

DSM TECHNOLOGY INPUT TABLES

UTILITY:	Missouri Statewide	BATCH:	1
SECTOR:	Residential	ANALYSIS:	Basic
SEGMENT:	All Electric	VINTAGE:	All

APPENDIX E

RESIDENTIAL

MEASURE INPUT DATA

MEASURE COSTS																						
Segment	Measure #	Measure Description	Savings Units	Cost Units	Unit Equipment Cost	Unit Labor Cost	NPV of Lifetime O & M Cost	Implementation Cost	Cost per Savings Unit	Service Life	Full = 1 Incr. = 0 Initial Cost	Replace Cost	Full Unit Cost	Relative Energy Reduction Factors					Implementation Type			
														SON	SOFF	WON	WOFF	SHON	SHOF	End Use	1=1 time	2=ROB
Existing	100	Base, 13 SEER Split-System Air Conditioner	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	18	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1	1	2
Existing	101	15 SEER Split-System Air Conditioner	home	unit	467.5	\$0.00	\$0.00	\$467.50	\$0.00	1	18	1	1	\$467.50	1.00	1.00	1.00	1.00	1.00	1	1	2
Existing	102	17 SEER Split-System Air Conditioner	home	unit	1119.5	\$0.00	\$0.00	\$1,119.50	\$0.00	1	18	1	1	\$1,119.50	1.00	1.00	1.00	1.00	1.00	1	1	2
Existing	103	Programmable Thermostat	home	unit	\$23.92	\$14.35	\$0.00	\$38.27	\$0.00	1	10	1	1	\$38.27	0.90	1.00	1.00	1.00	1.00	1	1	1
Existing	104	Ceiling Fans	home	unit	\$80.00	\$0.00	\$0.00	\$120.00	\$0.00	1	15	1	1	\$120.00	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	105	Whole House Fans	home	unit	\$243.17	\$269.72	\$0.00	\$512.89	\$0.00	1	15	1	1	\$512.89	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	106	Attic Venting	home	unit	\$41.00	\$100.00	\$0.00	\$141.00	\$0.00	1	10	1	1	\$141.00	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	107	Proper Refrigerant Charging and Air Flow	home	ton	\$14.11	\$28.23	\$0.00	\$42.34	\$0.00	1	10	1	1	\$42.34	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	108	Duct Repair	home	home	\$26.78	\$212.22	\$0.00	\$239.00	\$0.00	1	18	1	1	\$239.00	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	109	Duct Insulation	home	linear foot	\$0.38	\$1.33	\$0.00	\$1.70	\$0.00	1	18	1	1	\$1.70	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	110	AC maintenance and repair	home	unit	\$0.00	\$125.00	\$0.00	\$125.00	\$0.00	1	5	1	1	\$125.00	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	111	Single Pane Windows to Double Pane with Gas	home	sq ft	\$1.22	\$0.00	\$0.00	\$1.22	\$0.00	1	25	1	1	\$1.22	1.00	1.00	1.00	1.00	1.00	1	1	2
Existing	112	Double Pane with Glazing to Energy Star	home	sq ft	\$1.28	\$0.00	\$0.00	\$1.28	\$0.00	1	25	1	1	\$1.28	1.00	1.00	1.00	1.00	1.00	1	1	2
Existing	113	Sealed Attic w/Sprayed Foam Insulated Roof Deck	home	sq ft	\$1.90	\$0.00	\$0.00	\$1.90	\$0.00	1	40	1	1	\$1.90	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	114	Ceiling R-0 to R-38 Insulation	home	sq ft	\$0.61	\$0.33	\$0.00	\$0.94	\$0.00	1	40	1	1	\$0.94	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	115	Ceiling R-11 to R-38 Insulation	home	sq ft	\$0.43	\$0.33	\$0.00	\$0.76	\$0.00	1	40	1	1	\$0.76	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	116	Ceiling R-19 to R-38 Insulation	home	sq ft	\$0.30	\$0.33	\$0.00	\$0.64	\$0.00	1	40	1	1	\$0.64	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	117	Ceiling R-0 to R-49 Insulation	home	sq ft	\$0.78	\$0.33	\$0.00	\$1.12	\$0.00	1	40	1	1	\$1.12	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	118	Ceiling R-19 to R-49 Insulation	home	sq ft	\$0.48	\$0.33	\$0.00	\$0.81	\$0.00	1	40	1	1	\$0.81	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	119	Ceiling R-30 to R-49 Insulation	home	sq ft	\$0.30	\$0.33	\$0.00	\$0.64	\$0.00	1	40	1	1	\$0.64	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	120	Wall 2x4 R-0 to Blow-In R-13 Insulation	home	sq ft	\$0.14	\$0.27	\$0.00	\$0.41	\$0.00	1	25	1	1	\$0.41	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	121	Self Install Weatherization	home	home	\$5.44	\$0.00	\$0.00	\$5.44	\$0.00	1	10	1	1	\$5.44	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	122	Infiltration Reduction	home	home	\$83.75	\$36.25	\$0.00	\$120.00	\$0.00	1	10	1	1	\$120.00	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	130	Base Early Replacement 10 SEER Split-System AC	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	18	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	131	15 SEER Split-System AC Early Replacement	home	unit	\$514.00	\$0.00	\$0.00	\$514.00	\$0.00	1	18	1	1	\$514.00	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	140	Base Room Air Conditioner - EER 9.7	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	12	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1	1	2
Existing	141	HE Room Air Conditioner - Energy star EER 10.8	home	unit	\$50.00	\$0.00	\$0.00	\$50.00	\$0.00	1	12	1	1	\$50.00	1.00	1.00	1.00	1.00	1.00	1	1	2
Existing	142	HE Room Air Conditioner - CEE Tier 1 EER 11.3	home	unit	\$53.00	\$0.00	\$0.00	\$53.00	\$0.00	1	12	1	1	\$53.00	1.00	1.00	1.00	1.00	1.00	1	1	2
Existing	143	Ceiling Fans	home	unit	\$80.00	\$40.00	\$0.00	\$120.00	\$0.00	1	15	1	1	\$120.00	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	144	Whole House Fans	home	unit	\$243.17	\$0.00	\$0.00	\$243.17	\$0.00	1	10	1	1	\$243.17	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	145	Single Pane Windows to Double Pane with Gas	home	sq ft	\$1.22	\$0.00	\$0.00	\$1.22	\$0.00	1	25	1	1	\$1.22	1.00	1.00	1.00	1.00	1.00	1	1	2
Existing	146	Double Pane with Glazing to Energy Star	home	sq ft	\$1.28	\$0.00	\$0.00	\$1.28	\$0.00	1	25	1	1	\$1.28	1.00	1.00	1.00	1.00	1.00	1	1	2
Existing	147	Ceiling R-0 to R-38 Insulation	home	sq ft	\$0.61	\$0.33	\$0.00	\$0.94	\$0.00	1	25	1	1	\$0.94	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	148	Ceiling R-11 to R-38 Insulation	home	sq ft	\$0.43	\$0.33	\$0.00	\$0.76	\$0.00	1	25	1	1	\$0.76	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	149	Ceiling R-19 to R-38 Insulation	home	sq ft	\$0.30	\$0.33	\$0.00	\$0.64	\$0.00	1	25	1	1	\$0.64	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	150	Ceiling R-0 to R-49 Insulation	home	sq ft	\$0.78	\$0.33	\$0.00	\$1.12	\$0.00	1	25	1	1	\$1.12	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	151	Ceiling R-19 to R-49 Insulation	home	sq ft	\$0.48	\$0.33	\$0.00	\$0.81	\$0.00	1	25	1	1	\$0.81	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	152	Ceiling R-30 to R-49 Insulation	home	sq ft	\$0.30	\$0.33	\$0.00	\$0.64	\$0.00	1	25	1	1	\$0.64	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	153	Wall 2x4 R-0 to Blow-In R-13 Insulation	home	sq ft	\$0.14	\$0.27	\$0.00	\$0.41	\$0.00	1	25	1	1	\$0.41	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	154	Self Install Weatherization	home	home	\$5.44	\$0.00	\$0.00	\$5.44	\$0.00	1	10	1	1	\$5.44	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	155	Infiltration Reduction	home	home	\$83.75	\$36.25	\$0.00	\$120.00	\$0.00	1	10	1	1	\$120.00	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	156	Ductless Split Heat Pump	home	unit	\$238.92	\$0.00	\$0.00	\$238.92	\$0.00	1	18	1	1	\$238.92	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	160	Base Early Replacement Room Air Conditioner- EER 9.0	home	Unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	12	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	161	EER 8.5 AC Early Replacement, CEE Tier 1 EER 11.3	home	Unit	\$67.71	\$0.00	\$0.00	\$67.71	\$0.00	1	12	1	1	\$67.71	1.00	1.00	1.00	1.00	1.00	1	1	1
Existing	170	Base Dehumidifier (EF =1.20)	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	12	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1	1	2
Existing	171	Energy Star Dehumidifier (ROB)	home	unit	\$10.00	\$0.00	\$0.00	\$10.00	\$0.00	1	12	1	1	\$10.00	1.00	1.00	1.00	1.00	1.00	1	1	2
Existing	180	Base Furnace Fans	home	Unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	18	1	1	\$0.00	1.13	0.85	1.00	1.00	1.00	13	2	2
Existing	181	Variable speed furnace fans (RET)	home	Unit	\$200.00	\$0.00	\$0.00	\$200.00	\$0.00	1	18	1	1	\$200.00	0.60	0.60	0.60	0.60	0.60	13	1	1
Existing	182	Variable speed furnace fans (ROB)	home	Unit	\$15.00	\$0.00	\$0.00	\$15.00	\$0.00	1	18	1	1	\$15.00	0.60	0.60	0.60	0.60	0.60	13	2	2
Existing	200	Base Resistance Space Heating	home	Unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	18	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	9	2	2
Existing	201	Single Pane Windows to Double Pane with Gas	home	sq ft	\$1.03	\$0.00	\$0.00	\$1.03	\$0.00	1	25	1	1	\$1.03	1.00	1.00	1.00	1.00	1.00	9	2	2
Existing	202	Double Pane with Glazing to Energy Star	home	sq ft	\$1.72	\$0.00	\$0.00	\$1.72	\$0.00	1	25	1	1	\$1.72	1.00	1.00	1.00	1.00	1.00	9	2	2
Existing	203	Single Pane- Add storm windows	home	sq ft	\$7.33	\$16.00	\$0.00	\$23.33	\$0.00	1	25	1	1	\$23.33	1.00	1.00	1.00	1.00	1.00	9	1	1

APPENDIX E

RESIDENTIAL

MEASURE INPUT DATA

MEASURE COSTS																						
Segment	Measure #	Measure Description	Savings Units	Cost Units	Unit Equipment Cost	Unit Labor Cost	NPV of O & M Cost	Implementation Cost Factor	Cost Units per Savings Unit	Service Life	Full = 1 Incr. = 0	Initial Cost	Replace Cost	Full Unit Cost	Relative Energy Reduction Factors					End Use	Implementation Type	
															SON	SOFF	WON	WOFF	SHON	SHOF		
Existing	204	Double Pane- Add storm windows	home	sq ft	\$7.33	\$16.00	\$0.00	\$23.33	1	25	1	1	1	\$23.33	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	205	Ceiling R-0 to R-38 Insulation	home	sq ft	\$0.61	\$0.33	\$0.00	\$0.94	1	25	1	1	1	\$0.94	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	206	Ceiling R-11 to R-38 Insulation	home	sq ft	\$0.43	\$0.33	\$0.00	\$0.76	1	25	1	1	1	\$0.76	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	207	Ceiling R-19 to R-38 Insulation	home	sq ft	\$0.30	\$0.33	\$0.00	\$0.64	1	25	1	1	1	\$0.64	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	208	Ceiling R-0 to R-49 Insulation	home	sq ft	\$0.78	\$0.33	\$0.00	\$1.12	1	25	1	1	1	\$1.12	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	209	Ceiling R-19 to R-49 Insulation	home	sq ft	\$0.48	\$0.33	\$0.00	\$0.81	1	25	1	1	1	\$0.81	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	210	Ceiling R-30 to R-49 Insulation	home	sq ft	\$0.30	\$0.33	\$0.00	\$0.64	1	25	1	1	1	\$0.64	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	211	Wall Blow-in R-0 to R-13 Insulation	home	sq ft	\$0.18	\$0.35	\$0.00	\$0.53	1	20	1	1	1	\$0.53	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	212	Floor R-0 to R-19 Insulation	home	sq ft	\$0.38	\$0.51	\$0.00	\$0.89	1	20	1	1	1	\$0.89	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	213	Basement Insulation	home	sq ft	\$0.29	\$0.58	\$0.00	\$0.87	1	30	1	1	1	\$0.87	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	214	Programmable Thermostat	home	unit	\$70.21	\$42.13	\$0.00	\$112.34	1	12	1	1	1	\$112.34	0.90	1.10	1.00	1.00	1.00	1.00	9	1
Existing	215	Infiltration Reduction	home	home	\$83.75	\$36.25	\$0.00	\$120.00	1	10	1	1	1	\$120.00	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	216	Self Install Weatherization	home	home	\$5.44	\$0.00	\$0.00	\$5.44	1	10	1	1	1	\$5.44	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	217	Ductless Split Heat Pump	home	sq ft	\$5,734.08	\$0.00	\$0.00	\$5,734.08	1	18	1	1	1	\$5,734.08	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	220	Base Electric Furnace	home	Unit	\$0.00	\$0.00	\$0.00	\$0.00	1	18	1	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	9	2
Existing	221	Single Pane Windows to Double Pane with Gas	home	sq ft	\$1.03	\$0.00	\$0.00	\$1.03	1	25	1	1	1	\$1.03	1.00	1.00	1.00	1.00	1.00	1.00	9	2
Existing	222	Double Pane with Glazing to Energy Star	home	sq ft	\$1.72	\$0.00	\$0.00	\$1.72	1	25	1	1	1	\$1.72	1.00	1.00	1.00	1.00	1.00	1.00	9	2
Existing	223	Single Pane- Add storm windows	home	sq ft	\$7.33	\$16.00	\$0.00	\$23.33	1	25	1	1	1	\$23.33	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	224	Double Pane- Add storm windows	home	sq ft	\$7.33	\$16.00	\$0.00	\$23.33	1	25	1	1	1	\$23.33	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	225	Ceiling R-0 to R-38 Insulation	home	sq ft	\$0.50	\$0.27	\$0.00	\$0.77	1	25	1	1	1	\$0.77	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	226	Ceiling R-11 to R-38 Insulation	home	sq ft	\$0.63	\$0.27	\$0.00	\$0.89	1	25	1	1	1	\$0.89	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	227	Ceiling R-19 to R-38 Insulation	home	sq ft	\$0.36	\$0.24	\$0.00	\$0.61	1	25	1	1	1	\$0.61	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	228	Ceiling R-0 to R-49 Insulation	home	sq ft	\$0.49	\$0.27	\$0.00	\$0.76	1	25	1	1	1	\$0.76	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	229	Ceiling R-19 to R-49 Insulation	home	sq ft	\$0.21	\$0.22	\$0.00	\$0.42	1	25	1	1	1	\$0.42	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	230	Ceiling R-30 to R-49 Insulation	home	sq ft	\$0.12	\$0.10	\$0.00	\$0.22	1	25	1	1	1	\$0.22	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	231	Wall Blow-in R-0 to R-13 Insulation	home	sq ft	\$0.18	\$0.35	\$0.00	\$0.53	1	20	1	1	1	\$0.53	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	232	Floor R-0 to R-19 Insulation	home	sq ft	\$0.51	\$0.58	\$0.00	\$1.09	1	20	1	1	1	\$1.09	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	233	Basement Insulation	home	sq ft	\$0.29	\$0.58	\$0.00	\$0.87	1	30	1	1	1	\$0.87	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	234	Programmable Thermostat	home	unit	\$70.21	\$42.13	\$0.00	\$112.34	1	12	1	1	1	\$112.34	0.90	1.10	1.00	1.00	1.00	1.00	9	1
Existing	235	Infiltration Reduction	home	home	\$156.25	\$0.00	\$0.00	\$156.25	1	10	1	1	1	\$156.25	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	236	Self Install Weatherization	home	home	\$5.44	\$0.00	\$0.00	\$5.44	1	10	1	1	1	\$5.44	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	237	Ductless Split Heat Pump	home	sq ft	\$5,734.08	\$0.00	\$0.00	\$5,734.08	1	18	1	1	1	\$5,734.08	1.00	1.00	1.00	1.00	1.00	1.00	9	1
Existing	250	Base Lighting 60-Watt Incandescent, 1.8 hr/day	lamp	lamp	\$0.00	\$0.00	\$0.00	0	1	1000	1	1	1	0	1.00	1.00	1.00	1.00	1.00	1.00	2	1
Existing	251	CFL (15-Watt integral ballast), 1.8 hr/day	lamp	lamp	\$1.25	\$0.00	\$0.00	\$1.25	1	8000	1	1	1	\$1.25	1.00	1.00	1.00	1.00	1.00	1.00	2	1
Existing	252	LEDs w/ Incandescent Baseline	lamp	lamp	\$20.00	\$0.00	\$0.00	\$20.00	1	35000	1	1	1	\$9.00	1.00	1.00	1.00	1.00	1.00	1.00	2	1
Existing	255	Base Lighting 15 Watt CFL, 1.8 hours per day	lamp	lamp	\$0.00	\$0.00	\$0.00	0	1	8000	1	1	1	0	1.00	1.00	1.00	1.00	1.00	1.00	2	1
Existing	256	LEDs w/ CFL Baseline	lamp	lamp	\$20.00	\$0.00	\$0.00	\$20.00	1	35000	1	1	1	\$9.00	1.00	1.00	1.00	1.00	1.00	1.00	2	1
Existing	260	Base Lighting Fluorescent Tube, 1.8 hrs/day	fixture	fixture	\$0.00	\$0.00	\$0.00	\$0.00	1	45000	1	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	2	1
Existing	261	RET 2L4T8, 1EB	fixture	fixture	\$20.00	\$40.00	\$0.00	60.00	1	70000	1	1	1	60.00	1.00	1.00	1.00	1.00	1.00	1.00	2	1
Existing	262	ROB 2L4T8, 1EB	fixture	fixture	\$8.00	\$0.00	\$0.00	8.00	1	70000	1	1	1	8.00	1.00	1.00	1.00	1.00	1.00	1.00	2	2
Existing	265	Base Lighting Halogen and HID, 1.8 hrs/day	lamp	lamp	\$0.00	\$0.00	\$0.00	\$0.00	1	3000	1	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	2	1
Existing	266	LEDs w/ Halogen Baseline	lamp	lamp	\$20.00	\$0.00	\$0.00	\$20.00	1	16000	1	1	1	20.00	1.00	1.00	1.00	1.00	1.00	1.00	2	1
Existing	300	Base Refrigerator	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	1	12	1	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	3	2
Existing	301	HE Refrigerator - Energy Star	home	unit	\$79.00	\$0.00	\$0.00	\$79.00	1	12	1	1	1	\$79.00	1.00	1.00	1.00	1.00	1.00	1.00	3	2
Existing	302	HE Refrigerator - CEE tier 2	home	unit	\$179.00	\$0.00	\$0.00	\$179.00	1	12	1	1	1	\$179.00	1.00	1.00	1.00	1.00	1.00	1.00	3	2
Existing	310	Base Early Replacement Refrigerator	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	1	12	1	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	3	1
Existing	311	Refrigerator - Early Replacement to 2008 Energy Star	home	unit	\$204.19	\$0.00	\$0.00	\$204.19	1	5	1	1	1	\$204.19	1.00	1.00	1.00	1.00	1.00	1.00	3	1
Existing	340	Base Second Refrigerator	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	1	19	1	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	3	1
Existing	341	Second Refrigerator Recycling	home	unit	\$25.00	\$0.00	\$0.00	\$25.00	1	19	1	1	1	\$25.00	1.00	1.00	1.00	1.00	1.00	1.00	3	1
Existing	400	Base Freezer	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	1	12	1	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	4	2
Existing	401	Energy Star Freezer	home	unit	\$59.99	\$0.00	\$0.00	\$59.99	1	12	1	1	1	\$59.99	1.00	1.00	1.00	1.00	1.00	1.00	4	2
Existing	410	Base Early Replacement Freezer	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	1	12	1	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	4	1

APPENDIX E

RESIDENTIAL

MEASURE INPUT DATA

MEASURE COSTS																							
Segment	Measure #	Measure Description	Savings Units	Cost Units	Unit Equipment	Unit Labor Cost	NPV of		Implementation Cost Factor	Cost Units per Savings Unit	Service Life	Full = 1		Full Unit Cost	Relative Energy Reduction Factors					End Use	Implementation Type		
							O & M Cost	Lifetime Cost				Incr. = 0	Initial Cost		Replace Cost	SON	SOFF	WON	WOFF			SHON	SHOF
Existing	411	Early Replacement Freezer to 2008 Energy Star	home	unit	\$75.28	\$0.00	\$0.00	\$0.00	\$0.00	\$75.28	1	12	1	1	\$75.28	1.00	1.00	1.00	1.00	1.00	1.00	4	1
Existing	500	Base 40 gal. Water Heating (EF=0.88)	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	15	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	5	2
Existing	501	Heat Pump Water Heater (EF=2.5)	home	unit	\$1,288.02	\$122.83	\$0.00	\$0.00	\$1,410.85	\$0.00	1	12	1	1	\$1,410.85	1.00	1.00	1.00	1.00	1.00	1.00	5	2
Existing	502	HE Water Heater (EF=0.93)	home	unit	\$72.30	\$0.00	\$0.00	\$0.00	\$72.30	\$0.00	1	10	1	1	\$72.30	1.00	1.00	1.00	1.00	1.00	1.00	5	2
Existing	503	Low Flow Showerhead	home	unit	\$22.95	\$0.00	\$0.00	\$0.00	\$22.95	\$0.00	1	5	1	1	\$22.95	1.00	1.00	1.00	1.00	1.00	1.00	5	1
Existing	504	Pipe Wrap	home	linear foot	\$0.37	\$0.00	\$0.00	\$0.00	\$0.37	\$0.00	1	15	1	1	\$0.37	1.00	1.00	1.00	1.00	1.00	1.00	1	1
Existing	505	Faucet Aerators	home	unit	\$7.12	\$0.00	\$0.00	\$0.00	\$7.12	\$0.00	1	5	1	1	\$7.12	1.00	1.00	1.00	1.00	1.00	1.00	5	1
Existing	506	2011 Energy Star Clotheswasher (MEF 2.00)	home	unit	\$166.24	\$0.00	\$0.00	\$0.00	\$166.24	\$0.00	1	11	1	1	\$166.24	1.00	1.00	1.00	1.00	1.00	1.00	6	2
Existing	507	Tier 3 CW (MEF=2.20)	home	unit	\$393.16	\$0.00	\$0.00	\$0.00	\$393.16	\$0.00	1	11	1	1	\$393.16	1.00	1.00	1.00	1.00	1.00	1.00	6	2
Existing	508	Energy Star Dishwasher (EF=0.68)	home	unit	\$143.22	\$0.00	\$0.00	\$0.00	\$143.22	\$0.00	1	11	1	1	\$143.22	1.00	1.00	1.00	1.00	1.00	1.00	8	2
Existing	509	CEE Tier 2 DW (EF=0.72)	home	unit	\$222.56	\$0.00	\$0.00	\$0.00	\$222.56	\$0.00	1	11	1	1	\$222.56	1.00	1.00	1.00	1.00	1.00	1.00	8	2
Existing	510	Solar Water Heater	home	unit	\$1,650.00	\$1,850.00	\$0.00	\$0.00	\$3,500.00	\$0.00	1	15	1	1	\$3,500.00	1.00	1.00	1.00	1.00	1.00	1.00	2	2
Existing	550	Base Early Replacement Water Heating to Heat Pump W/2	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	10	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	5	1
Existing	551	Early Replacement Water Heating to Heat Pump Water H	home	unit	\$1,374.36	\$0.00	\$0.00	\$0.00	\$1,374.36	\$0.00	1	10	1	1	\$1,374.36	1.00	1.00	1.00	1.00	1.00	1.00	5	1
Existing	600	Base Clotheswasher (MEF=1.26)	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	11	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	6	2
Existing	601	Energy Star Clotheswasher (MEF 2.00)	home	unit	\$129.15	\$0.00	\$0.00	\$0.00	\$129.15	\$0.00	1	11	1	1	\$129.15	1.00	1.00	1.00	1.00	1.00	1.00	6	2
Existing	602	Tier 3 CW (MEF=2.20)	home	unit	\$175.23	\$0.00	\$0.00	\$0.00	\$175.23	\$0.00	1	11	1	1	\$175.23	1.00	1.00	1.00	1.00	1.00	1.00	6	2
Existing	700	Base Clothes Dryer (EF=3.01)	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	12	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	7	2
Existing	710	High Efficiency CD (EF=3.01 w/moisture sensor)	home	unit	\$238.23	\$0.00	\$0.00	\$0.00	\$238.23	\$0.00	1	12	1	1	\$238.23	1.00	1.00	1.00	1.00	1.00	1.00	7	2
Existing	711	Heat Pump Dryer	home	unit	\$1,680.98	\$0.00	\$0.00	\$0.00	\$1,680.98	\$0.00	1	12	1	1	\$1,680.98	1.00	1.00	1.00	1.00	1.00	1.00	7	2
Existing	800	Base Dishwasher (EF=0.65)	home	unit	\$292.65	\$0.00	\$0.00	\$0.00	\$292.65	\$0.00	1	11	1	1	\$292.65	1.00	1.00	1.00	1.00	1.00	1.00	8	2
Existing	900	Base Single Speed Pool Pump (RET)	home	unit	\$273.32	\$357.12	\$0.00	\$0.00	\$630.4376	\$0.00	1	10	1	1	\$630.4376	1.00	1.00	1.00	1.00	1.00	1.00	12	1
Existing	901	Variable Speed Pool Pump (1.5 hp)	home	unit	\$434.41	\$357.12	\$0.00	\$0.00	\$791.53	\$0.00	1	10	1	1	\$791.53	1.00	1.00	1.00	1.00	1.00	1.00	12	1
Existing	905	Base Two Speed Pool Pump (1.5 hp) (ROB)	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	0	\$0.00	1	10	1	1	0	1.00	1.00	1.00	1.00	1.00	1.00	12	2
Existing	906	Variable Speed Pool Pump (1.5 hp)	home	unit	\$394.47	\$357.12	\$0.00	\$0.00	\$751.59	\$0.00	1	10	1	1	\$751.59	1.00	1.00	1.00	1.00	1.00	1.00	12	2
Existing	910	Base Plasma Screen TV	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	6	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	11	2
Existing	911	Energy Star Plasma Screen TV	home	unit	\$1.00	\$0.00	\$0.00	\$0.00	\$1.00	\$0.00	1	6	1	1	\$1.00	1.00	1.00	1.00	1.00	1.00	1.00	11	2
Existing	912	TV Occupancy Sensor Power Strip	home	unit	\$85.00	\$0.00	\$0.00	\$0.00	\$85.00	\$0.00	1	8	1	1	\$85.00	1.00	1.00	1.00	1.00	1.00	1.00	1	1
Existing	920	Base LCD Screen TV	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	6	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	11	2
Existing	921	Energy Star LCD TV	home	unit	\$1.00	\$0.00	\$0.00	\$0.00	\$1.00	\$0.00	1	6	1	1	\$1.00	1.00	1.00	1.00	1.00	1.00	1.00	11	2
Existing	922	TV Occupancy Sensor Power Strip	home	unit	\$85.00	\$0.00	\$0.00	\$0.00	\$85.00	\$0.00	1	8	1	1	\$85.00	1.00	1.00	1.00	1.00	1.00	1.00	11	1
Existing	930	Base Other TV	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	6	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	11	2
Existing	931	Energy Star LCD TV	home	unit	\$1.00	\$0.00	\$0.00	\$0.00	\$1.00	\$0.00	1	6	1	1	\$1.00	1.00	1.00	1.00	1.00	1.00	1.00	11	2
Existing	932	TV Occupancy Sensor Power Strip	home	unit	\$85.00	\$0.00	\$0.00	\$0.00	\$85.00	\$0.00	1	8	1	1	\$85.00	1.00	1.00	1.00	1.00	1.00	1.00	11	1
Existing	940	Base Laptop Computer	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	4	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	11	2
Existing	941	Energy Star Laptop Computer	home	unit	\$1.00	\$0.00	\$0.00	\$0.00	\$1.00	\$0.00	1	4	1	1	\$1.00	1.00	1.00	1.00	1.00	1.00	1.00	11	2
Existing	945	Base Desktop Computer	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	4	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	11	2
Existing	946	Energy Star Desktop Computer	home	unit	\$1.00	\$0.00	\$0.00	\$0.00	\$1.00	\$0.00	1	4	1	1	\$1.00	1.00	1.00	1.00	1.00	1.00	1.00	11	2
Existing	950	Base Cooking	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	15	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	10	2
Existing	960	Base Miscellaneous	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	10	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	14	2
Existing	962	Plug Load Controls - Smart Power Strip	home	unit	\$25.00	\$0.00	\$0.00	\$0.00	\$25.00	\$0.00	1	5	1	1	\$25.00	1.00	1.00	1.00	1.00	1.00	1.00	14	1
Existing	970	Base House Practices	home	home	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	5	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	15	1
Existing	971	Indirect Feedback	home	home	\$10.00	\$0.00	\$0.00	\$0.00	\$10.00	\$0.00	1	5	1	1	\$10.00	1.00	1.00	1.00	1.00	1.00	1.00	15	1

BASE TECHNOLOGY UECs (kWh/home)						
Base						
Segment	Measure #	Measure Description	Single Family	Multi-Family	Single Family LI	Multi Family LI
Existing	100	Base 13 SEER Split-System Air Conditioner	3161	2253	3161	2253
Existing	130	Base Early Replacement 10 SEER Split-System AC	4092	2916	4092	2916
Existing	140	Base EER 9.7 Room Air Conditioner	2008	2579	1947	1621
Existing	160	Base Early Replacement Room Air Conditioner- EE	2163	2779	2097	1747
Existing	170	Base Dehumidifer (35-45 pints/day; EF = 1.20)	1064	1064	1064	1064
Existing	180	Base Furnace Fans (Retrofit)	1106	1106	1106	1106
Existing	200	Base Resistance Space Heating (Electric)	16654	11304	19944	8563
Existing	220	Base Electric Furnace	13155	9345	10516	7079
Existing	250	Base Lighting 60 Watt Incandescent, 1.8 hours per	1528	860	1528	860
Existing	255	Base Lighting 15 Watt CFL, 1.8 hours per day	172	97	172	97
Existing	260	Base Lighting Fluorescent Tube, 1.8 hrs/day	83	46	83	46
Existing	265	Base Lighting Halogen and HID, 1.8 hrs/day	116	65	116	65
Existing	300	Base Refrigerator	719	719	719	719
Existing	310	Base Early Replacement Refrigerator	719	719	719	719
Existing	340	Base Second Refrigerator	791	791	791	791
Existing	400	Base Freezer	549	549	549	549
Existing	410	Base Early Replacement Freezer	549	549	549	549
Existing	500	Base 40 gal. Water Heating (EF=0.89)	4516	3447	4516	3447
Existing	550	Base Early Replacement Water Heating to Heat Pu	4516	3447	4516	3447
Existing	600	Base Clotheswasher (MEF=1.26)	81	81	81	81
Existing	700	Base Clothes Dryer (EF=.46)	969	583	776	583
Existing	800	Base Dishwasher (EF=0.58)	162	162	162	162
Existing	900	Base Single Speed Pool Pump to Variable RET	822	822	822	822
Existing	905	Base Two Spped Pool Pump to Variable ROB	357	357	357	357
Existing	910	Base Plasma Screen TV	931	1118	946	946
Existing	920	Base LCD TV	450	500	460	460
Existing	930	Base Other TV	127	111	118	118
Existing	940	Base Laptop Computer	192	168	170	170
Existing	945	Base Desktop Computer	730	572	685	1129
Existing	950	Base Cooking	316	316	316	316
Existing	960	Base Miscellaneous	1535	1141	1430	1035
Existing	970	Base House Practices	14880	11064	13861	10035

Segment	Measure # Measure Description	Applicability Factor			Incomplete Factor			Feasibility Factor			Energy Savings			UEC Adjustment			Technology Saturation			Lighting Adjustment		
		Single Family	Multi-Family	Single Family LI	Single Family	Multi-Family	Multi-Family LI	Single Family	Multi-Family	Multi-Family LI	Single Family	Multi-Family	Multi-Family LI	Single Family	Multi-Family	Multi-Family LI	Single Family	Multi-Family	Multi-Family LI	Single Family	Multi-Family	Multi-Family LI
Existing	101 Base, 13 SEER Split-System Air Conditioner	74%	73%	74%	73%	74%	73%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	101 15 SEER Split-System Air Conditioner	74%	73%	74%	73%	74%	73%	98%	98%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	102 Programmable Thermostat	74%	73%	74%	73%	74%	73%	99%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	103 17 SEER Split-System Air Conditioner	74%	73%	74%	73%	74%	73%	96%	96%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	104 Ceiling Fans	74%	73%	74%	73%	74%	73%	35%	35%	68%	68%	100%	100%	2%	2%	2%	24%	24%	24%	82%	82%	82%
Existing	105 Whole House Fans	20%	0%	15%	0%	78%	87%	91%	89%	90%	25%	63%	83%	20%	20%	20%	100%	100%	100%	100%	100%	100%
Existing	106 Attic Venting	20%	0%	15%	0%	85%	85%	85%	33%	30%	100%	100%	100%	11%	9%	9%	100%	100%	100%	100%	100%	100%
Existing	107 Proper Refrigerant Charging and Air Flow	74%	73%	74%	73%	74%	73%	67%	67%	100%	100%	100%	100%	13%	11%	9%	8%	8%	8%	100%	100%	100%
Existing	108 Duct Repair	74%	73%	74%	73%	74%	73%	95%	95%	100%	100%	100%	100%	8%	8%	8%	100%	100%	100%	100%	100%	100%
Existing	109 Duct Insulation	74%	73%	74%	73%	74%	73%	50%	50%	76%	76%	100%	100%	4%	4%	4%	4%	4%	4%	100%	100%	100%
Existing	110 AC maintenance and repair	74%	73%	74%	73%	74%	73%	61%	61%	100%	100%	100%	100%	4%	4%	4%	4%	4%	4%	100%	100%	100%
Existing	111 Single Pane Windows to Double Pane with Gas	74%	73%	74%	73%	74%	73%	33%	33%	40%	44%	100%	100%	16%	16%	16%	18%	18%	18%	100%	100%	100%
Existing	112 Single Pane Windows to Double Pane with Gas	74%	73%	74%	73%	74%	73%	49%	64%	51%	46%	100%	100%	6%	6%	6%	32%	32%	32%	100%	100%	100%
Existing	113 Sealed Attic w/Unvented Foam Insulated Roof Deck	20%	0%	15%	0%	97%	97%	97%	33%	30%	100%	100%	100%	9%	9%	9%	100%	100%	100%	100%	100%	100%
Existing	114 Ceiling R-11 to R-38 Insulation	74%	73%	74%	73%	74%	73%	27%	27%	4%	4%	4%	4%	33%	33%	33%	25%	25%	25%	100%	100%	100%
Existing	115 Ceiling R-19 to R-38 Insulation	74%	73%	74%	73%	74%	73%	18%	18%	18%	83%	83%	83%	4%	4%	4%	4%	4%	4%	100%	100%	100%
Existing	116 Ceiling R-19 to R-49 Insulation	74%	73%	74%	73%	74%	73%	27%	27%	4%	4%	4%	4%	33%	33%	33%	27%	27%	27%	100%	100%	100%
Existing	117 Ceiling R-19 to R-49 Insulation	74%	73%	74%	73%	74%	73%	18%	18%	18%	83%	83%	83%	5%	5%	5%	100%	100%	100%	100%	100%	100%
Existing	118 Ceiling R-30 to R-49 Insulation	74%	73%	74%	73%	74%	73%	13%	13%	13%	83%	83%	83%	4%	4%	4%	4%	4%	4%	100%	100%	100%
Existing	119 Wall 2x4 R-0 to Row-In R-13 Insulation	74%	73%	74%	73%	74%	73%	9%	12%	80%	40%	63%	63%	6%	6%	6%	6%	6%	6%	100%	100%	100%
Existing	120 Self Insulation Weatherization	74%	73%	74%	73%	74%	73%	62%	62%	100%	100%	100%	100%	2%	2%	2%	2%	2%	2%	100%	100%	100%
Existing	121 Infiltration Reduction	74%	73%	74%	73%	74%	73%	70%	70%	100%	100%	100%	100%	20%	20%	20%	20%	20%	20%	100%	100%	100%
Existing	130 Base Early Replacement 10 SEER Split-System AC	13%	16%	13%	15%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Existing	131 15 SEER Split-System AC Early Replacement	13%	16%	13%	15%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Existing	140 Base Room Air Conditioner - EER 9.7	5%	8%	5%	8%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Existing	141 HE Room Air Conditioner - Energy Star EER 10.8	5%	8%	5%	8%	99%	99%	99%	99%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Existing	142 HE Room Air Conditioner - CEE Tier 1 EER 11.3	5%	8%	5%	8%	99%	99%	99%	99%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Existing	143 Ceiling Fans	5%	8%	5%	8%	35%	35%	88%	88%	100%	100%	100%	100%	5%	5%	5%	5%	5%	5%	100%	100%	100%
Existing	144 Whole House Fans	0%	1%	0%	1%	0%	83%	83%	43%	43%	90%	25%	63%	20%	20%	20%	100%	100%	100%	100%	100%	100%
Existing	145 Single Pane Windows to Double Pane with Gas	5%	8%	5%	8%	35%	33%	40%	40%	100%	100%	100%	100%	16%	16%	16%	18%	18%	18%	100%	100%	100%
Existing	146 Double Pane with Glazing to Energy Star	5%	8%	5%	8%	49%	64%	51%	46%	100%	100%	100%	100%	6%	6%	6%	6%	6%	6%	100%	100%	100%
Existing	147 Ceiling R-19 to R-38 Insulation	5%	3%	5%	3%	4%	4%	4%	4%	4%	33%	33%	33%	25%	25%	25%	25%	25%	25%	100%	100%	100%
Existing	148 Ceiling R-11 to R-38 Insulation	5%	3%	5%	3%	14%	14%	14%	14%	14%	50%	50%	50%	9%	9%	9%	9%	9%	9%	100%	100%	100%
Existing	149 Ceiling R-19 to R-38 Insulation	5%	3%	5%	3%	18%	18%	18%	18%	18%	83%	83%	83%	4%	4%	4%	4%	4%	4%	100%	100%	100%
Existing	150 Ceiling R-19 to R-49 Insulation	5%	3%	5%	3%	4%	4%	4%	4%	4%	33%	33%	33%	27%	27%	27%	27%	27%	27%	100%	100%	100%
Existing	151 Ceiling R-19 to R-49 Insulation	5%	3%	5%	3%	18%	18%	18%	18%	18%	83%	83%	83%	5%	5%	5%	100%	100%	100%	100%	100%	100%
Existing	152 Ceiling R-30 to R-49 Insulation	5%	3%	5%	3%	13%	13%	13%	13%	13%	83%	83%	83%	4%	4%	4%	4%	4%	4%	100%	100%	100%
Existing	153 Wall 2x4 R-0 to Row-In R-13 Insulation	5%	8%	5%	8%	9%	12%	80%	40%	63%	63%	63%	63%	6%	6%	6%	6%	6%	6%	100%	100%	100%
Existing	154 Self Insulation Weatherization	5%	8%	5%	8%	62%	62%	100%	100%	100%	100%	100%	100%	2%	2%	2%	2%	2%	2%	100%	100%	100%
Existing	155 Infiltration Reduction	5%	8%	5%	8%	70%	70%	100%	100%	100%	100%	100%	100%	20%	20%	20%	20%	20%	20%	100%	100%	100%
Existing	156 Ductless Split Heat Pump	0%	1%	0%	1%	0%	99%	99%	99%	99%	100%	100%	100%	32%	33%	33%	32%	32%	32%	100%	100%	100%
Existing	160 Base Early Replacement Room Air Conditioner - EER 9.0	1%	1%	1%	1%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Existing	161 EER 9.5 AC Early Replacement, CEE Tier 1 EER 11.3	1%	1%	1%	1%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Existing	170 Base Ductless (EF = 120)	27%	13%	27%	13%	70%	70%	100%	100%	100%	100%	100%	100%	20%	20%	20%	20%	20%	20%	100%	100%	100%
Existing	171 Energy Star Ductless (ROB)	87%	87%	87%	87%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Existing	180 Base Furnace Fans	87%	87%	87%	87%	98%	98%	98%	98%	98%	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Existing	181 Variable speed furnace fans (RET)	87%	87%	87%	87%	98%	98%	98%	98%	98%	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Existing	200 Base Resistance Space Heating	4%	4%	4%	4%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Existing	201 Base Resistance Space Heating	4%	4%	4%	4%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Existing	202 Double Pane with Glazing to Energy Star	4%	4%	4%	4%	49%	64%	51%	46%	100%	100%	100%	100%	6%	6%	6%	32%	32%	32%	100%	100%	100%
Existing	203 Single Pane-Add storm windows	4%	4%	4%	4%	28%	25%	32%	35%	100%	100%	100%	100%	5%	5%	5%	3%	3%	3%	100%	100%	100%
Existing	204 Double Pane-Add storm windows	4%	4%	4%	4%	44%	57%	45%	41%	100%	100%	100%	100%	13%	13%	13%	24%	24%	24%	100%	100%	100%
Existing	205 Ceiling R-40 to R-38 Insulation	4%	1%	4%	1%	4%	4%	4%	4%	4%	33%	33%	33%	24%	24%	24%	100%	100%	100%	100%	100%	100%
Existing	206 Ceiling R-11 to R-38 Insulation	4%	1%	4%	1%	14%	14%	14%	14%	14%	50%	50%	50%	8%	8%	8%	8%	8%	8%	100%	100%	100%
Existing	207 Ceiling R-11 to R-38 Insulation	4%	1%	4%	1%	1%	1%	1%	1%	1%	4%	4%	4%	1%	1%	1%	1%	1%	1%	100%	100%	100%
Existing	208 Ceiling R-19 to R-38 Insulation	4%	1%	4%	1%	18%	18%	18%	18%	18%	83%	83%	83%	4%	4%	4%	4%	4%	4%	100%	100%	100%
Existing	209 Ceiling R-19 to R-49 Insulation	4%	1%	4%	1%	13%	13%	13%	13%	13%	83%	83%	83%	2%	2%	2%	2%	2%	2%	100%	100%	100%
Existing	210 Ceiling R-30 to R-49 Insulation	4%	1%	4%	1%	11%	20%	11%	20%	75%	45%	62%	62%	9%	9%	9%	9%	9%	9%	100%	100%	100%
Existing	211 Floor R-0 to R-19 Insulation	2%	1%	2%	1%	97%	55%	97%	55%	50												

Segment	Measure # Measure Description	Applicability Factor			Incomplete Factor (percent)			Feasibility Factor (percent)			Energy Savings			UEC Adjustment			Technology Saturation			Lighting Adjustment		
		Single Family	Multi-Family	Single Family/LI	Single Family	Multi-Family	Single Family/LI	Single Family	Multi-Family	Single Family/LI	Single Family	Multi-Family	Single Family/LI	Single Family	Multi-Family	Single Family/LI	Single Family	Multi-Family	Single Family/LI	Single Family	Multi-Family	Single Family/LI
Existing	223 Floor R-10 to R-19 Insulation	6%	5%	7%	4%	9%	55%	50%	20%	3%	3%	10%	10%	100%	100%	2,278.3	767.2	1,397.5	874.6	657	657	
Existing	232 Basement Insulation	9%	1%	8%	1%	57%	69%	69%	65%	65%	65%	35%	35%	100%	100%	1,251.7	374.0	1,046.9	524.8	657	657	
Existing	233 Programmable Thermostat	15%	15%	15%	15%	38%	93%	38%	100%	100%	100%	7%	7%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	234 Infiltration Reduction	15%	15%	15%	15%	70%	100%	70%	100%	100%	100%	6%	6%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	237 Ductless Split Heat Pump	1%	1%	1%	1%	99%	99%	99%	100%	100%	100%	2%	2%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	238 Ductless Split Heat Pump	1%	1%	1%	1%	99%	99%	99%	100%	100%	100%	2%	2%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	251 CFL (15-Watt integral ballast), 1.8 hr/day	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	90%	90%	100%	100%	37.2	20.9	37.2	20.9	657	657	
Existing	252 LEDs w/ Incandescent Ballast	100%	100%	100%	100%	99%	99%	99%	100%	100%	100%	90%	90%	100%	100%	37.2	20.9	37.2	20.9	657	657	
Existing	253 Base Lighting 15-Watt CFL, 1.2 hours per day	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	100%	100%	12.4	7.0	12.4	7.0	657	657	
Existing	254 LED Light Bulbs (15-Watt CFL)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	100%	100%	12.4	7.0	12.4	7.0	657	657	
Existing	260 Base Lighting Fluorescent Tube, 1.8 hr/day	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	100%	100%	6.0	3.4	6.0	3.4	657	657	
Existing	261 RET 24-T18, 1EB	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	100%	100%	6.0	3.4	6.0	3.4	657	657	
Existing	262 RET 24-T18, 1EB	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	100%	100%	6.0	3.4	6.0	3.4	657	657	
Existing	265 Base Lighting Halogen and HID, 1.8 hr/day	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	100%	100%	3.6	2.0	3.6	2.0	657	657	
Existing	266 Base Lighting Halogen and HID, 1.8 hr/day	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	100%	100%	3.6	2.0	3.6	2.0	657	657	
Existing	300 Base Refrigerator - Energy Star	85%	85%	85%	85%	99%	71%	99%	100%	100%	100%	20%	20%	72%	72%	1.2	1.1	1.2	1.1	657	657	
Existing	301 HE Refrigerator - Energy Star	85%	85%	85%	85%	99%	99%	99%	100%	100%	100%	20%	20%	72%	72%	1.2	1.1	1.2	1.1	657	657	
Existing	302 HE Refrigerator - CEE Tier 2	85%	85%	85%	85%	99%	99%	99%	100%	100%	100%	25%	25%	72%	72%	1.2	1.1	1.2	1.1	657	657	
Existing	310 Base Early Replacement Refrigerator	15.00%	15.00%	15.00%	15.00%	100%	100%	100%	100%	100%	100%	0.00%	0.00%	100%	100%	1.2	1.1	1.2	1.1	657	657	
Existing	311 Refrigerator - Early Replacement to 2008 Energy Star	15.00%	15.00%	15.00%	15.00%	100%	100%	100%	100%	100%	100%	27.63%	27.63%	100%	100%	1.2	1.1	1.2	1.1	657	657	
Existing	312 Refrigerator - Early Replacement to 2008 Energy Star	15.00%	15.00%	15.00%	15.00%	100%	100%	100%	100%	100%	100%	27.63%	27.63%	100%	100%	1.2	1.1	1.2	1.1	657	657	
Existing	340 Second Refrigerator Recycling	32.70%	12.00%	16.35%	6.00%	100%	100%	100%	100%	100%	100%	89.90%	89.90%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	400 Base Freezer	45.90%	16.84%	38.28%	10.45%	100%	100%	100%	100%	100%	100%	0.00%	0.00%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	401 Base Early Replacement Freezer	45.90%	16.84%	38.28%	10.45%	75.2%	75.0%	75.2%	100%	100%	100%	15.00%	15.00%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	410 Base Early Replacement Freezer	8.10%	2.97%	8.10%	2.97%	100%	100%	100%	100%	100%	100%	0.00%	0.00%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	411 Early Replacement Freezer to 2008 Energy Star	8.10%	2.97%	8.10%	2.97%	100%	100%	100%	100%	100%	100%	0.00%	0.00%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	500 Heat Pump Water Heater (EF=2.5)	24.62%	33.35%	26.80%	26.86%	99%	99%	99%	100%	100%	100%	64.80%	64.80%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	501 HE Water Heater (EF=0.93)	24.62%	33.35%	26.80%	26.86%	99%	99%	99%	100%	100%	100%	64.80%	64.80%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	502 Low Flow Showerhead	24.62%	33.35%	26.80%	26.86%	99%	99%	99%	100%	100%	100%	5.40%	5.40%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	503 Pipe Wrap	24.62%	33.35%	26.80%	26.86%	99%	99%	99%	100%	100%	100%	3.00%	3.00%	100%	100%	3.5	3.1	3.5	3.1	657	657	
Existing	504 Faucet Aerator	24.62%	33.35%	26.80%	26.86%	99%	99%	99%	100%	100%	100%	3.00%	3.00%	100%	100%	3.5	3.1	3.5	3.1	657	657	
Existing	505 2011 Energy Star Dishwasher (MEF=2.00)	24.13%	22.68%	25.26%	19.68%	99%	99%	99%	100%	100%	100%	3.12%	3.12%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	507 Tier 3 COW (MEF=2.20)	24.13%	22.68%	25.26%	19.68%	99%	99%	99%	100%	100%	100%	3.26%	3.26%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	508 CEE Tier 2 DW (EF=0.72)	18.96%	25.02%	14.19%	9.11%	82.9%	90%	100%	100%	100%	100%	2.14%	2.14%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	510 Base Early Replacement Water Heating to Heat Pump Water	18.96%	25.02%	14.19%	9.11%	99%	99%	99%	100%	100%	100%	2.38%	2.38%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	511 High Energy LCD (EF=3.01) (minimum sensor)	88.00%	68.00%	98.00%	68.00%	99%	99%	99%	100%	100%	100%	50.00%	50.00%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	550 Base Early Replacement Water Heating to Heat Pump Water	1.30%	1.76%	1.41%	1.52%	100%	100%	100%	100%	100%	100%	0.00%	0.00%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	551 Early Replacement Water Heating to Heat Pump Water	1.30%	1.76%	1.41%	1.52%	100%	100%	100%	100%	100%	100%	0.00%	0.00%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	600 Base Dishwasher (MEF=1.26)	98.00%	68.00%	98.00%	68.00%	100%	100%	100%	100%	100%	100%	63.58%	63.58%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	601 Energy Star Clotheswasher (MEF=2.00)	98.00%	68.00%	98.00%	68.00%	83.9%	100%	100%	100%	100%	100%	29.49%	29.49%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	700 High Energy LCD (EF=3.01) (minimum sensor)	87.70%	63.78%	79.72%	57.84%	100%	100%	100%	100%	100%	100%	31.76%	31.76%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	710 Base Dishwasher (EF=3.01) (minimum sensor)	87.70%	63.78%	79.72%	57.84%	99%	99%	99%	100%	100%	100%	0.00%	0.00%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	800 Base Dishwasher (EF=0.69)	77.00%	75.00%	52.93%	31.40%	100%	100%	100%	100%	100%	100%	0.00%	0.00%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	900 Base Single Speed Pool Pump (RET)	0.38%	0.38%	0.00%	0.00%	100%	100%	100%	100%	100%	100%	0.00%	0.00%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	905 Variable Speed Pool Pump (1.5 hp) (ROB)	0.38%	0.38%	0.00%	0.00%	86.8%	86.8%	86.8%	90%	90%	90%	0.00%	0.00%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	906 Variable Speed Pool Pump (1.5 hp) (ROB)	0.38%	0.38%	0.00%	0.00%	86.8%	86.8%	86.8%	90%	90%	90%	0.00%	0.00%	100%	100%	1.0	1.0	1.0	1.0	657	657	
Existing	910 Base Plasma Screen TV	11.00%	8.00%	1.00%	0.80%	100%	100%	100%	100%	100%	100%	30.00%	30.00%	100%	100%	2.4	2.2	2.4	2.2	657	657	
Existing	911 Energy Star Plasma Screen TV	26.00%	17.00%	0.00%	0.00%	44.9%	36.9%	44.9%	100%	100%	100%	30.00%	30.00%	100%	100%	2.4	2.2	2.4	2.2	657	657	
Existing	912 TV Occupancy Sensor Power Strip	26.00%	17.00%	0.00%	0.00%	44.9%	36.9%	44.9%	100%	100%	100%	30.00%	30.00%	100%	100%	2.4	2.2	2.4	2.2	657	657	
Existing	920 Base LCD Screen TV	42.00%	35.00%	4.20%	3.50%	100%	100%	100%	100%	100%	100%	5.13%	5.13%	100%	100%	2.4	2.2	2.4	2.2	657	657	
Existing	921 Energy Star LCD TV	42.00%	35.00%	4.20%	3.50%	100%	100%	100%	100%	100%	100%	5.13%	5.13%	100%	100%	2.4	2.2	2.4	2.2	657	657	
Existing	922 TV Occupancy Sensor Power Strip	42.00%	35.00%	4.20%	3.50%	99%	99%	99%	100%	100%	100%	3.02%	3.02%	100%	100%	2.4	2.2	2.4	2.2	657	657	
Existing	930 Base Other TV	87.00%	78.00%	87.00%	78.00%	100%	100%	100%	100%	100%	100%	0.00%	0.00%	100%	100%	2.4	2.2	2.4	2.2	657	657	
Existing	931 Energy Star other TV	87.00%	78.00%	87.00%	78.00%	100%	100%	100%	100%	100%	100%	40.00%	40.00%	100%	100%	2.4	2.2	2.4	2.2	657	657	
Existing	932 TV Occupancy Sensor Power Strip	87.00%	78.00%	87.00%	78.00%	99%	99%	99%	100%	100%	100%	5.47%	5.47%	100%	100%							

DSM TECHNOLOGY INPUT TABLES

UTILITY:	Missouri	BATCH:	1
SECTOR:	COM	ANALYSIS:	Basic
SEGMENT:	All Electric	VINTAGE:	E

APPENDIX E

COMMERCIAL

MEASURE INPUT DATA

MEASURE COSTS																						
Segment	Measure #	Measure Description	Savings Units	Cost Units	Unit Equipment Cost	Unit Labor Cost	NPV of Lifetime O & M Cost	Implementator Cost Factor	Cost per Savings Unit	Service Life	Initial Cost	Replace Cost	Full Unit Cost	Relative Energy Reduction Factors					Implementation Type			
														SON	SOFF	WON	WOFF	SHON	SHOF	End Use	1=1 time	
Existing	100	Base Fluorescent Fixture, 4L4T12, 34W, 2EEMAG	sqft	fixture	\$27.00	\$23.32	\$0.00	\$50.32	1	9	1	1	\$50.32	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	101	RET 4L4' Premium T8, 1EB, base 4L4T12	sqft	fixture	\$35.00	\$23.32	\$0.00	\$58.32	1	14	1	0	\$58.32	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	102	RET 2L4' Premium T8, 1EB, Reflector, base 4L4T12	sqft	fixture	\$46.74	\$22.09	\$0.00	\$68.83	1	14	1	0	\$68.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	103	LED Indoor Lighting - Base 4L4T12	sqft	fixture	\$180.00	\$23.32	(\$11.44)	\$191.88	1	100,000	1	0	\$191.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	104	Occupancy Sensor, 4L4' Fluorescent Fixtures - Base 4L	sqft	sq ft	\$0.14		\$0.00	\$0.14	1	9	1	1	\$0.14	1.00	1.00	0.50	1.00	1.00	1.00	1.00	1	
Existing	105	Continuous Dimming, 5L4' Fluorescent Fixtures - Base 4	sq ft	sq ft	\$0.75		\$0.00	\$0.75	1	10	1	1	\$0.75	1.00	1.00	0.50	1.00	1.00	1.00	1.00	1	
Existing	106	Lighting Control Tuneup	sqft	sqft	\$0.01		\$0.00	\$0.01	1	6	1	1	\$0.01	0.25	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	107	High Performance Lighting Remod/Remov - 25% Saving	sqft	sqft	\$0.20		\$0.20	\$0.20	1	20	1	1	\$0.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	120	Base Fluorescent Fixture, 2L4T12, 34W, 1EEMAG	sqft	fixture	\$16.19	\$23.32	\$0.00	\$39.51	1	9	1	1	\$39.51	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	121	RET 2L4' Premium T8, 1EB - base 2L4T12	sqft	fixture	\$25.74	\$23.32	\$0.00	\$49.06	1	14	1	0	\$49.06	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	122	RET 1L4' Premium T8, 1EB, Reflector OEM - Base 2L4'	sqft	fixture	\$44.09	\$22.09	\$0.00	\$66.18	1	14	1	0	\$66.18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	123	LED Indoor Lighting - Base 2L4T12	sqft	fixture	\$90.00	\$23.32	(\$11.44)	\$101.88	1	100,000	1	0	\$101.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	124	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L	sq ft	sq ft	\$0.14		\$0.00	\$0.14	1	8	1	1	\$0.14	1.00	1.00	0.50	1.00	1.00	1.00	1.00	1	
Existing	125	Continuous Dimming, 10L4' Fluorescent Fixtures - Base	sq ft	sq ft	\$0.75		\$0.00	\$0.75	1	10	1	1	\$0.75	1.00	1.00	0.50	1.00	1.00	1.00	1.00	1	
Existing	126	Lighting Control Tuneup - Base 2L4T12	sqft	sqft	\$0.01		\$0.00	\$0.01	1	6	1	1	\$0.01	0.25	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	127	High Performance Lighting Remod/Remov - 25% Saving	sqft	sqft	\$0.20		\$0.20	\$0.20	1	20	1	1	\$0.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	130	Base Fluorescent Fixture, 2L8T12, 60W, 1EEMAG	sqft	fixture	\$36.00	\$17.00	\$0.00	\$53.00	1	9	1	1	\$53.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	131	RET 2 - 2L4' Premium T8, 1EB - Base 2L8T12	sqft	fixture	\$51.48	\$46.64	\$0.00	\$98.12	1	14	1	0	\$98.12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	132	RET 2 - 1L4' Premium T8, 1EB, Reflector OEM - Base 2	sqft	fixture	\$88.18	\$44.18	\$0.00	\$132.36	1	14	1	0	\$132.36	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	133	LED Indoor Lighting - Base 2L8T12	sqft	fixture	\$180.00	\$46.64	(\$8.34)	\$218.30	1	100,000	1	0	\$218.30	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	134	Occupancy Sensor, 4L8' Fluorescent Fixtures - Base 2L	sq ft	sq ft	\$0.14		\$0.00	\$0.14	1	9	1	1	\$0.14	1.00	1.00	0.50	1.00	1.00	1.00	1.00	1	
Existing	135	Continuous Dimming, 5L8' Fluorescent Fixtures - Base 2	sq ft	sq ft	\$0.75		\$0.00	\$0.75	1	10	1	1	\$0.75	1.00	1.00	0.50	1.00	1.00	1.00	1.00	1	
Existing	136	High Performance Lighting Remod/Remov - 25% Saving	sqft	sqft	\$0.20		\$0.20	\$0.20	1	20	1	1	\$0.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	140	Base Incandescent Flood, 75W to Screw-in Replacement	sqft	fixture	\$0.68	\$4.91	\$0.00	\$5.59	1	1.25	1	1	\$5.59	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	141	CFL Screw-in 18W	sqft	fixture	\$7.97	\$4.91	\$0.00	\$12.88	1	5	0	0	\$12.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	142	Cold Cathode Lamps	sqft	fixture	\$22.00	\$4.91	\$0.00	\$26.91	1	25,000	0	0	\$26.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	143	Screw-in LED - Base Incandescent	sqft	fixture	\$75.00	\$4.91	\$0.00	\$79.91	1	100,000	0	0	\$79.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	145	Base CFL to screw-in replacement	sqft	fixture	\$7.97	\$4.91	\$0.00	\$12.88	1	5	1	1	\$12.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	146	Screw-in LED - Base CFL	sqft	fixture	\$75.00	\$4.91	\$0.00	\$79.91	1	100,000	0	0	\$79.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	150	Base Incandescent Flood, 75W to Hardwired CFL	sqft	fixture	\$0.61	\$3.77	\$0.00	\$4.38	1	1.40	1	1	\$4.38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	151	CFL Hardwired, Modular 18W	sqft	fixture	\$19.00	\$27.00	\$0.00	\$46.00	1	14	1	1	\$46.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	152	Ceramic Metal Halide	sqft	fixture	\$90.00	\$27.00	\$0.00	\$117.00	1	10,000	1	1	\$117.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	153	Hardwired LED fixture - Base Incandescent	sqft	fixture	\$94.61	\$30.77	(\$32.62)	\$92.76	1	100,000	0	0	\$92.76	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	155	Base CFL to Hardwired replacement	sqft	fixture	\$19.61	\$30.77	\$0.00	\$50.38	1	14	1	1	\$50.38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	156	Hardwired LED fixture - Base CFL	sqft	fixture	\$94.61	\$30.77	(\$5.89)	\$119.49	1	100,000	0	0	\$119.49	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	160	Base High Bay Probe-start Metal Halide, 400W	sqft	fixture	\$200.00	\$60.00	\$0.00	\$260.00	1	14	1	1	\$260.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	161	High Bay T5 - Base Std MH	sqft	fixture	\$290.00	\$60.00	\$0.00	\$350.00	1	14	0	0	\$350.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	162	PSMH * electronic ballast	sqft	fixture	\$413.60	\$60.00	\$0.00	\$473.60	1	45,000	0	0	\$473.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	163	Induction High Bay Lighting - Base Std MH	sqft	fixture	\$480.00	\$60.00	\$0.00	\$540.00	1	100,000	0	0	\$540.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	164	Occupancy Sensor, High Bay T5 - Base Std MH	sq ft	sq ft	\$0.14		\$0.00	\$0.14	1	40,000	1	1	\$0.14	0.10	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	165	High Performance Lighting Remod/Remov - 25% Saving	sqft	sqft	\$0.20		\$0.20	\$0.20	1	20	1	1	\$0.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	180	Base 4L4T8, 1EB	sqft	fixture	\$0.00	\$0.00	\$0.00	\$0.00	1	14	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	181	ROB 4L4' Premium T8, 1EB - Base 4L4T8	sqft	fixture	\$7.00	\$0.00	\$0.00	\$7.00	1	14	1	1	\$7.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	182	Occupancy Sensor, 4L4' Fluorescent Fixtures - Base 4L	sq ft	sq ft	\$0.14		\$0.00	\$0.14	1	9	1	1	\$0.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	183	Lighting Control Tuneup - Base 4L4T8	sqft	sqft	\$0.01		\$0.00	\$0.01	1	6	1	1	\$0.01	0.25	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	184	LED Indoor Lighting - Base 4L4T8	sqft	fixture	\$180.00	\$23.32	(\$11.44)	\$191.88	1	100,000	1	0	\$191.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	185	High Performance Lighting Remod/Remov - 25% Saving	sqft	sqft	\$0.20		\$0.20	\$0.20	1	20	1	1	\$0.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	190	Base 2L4T8, 1EB	sqft	fixture	\$0.00	\$0.00	\$0.00	\$0.00	1	14	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	191	ROB 2L4' Premium T8, 1EB - Base 2L4T8	sqft	fixture	\$5.00	\$0.00	\$0.00	\$5.00	1	14	1	1	\$5.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2	
Existing	192	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L	sq ft	sq ft	\$0.14		\$0.00	\$0.14	1	9	1	1	\$0.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	193	Lighting Control Tuneup - Base 2L4T8	sqft	sq ft	\$0.01		\$0.00	\$0.01	1	6	1	1	\$0.01	0.25	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	194	LED Indoor Lighting - Base 2L4T8	sqft	fixture	\$90.00	\$23.32	(\$11.44)	\$101.88	1	100,000	1	0	\$101.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	
Existing	196	High Performance Lighting Remod/Remov - 25% Saving	sqft	sqft	\$0.2																	

APPENDIX E

COMMERCIAL

MEASURE INPUT DATA

MEASURE COSTS																						
Segment	Measure #	Measure Description	Savings Units	Cost Units	Unit Equipment	Unit Labor	NPV of O & M Cost	Implementator Cost Factor	Cost per Savings Unit	Service Life	Initial Cost	Replace Cost	Full Unit Cost	SON	SOFF	WON	WOFF	SHON	SHOF	End Use	Implementation Type	
Existing	221	Induction Streetlighting	sqft	fixture	\$400.00	\$150.00	\$10.03	\$660.03	1	100,000	1	0	\$560.03	1.00	1.00	1.00	1.00	1.00	1.00	2	1	
Existing	222	LED Streetlighting	sqft	fixture	\$400.00	\$150.00	(\$198.58)	\$351.42	1	90,000	1	0	\$351.42	1.00	1.00	1.00	1.00	1.00	1.00	2	1	
Existing	300	Base Centrifugal Chiller, 0.58 kW/ton, 500 tons	sqft	ton	\$220.00		\$0.00	\$220.00	1	20	1	0	\$220.00	1.00	1.00	1.00	1.00	1.00	1.00	3	2	
Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	sqft	ton	\$255.00		\$0.00	\$255.00	1	20	0	0	\$255.00	1.00	1.00	1.00	1.00	1.00	1.00	3	2	
Existing	302	Window Film (Standard)	sqft	sf>window	\$2.06	\$0.64	\$0.13	\$2.84	1	10	1	1	\$2.84	1.00	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	303	EMS - Chiller	sqft	ton	\$60.00		\$0.00	\$60.00	1	15	1	1	\$60.00	1.00	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	304	Cool Roof - Chiller	sqft	sf>roof	\$0.35		\$0.13	\$0.48	1	10	1	1	\$0.48	1.00	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	305	Chiller Tune Up/Diagnostics	sqft	sqft			\$0.10	\$0.10	1	10	1	1	\$0.10	0.50	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	306	VSD for Chiller Pumps and Towers	sqft	ton	\$32.00	\$10.00	\$0.00	\$42.00	1	15	1	1	\$42.00	1.00	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	307	EMS Optimization	sqft	sqft	\$0.00		\$0.03	\$0.03	1	5	1	1	\$0.03	0.25	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	308	Economizer - Chiller	sqft	ton	\$126.76	\$43.34	\$0.00	\$170.10	1	15	1	1	\$170.10	0.25	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	309	Duct/Pipe Insulation - Chiller	sqft	sqft-insulation	\$3.08		\$3.08	\$3.08	1	10	1	1	\$3.08	1.00	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	311	High Efficiency Chiller Motors	sqft	ton	\$19.49		\$19.49	\$19.49	1	20	1	1	\$19.49	1.00	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	350	Base DX Packaged System, EER=10.3, 10 tons	sqft	ton	\$469.83	\$308.85	\$0.00	\$769.68	1	15	1	1	\$769.68	1.00	1.00	1.00	1.00	1.00	1.00	3	2	
Existing	351	DX Tune Up/Advanced Diagnostics	sqft	sqft			\$0.13	\$0.13	1	10	1	1	\$0.13	0.50	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	352	DX Packaged System, EER=10.9, 10 tons	sqft	ton	\$487.48	\$308.85	\$0.00	\$796.33	1	15	0	0	\$796.33	1.00	1.00	1.00	1.00	1.00	1.00	3	2	
Existing	353	DX Packaged System, EER=11.5, 10 tons	sqft	ton	\$567.50	\$308.85	\$0.00	\$876.35	1	15	0	0	\$876.35	1.00	1.00	1.00	1.00	1.00	1.00	3	2	
Existing	354	DX Packaged System, EER=13.4, 10 tons	sqft	ton	\$1,500.00	\$308.85	\$0.00	\$1,808.85	1	15	0	0	\$1,808.85	1.00	1.00	1.00	1.00	1.00	1.00	3	2	
Existing	356	Ductless (Mini Split) Cooling System	sqft	sf>window	\$2.06	\$0.64	\$0.13	\$2.84	1	10	1	1	\$2.84	1.00	1.00	1.00	1.00	1.00	1.00	3	2	
Existing	357	Window Film (Standard)	sqft	ton	\$5.50	\$15.00	\$0.00	\$20.50	1	8	1	1	\$20.50	0.25	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	358	Prog. Thermostat - DX	sqft	sf>roof	\$0.35		\$0.13	\$0.48	1	10	1	1	\$0.48	1.00	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	359	Cool Roof - DX	sqft	ton	\$126.76	\$43.34	\$0.04	\$170.10	1	5	1	1	\$170.10	0.25	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	360	Optimize Controls	sqft	ton	\$16.67	\$91.24	\$0.00	\$107.91	1	15	1	1	\$107.91	1.00	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	361	Economizer	sqft	ton	\$0.15	\$0.09	(\$90.05)	\$0.24	1	20	1	1	\$0.24	1.00	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	362	Aerosol Duct Sealing - DX	sqft	ton	\$16.67	\$91.24	(\$90.05)	\$0.24	1	20	1	1	\$0.24	1.00	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	363	Ceiling/roof Insulation - DX	sqft	sf>ceiling	\$0.15	\$0.09	(\$90.05)	\$0.24	1	20	1	1	\$0.24	1.00	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	364	Duct/Pipe Insulation - DX	sqft	ton	\$0.68	\$2.40	(\$0.48)	\$2.60	1	10	1	1	\$2.60	1.00	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	365	DX Coil Cleaning	sqft	ton	\$8.77		\$8.77	\$8.77	1	5	1	1	\$8.77	1.00	1.00	1.00	1.00	1.00	1.00	3	1	
Existing	400	Base Fan Motor, 5hp, 1800rpm, 87.5%	sqft	HP	\$52.00		\$0.00	\$52.00	1	20	1	1	\$52.00	1.00	1.00	1.00	1.00	1.00	1.00	4	2	
Existing	401	Fan Motor, 5hp, 1800rpm, 89.5%	sqft	HP	\$72.00		\$0.00	\$72.00	1	20	0	0	\$72.00	1.00	1.00	1.00	1.00	1.00	1.00	4	2	
Existing	402	Variable Speed Drive Control, 5 HP	sqft	HP	\$214.00	\$171.00	\$0.00	\$385.00	1	15	1	1	\$385.00	0.25	1.00	1.00	1.00	1.00	1.00	4	1	
Existing	403	Demand Controlled Ventilation	sqft	sqft	\$0.48		(\$0.36)	\$0.125	1	15	1	1	\$0.125	0.50	1.00	1.00	1.00	1.00	1.00	4	1	
Existing	410	Base Fan Motor, 15hp, 1800rpm, 91.0%	sqft	HP	\$43.00		\$0.00	\$43.00	1	20	1	1	\$43.00	1.00	1.00	1.00	1.00	1.00	1.00	4	2	
Existing	411	Fan Motor, 15hp, 1800rpm, 92.4%	sqft	HP	\$54.00		\$0.00	\$54.00	1	20	0	0	\$54.00	1.00	1.00	1.00	1.00	1.00	1.00	4	2	
Existing	412	Variable Speed Drive Control, 15 HP	sqft	HP	\$129.00	\$102.00	\$0.00	\$231.00	1	20	1	1	\$231.00	0.25	1.00	1.00	1.00	1.00	1.00	4	1	
Existing	413	Air Handler Optimization, 15 HP	sqft	sqft	\$0.00		\$0.03	\$0.03	1	8	1	1	\$0.03	0.25	1.00	1.00	1.00	1.00	1.00	4	1	
Existing	414	Energy Recovery Ventilation	sqft	ton	\$130.95		\$0.00	\$130.95	1	20	1	1	\$130.95	1.00	1.00	1.00	1.00	1.00	1.00	4	1	
Existing	415	Electronically Commutated Motors (ECM) on an air hand	sqft	ton	\$27.76		\$0.00	\$27.76	1	15	1	1	\$27.76	1.00	1.00	1.00	1.00	1.00	1.00	4	2	
Existing	416	Separate Makeup Air/Exhaust Hoods AC	sqft	HP	\$3.00		\$3.00	\$3.00	1	15	1	1	\$3.00	1.00	1.00	1.00	1.00	1.00	1.00	4	1	
Existing	417	Demand Controlled Ventilation	sqft	sqft	\$0.48		(\$0.36)	\$0.12	1	15	1	1	\$0.12	0.50	1.00	1.00	1.00	1.00	1.00	4	1	
Existing	420	Base Fan Motor, 40hp, 1800rpm, 93.0%	sqft	HP	\$37.00		\$0.00	\$37.00	1	20	1	1	\$37.00	1.00	1.00	1.00	1.00	1.00	1.00	4	2	
Existing	421	Fan Motor, 40hp, 1800rpm, 94.1%	sqft	HP	\$47.00		\$0.00	\$47.00	1	20	0	0	\$47.00	1.00	1.00	1.00	1.00	1.00	1.00	4	2	
Existing	422	Variable Speed Drive Control, 40 HP	sqft	HP	\$120.00	\$37.00	\$0.00	\$157.00	1	20	1	1	\$157.00	0.25	1.00	1.00	1.00	1.00	1.00	4	1	
Existing	423	Air Handler Optimization, 40 HP	sqft	sqft	\$0.00		\$0.03	\$0.03	1	8	1	1	\$0.03	0.25	1.00	1.00	1.00	1.00	1.00	4	1	
Existing	424	Demand Controlled Ventilation	sqft	sqft	\$0.48		(\$0.36)	\$0.12	1	15	1	1	\$0.12	0.50	1.00	1.00	1.00	1.00	1.00	4	1	
Existing	500	Base Non-Commercial Refrigerator	sqft	refrigerator	\$1,052.00	\$0.00	\$0.00	\$1,052.00	1	13	1	1	\$1,052.00	1.00	1.00	1.00	1.00	1.00	1.00	5	2	

APPENDIX E

COMMERCIAL

MEASURE INPUT DATA

TECHNOLOGY SATURATION

(units/square foot)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	100	Base Fluorescent Fixture, 4L4T12, 34W, 2EEMAG	0.0133	0.0072	0.0112	0.0132	0.0688	0.0151	0.0085	0.0103	0.0075	0.0105
Existing	101	RET 4L4' Premium T8, 1EB, base 4L4T12	0.0133	0.0072	0.0112	0.0132	0.0688	0.0151	0.0085	0.0103	0.0075	0.0105
Existing	102	RET 2L4' Premium T8, 1EB, Reflector, base 4L4T12	0.0133	0.0072	0.0112	0.0132	0.0688	0.0151	0.0085	0.0103	0.0075	0.0105
Existing	103	LED Indoor Lighting - Base 4L4T12	0.0133	0.0072	0.0112	0.0132	0.0688	0.0151	0.0085	0.0103	0.0075	0.0105
Existing	104	Occupancy Sensor, 4L4' Fluorescent Fixtures - Base 4L4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	105	Continuous Dimming, 5L4' Fluorescent Fixtures - Base 4L	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	106	Lighting Control Tuneup	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	107	High Performance Lighting Remod/Renov - 25% Savings	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	120	Base Fluorescent Fixture, 2L4T12, 34W, 1EEMAG	0.0267	0.0143	0.0223	0.0265	0.1376	0.0301	0.0170	0.0205	0.0149	0.0209
Existing	121	RET 2L4' Premium T8, 1EB -- base 2L4T12	0.0267	0.0143	0.0223	0.0265	0.1376	0.0301	0.0170	0.0205	0.0149	0.0209
Existing	122	RET 1L4' Premium T8, 1EB, Reflector OEM - Base 2L4T	0.0267	0.0143	0.0223	0.0265	0.1376	0.0301	0.0170	0.0205	0.0149	0.0209
Existing	123	LED Indoor Lighting - Base 2L4T12	0.0267	0.0143	0.0223	0.0265	0.1376	0.0301	0.0170	0.0205	0.0149	0.0209
Existing	124	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	125	Continuous Dimming, 10L4' Fluorescent Fixtures - Base :	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	126	Lighting Control Tuneup - Base 2L4T12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	127	High Performance Lighting Remod/Renov - 25% Savings	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	130	Base Fluorescent Fixture, 2L8T12, 60W, 1EEMAG	0.0156	0.0084	0.0131	0.0155	0.0806	0.0176	0.0100	0.0120	0.0087	0.0123
Existing	131	RET 2 - 2L4' Premium T8, 1EB - Base 2L8T12	0.0156	0.0084	0.0131	0.0155	0.0806	0.0176	0.0100	0.0120	0.0087	0.0123
Existing	132	RET 2 - 1L4' Premium T8, 1EB, Reflector OEM - Base 2L	0.0156	0.0084	0.0131	0.0155	0.0806	0.0176	0.0100	0.0120	0.0087	0.0123
Existing	133	LED Indoor Lighting - Base 2L8T12	0.0156	0.0084	0.0131	0.0155	0.0806	0.0176	0.0100	0.0120	0.0087	0.0123
Existing	134	Occupancy Sensor, 4L8' Fluorescent Fixtures - Base 2L8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	135	Continuous Dimming, 5L8' Fluorescent Fixtures - Base 2L	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	136	High Performance Lighting Remod/Renov - 25% Savings	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	140	Base Incandescent Flood, 75W to Screw-in Replacement	0.0316	0.0435	0.0684	0.1000	0.0672	0.1050	0.0641	0.0288	0.0389	0.0164
Existing	141	CFL Screw-in 18W	0.0316	0.0435	0.0684	0.1000	0.0672	0.1050	0.0641	0.0288	0.0389	0.0164
Existing	142	Cold Cathode Lamps	0.0316	0.0435	0.0684	0.1000	0.0672	0.1050	0.0641	0.0288	0.0389	0.0164
Existing	143	Screw-in LED--Base Incandescent	0.0316	0.0435	0.0684	0.1000	0.0672	0.1050	0.0641	0.0288	0.0389	0.0164
Existing	145	Base CFL to screw-in replacement	0.0360	0.0496	0.0780	0.1141	0.0766	0.1197	0.0731	0.0328	0.0443	0.0187
Existing	146	Screw-in LED--Base CFL	0.0360	0.0496	0.0780	0.1141	0.0766	0.1197	0.0731	0.0328	0.0443	0.0187
Existing	150	Base Incandescent Flood, 75W to Hardwired CFL	0.0316	0.0435	0.0684	0.1000	0.0672	0.1050	0.0641	0.0288	0.0389	0.0164
Existing	151	CFL Hardwired, Modular 18W	0.0316	0.0435	0.0684	0.1000	0.0672	0.1050	0.0641	0.0288	0.0389	0.0164
Existing	152	Ceramic Metal Halide	0.0316	0.0435	0.0684	0.1000	0.0672	0.1050	0.0641	0.0288	0.0389	0.0164
Existing	153	Hardwired LED fixture--Base Incandescent	0.0316	0.0435	0.0684	0.1000	0.0672	0.1050	0.0641	0.0288	0.0389	0.0164
Existing	155	Base CFL to Hardwired replacement	0.0360	0.0496	0.0780	0.1141	0.0766	0.1197	0.0731	0.0328	0.0443	0.0187
Existing	156	Hardwired LED fixture--Base CFL	0.0360	0.0496	0.0780	0.1141	0.0766	0.1197	0.0731	0.0328	0.0443	0.0187
Existing	160	Base High Bay Probe-start Metal Halide, 400W	0.0049	0.0027	0.0041	0.0049	0.0255	0.0056	0.0031	0.0038	0.0028	0.0039
Existing	161	High Bay T5 - Base Std MH	0.0049	0.0027	0.0041	0.0049	0.0255	0.0056	0.0031	0.0038	0.0028	0.0039
Existing	162	PSMH + electronic ballast	0.0049	0.0027	0.0041	0.0049	0.0255	0.0056	0.0031	0.0038	0.0028	0.0039
Existing	163	Induction High Bay Lighting - Base Std MH	0.0049	0.0027	0.0041	0.0049	0.0255	0.0056	0.0031	0.0038	0.0028	0.0039
Existing	164	Occupancy Sensor, High Bay T5 - Base Std MH	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	165	High Performance Lighting Remod/Renov - 25% Savings	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	180	Base 4L4T8, 1EB	0.0099	0.0053	0.0083	0.0183	0.0950	0.0111	0.0117	0.0076	0.0055	0.0077
Existing	181	ROB 4L4' Premium T8, 1EB - Base 4L4T8	0.0099	0.0053	0.0083	0.0183	0.0950	0.0111	0.0117	0.0076	0.0055	0.0077
Existing	182	Occupancy Sensor, 4L4' Fluorescent Fixtures - Base 4L4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	183	Lighting Control Tuneup - Base 4L4T8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	184	LED Indoor Lighting - Base 4L4T8	0.0099	0.0053	0.0083	0.0183	0.0950	0.0111	0.0117	0.0076	0.0055	0.0077
Existing	185	High Performance Lighting Remod/Renov - 25% Savings	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	190	Base 2L4T8, 1EB	0.0190	0.0102	0.0159	0.0228	0.1187	0.0215	0.0147	0.0146	0.0107	0.0149
Existing	191	ROB 2L4' Premium T8, 1EB - Base 2L4T8	0.0190	0.0102	0.0159	0.0228	0.1187	0.0215	0.0147	0.0146	0.0107	0.0149
Existing	192	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	193	Lighting Control Tuneup - Base 2L4T8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	194	LED Indoor Lighting - Base 2L4T8	0.0190	0.0102	0.0159	0.0228	0.1187	0.0215	0.0147	0.0146	0.0107	0.0149
Existing	196	High Performance Lighting Remod/Renov - 25% Savings	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	200	Base Exit Sign	0.0003	0.0005	0.0002	0.0001	0.0004	0.0001	0.0002	0.0005	0.0003	0.0001
Existing	201	LED Exit Sign	0.0003	0.0005	0.0002	0.0001	0.0004	0.0001	0.0002	0.0005	0.0003	0.0001

APPENDIX E

COMMERCIAL

MEASURE INPUT DATA

TECHNOLOGY SATURATION

(units/square foot)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	210	Base Outdoor Mercury Vapor 400W Lamp	0.0011	0.0027	0.0008	0.0014	0.0015	0.0008	0.0002	0.0003	0.0004	0.0007
Existing	211	High Pressure Sodium 250W Lamp	0.0011	0.0027	0.0008	0.0014	0.0015	0.0008	0.0002	0.0003	0.0004	0.0007
Existing	212	LED Outdoor Area Lighting	0.0011	0.0027	0.0008	0.0014	0.0015	0.0008	0.0002	0.0003	0.0004	0.0007
Existing	213	LED Outdoor Bi-level Fixtures	0.0011	0.0027	0.0008	0.0014	0.0015	0.0008	0.0002	0.0003	0.0004	0.0007
Existing	214	Outdoor Lighting Controls (Photocell/Timeclock)	0.0003	0.0007	0.0002	0.0003	0.0004	0.0002	0.0000	0.0001	0.0001	0.0002
Existing	220	Base Street Lighting	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.0026
Existing	221	Induction Streetlighting										0.0026
Existing	222	LED Streetlighting										0.0026
Existing	300	Base Centrifugal Chiller, 0.58 kW/ton, 500 tons	0.0030	0.0030	0.0030	0.0025	0.0189	0.0025	0.0026	0.0025	0.0035	0.0020
Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	0.0030	0.0030	0.0030	0.0025	0.0189	0.0025	0.0026	0.0025	0.0035	0.0020
Existing	302	Window Film (Standard)	0.0877	0.0284	0.0409	0.0460	0.0945	0.0242	0.0625	0.0171	0.0071	0.0284
Existing	303	EMS - Chiller	0.0030	0.0030	0.0030	0.0025	0.0189	0.0025	0.0026	0.0025	0.0035	0.0020
Existing	304	Cool Roof - Chiller	0.5000	1.0000	1.0000	1.0000	0.0833	0.5000	0.4333	1.0000	1.0000	1.0000
Existing	305	Chiller Tune Up/Diagnostics	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	306	VSD for Chiller Pumps and Towers	0.0030	0.0030	0.0030	0.0025	0.0189	0.0025	0.0026	0.0025	0.0035	0.0020
Existing	307	EMS Optimization	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	308	Economizer - Chiller	0.0030	0.0030	0.0030	0.0025	0.0189	0.0025	0.0026	0.0025	0.0035	0.0020
Existing	309	Duct/Pipe Insulation - Chiller	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500
Existing	311	High Efficiency Chiller Motors	0.0024	0.0034	0.0021	0.0025	0.0018	0.0033	0.0026	0.0035	0.0028	0.0039
Existing	350	Base DX Packaged System, EER=10.3, 10 tons	0.0030	0.0030	0.0030	0.0025	0.0189	0.0025	0.0026	0.0025	0.0035	0.0020
Existing	351	DX Tune Up/ Advanced Diagnostics	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	352	DX Packaged System, EER=10.9, 10 tons	0.0030	0.0030	0.0030	0.0025	0.0189	0.0025	0.0026	0.0025	0.0035	0.0020
Existing	353	DX Packaged System, EER=11.5, 10 tons	0.0030	0.0030	0.0030	0.0025	0.0189	0.0025	0.0026	0.0025	0.0035	0.0020
Existing	354	DX Packaged System, EER=13.4, 10 tons	0.0030	0.0030	0.0030	0.0025	0.0189	0.0025	0.0026	0.0025	0.0035	0.0020
Existing	355	Ductless (Mini Split) Cooling System										
Existing	357	Window Film (Standard)	0.0877	0.0284	0.0409	0.0460	0.0945	0.0242	0.0625	0.0171	0.0071	0.0284
Existing	358	Prog. Thermostat - DX	0.0030	0.0030	0.0030	0.0025	0.0189	0.0025	0.0026	0.0025	0.0035	0.0020
Existing	359	Cool Roof - DX	0.5000	1.0000	1.0000	1.0000	0.0833	0.5000	0.4333	1.0000	1.0000	1.0000
Existing	360	Optimize Controls	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	361	Economizer	0.0030	0.0030	0.0030	0.0025	0.0189	0.0025	0.0026	0.0025	0.0035	0.0020
Existing	362	Aerosol Duct Sealing - DX	0.0030	0.0030	0.0030	0.0025	0.0189	0.0025	0.0026	0.0025	0.0035	0.0020
Existing	363	Ceiling/roof Insulation - DX	0.5000	1.0000	1.0000	1.0000	0.0833	0.5000	0.4333	1.0000	1.0000	1.0000
Existing	364	Duct/Pipe Insulation - DX	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	365	DX Coil Cleaning	0.0030	0.0030	0.0030	0.0025	0.0189	0.0025	0.0026	0.0025	0.0035	0.0020
Existing	400	Base Fan Motor, 5hp, 1800rpm, 87.5%	0.0003	0.0018	0.0003	0.0005	0.0003	0.0004	0.0001	0.0003	0.0003	0.0005
Existing	401	Fan Motor, 5hp, 1800rpm, 89.5%	0.0003	0.0018	0.0003	0.0005	0.0003	0.0004	0.0001	0.0003	0.0003	0.0005
Existing	402	Variable Speed Drive Control, 5 HP	0.0003	0.0018	0.0003	0.0005	0.0003	0.0004	0.0001	0.0003	0.0003	0.0005
Existing	403	Demand Controlled Ventilation	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	410	Base Fan Motor, 15hp, 1800rpm, 91.0%	0.0002	0.0010	0.0013	0.0000	0.0000	0.0007	0.0003	0.0002	0.0000	0.0009
Existing	411	Fan Motor, 15hp, 1800rpm, 92.4%	0.0002	0.0010	0.0013	0.0000	0.0000	0.0007	0.0003	0.0002	0.0000	0.0009
Existing	412	Variable Speed Drive Control, 15 HP	0.0002	0.0010	0.0013	0.0000	0.0000	0.0007	0.0003	0.0002	0.0000	0.0009
Existing	413	Air Handler Optimization, 15 HP	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	414	Energy Recovery Ventilation	0.0024	0.0037	0.0016	0.0035	0.0004	0.0026	0.0020	0.0042	0.0017	0.0014
Existing	415	Electronically Commutated Motors (ECM) on an air handl	0.0024	0.0037	0.0016	0.0035	0.0004	0.0026	0.0020	0.0042	0.0017	0.0014
Existing	416	Separate Makeup Air/Exhaust Hoods AC	0.0002	0.0010	0.0013	0.0000	0.0000	0.0007	0.0003	0.0002	0.0000	0.0009
Existing	417	Demand Controlled Ventilation	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	420	Base Fan Motor, 40hp, 1800rpm, 93.0%	0.0012	0.0000	0.0019	0.0000	0.0004	0.0000	0.0005	0.0000	0.0000	0.0024
Existing	421	Fan Motor, 40hp, 1800rpm, 94.1%	0.0012	0.0000	0.0019	0.0000	0.0004	0.0000	0.0005	0.0000	0.0000	0.0024
Existing	422	Variable Speed Drive Control, 40 HP	0.0012	0.0000	0.0019	0.0000	0.0004	0.0000	0.0005	0.0000	0.0000	0.0024
Existing	423	Air Handler Optimization, 40 HP	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	424	Demand Controlled Ventilation	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	500	Base Non-Commercial Refrigerator	0.0005	0.0005	0.0001	0.0000	0.0001	0.0004	0.0000	0.0007	0.0009	0.0001

APPENDIX E

COMMERCIAL

MEASURE INPUT DATA

Hour Adjustment For Lighting
(Hours/year)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	100	Base Fluorescent Fixture, 4L4'T12, 34W, 2EEMAG	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	5,638	2,716
Existing	101	RET 4L4' Premium T8, 1EB, base 4L4'T12	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	102	RET 2L4' Premium T8, 1EB, Reflector, base 4L4'T12	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	103	LED Indoor Lighting - Base 4L4'T12	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	104	Occupancy Sensor, 4L4' Fluorescent Fixtures - Base 4L4'	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	105	Continuous Dimming, 5L4' Fluorescent Fixtures - Base 4L	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	106	Lighting Control Tuneup	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	107	High Performance Lighting Remod/Renov - 25% Savings	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	120	Base Fluorescent Fixture, 2L4'T12, 34W, 1EEMAG	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	5,638	2,716
Existing	121	RET 2L4' Premium T8, 1EB -- base 2L4'T12	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	122	RET 1L4' Premium T8, 1EB, Reflector OEM - Base 2L4'T	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	123	LED Indoor Lighting - Base 2L4'T12	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	124	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L4'	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	125	Continuous Dimming, 10L4' Fluorescent Fixtures - Base 2	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	126	Lighting Control Tuneup - Base 2L4'T12	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	127	High Performance Lighting Remod/Renov - 25% Savings	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	130	Base Fluorescent Fixture, 2L8'T12, 60W, 1EEMAG	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	5,638	2,716
Existing	131	RET 2 - 2L4' Premium T8, 1EB - Base 2L8'T12	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	132	RET 2 - 1L4' Premium T8, 1EB, Reflector OEM - Base 2L	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	133	LED Indoor Lighting - Base 2L8'T12	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	134	Occupancy Sensor, 4L8' Fluorescent Fixtures - Base 2L8'	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	135	Continuous Dimming, 5L8' Fluorescent Fixtures - Base 2L	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	136	High Performance Lighting Remod/Renov - 25% Savings	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	140	Base Incandescent Flood, 75W to Screw-in Replacement	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	141	CFL Screw-in 18W	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	142	Cold Cathode Lamps	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	143	Screw-in LED--Base Incandescent	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	145	Base CFL to screw-in replacement	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	146	Screw-in LED--Base CFL	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	150	Base Incandescent Flood, 75W to Hardwired CFL	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	151	CFL Hardwired, Modular 18W	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	152	Ceramic Metal Halide	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	153	Hardwired LED fixture--Base Incandescent	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	155	Base CFL to Hardwired replacement	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	156	Hardwired LED fixture--Base CFL	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	160	Base High Bay Probe-start Metal Halide, 400W	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	161	High Bay T5 - Base Std MH	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	162	PSMH + electronic ballast	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	163	Induction High Bay Lighting - Base Std MH	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	164	Occupancy Sensor, High Bay T5 - Base Std MH	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	165	High Performance Lighting Remod/Renov - 25% Savings	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	180	Base 4L4'T8, 1EB	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	5,638	2,716
Existing	181	ROB 2L4' Premium T8, 1EB - Base 4L4'T8	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	182	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 4L4'	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	183	Lighting Control Tuneup - Base 4L4'T8	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	184	LED Indoor Lighting - Base 4L4'T8	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	185	High Performance Lighting Remod/Renov - 25% Savings	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	190	Base 2L4'T8, 1EB	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	5,638	2,716
Existing	191	ROB 2L4' Premium T8, 1EB - Base 2L4'T8	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	192	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L4'	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	193	Lighting Control Tuneup - Base 2L4'T8	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	194	LED Indoor Lighting - Base 2L4'T8	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	196	High Performance Lighting Remod/Renov - 25% Savings	4,732	2,477	2,615	4,346	2,799	2,484	2,484	3,449	2,743	2,716
Existing	200	Base Exit Sign	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760
Existing	201	LED Exit Sign	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760

APPENDIX E

COMMERCIAL

MEASURE INPUT DATA

Hour Adjustment For Lighting
(Hours/year)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	210	Base Outdoor Mercury Vapor 400W Lamp	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380
Existing	211	High Pressure Sodium 250W Lamp	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380
Existing	212	LED Outdoor Area Lighting	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380
Existing	213	LED Outdoor Bi-level Fixtures	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380
Existing	214	Outdoor Lighting Controls (Photocell/Timeclock)	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380
Existing	220	Base Street Lighting	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380
Existing	221	Induction Streetlighting	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380
Existing	222	LED Streetlighting	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380	4,380
Existing	300	Base Centrifugal Chiller, 0.58 kW/ton, 500 tons										
Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons										
Existing	302	Window Film (Standard)										
Existing	303	EMS - Chiller										
Existing	304	Cool Roof - Chiller										
Existing	305	Chiller Tune Up/Diagnostics										
Existing	306	VSD for Chiller Pumps and Towers										
Existing	307	EMS Optimization										
Existing	308	Economizer - Chiller										
Existing	309	Duct/Pipe Insulation - Chiller										
Existing	311	High Efficiency Chiller Motors										
Existing	350	Base DX Packaged System, EER=10.3, 10 tons										
Existing	351	DX Tune Up/ Advanced Diagnostics										
Existing	352	DX Packaged System, EER=10.9, 10 tons										
Existing	353	DX Packaged System, EER=11.5, 10 tons										
Existing	354	DX Packaged System, EER=13.4, 10 tons										
Existing	356	Ductless (Mini Split) Cooling System										
Existing	357	Window Film (Standard)										
Existing	358	Prog. Thermostat - DX										
Existing	359	Cool Roof - DX										
Existing	360	Optimize Controls										
Existing	361	Economizer										
Existing	362	Aerosol Duct Sealing - DX										
Existing	363	Ceiling/roof Insulation - DX										
Existing	364	Duct/Pipe Insulation - DX										
Existing	365	DX Coil Cleaning										
Existing	400	Base Fan Motor, 5hp, 1800rpm, 87.5%										
Existing	401	Fan Motor, 5hp, 1800rpm, 89.5%										
Existing	402	Variable Speed Drive Control, 5 HP										
Existing	403	Demand Controlled Ventilation										
Existing	410	Base Fan Motor, 15hp, 1800rpm, 91.0%										
Existing	411	Fan Motor, 15hp, 1800rpm, 92.4%										
Existing	412	Variable Speed Drive Control, 15 HP										
Existing	413	Air Handler Optimization, 15 HP										
Existing	414	Energy Recovery Ventilation										
Existing	415	Electronically Commutated Motors (ECM) on an air handler unit										
Existing	416	Separate Makeup Air/Exhaust Hoods AC										
Existing	417	Demand Controlled Ventilation										
Existing	420	Base Fan Motor, 40hp, 1800rpm, 93.0%										
Existing	421	Fan Motor, 40hp, 1800rpm, 94.1%										
Existing	422	Variable Speed Drive Control, 40 HP										
Existing	423	Air Handler Optimization, 40 HP										
Existing	424	Demand Controlled Ventilation										
Existing	500	Base Non-Commercial Refrigerator			1052	0				1	13	1

BASE TECHNOLOGY EUIs (kWh/square foot)											
Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Miscellaneous
Existing	100	Base Fluorescent Fixture, 4L4'T12, 34W, 2EEMAG	2.9	2.3	3.5	8.3	2.9	4.6	4.2	3.6	2.1
Existing	120	Base Fluorescent Fixture, 2L4'T12, 34W, 1EEMAG	2.8	2.0	3.4	8.2	3.5	4.9	4.2	3.1	2.0
Existing	130	Base Fluorescent Fixture, 2L8'T12, 60W, 1EEMAG	2.8	2.0	3.4	8.2	3.5	4.9	4.2	3.1	2.0
Existing	140	Base Incandescent Flood, 75W to Screw-in CFL	11.2	8.1	13.4	32.6	14.1	19.6	16.6	12.2	8.0
Existing	145	Base screw-in CFL to screw-in LED	3.1	2.2	3.7	8.9	3.9	5.4	4.5	3.3	2.2
Existing	150	Base Incandescent Flood, 75W to Hardwired CFL	11.2	8.1	13.4	32.6	14.1	19.6	16.6	12.2	8.0
Existing	155	Base CFL to LED Hardwired	3.1	2.2	3.7	8.9	3.9	5.4	4.5	3.3	2.2
Existing	160	Base High Bay Metal Halide, 400W	2.1	1.5	2.5	6.1	2.7	3.7	3.1	2.3	1.5
Existing	180	Base 4L4'T8, 1EB	1.9	1.4	2.2	5.5	2.4	3.3	2.8	2.0	1.3
Existing	190	Base 2L4'T8, 1EB	1.9	1.4	2.2	5.5	2.4	3.3	2.8	2.0	1.3
Existing	200	Base Exit Sign (13 w)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Existing	210	Base Mercury Vapor 400W Lamp Outdoor	1.1	2.9	1.0	1.7	0.4	0.8	0.2	0.3	0.5
Existing	220	Base Street Lighting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Existing	300	Base Centrifugal Chiller, 0.58 kW/ton, 500 tons	2.9	5.3	2.3	5.9	2.5	1.5	2.1	3.1	0.9
Existing	350	Base DX Packaged System, EER=10.3, 10 tons	4.9	9.1	4.0	10.2	4.3	2.5	3.6	5.3	1.6
Existing	400	Base Fan Motor, 5hp, 1800rpm, 87.5%	1.1	3.1	0.9	7.8	0.7	0.8	0.6	3.9	0.7
Existing	410	Base Fan Motor, 15hp, 1800rpm, 91.0%	1.0	2.9	0.8	7.2	0.6	0.7	0.5	3.6	0.7
Existing	420	Base Fan Motor, 40hp, 1800rpm, 93.0%	1.0	2.8	0.8	7.1	0.6	0.7	0.5	3.5	0.7
Existing	500	Base Non-Commercial Refrigerator	0.1	0.3	0.1	0.0	0.0	0.2	0.0	0.1	0.2
Existing	520	Base Refrigeration System	0.1	10.3	0.3	26.4	1.3	0.4	0.5	0.3	0.4
Existing	610	Base Desktop PC	1.3	0.1	0.3	0.2	0.1	0.3	0.1	0.4	0.1
Existing	620	Base Monitor, 17" CRT	1.3	0.1	0.3	0.2	0.1	0.3	0.1	0.4	0.1
Existing	630	Base Monitor, 17" LCD	0.313	0.034	0.075	0.042	0.022	0.080	0.017	0.096	0.014
Existing	640	Base Copier	0.4	0.1	0.2	0.3	0.0	0.1	0.0	0.2	0.0
Existing	650	Base Laser Printer	0.8	0.2	0.4	0.2	0.1	0.2	0.0	0.4	0.1
Existing	660	Base Data Center/Server Room	236.0	265.8	282.2	407.5	25.9	94.6	75.2	118.3	194.9

Standards Adjustment Factor

(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	100	Base Fluorescent Fixture, 4L4T12, 34W, 2EEMAG	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	101	RET 4L4' Premium T8, 1EB, base 4L4T12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	102	RET 2L4' Premium T8, 1EB, Reflector, base 4L4T12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	103	LED Indoor Lighting - Base 4L4T12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	104	Occupancy Sensor, 4L4' Fluorescent Fixtures - Base 4L4	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	105	Continuous Dimming, 5L4' Fluorescent Fixtures - Base 4L4	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	106	Lighting Control Tuneup	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	107	High Performance Lighting Remod/Renov - 25% Savings	89%	89%	89%	89%	89%	89%	89%	89%	89%	89%
Existing	120	Base Fluorescent Fixture, 2L4T12, 34W, 1EEMAG	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	121	RET 2L4' Premium T8, 1EB -- base 2L4T12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	122	RET 1L4' Premium T8, 1EB, Reflector OEM - Base 2L4T12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	123	LED Indoor Lighting - Base 2L4T12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	124	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L4	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	125	Continuous Dimming, 10L4' Fluorescent Fixtures - Base 2L4	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	126	Lighting Control Tuneup - Base 2L4T12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	127	High Performance Lighting Remod/Renov - 25% Savings	89%	89%	89%	89%	89%	89%	89%	89%	89%	89%
Existing	130	Base Fluorescent Fixture, 2L8T12, 60W, 1EEMAG	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	131	RET 2 - 2L4' Premium T8, 1EB -Base 2L8T12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	132	RET 2 - 1L4' Premium T8, 1EB, Reflector OEM - Base 2L8T12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	133	LED Indoor Lighting - Base 2L8T12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	134	Occupancy Sensor, 4L8' Fluorescent Fixtures - Base 2L8	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	135	Continuous Dimming, 5L8' Fluorescent Fixtures - Base 2L8	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	136	High Performance Lighting Remod/Renov - 25% Savings	89%	89%	89%	89%	89%	89%	89%	89%	89%	89%
Existing	140	Base Incandescent Flood, 75W to Screw-In Replacement	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	141	CFL Screw-in 18W	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	142	Cold Cathode Lamps	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	143	Screw-in LED--Base Incandescent	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	145	Base CFL to screw-in replacement	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	146	Screw-in LED--Base CFL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	150	Base Incandescent Flood, 75W to Hardwired CFL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	151	CFL Hardwired, Modular 18W	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	152	Ceramic Metal Halide	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	153	Hardwired LED fixture--Base Incandescent	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	155	Base CFL to Hardwired replacement	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	156	Hardwired LED fixture--Base CFL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	160	Base High Bay Probe-start Metal Halide, 400W	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	161	High Bay T5 - Base Std MH	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	162	PSMH + electronic ballast	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	163	Induction High Bay Lighting - Base Std MH	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	164	Occupancy Sensor, High Bay T5 - Base Std MH	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	165	High Performance Lighting Remod/Renov - 25% Savings	63%	63%	63%	63%	63%	63%	63%	63%	63%	63%
Existing	180	Base 4L4T8, 1EB	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	181	ROB 4L4' Premium T8, 1EB - Base 4L4T8	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	182	Occupancy Sensor, 4L4' Fluorescent Fixtures - Base 4L4	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	183	Lighting Control Tuneup - Base 4L4T8	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	184	LED Indoor Lighting - Base 4L4T8	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	185	High Performance Lighting Remod/Renov - 25% Savings	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	190	Base 2L4T8, 1EB	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	191	ROB 2L4' Premium T8, 1EB - Base 2L4T8	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	192	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L4	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	193	Lighting Control Tuneup - Base 2L4T8	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	194	LED Indoor Lighting - Base 2L4T8	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	196	High Performance Lighting Remod/Renov - 25% Savings	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	200	Base Exit Sign	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	201	LED Exit Sign	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Standards Adjustment Factor
(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	210	Base Outdoor Mercury Vapor 400W Lamp	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	211	High Pressure Sodium 250W Lamp	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	212	LED Outdoor Area Lighting	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	213	LED Outdoor Bi-level Fixtures	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	214	Outdoor Lighting Controls (Photocell/Timeclock)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	220	Base Street Lighting	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	221	Induction Streetlighting	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	222	LED Streetlighting	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	300	Base Centrifugal Chiller, 0.58 kW/ton, 500 tons	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	302	Window Film (Standard)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	303	EMS - Chiller	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	304	Cool Roof - Chiller	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	305	Chiller Tune Up/Diagnostics	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	306	VSD for Chiller Pumps and Towers	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	307	EMS Optimization	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	308	Economizer - Chiller	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	309	Duct/Pipe Insulation - Chiller	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	311	High Efficiency Chiller Motors	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	350	Base DX Packaged System, EER=10.3, 10 tons	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	351	DX Tune Up/ Advanced Diagnostics	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	352	DX Packaged System, EER=10.9, 10 tons	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	353	DX Packaged System, EER=11.5, 10 tons	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	354	DX Packaged System, EER=13.4, 10 tons	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	356	Ductless (Mini Split) Cooling System	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	357	Window Film (Standard)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	358	Prog. Thermostat - DX	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	359	Cool Roof - DX	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	360	Optimize Controls	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	361	Economizer	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	362	Aerosol Duct Sealing - DX	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	363	Ceiling/roof Insulation - DX	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	364	Duct/Pipe Insulation - DX	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	365	DX Coil Cleaning	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	400	Base Fan Motor, 5hp, 1800rpm, 87.5%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	401	Fan Motor, 5hp, 1800rpm, 89.5%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	402	Variable Speed Drive Control, 5 HP	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	403	Demand Controlled Ventilation	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	410	Base Fan Motor, 15hp, 1800rpm, 91.0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	411	Fan Motor, 15hp, 1800rpm, 92.4%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	412	Variable Speed Drive Control, 15 HP	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	413	Air Handler Optimization, 15 HP	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	414	Energy Recovery Ventilation	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	415	Electronically Commutated Motors (ECM) on an air handl	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	416	Separate Makeup Air/Exhaust Hoods AC	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	417	Demand Controlled Ventilation	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	420	Base Fan Motor, 40hp, 1800rpm, 93.0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	421	Fan Motor, 40hp, 1800rpm, 94.1%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	422	Variable Speed Drive Control, 40 HP	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	423	Air Handler Optimization, 40 HP	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	424	Demand Controlled Ventilation	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	500	Base Non-Commercial Refrigerator	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

APPLICABILITY FACTOR

(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	100	Base Fluorescent Fixture, 4L4'T12, 34W, 2EEMAG	5.96%	8.00%	3.69%	0.00%	9.50%	0.00%	0.60%	0.46%	0.00%	3.41%
Existing	101	RET 4L4' Premium T8, 1EB, base 4L4'T12	5.96%	8.00%	3.69%	0.00%	9.50%	0.00%	0.60%	0.46%	0.00%	3.41%
Existing	102	RET 2L4' Premium T8, 1EB, Reflector, base 4L4'T12	5.96%	8.00%	3.69%	0.00%	9.50%	0.00%	0.60%	0.46%	0.00%	3.41%
Existing	103	LED Indoor Lighting - Base 4L4'T12	5.96%	8.00%	3.69%	0.00%	9.50%	0.00%	0.60%	0.46%	0.00%	3.41%
Existing	104	Occupancy Sensor, 4L4' Fluorescent Fixtures - Base 4L4'	5.96%	8.00%	3.69%	0.00%	9.50%	0.00%	0.60%	0.46%	0.00%	3.41%
Existing	105	Continuous Dimming, 5L4' Fluorescent Fixtures - Base 4L	5.96%	8.00%	3.69%	0.00%	9.50%	0.00%	0.60%	0.46%	0.00%	3.41%
Existing	106	Lighting Control Tuneup	4.42%	4.56%	2.29%	0.00%	6.54%	0.00%	0.60%	0.06%	0.00%	1.36%
Existing	107	High Performance Lighting Remod/Renov - 25% Savings	5.96%	8.00%	3.69%	0.00%	9.50%	0.00%	0.60%	0.46%	0.00%	3.41%
Existing	120	Base Fluorescent Fixture, 2L4'T12, 34W, 1EEMAG	9.94%	3.00%	7.48%	12.00%	6.04%	0.00%	0.98%	1.75%	1.90%	2.28%
Existing	121	RET 2L4' Premium T8, 1EB -- base 2L4'T12	9.9%	3.0%	7.5%	12.0%	6.0%	0.0%	1.0%	1.8%	1.9%	2.3%
Existing	122	RET 1L4' Premium T8, 1EB, Reflector OEM - Base 2L4'T	9.9%	3.0%	7.5%	12.0%	6.0%	0.0%	1.0%	1.8%	1.9%	2.3%
Existing	123	LED Indoor Lighting - Base 2L4'T12	9.9%	3.0%	7.5%	12.0%	6.0%	0.0%	1.0%	1.8%	1.9%	2.3%
Existing	124	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L4'	9.9%	3.0%	7.5%	12.0%	6.0%	0.0%	1.0%	1.8%	1.9%	2.3%
Existing	125	Continuous Dimming, 10L4' Fluorescent Fixtures - Base 2	9.9%	3.0%	7.5%	12.0%	6.0%	0.0%	1.0%	1.8%	1.9%	2.3%
Existing	126	Lighting Control Tuneup - Base 2L4'T12	7.37%	1.71%	4.65%	4.49%	4.15%	0.00%	0.98%	0.22%	1.77%	0.91%
Existing	127	High Performance Lighting Remod/Renov - 25% Savings	9.9%	3.0%	7.5%	12.0%	6.0%	0.0%	1.0%	1.8%	1.9%	2.3%
Existing	130	Base Fluorescent Fixture, 2L8'T12, 60W, 1EEMAG	4.77%	8.00%	5.06%	50.39%	3.31%	0.00%	0.00%	0.00%	0.00%	0.97%
Existing	131	RET 2 - 2L4' Premium T8, 1EB - Base 2L8'T12	4.8%	8.0%	5.1%	50.4%	3.3%	0.0%	0.0%	0.0%	0.0%	1.0%
Existing	132	RET 2 - 1L4' Premium T8, 1EB, Reflector OEM - Base 2L	4.8%	8.0%	5.1%	50.4%	3.3%	0.0%	0.0%	0.0%	0.0%	1.0%
Existing	133	LED Indoor Lighting - Base 2L8'T12	4.8%	8.0%	5.1%	50.4%	3.3%	0.0%	0.0%	0.0%	0.0%	1.0%
Existing	134	Occupancy Sensor, 4L8' Fluorescent Fixtures - Base 2L8'	4.8%	8.0%	5.1%	50.4%	3.3%	0.0%	0.0%	0.0%	0.0%	1.0%
Existing	135	Continuous Dimming, 5L8' Fluorescent Fixtures - Base 2L	4.8%	8.0%	5.1%	50.4%	3.3%	0.0%	0.0%	0.0%	0.0%	1.0%
Existing	136	High Performance Lighting Remod/Renov - 25% Savings	4.8%	8.0%	5.1%	50.4%	3.3%	0.0%	0.0%	0.0%	0.0%	1.0%
Existing	140	Base Incandescent Flood, 75W to Screw-in Replacement	15.8%	70.0%	9.7%	15.0%	0.5%	3.3%	0.6%	5.6%	4.7%	32.8%
Existing	141	CFL Screw-in 18W	14.2%	63.0%	8.7%	13.5%	0.4%	3.0%	0.6%	5.1%	4.3%	29.5%
Existing	142	Cold Cathode Lamps	1.6%	7.0%	1.0%	1.5%	0.0%	0.3%	0.1%	0.6%	0.5%	3.3%
Existing	143	Screw-in LED--Base Incandescent	15.8%	70.0%	9.7%	15.0%	0.5%	3.3%	0.6%	5.6%	4.7%	32.8%
Existing	145	Base CFL to screw-in replacement	5.5%	1.0%	0.5%	0.0%	0.0%	0.2%	0.0%	8.8%	8.7%	5.2%
Existing	146	Screw-in LED--Base CFL	5.5%	1.0%	0.5%	0.0%	0.0%	0.2%	0.0%	8.8%	8.7%	5.2%
Existing	150	Base Incandescent Flood, 75W to Hardwired CFL	7.1%	7.0%	2.8%	3.0%	0.0%	0.0%	3.6%	15.5%	23.6%	7.2%
Existing	151	CFL Hardwired, Modular 18W	6.4%	6.3%	2.5%	2.7%	0.0%	0.2%	3.3%	14.0%	21.3%	6.5%
Existing	152	Ceramic Metal Halide	0.7%	0.7%	0.3%	0.3%	0.0%	0.0%	0.4%	1.6%	2.4%	0.7%
Existing	153	Hardwired LED fixture--Base Incandescent	7.1%	7.0%	2.8%	3.0%	0.0%	0.2%	3.6%	15.5%	23.6%	7.2%
Existing	155	Base CFL to Hardwired replacement	19.65%	1.00%	0.22%	0.51%	0.06%	0.14%	6.09%	25.33%	61.01%	5.71%
Existing	156	Hardwired LED fixture--Base CFL	19.6%	1.0%	0.2%	0.5%	0.1%	0.1%	6.1%	25.3%	61.0%	5.7%
Existing	160	Base High Bay Probe-start Metal Halide, 400W	0.6%	0.00%	8.2%	7.1%	6.0%	11.21%	2.75%	0.3%	0.0%	14.7%
Existing	161	High Bay T5 - Base Std MH	0.6%	0.0%	8.2%	7.1%	6.0%	11.2%	2.7%	0.3%	0.0%	14.7%
Existing	162	PSMH + electronic ballast	0.6%	0.0%	8.2%	7.1%	6.0%	11.2%	2.7%	0.3%	0.0%	14.7%
Existing	163	Induction High Bay Lighting - Base Std MH	0.6%	0.0%	8.2%	7.1%	6.0%	11.2%	2.7%	0.3%	0.0%	14.7%
Existing	164	Occupancy Sensor, High Bay T5 - Base Std MH	0.6%	0.0%	8.2%	7.1%	6.0%	11.2%	2.7%	0.3%	0.0%	14.7%
Existing	165	High Performance Lighting Remod/Renov - 25% Savings	0.6%	0.0%	8.2%	7.1%	6.0%	11.2%	2.7%	0.3%	0.0%	14.7%
Existing	180	Base 4L4'T8, 1EB	12.6%	1.00%	16.9%	0.0%	3.9%	30.05%	34.30%	39.6%	0.0%	18.9%
Existing	181	ROB 4L4' Premium T8, 1EB - Base 4L4'T8	12.6%	1.0%	16.9%	0.0%	13.5%	30.0%	34.3%	39.6%	0.0%	18.9%
Existing	182	Occupancy Sensor, 4L4' Fluorescent Fixtures - Base 4L4'	12.6%	1.0%	16.9%	0.0%	13.5%	30.0%	34.3%	39.6%	0.0%	18.9%
Existing	183	Lighting Control Tuneup - Base 4L4'T8	9.37%	0.57%	10.52%	0.00%	9.30%	27.52%	34.30%	4.87%	0.00%	7.53%
Existing	184	LED Indoor Lighting - Base 4L4'T8	12.6%	1.0%	16.9%	0.0%	13.5%	30.0%	34.3%	39.6%	0.0%	18.9%
Existing	185	High Performance Lighting Remod/Renov - 25% Savings	12.6%	1.0%	16.9%	0.0%	13.5%	30.0%	34.3%	39.6%	0.0%	18.9%
Existing	190	Base 2L4'T8, 1EB	18.3%	1.00%	35.9%	12.0%	3.9%	24.89%	48.74%	49.9%	0.0%	8.6%
Existing	191	ROB 2L4' Premium T8, 1EB - Base 2L4'T8	18.3%	1.0%	35.9%	12.0%	3.9%	24.89%	48.7%	49.9%	0.0%	8.6%
Existing	192	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L4'	18.3%	1.0%	35.9%	12.0%	3.9%	24.9%	48.7%	49.9%	0.0%	8.6%
Existing	193	Lighting Control Tuneup - Base 2L4'T8	13.56%	0.57%	22.27%	4.49%	2.70%	22.80%	48.74%	6.14%	0.00%	3.42%
Existing	194	LED Indoor Lighting - Base 2L4'T8	18.3%	1.0%	35.9%	12.0%	3.9%	24.9%	48.7%	49.9%	0.0%	8.6%
Existing	196	High Performance Lighting Remod/Renov - 25% Savings	18.3%	1.0%	35.9%	12.0%	3.9%	24.9%	48.7%	49.9%	0.0%	8.6%
Existing	200	Base Exit Sign	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	201	LED Exit Sign	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

APPLICABILITY FACTOR

(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	210	Base Outdoor Mercury Vapor 400W Lamp	67.00%	100.00%	81.50%	47.28%	88.72%	79.19%	100.00%	96.73%	100.00%	88.40%
Existing	211	High Pressure Sodium 250W Lamp	67.0%	100.0%	81.5%	47.3%	88.7%	79.2%	100.0%	96.7%	100.0%	88.4%
Existing	212	LED Outdoor Area Lighting	67.0%	100.0%	81.5%	47.3%	88.7%	79.2%	100.0%	96.7%	100.0%	88.4%
Existing	213	LED Outdoor Bi-level Fixtures	67.0%	100.0%	81.5%	47.3%	88.7%	79.2%	100.0%	96.7%	100.0%	88.4%
Existing	214	Outdoor Lighting Controls (Photocell/Timeclock)	67.0%	100.0%	81.5%	47.3%	88.7%	79.2%	100.0%	96.7%	100.0%	88.4%
Existing	220	Base Street Lighting	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Existing	221	Induction Streetlighting	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Existing	222	LED Streetlighting	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Existing	300	Base Centrifugal Chiller, 0.58 kW/ton, 500 tons	35.4%	4.6%	12.3%	0.0%	7.2%	21.4%	74.7%	76.7%	27.9%	14.6%
Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	35.4%	4.6%	12.3%	0.0%	7.2%	21.4%	74.7%	76.7%	27.9%	14.6%
Existing	302	Window Film (Standard)	35.4%	4.6%	12.3%	0.0%	7.2%	21.4%	74.7%	76.7%	27.9%	14.6%
Existing	303	EMS - Chiller	35.4%	4.6%	12.3%	0.0%	7.2%	21.4%	74.7%	76.7%	27.9%	14.6%
Existing	304	Cool Roof - Chiller	35.4%	4.6%	12.3%	0.0%	7.2%	21.4%	74.7%	76.7%	27.9%	14.6%
Existing	305	Chiller Tune Up/Diagnostics	35.4%	4.6%	12.3%	0.0%	7.2%	21.4%	74.7%	76.7%	27.9%	14.6%
Existing	306	VSD for Chiller Pumps and Towers	35.4%	4.6%	12.3%	0.0%	7.2%	21.4%	74.7%	76.7%	27.9%	14.6%
Existing	307	EMS Optimization	35.4%	4.6%	12.3%	0.0%	7.2%	21.4%	74.7%	76.7%	27.9%	14.6%
Existing	308	Economizer - Chiller	35.4%	4.6%	12.3%	0.0%	7.2%	21.4%	74.7%	76.7%	27.9%	14.6%
Existing	309	Duct/Pipe Insulation - Chiller	35.4%	4.6%	12.3%	0.0%	7.2%	21.4%	74.7%	76.7%	27.9%	14.6%
Existing	311	High Efficiency Chiller Motors	35.4%	4.6%	12.3%	0.0%	7.2%	21.4%	74.7%	76.7%	27.9%	14.6%
Existing	350	Base DX Packaged System, EER=10.3, 10 tons	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	92.6%	18.0%	67.9%	69.9%
Existing	351	DX Tune Up/ Advanced Diagnostics	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	352	DX Packaged System, EER=10.9, 10 tons	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	353	DX Packaged System, EER=11.5, 10 tons	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	354	DX Packaged System, EER=13.4, 10 tons	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	356	Ductless (Mini Split) Cooling System	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	357	Window Film (Standard)	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	358	Prog. Thermostat - DX	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	359	Cool Roof - DX	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	360	Optimize Controls	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	361	Economizer	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	362	Aerosol Duct Sealing - DX	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	363	Ceiling/roof Insulation - DX	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	364	Duct/Pipe Insulation - DX	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	365	DX Coil Cleaning	57.2%	88.2%	73.8%	94.3%	72.8%	62.6%	93.3%	18.0%	67.9%	69.9%
Existing	400	Base Fan Motor, 5hp, 1800rpm, 87.5%	86.0%	72.8%	73.3%	49.3%	68.3%	77.7%	100.00%	47.7%	100.0%	83.6%
Existing	401	Fan Motor, 5hp, 1800rpm, 89.5%	86.0%	72.8%	73.3%	49.3%	68.3%	77.7%	100.0%	47.7%	100.0%	83.6%
Existing	402	Variable Speed Drive Control, 5 HP	86.0%	72.8%	73.3%	49.3%	68.3%	77.7%	100.0%	47.7%	100.0%	83.6%
Existing	403	Demand Controlled Ventilation	86.0%	72.8%	73.3%	49.3%	68.3%	77.7%	100.0%	47.7%	100.0%	83.6%
Existing	410	Base Fan Motor, 15hp, 1800rpm, 91.0%	5.5%	12.1%	9.0%	0.0%	0.0%	42.0%	37.11%	14.3%	0.0%	12.2%
Existing	411	Fan Motor, 15hp, 1800rpm, 92.4%	5.5%	12.1%	9.0%	0.0%	0.0%	42.0%	37.1%	14.3%	0.0%	12.2%
Existing	412	Variable Speed Drive Control, 15 HP	5.5%	12.1%	9.0%	0.0%	0.0%	42.0%	37.1%	14.3%	0.0%	12.2%
Existing	413	Air Handler Optimization, 15 HP	5.5%	12.1%	9.0%	0.0%	0.0%	42.0%	37.1%	14.3%	0.0%	12.2%
Existing	414	Energy Recovery Ventilation	5.5%	12.1%	9.0%	0.0%	0.0%	42.0%	37.1%	14.3%	0.0%	12.2%
Existing	415	Electronically Commutated Motors (ECM) on an air handl	5.5%	12.1%	9.0%	0.0%	0.0%	42.0%	37.1%	14.3%	0.0%	12.2%
Existing	416	Separate Makeup Air/Exhaust Hoods AC	5.5%	12.1%	9.0%	0.0%	0.0%	42.0%	37.1%	14.3%	0.0%	12.2%
Existing	417	Demand Controlled Ventilation	5.5%	12.1%	9.0%	0.0%	0.0%	42.0%	37.1%	14.3%	0.0%	12.2%
Existing	420	Base Fan Motor, 40hp, 1800rpm, 93.0%	20.2%	0.0%	13.6%	0.0%	5.7%	0.0%	22.29%	0.0%	0.0%	52.0%
Existing	421	Fan Motor, 40hp, 1800rpm, 94.1%	20.2%	0.0%	13.6%	0.0%	5.7%	0.0%	22.3%	0.0%	0.0%	52.0%
Existing	422	Variable Speed Drive Control, 40 HP	20.2%	0.0%	13.6%	0.0%	5.7%	0.0%	22.3%	0.0%	0.0%	52.0%
Existing	423	Air Handler Optimization, 40 HP	20.2%	0.0%	13.6%	0.0%	5.7%	0.0%	22.3%	0.0%	0.0%	52.0%
Existing	424	Demand Controlled Ventilation	20.2%	0.0%	13.6%	0.0%	5.7%	0.0%	22.3%	0.0%	0.0%	52.0%
Existing	500	Base Non-Commercial Refrigerator	67.3%	44.0%	53.1%	43.4%	49.0%	60.3%	73.12%	89.7%	61.1%	60.0%

INCOMPLETE FACTOR

(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	100	Base Fluorescent Fixture, 4L4'T12, 34W, 2EEMAG	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	101	RET 4L4' Premium T8, 1EB, base 4L4'T12	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	102	RET 2L4' Premium T8, 1EB, Reflector, base 4L4'T1	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	103	LED Indoor Lighting - Base 4L4'T12	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	104	pancy Sensor, 4L4' Fluorescent Fixtures - Base 4L	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	105	uous Dimming, 5L4' Fluorescent Fixtures - Base 4	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	106	Lighting Control Tuneup	25.8%	43.0%	37.9%	62.6%	31.2%	8.4%	0.0%	87.7%	6.9%	60.1%
Existing	107	rmance Lighting Remod/Renov - 25% Savings - Ba	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	120	Base Fluorescent Fixture, 2L4'T12, 34W, 1EEMAG	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	121	RET 2L4' Premium T8, 1EB -- base 2L4'T12	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	122	1L4' Premium T8, 1EB, Reflector OEM - Base 2L4	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	123	LED Indoor Lighting - Base 2L4'T12	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	124	pancy Sensor, 8L4' Fluorescent Fixtures - Base 2L	99.7%	100.0%	100.0%	100.0%	100.0%	100.0%	93.7%	100.0%	100.0%	100.0%
Existing	125	uous Dimming, 10L4' Fluorescent Fixtures - Base 2	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	126	Lighting Control Tuneup - Base 2L4'T12	25.8%	43.0%	37.9%	62.6%	31.2%	8.4%	0.0%	87.7%	6.9%	60.1%
Existing	127	rmance Lighting Remod/Renov - 25% Savings - Ba	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	130	Base Fluorescent Fixture, 2L8'T12, 60W, 1EEMAG	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	131	RET 2 - 2L4' Premium T8, 1EB - Base 2L8'T12	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	132	RET 1L4' Premium T8, 1EB, Reflector OEM - Base 2L	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	133	LED Indoor Lighting - Base 2L8'T12	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	134	pancy Sensor, 4L8' Fluorescent Fixtures - Base 2L	97.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	135	uous Dimming, 5L8' Fluorescent Fixtures - Base 2	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	136	rmance Lighting Remod/Renov - 25% Savings - Ba	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	140	ie Incandescent Flood, 75W to Screw-in Replace	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	141	CFL Screw-in 18W	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	142	Cold Cathode Lamps	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	143	Screw-in LED--Base Incandescent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	145	Base CFL to screw-in replacement	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	146	Screw-in LED--Base CFL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	150	Base Incandescent Flood, 75W to Hardwired CFL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	151	CFL Hardwired, Modular 18W	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	152	Ceramic Metal Halide	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	153	Hardwired LED fixture--Base Incandescent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	155	Base CFL to Hardwired replacement	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	156	Hardwired LED fixture--Base CFL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	160	Base High Bay Probe-start Metal Halide, 400W	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	161	High Bay T5 - Base Std MH	100.0%	100.0%	87.7%	100.0%	46.3%	36.0%	100.0%	100.0%	100.0%	100.0%
Existing	162	PSMH + electronic ballast	100%	100%	100%	58%	100%	79%	68%	100%	100%	74%
Existing	163	Induction High Bay Lighting - Base Std MH	100%	100%	100%	100.0%	100%	100%	100.0%	100%	100%	100.0%
Existing	164	Occupancy Sensor, High Bay T5 - Base Std MH	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%
Existing	165	uce Lighting Remod/Renov - 25% Savings - Base 1	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	180	Base 4L4'T8, 1EB	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	181	ROB 4L4' Premium T8, 1EB - Base 4L4'T8	59.1%	78.0%	62.3%	0.0%	39.0%	100.0%	76.6%	98.6%	0.0%	59.3%
Existing	182	pancy Sensor, 4L4' Fluorescent Fixtures - Base 4L	99.4%	100.0%	100.0%	100.0%	100.0%	82.6%	77.4%	100.0%	100.0%	96.3%
Existing	183	Lighting Control Tuneup - Base 4L4'T8	25.8%	43.0%	37.9%	62.6%	31.2%	8.4%	0.0%	87.7%	6.9%	60.1%
Existing	184	LED Indoor Lighting - Base 4L4'T8	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	185	rmance Lighting Remod/Renov - 25% Savings - B;	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	190	Base 2L4'T8, 1EB	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	191	ROB 2L4' Premium T8, 1EB - Base 2L4'T8	59.2%	100.0%	63.3%	0.0%	100.0%	100.0%	74.5%	98.8%	0.0%	54.5%
Existing	192	pancy Sensor, 8L4' Fluorescent Fixtures - Base 2L	99.7%	100.0%	97.1%	100.0%	100.0%	87.4%	70.9%	94.0%	100.0%	95.2%
Existing	193	Lighting Control Tuneup - Base 2L4'T8	25.8%	43.0%	37.9%	62.6%	31.2%	8.4%	0.0%	87.7%	6.9%	60.1%
Existing	194	LED Indoor Lighting - Base 2L4'T8	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	196	rmance Lighting Remod/Renov - 25% Savings - B;	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	200	Base Exit Sign	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	201	LED Exit Sign	81.2%	93.3%	97.8%	100.0%	91.4%	89.9%	83.8%	94.7%	86.5%	95.4%

INCOMPLETE FACTOR

(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	210	Base Outdoor Mercury Vapor 400W Lamp	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	211	High Pressure Sodium 250W Lamp	57.5%	62.0%	65.2%	100.0%	88.5%	44.5%	64.9%	73.8%	100.0%	57.4%
Existing	212	LED Outdoor Area Lighting	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	213	LED Outdoor Bi-level Fixtures	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	214	Outdoor Lighting Controls (Photocell/Timeclock)	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Existing	220	Base Street Lighting	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	221	Induction Streetlighting	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Existing	222	LED Streetlighting	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	99.0%
Existing	300	Base Centrifugal Chiller, 0.58 kW/ton, 500 tons	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	68.0%	68.0%	68.0%	68.0%	68.0%	68.0%	68.0%	68.0%	68.0%	68.0%
Existing	302	Window Film (Standard)	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
Existing	303	EMS - Chiller	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	304	Cool Roof - Chiller	65.0%	68.0%	63.0%	80.0%	47.0%	80.0%	66.0%	84.0%	100.0%	78.0%
Existing	305	Chiller Tune Up/Diagnostics	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Existing	306	VSD for Chiller Pumps and Towers	74.0%	74.0%	74.0%	74.0%	74.0%	74.0%	74.0%	74.0%	74.0%	74.0%
Existing	307	EMS Optimization	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Existing	308	Economizer - Chiller	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Existing	309	Duct/Pipe Insulation - Chiller	3.0%	12.0%	79.0%	11.0%	83.0%	3.0%	3.0%	3.0%	3.0%	10.0%
Existing	311	High Efficiency Chiller Motors	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
Existing	350	Base DX Packaged System, EER=10.3, 10 tons	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	351	DX Tune Up/ Advanced Diagnostics	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
Existing	352	DX Packaged System, EER=10.9, 10 tons	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	353	DX Packaged System, EER=11.5, 10 tons	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	354	DX Packaged System, EER=13.4, 10 tons	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	355	Ductless (Mini Split) Cooling System										
Existing	357	Window Film (Standard)	83.6%	90.4%	69.4%	100.0%	95.0%	100.0%	81.8%	84.8%	100.0%	89.7%
Existing	358	Prog. Thermostat - DX	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%
Existing	359	Cool Roof - DX	65.0%	68.0%	63.0%	80.0%	47.0%	80.0%	66.0%	84.0%	100.0%	78.0%
Existing	360	Optimize Controls	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
Existing	361	Economizer	53.0%	53.0%	53.0%	53.0%	53.0%	53.0%	53.0%	53.0%	53.0%	53.0%
Existing	362	Aerosol Duct Sealing - DX	100.0%	91.6%	100.0%	100.0%	97.4%	100.0%	37.1%	100.0%	100.0%	96.0%
Existing	363	Ceiling/roof Insulation - DX	13.9%	21.6%	16.1%	33.0%	53.7%	20.8%	0.0%	0.0%	0.0%	48.1%
Existing	364	Duct/Pipe Insulation - DX	89.8%	77.6%	61.1%	86.7%	85.1%	88.7%	75.7%	86.2%	41.2%	23.9%
Existing	365	DX Coil Cleaning	79.0%	47.3%	51.9%	10.6%	92.9%	55.1%	29.8%	0.0%	37.5%	57.4%
Existing	400	Base Fan Motor, 5hp, 1800rpm, 87.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	401	Fan Motor, 5hp, 1800rpm, 89.5%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%
Existing	402	Variable Speed Drive Control, 5 HP	47.3%	100.0%	82.4%	100.0%	100.0%	100.0%	0.0%	84.8%	100.0%	26.5%
Existing	403	Demand Controlled Ventilation	79.6%	76.3%	100.0%	55.9%	100.0%	59.2%	37.1%	100.0%	100.0%	33.5%
Existing	410	Base Fan Motor, 15hp, 1800rpm, 91.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	411	Fan Motor, 5hp, 1800rpm, 89.5%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%
Existing	412	Variable Speed Drive Control, 15 HP	47.3%	100.0%	82.4%	100.0%	100.0%	100.0%	0.0%	84.8%	100.0%	26.5%
Existing	413	Air Handler Optimization, 15 HP	56.2%	100.0%	97.1%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	21.7%
Existing	414	Energy Recovery Ventilation	58.7%	100.0%	97.8%	100.0%	100.0%	100.0%	26.2%	100.0%	100.0%	19.9%
Existing	415	Initially Commutated Motors (ECM) on an air hand	100.0%	100.0%	100.0%	100.0%	100.0%	80.4%	100.0%	100.0%	100.0%	100.0%
Existing	416	Separate Makeup Air/Exhaust Hoods AC	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	417	Demand Controlled Ventilation	79.6%	76.3%	100.0%	55.9%	100.0%	59.2%	37.1%	100.0%	100.0%	33.5%
Existing	420	Base Fan Motor, 40hp, 1800rpm, 93.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	421	Fan Motor, 5hp, 1800rpm, 89.5%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%	78.0%
Existing	422	Variable Speed Drive Control, 40 HP	47.3%	100.0%	82.4%	100.0%	100.0%	100.0%	0.0%	84.8%	100.0%	26.5%
Existing	423	Air Handler Optimization, 40 HP	56.2%	100.0%	97.1%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	21.7%
Existing	424	Demand Controlled Ventilation	79.6%	76.3%	100.0%	55.9%	100.0%	59.2%	37.1%	100.0%	100.0%	33.5%
Existing	500	Base Non-Commercial Refrigerator	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

FEASIBILITY FACTOR
(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	100	Base Fluorescent Fixture, 4L4T12, 34W, 2EEMAG	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	101	RET 4L4' Premium T8, 1EB, base 4L4'T12	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	102	RET 2L4' Premium T8, 1EB, Reflector, base 4L4'T12	30.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Existing	103	LED Indoor Lighting - Base 4L4'T12	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	104	Occupancy Sensor, 4L4' Fluorescent Fixtures - Base 4L4'	40.0%	10.0%	10.0%	7.0%	20.0%	50.0%	35.0%	50.0%	20.0%	20.0%
Existing	105	Continuous Dimming, 5L4' Fluorescent Fixtures - Base 4l	40.0%	50.0%	12.0%	18.2%	40.0%	30.0%	21.0%	10.0%	30.0%	30.0%
Existing	106	Lighting Control Tuneup	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	107	High Performance Lighting Remod/Remov - 25% Savings	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Existing	120	Base Fluorescent Fixture, 2L4T12, 34W, 1EEMAG	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	121	RET 2L4' Premium T8, 1EB - base 2L4'T12	63.0%	63.0%	63.0%	63.0%	63.0%	63.0%	63.0%	63.0%	63.0%	63.0%
Existing	122	RET 1L4' Premium T8, 1EB, Reflector OEM - Base 2L4'T	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Existing	123	LED Indoor Lighting - Base 2L4'T12	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	124	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L4'	40.0%	10.0%	10.0%	7.0%	20.0%	50.0%	35.0%	50.0%	20.0%	20.0%
Existing	125	Continuous Dimming, 10L4' Fluorescent Fixtures - Base ;	40.0%	50.0%	12.0%	18.2%	40.0%	30.0%	21.0%	10.0%	30.0%	30.0%
Existing	126	Lighting Control Tuneup - Base 2L4'T12	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	127	High Performance Lighting Remod/Remov - 25% Savings	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Existing	130	Base Fluorescent Fixture, 2L8T12, 60W, 1EEMAG	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	131	RET 2 - 2L4' Premium T8, 1EB - Base 2L8'T12	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	132	RET 2 - 1L4' Premium T8, 1EB, Reflector OEM - Base 2L	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Existing	133	LED Indoor Lighting - Base 2L8'T12	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	134	Occupancy Sensor, 4L8' Fluorescent Fixtures - Base 2L8'	40.0%	10.0%	10.0%	7.0%	20.0%	50.0%	35.0%	50.0%	20.0%	20.0%
Existing	135	Continuous Dimming, 5L8' Fluorescent Fixtures - Base 2l	40.0%	50.0%	12.0%	18.2%	40.0%	30.0%	21.0%	10.0%	30.0%	30.0%
Existing	136	High Performance Lighting Remod/Remov - 25% Savings	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Existing	140	CFL Incandescent Flood, 75W to Screw-in Replacemer	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	141	CFL Screw-in 18W	90.0%	50.0%	50.0%	90.0%	90.0%	90.0%	90.0%	90.0%	70.0%	90.0%
Existing	142	Cold Cathode Lamps	90.0%	50.0%	50.0%	90.0%	90.0%	90.0%	90.0%	90.0%	70.0%	90.0%
Existing	143	Screw-in LED-Base Incandescent	90.0%	50.0%	50.0%	90.0%	90.0%	90.0%	90.0%	90.0%	70.0%	90.0%
Existing	145	Base CFL to screw-in replacement	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	146	Screw-in LED-Base CFL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	150	Base Incandescent Flood, 75W to Hardwired CFL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	151	CFL Hardwired, Modular 18W	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	152	Ceramic Metal Halide	50.0%	50.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	5.0%	50.0%
Existing	153	Hardwired LED fixture--Base Incandescent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	155	Base CFL to Hardwired replacement	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	156	Hardwired LED fixture--Base CFL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	160	Base High Bay Probe-start Metal Halide, 400W	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	161	High Bay T5 - Base Std MH	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	162	PSMH + electronic ballast	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	163	Induction High Bay Lighting - Base Std MH	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	164	Occupancy Sensor, High Bay T5 - Base Std MH	18.5%	18.5%	18.5%	18.5%	18.5%	18.5%	18.5%	18.5%	18.5%	18.5%
Existing	165	High Performance Lighting Remod/Remov - 25% Savings	30%	30%	30%	30.0%	30%	30%	30.0%	30%	30%	30%
Existing	180	Base 4L4'T8, 1EB	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	181	ROB 4L4' Premium T8, 1EB - Base 4L4'T8	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	182	Occupancy Sensor, 4L4' Fluorescent Fixtures - Base 4L4	40.0%	10.0%	10.0%	7.0%	20.0%	50.0%	35.0%	50.0%	20.0%	20.0%
Existing	183	Lighting Control Tuneup - Base 4L4'T8	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	184	LED Indoor Lighting - Base 4L4'T8	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	185	High Performance Lighting Remod/Remov - 25% Savings	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Existing	190	Base 2L4'T8, 1EB	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	191	ROB 2L4' Premium T8, 1EB - Base 2L4'T8	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	192	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L4	40.0%	10.0%	10.0%	7.0%	50.0%	50.0%	35.0%	50.0%	20.0%	20.0%
Existing	193	Lighting Control Tuneup - Base 2L4'T8	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	194	LED Indoor Lighting - Base 2L4'T8	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Existing	196	High Performance Lighting Remod/Remov - 25% Savings	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Existing	200	Base Exit Sign	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	201	LED Exit Sign	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

FEASIBILITY FACTOR

(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	210	Base Outdoor Mercury Vapor 400W Lamp	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	211	High Pressure Sodium 250W Lamp	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	212	LED Outdoor Area Lighting	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	213	LED Outdoor Bi-level Fixtures	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Existing	214	Outdoor Lighting Controls (Photocell/Timeclock)	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
Existing	220	Base Street Lighting	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	221	Induction Streetlighting	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	222	LED Streetlighting	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	300	Base Centrifugal Chiller, 0.58 kW/ton, 500 tons	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	100.0%	0.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%
Existing	302	Window Film (Standard)	75.0%	75.0%	50.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Existing	303	EMS - Chiller	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	304	Cool Roof - Chiller	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Existing	305	Chiller Tune Up/Diagnostics	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Existing	306	VSD for Chiller Pumps and Towers	66.8%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
Existing	307	EMS Optimization	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Existing	308	Economizer - Chiller	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	89.5%
Existing	309	Duct/Pipe Insulation - Chiller	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Existing	311	High Efficiency Chiller Motors	63%	100%	100%	0%	100%	100%	100%	100%	0%	100%
Existing	350	Base DX Packaged System, EER=10.3, 10 tons	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	351	DX Tune Up/ Advanced Diagnostics	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Existing	352	DX Packaged System, EER=10.9, 10 tons	86.2%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	98.7%
Existing	353	DX Packaged System, EER=11.5, 10 tons	86.2%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	98.7%
Existing	354	DX Packaged System, EER=13.4, 10 tons	86.2%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	98.7%
Existing	356	Ductless (Mini Split) Cooling System										
Existing	357	Window Film (Standard)	75.0%	75.0%	50.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Existing	358	Prog. Thermostat - DX	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	359	Cool Roof - DX	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Existing	360	Optimize Controls	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Existing	361	Economizer	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	89.5%
Existing	362	Aerosol Duct Sealing - DX	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%
Existing	363	Ceiling/roof Insulation - DX	22.0%	43.0%	100.0%	100.0%	100.0%	3.0%	100.0%	100.0%	100.0%	100.0%
Existing	364	Duct/Pipe Insulation - DX	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Existing	365	DX Coil Cleaning	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Existing	400	Base Fan Motor, 5hp, 1800rpm, 87.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	401	Fan Motor, 5hp, 1800rpm, 89.5%	94.4%	100.0%	91.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	402	Variable Speed Drive Control, 5 HP	82.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%
Existing	403	Demand Controlled Ventilation	78.6%	92.2%	70.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	91.2%
Existing	410	Base Fan Motor, 15hp, 1800rpm, 91.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	411	Fan Motor, 15hp, 1800rpm, 92.4%	94.4%	100.0%	91.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	412	Variable Speed Drive Control, 15 HP	82.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%
Existing	413	Air Handler Optimization, 15 HP	51.0%	24.2%	37.2%	17.7%	24.4%	65.7%	37.1%	27.9%	58.8%	91.4%
Existing	414	Energy Recovery Ventilation	55.2%	100.0%	100.0%	100.0%	100.0%	69.3%	100.0%	100.0%	100.0%	87.6%
Existing	415	Electronically Commutated Motors (ECM) on an air handl	100.0%	100.0%	100.0%	100.0%	100.0%	81.8%	0.0%	100.0%	100.0%	81.4%
Existing	416	Separate Makeup Air/Exhaust Hoods AC	0.0%	100.0%	0.0%	10.0%	0.0%	0.0%	0.00%	0.0%	0.0%	0.0%
Existing	417	Demand Controlled Ventilation	78.6%	92.2%	70.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	91.2%
Existing	420	Base Fan Motor, 40hp, 1800rpm, 93.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	421	Fan Motor, 40hp, 1800rpm, 94.1%	94.4%	100.0%	91.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	422	Variable Speed Drive Control, 40 HP	82.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%
Existing	423	Air Handler Optimization, 40 HP	51.0%	24.2%	37.2%	17.7%	24.4%	65.7%	37.1%	27.9%	58.8%	91.4%
Existing	424	Demand Controlled Ventilation	78.6%	92.2%	70.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	91.2%
Existing	500	Base Non-Commercial Refrigerator	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

ENERGY SAVINGS

(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	100	Base Fluorescent Fixture, 4L4T12, 34W, 2EEMAG	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	101	RET 4L4' Premium T8, 1EB, base 4L4'T12	65.3%	65.3%	65.3%	65.3%	65.3%	65.3%	65.3%	65.3%	65.3%	65.3%
Existing	102	RET 2L4' Premium T8, 1EB, Reflector, base 4L4'T12	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%
Existing	103	LED Indoor Lighting - Base 4L4'T12	30.0%	20.0%	20.0%	20.0%	30.0%	30.0%	20.0%	20.0%	20.0%	20.0%
Existing	104	LED Indoor Lighting - Base 4L4'T12	30.0%	20.0%	20.0%	20.0%	30.0%	30.0%	20.0%	20.0%	20.0%	20.0%
Existing	105	Occupancy Sensor, 4L4' Fluorescent Fixtures - Base 4L4	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%
Existing	106	Continuous Dimming, 5L4' Fluorescent Fixtures - Base 4l	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Existing	107	Lighting Control Tuneup	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	108	High Performance Lighting Remod/Renov - 25% Savings	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	120	Base Fluorescent Fixture, 2L4T12, 34W, 1EEMAG	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	121	RET 2L4' Premium T8, 1EB - base 2L4'T12	65.3%	65.3%	65.3%	65.3%	65.3%	65.3%	65.3%	65.3%	65.3%	65.3%
Existing	122	RET 1L4' Premium T8, 1EB, Reflector OEM - Base 2L4'T	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%
Existing	123	LED Indoor Lighting - Base 2L4'T12	30.0%	20.0%	20.0%	20.0%	30.0%	30.0%	20.0%	20.0%	20.0%	20.0%
Existing	124	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L4	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%
Existing	125	Continuous Dimming, 10L4' Fluorescent Fixtures - Base ;	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Existing	126	Lighting Control Tuneup - Base 2L4'T12	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	127	High Performance Lighting Remod/Renov - 25% Savings	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	130	Base Fluorescent Fixture, 2L8T12, 60W, 1EEMAG	12.9%	12.9%	12.9%	12.9%	12.9%	12.9%	12.9%	12.9%	12.9%	12.9%
Existing	131	RET 2 - 2L4' Premium T8, 1EB - Base 2L8'T12	59.7%	59.7%	59.7%	59.7%	59.7%	59.7%	59.7%	59.7%	59.7%	59.7%
Existing	132	RET 2 - 1L4' Premium T8, 1EB, Reflector OEM - Base 2L	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%	58.7%
Existing	133	LED Indoor Lighting - Base 2L8'T12	30.0%	20.0%	20.0%	20.0%	30.0%	30.0%	20.0%	20.0%	20.0%	20.0%
Existing	134	Occupancy Sensor, 4L8' Fluorescent Fixtures - Base 2L8	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%	52.0%
Existing	135	Continuous Dimming, 5L8' Fluorescent Fixtures - Base 2l	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	136	High Performance Lighting Remod/Renov - 25% Savings	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%
Existing	140	Base Incandescent Flood, 75W to Screw-in Replacement	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%
Existing	141	CFL Screw-in 18W	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%
Existing	142	Cold Cathode Lamps	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%
Existing	143	Screw-in LED-Base Incandescent	56.0%	56.0%	56.0%	56.0%	56.0%	56.0%	56.0%	56.0%	56.0%	56.0%
Existing	145	Base CFL to screw-in replacement	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%
Existing	146	Screw-in LED-Base CFL	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%
Existing	150	Base Incandescent Flood, 75W to Hardwired CFL	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%
Existing	151	CFL Hardwired, Modular 18W	56.0%	56.0%	56.0%	56.0%	56.0%	56.0%	56.0%	56.0%	56.0%	56.0%
Existing	152	Ceramic Metal Halide	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%
Existing	153	Hardwired LED fixture--Base Incandescent	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%	67.5%
Existing	155	Base CFL to Hardwired replacement	48.6%	48.6%	48.6%	48.6%	48.6%	48.6%	48.6%	48.6%	48.6%	48.6%
Existing	156	Hardwired LED fixture--Base CFL	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%
Existing	160	Base High Bay Probe-start Metal Halide, 400W	37.4%	37.4%	37.4%	37.4%	37.4%	37.4%	37.4%	37.4%	37.4%	37.4%
Existing	161	High Bay T5 - Base Std MH	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Existing	162	PSMH + electronic ballast	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	163	Induction High Bay Lighting - Base Std MH	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%
Existing	164	Occupancy Sensor, High Bay T5 - Base Std MH	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Existing	165	High Performance Lighting Remod/Renov - 25% Savings	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Existing	180	Base 4L4'T8, 1EB	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	181	ROB 4L4' Premium T8, 1EB - Base 4L4'T8	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%
Existing	182	Occupancy Sensor, 4L4' Fluorescent Fixtures - Base 4L4	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Existing	183	Lighting Control Tuneup - Base 4L4'T8	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Existing	184	LED Indoor Lighting - Base 4L4'T8	29.1%	29.1%	29.1%	29.1%	29.1%	29.1%	29.1%	29.1%	29.1%	29.1%
Existing	185	High Performance Lighting Remod/Renov - 25% Savings	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	190	Base 2L4'T8, 1EB	17.2%	17.2%	17.2%	17.2%	17.2%	17.2%	17.2%	17.2%	17.2%	17.2%
Existing	191	ROB 2L4' Premium T8, 1EB - Base 2L4'T8	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Existing	192	Occupancy Sensor, 8L4' Fluorescent Fixtures - Base 2L4	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Existing	193	Lighting Control Tuneup - Base 2L4'T8	29.1%	29.1%	29.1%	29.1%	29.1%	29.1%	29.1%	29.1%	29.1%	29.1%
Existing	194	LED Indoor Lighting - Base 2L4'T8	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	196	High Performance Lighting Remod/Renov - 25% Savings	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%
Existing	200	Base Exit Sign	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%
Existing	201	LED Exit Sign	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%

ENERGY SAVINGS

(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	210	Base Outdoor Mercury Vapor 400W Lamp	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%
Existing	211	High Pressure Sodium 250W Lamp	51.9%	51.9%	51.9%	51.9%	51.9%	51.9%	51.9%	51.9%	51.9%	51.9%
Existing	212	LED Outdoor Area Lighting	69.6%	69.6%	69.6%	69.6%	69.6%	69.6%	69.6%	69.6%	69.6%	69.6%
Existing	213	LED Outdoor Bi-level Fixtures	22.2%	22.2%	22.2%	22.2%	22.2%	22.2%	22.2%	22.2%	22.2%	22.2%
Existing	214	Outdoor Lighting Controls (Photocell/Timeclock)										
Existing	220	Base Street Lighting										
Existing	221	Induction Streetlighting	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Existing	222	LED Streetlighting	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%
Existing	300	Base Centrifugal Chiller, 0.58 kW/ton, 500 tons										
Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%
Existing	302	Window Film (Standard)	9.3%	10.3%	2.5%	2.5%	9.3%	3.9%	2.5%	1.2%	7.0%	2.5%
Existing	303	EMS - Chiller	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Existing	304	Cool Roof - Chiller	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
Existing	305	Chiller Tune Up/Diagnostics	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Existing	306	VSD for Chiller Pumps and Towers	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Existing	307	EMS Optimization	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Existing	308	Economizer - Chiller	27.0%	0.0%	21.0%	21.0%	27.0%	12.0%	21.0%	18.0%	43.0%	0.0%
Existing	309	Duct/Pipe Insulation - Chiller	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Existing	311	High Efficiency Chiller Motors	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
Existing	350	Base DX Packaged System, EER=10.3, 10 tons										
Existing	351	DX Time Up/ Advanced Diagnostics	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Existing	352	DX Packaged System, EER=10.9, 10 tons	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
Existing	353	DX Packaged System, EER=11.5, 10 tons	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%
Existing	354	DX Packaged System, EER=13.4, 10 tons	23.0%	23.0%	23.0%	23.0%	23.0%	23.0%	23.0%	23.0%	23.0%	23.0%
Existing	356	Ductless (Mini Split) Cooling System										
Existing	357	Window Film (Standard)	9.3%	10.3%	2.5%	2.5%	9.3%	3.9%	2.5%	1.2%	7.0%	2.5%
Existing	358	Prog. Thermostat - DX	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Existing	359	Cool Roof - DX	1.8%	6.9%	13.0%	13.0%	1.8%	6.1%	13.0%	0.6%	0.4%	13.0%
Existing	360	Optimize Controls	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Existing	361	Economizer	21.0%	8.0%	17.0%	1.0%	0.0%	10.0%	10.0%	1.0%	8.0%	8.0%
Existing	362	Aerosol Duct Sealing - DX	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Existing	363	Ceiling/roof Insulation - DX	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%
Existing	364	Duct/Pipe Insulation - DX	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Existing	365	DX Coil Cleaning	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
Existing	400	Base Fan Motor, 5hp, 1800rpm, 87.5%										
Existing	401	Fan Motor, 5hp, 1800rpm, 89.5%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
Existing	402	Variable Speed Drive Control, 5 HP	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Existing	403	Demand Controlled Ventilation	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Existing	410	Base Fan Motor, 15hp, 1800rpm, 91.0%										
Existing	411	Fan Motor, 15hp, 1800rpm, 92.4%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Existing	412	Variable Speed Drive Control, 15 HP	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Existing	413	Air Handler Optimization, 15 HP	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Existing	414	Energy Recovery Ventilation	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Existing	415	Electronically Commutated Motors (ECM) on an air handl	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%
Existing	416	Separate Makeup Air/Exhaust Hoods AC	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	417	Demand Controlled Ventilation	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Existing	420	Base Fan Motor, 40hp, 1800rpm, 93.0%										
Existing	421	Fan Motor, 40hp, 1800rpm, 94.1%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
Existing	422	Variable Speed Drive Control, 40 HP	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Existing	423	Air Handler Optimization, 40 HP	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Existing	424	Demand Controlled Ventilation	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Existing	500	Base Non-Commercial Refrigerator										

DSM TECHNOLOGY INPUT TABLES

UTILITY:	Missouri	BATCH:	1
SECTOR:	IND	ANALYSIS:	Basic
SEGMENT:	All Electric	VINTAGE:	E

MEASURE COSTS

MEASURE COSTS																										
Measure #	Measure Description	Savings Units	Cost Units	Unit Equipment Cost	Unit Labor Cost	NPV of Lifetime O & M Cost	Implementation			Cost Units per Savings Unit	Full = 1 Incr. = 0			Full Unit Cost	Relative Energy Reduction Factors							Implementation Type 1=1, time 2=ROB				
							Factor	Cost	Unit		Initial Cost	Replace Cost	SI		SO	WO	SH	NO	SH	NO						
100	Base Compressed Air	\$/KWh	\$/KWh		\$0.00	\$0.00	\$0.00			1	14.5	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
101	Compressed Air-O&M	\$/KWh	\$/KWh	\$0.01	\$0.0011	\$0.00	\$0.01			1	10	1	1	\$0.01	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
102	Compressed Air - Controls	\$/KWh	\$/KWh	\$0.02	\$0.0018	\$0.00	\$0.02			1	10	1	1	\$0.02	1.00	1.00	1.00	1.00	1.00	1.00	1	2				
103	Compressed Air - System Optimization	\$/KWh	\$/KWh	\$0.01	\$0.0017	\$0.00	\$0.02			1	10	1	1	\$0.02	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
104	Compressed Air- Sizing	\$/KWh	\$/KWh	\$0.00	\$0.0005	\$0.00	\$0.00			1	10	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1	2				
105	Comp Air - Replace 1-5 HP motor	\$/KWh	\$/KWh	\$0.05	\$0.0056	\$0.00	\$0.05			1	14.5	1	1	\$0.05	1.00	1.00	1.00	1.00	1.00	1.00	1	2				
106	Comp Air - ASD (1-5 hp)	\$/KWh	\$/KWh	\$0.07	\$0.0081	\$0.00	\$0.08			1	14.5	1	1	\$0.08	0.09	1.00	1.00	1.00	1.00	1.00	1	1				
107	Comp Air - Motor practices-1 (1-5 HP)	\$/KWh	\$/KWh	\$0.02	\$0.0022	\$0.00	\$0.02			1	14.5	1	1	\$0.02	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
108	Comp Air - Replace 6-100 HP motor	\$/KWh	\$/KWh	\$0.03	\$0.0031	\$0.00	\$0.03			1	10	1	1	\$0.03	1.00	1.00	1.00	1.00	1.00	1.00	1	2				
109	Comp Air - ASD (6-100 hp)	\$/KWh	\$/KWh	\$0.00	\$0.0003	\$0.00	\$0.00			1	10	1	1	\$0.00	0.09	1.00	1.00	1.00	1.00	1.00	1	2				
110	Comp Air - Motor practices-1 (6-100 HP)	\$/KWh	\$/KWh	\$0.00	\$0.0006	\$0.00	\$0.01			1	10	1	1	\$0.01	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
111	Comp Air - Replace 100+ HP motor	\$/KWh	\$/KWh	\$0.01	\$0.0009	\$0.00	\$0.01			1	6	1	1	\$0.01	1.00	1.00	1.00	1.00	1.00	1.00	1	2				
112	Comp Air - ASD (100+ hp)	\$/KWh	\$/KWh	\$0.01	\$0.0006	\$0.00	\$0.01			1	6	1	1	\$0.01	0.09	1.00	1.00	1.00	1.00	1.00	1	1				
113	Comp Air - Motor practices-1 (100+ HP)	\$/KWh	\$/KWh	\$0.00	\$0.0002	\$0.00	\$0.00			1	6	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
114	Power recovery	\$/KWh	\$/KWh	\$0.00	\$0.0003	\$0.00	\$0.00			1	10	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
200	Base Fans	\$/KWh	\$/KWh	\$0.00	\$0.0000	\$0.00	\$0.00			1	14.5	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
201	Fans - O&M	\$/KWh	\$/KWh	\$0.00	\$0.0001	\$0.00	\$0.00			1	10	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
202	Fans - Controls	\$/KWh	\$/KWh	\$0.084	\$0.0097	\$0.00	\$0.09			1	10	1	1	\$0.09	1.00	1.00	1.00	1.00	1.00	1.00	2	2				
203	Fans - System Optimization	\$/KWh	\$/KWh	\$0.055	\$0.0063	\$0.00	\$0.06			1	10	1	1	\$0.06	0.47	1.00	1.00	1.00	1.00	1.00	2	1				
204	Fans-Improve components	\$/KWh	\$/KWh	\$0.005	\$0.0005	\$0.00	\$0.01			1	10	1	1	\$0.01	1.00	1.00	1.00	1.00	1.00	1.00	2	2				
205	Fans - Replace 1-5 HP motor	\$/KWh	\$/KWh	\$0.048	\$0.0056	\$0.00	\$0.05			1	14.5	1	1	\$0.05	1.00	1.00	1.00	1.00	1.00	1.00	2	2				
206	Fans - ASD (1-5 hp)	\$/KWh	\$/KWh	\$0.07	\$0.0081	\$0.00	\$0.08			1	14.5	1	1	\$0.08	0.09	1.00	1.00	1.00	1.00	1.00	2	1				
207	Fans - Motor practices-1 (1-5 HP)	\$/KWh	\$/KWh	\$0.02	\$0.0022	\$0.00	\$0.02			1	14.5	1	1	\$0.02	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
208	Fans - Replace 6-100 HP motor	\$/KWh	\$/KWh	\$0.03	\$0.0031	\$0.00	\$0.03			1	10	1	1	\$0.03	1.00	1.00	0.50	1.00	1.00	0.50	2	2				
209	Fans - ASD (6-100 hp)	\$/KWh	\$/KWh	\$0.00	\$0.0003	\$0.00	\$0.00			1	10	1	1	\$0.00	0.09	0.50	1.00	1.00	0.75	0.00	2	2				
210	Fans - Motor practices-1 (6-100 HP)	\$/KWh	\$/KWh	\$0.00	\$0.0006	\$0.00	\$0.01			1	10	1	1	\$0.01	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
211	Fans - Replace 100+ HP motor	\$/KWh	\$/KWh	\$0.01	\$0.0009	\$0.00	\$0.01			1	6	1	1	\$0.01	1.00	1.00	1.00	1.00	1.00	1.00	2	2				
212	Fans - ASD (100+ hp)	\$/KWh	\$/KWh	\$0.01	\$0.0006	\$0.00	\$0.01			1	6	1	1	\$0.01	0.09	1.00	0.50	1.00	1.00	0.50	2	1				
213	Fans - Motor practices-1 (100+ HP)	\$/KWh	\$/KWh	\$0.00	\$0.0002	\$0.00	\$0.00			1	6	1	1	\$0.00	1.00	0.50	1.00	1.00	0.75	0.00	2	1				
214	Optimize drying process	\$/KWh	\$/KWh	\$0.05	\$0.0053	\$0.00	\$0.05			1	10	1	1	\$0.05	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
215	Power recovery	\$/KWh	\$/KWh	\$0.00	\$0.0003	\$0.00	\$0.00			1	10	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
300	Base Pumps	\$/KWh	\$/KWh	\$0.00	\$0.0000	\$0.00	\$0.00			1	14.5	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	3	1				
301	Pumps - O&M	\$/KWh	\$/KWh	\$0.00	\$0.0005	\$0.00	\$0.01			1	10	1	1	\$0.01	1.00	1.00	1.00	1.00	1.00	1.00	3	1				
302	Pumps - Controls	\$/KWh	\$/KWh	\$0.02	\$0.0028	\$0.00	\$0.03			1	10	1	1	\$0.03	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
303	Pumps - System Optimization	\$/KWh	\$/KWh	\$0.06	\$0.0070	\$0.00	\$0.07			1	10	1	1	\$0.07	1.00	1.00	1.00	1.00	1.00	1.00	3	1				
304	Pumps - Sizing	\$/KWh	\$/KWh	\$0.02	\$0.0021	\$0.00	\$0.02			1	10	1	1	\$0.02	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
305	Pumps - Replace 1-5 HP motor	\$/KWh	\$/KWh	\$0.05	\$0.0056	\$0.00	\$0.05			1	14.5	1	1	\$0.05	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
306	Pumps - ASD (1-5 hp)	\$/KWh	\$/KWh	\$0.07	\$0.0081	\$0.00	\$0.08			1	14.5	1	1	\$0.08	0.09	1.00	1.00	1.00	1.00	1.00	3	1				
307	Pumps - Motor practices-1 (1-5 HP)	\$/KWh	\$/KWh	\$0.02	\$0.0022	\$0.00	\$0.02			1	14.5	1	1	\$0.02	1.00	1.00	1.00	1.00	1.00	1.00	3	1				
308	Pumps - Replace 6-100 HP motor	\$/KWh	\$/KWh	\$0.03	\$0.0031	\$0.00	\$0.03			1	10	1	1	\$0.03	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
309	Pumps - ASD (6-100 hp)	\$/KWh	\$/KWh	\$0.00	\$0.0003	\$0.00	\$0.00			1	10	1	1	\$0.00	0.09	1.00	1.00	1.00	1.00	1.00	3	1				
310	Pumps - Motor practices-1 (6-100 HP)	\$/KWh	\$/KWh	\$0.00	\$0.0006	\$0.00	\$0.01			1	10	1	1	\$0.01	1.00	1.00	1.00	1.00	1.00	1.00	3	1				
311	Pumps - Replace 100+ HP motor	\$/KWh	\$/KWh	\$0.01	\$0.0009	\$0.00	\$0.01			1	6	1	1	\$0.01	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
312	Pumps - ASD (100+ hp)	\$/KWh	\$/KWh	\$0.01	\$0.0006	\$0.00	\$0.01			1	6	1	1	\$0.01	0.09	1.00	1.00	1.00	1.00	1.00	3	1				
313	Pumps - Motor practices-1 (100+ HP)	\$/KWh	\$/KWh	\$0.00	\$0.0002	\$0.00	\$0.00			1	6	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	3	1				
314	Power recovery	\$/KWh	\$/KWh	\$0.00	\$0.0003	\$0.00	\$0.00			1	10	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	3	1				
400	Base Drives	\$/KWh	\$/KWh	\$0.00	\$0.0000	\$0.00	\$0.00			1	20	1	1	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	4	1				
401	Bakery - Process (Mixing) - O&M	\$/KWh	\$/KWh	\$0.00	\$0.0005	\$0.00	\$0.01			1	10	1	1	\$0.01	1.00	1.00	1.00	1.00	1.00	1.00	4	1				
402	O&M/drives spinning machines	\$/KWh	\$/KWh	\$0.03	\$0.0034	\$0.00	\$0.03			1	10	1	1	\$0.03	1.00	1.00	1.00	1.00	1.00	1.00	4	1				
403	Air conveying systems	\$/KWh	\$/KWh	\$0.03	\$0.0040	\$0.00	\$0.04			1	14	1	1	\$0.04	0.24	1.00	1.00	1.00	1.00	1.00	4	2				
404	Replace V-Belts	\$/KWh	\$/KWh	\$0.01	\$0.0006	\$0.00	\$0.01			1	10	1	1	\$0.01	1.00	1.00	1.00	1.00	1.00	1.00	4	2				
405	Drives - EE motor	\$/KWh	\$/KWh	\$0.01	\$0.0007	\$0.00	\$0.01			1	10	1	1	\$0.01	1.00	1.00	1.00	1.00	1.00	1.00	4	2				
406	Gap Forming papermachine	\$/KWh	\$/KWh	\$0.01	\$0.0008	\$0.00	\$0.01			1	20	1	1	\$0.01	1.00	1.00	1.00	1.00	1.00	1.00	4	2				
407	High Consistency forming	\$/KWh	\$/KWh																							

MEASURE COSTS

MEASURE COSTS																					Implementation Type																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Measure #	Measure Description	Savings Units	Cost Units	Unit Equipment	Unit Labor	NPV of O & M		Implementation		Cost Units per Savings	Service Life	Full = 1 Incr. = 0		Full Cost	Unit Replace	Relative Energy Reduction Factors						Implementation Type																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
						Cost	Cost	Factor	Cost			Initial Cost	Cost			SI	ON	WO	FF	SH	ON		WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON	WO	FF	SH	ON

MEASURE COSTS

Measure #	Measure Description	Savings Units	Cost Units	Unit Equipment	Unit Labor	NPV of Lifetime O & M	Implementation Cost Factor	Cost Units per Savings Unit	Full = 1 Incr. = 0	Service Life	Initial Cost	Replace Cost	Full Unit Cost	Relative Energy Reduction Factors	End Use	Implementation Type 1=1 time 2=ROB

TECHNOLOGY SATURATION (units/base kWh)														
Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non-metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics
100	Base Compressed Air	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
101	Compressed Air - O&M	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
102	Compressed Air - Controls	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
103	Compressed Air - System Optimization	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
104	Compressed Air - Sizing	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
105	Comp Air - Replace 1-5 HP motor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
106	Comp Air - ASD (1-5 hp)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
107	Comp Air - Motor practices-1 (1-5 HP)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
108	Comp Air - Replace 6-100 HP motor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
109	Comp Air - ASD (6-100 hp)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
110	Comp Air - Motor practices-1 (6-100 HP)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
111	Comp Air - Replace 100+ HP motor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
112	Comp Air - ASD (100+ hp)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
113	Comp Air - Motor practices-1 (100+ HP)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
114	Power recovery	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
200	Base Fans	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
201	Fans - O&M	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
202	Fans - Controls	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
203	Fans - System Optimization	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
204	Fans - Improve components	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
205	Fans - Replace 1-5 HP motor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
206	Fans - ASD (1-5 hp)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
207	Fans - Motor practices-1 (1-5 HP)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
208	Fans - Replace 6-100 HP motor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
209	Fans - ASD (6-100 hp)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
210	Fans - Motor practices-1 (6-100 HP)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
211	Fans - Replace 100+ HP motor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
212	Fans - ASD (100+ hp)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
213	Fans - Motor practices-1 (100+ HP)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
214	Optimize drying process	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
215	Power recovery	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
300	Base Pumps	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
301	Pumps - O&M	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
302	Pumps - Controls	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
303	Pumps - System Optimization	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
304	Pumps - Sizing	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
305	Pumps - Replace 1-5 HP motor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
306	Pumps - ASD (1-5 hp)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
307	Pumps - Motor practices-1 (1-5 HP)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
308	Pumps - Replace 6-100 HP motor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
309	Pumps - ASD (6-100 hp)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
310	Pumps - Motor practices-1 (6-100 HP)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
311	Pumps - Replace 100+ HP motor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
312	Pumps - ASD (100+ hp)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
313	Pumps - Motor practices-1 (100+ HP)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
314	Power recovery	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
400	Base Drives	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
401	Bakery - Process (Mixing) - O&M	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
402	O&M/drives spinning machines	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
403	Air conveying systems	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
404	Replace V-Belts	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
405	Drives - EE motor	1.0000	1.0000	1.0000	0.8860	1.0000	1.0000	1.0000	1.0000	0.8330	1.0000	1.0000	1.0000	1.0000
406	Gap Forming papermachine	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
407	High Consistency forming	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
408	Optimization control PM	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
409	Efficient practices printing press	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
410	Efficient Printing press (fewer cylinders)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TECHNOLOGY SATURATION (units/base kWh)																	
Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non-metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Printing	Misc.
411	Light cylinders	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
412	Efficient drives	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
413	Clean Room - Controls	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
414	Clean Room - New Designs	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
415	Drives - Process Controls (batch + site)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
416	Process Drives - ASD	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
417	O&M - Extruders/Injection Moulding	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
418	Extruders/Injection Moulding-multipump	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
419	Direct drive Extruders	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
420	Injection Moulding - Impulse Cooling	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
421	Injection Moulding - Direct drive	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
422	Efficient grinding	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
423	Process control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
424	Process optimization	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
425	Drives - Process Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
426	Efficient drives - rolling	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
427	Drives - Optimization process (M&T)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
428	Drives - Scheduling	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
429	Machinery	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
430	Efficient Machinery	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
500	Base Heating	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
501	Bakery - Process	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
502	Drying (UV/IR)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
503	Heat Pumps - Drying	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
504	Top-heating (glass)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
505	Efficient electric melting	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
506	Intelligent extruder (DOE)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
507	Near Net Shape Casting	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
508	Heating - Process Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
509	Efficient Curing ovens	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
510	Heating - Optimization process (M&T)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
511	Heating - Scheduling	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
550	Base Refrigeration	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
551	Efficient Refrigeration - Operations	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
552	Optimization Refrigeration	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
600	Base Other Process	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
601	Other Process Controls (batch + site)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
602	Efficient desalter	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
603	New transformers welding	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
604	Efficient processes welding, etc.)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
605	Process control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
606	Power recovery	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
700	Base Centrifugal Chiller, 0.58 kW/ton, 500 tc	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
701	Centrifugal Chiller, 0.51 kW/ton, 500 tons	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
702	Window Film - Chiller	0.0170	0.0170	0.0170	0.0170	0.0170	0.0170	0.0170	0.0170	0.0170	0.0170	0.0170	0.0170	0.0170	0.0170	0.0170	0.0170
703	EMS - Chiller	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
704	Cool Roof - Chiller	0.2992	0.2992	0.2992	0.2992	0.2992	0.2992	0.2992	0.2992	0.2992	0.2992	0.2992	0.2992	0.2992	0.2992	0.2992	0.2992
705	Chiller Tune Up/Diagnostics	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
706	Cooling Circ. Pumps - VSD	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013
710	Base DX Packaged System, EER=10.3, 10 t	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008
711	DX Tune Up/ Advanced Diagnostics	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008
712	DX Packaged System, EER=10.9, 10 tons	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008
713	Window Film - DX	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099	0.0099
714	Evaporative Pre-Cooler	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0									

TECHNOLOGY SATURATION (units/base kWh)																
Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non-metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Misc.
802	CFL Hardwired, Modular 36W	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027
803	Metal Halide, 50W	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027	0.0027
804	Occupancy Sensor, 4L4' Fluorescent Fixture	0.0037	0.0037	0.0037	0.0037	0.0037	0.0037	0.0037	0.0037	0.0037	0.0037	0.0037	0.0037	0.0037	0.0037	0.0037
900	Base Other	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
901	Replace V-belts	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
902	Membranes for wastewater	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

APPLICABILITY FACTOR (percent)																	
Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non-metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Printing	Misc.
100	Base Compressed Air	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
101	Compressed Air-O&M	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
102	Compressed Air - Controls	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
103	Compressed Air - System Optimization	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
104	Compressed Air- Sizing	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
105	Comp Air - Replace 1-5 HP motor	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
106	Comp Air - ASD (1-5 hp)	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
107	Comp Air - Motor practices-1 (1-5 HP)	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
108	Comp Air - Replace 6-100 HP motor	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
109	Comp Air - ASD (6-100 hp)	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
110	Comp Air - Motor practices-1 (6-100 HP)	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
111	Comp Air - Replace 100+ HP motor	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
112	Comp Air - ASD (100+ hp)	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
113	Comp Air - Motor practices-1 (100+ HP)	8%	4%	5%	4%	4%	3%	12%	4%	6%	3%	12%	14%	10%	12%	9%	0%
114	Power recovery	0%	0%	0%	0%	0%	0%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%
200	Base Fans	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
201	Fans - O&M	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
202	Fans - Controls	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
203	Fans - System Optimization	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
204	Fans -Improve components	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
205	Fans - Replace 1-5 HP motor	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
206	Fans - ASD (1-5 hp)	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
207	Fans - Motor practices-1 (1-5 HP)	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
208	Fans - Replace 6-100 HP motor	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
209	Fans - ASD (6-100 hp)	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
210	Fans - Motor practices-1 (6-100 HP)	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
211	Fans - Replace 100+ HP motor	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
212	Fans - ASD (100+ hp)	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
213	Fans - Motor practices-1 (100+ HP)	8%	7%	9%	15%	7%	6%	7%	7%	14%	8%	7%	5%	3%	5%	3%	30%
214	Optimize drying process	0%	0%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
215	Power recovery	0%	0%	0%	0%	0%	0%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%
300	Base Pumps	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
301	Pumps - O&M	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
302	Pumps - Controls	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
303	Pumps - System Optimization	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
304	Pumps - Sizing	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
305	Pumps - Replace 1-5 HP motor	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
306	Pumps - ASD (1-5 hp)	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
307	Pumps - Motor practices-1 (1-5 HP)	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
308	Pumps - Replace 6-100 HP motor	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
309	Pumps - ASD (6-100 hp)	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
310	Pumps - Motor practices-1 (6-100 HP)	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
311	Pumps - Replace 100+ HP motor	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
312	Pumps - ASD (100+ hp)	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
313	Pumps - Motor practices-1 (100+ HP)	15%	9%	11%	24%	9%	26%	49%	9%	18%	10%	9%	7%	4%	7%	4%	62%
314	Power recovery	0%	0%	0%	0%	0%	0%	49%	0%	0%	0%	0%	0%	0%	0%	0%	0%
400	Base Drives	14%	30%	41%	32%	32%	21%	13%	31%	20%	11%	22%	18%	9%	12%	16%	0%
401	Bakery - Process (Mixing) - O&M	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
402	O&M/drives spinning machines	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
403	Air conveying systems	0%	0%	41%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
404	Replace V-Belts	0%	0%	41%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
405	Drives - EE motor	0%	0%	41%	32%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%
406	Gap Forming papermachine	0%	0%	0%	32%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
407	High Consistency forming	0%	0%	0%	32%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
408	Optimization control PM	0%	0%	0%	32%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
409	Efficient practices printing press	0%	0%	0%	0%	32%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
410	Efficient Printing press (fewer cylinders)	0%	0%	0%	0%	32%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

APPENDIX E

INDUSTRIAL

MEASURE INPUT DATA

APPLICABILITY FACTOR (percent)																	
Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non-metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Printing	Misc.
411	Light cylinders	0%	0%	0%	0%	32%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
412	Efficient drives	0%	0%	0%	0%	32%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
413	Clean Room - Controls	0%	0%	0%	0%	0%	21%	0%	0%	0%	0%	0%	0%	9%	0%	0%	0%
414	Clean Room - New Designs	0%	0%	0%	0%	0%	21%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
415	Drives - Process Controls (batch + site)	0%	0%	0%	0%	0%	21%	0%	0%	20%	11%	0%	0%	0%	0%	0%	0%
416	Process Drives - ASD	0%	0%	0%	0%	0%	21%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
417	O&M - Extruders/Injection Moulding	0%	0%	0%	0%	0%	0%	0%	31%	0%	0%	0%	0%	0%	0%	0%	0%
418	Extruders/injection Moulding-multipump	0%	0%	0%	0%	0%	0%	0%	31%	0%	0%	0%	0%	0%	0%	0%	0%
419	Direct drive Extruders	0%	0%	0%	0%	0%	0%	0%	31%	0%	0%	0%	0%	0%	0%	0%	0%
420	Injection Moulding - Impulse Cooling	0%	0%	0%	0%	0%	0%	0%	31%	0%	0%	0%	0%	0%	0%	0%	0%
421	Injection Moulding - Direct drive	0%	0%	0%	0%	0%	0%	0%	31%	0%	0%	0%	0%	0%	0%	0%	0%
422	Efficient grinding	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%
423	Process control	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%
424	Process optimization	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%
425	Drives - Process Control	0%	0%	0%	0%	0%	0%	0%	0%	0%	11%	0%	0%	0%	0%	0%	0%
426	Efficient drives - rolling	0%	0%	0%	0%	0%	0%	0%	0%	0%	11%	0%	0%	0%	0%	0%	0%
427	Drives - Optimization process (M&T)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	22%	18%	0%	12%	16%	0%
428	Drives - Scheduling	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	22%	18%	9%	12%	16%	0%
429	Machinery	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	22%	18%	9%	12%	16%	0%
430	Efficient Machinery	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
500	Base Heating	8%	10%	9%	12%	4%	9%	5%	16%	22%	29%	20%	7%	15%	14%	10%	1%
501	Bakery - Process	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
502	Drying (UV/IR)	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
503	Heat Pumps - Drying	0%	0%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
504	Top-heating (glass)	0%	0%	0%	0%	0%	0%	0%	0%	22%	0%	0%	0%	0%	0%	0%	0%
505	Efficient electric melting	0%	0%	0%	0%	0%	0%	0%	0%	0%	29%	0%	0%	0%	0%	0%	0%
506	Intelligent extruder (DOE)	0%	0%	0%	0%	0%	0%	0%	0%	0%	29%	0%	0%	0%	0%	0%	0%
507	Near Net Shape Casting	0%	0%	0%	0%	0%	0%	0%	0%	0%	29%	0%	0%	0%	0%	0%	0%
508	Heating - Process Control	0%	0%	0%	0%	0%	0%	0%	0%	0%	29%	0%	0%	0%	0%	0%	0%
509	Efficient Curing ovens	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	7%	15%	14%	10%	0%
510	Heating - Optimization process (M&T)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	7%	0%	14%	0%	0%
511	Heating - Scheduling	26%	12%	1%	2%	6%	8%	5%	9%	3%	1%	4%	3%	9%	6%	6%	0%
550	Base Refrigeration	26%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
551	Efficient Refrigeration - Operations	26%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
552	Optimization Refrigeration	26%	1%	1%	2%	1%	14%	1%	2%	3%	31%	5%	2%	8%	3%	2%	0%
600	Base Other Process	0%	0%	0%	0%	0%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
601	Other Process Controls (batch + site)	0%	0%	0%	0%	0%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
602	Efficient desalter	0%	0%	0%	0%	0%	0%	0.6%	0%	0%	0%	0%	0%	0%	0%	0%	0%
603	New transformers welding	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	2%	0%	3%	1.5%	0%
604	Efficient processes (welding, etc.)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	0%	0%	0%
605	Process control	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
606	Power recovery	0%	0%	0%	0%	0%	0%	0.6%	0%	0%	0%	0%	0%	0%	0%	0%	0%
700	Base Centrifugal Chiller, 0.58 kW/ton, 500 tons	1%	7%	4%	1%	10%	1%	0%	6%	1%	0%	5%	12%	13%	10%	13%	0%
701	Centrifugal Chiller, 0.51 kW/ton, 500 tons	1.1%	7.3%	3.6%	0.6%	10.1%	0.8%	0.5%	5.8%	0.8%	0.4%	5.4%	12.0%	12.8%	10.3%	13.3%	0.3%
702	Window Film - Chiller	1.1%	7.3%	3.6%	0.6%	10.1%	0.8%	0.5%	5.8%	0.8%	0.4%	5.4%	12.0%	12.8%	10.3%	13.3%	0.3%
703	EMS - Chiller	1.1%	7.3%	3.6%	0.6%	10.1%	0.8%	0.5%	5.8%	0.8%	0.4%	5.4%	12.0%	12.8%	10.3%	13.3%	0.3%
704	Cool Roof - Chiller	1.1%	7.3%	3.6%	0.6%	10.1%	0.8%	0.5%	5.8%	0.8%	0.4%	5.4%	12.0%	12.8%	10.3%	13.3%	0.3%
705	Chiller Tune Up/Diagnostics	1.1%	7.3%	3.6%	0.6%	10.1%	0.8%	0.5%	5.8%	0.8%	0.4%	5.4%	12.0%	12.8%	10.3%	13.3%	0.3%
706	Cooling Circ. Pumps - VSD	1.1%	7.3%	3.6%	0.6%	10.1%	0.8%	0.5%	5.8%	0.8%	0.4%	5.4%	12.0%	12.8%	10.3%	13.3%	0.3%
710	Base DX Packaged System, EER=10.3, 10 tons	7%	6%	3%	4%	9%	5%	3%	5%	5%	3%	5%	10%	11%	9%	11%	2%
711	DX Tune Up/ Advanced Diagnostics	7.4%	6.3%	3.1%	3.8%	8.7%	5.1%	3.1%	5.0%	5.4%	2.9%	4.6%	10.3%	11.0%	8.8%	11.4%	2.0%
712	DX Packaged System, EER=10.9, 10 tons	7.4%	6.3%	3.1%	3.8%	8.7%	5.1%	3.1%	5.0%	5.4%	2.9%	4.6%	10.3%	11.0%	8.8%	11.4%	2.0%
713	Window Film - DX	7.4%	6.3%	3.1%	3.8%	8.7%	5.1%	3.1%	5.0%	5.4%	2.9%	4.6%	10.3%	11.0%	8.8%	11.4%	2.0%
714	Evaporative Pre-Cooler	7.4%	6.3%	3.1%	3.8%	8.7%	5.1%	3.1%	5.0%	5.4%	2.9%	4.6%	10.3%	11.0%	8.8%	11.4%	2.0%
715	Prog. Thermostat - DX	7.4%	6.3%	3.1%	3.8%	8.7%	5.1%	3.1%	5.0%	5.4%	2.9%	4.6%	10.3%	11.0%	8.8%	11.4%	2.0%
716	Cool Roof - DX	7.4%	6.3%	3.1%	3.8%	8.7%	5.1%	3.1%	5.0%	5.4%	2.9%	4.6%	10.3%	11.0%	8.8%	11.4%	2.0%
800	Base Lighting	7%	10%	8%	4%	12%	4%	2%	9%	5%	3%	9%	15%	12%	15%	17%	4%
801	RET 2L4' Premium T8, 1EB	4%	5%	4%	2%	6%	2%	1%	4%	3%	2%	5%	8%	6%	8%	9%	2%

APPLICABILITY FACTOR (percent)																	
Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non-metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Printing	Misc.
802	CFL Hardwired, Modular 36W	0.05%	0.07%	0.06%	0.03%	0.08%	0.03%	0.02%	0.06%	0.04%	0.02%	0.07%	0.10%	0.08%	0.10%	0.12%	0.03%
803	Metal Halide, 50W	3%	4%	3%	2%	5%	1%	1%	3%	2%	1%	4%	6%	5%	6%	7%	2%
804	Occupancy Sensor, 4L4' Fluorescent Fixtures	4%	6%	5%	2%	7%	2%	1%	5%	3%	2%	5%	8%	6%	8%	9%	2%
900	Base Other	4%	3%	9%	2%	7%	3%	1%	4%	3%	1%	3%	6%	7%	5%	8%	0%
901	Replace V-belts	4%	3%	9%	2%	7%	3%	1%	4%	3%	1%	3%	6%	7%	5%	8%	0%
902	Membranes for wastewater	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

APPENDIX E

INDUSTRIAL

MEASURE INPUT DATA

INCOMPLETE FACTOR (percent)																	
Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Plastics	Rubber, Non-metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Printing	Misc.
100	Base Compressed Air	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
101	Compressed Air - O&M	31.00%	22.00%	22.00%	31.00%	31.00%	31.00%	31.00%	31.00%	31.00%	31.00%	22.00%	22.00%	22.00%	22.00%	22.00%	31.00%
102	Compressed Air - Controls	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
103	Compressed Air - System Optimization	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
104	Compressed Air - Sizing	17.53%	99.26%	17.53%	17.53%	17.53%	17.53%	17.53%	17.53%	17.53%	17.53%	99.26%	99.26%	99.26%	99.26%	99.26%	17.53%
105	Comp Air - Replace 1-5 HP motor	87.00%	87.00%	87.00%	87.00%	87.00%	87.00%	87.00%	87.00%	87.00%	87.00%	87.00%	87.00%	87.00%	87.00%	87.00%	87.00%
106	Comp Air - ASD (1-5 hp)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
107	Comp Air - Motor practices-1 (1-5 HP)	99.98%	100.00%	100.00%	99.98%	99.98%	99.98%	99.98%	99.98%	99.98%	99.98%	100.00%	100.00%	100.00%	100.00%	100.00%	99.98%
108	Comp Air - Replace 6-100 HP motor	63.61%	20.84%	20.84%	63.61%	63.61%	63.61%	63.61%	63.61%	63.61%	63.61%	20.84%	20.84%	20.84%	20.84%	20.84%	63.61%
109	Comp Air - ASD (6-100 hp)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
110	Comp Air - Motor practices-1 (6-100 HP)	14.03%	100.00%	100.00%	14.03%	14.03%	14.03%	14.03%	14.03%	14.03%	14.03%	100.00%	100.00%	100.00%	100.00%	100.00%	14.03%
111	Comp Air - Replace 100+ HP motor	26.12%	38.00%	38.00%	26.12%	26.12%	26.12%	26.12%	26.12%	26.12%	26.12%	38.00%	38.00%	38.00%	38.00%	38.00%	26.12%
112	Comp Air - ASD (100+ hp)	68.02%	100.00%	100.00%	68.02%	68.02%	68.02%	68.02%	68.02%	68.02%	68.02%	100.00%	100.00%	100.00%	100.00%	100.00%	68.02%
113	Comp Air - Motor practices-1 (100+ HP)	64.18%	39.66%	39.66%	64.18%	64.18%	64.18%	64.18%	64.18%	64.18%	64.18%	39.66%	39.66%	39.66%	39.66%	39.66%	64.18%
114	Power recovery	86.04%	19.68%	19.68%	86.04%	86.04%	86.04%	86.04%	86.04%	86.04%	86.04%	19.68%	19.68%	19.68%	19.68%	19.68%	86.04%
200	Base Fans	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
201	Fans - O&M	84.47%	12.87%	12.87%	84.47%	84.47%	84.47%	84.47%	84.47%	84.47%	84.47%	12.87%	12.87%	12.87%	12.87%	12.87%	84.47%
202	Fans - Controls	72.02%	21.21%	21.21%	72.02%	72.02%	72.02%	72.02%	72.02%	72.02%	72.02%	21.21%	21.21%	21.21%	21.21%	21.21%	72.02%
203	Fans - System Optimization	85.79%	21.87%	21.87%	85.79%	85.79%	85.79%	85.79%	85.79%	85.79%	85.79%	21.87%	21.87%	21.87%	21.87%	21.87%	85.79%
204	Fans - Improve components	68.08%	35.69%	35.69%	68.08%	68.08%	68.08%	68.08%	68.08%	68.08%	68.08%	35.69%	35.69%	35.69%	35.69%	35.69%	68.08%
205	Fans - Replace 1-5 HP motor	98.47%	87.00%	87.00%	98.47%	98.47%	98.47%	98.47%	98.47%	98.47%	98.47%	87.00%	87.00%	87.00%	87.00%	87.00%	98.47%
206	Fans - ASD (1-5 hp)	99.72%	81.94%	81.94%	99.72%	99.72%	99.72%	99.72%	99.72%	99.72%	99.72%	81.94%	81.94%	81.94%	81.94%	81.94%	99.72%
207	Fans - Motor practices-1 (1-5 HP)	99.63%	100.00%	100.00%	99.63%	99.63%	99.63%	99.63%	99.63%	99.63%	99.63%	100.00%	100.00%	100.00%	100.00%	100.00%	99.63%
208	Fans - Replace 6-100 HP motor	89.52%	47.03%	47.03%	89.52%	89.52%	89.52%	89.52%	89.52%	89.52%	89.52%	47.03%	47.03%	47.03%	47.03%	47.03%	89.52%
209	Fans - ASD (6-100 hp)	92.64%	91.96%	91.96%	92.64%	92.64%	92.64%	92.64%	92.64%	92.64%	92.64%	91.96%	91.96%	91.96%	91.96%	91.96%	92.64%
210	Fans - Motor practices-1 (6-100 HP)	89.03%	41.35%	41.35%	89.03%	89.03%	89.03%	89.03%	89.03%	89.03%	89.03%	41.35%	41.35%	41.35%	41.35%	41.35%	89.03%
211	Fans - Replace 100+ HP motor	93.70%	89.94%	89.94%	93.70%	93.70%	93.70%	93.70%	93.70%	93.70%	93.70%	89.94%	89.94%	89.94%	89.94%	89.94%	93.70%
212	Fans - ASD (100+ hp)	93.70%	10.92%	10.92%	93.70%	93.70%	93.70%	93.70%	93.70%	93.70%	93.70%	10.92%	10.92%	10.92%	10.92%	10.92%	93.70%
213	Fans - Motor practices-1 (100+ HP)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
214	Optimize drying process	100.00%	80.13%	80.13%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	80.13%	80.13%	80.13%	80.13%	80.13%	100.00%
215	Power recovery	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
300	Base Pumps	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
301	Pumps - O&M	17.61%	55.31%	55.31%	17.61%	17.61%	17.61%	17.61%	17.61%	17.61%	17.61%	55.31%	55.31%	55.31%	55.31%	55.31%	17.61%
302	Pumps - Controls	13.55%	24.06%	24.06%	13.55%	13.55%	13.55%	13.55%	13.55%	13.55%	13.55%	24.06%	24.06%	24.06%	24.06%	24.06%	13.55%
303	Pumps - System Optimization	15.00%	79.30%	79.30%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	79.30%	79.30%	79.30%	79.30%	79.30%	15.00%
304	Pumps - Sizing	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
305	Pumps - Replace 1-5 HP motor	89.37%	92.74%	92.74%	89.37%	89.37%	89.37%	89.37%	89.37%	89.37%	89.37%	92.74%	92.74%	92.74%	92.74%	92.74%	89.37%
306	Pumps - ASD (1-5 hp)	100.00%	80.42%	80.42%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	80.42%	80.42%	80.42%	80.42%	80.42%	100.00%
307	Pumps - Motor practices-1 (1-5 HP)	40.42%	53.83%	53.83%	40.42%	40.42%	40.42%	40.42%	40.42%	40.42%	40.42%	53.83%	53.83%	53.83%	53.83%	53.83%	40.42%
308	Pumps - Replace 6-100 HP motor	96.71%	88.90%	88.90%	96.71%	96.71%	96.71%	96.71%	96.71%	96.71%	96.71%	88.90%	88.90%	88.90%	88.90%	88.90%	96.71%
309	Pumps - ASD (6-100 hp)	97.88%	46.59%	46.59%	97.88%	97.88%	97.88%	97.88%	97.88%	97.88%	97.88%	46.59%	46.59%	46.59%	46.59%	46.59%	97.88%
310	Pumps - Motor practices-1 (6-100 HP)	62.84%	80.97%	80.97%	62.84%	62.84%	62.84%	62.84%	62.84%	62.84%	62.84%	80.97%	80.97%	80.97%	80.97%	80.97%	62.84%
311	Pumps - Replace 100+ HP motor	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%	38.00%
312	Pumps - ASD (100+ hp)	100.00%	97.76%	97.76%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	97.76%	97.76%	97.76%	97.76%	97.76%	100.00%
313	Pumps - Motor practices-1 (100+ HP)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
314	Power recovery	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
400	Base Drives	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
401	Bakery - Process (Mixing) - O&M	70.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
402	O&M/drives spinning machines	100.00%	40.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
403	Air conveying systems	100.00%	100.00%	25.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
404	Replace V-Belts	47.03%	20.92%	20.92%	47.03%	47.03%	47.03%	47.03%	47.03%	47.03%	47.03%	20.92%	20.92%	20.92%	20.92%	20.92%	47.03%
405	Drives - EE motor	63.25%	14.43%	14.43%	63.25%	63.25%	63.25%	63.25%	63.25%	63.25%	63.25%	14.43%	14.43%	14.43%	14.43%	14.43%	63.25%
406	Gap Forming papermachine	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
407	High Consistency forming	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
408	Optimization control PM	56.71%	97.67%	97.67%	56.71%	56.71%	56.71%	56.71%	56.71%	56.71%	56.71%	97.67%	97.67%	97.67%	97.67%	97.67%	56.71%
409	Efficient practices printing press	100.00%	100.00%	100.00%	100.00%	50.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
410	Efficient Printing press (fewer cylinders)	100.00%	100.00%	100.00%	100.00%	20.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

INCOMPLETE FACTOR
(percent)

Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Plastics, Rubber	Non-metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Printing	Misc.
411	Light cylinders	100.00%	100.00%	100.00%	100.00%	20.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
412	Efficient drives	100.00%	100.00%	100.00%	100.00%	30.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
413	Efficient drives	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
414	Clean Room - New Designs	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
415	Drives - Process Controls (batch + site)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
416	Process Drives - ASD	97.67%	65.04%	65.04%	97.67%	97.67%	97.67%	97.67%	97.67%	97.67%	97.67%	65.04%	65.04%	65.04%	65.04%	65.04%	97.67%
417	O&M - Extruders/Injection Moulding	57.13%	37.55%	37.55%	57.13%	57.13%	57.13%	57.13%	57.13%	57.13%	57.13%	37.55%	37.55%	37.55%	37.55%	37.55%	57.13%
418	Extruders/Injection Moulding-multipump	79.06%	100.00%	100.00%	79.06%	79.06%	79.06%	79.06%	79.06%	79.06%	79.06%	100.00%	100.00%	100.00%	100.00%	100.00%	79.06%
419	Direct drive Extruders	90.49%	100.00%	100.00%	90.49%	90.49%	90.49%	90.49%	90.49%	90.49%	90.49%	100.00%	100.00%	100.00%	100.00%	100.00%	90.49%
420	Injection Moulding - Impulse Cooling	83.81%	100.00%	100.00%	83.81%	83.81%	83.81%	83.81%	83.81%	83.81%	83.81%	100.00%	100.00%	100.00%	100.00%	100.00%	83.81%
421	Injection Moulding - Direct drive	89.89%	100.00%	100.00%	89.89%	89.89%	89.89%	89.89%	89.89%	89.89%	89.89%	100.00%	100.00%	100.00%	100.00%	100.00%	89.89%
422	Efficient grinding	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	20.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
423	Process control	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
424	Process optimization	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	25.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
425	Drives - Process Control	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
426	Efficient drives - rolling	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
427	Drives - Optimization process (M&T)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
428	Drives - Scheduling	72.38%	29.00%	29.00%	72.38%	72.38%	72.38%	72.38%	72.38%	72.38%	72.38%	29.00%	29.00%	29.00%	29.00%	29.00%	72.38%
429	Machinery	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
430	Efficient Machinery	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
500	Base Heating	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
501	Bakery - Process	49.76%	100.00%	100.00%	49.76%	49.76%	49.76%	49.76%	49.76%	49.76%	49.76%	100.00%	100.00%	100.00%	100.00%	100.00%	49.76%
502	Drying (UV/IR)	100.00%	20.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
503	Heat Pumps - Drying	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
504	Top-heating (glass)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
505	Efficient electric melting	99.78%	100.00%	100.00%	99.78%	99.78%	99.78%	99.78%	99.78%	99.78%	99.78%	100.00%	100.00%	100.00%	100.00%	100.00%	99.78%
506	Intelligent extruder (DOE)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
507	Near Net Shape Casting	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	25.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
508	Heating - Process Control	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	50.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
509	Efficient Curing ovens	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	25.00%	25.00%	25.00%	25.00%	25.00%	100.00%
510	Heating - Optimization process (M&T)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	50.00%	50.00%	100.00%	100.00%	100.00%	100.00%
511	Heating - Scheduling	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	30.00%	30.00%	100.00%	100.00%	100.00%	100.00%
550	Base Refrigeration	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
551	Efficient Refrigeration - Operations	83.26%	51.76%	51.76%	83.26%	83.26%	83.26%	83.26%	83.26%	83.26%	83.26%	51.76%	51.76%	51.76%	51.76%	51.76%	83.26%
552	Optimization Refrigeration	95.06%	44.99%	44.99%	95.06%	95.06%	95.06%	95.06%	95.06%	95.06%	95.06%	44.99%	44.99%	44.99%	44.99%	44.99%	95.06%
600	Base Other Process	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
601	Other Process Controls (batch + site)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
602	Efficient desalter	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
603	New transformers welding	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
604	Efficient processes welding, etc.)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
605	Process control	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
606	Power recovery	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
700	Base Centrifugal Chiller, 0.58 kW/ton, 500 tons	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
701	Centrifugal Chiller, 0.51 kW/ton, 500 tons	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
702	Window Film - Chiller	50.48%	50.48%	50.48%	50.48%	50.48%	50.48%	50.48%	50.48%	50.48%	50.48%	50.48%	50.48%	50.48%	50.48%	50.48%	100.00%
703	EMS - Chiller	63.20%	63.20%	63.20%	63.20%	63.20%	63.20%	63.20%	63.20%	63.20%	63.20%	63.20%	63.20%	63.20%	63.20%	63.20%	63.20%
704	Cool Roof - Chiller	58.65%	58.65%	58.65%	58.65%	58.65%	58.65%	58.65%	58.65%	58.65%	58.65%	58.65%	58.65%	58.65%	58.65%	58.65%	58.65%
705	Chiller Tune Up/Diagnostics	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
706	Cooling Circ. Pumps - VSD	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%
710	Base DX Packaged System, EER=10.3, 10 tons	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
711	DX Tune Up/ Advanced Diagnostics	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
712	DX Packaged System, EER=10.9, 10 tons	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
713	Window Film - DX	30.70%	30.70%	30.70%	30.70%	30.70%	30.70%	30.70%	30.70%	30.70%	30.70%	30.70%	30.70%	30.70%	30.70%	30.70%	30.70%
714	Evaporative Pre-Cooler	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%
715	Prog. Thermostat - DX	45.30%	45.30%	45.30%	45.30%	45.30%	45.30%	45.30%	45.30%	45.30%	45.30%	45.30%	45.30%	45.30%	45.30%	45.30%	45.30%
716	Cool Roof - DX	61.49%	61.49%	61.49%	61.49%	61.49%	61.49%	61.49%	61.49%	61.49%	61.49%	61.49%	61.49%	61.49%	61.49%	61.49%	61.49%
800	Base Lighting	95.88%	95.88%	95.88%	95.88%	95.88%	95.88%	95.88%	95.88%	95.88%	95.88%	95.88%	95.88%	95.88%	95.88%	95.88%	95.88%
801	RET 2L4' Premium T8, 1EB																

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MEASURE INPUT DATA

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APPENDIX E

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FEASIBILITY FACTOR
(percent)

Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non- metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Printing	Misc.
100	Base Compressed Air	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
101	Compressed Air-O&M	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
102	Compressed Air - Controls	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
103	Compressed Air - System Optimization	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
104	Compressed Air- Sizing	56%	47%	47%	56%	56%	56%	56%	56%	56%	56%	47%	47%	47%	47%	47%	100%
105	Comp Air - Replace 1-5 HP motor	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
106	Comp Air - ASD (1-5 hp)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
107	Comp Air - Motor practices-1 (1-5 HP)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
108	Comp Air - Replace 6-100 HP motor	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%
109	Comp Air - ASD (6-100 hp)	96%	36%	36%	96%	96%	96%	96%	96%	96%	96%	36%	36%	36%	36%	36%	36%
110	Comp Air - Motor practices-1 (6-100 HP)	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%
111	Comp Air - Replace 100+ HP motor	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%
112	Comp Air - ASD (100+ hp)	87%	100%	100%	87%	87%	87%	87%	87%	87%	87%	100%	100%	100%	100%	100%	59%
113	Comp Air - Motor practices-1 (100+ HP)	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%
114	Power recovery	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
200	Base Fans	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
201	Fans - O&M	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
202	Fans - Controls	83%	89%	89%	83%	83%	83%	83%	83%	83%	83%	89%	89%	89%	89%	89%	100%
203	Fans - System Optimization	83%	87%	87%	83%	83%	83%	83%	83%	83%	83%	87%	87%	87%	87%	87%	100%
204	Fans - Improve components	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
205	Fans - Replace 1-5 HP motor	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
206	Fans - ASD (1-5 hp)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
207	Fans - Motor practices-1 (1-5 HP)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
208	Fans - Replace 6-100 HP motor	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%
209	Fans - ASD (6-100 hp)	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%
210	Fans - Motor practices-1 (6-100 HP)	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%
211	Fans - Replace 100+ HP motor	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%
212	Fans - ASD (100+ hp)	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%
213	Fans - Motor practices-1 (100+ HP)	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%
214	Optimize drying process	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
215	Power recovery	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
300	Base Pumps	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
301	Pumps - O&M	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
302	Pumps - Controls	100%	79%	79%	100%	100%	100%	100%	100%	100%	100%	79%	79%	79%	79%	79%	100%
303	Pumps - System Optimization	99%	77%	77%	99%	99%	99%	99%	99%	99%	99%	77%	77%	77%	77%	77%	100%
304	Pumps - Sizing	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
305	Pumps - Replace 1-5 HP motor	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
306	Pumps - ASD (1-5 hp)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
307	Pumps - Motor practices-1 (1-5 HP)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
308	Pumps - Replace 6-100 HP motor	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%
309	Pumps - ASD (6-100 hp)	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%
310	Pumps - Motor practices-1 (6-100 HP)	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%
311	Pumps - Replace 100+ HP motor	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%
312	Pumps - ASD (100+ hp)	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%
313	Pumps - Motor practices-1 (100+ HP)	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%
314	Power recovery	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
400	Base Drives	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
401	Bakery - Process (Mixing) - O&M	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
402	O&M/drives spinning machines	0%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
403	Air conveying systems	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
404	Replace V-Belts	0%	0%	70%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
405	Drives - EE motor	73%	27%	27%	73%	73%	73%	73%	73%	73%	73%	27%	27%	27%	27%	27%	0%
406	Gap Forming papermachine	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
407	High Consistency forming	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
408	Optimization control PM	82%	47%	47%	82%	82%	82%	82%	82%	82%	82%	47%	47%	47%	47%	47%	0%
409	Efficient practices printing press	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
410	Efficient Printing press (fewer cylinders)	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

APPENDIX E

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MEASURE INPUT DATA

FEASIBILITY FACTOR
(percent)

Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non- metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Printing	Misc.
411	Light cylinders	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
412	Efficient drives	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
413	Clean Room - Controls	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	60%	0%	0%	0%
414	Clean Room - New Designs	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
415	Drives - Process Controls (batch + site)	0%	0%	0%	0%	0%	86%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%
416	Process Drives - ASD	0%	0%	0%	0%	0%	70%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%
417	O&M - Extruders/Injection Moulding	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%
418	Extruders/Injection Moulding-multipump	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%
419	Direct drive Extruders	40%	0%	0%	40%	40%	40%	40%	40%	40%	40%	0%	0%	0%	0%	0%	0%
420	Injection Moulding - Impulse Cooling	45%	0%	0%	45%	45%	45%	45%	45%	45%	45%	0%	0%	0%	0%	0%	0%
421	Injection Moulding - Direct drive	46%	0%	0%	46%	46%	46%	46%	46%	46%	46%	0%	0%	0%	0%	0%	0%
422	Efficient grinding	100%	85%	85%	100%	100%	100%	100%	100%	100%	100%	85%	85%	85%	85%	85%	0%
423	Process control	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
424	Process optimization	0%	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%	0%	0%	0%
425	Drives - Process Control	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%
426	Efficient drives - rolling	95%	0%	0%	95%	95%	95%	95%	95%	95%	95%	0%	0%	0%	0%	0%	0%
427	Drives - Optimization process (M&T)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	40%	0%	40%	0%	0%
428	Drives - Scheduling	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	40%	40%	40%	40%	0%
429	Machinery	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%	50%	50%	0%	0%
430	Efficient Machinery	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%
500	Base Heating	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
501	Bakery - Process	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
502	Drying (UV/IR)	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
503	Heat Pumps - Drying	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
504	Top-heating (glass)	84%	0%	0%	84%	84%	84%	84%	84%	84%	84%	0%	0%	0%	0%	0%	0%
505	Efficient electric melting	0%	0%	0%	0%	0%	0%	0%	0%	0%	90%	0%	0%	0%	0%	0%	0%
506	Intelligent extruder (DOE)	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%
507	Near Net Shape Casting	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%
508	Heating - Process Control	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%
509	Efficient Curing ovens	84%	0%	0%	84%	84%	84%	84%	84%	84%	84%	70%	50%	50%	50%	50%	50%
510	Heating - Optimization process (M&T)	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	40%	0%	40%	0%	0%
511	Heating - Scheduling	14%	0%	0%	14%	14%	14%	14%	14%	14%	14%	40%	40%	0%	0%	0%	0%
550	Base Refrigeration	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
551	Efficient Refrigeration - Operations	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
552	Optimization Refrigeration	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
600	Base Other Process	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
601	Other Process Controls (batch + site)	0%	0%	0%	0%	0%	86%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
602	Efficient desalter	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
603	New transformers welding	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	50%	0%	100%	0%	0%
604	Efficient processes (welding, etc.)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%
605	Process control	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%
606	Power recovery	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
700	Base Centrifugal Chiller, 0.58 kW/ton, 500 tons	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
701	Centrifugal Chiller, 0.51 kW/ton, 500 tons	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
702	Window Film - Chiller	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
703	EMS - Chiller	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
704	Cool Roof - Chiller	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
705	Chiller Tune Up/Diagnostics	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
706	Cooling Circ. Pumps - VSD	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
710	Base DX Packaged System, EER=10.3, 10 tons	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
711	DX Tune Up/Advanced Diagnostics	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
712	DX Packaged System, EER=10.9, 10 tons	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
713	Window Film - DX	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
714	Evaporative Pre-Cooler	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
715	Prog. Thermostat - DX	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
716	Cool Roof - DX	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
800	Base Lighting	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
801	RET 2L4' Premium T8, 1EB	76%	86%	87%	80%	96%	77%	77%	80%	62%	66%	85%	87%	90%	89%	93%	93%

FEASIBILITY FACTOR
(percent)

Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non- metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Printing	Misc.
802	CFL Hardwired, Modular 36W	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%	6%
803	Metal Halide, 50W	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%
804	Occupancy Sensor, 4L4' Fluorescent Fixtures	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
900	Base Other	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
901	Replace V-belts	73%	71%	80%	79%	39%	0%	7%	53%	70%	20%	53%	40%	33%	55%	55%	55%
804	Membranes for wastewater	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	29%
902	Occupancy Sensor, 4L4' Fluorescent Fixtures	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
900	Base Other	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
901	Replace V-belts	73%	71%	80%	79%	0%	7%	53%	70%	20%	53%	20%	40%	33%	55%	39%	55%
902	Membranes for wastewater	0%	29%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

**ENERGY SAVINGS
(percent)**

Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non- metallic minerals	Prim Metals	Fab Metals	Steel	Ind Mach	Electronics	Transp Equip	Printing	Misc.
100	Base Compressed Air	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
101	Compressed Air - O&M	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%
102	Compressed Air - Controls	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
103	Compressed Air - System Optimization	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
104	Compressed Air - Sizing	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
105	Comp Air - Replace 1-5 HP motor	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%
106	Comp Air - ASD (1-5 hp)	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%
107	Comp Air - Motor practices-1 (1-5 HP)	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
108	Comp Air - Replace 6-100 HP motor	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
109	Comp Air - ASD (6-100 hp)	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%
110	Comp Air - Motor practices-1 (6-100 HP)	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
111	Comp Air - Replace 100+ HP motor	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
112	Comp Air - ASD (100+ hp)	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%
113	Comp Air - Motor practices-1 (100+ HP)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
114	Power recovery	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
200	Base Fans	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
201	Fans - O&M	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
202	Fans - Controls	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
203	Fans - System Optimization	21.2%	21.2%	21.2%	21.2%	21.2%	21.2%	21.2%	21.2%	21.2%	21.2%	21.2%	21.2%	21.2%	21.2%	21.2%	21.2%
204	Fans - Improve components	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
205	Fans - Replace 1-5 HP motor	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%
206	Fans - ASD (1-5 hp)	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%
207	Fans - Motor practices-1 (1-5 HP)	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
208	Fans - Replace 6-100 HP motor	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
209	Fans - ASD (6-100 hp)	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%
210	Fans - Motor practices-1 (6-100 HP)	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
211	Fans - Replace 100+ HP motor	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
212	Fans - ASD (100+ hp)	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%
213	Fans - Motor practices-1 (100+ HP)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
214	Optimize drying process	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
215	Power recovery	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
300	Base Pumps	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
301	Pumps - O&M	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
302	Pumps - Controls	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
303	Pumps - System Optimization	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
304	Pumps - Sizing	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
305	Pumps - Replace 1-5 HP motor	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%
306	Pumps - ASD (1-5 hp)	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%
307	Pumps - Motor practices-1 (1-5 HP)	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
308	Pumps - Replace 6-100 HP motor	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
309	Pumps - ASD (6-100 hp)	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%
310	Pumps - Motor practices-1 (6-100 HP)	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
311	Pumps - Replace 100+ HP motor	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
312	Pumps - ASD (100+ hp)	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%	6.4%
313	Pumps - Motor practices-1 (100+ HP)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
314	Power recovery	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
400	Base Drives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
401	Bakery - Process (Mixing) - O&M	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
402	O&M/drives spinning machines	0.0%	16.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
403	Air conveying systems	0.0%	0.0%	41.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
404	Replace V-Belts	0.0%	0.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
405	Drives - EE motor	0.0%	0.0%	3.5%	3.1%	0.0%	0.0%	0.0%	0.0%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
406	Gap Forming papermachine	0.0%	0.0%	0.0%	7.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
407	High Consistency control PM	0.0%	0.0%	0.0%	7.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
408	Optimization control PM	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
409	Efficient practices printing press	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
410	Efficient Printing press (fewer cylinders)	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

ENERGY SAVINGS (percent)																		
Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non- metallic minerals	Prim Metals	Fab Metals	Steel	Production	Ind Mach	Electronics	Transp Equip	Printing	Misc.
411	Light cylinders	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
412	Efficient drives	0.0%	0.0%	0.0%	0.0%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
413	Clean Room - Controls	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
414	Clean Room - New Designs	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
415	Drives - Process Controls (batch + site)	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	0.0%	0.0%	2.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
416	Process Drives - ASD	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%
417	O&M - Extruders/Injection Moulding	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
418	Extruders/Injection Moulding-multipump	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
419	Direct drive Extruders	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
420	Injection Moulding - Impulse Cooling	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
421	Injection Moulding - Direct drive	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
422	Efficient grinding	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
423	Process control	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
424	Process optimization	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
425	Drives - Process Control	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
426	Efficient drives - rolling	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
427	Drives - Optimization process (M&T)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	10.0%	0.0%	10.0%	0.0%	0.0%
428	Drives - Scheduling	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.5%	0.0%	5.5%	5.0%	5.5%	5.0%	0.0%
429	Machinery	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	0.0%	7.0%	3.5%	10.8%	0.0%	0.0%
430	Efficient Machinery	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	0.0%
500	Base Heating	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
501	Bakery - Process	37.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
502	Drying (UV/IR)	0.0%	26.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
503	Heat Pumps - Drying	0.0%	0.0%	22.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
504	Top-heating (glass)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
505	Efficient electric melting	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
506	Intelligent extruder (DOE)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
507	Near Net Shape Casting	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
508	Heating - Process Control	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
509	Efficient Curing ovens	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	20.0%	20.0%	20.0%	0.0%	0.0%
510	Heating - Optimization process (M&T)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	10.0%	0.0%	10.0%	0.0%	0.0%
511	Heating - Scheduling	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.5%	0.0%	5.5%	0.0%	0.0%	0.0%	0.0%
550	Base Refrigeration	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
551	Efficient Refrigeration - Operations	12.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
552	Optimization Refrigeration	26.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
600	Base Other Process	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
601	Other Process Controls (batch + site)	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
602	Efficient desalter	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
603	New transformers welding	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	25.0%	0.0%	25.0%	0.0%	0.0%
604	Efficient processes (welding, etc.)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%	0.0%
605	Process control	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	0.0%
606	Power recovery	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
700	Base Centrifugal Chiller, 0.58 kW/ton, 500 t	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
701	Centrifugal Chiller, 0.51 kW/ton, 500 tons	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%
702	Window Film - Chiller	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%
703	EMS - Chiller	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
704	Cool Roof - Chiller	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%
705	Chiller Tune Up/Diagnostics	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
706	Cooling Circ. Pumps - VSD	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
710	Base DX Packaged System, EER=10.3, 10 t	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
711	DX Tune Up/ Advanced Diagnostics	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
712	DX Packaged System, EER=10.9, 10 tons	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
713	Window Film - DX	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%
714	Evaporative Pre-Cooler	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
715	Prog. Thermostat - DX	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
716	Cool Roof - DX	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%
800	Base Lighting	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
801	RET 2L4 Premium T8, 1EB	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%

ENERGY SAVINGS																	
(percent)																	
Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non-metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Printing	Misc.
802	CFL Hardwired, Modular 36W	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%
803	Metal Halide, 50W	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%	58.0%
804	Occupancy Sensor, 4L4' Fluorescent Fixture	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
900	Base Other	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
901	Replace V-belts	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
902	Membranes for wastewater	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

DSM TECHNOLOGY INPUT TABLES

UTILITY:	Missouri Statewide	BATCH:	1
SECTOR:	Residential	ANALYSIS:	Basic
SEGMENT:	All Gas	VINTAGE:	All

APPENDIX E

RESIDENTIAL

MEASURE INPUT DATA

MEASURE COSTS																						
Segment	Measure #	Measure Description	Savings Units	Cost Units	Unit Equipment	Unit Labor	NPV of O & M	Implementation Cost Factor	Cost per Savings Unit	Service Life	Full = 1 Incr. = 0	Initial Cost	Replace Cost	Full Unit Cost	Relative Energy Reduction Factors					Implementation Type		
															SON	SOFF	WON	WOFF	SHON	SHOF	End Use	
Existing	100	Base Furnace	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	1	18	1	1	\$0.00	1	1.0	1.0	1.0	1.0	1.0	1.0	1	2
Existing	101	Basement insulation R-13 (Furnace)	home	sq.ft.	\$0.69	\$0.00	\$0.00	\$0.69	1	30	1	1	\$0.69	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	102	Ceiling R-0 to R-38 Insulation	home	sq.ft.	\$0.51	\$0.20	\$0.00	\$0.71	1	30	1	1	\$0.71	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	103	Ceiling R-0 to R-49 Insulation	home	sq.ft.	\$0.66	\$0.20	\$0.00	\$0.86	1	30	1	1	\$0.86	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	104	Ceiling R-11 to R-38 Insulation	home	sq.ft.	\$0.36	\$0.20	\$0.00	\$0.56	1	30	1	1	\$0.56	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	105	Ceiling R-11 to R-49 Insulation	home	sq.ft.	\$0.25	\$0.20	\$0.00	\$0.45	1	30	1	1	\$0.45	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	106	Ceiling R-19 to R-38 Insulation	home	sq.ft.	\$0.25	\$0.20	\$0.00	\$0.45	1	30	1	1	\$0.45	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	107	Ceiling R-19 to R-49 Insulation	home	sq.ft.	\$0.40	\$0.20	\$0.00	\$0.60	1	30	1	1	\$0.60	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	108	Comprehensive Shell Air Sealing - Inf. Reduction	home	sq.ft.	\$156.25	\$0.00	\$0.00	\$156.25	1	10	1	1	\$156.25	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	109	Condensing Furnace - 94 AFUE (Tier 2)	home	unit	\$974.38	\$0.00	\$0.00	\$974.38	1	18	1	1	\$974.38	1	1.0	1.0	1.0	1.0	1.0	1.0	2	2
Existing	110	Crawspace insulation	home	sq.ft.	\$0.69	\$0.00	\$0.00	\$0.69	1	30	1	1	\$0.69	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	111	Duct insulation	home	linear ft	\$16.67	\$91.24	\$0.00	\$107.91	1	20	1	1	\$107.91	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	112	Duct Repair and Sealing	home	home	\$55.75	\$441.87	\$0.00	\$497.62	1	18	1	1	\$497.62	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	113	ENERGY STAR Programmable Thermostat	home	unit	\$70.21	\$42.13	\$0.00	\$112.34	1	12	1	1	\$112.34	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	114	Floor R-0 to R-19 Insulation-Batts	home	sq.ft.	\$0.51	\$0.53	\$0.00	\$1.04	1	30	1	1	\$1.04	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	115	Floor R-0 to R-30 Insulation-Batts	home	sq.ft.	\$0.78	\$0.61	\$0.00	\$1.39	1	30	1	1	\$1.39	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	116	Floor R-19 to R-30 Insulation-Batts	home	sq.ft.	\$0.40	\$0.61	\$0.00	\$1.01	1	30	1	1	\$1.01	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	117	Furnace controls	home	unit	\$585.00	\$0.00	\$0.00	\$585.00	1	18	1	1	\$585.00	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	118	Furnace Diagnostic Testing, Repair and Maintenance	home	unit	\$150.00	\$0.00	\$0.00	\$150.00	1	5	1	1	\$150.00	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	119	Plastic Film (1-2 yr measure, window kit)	home	sq. ft.	\$0.27	\$0.00	\$0.00	\$0.27	1	1	1	1	\$0.27	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	120	Radiant Barrier	home	sq. ft.	\$0.30	\$0.10	\$0.00	\$0.40	1	25	1	1	\$0.40	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	121	Self Install Weatherization	home	home	\$4.56	\$0.00	\$0.00	\$4.56	1	5	1	1	\$4.56	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	122	Slab insulation R-0 to R-5 (4 ft)	home	sq.ft.	\$0.19	\$0.35	\$0.00	\$0.54	1	30	1	1	\$0.54	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	123	Wall 2x4 R-0 to Blow-In R-13 Insulation	home	sq.ft.	\$0.18	\$0.35	\$0.00	\$0.53	1	30	1	1	\$0.53	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	124	Windows - Add Storm Windows to Double-Glazed	home	sq.ft.	\$7.33	\$16.00	\$0.00	\$23.33	1	10	1	1	\$23.33	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	125	Windows - Add Storm Windows to Single-Glazed	home	sq.ft.	\$7.33	\$16.00	\$0.00	\$23.33	1	10	1	1	\$23.33	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	126	Single Pane to Double Pane with Gas	home	sq.ft.	\$1.03	\$0.00	\$0.00	\$1.03	1	10	1	1	\$1.03	1	1.0	1.0	1.0	1.0	1.0	1.0	1	2
Existing	127	Windows - Double-Glazed to Energy Star	home	sq.ft.	\$1.72	\$0.00	\$0.00	\$1.72	1	10	1	1	\$1.72	1	1.0	1.0	1.0	1.0	1.0	1.0	1	2
Existing	200	Base Boiler	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	1	20	1	1	\$0.00	1	1.0	1.0	1.0	1.0	1.0	1.0	1	2
Existing	201	Basement insulation R-13 (Boiler)	home	sq.ft.	\$0.69	\$0.00	\$0.00	\$0.69	1	30	1	1	\$0.69	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	202	Boiler controls	home	unit	\$585.00	\$0.00	\$0.00	\$585.00	1	20	1	1	\$585.00	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	203	Boiler Diagnostic Testing, Repair and Maintenance	home	unit	\$150.00	\$0.00	\$0.00	\$150.00	1	5	1	1	\$150.00	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	204	Ceiling R-0 to R-38 Insulation	home	sq.ft.	\$0.51	\$0.20	\$0.00	\$0.71	1	30	1	1	\$0.71	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	205	Ceiling R-0 to R-49 Insulation	home	sq.ft.	\$0.66	\$0.20	\$0.00	\$0.86	1	30	1	1	\$0.86	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	206	Ceiling R-11 to R-38 Insulation	home	sq.ft.	\$0.36	\$0.20	\$0.00	\$0.56	1	30	1	1	\$0.56	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	207	Ceiling R-11 to R-49 Insulation	home	sq.ft.	\$0.25	\$0.20	\$0.00	\$0.45	1	30	1	1	\$0.45	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	208	Ceiling R-19 to R-38 Insulation	home	sq.ft.	\$0.25	\$0.20	\$0.00	\$0.45	1	30	1	1	\$0.45	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	209	Ceiling R-19 to R-49 Insulation	home	sq.ft.	\$0.40	\$0.20	\$0.00	\$0.60	1	30	1	1	\$0.60	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	210	Comprehensive Shell Air Sealing - Inf. Reduction	home	Home	\$156.25	\$0.00	\$0.00	\$156.25	1	10	1	1	\$156.25	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	211	Crawspace insulation	home	sq.ft.	\$0.69	\$0.00	\$0.00	\$0.69	1	30	1	1	\$0.69	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	212	ENERGY STAR Programmable Thermostat	home	unit	\$70.21	\$42.13	\$0.00	\$112.34	1	12	1	1	\$112.34	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	213	Floor R-0 to R-19 Insulation-Batts	home	sq.ft.	\$0.51	\$0.53	\$0.00	\$1.04	1	30	1	1	\$1.04	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	214	Floor R-0 to R-30 Insulation-Batts	home	sq.ft.	\$0.78	\$0.61	\$0.00	\$1.39	1	30	1	1	\$1.39	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	215	Floor R-19 to R-30 Insulation-Batts	home	sq.ft.	\$0.40	\$0.61	\$0.00	\$1.01	1	30	1	1	\$1.01	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	216	High Efficiency Condensing Boiler (AFUE = 90%)	home	unit	\$900.00	\$0.00	\$0.00	\$900.00	1	20	1	1	\$900.00	1	1.0	1.0	1.0	1.0	1.0	1.0	2	2
Existing	217	Pipe Insulation (Boiler)	home	linear foot	\$1.59	\$3.63	\$0.00	\$5.22	1	30	1	1	\$5.22	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	218	Plastic Film (1-2 yr measure, window kit)	home	sq.ft.	\$0.27	\$0.00	\$0.00	\$0.27	1	1	1	1	\$0.27	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	219	Radiant Barrier	home	sq.ft.	\$0.30	\$0.10	\$0.00	\$0.40	1	25	1	1	\$0.40	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	220	Self Install Weatherization	home	home	\$4.56	\$0.00	\$0.00	\$4.56	1	5	1	1	\$4.56	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	221	Slab insulation R-0 to R-5 (4 ft)	home	sq.ft.	\$0.19	\$0.35	\$0.00	\$0.54	1	30	1	1	\$0.54	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	222	Stack Damper	home	unit	\$150.00	\$69.00	\$0.00	\$219.00	1	5	1	1	\$219.00	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	223	Wall 2x4 R-0 to Blow-In R-13 Insulation	home	sq.ft.	\$0.18	\$0.35	\$0.00	\$0.53	1	30	1	1	\$0.53	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1
Existing	224	Windows - Add Storm Windows to Double-Glazed	home	sq.ft.	\$7.33	\$16.00	\$0.00	\$23.33	1	10	1	1	\$23.33	1	1.0	1.0	1.0	1.0	1.0	1.0	1	1

APPENDIX E

RESIDENTIAL

MEASURE INPUT DATA

MEASURE COSTS																					
Segment	Measure #	Measure Description	Savings Units	Cost Units	Unit Equipment Cost	Unit Labor Cost	Lifetime O & M Cost	NPV of Implementation		Cost Units per Savings Unit	Full = 1			Relative Energy Reduction Factors						Implementation Type	
								Cost Factor	Cost		Service Life	Initial Cost	Replace Cost	Full Unit Cost	SON	SOFF	WON	WOFF	SHON		SHOF
Existing	225	Windows - Add Storm Windows to Single-Glazed	home	sq.ft.	\$7.33	\$16.00	\$0.00	\$23.33	1	10	1	1	\$23.33	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1
Existing	226	Single Pane to Double Pane with Gas	home	sq.ft.	\$1.03	\$0.00	\$0.00	\$1.03	1	10	1	1	\$1.03	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2
Existing	227	Windows - Double-Glazed to Energy Star	home	sq.ft.	\$1.72	\$0.00	\$0.00	\$1.72	1	10	1	1	\$1.72	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1

APPENDIX E

RESIDENTIAL

MEASURE INPUT DATA

MEASURE COSTS																						
Segment	Measure #	Measure Description	Savings Units	Cost Units	Unit Equipment Cost	Unit Labor Cost	NPV of O & M Cost	Implementation Cost Factor	Cost per Savings Unit	Service Life	Full = 1			Relative Energy Reduction Factors				SHOF	End Use	Implementation Type		
											Initial	Replace	Unit Cost	SON	SOFF	WON	WOFF				SHON	1=1 time
Existing	300	Base Room Heat	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	1	15	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	2	
Existing	301	Basement insulation R-13 (Room Heater)	home	sq.ft.	\$0.69	\$0.00	\$0.00	\$0.69	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	302	Ceiling R-0 to R-38 Insulation	home	sq.ft.	\$0.51	\$0.20	\$0.00	\$0.71	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	303	Ceiling R-0 to R-49 Insulation	home	sq.ft.	\$0.66	\$0.20	\$0.00	\$0.86	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	304	Ceiling R-11 to R-38 Insulation	home	sq.ft.	\$0.36	\$0.20	\$0.00	\$0.56	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	305	Ceiling R-11 to R-49 Insulation	home	sq.ft.	\$0.25	\$0.20	\$0.00	\$0.45	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	306	Ceiling R-19 to R-38 Insulation	home	sq.ft.	\$0.25	\$0.20	\$0.00	\$0.45	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	307	Ceiling R-19 to R-49 Insulation	home	sq.ft.	\$0.40	\$0.20	\$0.00	\$0.60	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	308	Comprehensive Shell Air Sealing - Inf. Reduction	home	Home	\$156.25	\$0.00	\$0.00	\$156.25	1	10	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	309	Crawlspace insulation	home	sq.ft.	\$0.69	\$0.00	\$0.00	\$0.69	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	310	ENERGY STAR Programmable Thermostat	home	unit	\$70.21	\$42.13	\$0.00	\$112.34	1	12	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	311	Floor R-0 to R-19 Insulation-Batts	home	sq.ft.	\$0.51	\$0.53	\$0.00	\$1.04	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	312	Floor R-0 to R-30 Insulation-Batts	home	sq.ft.	\$0.78	\$0.61	\$0.00	\$1.39	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	313	Floor R-19 to R-30 Insulation-Batts	home	sq.ft.	\$0.40	\$0.61	\$0.00	\$1.01	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	314	Heater Diagnostic Testing, Repair and Maintenance	home	unit	\$123.00	\$0.00	\$0.00	\$123.00	1	10	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	315	High efficiency gas room heater	home	unit	\$318.05	\$0.00	\$0.00	\$318.05	1	10	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	2	
Existing	316	Radiant Barrier	home	unit	\$0.30	\$0.10	\$0.00	\$0.40	1	25	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	317	Plastic Film (1-2 yr measure, window kit)	home	sq.ft.	\$0.27	\$0.00	\$0.00	\$0.27	1	1	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	318	Self Install Weatherization	home	home	\$4.56	\$0.00	\$0.00	\$4.56	1	5	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	319	Slab insulation R-0 to R-5 (4 ft)	home	sq.ft.	\$0.19	\$0.35	\$0.00	\$0.54	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	320	Wall 2x4 R-0 to Blow-In R-13 Insulation	home	sq.ft.	\$0.18	\$0.35	\$0.00	\$0.53	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	321	Windows - Add Storm Windows to Double-Glazed	home	sq.ft.	\$7.33	\$16.00	\$0.00	\$23.33	1	10	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	322	Windows - Add Storm Windows to Single-Glazed	home	sq.ft.	\$7.33	\$16.00	\$0.00	\$23.33	1	10	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	1	
Existing	323	Single Pane to Double Pane with Gas	home	sq.ft.	\$1.03	\$0.00	\$0.00	\$1.03	1	10	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	2	
Existing	324	Windows - Double-Glazed to Energy Star	home	sq.ft.	\$1.72	\$0.00	\$0.00	\$1.72	1	10	1	1	1	1	1.0	1.0	1.0	1.0	1.0	1	2	
Existing	400	Base Water Heating (.58)	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	1	15	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	2	
Existing	401	Commercial Clotheswasher (MEF = 2.0)	home	unit	\$10.00	\$0.00	\$0.00	\$10.00	1	15	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	2	
Existing	402	Condensing Gas Storage water heater (>0.8 EF)	home	unit	\$750.00	\$0.00	\$0.00	\$750.00	1	15	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	2	
Existing	403	Drain Water Heat Recovery (GFX)	home	unit	\$742.00	\$0.00	\$0.00	\$742.00	1	30	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	1	
Existing	404	2011 Energy Star Clotheswasher (MEF 2.00)	home	unit	\$166.24	\$0.00	\$0.00	\$166.24	1	14	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	1	
Existing	405	Energy Star CW CEE Tier 3 (MEF=2.20)	home	unit	\$393.16	\$0.00	\$0.00	\$393.16	1	14	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	1	
Existing	406	Energy Star Dishwasher (EF=0.68)	home	unit	\$143.22	\$0.00	\$0.00	\$143.22	1	13	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	1	
Existing	407	CEE Tier 2 DW (EF=0.72)	home	unit	\$222.56	\$0.00	\$0.00	\$222.56	1	13	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	1	
Existing	408	Energy Star Water Heater (EF = .67)	home	unit	\$107.07	\$0.00	\$0.00	\$107.07	1	15	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	2	
Existing	409	Faucet Aerators	home	unit	\$7.12	\$0.00	\$0.00	\$7.12	1	10	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	1	
Existing	410	Low-Flow Showerheads	home	unit	\$22.95	\$0.00	\$0.00	\$22.95	1	10	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	1	
Existing	411	Pipe Wrap	home	linear ft	\$0.37	\$0.00	\$0.00	\$0.37	1	15	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	1	
Existing	412	Solar Water Heater	home	unit	\$2,650.00	\$1,850.00	\$0.00	\$4,500.00	1	15	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	2	
Existing	413	0.82 EF Tankless Hot Water Heater Energy Star Standard	home	unit	\$370.64	\$250.90	\$0.00	\$621.54	1	20	1	1	1	1	1.0	1.0	1.0	1.0	1.0	2	2	
Existing	500	Base Clothes Drying	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	1	18	1	1	1	1	1.0	1.0	1.0	1.0	1.0	3	2	
Existing	501	Efficient Clothes Dryer (EF = 2.67)	home	unit	\$50.00	\$0.00	\$0.00	\$50.00	1	18	1	1	1	1	1.0	1.0	1.0	1.0	1.0	3	2	
Existing	600	Base Cooking	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	1	15	1	1	1	1	1.0	1.0	1.0	1.0	1.0	4	2	
Existing	601	Convection Oven	home	unit	\$204.00	\$0.00	\$0.00	\$204.00	1	15	1	1	1	1	1.0	1.0	1.0	1.0	1.0	4	2	
Existing	602	EE Gas Range	home	unit	\$100.00	\$0.00	\$0.00	\$100.00	1	15	1	1	1	1	1.0	1.0	1.0	1.0	1.0	4	2	
Existing	700	Base Other	home	unit	\$0.00	\$0.00	\$0.00	\$0.00	1	6	1	1	1	1	1.0	1.0	1.0	1.0	1.0	5	2	
Existing	800	Base House Use	home	home	\$0.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1.0	1.0	1.0	1.0	1.0	6	2	
Existing	801	Conservation- Opower	home	home	\$2.95	\$0.00	\$0.00	\$2.95	1	1	1	1	1	1	1.0	1.0	1.0	1.0	1.0	6	2	

KEMA

Segment	Measure #	Measure Description	Applicability Factor			Incomplete Factor			Feasibility Factor			Energy Savings			UEC Adjustment			Technology Saturation		
			Single Family	Multi-Family	Single Family LI	Single Family	Multi-Family	Single Family LI	Single Family	Multi-Family	Single Family LI	Single Family	Multi-Family	Single Family LI	Single Family	Multi-Family	Single Family LI	Single Family	Multi-Family	Single Family LI
Existing	100	Base Furnace	76.5%	76.5%	76.5%	76.5%	100%	100%	100%	100%	100%	0%	0%	0%	100.0%	100.0%	100.0%	1.0	1.0	1.0
Existing	101	Basement insulation R-13 (Furnace)	52.8%	52.8%	38.2%	76.5%	69%	69%	65%	65%	65%	18%	18%	18%	100.0%	100.0%	100.0%	1,251.7	374.0	1,046.9
Existing	102	Ceiling R-0 to R-38 Insulation	76.5%	76.5%	76.5%	76.5%	4%	4%	33%	33%	33%	25%	25%	25%	100.0%	100.0%	100.0%	2,150.9	552.3	1,659.4
Existing	103	Ceiling R-0 to R-49 Insulation	76.5%	76.5%	76.5%	76.5%	4%	4%	33%	33%	33%	27%	27%	27%	100.0%	100.0%	100.0%	2,150.9	552.3	1,659.4
Existing	104	Ceiling R-11 to R-38 Insulation	76.5%	76.5%	76.5%	76.5%	14%	14%	50%	50%	50%	9%	9%	9%	100.0%	100.0%	100.0%	2,150.9	552.3	1,659.4
Existing	105	Ceiling R-11 to R-49 Insulation	76.5%	76.5%	76.5%	76.5%	13%	13%	50%	50%	50%	13%	13%	13%	100.0%	100.0%	100.0%	2,150.9	552.3	1,659.4
Existing	106	Ceiling R-19 to R-38 Insulation	76.5%	76.5%	76.5%	76.5%	18%	18%	83%	83%	83%	4%	4%	4%	100.0%	100.0%	100.0%	2,150.9	552.3	1,659.4
Existing	107	Ceiling R-19 to R-49 Insulation	76.5%	76.5%	76.5%	76.5%	18%	18%	83%	83%	83%	5%	5%	5%	100.0%	100.0%	100.0%	2,150.9	552.3	1,659.4
Existing	108	Comprehensive Shell Air Sealing - Inf. Reduction	76.5%	76.5%	76.5%	76.5%	70%	70%	75%	75%	75%	6%	6%	6%	100.0%	100.0%	100.0%	1.0	1.0	1.0
Existing	109	Comprehensive Shell Air Sealing - 94 AFUE (Tier 2)	76.5%	76.5%	76.5%	76.5%	74%	74%	89%	89%	89%	17%	17%	17%	95.0%	95.0%	95.0%	2,278.3	767.2	1,974.5
Existing	110	Crawlspace insulation	76.5%	76.5%	76.5%	76.5%	32%	32%	50%	50%	50%	18%	18%	18%	100.0%	100.0%	100.0%	110.7	60.2	85.4
Existing	111	Duct insulation	76.5%	76.5%	76.5%	76.5%	65%	65%	100%	100%	100%	4%	4%	4%	100.0%	100.0%	100.0%	1.0	1.0	1.0
Existing	112	Duct Repair and Sealing	76.5%	76.5%	76.5%	76.5%	95%	95%	100%	100%	100%	100%	100%	100%	100.0%	100.0%	100.0%	1.0	1.0	1.0
Existing	113	ENERGY STAR Programmable Thermostat	76.5%	76.5%	76.5%	76.5%	36%	50%	36%	100%	100%	7%	7%	7%	100.0%	100.0%	100.0%	2,278.3	767.2	1,974.5
Existing	114	Floor R-0 to R-19 Insulation-Batts	22.9%	22.9%	76.5%	76.5%	97%	55%	97%	55%	50%	37%	37%	10%	100.0%	100.0%	100.0%	2,278.3	767.2	1,974.5
Existing	115	Floor R-0 to R-30 Insulation-Batts	22.9%	22.9%	76.5%	76.5%	97%	55%	97%	55%	50%	37%	37%	10%	100.0%	100.0%	100.0%	2,278.3	767.2	1,974.5
Existing	116	Floor R-19 to R-30 Insulation-Batts	22.9%	22.9%	76.5%	76.5%	3%	8%	3%	8%	50%	20%	20%	2%	100.0%	100.0%	100.0%	1.0	1.0	1.0
Existing	117	Furnace controls	76.5%	76.5%	76.5%	76.5%	100%	100%	100%	100%	100%	100%	100%	100%	100.0%	100.0%	100.0%	1.0	1.0	1.0
Existing	118	Furnace Diagnostic Testing, Repair and Maintenance	76.5%	76.5%	76.5%	76.5%	30%	30%	100%	100%	100%	2%	2%	2%	100.0%	100.0%	100.0%	304.1	114.0	168.8
Existing	119	Plastic Film (1-2 yr measure, window kt)	76.5%	76.5%	76.5%	76.5%	100%	100%	100%	100%	100%	80%	80%	80%	100.0%	100.0%	100.0%	1,365.5	0.0	1,326.9
Existing	120	Radiant Barrier	38.7%	35.2%	76.5%	76.5%	62%	62%	100%	100%	100%	7%	7%	7%	100.0%	100.0%	100.0%	1.0	1.0	1.0
Existing	121	Self Initial Weatherization	76.5%	76.5%	76.5%	76.5%	77%	77%	100%	100%	100%	100%	100%	100%	100.0%	100.0%	100.0%	2,188.7	1,177.5	1,821.9
Existing	122	Slab insulation R-0 to R-5 (4 ft)	-52.8%	22.9%	-38.2%	76.5%	9%	12%	80%	40%	63%	9%	9%	9%	100.0%	100.0%	100.0%	1,251.7	374.0	1,046.9
Existing	123	Wall 2x4 R-0 to Blow-In R-13 Insulation	76.5%	76.5%	76.5%	76.5%	26%	32%	26%	100%	100%	5%	5%	5%	100.0%	100.0%	100.0%	2,188.7	1,177.5	1,821.9
Existing	124	Windows - Add Storm Windows to Double-Glazed	76.5%	76.5%	76.5%	76.5%	44%	57%	45%	100%	100%	13%	13%	13%	100.0%	100.0%	100.0%	352.6	64.6	272.0
Existing	125	Windows - Add Storm Windows to Single-Glazed	76.5%	76.5%	76.5%	76.5%	44%	57%	45%	100%	100%	13%	13%	13%	100.0%	100.0%	100.0%	352.6	64.6	272.0
Existing	126	Single Pane to Double Pane with Gas	76.5%	76.5%	76.5%	76.5%	35%	33%	40%	100%	100%	32%	32%	32%	100.0%	100.0%	100.0%	352.6	64.6	272.0
Existing	127	Windows - Double-Glazed to Energy Star	76.5%	76.5%	76.5%	76.5%	49%	64%	51%	100%	100%	10%	10%	10%	100.0%	100.0%	100.0%	352.6	64.6	272.0
Existing	200	Base Boiler	0.8%	0.8%	0.8%	0.8%	100%	100%	100%	100%	100%	0%	0%	0%	100.0%	100.0%	100.0%	1.0	1.0	1.0
Existing	201	Basement insulation R-13 (Boiler)	0.5%	0.5%	0.4%	0.8%	69%	69%	50%	50%	50%	18%	18%	18%	100.0%	100.0%	100.0%	1,251.7	374.0	1,046.9
Existing	202	Boiler controls	0.8%	0.8%	0.8%	0.8%	100%	100%	100%	100%	100%	11%	11%	11%	100.0%	100.0%	100.0%	1.0	1.0	1.0
Existing	203	Boiler Diagnostic Testing, Repair and Maintenance	0.8%	0.8%	0.8%	0.8%	30%	30%	100%	100%	100%	25%	25%	25%	100.0%	100.0%	100.0%	2,150.9	552.3	1,659.4
Existing	204	Ceiling R-0 to R-38 Insulation	0.8%	0.8%	0.8%	0.8%	4%	4%	33%	33%	33%	27%	27%	27%	100.0%	100.0%	100.0%	2,150.9	552.3	1,659.4
Existing	205	Ceiling R-0 to R-49 Insulation	0.8%	0.8%	0.8%	0.8%	4%	4%	33%	33%	33%	27%	27%	27%	100.0%	100.0%	100.0%	2,150.9	552.3	1,659.4
Existing	206	Ceiling R-11 to R-38 Insulation	0.8%	0.8%	0.8%	0.8%	14%	14%	50%	50%	50%	9%	9%	9%	100.0%	100.0%	100.0%	2,150.9	552.3	1,659.4
Existing	207	Ceiling R-11 to R-49 Insulation	0.8%	0.8%	0.8%	0.8%	13%	13%	50%	50%	50%	13%	13%	13%	100.0%	100.0%	100.0%	2,150.9	552.3	1,659.4
Existing	208	Ceiling R-19 to R-38 Insulation	0.8%	0.8%	0.8%	0.8%	18%	18%	83%	83%	83%	4%	4%	4%	100.0%	100.0%	100.0%	2,150.9	552.3	1,659.4
Existing	209	Ceiling R-19 to R-49 Insulation	0.8%	0.8%	0.8%	0.8%	18%	18%	83%	83%	83%	5%	5%	5%	100.0%	100.0%	100.0%	2,150.9	552.3	1,659.4
Existing	210	Comprehensive Shell Air Sealing - Inf. Reduction	0.8%	0.8%	0.8%	0.8%	70%	70%	75%	75%	75%	6%	6%	6%	100.0%	100.0%	100.0%	1.0	1.0	1.0
Existing	211	Crawlspace insulation	0.8%	0.8%	0.8%	0.8%	65%	32%	50%	50%	50%	18%	18%	18%	100.0%	100.0%	100.0%	2,278.3	767.2	1,974.5
Existing	212	ENERGY STAR Programmable Thermostat	0.8%	0.8%	0.8%	0.8%	36%	50%	36%	100%	100%	7%	7%	7%	100.0%	100.0%	100.0%	1.0	1.0	1.0
Existing	213	Floor R-0 to R-19 Insulation-Batts	0.2%	0.2%	0.8%	0.8%	97%	55%	97%	55%	50%	37%	37%	10%	100.0%	100.0%	100.0%	2,278.3	767.2	1,974.5
Existing	214	Floor R-0 to R-30 Insulation-Batts	0.2%	0.2%	0.8%	0.8%	97%	55%	97%	55%	50%	37%	37%	10%	100.0%	100.0%	100.0%	2,278.3	767.2	1,974.5
Existing	215	Floor R-19 to R-30 Insulation-Batts	0.2%	0.2%	0.8%	0.8%	3%	8%	3%	8%	50%	20%	20%	2%	100.0%	100.0%	100.0%	2,278.3	767.2	1,974.5
Existing	216	High Efficiency Condensing Boiler (AFUE = 90%)	0.8%	0.8%	0.8%	0.8%	80%	80%	95%	95%	95%	11%	11%	11%	95.0%	95.0%	95.0%	96.0	109.0	84.0
Existing	217	Pipe Insulation (Boiler)	0.8%	0.8%	0.8%	0.8%	100%	100%	100%	100%	100%	3%	3%	3%	100.0%	100.0%	100.0%	304.1	114.0	168.8
Existing	218	Plastic Film (1-2 yr measure, window kt)	0.8%	0.8%	0.8%	0.8%	100%	100%	100%	100%	100%	80%	80%	80%	100.0%	100.0%	100.0%	1,365.5	0.0	1,326.9
Existing	219	Radiant Barrier	0.4%	0.3%	0.8%	0.8%	100%	100%	100%	100%	100%	7%	7%	7%	100.0%	100.0%	100.0%	1.0	1.0	1.0
Existing	220	Self Initial Weatherization	0.8%	0.8%	0.8%	0.8%	62%	62%	100%	100%	100%	2%	2%	2%	100.0%	100.0%	100.0%	1.0	1.0	1.0

Segment	Measure #	Measure Description	Applicability Factor			Incomplete Factor			Feasibility Factor			Energy Savings			UEC Adjustment			Technology Saturation				
			Single Family	Multi-Family	Multi-Family LI	Single Family	Multi-Family	Multi-Family LI	Single Family	Multi-Family	Multi-Family LI	Single Family	Multi-Family	Multi-Family LI	Single Family	Multi-Family	Multi-Family LI	Single Family	Multi-Family	Multi-Family LI		
Existing	221	Slab Insulation R-0 to R-5 (4 ft)	-0.5%	0.2%	-0.4%	0.8%	77%	77%	100%	100%	100%	100%	9%	9%	9%	100.0%	100.0%	100.0%	1,251.7	374.0	1,046.9	573.6
Existing	222	Stack Damper	0.8%	0.8%	0.8%	0.8%	100%	100%	100%	100%	100%	100%	4%	4%	4%	100%	100%	100%	2,188.7	1,177.5	1,821.9	1,191.4
Existing	223	Windows - Add Storm Windows to Double-Glazed	0.8%	0.8%	0.8%	0.8%	9%	12%	9%	80%	40%	63%	9%	9%	9%	100%	100%	100%	352.6	64.6	272.0	68.1
Existing	224	Windows - Add Storm Windows to Single-Glazed	0.8%	0.8%	0.8%	0.8%	28%	32%	35%	100%	100%	100%	5%	5%	5%	100%	100%	100%	352.6	64.6	272.0	68.1
Existing	225	Single Pane to Double Pane with Gas	0.8%	0.8%	0.8%	0.8%	44%	57%	45%	100%	100%	100%	13%	13%	13%	100%	100%	100%	352.6	64.6	272.0	68.1
Existing	226	Single Pane to Double Pane with Gas	0.8%	0.8%	0.8%	0.8%	33%	44%	40%	100%	100%	100%	32%	32%	32%	100%	100%	100%	352.6	64.6	272.0	68.1
Existing	227	Windows - Double-Glazed to Energy Star	0.8%	0.8%	0.8%	0.8%	48%	64%	51%	100%	100%	100%	10%	6%	10%	100%	100%	100%	352.6	64.6	272.0	68.1
Existing	300	Base Room Heat	2.0%	2.0%	2.0%	2.0%	100%	100%	100%	100%	100%	100%	0%	0%	0%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	301	Basement Insulation R-13 (Room Heater)	1.3%	1.3%	1.0%	1.0%	57%	69%	69%	50%	50%	50%	18%	18%	18%	100%	100%	100%	1,251.7	374.0	1,046.9	573.6
Existing	302	Ceiling R-0 to R-38 Insulation	2.0%	2.0%	2.0%	2.0%	4%	4%	4%	33%	33%	33%	25%	25%	25%	100%	100%	100%	2,150.9	552.3	1,659.4	582.2
Existing	303	Ceiling R-0 to R-49 Insulation	2.0%	2.0%	2.0%	2.0%	4%	4%	4%	33%	33%	33%	27%	27%	27%	100%	100%	100%	2,150.9	552.3	1,659.4	582.2
Existing	304	Ceiling R-11 to R-38 Insulation	2.0%	2.0%	2.0%	2.0%	14%	14%	14%	50%	50%	50%	9%	9%	9%	100%	100%	100%	2,150.9	552.3	1,659.4	582.2
Existing	305	Ceiling R-11 to R-49 Insulation	2.0%	2.0%	2.0%	2.0%	13%	13%	13%	50%	50%	50%	13%	13%	13%	100%	100%	100%	2,150.9	552.3	1,659.4	582.2
Existing	306	Ceiling R-19 to R-49 Insulation	2.0%	2.0%	2.0%	2.0%	18%	18%	18%	83%	83%	83%	4%	4%	4%	100%	100%	100%	2,150.9	552.3	1,659.4	582.2
Existing	307	Ceiling R-19 to R-49 Insulation	2.0%	2.0%	2.0%	2.0%	18%	18%	18%	83%	83%	83%	5%	5%	5%	100%	100%	100%	2,150.9	552.3	1,659.4	582.2
Existing	308	Comprehensive Shell Air Sealing - Inf. Reduction	2.0%	2.0%	2.0%	2.0%	70%	70%	70%	100%	100%	100%	6%	6%	6%	100%	100%	100%	2,278.3	767.2	1,974.5	824.6
Existing	309	Crawspace Insulation	2.0%	2.0%	2.0%	2.0%	65%	32%	65%	50%	50%	50%	18%	18%	18%	100%	100%	100%	2,278.3	767.2	1,974.5	824.6
Existing	310	ENERGY STAR Programmable Thermostat	0.6%	0.6%	2.0%	2.0%	97%	55%	97%	55%	50%	37%	7%	7%	7%	100%	100%	100%	2,278.3	767.2	1,974.5	824.6
Existing	311	Floor R-0 to R-19 Insulation-Batts	0.6%	0.6%	2.0%	2.0%	97%	55%	97%	55%	50%	20%	10%	10%	10%	100%	100%	100%	2,278.3	767.2	1,974.5	824.6
Existing	312	Floor R-0 to R-30 Insulation-Batts	0.6%	0.6%	2.0%	2.0%	97%	55%	97%	55%	50%	20%	12%	12%	12%	100%	100%	100%	2,278.3	767.2	1,974.5	824.6
Existing	313	Floor R-19 to R-30 Insulation-Batts	0.6%	0.6%	2.0%	2.0%	3%	8%	3%	8%	37%	2%	2%	2%	2%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	314	Heater Diagnostic Testing, Repair and Maintenance	2.0%	2.0%	2.0%	2.0%	30%	30%	30%	100%	100%	100%	10%	10%	10%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	315	High efficiency gas room heater	2.0%	2.0%	2.0%	2.0%	97%	98%	97%	85%	95%	95%	21%	21%	21%	100%	100%	100%	304.1	114.0	168.8	178.6
Existing	316	Radiant Barrier	2.0%	2.0%	2.0%	2.0%	100%	100%	100%	80%	30%	80%	7%	7%	7%	100%	100%	100%	1,366.5	1.0	1.0	1.0
Existing	317	Plastic Film (1-2 yr measure, window kit)	1.0%	0.9%	2.0%	2.0%	100%	100%	100%	100%	100%	100%	2%	2%	2%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	318	Self Install Weatherization	2.0%	2.0%	2.0%	2.0%	62%	62%	62%	100%	100%	100%	2%	2%	2%	100%	100%	100%	1,251.7	374.0	1,046.9	573.6
Existing	319	Wall 2x4 R-0 to Blow-In R-13 Insulation	-1.3%	0.6%	-1.0%	2.0%	77%	77%	77%	100%	100%	100%	9%	9%	9%	100%	100%	100%	2,188.7	1,177.5	1,821.9	1,191.4
Existing	320	Windows - Add Storm Windows to Double-Glazed	2.0%	2.0%	2.0%	2.0%	28%	32%	35%	100%	100%	100%	13%	13%	13%	100%	100%	100%	352.6	64.6	272.0	68.1
Existing	321	Windows - Add Storm Windows to Single-Glazed	2.0%	2.0%	2.0%	2.0%	44%	57%	45%	100%	100%	100%	32%	32%	32%	100%	100%	100%	352.6	64.6	272.0	68.1
Existing	322	Single Pane to Double Pane with Gas	2.0%	2.0%	2.0%	2.0%	35%	44%	40%	100%	100%	100%	10%	6%	10%	100%	100%	100%	352.6	64.6	272.0	68.1
Existing	323	Single Pane to Double Pane with Gas	2.0%	2.0%	2.0%	2.0%	48%	64%	51%	100%	100%	100%	10%	6%	10%	100%	100%	100%	352.6	64.6	272.0	68.1
Existing	324	Windows - Double-Glazed to Energy Star	2.0%	2.0%	2.0%	2.0%	100%	100%	100%	100%	100%	100%	0%	0%	0%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	400	Base Water Heating (58)	76.5%	76.5%	76.5%	76.5%	100%	100%	100%	100%	100%	100%	33%	36%	36%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	401	Commercial Clotheswasher (MEF = 2.0)	76.5%	17.6%	76.5%	76.5%	0%	80%	0%	100%	0%	100%	0%	0%	0%	100%	100%	100%	3.2	1.8	2.1	1.9
Existing	402	Condensing Gas Storage water heater (>0.8 EF)	76.5%	76.5%	76.5%	76.5%	98%	100%	98%	100%	50%	38%	38%	38%	38%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	403	Drain Water Heat Recovery (GFX)	76.5%	76.5%	76.5%	76.5%	99%	99%	99%	100%	10%	5%	9%	5%	5%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	404	2011 Energy Star Clotheswasher (MEF 2.00)	74.9%	52.0%	74.9%	52.0%	84%	84%	84%	100%	100%	5%	5%	5%	5%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	405	Energy Star CW CEE Tier 3 (MEF=2.20)	74.9%	52.0%	74.9%	52.0%	84%	84%	84%	100%	100%	5%	5%	5%	5%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	406	Energy Star Dishwasher (EF=0.68)	58.9%	57.3%	40.3%	24.1%	83%	75%	83%	75%	100%	2%	2%	2%	2%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	407	CEE Tier 2 DW (EF=0.72)	58.9%	57.3%	40.3%	24.1%	99%	99%	99%	99%	100%	11%	11%	11%	11%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	408	Energy Star Water Heater (EF = .67)	76.5%	76.5%	76.5%	76.5%	80%	80%	80%	100%	100%	100%	8%	8%	8%	100%	100%	100%	3.2	1.8	2.1	1.9
Existing	409	Faucet Aerators	76.5%	76.5%	76.5%	76.5%	60%	51%	80%	68%	100%	4%	4%	4%	4%	100%	100%	100%	2.1	1.5	1.5	1.4
Existing	410	Low-Flow Showerheads	76.5%	76.5%	76.5%	76.5%	39%	33%	46%	46%	100%	5%	5%	5%	5%	100%	100%	100%	8.0	8.0	8.0	8.0
Existing	411	Pipe Wrap	76.5%	76.5%	76.5%	76.5%	39%	78%	49%	49%	85%	5%	5%	5%	5%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	412	Solar Water Heater	76.5%	76.5%	76.5%	76.5%	99%	99%	99%	99%	75%	28%	28%	28%	28%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	413	0.82 EF Tankless Hot Water Heater Energy Star Standard	76.5%	76.5%	76.5%	76.5%	99%	99%	99%	99%	75%	0%	0%	0%	0%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	500	Base Clothes Drying	11.9%	11.9%	11.9%	11.9%	100%	100%	100%	100%	100%	0%	0%	0%	0%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	501	Efficient Clothes Dryer (EF = 2.67)	11.9%	11.9%	11.9%	11.9%	10%	10%	10%	100%	100%	15%	15%	15%	15%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	600	Base Cooking	35.6%	34.4%	45.6%	39.1%	100%	100%	100%	100%	100%	0%	0%	0%	0%	100%	100%	100%	1.0	1.0	1.0	1.0
Existing	601	Convection Oven	35.6%	34.4%	45.6%	39.1%	99.0%	99.0%	99.0%	100.0%	100.0%	33.00%	33.00%	33.00%	33.00%	100.0%	100.0%	100.0%	1.0	1.0	1.0	1.0
Existing	602	EE Gas Range	35.6%	34.4%	45.6%	39.1%	99.0%	99.0%	99.0%	100.0%	100.0%	10.00%	10.00%	10.00%	10.00%	100.0%	100.0%	100.0%	1.0	1.0	1.0	1.0
Existing	700	Base Other	4.7%	1.5%	2.5%	1.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.00%	0.00%	0.00%	0.00%	100.0%	100.0%	100.0%	1.0	1.0	1.0	1.0
Existing	800	Base House Use	100%	100%	100%	100%	100.0%	100.0%	100.0%	100.0%	100.0%	1.00%	1.00%	1.00%	1.00%	100.0%	100.0%	100.0%	1.0	1.0	1.0	1.0
Existing	801	Conservation- Opower	100%	100%	100%	100%	100.0%	100.0%	100.0%	100.0%	100.0%	1.00%	1.00%	1.00%	1.00%	100.0%	100.0%	100.0%	1.0	1.0	1.0	1.0

DSM TECHNOLOGY INPUT TABLES

UTILITY:	Missouri	BATCH:	1
SECTOR:	COM	ANALYSIS:	Basic
SEGMENT:	Existing	VINTAGE:	G

APPENDIX E

COMMERCIAL

MEASURE INPUT DATA

MEASURE COSTS																									
Segment	Measure #	Measure Description	Savings Units	Cost Units	Unit Equipment Cost	Unit Labor Cost	NPV of Lifetime O & M Cost	Implementation Cost Factor	Cost Units per Savings Unit	Service Life	Full = 1 Incr. = 0	Replace Initial Cost	Full Unit Cost	Relative Energy Reduction Factors						Implementation Type					
														SON	SOFF	WON	WOFF	SHON	SHOF	End Use	1= time	2=ROB			
Existing	100	Base Cooking - Fryer	unit	\$/unit	\$ -	\$0.00	\$0.00	\$0.00	1	12	1	\$ -	1	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
Existing	101	Energy Star Fryer	unit	\$/unit	\$1,100.00	\$0.00	\$0.00	\$1,100.00	1	12	0	1	\$ 1,100.00	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
Existing	110	Base Cooking - Steamer	unit	\$/unit	\$ -	\$0.00	\$0.00	\$0.00	1	10	1	\$ -	1	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
Existing	111	Energy Star Steamer	unit	\$/unit	\$2,075.00	\$0.00	\$0.00	\$2,075.00	1	10	0	1	\$ 2,075.00	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
Existing	120	Base Cooking - Convection Oven	unit	\$/unit	\$ -	\$0.00	\$0.00	\$0.00	1	12	1	\$ -	1	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
Existing	121	High-Efficiency Convection Oven	unit	\$/unit	\$1,571.00	\$0.00	\$0.00	\$1,571.00	1	12	0	1	\$ 1,571.00	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
Existing	130	Base Cooking - Griddle	unit	\$/unit	\$ -	\$0.00	\$0.00	\$0.00	1	12	1	\$ -	1	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
Existing	131	High-Efficiency Griddle	unit	\$/unit	\$1,165.00	\$0.00	\$0.00	\$1,165.00	1	12	0	1	\$ 1,165.00	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
Existing	140	Base Cooking - Range	unit	\$/unit	\$ -	\$0.00	\$0.00	\$0.00	1	12	1	\$ -	1	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
Existing	141	High-Efficiency Range	unit	\$/unit	\$2,493.00	\$0.00	\$0.00	\$2,493.00	1	12	0	1	\$ 2,493.00	1.00	1.00	1.00	1.00	1.00	1.00	3	2				
Existing	200	Base Heating	sq ft	\$/kBtuhr	\$ -	\$0.00	\$0.00	\$0.00	1	20	1	\$ -	1	1.00	1.00	1.00	1.00	1.00	1.00	1	2				
Existing	201	High Efficiency Windows (Multiple Glazed, Low Emissivity)	sq ft	\$/sf-window	\$ 6.99	\$0.00	\$0.00	\$6.99	1	20	0	1	\$ 6.99	1.00	1.00	1.00	1.00	1.00	1.00	1	2				
Existing	202	Insulation (ceiling)	sq ft	\$/sf-ceiling	\$ 0.23	\$0.15	\$0.00	\$0.62	1	20	0	1	\$ 0.62	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	203	Insulation (wall)	sq ft	\$/sf-wall	\$ 3.50	\$0.00	\$0.00	\$3.50	1	20	0	1	\$ 3.50	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	206	Duct Repair and Sealing	sq ft	\$/sf building	\$ 0.16	\$0.00	\$0.00	\$0.16	1	18	0	1	\$ 0.16	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	207	Duct Insulation	sq ft	\$/sf insulation	\$ 0.68	\$2.4	\$0.00	\$3.08	1	20	0	1	\$ 3.08	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	209	Insulation of Pipes	sq ft	\$/Lin Ft Pipe	\$ 0.37	\$2.44	\$0.00	\$2.81	1	15	0	1	\$ 2.81	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	212	Boiler Tune-Up	sq ft	\$/boiler	\$ -	\$300.00	\$0.00	\$300.00	1	2	0	1	\$ 300.00	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	216	Clock / Programmable Thermostat	sq ft	\$/sqft	\$ 0.06	\$0.06	\$0.00	\$0.12	1	11	0	1	\$ 0.12	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	218	Installation of Energy Management Systems (EMS)	sq ft	\$/control point	\$ 213.00	\$294.58	\$0.00	\$507.58	1	14	0	1	\$ 507.58	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	219	EMS Optimization	sq ft	\$/sqft	\$ -	\$0.03	\$0.00	\$0.03	1	5	0	1	\$ 0.03	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	221	Heat Recovery from AC	sq ft	\$/CFM	\$ 2.30	\$0.00	\$0.00	\$2.30	1	20	0	1	\$ 2.30	1.00	1.00	1.00	1.00	1.00	1.00	1	2				
Existing	222	Installation of Air Side Heat Recovery Systems	sq ft	\$/O-A CFM	\$ 1.00	\$0.00	\$0.00	\$1.00	1	20	0	1	\$ 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	227	High Efficiency (Power Burner Premium) Furnace 95% efficiency (in situ base=82%)	sq ft	\$/kBtuhr	\$ 14.00	\$0.00	\$0.00	\$14.00	1	20	0	1	\$ 14.00	1.00	1.00	1.00	1.00	1.00	1.00	1	2				
Existing	228	High Efficiency (Power Burner Premium) Boiler 95% efficiency (in situ base=82%)	sq ft	\$/kBtuhr	\$ 14.00	\$0.00	\$0.00	\$14.00	1	20	0	1	\$ 14.00	1.00	1.00	1.00	1.00	1.00	1.00	1	2				
Existing	229	Stack Heat Exchanger	sq ft	(BtuH boiler capax	\$ 1.00	\$0.00	\$0.00	\$1.00	1	20	0	1	\$ 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	230	Condensing unit heaters	sq ft	\$/unit	\$1,325.00	\$0.00	\$0.00	\$1,325.00	1	20	0	1	\$ 1,325.00	1.00	1.00	1.00	1.00	1.00	1.00	1	2				
Existing	231	Radiant heater	sq ft	\$/unit	\$1,938.00	\$0.00	\$0.00	\$1,938.00	1	20	0	1	\$ 1,938.00	1.00	1.00	1.00	1.00	1.00	1.00	1	2				
Existing	232	Hot water temperature reset	sq ft	\$/unit	\$300.00	\$0.00	\$0.00	\$300.00	1	15	0	1	\$ 300.00	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	233	Demand controlled ventilation (DCV)	sq ft	\$/zone	\$700.00	\$0.00	\$0.00	\$700.00	1	10	0	1	\$ 700.00	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	234	Refrigeration heat recovery - space conditioning	sq ft	\$/bdg	\$ -	#####	\$0.00	\$40,000.00	1	15	0	1	\$40,000.00	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	235	Retirocommissioning	sq ft	\$/sqft	\$ -	\$0.06	\$0.00	\$0.06	1	7	0	1	\$ 0.06	1.00	1.00	1.00	1.00	1.00	1.00	1	1				
Existing	300	Base Miscellaneous	sq ft	\$/unit	\$ -	\$0.00	\$0.00	\$0.00	1	10	1	1	\$ -	1.00	1.00	1.00	1.00	1.00	1.00	4	1				
Existing	400	Base Water Heating - high standby loss (as % of load)	sq ft	\$/kBtuhr	\$ -	\$0.00	\$0.00	\$0.00	1	15	1	1	\$ -	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
Existing	401	Hot Water Pipe Insulation	sq ft	\$/Lin Ft Pipe	\$1.59	\$3.63	\$0.00	\$5.22	1	15	0	1	\$ 5.22	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
Existing	402	Demand controlled circulating systems	sq ft	\$/unit	\$65.79	\$165.00	\$0.00	\$230.79	1	15	0	1	\$ 230.79	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
Existing	403	Tankless Water Heater	sq ft	\$/unit	\$950.00	\$0.00	\$0.00	\$950.00	1	20	0	1	\$ 950.00	1.00	1.00	1.00	1.00	1.00	1.00	2	2				
Existing	404	Thermally activated heat pump/chiller	sq ft	\$/kBtuhr	\$5.10	\$4.05	\$0.00	\$9.15	1	15	0	1	\$ 9.15	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
Existing	500	Base Water Heating - low standby loss (as % of load)	sq ft	\$/kBtuhr	\$ -	\$0.00	\$0.00	\$0.00	1	15	1	1	\$ -	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
Existing	501	Hot Water Pipe Insulation	sq ft	\$/Lin Ft Pipe	\$1.59	\$3.63	\$0.00	\$5.22	1	15	0	1	\$ 5.22	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
Existing	502	Demand controlled circulating systems	sq ft	\$/unit	\$65.79	\$165.28	\$0.00	\$231.07	1	15	0	1	\$ 231.07	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
Existing	503	Condensing Water Heater (gas, 95% thermal efficiency)	sq ft	\$/unit	\$1,000.00	\$0.00	\$68.48	\$1,068.48	1	15	0	1	\$ 1,000.00	1.00	1.00	1.00	1.00	1.00	1.00	2	2				
Existing	504	Thermally activated heat pump/chiller	sq ft	\$/kBtuhr	\$5.10	\$4.05	\$0.00	\$9.15	1	15	0	1	\$ 9.15	1.00	1.00	1.00	1.00	1.00	1.00	2	1				
Existing	505	Pre-Rinse Spray Valve	unit	\$/unit	\$10.00	\$0.00	\$0.00	\$10.00	1	5	0	1	\$ 10.00	1.00	1.00	1.00	1.00	1.00	1.00	2	1				

APPENDIX E

COMMERCIAL

MEASURE INPUT DATA

TECHNOLOGY SATURATION

(units/square foot)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	100	Base Cooking - Fryer	0.0001	0.00011	0.00009	0.0001	0.0001	0.0000	0.0000	0.0001	0.0001	0.0001
Existing	101	Energy Star Fryer	0.0001	0.00074	0.00009	0.0001	0.0001	0.0000	0.0000	0.0001	0.0001	0.0001
Existing	110	Base Cooking - Steamer	0.0001	0.00006	0.00008	0.0001	0.0001	0.0000	0.0000	0.0002	0.0000	0.0001
Existing	111	Energy Star Steamer	0.0001	0.00025	0.00008	0.0001	0.0001	0.0000	0.0000	0.0002	0.0000	0.0001
Existing	120	Base Cooking - Convection Oven	0.0002	0.00006	0.00045	0.0001	0.0001	0.0000	0.0000	0.0001	0.0001	0.0001
Existing	121	High-Efficiency Convection Oven	0.0002	0.00012	0.00045	0.0001	0.0001	0.0000	0.0000	0.0001	0.0001	0.0001
Existing	130	Base Cooking - Griddle	0.0000	0.00023	0.00007	0.0002	0.0002	0.0000	0.0000	0.0001	0.0001	0.0001
Existing	131	High-Efficiency Griddle	0.0000	0.00031	0.00007	0.0002	0.0002	0.0000	0.0000	0.0001	0.0001	0.0001
Existing	140	Base Cooking - Range	0.0000	0.00021	0.00043	0.0001	0.0001	0.0000	0.0000	0.0000	0.0002	0.0001
Existing	141	High-Efficiency Range	0.0000	0.00012	0.00043	0.0001	0.0001	0.0000	0.0000	0.0000	0.0002	0.0001
Existing	200	Base Heating	0.0148	0.04074	0.01541	0.0169	0.0124	0.0602	0.0228	0.0200	0.0149	0.0253
Existing	201	High Efficiency Windows (Multiple Glazed, Low Emissivity)	0.0877	0.04600	0.02844	0.0409	0.0171	0.0242	0.0625	0.0201	0.0945	0.0284
Existing	202	Insulation (ceiling)	0.3364	0.54184	0.61843	0.8807	0.7806	0.4369	0.2087	0.2413	0.1856	0.5269
Existing	203	Insulation (wall)	0.1440	0.57729	0.37341	0.3561	0.1874	0.1433	0.1674	0.1097	0.1155	0.1934
Existing	206	Duct Repair and Sealing	1.0000	1.00000	1.00000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	207	Duct Insulation	0.0453	0.07934	0.03109	0.0332	0.0153	0.0170	0.0145	0.0142	0.0315	0.0313
Existing	209	Insulation of Pipes	0.0371	0.07808	0.05070	0.0584	0.0278	0.0294	0.0108	0.0433	0.0244	0.0585
Existing	212	Boiler Tune-Up	0.0000	0.00009	0.00002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Existing	216	Clock / Programmable Thermostat	1.0000	1.00000	1.00000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	218	Installation of Energy Management Systems (EMS)	0.0004	0.00083	0.00073	0.0006	0.0046	0.0007	0.0007	0.0004	0.0005	0.0002
Existing	219	EMS Optimization	1.0000	1.00000	1.00000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	221	Heat Recovery from AC	1.0000	1.00000	1.00000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	222	Installation of Air Side Heat Recovery Systems	1.0000	1.00000	1.00000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	227	High Efficiency (Power Burner/ Premium) Furnace 95%	0.0311	0.10419	0.02722	0.0350	0.0226	0.0780	0.0566	0.0211	0.0503	0.0330
Existing	228	High Efficiency (Power Burner/ Premium) Boiler 95% eff	0.0311	0.10419	0.02722	0.0350	0.0226	0.0780	0.0566	0.0211	0.0503	0.0330
Existing	229	Stack Heat Exchanger	0.0311	0.10419	0.02722	0.0350	0.0226	0.0780	0.0566	0.0211	0.0503	0.0330
Existing	230	Condensing unit heaters	0.0000	0.00000	0.00000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Existing	231	Radiant heater	0.0000	0.00000	0.00000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Existing	232	Hot water temperature reset	0.0000	0.00009	0.00002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Existing	233	Demand controlled ventilation (DCV)	0.0004	0.00036	0.00036	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
Existing	234	Refrigeration heat recovery - space conditioning	0.0000	0.00000	0.00000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Existing	235	Retrocommissioning	1.0000	1.00000	1.00000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Existing	300	Base Miscellaneous	0.0000	0.00000	0.00000	0.0000	0.0000	0.0243	0.0192	0.0041	0.0158	0.3062
Existing	400	Base Water Heating - high standby loss (as % of load)	0.0046	0.02000	0.01452	0.0068	0.0009	0.0204	0.0362	0.0318	0.0279	0.0273
Existing	401	Hot Water Pipe Insulation	0.0010	0.00638	0.00591	0.0023	0.0004	0.0038	0.0063	0.0023	0.0086	0.0023
Existing	402	Demand controlled circulating systems	0.0000	0.00009	0.00002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Existing	403	Tankless Water Heater	0.0001	0.00000	0.00009	0.0001	0.0000	0.0001	0.0000	0.0002	0.0000	0.0001
Existing	404	Thermally activated heat pump/chiller	0.0046	0.02000	0.01452	0.0068	0.0009	0.0204	0.0362	0.0318	0.0279	0.0273
Existing	500	Base Water Heating - low standby loss (as % of load)	0.0046	0.02000	0.01452	0.0068	0.0009	0.0204	0.0362	0.0318	0.0279	0.0273
Existing	501	Hot Water Pipe Insulation	0.0010	0.00638	0.00591	0.0023	0.0004	0.0038	0.0063	0.0023	0.0086	0.0023
Existing	502	Demand controlled circulating systems	0.0000	0.00009	0.00002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Existing	503	Condensing Water Heater (gas, 95% thermal efficiency)	0.0000	0.00063	0.00000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0000
Existing	504	Thermally activated heat pump/chiller	0.0046	0.02000	0.01452	0.0068	0.0009	0.0204	0.0362	0.0318	0.0279	0.0273
Existing	505	Pre-Rinse Spray Valve	0.0001	0.00016	0.00007	0.0001	0.0000	0.0001	0.0000	0.0000	0.0000	0.0001

BASE TECHNOLOGY EUIs**(kWh/square foot)**

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel/Motel	Miscellaneous
Existing	100	Base Cooking - Fryer	0.0060	0.6888	0.0328	0.0809	0.0280	0.0062	0.0136	0.0154	0.0338	0.0150
Existing	110	Base Cooking - Steamer	0.0035	0.4019	0.0192	0.0472	0.0163	0.0036	0.0079	0.0090	0.0197	0.0087
Existing	120	Base Cooking - Convection Oven	0.0009	0.1039	0.0050	0.0122	0.0042	0.0009	0.0020	0.0023	0.0051	0.0023
Existing	130	Base Cooking - Griddle	0.0024	0.2745	0.0131	0.0322	0.0112	0.0025	0.0054	0.0061	0.0135	0.0060
Existing	140	Base Cooking - Range	0.0030	0.3495	0.0167	0.0411	0.0142	0.0031	0.0069	0.0078	0.0171	0.0076
Existing	200	Base Heating	0.6333	0.1505	0.2889	0.2848	0.1883	0.3359	0.1503	0.1484	0.3564	0.2156
Existing	300	Base Miscellaneous	0.2776	0.4355	0.1213	0.1000	0.1125	0.0366	0.1101	0.2106	0.0384	0.7529
Existing	400	Base Water Heating - high standby loss (as % of lo:	0.090	0.224	0.048	0.208	0.020	0.000	0.000	0.000	0.000	0.330
Existing	500	Base Water Heating - low standby loss (as % of loa	0.000	0.281	0.000	0.000	0.000	0.102	0.118	0.245	0.287	0.000

APPENDIX E

COMMERCIAL

MEASURE INPUT DATA

Standards Adjustment Factor (percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	100	Base Cooking - Fryer	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	101	Energy Star Fryer	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	110	Base Cooking - Steamer	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	111	Energy Star Steamer	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	120	Base Cooking - Convection Oven	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	121	High-Efficiency Convection Oven	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	130	Base Cooking - Griddle	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	131	High-Efficiency Griddle	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	140	Base Cooking - Range	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	141	High-Efficiency Range	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	200	Base Heating	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	201	High Efficiency Windows (Multiple Glazed, Low Emissivity)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	202	Insulation (ceiling)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	203	Insulation (wall)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	206	Duct Repair and Sealing	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	207	Duct Insulation	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	209	Insulation of Pipes	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	212	Boiler Tune-Up	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	216	Clock / Programmable Thermostat	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	218	Installation of Energy Management Systems (EMS)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	219	EMS Optimization	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	221	Heat Recovery from AC	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	222	Installation of Air Side Heat Recovery Systems	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	227	High Efficiency (Power Burner/ Premium) Furnace 95% efficiency (in situ base=82%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	228	High Efficiency (Power Burner/ Premium) Boiler 95% efficiency (in situ base=82%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	229	Stack Heat Exchanger	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	230	Condensing unit heaters	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	231	Radiant heater	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	232	Hot water temperature reset	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	233	Demand controlled ventilation (DCV)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	234	Refrigeration heat recovery - space conditioning	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	235	Retrocommissioning	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	300	Base Miscellaneous	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	400	Base Water Heating - high standby loss (as % of load)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	401	Hot Water Pipe Insulation	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	402	Demand controlled circulating systems	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	403	Tankless Water Heater	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	404	Thermally activated heat pump/chiller	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	500	Base Water Heating - low standby loss (as % of load)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	501	Hot Water Pipe Insulation	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	502	Demand controlled circulating systems	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	503	Condensing Water Heater (gas, 95% thermal efficiency)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	504	Thermally activated heat pump/chiller	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	505	Pre-Rinse Spray Valve	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

APPENDIX E

COMMERCIAL

MEASURE INPUT DATA

APPLICABILITY FACTOR

(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	100	Base Cooking - Fryer	21%	88%	0%	66%	0%	48%	0%	34%	36%	6%
Existing	101	Energy Star Fryer	21%	88%	0%	66%	0%	48%	0%	34%	36%	6%
Existing	110	Base Cooking - Steamer	0%	17%	0%	33%	0%	69%	0%	80%	36%	1%
Existing	111	Energy Star Steamer	0%	17%	0%	33%	0%	69%	0%	80%	36%	1%
Existing	120	Base Cooking - Convection Oven	31%	31%	28%	33%	0%	69%	0%	80%	36%	16%
Existing	121	High-Efficiency Convection Oven	31%	31%	28%	33%	0%	69%	0%	80%	36%	16%
Existing	130	Base Cooking - Griddle	21%	73%	0%	0%	0%	42%	0%	34%	36%	8%
Existing	131	High-Efficiency Griddle	21%	73%	0%	0%	0%	42%	0%	34%	36%	8%
Existing	140	Base Cooking - Range	23%	87%	0%	0%	0%	2%	0%	67%	36%	29%
Existing	141	High-Efficiency Range	23%	87%	0%	0%	0%	2%	0%	67%	36%	29%
Existing	200	Base Heating	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	201	High Efficiency Windows (Multiple Glazed, Low Emissivity)	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	202	Insulation (ceiling)	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	203	Insulation (wall)	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	206	Duct Repair and Sealing	17%	22%	40%	67%	29%	12%	5%	8%	4%	30%
Existing	207	Duct Insulation	17%	22%	40%	67%	29%	12%	5%	8%	4%	30%
Existing	209	Insulation of Pipes	35%	10%	0%	0%	10%	46%	88%	49%	23%	25%
Existing	212	Boiler Tune-Up	35%	10%	0%	0%	10%	46%	88%	49%	23%	25%
Existing	216	Clock / Programmable Thermostat	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	218	Installation of Energy Management Systems (EMS)	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	219	EMS Optimization	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	221	Heat Recovery from AC	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	222	Installation of Air Side Heat Recovery Systems	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	227	High Efficiency (Power Burner/ Premium) Furnace 9	17%	22%	40%	67%	29%	12%	5%	8%	4%	30%
Existing	228	High Efficiency (Power Burner/ Premium) Boiler 95%	35%	10%	0%	0%	10%	46%	88%	49%	23%	25%
Existing	229	Stack Heat Exchanger	35%	10%	0%	0%	10%	46%	88%	49%	23%	25%
Existing	230	Condensing unit heaters	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	231	Radiant heater	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	232	Hot water temperature reset	35%	10%	0%	0%	10%	46%	88%	49%	23%	25%
Existing	233	Demand controlled ventilation (DCV)	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	234	Refrigeration heat recovery - space conditioning	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	235	Retrocommissioning	71%	74%	74%	98%	88%	79%	89%	83%	39%	82%
Existing	300	Base Miscellaneous	0%	6%	0%	0%	11%	6%	10%	10%	6%	1%
Existing	400	Base Water Heating - high standby loss (as % of load)	51%	79%	57%	75%	55%	77%	85%	80%	94%	69%
Existing	401	Hot Water Pipe Insulation	51%	79%	57%	75%	55%	77%	85%	80%	94%	69%
Existing	402	Demand controlled circulating systems	51%	79%	57%	75%	55%	77%	85%	80%	94%	69%
Existing	403	Tankless Water Heater	51%	79%	57%	75%	55%	77%	85%	80%	94%	69%
Existing	404	Thermally activated heat pump/chiller	51%	79%	57%	75%	55%	77%	85%	80%	94%	69%
Existing	500	Base Water Heating - low standby loss (as % of load)	51%	79%	57%	75%	55%	77%	85%	80%	94%	69%
Existing	501	Hot Water Pipe Insulation	51%	79%	57%	75%	55%	77%	85%	80%	94%	69%
Existing	502	Demand controlled circulating systems	51%	79%	57%	75%	55%	77%	85%	80%	94%	69%
Existing	503	Condensing Water Heater (gas, 95% thermal efficiency)	51%	79%	57%	75%	55%	77%	85%	80%	94%	69%
Existing	504	Thermally activated heat pump/chiller	51%	79%	57%	75%	55%	77%	85%	80%	94%	69%
Existing	505	Pre-Rinse Spray Valve	51%	79%	57%	75%	55%	77%	85%	80%	94%	69%

APPENDIX E

COMMERCIAL

MEASURE INPUT DATA

INCOMPLETE FACTOR

(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	100	Base Cooking - Fryer	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	101	Energy Star Fryer	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%	93.0%
Existing	110	Base Cooking - Steamer	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	111	Energy Star Steamer	88.0%	88.0%	88.0%	88.0%	88.0%	88.0%	88.0%	88.0%	88.0%	88.0%
Existing	120	Base Cooking - Convection Oven	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	121	High-Efficiency Convection Oven	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
Existing	130	Base Cooking - Griddle	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	131	High-Efficiency Griddle	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
Existing	140	Base Cooking - Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	141	High-Efficiency Range	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
Existing	200	Base Heating	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	201	h Efficiency Windows (Multiple Glazed, Low Emissiv	22.0%	61.0%	47.0%	34.0%	75.0%	28.0%	74.0%	1.0%	17.0%	25.0%
Existing	202	Insulation (ceiling)	15.0%	57.0%	15.0%	0.0%	33.0%	0.0%	0.0%	0.0%	0.0%	19.0%
Existing	203	Insulation (wall)	10.0%	33.3%	24.9%	5.4%	7.3%	12.5%	10.0%	29.7%	33.3%	3.3%
Existing	206	Duct Repair and Sealing	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	207	Duct Insulation	58.5%	56.8%	84.9%	71.5%	62.3%	71.8%	73.8%	70.3%	79.1%	83.4%
Existing	209	Insulation of Pipes	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Existing	212	Boiler Tune-Up	10.0%	10.0%	10.0%	10.0%	10.0%	25.0%	10.0%	10.0%	10.0%	10.0%
Existing	216	Clock / Programmable Thermostat	71.0%	43.0%	49.0%	72.0%	29.0%	80.0%	70.0%	64.0%	60.0%	69.0%
Existing	218	Installation of Energy Management Systems (EMS)	44.0%	98.0%	81.0%	65.0%	97.0%	27.0%	35.0%	68.0%	79.0%	66.0%
Existing	219	EMS Optimization	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Existing	221	Heat Recovery from AC	34.2%	100.0%	100.0%	74.1%	82.9%	100.0%	70.3%	100.0%	100.0%	98.7%
Existing	222	Installation of Air Side Heat Recovery Systems	9.5%	100.0%	100.0%	79.4%	98.3%	99.0%	70.3%	100.0%	100.0%	73.6%
Existing	227	Power Burner/ Premium) Furnace 95% efficiency (in	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
Existing	228	(Power Burner/ Premium) Boiler 95% efficiency (in	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
Existing	229	Stack Heat Exchanger	84.0%	86.0%	85.0%	87.0%	84.0%	84.0%	81.0%	79.0%	85.0%	84.0%
Existing	230	Condensing unit heaters	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%
Existing	231	Radiant heater	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%
Existing	232	Hot water temperature reset	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Existing	233	Demand controlled ventilation (DCV)	33.7%	100.0%	5.1%	100.0%	82.9%	59.0%	0.2%	16.7%	100.0%	99.2%
Existing	234	Refrigeration heat recovery - space conditioning	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%
Existing	235	Retrocommissioning	31.6%	76.9%	5.1%	79.7%	81.2%	69.6%	98.5%	91.1%	15.3%	44.2%
Existing	300	Base Miscellaneous	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	400	ase Water Heating - high standby loss (as % of loac	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Existing	401	Hot Water Pipe Insulation	0.6%	36.0%	1.2%	27.7%	56.0%	6.1%	0.3%	10.7%	2.3%	41.6%
Existing	402	Demand controlled circulating systems	86.1%	100.0%	97.7%	100.0%	100.0%	92.5%	46.9%	92.8%	10.0%	97.1%
Existing	403	Tankless Water Heater	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%
Existing	404	Thermally activated heat pump/chiller	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Existing	500	ase Water Heating - low standby loss (as % of load	100%	100%	100%	100.0%	100%	100.0%	100.0%	100%	100%	100.0%
Existing	501	Hot Water Pipe Insulation	0.6%	36.0%	1.2%	27.7%	56.0%	6.1%	0.3%	10.7%	2.3%	41.6%
Existing	502	Demand controlled circulating systems	86.1%	100.0%	97.7%	100.0%	100.0%	92.5%	46.9%	92.8%	10.0%	97.1%
Existing	503	ondensing Water Heater (gas, 95% thermal efficienc	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
Existing	504	Thermally activated heat pump/chiller	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%
Existing	505	Pre-Rinse Spray Valve	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%

APPENDIX E

COMMERCIAL

MEASURE INPUT DATA

FEASIBILITY FACTOR

(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	100	Base Cooking - Fryer	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	101	Energy Star Fryer	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	110	Base Cooking - Steamer	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	111	Energy Star Steamer	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	120	Base Cooking - Convection Oven	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	121	High-Efficiency Convection Oven	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	130	Base Cooking - Griddle	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	131	High-Efficiency Griddle	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	140	Base Cooking - Range	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	141	High-Efficiency Range	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	200	Base Heating	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Existing	201	High Efficiency Windows (Multiple Glazed, Low Emissivity)	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Existing	202	Insulation (ceiling)	22.0%	100.0%	43.0%	100.0%	100.0%	3.0%	100.0%	100.0%	100.0%	100.0%
Existing	203	Insulation (wall)	48%	37%	2%	0%	29%	0%	0%	100%	100%	26%
Existing	206	Duct Repair and Sealing	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%
Existing	207	Duct Insulation	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Existing	209	Insulation of Pipes	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Existing	212	Boiler Tune-Up	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	216	Clock / Programmable Thermostat	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	218	Installation of Energy Management Systems (EMS)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	219	EMS Optimization	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Existing	221	Heat Recovery from AC	10%	80%	5%	80%	10%	15%	15%	80%	20%	5%
Existing	222	Installation of Air Side Heat Recovery Systems	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Existing	227	High Efficiency (Power Burner/ Premium) Furnace	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Existing	228	High Efficiency (Power Burner/ Premium) Boiler 95+	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Existing	229	Stack Heat Exchanger	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Existing	230	Condensing unit heaters	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%
Existing	231	Radiant heater	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%
Existing	232	Hot water temperature reset	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Existing	233	Demand controlled ventilation (DCV)	79%	92%	70%	100%	100%	100%	100%	100%	100%	91%
Existing	234	Refrigeration heat recovery - space conditioning	0%	0%	0%	6%	0%	0%	0%	0%	0%	0%
Existing	235	Retrocommissioning	42%	0%	11%	12%	31%	39%	56%	69%	74%	31%
Existing	300	Base Miscellaneous	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	400	Base Water Heating - high standby loss (as % of load)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	401	Hot Water Pipe Insulation	32%	5%	74%	18%	76%	8%	12%	19%	32%	2%
Existing	402	Demand controlled circulating systems	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Existing	403	Tankless Water Heater	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Existing	404	Thermally activated heat pump/chiller	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%
Existing	500	Base Water Heating - low standby loss (as % of load)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Existing	501	Hot Water Pipe Insulation	32%	5%	74%	18%	76%	8%	12%	19%	32%	2%
Existing	502	Demand controlled circulating systems	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Existing	503	Condensing Water Heater (gas, 95% thermal efficiency)	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Existing	504	Thermally activated heat pump/chiller	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%
Existing	505	Pre-Rinse Spray Valve	0%	100%	0%	100%	100%	100%	100%	100%	100%	100%

APPENDIX E

COMMERCIAL

MEASURE INPUT DATA

ENERGY SAVINGS

(percent)

Segment	Measure #	Measure Description	Office	Restaurant	Retail	Grocery	Warehousing	School	College	Health Care	Hotel	Miscellaneous
Existing	100	Base Cooking - Fryer	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing	101	Energy Star Fryer	31%	31%	31%	31%	31%	31%	31%	31%	31%	31%
Existing	110	Base Cooking - Steamer	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing	111	Energy Star Steamer	81%	81%	81%	81%	81%	81%	81%	81%	81%	81%
Existing	120	Base Cooking - Convection Oven	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing	121	High-Efficiency Convection Oven	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Existing	130	Base Cooking - Griddle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing	131	High-Efficiency Griddle	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Existing	140	Base Cooking - Range	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing	141	High-Efficiency Range	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%
Existing	200	Base Heating	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing	201	High Efficiency Windows (Multiple Glazed, Low Emissivity)	18%	1%	5%	3%	0%	1%	0%	1%	3%	3%
Existing	202	Insulation (ceiling)	33%	40%	23%	20%	23%	16%	16%	6%	25%	23%
Existing	203	Insulation (wall)	41%	33%	29%	38%	29%	18%	18%	35%	7%	29%
Existing	206	Duct Repair and Sealing	2%	2%	2%	1%	1%	1%	2%	2%	0%	0%
Existing	207	Duct Insulation	2%	0%	2%	0%	0%	0%	4%	2%	2%	2%
Existing	209	Insulation of Pipes	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Existing	212	Boiler Tune-Up	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Existing	216	Clock / Programmable Thermostat	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Existing	218	Installation of Energy Management Systems (EMS)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Existing	219	EMS Optimization	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Existing	221	Heat Recovery from AC	20%	63%	0%	84%	0%	20%	20%	20%	20%	10%
Existing	222	Installation of Air Side Heat Recovery Systems	15%	25%	5%	15%	0%	15%	9%	25%	5%	10%
Existing	227	High Efficiency (Power Burner/ Premium) Furnace 95% efficiency (in situ base=62%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Existing	228	High Efficiency (Power Burner/ Premium) Boiler 95% efficiency (in situ base=82%)	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%
Existing	229	Stack Heat Exchanger	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Existing	230	Condensing unit heaters	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%
Existing	231	Radiant heater	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%
Existing	232	Hot water temperature reset	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Existing	233	Demand controlled ventilation (DCV)	4%	22%	15%	37%	21%	32%	32%	0%	12%	12%
Existing	234	Refrigeration heat recovery - space conditioning	0%	0%	0%	75%	0%	0%	0%	0%	0%	0%
Existing	235	Retrocommissioning	6%	0%	4%	4%	2%	6%	6%	10%	6%	6%
Existing	300	Base Miscellaneous	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing	400	Base Water Heating - high standby loss (as % of load)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing	401	Hot Water Pipe Insulation	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Existing	402	Demand controlled circulating systems	6%	2%	1%	1%	4%	5%	7%	6%	3%	4%
Existing	403	Tankless Water Heater	51%	0%	41%	43%	50%	28%	0%	26%	19%	40%
Existing	404	Thermally activated heat pump/chiller	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%
Existing	500	Base Water Heating - low standby loss (as % of load)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing	501	Hot Water Pipe Insulation	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Existing	502	Demand controlled circulating systems	6%	2%	1%	1%	4%	5%	7%	6%	3%	4%
Existing	503	Condensing Water Heater (gas, 95% thermal efficiency)	26%	27%	26%	25%	27%	26%	25%	25%	25%	27%
Existing	504	Thermally activated heat pump/chiller	48%	48%	48%	48%	48%	48%	48%	48%	48%	48%
Existing	505	Pre-Rinse Spray Valve	0%	4%	0%	3%	2%	1%	4%	1%	0%	1%

DSM TECHNOLOGY INPUT TABLES

UTILITY: Missouri
SECTOR: Ind
SEGMENT: All Gas

BATCH: 1
ANALYSIS: Basic
VINTAGE: E

APPENDIX E

INDUSTRIAL

MEASURE INPUT DATA

MEASURE COSTS

MEASURE COSTS																						
Measure #	Measure Description	Savings Units	Cost Units	Unit Equipment Cost	Unit Labor Cost	NPV of Lifetime		Implementation		Cost Units		Full = 1 Incr. = 0		Full Unit Cost	Relative Energy Reduction Factors						Implementation Type 1=1 time 2=ROB	
						O & M Cost	Life	Cost	Factor	per Savings Unit	Service Life	Initial Cost	Replace Cost		SUON	SUOFF	WON	WOFF	SHON	SHOFF		End Use
100	Base Boiler	\$/Therm	\$/Therm	\$0,000	\$0,00	\$0,00	\$0,00	\$0,000	\$0,000	1	20	1	1	\$0,000	1,00	1,00	1,00	1,00	1,00	1,00	3	1
101	Improved process control	\$/Therm	\$/Therm	\$0,013	\$0,00	\$0,00	\$0,000	\$0,013	\$0,016	1	15	1	1	\$0,016	1,00	1,00	1,00	1,00	1,00	1,00	3	2
102	Maintain boilers	\$/Therm	\$/Therm	\$0,001	\$0,00	\$0,00	\$0,000	\$0,002	\$0,002	1	2	1	1	\$0,002	1,00	1,00	1,00	1,00	1,00	1,00	3	1
103	Flue gas heat recovery/economizer	\$/Therm	\$/Therm	\$0,029	\$0,00	\$0,00	\$0,001	\$0,044	\$0,044	1	15	1	1	\$0,044	1,00	1,00	1,00	1,00	1,00	1,00	3	2
104	Blowdown steam heat recovery	\$/Therm	\$/Therm	\$0,026	\$0,00	\$0,00	\$0,001	\$0,039	\$0,039	1	15	1	1	\$0,039	1,00	1,00	1,00	1,00	1,00	1,00	3	2
105	Upgrade burner efficiency	\$/Therm	\$/Therm	\$0,017	\$0,00	\$0,00	\$0,001	\$0,028	\$0,028	1	20	1	1	\$0,028	1,00	1,00	1,00	1,00	1,00	1,00	3	2
106	Water treatment	\$/Therm	\$/Therm	\$0,007	\$0,00	\$0,00	\$0,000	\$0,010	\$0,010	1	10	1	1	\$0,010	1,00	1,00	1,00	1,00	1,00	1,00	3	1
107	Load control	\$/Therm	\$/Therm	\$0,015	\$0,00	\$0,00	\$0,000	\$0,018	\$0,018	1	15	1	1	\$0,018	1,00	1,00	1,00	1,00	1,00	1,00	3	1
108	Improved insulation	\$/Therm	\$/Therm	\$0,064	\$0,01	\$0,00	\$0,001	\$0,085	\$0,085	1	15	1	1	\$0,085	1,00	1,00	1,00	1,00	1,00	1,00	3	1
109	Steam trap maintenance	\$/Therm	\$/Therm	\$0,046	\$0,01	\$0,00	\$0,000	\$0,053	\$0,053	1	2	1	1	\$0,053	1,00	1,00	1,00	1,00	1,00	1,00	3	1
110	Automatic steam trap monitoring	\$/Therm	\$/Therm	\$0,037	\$0,00	\$0,00	\$0,000	\$0,044	\$0,044	1	15	1	1	\$0,044	1,00	1,00	1,00	1,00	1,00	1,00	3	2
111	Leak repair	\$/Therm	\$/Therm	\$0,012	\$0,00	\$0,00	\$0,000	\$0,013	\$0,013	1	2	1	1	\$0,013	1,00	1,00	1,00	1,00	1,00	1,00	3	1
112	Condensate return	\$/Therm	\$/Therm	\$0,080	\$0,01	\$0,00	\$0,003	\$0,122	\$0,122	1	15	1	1	\$0,122	1,00	1,00	1,00	1,00	1,00	1,00	3	2
113	Thermally activated heat pump/chiller	\$/Therm	\$/Therm	\$0,529	\$0,06	\$0,00	\$0,000	\$0,590	\$0,590	1	15	1	1	\$0,590	1,00	1,00	1,00	1,00	1,00	1,00	3	1
200	Base HVAC	\$/Therm	\$/Therm	\$0,000	\$0,00	\$0,00	\$0,000	\$0,000	\$0,000	1	20	1	1	\$0,000	1,00	1,00	1,00	1,00	1,00	1,00	2	1
201	Improve ceiling insulation	\$/Therm	\$/Therm	\$0,711	\$0,08	\$0,00	\$0,17	\$0,965	\$0,965	1	20	1	1	\$0,965	1,00	1,00	1,00	1,00	1,00	1,00	2	1
202	Install high efficiency (95%) condensing furnace	\$/Therm	\$/Therm	\$0,263	\$0,03	\$0,00	\$0,13	\$0,421	\$0,421	1	20	1	1	\$0,421	1,00	1,00	1,00	1,00	1,00	1,00	2	2
203	Stack heat exchanger	\$/Therm	\$/Therm	\$0,128	\$0,01	\$0,00	\$0,06	\$0,204	\$0,204	1	20	1	1	\$0,204	1,00	1,00	1,00	1,00	1,00	1,00	2	1
204	Duct insulation	\$/Therm	\$/Therm	\$0,029	\$0,00	\$0,00	\$0,01	\$0,040	\$0,040	1	20	1	1	\$0,040	1,00	1,00	1,00	1,00	1,00	1,00	2	1
205	EMS install	\$/Therm	\$/Therm	\$0,292	\$0,03	\$0,00	\$0,04	\$0,361	\$0,361	1	20	1	1	\$0,361	1,00	1,00	1,00	1,00	1,00	1,00	2	1
206	EMS optimization	\$/Therm	\$/Therm	\$0,007	\$0,00	\$0,00	\$0,000	\$0,008	\$0,008	1	5	1	1	\$0,008	1,00	1,00	1,00	1,00	1,00	1,00	2	1
300	Base CHP	\$/Therm	\$/Therm	\$0,000	\$0,00	\$0,00	\$0,000	\$0,000	\$0,000	1	20	1	1	\$0,000	1,00	1,00	1,00	1,00	1,00	1,00	4	1
400	Base Other	\$/Therm	\$/Therm	\$0,000	\$0,00	\$0,00	\$0,000	\$0,000	\$0,000	1	20	1	1	\$0,000	1,00	1,00	1,00	1,00	1,00	1,00	5	1
500	Base Process Heat	\$/Therm	\$/Therm	\$0,000	\$0,00	\$0,00	\$0,000	\$0,000	\$0,000	1	20	1	1	\$0,000	1,00	1,00	1,00	1,00	1,00	1,00	1	1
501	Process Controls & Management	\$/Therm	\$/Therm	\$0,055	\$0,01	\$0,00	\$0,000	\$0,065	\$0,065	1	8	1	1	\$0,065	1,00	1,00	1,00	1,00	1,00	1,00	1	1
502	Heat Recovery	\$/Therm	\$/Therm	\$0,639	\$0,07	\$0,00	\$0,31	\$1,022	\$1,022	1	20	1	1	\$1,022	1,00	1,00	1,00	1,00	1,00	1,00	1	1
503	Efficient burners	\$/Therm	\$/Therm	\$0,164	\$0,02	\$0,00	\$0,05	\$0,233	\$0,233	1	10	1	1	\$0,233	1,00	1,00	1,00	1,00	1,00	1,00	1	2
504	Process integration	\$/Therm	\$/Therm	\$0,730	\$0,08	\$0,00	\$0,30	\$1,111	\$1,111	1	15	1	1	\$1,111	1,00	1,00	1,00	1,00	1,00	1,00	1	1
505	Efficient drying	\$/Therm	\$/Therm	\$0,427	\$0,05	\$0,00	\$0,21	\$0,683	\$0,683	1	20	1	1	\$0,683	1,00	1,00	1,00	1,00	1,00	1,00	1	2
506	Closed hood	\$/Therm	\$/Therm	\$0,292	\$0,03	\$0,00	\$0,12	\$0,444	\$0,444	1	15	1	1	\$0,444	1,00	1,00	1,00	1,00	1,00	1,00	1	2
507	Extended nip press	\$/Therm	\$/Therm	\$0,642	\$0,07	\$0,00	\$0,31	\$1,028	\$1,028	1	20	1	1	\$1,028	1,00	1,00	1,00	1,00	1,00	1,00	1	2
508	Improved separation processes	\$/Therm	\$/Therm	\$0,183	\$0,02	\$0,00	\$0,09	\$0,292	\$0,292	1	20	1	1	\$0,292	1,00	1,00	1,00	1,00	1,00	1,00	1	2
509	Thermal oxidizers	\$/Therm	\$/Therm	\$1,752	\$0,20	\$0,00	\$0,71	\$2,666	\$2,666	1	15	1	1	\$2,666	1,00	1,00	1,00	1,00	1,00	1,00	1	2
510	Flare gas controls and recovery	\$/Therm	\$/Therm	\$0,730	\$0,08	\$0,00	\$0,30	\$1,111	\$1,111	1	15	1	1	\$1,111	1,00	1,00	1,00	1,00	1,00	1,00	1	2
511	Fouling control	\$/Therm	\$/Therm	\$0,041	\$0,00	\$0,00	\$0,000	\$0,049	\$0,049	1	5	1	1	\$0,049	1,00	1,00	1,00	1,00	1,00	1,00	1	1
512	Efficient furnaces	\$/Therm	\$/Therm	\$0,096	\$0,01	\$0,00	\$0,05	\$0,154	\$0,154	1	20	1	1	\$0,154	1,00	1,00	1,00	1,00	1,00	1,00	1	2
513	Oxyfuel	\$/Therm	\$/Therm	\$0,438	\$0,05	\$0,00	\$0,21	\$0,701	\$0,701	1	20	1	1	\$0,701	1,00	1,00	1,00	1,00	1,00	1,00	1	2
514	Batch cullet preheating	\$/Therm	\$/Therm	\$0,234	\$0,03	\$0,00	\$0,09	\$0,355	\$0,355	1	15	1	1	\$0,355	1,00	1,00	1,00	1,00	1,00	1,00	1	2
515	Preventative maintenance	\$/Therm	\$/Therm	\$0,007	\$0,00	\$0,00	\$0,000	\$0,008	\$0,008	1	5	1	1	\$0,008	1,00	1,00	1,00	1,00	1,00	1,00	1	1
516	Combustion controls	\$/Therm	\$/Therm	\$0,088	\$0,01	\$0,00	\$0,01	\$0,103	\$0,103	1	8	1	1	\$0,103	1,00	1,00	1,00	1,00	1,00	1,00	1	2
517	Optimize furnace operations	\$/Therm	\$/Therm	\$0,110	\$0,01	\$0,00	\$0,03	\$0,155	\$0,155	1	10	1	1	\$0,155	1,00	1,00	1,00	1,00	1,00	1,00	1	1
518	Insulation/reduce heat losses	\$/Therm	\$/Therm	\$0,292	\$0,03	\$0,00	\$0,06	\$0,385	\$0,385	1	15	1	1	\$0,385	1,00	1,00	1,00	1,00	1,00	1,00	1	1

APPENDIX E

INDUSTRIAL

MEASURE INPUT DATA

TECHNOLOGY SATURATION
(units/lbase kWh)

Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Printing	Chemicals	Petroleum	Rubber, Plastics	Stone,Clay, Glass	Prim Metals	Fab Metals	Ind Mach	Electronics	Transp Equip	Misc.
100	Base Boiler	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
101	Improved process control	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
102	Maintain boilers	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
103	Flue gas heat recovery/economizer	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
104	Blowdown steam heat recovery	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
105	Upgrade burner efficiency	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
106	Water treatment	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
107	Load control	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
108	Improved insulation	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
109	Steam trap maintenance	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
110	Automatic steam trap monitoring	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
111	Leak repair	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
112	Condensate return	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
113	Thermally activated heat pump/chiller	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
200	Base HVAC	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
201	Improve ceiling insulation	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
202	Install high efficiency (95%) condensing f	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
203	Stack heat exchanger	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
204	Duct insulation	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
205	EMS install	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
206	EMS optimization	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
300	Base CHP	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
400	Base Other	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
500	Base Process Heat	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
501	Process Controls & Management	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
502	Heat Recovery	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
503	Efficient burners	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
504	Process integration	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
505	Efficient drying	1,000	1,000	1,000	1,000	1,197	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
506	Closed hood	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
507	Extended nip press	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
508	Improved separation processes	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
509	Thermal oxidizers	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
510	Flare gas controls and recovery	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
511	Fouling control	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
512	Efficient furnaces	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
513	Oxyfuel	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
514	Batch cullet preheating	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
515	Preventative maintenance	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
516	Combustion controls	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
517	Optimize furnace operations	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
518	Insulation/reduce heat losses	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

APPENDIX E

INDUSTRIAL

MEASURE INPUT DATA

APPLICABILITY FACTOR (percent)																				
Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non-metallic minerals	Prim Metals	Fab Metals	Production	Steel	Ind Mach	Electronics	Transp Equip	Printing			
100	Base Boiler	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
101	Improved process control	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
102	Maintain boilers	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
103	Flue gas heat recovery/economizer	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
104	Blowdown steam heat recovery	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
105	Upgrade burner efficiency	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
106	Water treatment	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
107	Load control	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
108	Improved insulation	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
109	Steam trap maintenance	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
110	Automatic steam trap monitoring	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
111	Leak repair	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
112	Condensate return	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
113	Thermally activated heat pump/chiller	52.4%	35.0%	16.0%	25.4%	13.2%	27.5%	14.1%	45.2%	4.5%	5.1%	14.5%	19.5%	31.0%	14.9%	16.0%				
200	Base HVAC	5.0%	5.7%	13.0%	2.8%	18.4%	1.6%	0.8%	19.4%	3.8%	6.5%	14.5%	36.6%	28.6%	34.3%	48.0%				
201	Improve ceiling insulation	5.0%	5.7%	13.0%	2.8%	18.4%	1.6%	0.8%	19.4%	3.8%	6.5%	14.5%	36.6%	28.6%	34.3%	48.0%				
202	Install high efficiency (95%) condensing furnace/	5.0%	5.7%	13.0%	2.8%	18.4%	1.6%	0.8%	19.4%	3.8%	6.5%	14.5%	36.6%	28.6%	34.3%	48.0%				
203	Stack heat exchanger	5.0%	5.7%	13.0%	2.8%	18.4%	1.6%	0.8%	19.4%	3.8%	6.5%	14.5%	36.6%	28.6%	34.3%	48.0%				
204	Duct insulation	5.0%	5.7%	13.0%	2.8%	18.4%	1.6%	0.8%	19.4%	3.8%	6.5%	14.5%	36.6%	28.6%	34.3%	48.0%				
205	EMS install	5.0%	5.7%	13.0%	2.8%	18.4%	1.6%	0.8%	19.4%	3.8%	6.5%	14.5%	36.6%	28.6%	34.3%	48.0%				
206	EMS optimization	5.0%	5.7%	13.0%	2.8%	18.4%	1.6%	0.8%	19.4%	3.8%	6.5%	14.5%	36.6%	28.6%	34.3%	48.0%				
300	Base CHP	4.4%	12.3%	0.4%	33.2%	0.0%	31.7%	18.3%	0.2%	4.8%	0.9%	0.9%	4.9%	0.2%	1.7%	0.0%				
400	Base Other	6.7%	16.5%	17.6%	12.6%	2.6%	11.4%	6.8%	10.3%	13.7%	5.3%	6.0%	9.8%	10.5%	19.0%	12.0%				
500	Base Process Heat	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
501	Process Controls & Management	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
502	Heat Recovery	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
503	Efficient burners	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
504	Process integration	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
505	Efficient drying	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
506	Closed hood	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
507	Extended nip press	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
508	Improved separation processes	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
509	Thermal oxidizers	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
510	Flare gas controls and recovery	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
511	Fouling control	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
512	Efficient furnaces	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
513	Oxyfuel	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
514	Batch cullet preheating	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
515	Preventative maintenance	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
516	Combustion controls	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
517	Optimize furnace operations	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				
518	Insulation/reduce heat losses	31.5%	30.4%	53.0%	26.0%	65.8%	27.8%	59.4%	25.0%	77.8%	78.3%	64.1%	29.3%	29.8%	30.2%	24.0%				

APPENDIX E

INDUSTRIAL

MEASURE INPUT DATA

INCOMPLETE FACTOR (percent)																
Measure #	Measure Description	Food	Textiles, Apparel	Lumber,Furniture	Paper	Chemicals	Petroleum	Rubber,Plastics	Non-metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Printing
100	Base Boiler	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
101	Improved process control	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
102	Maintain boilers	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
103	Flue gas heat recovery/economizer	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
104	Blowdown steam heat recovery	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
105	Upgrade burner efficiency	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
106	Water treatment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
107	Load control	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
108	Improved insulation	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
109	Steam trap maintenance	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
110	Automatic steam trap monitoring	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
111	Leak repair	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
112	Condensate return	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
113	Thermally activated heat pump/chiller	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
200	Base HVAC	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
201	Improve ceiling insulation	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
202	Install high efficiency (95%) condensing furnace/lt	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
203	Stack heat exchanger	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
204	Duct insulation	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
205	EMS install	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
206	EMS optimization	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
300	Base CHP	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
400	Base Other	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
500	Base Process Heat	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
501	Process Controls & Management	90.0%	90.0%	90.0%	80.0%	80.0%	50.0%	70.0%	80.0%	80.0%	70.0%	100.0%	80.0%	80.0%	80.0%	80.0%
502	Heat Recovery	90.0%	70.0%	70.0%	100.0%	100.0%	100.0%	100.0%	60.0%	100.0%	30.0%	100.0%	60.0%	60.0%	60.0%	70.0%
503	Efficient burners	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	70.0%	70.0%	80.0%	100.0%	100.0%	100.0%	100.0%
504	Process integration	70.0%	100.0%	100.0%	70.0%	100.0%	30.0%	60.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
505	Efficient drying	60.0%	100.0%	100.0%	100.0%	60.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	90.0%
506	Closed hood	100.0%	100.0%	100.0%	50.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
507	Extended nip press	100.0%	100.0%	100.0%	60.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
508	Improved separation processes	100.0%	100.0%	100.0%	100.0%	100.0%	60.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
509	Thermal oxidizers	100.0%	100.0%	100.0%	100.0%	100.0%	30.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
510	Flare gas controls and recovery	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	50.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
511	Fouling control	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	55.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
512	Efficient furnaces	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	50.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
513	Oxyfuel	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	50.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
514	Batch cullet preheating	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	80.0%	100.0%	100.0%	100.0%	100.0%	100.0%
515	Preventative maintenance	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
516	Combustion controls	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	60.0%	100.0%	100.0%	100.0%	100.0%
517	Optimize furnace operations	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	50.0%	100.0%	100.0%	100.0%	100.0%
518	Insulation/reduce heat losses	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	10.0%	100.0%	100.0%	100.0%	100.0%

APPENDIX E

INDUSTRIAL

MEASURE INPUT DATA

FEASIBILITY FACTOR

(percent)

Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non-metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Printing
100	Base Boiler	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
101	Improved process control	59.0%	59.0%	59.0%	59.0%	59.0%	59.0%	59.0%	59.0%	59.0%	59.0%	59.0%	59.0%	59.0%	59.0%	59.0%
102	Maintain boilers	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
103	Flue gas heat recovery/economizer	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
104	Blowdown steam heat recovery	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%
105	Upgrade burner efficiency	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
106	Water treatment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
107	Load control	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
108	Improved insulation	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
109	Steam trap maintenance	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
110	Automatic steam trap monitoring	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
111	Leak repair	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
112	Condensate return	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
113	Thermally activated heat pump/chiller	80.0%	0.0%	0.0%	80.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
200	Base HVAC	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
201	Improve ceiling insulation	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
202	Install high efficiency (95%) condensing furnace/t	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
203	Stack heat exchanger	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
204	Duct insulation	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
205	EMS install	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
206	EMS optimization	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
300	Base CHP	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
400	Base Other	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
500	Base Process Heat	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	#####	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
501	Process Controls & Management	60.0%	80.0%	80.0%	80.0%	80.0%	80.0%	90.0%	90.0%	70.0%	80.0%	0.0%	80.0%	80.0%	80.0%	80.0%
502	Heat Recovery	30.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	40.0%	0.0%	50.0%	50.0%	50.0%	40.0%
503	Efficient burners	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	62.0%	60.0%	40.0%	0.0%	0.0%	0.0%	0.0%
504	Process integration	50.0%	0.0%	0.0%	30.0%	0.0%	60.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
505	Efficient drying	30.0%	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
506	Closed hood	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
507	Extended nip press	0.0%	0.0%	0.0%	40.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
508	Improved separation processes	0.0%	0.0%	0.0%	0.0%	0.0%	40.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
509	Thermal oxidizers	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
510	Flare gas controls and recovery	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
511	Fouling control	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	70.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
512	Efficient furnaces	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
513	Oxyfuel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	38.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
514	Batch cullet preheating	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
515	Preventative maintenance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	90.0%	0.0%	0.0%	0.0%	0.0%	0.0%
516	Combustion controls	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	80.0%	0.0%	0.0%	0.0%	0.0%
517	Optimize furnace operations	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	60.0%	0.0%	0.0%	0.0%	0.0%
518	Insulation/reduce heat losses	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	80.0%	0.0%	0.0%	0.0%	0.0%

APPENDIX E

INDUSTRIAL

MEASURE INPUT DATA

ENERGY SAVINGS (percent)																
Measure #	Measure Description	Food	Textiles, Apparel	Lumber, Furniture	Paper	Chemicals	Petroleum	Rubber, Plastics	Non-metallic minerals	Prim Metals	Fab Metals	Steel Production	Ind Mach	Electronics	Transp Equip	Printing
100	Base Boiler	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
101	Improved process control	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
102	Maintain boilers	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
103	Flue gas heat recovery/economizer	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
104	Blowdown steam heat recovery	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
105	Upgrade burner efficiency	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
106	Water treatment	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
107	Load control	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
108	Improved insulation	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
109	Steam trap maintenance	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
110	Automatic steam trap monitoring	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
111	Leak repair	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
112	Condensate return	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
113	Thermally activated heat pump/chiller	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
200	Base HVAC	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
201	Improve ceiling insulation	24.3%	24.3%	24.3%	24.3%	24.3%	24.3%	24.3%	24.3%	24.3%	24.3%	24.3%	24.3%	24.3%	24.3%	24.3%
202	Install high efficiency (95%) condensing	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%
203	Stack heat exchanger	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
204	Duct insulation	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
205	EMS install	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
206	EMS optimization	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
300	Base CHP	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
400	Base Other	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
500	Base Process Heat	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
501	Process Controls & Management	8.0%	5.0%	5.0%	3.0%	5.0%	4.0%	6.0%	5.0%	7.0%	6.0%	0.0%	5.0%	5.0%	8.0%	5.0%
502	Heat Recovery	10.0%	25.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	20.0%	20.0%	20.0%
503	Efficient burners	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%
504	Process integration	25.0%	0.0%	0.0%	15.0%	0.0%	13.0%	13.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
505	Efficient drying	13.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%
506	Closed hood	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
507	Extended nip press	0.0%	0.0%	0.0%	16.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
508	Improved separation processes	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
509	Thermal oxidizers	0.0%	0.0%	0.0%	0.0%	0.0%	60.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
510	Flare gas controls and recovery	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
511	Fouling control	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
512	Efficient furnaces	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
513	Oxyfuel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
514	Batch cullet preheating	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
515	Preventative maintenance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%
516	Combustion controls	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	0.0%	0.0%	0.0%	0.0%
517	Optimize furnace operations	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%
518	Insulation/reduce heat losses	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%