</b>	<b>\$30,573</b>	<b>\$2,377</b>	<b>\$2,377</b>			
<b>Benefit/Cost Ratio</b>	<b>0.71</b>	<b>6.01</b>	<b>1.43</b>	<b>1.02</b>	<b>1.02</b>			

  

<b>Program "Inputs" per Customer kW</b>		
Lifetime (Weighted on Generator kWh)	A	20.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	90.00%
Gross Load Factor at Customer	E	24.57%
Transmission Loss Factor (Energy)	F	7.280%
Transmission Loss Factor (Demand)	G	8.300%
Societal Net Benefit (Cost)	H	\$81
<b>Program Summary per Participant</b>		
Gross kW Saved at Customer	I	2.67 kW
Net coincident kW Saved at Generator	$(I \times D) / (1 - G)$	2.62 kW
Gross Annual kWh Saved at Customer	$(B \times E \times I)$	5,754 kWh
Net Annual kWh Saved at Generator	$(B \times E \times I) / (1 - F)$	6,206 kWh
<b>Program Summary All Participants</b>		
Total Participants	J	11
<b>Total Budget</b>	<b>K</b>	<b>\$16,940</b>
Gross kW Saved at Customer	$(J \times I)$	29.41 kW
<b>Net coincident kW Saved at Generator</b>	<b><math>(I \times D) / (1 - G) \times J</math></b>	<b>29 kW</b>
Gross Annual kWh Saved at Customer	$(B \times E \times I) \times J$	63,299 kWh
<b>Net Annual kWh Saved at Generator</b>	<b><math>((B \times E \times I) / (1 - F)) \times J</math></b>	<b>68,269 kWh</b>
<b>Societal Net Benefits</b>	<b><math>(J \times I \times H)</math></b>	<b>\$2,377</b>
<b>Utility Program Cost per kWh Lifetime</b>		
		<b>\$0.0124</b>
<b>Utility Program Cost per kW at Gen</b>		
		<b>\$587</b>

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

<b>RESIDENTIAL HOME LIGHTING</b>						<b>2016</b>	<b>ELECTRIC</b>	<b>ACTUAL</b>
<b>2016 Net Present Cost Benefit Summary Analysis For All Participants</b>						<b>Input Summary and Totals</b>		
	<b>Participant</b>	<b>Utility</b>	<b>Rate</b>	<b>Total</b>	<b>Societal</b>	<b>Program "Inputs" per Customer kW</b>		
	<b>Test</b>	<b>Test</b>	<b>Impact</b>	<b>Resource</b>	<b>Test</b>	Lifetime (Weighted on Generator kWh)	A	12.8 years
	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	Annual Hours	B	8760
<b>Benefits</b>						Gross Customer kW	C	1 kW
<b>Avoided Revenue Requirements</b>						Generator Peak Coincidence Factor	D	12.47%
Generation	N/A	\$101,207	\$101,207	\$101,207	\$101,207	Gross Load Factor at Customer	E	11.67%
T & D	N/A	\$38,373	\$38,373	\$38,373	\$38,373	Transmission Loss Factor (Energy)	F	6.868%
Marginal Energy	N/A	\$617,959	\$617,959	\$617,959	\$617,959	Transmission Loss Factor (Demand)	G	8.184%
Environmental Externality	N/A	N/A	N/A	N/A	\$0	Societal Net Benefit (Cost)	H	\$437
Subtotal	N/A	\$757,539	\$757,539	\$757,539	\$757,539	<b>Program Summary per Participant</b>		
<b>Participant Benefits</b>						Gross kW Saved at Customer	I	0.06 kW
Bill Reduction - Electric	\$552,444	N/A	N/A	N/A	N/A	Net coincident kW Saved at Generator	$(I \times D) / (1 - G)$	
Rebates from Xcel Energy	\$55,803	N/A	N/A	\$55,803	\$55,803	Gross Annual kWh Saved at Customer	$(B \times E \times I)$	
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0	Net Annual kWh Saved at Generator	$(B \times E \times I) / (1 - F)$	
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0	<b>Program Summary All Participants</b>		
Subtotal	\$608,247	N/A	N/A	\$55,803	\$55,803	Total Participants	J	18,416
<b>Total Benefits</b>						<b>Total Budget</b>	K	<b>\$74,962</b>
	\$608,247	\$757,539	\$757,539	\$813,342	\$813,342	Gross kW Saved at Customer	$(J \times I)$	1,059.35 kW
<b>Costs</b>						<b>Net coincident kW Saved at Generator</b>	$(I \times D) / (1 - G) \times J$	
<b>Utility Project Costs</b>						Gross Annual kWh Saved at Customer	$(B \times E \times I) \times J$	
Customer Services	N/A	\$0	\$0	\$0	\$0	<b>Net Annual kWh Saved at Generator</b>	$((B \times E \times I) / (1 - F)) \times J$	
Utility Administration	N/A	\$19,159	\$19,159	\$19,159	\$19,159	<b>Societal Net Benefits</b>	$(J \times I \times H)$	
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0	<b>Utility Program Cost per kWh Lifetime</b>		
Measurement & Verification	N/A	\$0	\$0	\$0	\$0	<b>Utility Program Cost per kW at Gen</b>		
Rebates	N/A	\$55,803	\$55,803	\$55,803	\$55,803			<b>\$0.0050</b>
Other	N/A	\$0	\$0	\$0	\$0			<b>\$521</b>
Subtotal	N/A	\$74,962	\$74,962	\$74,962	\$74,962			
<b>Utility Revenue Reduction</b>								
Revenue Reduction - Electric	N/A	N/A	\$552,444	N/A	N/A			
Subtotal	N/A	N/A	\$552,444	N/A	N/A			
<b>Participant Costs</b>								
Incremental Capital Costs	\$275,335	N/A	N/A	\$275,335	\$275,335			
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0			
Subtotal	\$275,335	N/A	N/A	\$275,335	\$275,335			
<b>Total Costs</b>								
	\$275,335	\$74,962	\$627,406	\$350,297	\$350,297			
<b>Net Benefit (Cost)</b>								
	\$332,912	\$682,577	\$130,133	\$463,045	\$463,045			
<b>Benefit/Cost Ratio</b>								
	2.21	10.11	1.21	2.32	2.32			

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

<b>RESIDENTIAL SAVER'S SWITCH</b>						<b>2016</b>	<b>ELECTRIC</b>	<b>ACTUAL</b>
<b>2016 Net Present Cost Benefit Summary Analysis For All Participants</b>						<b>Input Summary and Totals</b>		
	<b>Participant</b>	<b>Utility</b>	<b>Rate</b>	<b>Total</b>	<b>Societal</b>	<b>Program "Inputs" per Customer kW</b>		
	<b>Test</b>	<b>Test</b>	<b>Impact</b>	<b>Resource</b>	<b>Test</b>	Lifetime (Weighted on Generator kWh)	A	15.0 years
	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	Annual Hours	B	8760
<b>Benefits</b>						Gross Customer kW	C	1 kW
<b>Avoided Revenue Requirements</b>						Generator Peak Coincidence Factor	D	22.00%
Generation	N/A	\$436,969	\$436,969	\$436,969	\$436,969	Gross Load Factor at Customer	E	0.02%
T & D	N/A	\$165,676	\$165,676	\$165,676	\$165,676	Transmission Loss Factor (Energy)	F	7.280%
Marginal Energy	N/A	\$2,487	\$2,487	\$2,487	\$2,487	Transmission Loss Factor (Demand)	G	8.300%
Environmental Externality	N/A	N/A	N/A	N/A	\$0	Societal Net Benefit (Cost)	H	\$243
Subtotal	N/A	\$605,131	\$605,131	\$605,131	\$605,131	<b>Program Summary per Participant</b>		
<b>Participant Benefits</b>						Gross kW Saved at Customer	I	2.86 kW
Bill Reduction - Electric	\$439,337	N/A	N/A	N/A	N/A	Net coincident kW Saved at Generator	$(I \times D) / (1 - G)$	0.69 kW
Rebates from Xcel Energy	\$0	N/A	N/A	\$0	\$0	Gross Annual kWh Saved at Customer	$(B \times E \times I)$	5 kWh
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0	Net Annual kWh Saved at Generator	$(B \times E \times I) / (1 - F)$	6 kWh
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0	<b>Program Summary All Participants</b>		
Subtotal	\$439,337	N/A	N/A	\$0	\$0	Total Participants	J	628
<b>Total Benefits</b>						<b>Total Budget</b>	K	<b>\$168,133</b>
<b>Total Benefits</b>	<b>\$439,337</b>	<b>\$605,131</b>	<b>\$605,131</b>	<b>\$605,131</b>	<b>\$605,131</b>	Gross kW Saved at Customer	$(J \times I)$	1,795.26 kW
<b>Costs</b>						<b>Net coincident kW Saved at Generator</b>	$(I \times D) / (1 - G) \times J$	<b>431 kW</b>
<b>Utility Project Costs</b>						Gross Annual kWh Saved at Customer	$(B \times E \times I) \times J$	3,239 kWh
Customer Services	N/A	\$0	\$0	\$0	\$0	<b>Net Annual kWh Saved at Generator</b>	$((B \times E \times I) / (1 - F)) \times J$	<b>3,493 kWh</b>
Utility Administration	N/A	\$168,133	\$168,133	\$168,133	\$168,133	<b>Societal Net Benefits</b>	$(J \times I \times H)$	<b>\$436,998</b>
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0	<b>Utility Program Cost per kWh Lifetime</b>		
Measurement & Verification	N/A	\$0	\$0	\$0	\$0	<b>Utility Program Cost per kW at Gen</b>		
Rebates	N/A	\$0	\$0	\$0	\$0			<b>\$3,2087</b>
Other	N/A	\$0	\$0	\$0	\$0			<b>\$390</b>
Subtotal	N/A	\$168,133	\$168,133	\$168,133	\$168,133			
<b>Utility Revenue Reduction</b>								
Revenue Reduction - Electric	N/A	N/A	\$439,337	N/A	N/A			
Subtotal	N/A	N/A	\$439,337	N/A	N/A			
<b>Participant Costs</b>								
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			
<b>Total Costs</b>								
<b>Total Costs</b>	<b>\$0</b>	<b>\$168,133</b>	<b>\$607,470</b>	<b>\$168,133</b>	<b>\$168,133</b>			
<b>Net Benefit (Cost)</b>	<b>\$439,337</b>	<b>\$436,998</b>	<b>(\$2,339)</b>	<b>\$436,998</b>	<b>\$436,998</b>			
<b>Benefit/Cost Ratio</b>	<b>INF</b>	<b>3.60</b>	<b>1.00</b>	<b>3.60</b>	<b>3.60</b>			

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



2016 SD DSM Plan Cost-Effectiveness Analysis

<b>RESIDENTIAL SEGMENT TOTAL</b>						<b>2016</b>	<b>ELECTRIC</b>	<b>ACTUAL</b>	
<b>2016 Net Present Cost Benefit Summary Analysis For All Participants</b>						<b>Input Summary and Totals</b>			
	<b>Participant</b>	<b>Utility</b>	<b>Rate</b>	<b>Total</b>	<b>Societal</b>	<b>Program "Inputs" per Customer kW</b>			
	<b>Test</b>	<b>Test</b>	<b>Impact</b>	<b>Resource</b>	<b>Test</b>	Lifetime (Weighted on Generator kWh)	A	13.2 years	
	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	Annual Hours	B	8760	
<b>Benefits</b>						Gross Customer kW	C	1 kW	
<b>Avoided Revenue Requirements</b>						Generator Peak Coincidence Factor	D	19.20%	
Generation	N/A	\$573,303	\$573,303	\$573,303	\$573,303	Gross Load Factor at Customer	E	4.55%	
T & D	N/A	\$217,366	\$217,366	\$217,366	\$217,366	Transmission Loss Factor (Energy)	F	6.892%	
Marginal Energy	N/A	\$673,882	\$673,882	\$673,882	\$673,882	Transmission Loss Factor (Demand)	G	8.257%	
Environmental Externality	N/A	N/A	N/A	N/A	\$0	Societal Net Benefit (Cost)	H	\$308	
Subtotal	N/A	\$1,464,552	\$1,464,552	\$1,464,552	\$1,464,552	<b>Program Summary per Participant</b>			
<b>Participant Benefits</b>						Gross kW Saved at Customer	I	0.03 kW	
Bill Reduction - Electric	\$1,046,149	N/A	N/A	N/A	N/A	Net coincident kW Saved at Generator	$(I \times D) / (1 - G)$		0.01 kW
Rebates from Xcel Energy	\$72,003	N/A	N/A	\$72,003	\$72,003	Gross Annual kWh Saved at Customer	$(B \times E \times I)$		13 kWh
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0	Net Annual kWh Saved at Generator	$(B \times E \times I) / (1 - F)$		14 kWh
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0	<b>Program Summary All Participants</b>			
Subtotal	\$1,118,152	N/A	N/A	\$72,003	\$72,003	Total Participants	J	90,555	
<b>Total Benefits</b>						<b>Total Budget</b>	K	\$275,279	
Total Benefits	\$1,118,152	\$1,464,552	\$1,464,552	\$1,536,555	\$1,536,555	Gross kW Saved at Customer	$(J \times I)$	2,884.03 kW	
<b>Costs</b>						<b>Net coincident kW Saved at Generator</b>	$(I \times D) / (1 - G) \times J$		604 kW
<b>Utility Project Costs</b>						Gross Annual kWh Saved at Customer	$(B \times E \times I) \times J$		1,149,493 kWh
Customer Services	N/A	\$0	\$0	\$0	\$0	<b>Net Annual kWh Saved at Generator</b>	$((B \times E \times I) / (1 - F)) \times J$		1,234,581 kWh
Utility Administration	N/A	\$203,275	\$203,275	\$203,275	\$203,275	<b>Societal Net Benefits</b>	$(J \times I \times H)$		\$887,177
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0	<b>Utility Program Cost per kWh Lifetime</b>			
Measurement & Verification	N/A	\$0	\$0	\$0	\$0	<b>Utility Program Cost per kW at Gen</b>			
Rebates	N/A	\$72,003	\$72,003	\$72,003	\$72,003	<b>\$0.0168</b>			
Other	N/A	\$0	\$0	\$0	\$0	<b>\$456</b>			
Subtotal	N/A	\$275,279	\$275,279	\$275,279	\$275,279				
<b>Utility Revenue Reduction</b>									
Revenue Reduction - Electric	N/A	N/A	\$1,046,149	N/A	N/A				
Subtotal	N/A	N/A	\$1,046,149	N/A	N/A				
<b>Participant Costs</b>									
Incremental Capital Costs	\$374,099	N/A	N/A	\$374,099	\$374,099				
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0				
Subtotal	\$374,099	N/A	N/A	\$374,099	\$374,099				
<b>Total Costs</b>									
Total Costs	\$374,099	\$275,279	\$1,321,428	\$649,378	\$649,378				
<b>Net Benefit (Cost)</b>									
Net Benefit (Cost)	\$744,053	\$1,189,273	\$143,124	\$887,177	\$887,177				
<b>Benefit/Cost Ratio</b>									
Benefit/Cost Ratio	2.99	5.32	1.11	2.37	2.37				

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

2016 SD DSM Plan Cost-Effectiveness Analysis

<b>PORTFOLIO TOTAL</b>						<b>2016</b>	<b>ELECTRIC</b>	<b>ACTUAL</b>
<b>2016 Net Present Cost Benefit Summary Analysis For All Participants</b>						<b>Input Summary and Totals</b>		
	<b>Participant</b>	<b>Utility</b>	<b>Rate</b>	<b>Total</b>	<b>Societal</b>	<b>Program "Inputs" per Customer kW</b>		
	<b>Test</b>	<b>Test</b>	<b>Impact</b>	<b>Resource</b>	<b>Test</b>	Lifetime (Weighted on Generator kWh)	A	16.3 years
	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	<b>(\$Total)</b>	Annual Hours	B	8760
<b>Benefits</b>						Gross Customer kW	C	1 kW
<b>Avoided Revenue Requirements</b>						Generator Peak Coincidence Factor	D	29.54%
Generation	N/A	\$1,496,157	\$1,496,157	\$1,496,157	\$1,496,157	Gross Load Factor at Customer	E	10.28%
T & D	N/A	\$499,414	\$499,414	\$499,414	\$499,414	Transmission Loss Factor (Energy)	F	5.737%
Marginal Energy	N/A	\$2,614,736	\$2,614,736	\$2,614,736	\$2,614,736	Transmission Loss Factor (Demand)	G	7.444%
Environmental Externality	N/A	N/A	N/A	N/A	\$0	Societal Net Benefit (Cost)	H	\$384
Subtotal	N/A	\$4,610,307	\$4,610,307	\$4,610,307	\$4,610,307	<b>Program Summary per Participant</b>		
<b>Participant Benefits</b>						Gross kW Saved at Customer	I	0.05 kW
Bill Reduction - Electric	\$4,292,144	N/A	N/A	N/A	N/A	Net coincident kW Saved at Generator	$(I \times D) / (1 - G)$	
Rebates from Xcel Energy	\$536,857	N/A	N/A	\$536,857	\$536,857	Gross Annual kWh Saved at Customer	$(B \times E \times I)$	
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0	Net Annual kWh Saved at Generator	$(B \times E \times I) / (1 - F)$	
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0	<b>Program Summary All Participants</b>		
Subtotal	\$4,829,001	N/A	N/A	\$536,857	\$536,857	Total Participants	J	90,809
<b>Total Benefits</b>						<b>Total Budget</b>	K	<b>\$819,918</b>
<b>Total Benefits</b>	<b>\$4,829,001</b>	<b>\$4,610,307</b>	<b>\$4,610,307</b>	<b>\$5,147,164</b>	<b>\$5,147,164</b>	Gross kW Saved at Customer	$(J \times I)$	4,958.51 kW
<b>Costs</b>						<b>Net coincident kW Saved at Generator</b>	$(I \times D) / (1 - G) \times J$	
<b>Utility Project Costs</b>						Gross Annual kWh Saved at Customer	$(B \times E \times I) \times J$	
Customer Services	N/A	\$0	\$0	\$0	\$0	<b>Net Annual kWh Saved at Generator</b>	$((B \times E \times I) / (1 - F)) \times J$	
Utility Administration	N/A	\$283,060	\$283,060	\$283,060	\$283,060	<b>Societal Net Benefits</b>	$(J \times I \times H)$	
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0	<b>Utility Program Cost per kWh Lifetime</b>		
Measurement & Verification	N/A	\$0	\$0	\$0	\$0	<b>Utility Program Cost per kW at Gen</b>		
Rebates	N/A	\$536,857	\$536,857	\$536,857	\$536,857	<b>\$0.0107</b>		
Other	N/A	\$0	\$0	\$0	\$0	<b>\$518</b>		
Subtotal	N/A	\$819,918	\$819,918	\$819,918	\$819,918			
<b>Utility Revenue Reduction</b>								
Revenue Reduction - Electric	N/A	N/A	\$4,292,144	N/A	N/A			
Subtotal	N/A	N/A	\$4,292,144	N/A	N/A			
<b>Participant Costs</b>								
Incremental Capital Costs	\$2,326,799	N/A	N/A	\$2,326,799	\$2,326,799			
Incremental O&M Costs	\$96,780	N/A	N/A	\$96,780	\$96,780			
Subtotal	\$2,423,579	N/A	N/A	\$2,423,579	\$2,423,579			
<b>Total Costs</b>								
<b>Total Costs</b>	<b>\$2,423,579</b>	<b>\$819,918</b>	<b>\$5,112,062</b>	<b>\$3,243,497</b>	<b>\$3,243,497</b>			
<b>Net Benefit (Cost)</b>	<b>\$2,405,423</b>	<b>\$3,790,389</b>	<b>(\$501,755)</b>	<b>\$1,903,668</b>	<b>\$1,903,668</b>			
<b>Benefit/Cost Ratio</b>	<b>1.99</b>	<b>5.62</b>	<b>0.90</b>	<b>1.59</b>	<b>1.59</b>			

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