

2020 SD DSM Plan Cost-Effectiveness Analysis

SAVER'S SWITCH						2020	ELECTRIC	GOAL	
2020 Net Present Cost Benefit Summary Analysis For All Participants						Input Summary and Totals			
	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Total Resource Test (\$Total)	Societal Test (\$Total)	Program "Inputs" per Customer kW			
Benefits						Lifetime (Weighted on Generator kWh)	A	15.0 years	
Avoided Revenue Requirements						Annual Hours	B	8760	
Generation	N/A	\$276,569	\$276,569	\$276,569	\$276,569	Gross Customer kW	C	1 kW	
T & D	N/A	\$168,646	\$168,646	\$168,646	\$168,646	Generator Peak Coincidence Factor	D	29.16%	
Marginal Energy	N/A	\$398	\$398	\$398	\$398	Gross Load Factor at Customer	E	0.00%	
Environmental Externality	N/A	N/A	N/A	N/A	\$0	Transmission Loss Factor (Energy)	F	5.950%	
Subtotal	N/A	\$445,613	\$445,613	\$445,613	\$445,613	Transmission Loss Factor (Demand)	G	7.220%	
Participant Benefits						Societal Net Benefit (Cost)	H	\$238	
Bill Reduction - Electric	\$317	N/A	N/A	N/A	N/A	Program Summary per Participant			
Rebates from Xcel Energy	\$0	N/A	N/A	\$0	\$0	Gross kW Saved at Customer	I	2.53 kW	
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0	Net coincident kW Saved at Generator	$(I \times D) / (1 - G)$		0.79 kW
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0	Gross Annual kWh Saved at Customer	$(B \times E \times I)$		1 kWh
Subtotal	\$317	N/A	N/A	\$0	\$0	Net Annual kWh Saved at Generator	$(B \times E \times I) / (1 - F)$		1 kWh
Total Benefits	\$317	\$445,613	\$445,613	\$445,613	\$445,613	Program Summary All Participants			
Costs						Total Participants	J	510	
Utility Project Costs						Total Budget	K	\$138,500	
Customer Services	N/A	\$0	\$0	\$0	\$0	Gross kW Saved at Customer	$(J \times I)$	1,289.83 kW	
Utility Administration	N/A	\$138,500	\$138,500	\$138,500	\$138,500	Net coincident kW Saved at Generator	$(I \times D) / (1 - G) \times J$		405 kW
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0	Gross Annual kWh Saved at Customer	$(B \times E \times I) \times J$		538 kWh
Measurement & Verification	N/A	\$0	\$0	\$0	\$0	Net Annual kWh Saved at Generator	$((B \times E \times I) / (1 - F)) \times J$		572 kWh
Rebates	N/A	\$0	\$0	\$0	\$0	Societal Net Benefits	$(J \times I \times H)$		\$307,113
Other	N/A	\$0	\$0	\$0	\$0	Utility Program Cost per kWh Lifetime			\$16.1451
Subtotal	N/A	\$138,500	\$138,500	\$138,500	\$138,500	Utility Program Cost per kW at Gen			\$342
Utility Revenue Reduction									
Revenue Reduction - Electric	N/A	N/A	\$317	N/A	N/A				
Subtotal	N/A	N/A	\$317	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	\$138,500	\$138,817	\$138,500	\$138,500				
Net Benefit (Cost)	\$317	\$307,113	\$306,795	\$307,113	\$307,113				
Benefit/Cost Ratio	INF	3.22	3.21	3.22	3.22				

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