

DSM PROGRAMS BENEFIT-COST TESTS SUMMARY

	A	B	C	D	E	F	G	H	I	J
DEMAND SIDE MANAGEMENT - PROGRAM PORTFOLIO DESCRIPTIONS (3 Years)										
PROGRAMS	Total Resource Cost		Participant Test		Utility Cost Test		Ratepayer Impact Measure Test		Total Participants	
	NPV	B/C	NPV	B/C	NPV	B/C	NPV	B/C	3 Years	
1 Residential Appliance Program	\$2,987,639	1.4	\$10,349,965	2.3	\$5,613,096	2.1	\$3,019,416	1.4	46,497	
2 Commercial Rebate Program	\$2,361,768	2.8	\$3,917,833	4.7	\$2,788,351	4.2	\$2,226,058	2.6	2,470	
3 Energy Star New Homes	\$5,570,162	1.4	\$17,130,189	2.2	\$10,869,201	2.4	\$6,410,871	1.5	25,815	
4 Residential Home Energy Audit and Weatherization Program	\$303,666	1.1	\$4,156,343	5.4	\$343,236	1.1	-\$436,943	0.9	24,818	
5 Low Income Weatherization Program	-\$19,421	1.0	\$742,605	N/A	-\$19,421	1.0	-\$186,286	0.8	537	
6 Market Transformation	-\$2,444,860	0.0	\$0	N/A	-\$2,444,860	0.0	-\$2,444,860	0.0	850,000	
7 Totals	\$8,758,955	1.3	\$36,296,935	2.5	\$17,149,603	1.9	\$8,588,257	1.3	950,137	

Note: B/C = Net Present Value of Benefits divided by Net Present Value of Costs

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COST EFFECTIVENESS TESTS - RESIDENTIAL APPLIANCE PROGRAM (3 Years)										
MEASURE	Total Resource Cost		Participant Test		Utility Cost Test		Ratepayer Impact Measure Test		Total Participants	
	NPV	B/C	NPV	B/C	NPV	B/C	NPV	B/C	3 Years	
1	Energy Star Clothes Washer - Tier 1	\$34,056	1.0	\$1,022,265	1.6	\$602,607	1.8	\$265,803	1.2	16,524
2	Energy Star Clothes Washer - Tier 2	\$107,013	1.1	\$1,084,772	1.8	\$410,817	1.5	\$120,962	1.1	11,016
3	High Efficiency Gas Clothes Dryer - Residential	\$7,583	1.3	\$33,352	2.1	\$13,929	1.7	\$5,877	1.2	678
4	High Efficiency Gas Water Heater - Residential	\$897,308	2.0	\$1,961,664	2.7	\$1,238,650	3.2	\$796,172	1.8	12,156
5	Tank Less Gas Water Heater - Residential	\$10,363	1.1	\$56,665	1.6	\$67,928	3.0	\$42,963	1.7	123
6	90% Plus AFUE Condensing Gas Furnace - Residential	\$3,068,644	2.0	\$6,191,248	2.6	\$4,416,493	3.6	\$2,924,967	1.9	6,000
7	Program Costs	-\$1,137,328	0.0	\$0	0.0	-\$1,137,328	0.0	-\$1,137,328	0.0	
8	Totals	\$2,987,639	1.4	\$10,349,965	2.3	\$6,750,424	2.1	\$3,019,416	1.4	46,497

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	A		B		C		D		E		F		G		H		I		J	
COST EFFECTIVENESS TESTS - COMMERCIAL REBATE PROGRAM (3 Years)																				
	MEASURE	Total Resource Cost		Participant Test		Utility Cost Test		Ratepayer Impact Measure Test		Total Participants										
		NPV	B/C	NPV	B/C	NPV	B/C	NPV	B/C	3 Years										
1	High Efficiency Gas Water Heater - Commercial Tier 1	\$6,226	2.0	\$12,316	2.6	\$8,597	3.2	\$6,581	2.1	85										
2	High Efficiency Gas Water Heater - Commercial Tier 2	\$5,029	1.9	\$8,877	2.3	\$8,570	5.1	\$6,857	2.8	15										
3	High Efficiency Gas Water Heater - Commercial Tankless	\$20,158	2.4	\$35,149	3.0	\$25,884	4.1	\$20,386	2.5	60										
4	Energy Star Horizontal Clothes Washer - Tier 2	-\$1,262	0.8	\$2,607	1.3	\$1,659	1.4	\$761	1.2	86										
5	Energy Star Horizontal Clothes Washer - Tier 3	-\$546	0.9	\$2,430	1.5	\$657	1.2	\$78	1.0	43										
6	Commercial Clothes Washer	\$3,719	1.4	\$10,505	2.0	\$6,913	2.3	\$4,952	1.7	39										
7	Gas Clothes Dryer	\$1,412	1.3	\$5,617	1.9	\$2,602	1.7	\$1,611	1.4	129										
8	Gas Unit Heater NonCondensing	\$8,598	1.8	\$18,196	2.4	\$12,561	2.9	\$9,488	2.0	26										
9	Gas Unit Heater Condensing	\$8,203	1.2	\$44,547	1.7	\$27,226	1.9	\$17,777	1.4	26										
10	90% Plus AFUE Condensing Gas Furnace - Commercial	\$189,867	2.0	\$307,184	2.3	\$308,089	5.4	\$249,948	3.0	381										
11	92% Plus AFUE Condensing Gas Furnace - Commercial	\$54,101	2.0	\$94,004	2.4	\$82,284	4.1	\$65,567	2.5	96										
12	94% Plus AFUE Condensing Gas Furnace - Commercial	\$59,895	2.0	\$110,019	2.4	\$86,254	3.5	\$67,578	2.3	96										
13	High Efficiency Boiler Hot Water Tier 1	\$101,529	3.4	\$148,017	3.8	\$123,194	6.9	\$100,995	3.3	115										
14	High Efficiency Boiler Hot Water Tier 2	\$125,062	5.0	\$175,957	5.5	\$136,808	8.0	\$112,740	3.6	22										
15	High Efficiency Boiler Steam Tier 1	\$1,750	3.4	\$2,554	3.8	\$2,123	6.9	\$1,740	3.3	2										
16	High Efficiency Boiler Steam Tier 2	\$886	1.4	\$2,199	1.8	\$2,006	2.8	\$1,529	2.0	2										
17	Direct Contact Water Heater	\$547,774	9.2	\$753,014	10.0	\$572,214	14.5	\$473,808	4.4	6										
18	Programmable Thermostat - Commercial	\$231,713	13.5	\$299,316	13.9	\$241,775	29.6	\$203,124	5.3	364										
19	Low Flow Pre-rinse Spray Valve	\$298,573	23.1	\$367,000	22.7	\$303,642	36.9	\$257,117	5.7	364										
20	Boiler Reset Control	\$1,044,859	8.5	\$1,359,297	8.8	\$1,132,222	22.7	\$949,857	5.0	229										
21	Infrared Heating System	\$36,350	3.7	\$53,121	4.1	\$42,539	6.7	\$34,818	3.3	27										
22	Boiler Tune-up	\$52,548	1.5	\$105,906	1.7	\$95,208	2.3	\$73,420	1.8	257										
23	Program Costs	-\$434,676	0.0	\$0	0.0	-\$434,676	0.0	-\$434,676	0.0											
24	Totals	\$2,361,768	2.8	\$3,917,833	4.7	\$2,788,351	4.2	\$2,226,058	2.6	2,470										

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COST EFFECTIVENESS TESTS - ENERGY STAR NEW HOMES (3 Years)										
MEASURE	Total Resource Cost		Participant Test		Utility Cost Test		Ratepayer Impact Measure Test		Total Participants	
	NPV	B/C	NPV	B/C	NPV	B/C	NPV	B/C	3 Years	
1	Basic Energy Star Specifications - IECC plus 15% minimum, plus	\$4,978,078	2.0	\$9,795,282	2.7	\$7,381,320	4.1	\$5,041,103	2.1	5,007
2	High Efficiency Gas Water Heater - Home Builder	\$739,194	2.0	\$1,616,000	2.7	\$1,020,389	3.2	\$655,879	1.8	10,014
3	Tank Less Gas Water Heater - Home Builder	\$65,718	1.1	\$359,337	1.6	\$430,761	3.0	\$272,451	1.7	780
4	90% Plus AFUE Condensing Gas Furnace - Home Builder	\$1,464,265	1.3	\$5,359,569	1.8	\$3,713,825	2.3	\$2,118,532	1.5	10,014
5	Program Costs	-\$1,677,093	0.0	\$0	N/A	-\$1,677,093	0.0	-\$1,677,093	0.0	
6	Totals	\$5,570,162	1.4	\$17,130,189	2.2	\$10,869,201	2.4	\$6,410,871	1.5	25,815

DSM PROGRAMS BENEFIT-COST TESTS SUMMARY

COST EFFECTIVENESS TESTS - RESIDENTIAL HOME ENERGY AUDIT & WEATHERIZATION PROGRAM (3 Years)										
MEASURE	Total Resource Cost		Participant Test		Utility Cost Test		Ratepayer Impact Measure Test		Total Participants	
	NPV	B/C	NPV	B/C	NPV	B/C	NPV	B/C	3 Years	
1	Windows - Residential	\$68,260	3.4	\$121,212	4.4	\$70,689	3.7	\$47,193	2.0	136
2	Wall Insulation	\$78,496	1.4	\$307,333	2.2	\$105,582	1.6	\$36,072	1.1	274
3	Duct Sealing	\$37,081	1.8	\$100,494	2.6	\$41,640	1.9	\$20,555	1.3	214
4	Duct Insulation - Residential	\$80,280	2.5	\$164,975	3.4	\$85,771	2.7	\$52,663	1.6	214
5	Roof Insulation - Residential	\$96,586	1.6	\$288,692	2.4	\$119,126	1.8	\$55,735	1.3	731
6	Floor Insulation	\$203,808	2.5	\$427,456	3.5	\$200,516	2.4	\$118,107	1.5	731
7	Water Heater Blanket	\$219,566	8.8	\$344,163	10.8	\$212,555	7.1	\$152,378	2.6	2,692
8	Pipe Insulation	\$394,500	21.5	\$562,314	24.4	\$389,690	17.2	\$288,608	3.3	6,463
9	Faucet Aerator	\$144,526	9.0	\$220,943	10.8	\$140,017	7.2	\$100,300	2.6	8,080
10	Low Flow Showerhead	\$958,510	52.4	\$1,358,472	59.3	\$953,851	41.9	\$716,387	3.7	4,040
11	Programmable Thermostat - Residential	\$161,674	5.4	\$260,289	6.7	\$163,423	5.7	\$114,681	2.4	1,243
12	Program Costs	-\$2,139,622	0.0	\$0	N/A	-\$2,139,622	0.0	-\$2,139,622	0.0	
13	Totals	\$303,666	1.1	\$4,156,343	5.4	\$343,236	1.1	-\$436,943	0.9	24,818

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COST EFFECTIVENESS TESTS - LOW INCOME WEATHERIZATION PROGRAM (3 Years)																				
	MEASURE	Total Resource Cost		Participant Test		Utility Cost Test		Ratepayer Impact Measure Test		Total Participants										
		NPV	B/C	NPV	B/C	NPV	B/C	NPV	B/C	3 Years										
1	Low Income Furnace Replacement	\$682,583	N/A	\$742,605	N/A	\$682,583	N/A	\$515,719	4.1	537										
2	Program Costs	-\$702,005	0.0	\$0	0.0	-\$702,005	0.0	-\$702,005	0.0											
3	Totals	-\$19,421	1.0	\$742,605	N/A	-\$19,421	1.0	-\$186,286	0.8	537										