

APPENDIX 2.2
Measure Level TRC Ratios by EDC

Measure-level Total Resource Cost (TRC) test ratios (listed by EDC)

Measure #	Measure Name	EDCs						
		PBCO	PPL	WPP	ME	PE	PP	Duq.
100	Water Heating End Use							
101	Efficient Electric Water Heaters- 0.93 Energy Factor	1.04	1.52	1.42	1.49	1.52	1.46	1.43
102	Efficient Electric Water Heaters- 0.94 Energy Factor	1.28	1.86	1.74	1.83	1.86	1.80	1.75
103	Efficient Electric Water Heaters- 0.95 Energy Factor	1.48	2.17	2.03	2.12	2.17	2.09	2.04
104	Solar Water Heaters	0.41	0.28	0.28	0.29	0.30	0.29	0.26
105	Heat Pump Water Heaters- 2.0 Energy Factor	1.50	2.19	2.04	2.14	2.19	2.11	2.06
106	Heat Pump Water Heaters- 2.3 Energy Factor	1.63	2.39	2.23	2.34	2.39	2.31	2.25
107	Electric Water Heater Pipe Insulation	4.68	6.86	6.40	6.68	6.82	6.59	6.51
108	Low Flow Showerheads- 1.5 GPM	11.51	16.96	15.38	15.77	16.11	15.53	16.58
109	Low Flow Faucet Aerators	34.97	36.39	54.05	54.15	55.30	52.21	27.23
110	Water Heater Tank Wrap	0.79	1.16	1.04	1.05	1.08	1.03	1.14
111	Efficient Electric Water Heaters- 0.93 Energy Factor	1.04	1.52	1.42	1.49	1.52	1.46	1.43
112	Efficient Electric Water Heaters- 0.94 Energy Factor	1.28	1.86	1.74	1.83	1.86	1.80	1.75
113	Efficient Electric Water Heaters- 0.95 Energy Factor	1.48	2.17	2.03	2.12	2.17	2.09	2.04
114	Solar Water Heaters	0.41	0.28	0.28	0.29	0.30	0.29	0.26
115	Heat Pump Water Heaters- 2.0 Energy Factor	1.50	2.19	2.04	2.14	2.19	2.11	2.06
116	Heat Pump Water Heaters- 2.3 Energy Factor	1.63	2.39	2.23	2.34	2.39	2.31	2.25
117	Electric Water Heater Pipe Insulation	4.68	6.86	6.40	6.68	6.82	6.59	6.51
118	Low Flow Showerheads- 1.5 GPM	11.51	16.96	15.38	15.77	16.11	15.53	16.58
119	Low Flow Faucet Aerators	34.97	36.39	54.05	54.15	55.30	52.21	27.23
120	Water Heater Tank Wrap	0.79	1.16	1.04	1.05	1.08	1.03	1.14
121	Efficient Electric Water Heaters- 0.93 Energy Factor	1.04	1.52	1.42	1.49	1.52	1.46	1.43
122	Efficient Electric Water Heaters- 0.94 Energy Factor	1.28	1.86	1.74	1.83	1.86	1.80	1.75
123	Efficient Electric Water Heaters- 0.95 Energy Factor	1.48	2.17	2.03	2.12	2.17	2.09	2.04
124	Solar Water Heaters	0.41	0.28	0.28	0.29	0.30	0.29	0.26
125	Heat Pump Water Heaters- 2.0 Energy Factor	1.50	2.19	2.04	2.14	2.19	2.11	2.06
126	Heat Pump Water Heaters- 2.3 Energy Factor	1.63	2.39	2.23	2.34	2.39	2.31	2.25
127	Electric Water Heater Pipe Insulation	4.68	6.86	6.40	6.68	6.82	6.59	6.51
128	Low Flow Showerheads- 1.5 GPM	11.51	16.96	15.38	15.77	16.11	15.53	16.58
129	Low Flow Faucet Aerators	34.97	36.39	54.05	54.15	55.30	52.21	27.23
130	Water Heater Tank Wrap	0.79	1.16	1.04	1.05	1.08	1.03	1.14
200	Lighting							
201	Ceiling Fan with ENERGY STAR Light Fixture	1.38	1.73	1.53	1.62	1.89	1.80	1.55
202	Electroluminescent Nightlight	4.71	7.63	6.13	6.33	6.46	6.27	7.41
203	LED Nightlight	8.77	14.20	11.42	11.78	12.03	11.67	13.79
204	ENERGY STAR CFL Bulbs (screw-in) 60 Watt Incan. To a 14 Watt CFL	6.90	10.82	8.81	8.95	10.84	10.24	10.54
205	ENERGY STAR CFL Bulbs (screw-in) 75 Watt Incan. To a 19 Watt CFL	8.08	12.68	10.33	10.50	12.70	12.01	12.36
206	ENERGY STAR CFL Bulbs (screw-in) 100 Watt Incan. To a 23 Watt CFL	11.65	18.28	14.88	15.13	18.31	17.30	17.81
207	ENERGY STAR Indoor Fixture (hard-wired, pin-based)	1.61	2.01	1.80	1.90	1.94	1.87	1.79
208	ENERGY STAR LEDs - General Service Lamps	1.05	1.64	1.71	1.54	1.82	1.52	1.49
209	ENERGY STAR LEDs -Reflector Lamp	2.11	3.27	2.75	2.48	2.94	2.45	2.36
210	ENERGY STAR Outdoor Fixture (hard wired, pin-based)	3.58	5.61	3.97	4.20	4.29	4.15	4.07
211	ENERGY STAR Torchieres	1.24	1.94	1.71	1.77	1.80	1.74	1.80
212	ENERGY STAR Holiday Lights	0.26	0.42	0.35	0.36	0.37	0.36	0.40
213	Residential Occupancy Sensors- 14 W CFL	0.12	0.20	0.17	0.17	0.18	0.17	0.19
214	Residential Occupancy Sensors 19 W CFL	0.17	0.27	0.23	0.24	0.24	0.23	0.26
215	Residential Occupancy Sensors- 23 W CFL	0.20	0.33	0.27	0.29	0.29	0.28	0.31
216	Ceiling Fan with ENERGY STAR Light Fixture	1.38	1.73	1.53	1.62	1.89	1.80	1.55
217	Electroluminescent Nightlight	4.71	7.63	6.13	6.33	6.46	6.27	7.41
218	LED Nightlight	8.77	14.20	11.42	11.78	12.03	11.67	13.79
219	ENERGY STAR CFL Bulbs (screw-in) 60 Watt Incan. To a 14 Watt CFL	6.90	10.82	8.81	10.61	10.84	10.24	10.54
220	ENERGY STAR CFL Bulbs (screw-in) 75 Watt Incan. To a 19 Watt CFL	8.08	12.68	10.33	12.44	12.70	12.01	12.36
221	ENERGY STAR CFL Bulbs (screw-in) 100 Watt Incan. To a 23 Watt CFL	11.65	18.28	14.88	17.93	18.31	17.30	17.81
222	ENERGY STAR Indoor Fixture (hard-wired, pin-based)	1.61	2.01	1.80	1.90	1.94	1.87	1.79
223	ENERGY STAR LEDs - General Service Lamps	1.05	1.64	1.46	1.78	1.82	1.52	1.49
224	ENERGY STAR LEDs -Reflector Lamp	2.11	2.65	2.35	2.87	2.94	2.45	2.36
225	ENERGY STAR Outdoor Fixture (hard wired, pin-based)	3.58	4.54	3.97	4.20	4.29	4.15	4.07
226	ENERGY STAR Torchieres	1.24	1.94	1.71	1.77	1.80	1.74	1.80
227	ENERGY STAR Holiday Lights	0.26	0.42	0.35	0.36	0.37	0.36	0.40
228	Residential Occupancy Sensors- 14 W CFL	0.12	0.20	0.17	0.17	0.18	0.17	0.19
229	Residential Occupancy Sensors 19 W CFL	0.17	0.27	0.23	0.24	0.24	0.23	0.26
230	Residential Occupancy Sensors- 23 W CFL	0.20	0.33	0.27	0.29	0.29	0.28	0.31
231	Ceiling Fan with ENERGY STAR Light Fixture	1.38	1.73	1.53	1.85	1.89	1.80	1.55
232	Electroluminescent Nightlight	4.71	7.63	6.13	6.33	6.46	6.27	7.41
233	LED Nightlight	8.77	14.20	11.42	11.78	12.03	11.67	13.79
234	ENERGY STAR CFL Bulbs (screw-in) 60 Watt Incan. To a 14 Watt CFL	6.90	10.82	8.81	10.61	10.84	10.24	10.54
235	ENERGY STAR CFL Bulbs (screw-in) 75 Watt Incan. To a 19 Watt CFL	8.08	12.68	10.33	12.44	12.70	12.01	12.36
236	ENERGY STAR CFL Bulbs (screw-in) 100 Watt Incan. To a 23 Watt CFL	11.65	18.28	14.88	17.93	18.31	17.30	17.81
237	ENERGY STAR Indoor Fixture (hard-wired, pin-based)	1.61	2.01	1.80	1.90	1.94	1.87	1.79
238	ENERGY STAR LEDs - General Service Lamps	1.05	1.64	1.46	1.78	1.82	1.52	1.49
239	ENERGY STAR LEDs -Reflector Lamp	2.11	2.65	2.35	2.87	2.94	2.45	2.36
240	ENERGY STAR Outdoor Fixture (hard wired, pin-based)	3.58	4.54	3.97	4.20	4.29	4.15	4.07
241	ENERGY STAR Torchieres	1.24	1.94	1.71	1.77	1.80	1.74	1.80
242	ENERGY STAR Holiday Lights	0.26	0.42	0.35	0.36	0.37	0.36	0.40
243	Residential Occupancy Sensors- 14 W CFL	0.12	0.20	0.17	0.17	0.18	0.17	0.19
244	Residential Occupancy Sensors 19 W CFL	0.17	0.27	0.23	0.24	0.24	0.23	0.26
245	Residential Occupancy Sensors- 23 W CFL	0.20	0.33	0.27	0.29	0.29	0.28	0.31
300	Appliances							
301	Refrigerator / Freezer Recycling and Replacement With a New Unit	4.11	5.98	5.43	5.50	5.62	5.40	5.84
302	Refrigerator / Freezer Retirement (and Recycling) - No Replacement	6.37	9.27	8.55	8.70	8.89	8.55	8.96
303	Energy Star top mount freezer without door ice	0.77	1.12	1.07	1.12	1.14	1.10	1.04
304	Energy Star side mount freezer without door ice	0.91	1.33	1.26	1.31	1.34	1.29	1.25
305	Energy Star bottom mount freezer without door ice	0.84	1.22	1.16	1.21	1.23	1.19	1.14

Measure-level Total Resource Cost (TRC) test ratios (listed by EDC)

Measure #	Measure Name	EDCs						
		PBCO	PPL	WPP	ME	PE	PP	Duq.
306	Energy Star top mount freezer with door ice	0.89	1.30	1.23	1.28	1.31	1.26	1.22
307	Energy Star side mount freezer with door ice	0.95	1.39	1.31	1.36	1.39	1.35	1.31
308	Energy Star upright with manual defrost	0.38	0.53	0.56	0.58	0.59	0.56	0.46
309	Energy Star upright with automatic defrost	0.57	0.82	0.82	0.85	0.86	0.83	0.73
310	Energy Star chest freezer	1.56	2.14	2.30	2.35	2.40	2.30	1.84
311	Energy Star dehumidifiers (35-45 pints/day)	134.11	190.84	174.60	182.00	185.86	179.83	204.57
312	Energy Star Electric Clothes Dryer with Moisture Sensor	0.38	0.48	0.54	0.55	0.56	0.54	0.43
313	ENERGY STAR Clothes Washers- with Electric Heat	0.50	0.71	0.65	0.67	0.68	0.66	0.74
314	ENERGY STAR Clothes Washers- with Gas Heat	0.08	0.09	0.12	0.12	0.12	0.12	0.08
315	ENERGY STAR Dishwashers- with Electric Water Heating	4.38	5.77	6.37	6.49	6.63	6.33	5.09
316	ENERGY STAR Dishwashers- with Gas Heat	2.56	2.90	3.93	3.94	4.03	3.81	2.27
317	ENERGY STAR Room Air Conditioners	1.64	1.85	1.85	1.87	1.91	1.80	1.64
318	Energy Star Exhaust Fans	1.31	0.81	2.35	2.26	2.31	2.13	0.06
319	Energy Star Residential Whole House Fans	0.48	0.70	0.61	0.64	0.66	0.64	0.74
320	Refrigerator / Freezer Recycling and Replacement With a New Unit	4.11	5.98	5.43	5.50	5.62	5.40	5.84
321	Refrigerator / Freezer Retirement (and Recycling) - No Replacement	6.37	9.27	8.55	8.70	8.89	8.55	8.96
322	Energy Star top mount freezer without door ice	0.77	1.12	1.07	1.12	1.14	1.10	1.04
323	Energy Star side mount freezer without door ice	0.91	1.33	1.26	1.31	1.34	1.29	1.25
324	Energy Star bottom mount freezer without door ice	0.84	1.22	1.16	1.21	1.23	1.19	1.14
325	Energy Star top mount freezer with door ice	0.89	1.30	1.23	1.28	1.31	1.26	1.22
326	Energy Star side mount freezer with door ice	0.95	1.39	1.31	1.36	1.39	1.35	1.31
327	Energy Star upright with manual defrost	0.38	0.53	0.56	0.58	0.59	0.56	0.46
328	Energy Star upright with automatic defrost	0.57	0.82	0.82	0.85	0.86	0.83	0.73
329	Energy Star chest freezer	1.56	2.14	2.30	2.35	2.40	2.30	1.84
330	Energy Star dehumidifiers (35-45 pints/day)	134.11	190.84	174.60	182.00	185.86	179.83	204.57
331	Energy Star Electric Clothes Dryer with Moisture Sensor	0.38	0.48	0.54	0.55	0.56	0.54	0.43
332	ENERGY STAR Clothes Washers- with Electric Heat	0.50	0.71	0.65	0.67	0.68	0.66	0.74
333	ENERGY STAR Clothes Washers- with Gas Heat	0.08	0.09	0.12	0.12	0.12	0.12	0.08
334	ENERGY STAR Dishwashers- with Electric Water Heating	4.38	5.77	6.37	6.49	6.63	6.33	5.09
335	ENERGY STAR Dishwashers- with Gas Heat	2.56	2.90	3.93	3.94	4.03	3.81	2.27
336	ENERGY STAR Room Air Conditioners	1.64	1.85	1.85	1.87	1.91	1.80	1.64
337	Energy Star Exhaust Fans	1.31	0.81	2.35	2.26	2.31	2.13	0.06
338	Energy Star Residential Whole House Fans	0.48	0.70	0.61	0.64	0.66	0.64	0.74
339	Refrigerator / Freezer Recycling and Replacement With a New Unit	4.11	5.98	5.43	5.50	5.62	5.40	5.84
340	Refrigerator / Freezer Retirement (and Recycling) - No Replacement	6.37	9.27	8.55	8.70	8.89	8.55	8.96
341	Energy Star top mount freezer without door ice	0.77	1.12	1.07	1.12	1.14	1.10	1.04
342	Energy Star side mount freezer without door ice	0.91	1.33	1.26	1.31	1.34	1.29	1.25
343	Energy Star bottom mount freezer without door ice	0.84	1.22	1.16	1.21	1.23	1.19	1.14
344	Energy Star top mount freezer with door ice	0.89	1.30	1.23	1.28	1.31	1.26	1.22
345	Energy Star side mount freezer with door ice	0.95	1.39	1.31	1.36	1.39	1.35	1.31
346	Energy Star upright with manual defrost	0.38	0.53	0.56	0.58	0.59	0.56	0.46
347	Energy Star upright with automatic defrost	0.57	0.82	0.82	0.85	0.86	0.83	0.73
348	Energy Star chest freezer	1.56	2.14	2.30	2.35	2.40	2.30	1.84
349	Energy Star dehumidifiers (35-45 pints/day)	134.11	190.84	174.60	182.00	185.86	179.83	204.57
350	Energy Star Electric Clothes Dryer with Moisture Sensor	0.38	0.48	0.54	0.55	0.56	0.54	0.43
351	ENERGY STAR Clothes Washers- with Electric Heat	0.50	0.71	0.65	0.67	0.68	0.66	0.74
352	ENERGY STAR Clothes Washers- with Gas Heat	0.08	0.09	0.12	0.12	0.12	0.12	0.08
353	ENERGY STAR Dishwashers- with Electric Water Heating	4.38	5.77	6.37	6.49	6.63	6.33	5.09
354	ENERGY STAR Dishwashers- with Gas Heat	2.56	2.90	3.93	3.94	4.03	3.81	2.27
355	ENERGY STAR Room Air Conditioners	1.64	1.85	1.85	1.87	1.91	1.80	1.64
356	Energy Star Exhaust Fans	1.31	0.81	2.35	2.26	2.31	2.13	0.06
357	Energy Star Residential Whole House Fans	0.48	0.70	0.61	0.64	0.66	0.64	0.74
400	Electronics							
401	ENERGY STAR Computer	21.77	29.04	27.73	27.40	27.98	26.52	29.73
402	ENERGY STAR Copier	0.46	0.64	0.58	0.58	0.59	0.57	0.67
403	ENERGY STAR Fax Machine	0.34	0.46	0.41	0.41	0.42	0.40	0.50
404	ENERGY STAR Monitor	0.23	0.31	0.28	0.28	0.29	0.27	0.33
405	ENERGY STAR Multifunction	29.52	40.83	37.02	37.22	38.01	36.46	43.01
406	ENERGY STAR Printer	8.31	11.50	10.26	10.73	10.48	10.04	12.25
407	>50 in	367.48	529.46	473.37	499.26	509.83	493.54	535.90
408	<50 in	153.72	170.85	218.42	223.69	228.43	217.56	151.52
409	Smart Strip Plug Outlets	2.52	3.55	3.02	3.03	3.10	2.98	3.89
410	ENERGY STAR Computer	21.77	29.04	27.73	27.40	27.98	26.52	29.73
411	ENERGY STAR Copier	0.46	0.64	0.58	0.58	0.59	0.57	0.67
412	ENERGY STAR Fax Machine	0.34	0.46	0.41	0.41	0.42	0.40	0.50
413	ENERGY STAR Monitor	0.23	0.31	0.28	0.28	0.29	0.27	0.33
414	ENERGY STAR Multifunction	29.52	40.83	37.02	37.22	38.01	36.46	43.01
415	ENERGY STAR Printer	8.31	11.50	10.26	10.73	10.48	10.04	12.25
416	>50 in	367.48	529.46	473.37	499.26	509.83	493.54	535.90
417	<50 in	153.72	170.85	218.42	223.69	228.43	217.56	151.52
418	Smart Strip Plug Outlets	2.52	3.55	3.02	3.03	3.10	2.98	3.89
419	ENERGY STAR Computer	21.77	29.04	27.73	27.40	27.98	26.52	29.73
420	ENERGY STAR Copier	0.46	0.64	0.58	0.58	0.59	0.57	0.67
421	ENERGY STAR Fax Machine	0.34	0.46	0.41	0.41	0.42	0.40	0.50
422	ENERGY STAR Monitor	0.23	0.31	0.28	0.28	0.29	0.27	0.33
423	ENERGY STAR Multifunction	29.52	40.83	37.02	37.22	38.01	36.46	43.01
424	ENERGY STAR Printer	8.31	11.50	10.26	10.73	10.48	10.04	12.25
425	>50 in	367.48	529.46	473.37	499.26	509.83	493.54	535.90
426	<50 in	153.72	170.85	218.42	223.69	228.43	217.56	151.52
427	Smart Strip Plug Outlets	2.52	3.55	3.02	3.03	3.10	2.98	3.89
500	Pool							
501	High Efficiency Two-Speed Pool Pump	2.48	2.83	2.82	2.85	2.91	2.75	2.54
502	Variable Speed Pool Pumps	0.75	0.99	0.74	0.93	1.07	0.72	1.03

Measure-level Total Resource Cost (TRC) test ratios (listed by EDC)

Measure #	Measure Name	EDCs						
		PBCO	PPL	WPP	ME	PE	PP	Duq.
503	High Efficiency Two-Speed Pool Pump	2.48	2.83	2.82	2.85	2.91	2.75	2.54
504	Variable Speed Pool Pumps	0.75	0.99	0.74	0.64	1.07	0.72	1.03
505	High Efficiency Two-Speed Pool Pump	2.48	2.83	2.82	2.85	2.91	2.75	2.54
506	Variable Speed Pool Pumps	0.75	0.99	0.74	0.64	1.07	0.72	1.03
600	HVAC (Envelope)							
601	Air Sealing (cost per sf of living space for a typical single-family home)	1.78	3.02	2.84	5.71	2.86	3.82	3.06
602	Attic Insulation- R0 to R19 (Cost Per Square Foot installed)	1.83	2.52	3.53	3.75	3.51	3.92	3.25
603	Attic Insulation- R0-R38 (Cost Per Square Foot installed)	1.86	2.38	3.27	3.49	3.27	3.63	3.01
604	Attic Insulation R0 to R60 (Cost Per Square Foot installed)	1.61	1.92	2.63	2.80	2.63	2.93	2.42
605	Attic Insulation - R19 to R-60 (Cost Per Square Foot installed)	0.71	0.58	0.75	0.80	0.75	0.84	0.69
606	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	2.02	2.28	2.86	4.36	4.23	4.53	3.65
607	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	1.77	2.04	2.55	3.87	3.77	4.02	3.24
608	ENERGY STAR Windows	1.33	2.31	2.61	0.78	5.68	2.83	2.31
609	Floor Insulation - R0 to R-13 (Cost Per Square Foot Installed)	0.27	1.24	0.81	0.81	0.85	0.86	0.78
610	Floor Insulation - R0 to R-19 (Cost Per Square Foot Installed)	0.24	1.12	0.73	0.74	0.77	0.78	0.71
611	HVAC Duct Sealing (Cost per typical single-family home)	1.72	4.47	8.86	8.24	6.89	7.01	4.82
612	Air Sealing (cost per sf of living space for a typical single-family home)	0.18	0.08	-0.01	-0.19	-0.06	-0.09	-0.09
613	Attic Insulation- R0 to R19 (Cost Per Square Foot installed)	0.47	0.22	0.29	0.24	0.29	0.99	0.16
614	Attic Insulation- R0-R38 (Cost Per Square Foot installed)	0.45	0.20	0.26	0.22	0.29	0.77	0.15
615	Attic Insulation R0 to R60 (Cost Per Square Foot installed)	0.38	0.16	0.22	0.17	0.22	0.68	0.12
616	Attic Insulation - R19 to R-60 (Cost Per Square Foot installed)	0.13	0.04	0.07	0.04	0.07	0.05	0.03
617	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	0.33	0.15	0.10	0.07	0.07	0.10	0.04
618	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	0.25	0.13	0.08	0.07	0.06	0.08	0.03
619	ENERGY STAR Windows	0.11	-0.07	-0.09	-0.14	-0.23	-0.10	-0.13
620	Floor Insulation - R0 to R-13 (Cost Per Square Foot Installed)	-0.03	-0.05	-0.08	-0.11	-0.09	-0.09	-0.11
621	Floor Insulation - R0 to R-19 (Cost Per Square Foot Installed)	-0.03	-0.04	-0.07	-0.10	-0.08	-0.08	-0.10
622	HVAC Duct Sealing (Cost per typical single-family home)	0.59	0.87	0.71	0.59	0.35	0.37	0.35
623	Air Sealing (cost per sf of living space for a typical single-family home)	0.16	4.84	0.04	0.00	0.00	-0.01	-0.08
624	Attic Insulation- R0 to R19 (Cost Per Square Foot installed)	0.50	4.69	0.32	0.25	0.32	0.27	0.19
625	Attic Insulation- R0-R38 (Cost Per Square Foot installed)	0.47	4.37	0.28	0.23	0.28	0.26	0.17
626	Attic Insulation R0 to R60 (Cost Per Square Foot installed)	0.37	3.52	0.23	0.18	0.24	0.21	0.14
627	Attic Insulation - R19 to R-60 (Cost Per Square Foot installed)	0.13	1.02	0.06	0.05	0.07	0.07	0.04
628	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	0.26	3.50	0.09	0.07	0.14	0.10	0.05
629	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	0.23	3.11	0.08	0.06	0.13	0.09	0.04
630	ENERGY STAR Windows	0.10	3.52	-0.07	-0.06	-0.27	-0.02	-0.11
631	Floor Insulation - R0 to R-13 (Cost Per Square Foot Installed)	-0.10	2.49	-0.09	-0.11	-0.10	-0.09	-0.11
632	Floor Insulation - R0 to R-19 (Cost Per Square Foot Installed)	-0.09	2.23	-0.08	-0.10	-0.09	-0.10	-0.10
633	HVAC Duct Sealing (Cost per typical single-family home)	0.10	0.00	-0.05	0.03	-0.03	-0.05	0.05
634	Air Sealing (cost per sf of living space for a typical single-family home)	1.66	2.66	2.89	6.70	3.20	4.19	3.33
635	Attic Insulation- R0 to R19 (Cost Per Square Foot installed)	1.78	2.68	3.65	3.21	4.04	4.18	3.24
636	Attic Insulation- R0-R38 (Cost Per Square Foot installed)	1.73	2.52	3.41	3.02	3.76	3.92	3.03
637	Attic Insulation R0 to R60 (Cost Per Square Foot installed)	1.38	2.03	2.75	2.43	3.02	3.14	2.44
638	Attic Insulation - R19 to R-60 (Cost Per Square Foot installed)	0.45	0.61	0.81	0.72	0.86	0.92	0.72
639	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	0.89	0.79	1.24	2.11	1.97	2.10	1.57
640	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	0.77	0.70	1.10	1.87	1.74	1.88	1.40
641	ENERGY STAR Windows	1.17	4.00	2.58	3.03	6.13	3.03	2.42
642	Floor Insulation - R0 to R-13 (Cost Per Square Foot Installed)	-0.03	0.23	0.26	1.32	1.01	0.86	0.96
643	Floor Insulation - R0 to R-19 (Cost Per Square Foot Installed)	-0.02	0.22	0.24	1.19	0.91	0.76	0.87
644	HVAC Duct Sealing (Cost per typical single-family home)	1.38	3.27	5.75	7.41	6.27	6.64	4.17
645	Air Sealing (cost per sf of living space for a typical single-family home)	0.07	0.06	-0.01	-0.15	-0.02	-0.08	-0.07
646	Attic Insulation- R0 to R19 (Cost Per Square Foot installed)	0.43	0.32	0.32	0.12	0.41	0.32	0.17
647	Attic Insulation- R0-R38 (Cost Per Square Foot installed)	0.40	0.30	0.29	0.10	0.37	0.29	0.16
648	Attic Insulation R0 to R60 (Cost Per Square Foot installed)	0.31	0.24	0.24	0.08	0.30	0.23	0.13
649	Attic Insulation - R19 to R-60 (Cost Per Square Foot installed)	0.09	0.07	0.07	0.01	0.08	0.06	0.04
650	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	0.10	0.04	0.04	0.04	0.07	0.06	0.02
651	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	0.09	0.03	0.03	0.03	0.08	0.05	0.02
652	ENERGY STAR Windows	0.06	-0.09	-0.11	-0.15	-0.16	-0.09	-0.12
653	Floor Insulation - R0 to R-13 (Cost Per Square Foot Installed)	-0.15	-0.10	-0.08	-0.11	-0.09	-0.08	-0.11
654	Floor Insulation - R0 to R-19 (Cost Per Square Foot Installed)	-0.13	-0.09	-0.07	-0.10	-0.08	-0.07	-0.10
655	HVAC Duct Sealing (Cost per typical single-family home)	0.58	0.70	0.54	0.69	0.55	0.37	0.41
656	Air Sealing (cost per sf of living space for a typical single-family home)	0.08	4.45	-0.01	0.00	0.04	-0.01	-0.06
657	Attic Insulation- R0 to R19 (Cost Per Square Foot installed)	0.41	4.13	0.34	0.15	0.40	0.30	0.20
658	Attic Insulation- R0-R38 (Cost Per Square Foot installed)	0.39	3.90	0.30	0.13	0.37	0.29	0.18
659	Attic Insulation R0 to R60 (Cost Per Square Foot installed)	0.31	3.14	0.24	0.10	0.29	0.23	0.15
660	Attic Insulation - R19 to R-60 (Cost Per Square Foot installed)	0.09	0.95	0.06	0.02	0.08	0.07	0.04
661	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	0.10	1.23	0.04	0.03	0.09	0.05	0.03
662	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	0.08	1.11	0.03	0.02	0.08	0.04	0.02
663	ENERGY STAR Windows	-0.01	3.22	-0.09	-0.02	-0.14	0.00	-0.10
664	Floor Insulation - R0 to R-13 (Cost Per Square Foot Installed)	-0.11	1.46	-0.09	-0.12	-0.11	-0.11	-0.12
665	Floor Insulation - R0 to R-19 (Cost Per Square Foot Installed)	-0.11	1.30	-0.08	-0.11	-0.10	-0.10	-0.11
666	HVAC Duct Sealing (Cost per typical single-family home)	0.21	0.00	0.06	0.03	0.16	-0.04	0.12
667	Air Sealing (cost per sf of living space for a typical multi-family home)	1.32	1.69	1.88	3.81	1.95	2.79	2.25
668	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	0.29	0.31	0.48	0.28	0.36	0.72	0.28
669	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	0.25	0.27	0.41	0.24	0.34	0.62	0.25
670	ENERGY STAR Windows	1.15	1.57	2.30	2.56	5.13	2.81	2.19
671	HVAC Duct Sealing (Cost per typical multi-family home)	1.16	2.66	5.01	3.10	3.10	2.47	1.59
672	Air Sealing (cost per sf of living space for a typical multi-family home)	0.19	0.12	-0.01	0.08	0.06	0.03	-0.02
673	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	0.06	0.01	0.01	0.00	0.00	0.01	0.01
674	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	0.05	0.01	0.01	0.00	0.00	0.03	0.01
675	ENERGY STAR Windows	-0.06	-0.06	-0.08	-0.05	-0.10	0.05	-0.08
676	HVAC Duct Sealing (Cost per typical multi-family home)	0.72	0.80	0.41	0.35	0.35	0.13	0.20
677	Air Sealing (cost per sf of living space for a typical multi-family home)	0.03	2.82	-0.02	0.03	0.03	-0.01	-0.03
678	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	0.01	0.44	0.01	0.00	0.00	0.01	0.01

Measure-level Total Resource Cost (TRC) test ratios (listed by EDC)

Measure #	Measure Name	EDCs						
		PBCO	PPL	WPP	ME	PE	PP	Duq.
679	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	0.01	0.39	0.01	0.00	0.00	0.01	0.01
680	ENERGY STAR Windows	-0.10	2.73	-0.09	-0.08	-0.17	-0.09	-0.09
681	HVAC Duct Sealing (Cost per typical multi-family home)	0.83	0.00	0.26	0.23	0.23	0.00	0.23
700	HVAC (Equipment/Controls)							
701	Programmable Thermostat (ASHP)	0.07	18.52	14.34	14.20	12.49	13.21	15.64
702	Air Source Heat Pump (Maintenance)	4.74	8.98	8.53	8.30	7.27	8.46	10.97
703	Air Source Heat Pump (Equipment Only) - SEER 13 to SEER 15 (3.5 ton)	0.70	0.85	0.47	0.17	0.71	0.43	0.46
704	Air Source Heat Pump (Equipment Only) - SEER 13 to SEER 16 (3.5 ton)	0.53	0.61	0.71	0.11	0.48	0.67	0.73
705	GSHP w/ Desuperheater	0.35	0.26	0.23	0.22	0.13	0.19	0.25
706	Ductless Mini-Split Heat Pumps	2.28	4.26	7.02	6.84	6.27	6.36	4.17
707	Ground Source Heat Pumps (GSHP)	0.30	0.18	0.17	0.18	0.07	0.16	0.21
708	Central AC (Equipment Only) - SEER 13 to SEER 15 (3.5 tons)	0.29	0.19	0.17	0.13	0.10	0.12	0.11
709	Central AC (Equipment Only) - SEER 13 to SEER 16 (3.5 tons)	0.21	0.15	0.12	0.08	0.08	0.08	0.08
710	HVAC Tune Up (Cooling Season Only Tune Up)	1.68	2.74	1.76	1.39	1.68	1.26	2.06
711	Furnace High Efficiency Fan	1.95	2.62	2.78	2.42	2.48	2.38	2.26
712	Programmable Thermostat (CAC)	1.48	3.02	14.34	1.06	1.25	0.97	1.30
713	Furnace Whistle	59.17	72.98	86.39	89.04	90.92	86.83	60.36
714	Room AC (RAC) Retirement with no replacement (per AC unit)	5.76	3.97	3.66	3.52	3.59	3.24	2.28
715	Room AC (RAC) Retirement with replacement (per AC unit)	0.15	0.14	0.10	0.10	0.10	0.10	0.17
716	Programmable Thermostat (ASHP)	4.33	11.70	8.38	6.61	6.91	10.56	8.74
717	Air Source Heat Pump (Maintenance)	2.55	3.53	5.77	4.96	5.14	6.92	7.32
718	Air Source Heat Pump (Equipment Only) - SEER 13 to SEER 15 (3.5 ton)	0.42	0.91	0.31	0.46	0.53	0.36	0.32
719	Air Source Heat Pump (Equipment Only) - SEER 13 to SEER 16 (3.5 ton)	0.32	0.40	0.48	0.33	0.36	0.56	0.50
720	GSHP w/ Desuperheater	0.14	0.31	0.11	0.05	0.07	0.13	0.10
721	Ductless Mini-Split Heat Pumps	1.45	2.78	4.33	5.33	3.89	5.57	2.94
722	Ground Source Heat Pumps (GSHP)	0.11	0.26	0.07	0.01	0.02	0.08	0.06
723	Central AC (Equipment Only) - SEER 13 to SEER 15 (3.5 tons)	0.12	0.14	0.11	0.12	0.14	0.12	0.10
724	Central AC (Equipment Only) - SEER 13 to SEER 16 (3.5 tons)	0.10	0.10	0.08	0.09	0.09	0.07	0.08
725	HVAC Tune Up (Cooling Season Only Tune Up)	1.00	2.13	1.37	1.13	1.58	1.22	1.91
726	Furnace High Efficiency Fan	1.95	2.62	2.78	2.42	2.48	2.38	2.26
727	Programmable Thermostat (CAC)	0.92	14.87	0.82	0.59	1.04	0.74	0.88
728	Furnace Whistle	59.17	72.98	86.39	89.04	90.92	86.83	60.36
729	Room AC (RAC) Retirement with no replacement (per AC unit)	5.76	3.97	3.66	3.52	3.59	3.24	2.28
730	Room AC (RAC) Retirement with replacement (per AC unit)	0.42	0.14	0.10	0.10	0.10	0.10	0.17
731	Programmable Thermostat (ASHP)	-0.95	3.21	0.93	2.44	2.45	1.56	2.30
732	Air Source Heat Pump (Maintenance)	0.83	1.33	1.39	1.62	1.58	1.55	2.79
733	Air Source Heat Pump (Equipment Only) - SEER 13 to SEER 15 (3.5 ton)	0.20	0.17	0.08	0.16	0.21	0.08	0.14
734	Air Source Heat Pump (Equipment Only) - SEER 13 to SEER 16 (3.5 ton)	0.13	0.12	0.13	0.11	0.14	0.13	0.22
735	GSHP w/ Desuperheater	0.06	-0.04	-0.03	-0.05	-0.04	-0.09	0.00
736	Ductless Mini-Split Heat Pumps	0.45	0.53	1.06	1.25	1.30	1.02	0.85
737	Ground Source Heat Pumps (GSHP)	0.03	-0.08	-0.07	-0.08	-0.08	-0.10	-0.04
738	Central AC (Equipment Only) - SEER 13 to SEER 15 (3.5 tons)	0.09	0.08	0.05	0.04	0.09	0.04	0.07
739	Central AC (Equipment Only) - SEER 13 to SEER 16 (3.5 tons)	0.09	0.06	0.04	0.05	0.05	0.05	0.06
740	HVAC Tune Up (Cooling Season Only Tune Up)	0.70	1.09	0.77	0.70	0.73	0.61	1.36
741	Furnace High Efficiency Fan	1.95	2.62	2.78	2.42	2.48	2.38	2.26
742	Programmable Thermostat (CAC)	-1.90	4.75	-0.59	0.35	0.48	0.08	-0.21
743	Furnace Whistle	59.17	72.98	86.39	89.04	90.92	86.83	60.36
744	Room AC (RAC) Retirement with no replacement (per AC unit)	5.76	3.97	3.66	3.52	3.59	3.24	2.28
745	Room AC (RAC) Retirement with replacement (per AC unit)	0.42	0.14	0.10	0.10	0.10	0.10	0.17
800	Whole House							
801	Direct (Real Time) Feedback	3.23	4.10	5.30	4.97	4.53	4.65	3.77
802	Indirect Feedback (O-Power)	4.97	6.28	8.09	7.55	6.87	6.94	5.81
803	Direct (Real Time) Feedback	0.86	0.99	1.39	1.25	1.22	1.04	0.94
804	Indirect Feedback (O-Power)	1.33	1.52	2.13	1.90	1.85	1.55	1.45
805	Direct (Real Time) Feedback	0.74	4.48	1.29	1.16	1.13	0.96	0.92
806	Indirect Feedback	1.13	6.85	1.96	1.76	1.71	1.44	1.42
807	Direct (Real Time) Feedback	2.08	3.17	4.10	3.48	3.53	4.15	2.83
808	Indirect Feedback (O-Power)	3.19	4.86	6.27	5.28	5.37	6.19	4.36
809	Direct (Real Time) Feedback	0.57	0.81	1.16	0.90	0.97	1.04	0.74
810	Indirect Feedback (O-Power)	0.87	1.25	1.78	1.36	1.48	1.56	1.15
811	Direct (Real Time) Feedback	0.48	3.36	1.09	0.82	0.91	0.98	0.73
812	Indirect Feedback (O-Power)	0.73	5.15	1.66	1.24	1.38	1.46	1.12
813	Direct (Real Time) Feedback	1.29	1.47	1.91	2.02	1.99	1.80	1.68
814	Indirect Feedback (O-Power)	1.98	2.25	2.92	3.07	3.02	2.69	2.58
815	Direct (Real Time) Feedback	0.40	0.45	0.66	0.71	0.69	0.56	0.60
816	Indirect Feedback (O-Power)	0.62	0.69	1.01	1.08	1.05	0.84	0.92
817	Direct (Real Time) Feedback	0.40	1.41	0.64	0.69	0.67	0.55	0.61
818	Indirect Feedback (O-Power)	0.62	2.16	0.98	1.05	1.02	0.82	0.94
900	New Construction							
901	Residential New Construction-Tier 1	0.53	0.55	0.86	1.06	0.85	0.85	0.75
902	Residential New Construction-Tier 2	0.71	0.74	1.15	1.42	1.13	1.13	1.00
903	Residential New Construction-Tier 1	0.29	0.28	0.39	0.39	0.37	0.34	0.35
904	Residential New Construction-Tier 2	0.39	0.35	0.52	0.53	0.49	0.45	0.47
905	Residential New Construction Tier 1	0.56	0.63	0.40	0.96	0.94	0.42	0.88
906	Residential New Construction Tier 2	0.74	0.83	0.53	1.28	1.26	0.57	1.17
907	Residential New Construction Tier 1	0.29	0.27	0.20	0.44	0.42	0.18	0.45
908	Residential New Construction Tier 2	0.39	0.36	0.27	0.58	0.56	0.24	0.60

APPENDIX 2.3
Measure Level Levelized Costs by EDC

Measure-level Levelized Costs (listed by EDC)

Measure #	Measure Name	EDCs						
		PBCO	PPL	WPP	ME	PE	PP	Duq.
100	Water Heating End Use							
101	Efficient Electric Water Heaters- 0.93 Energy Factor	0.08	0.08	0.09	0.08	0.08	1.46	0.08
102	Efficient Electric Water Heaters- 0.94 Energy Factor	0.07	0.06	0.07	0.07	0.07	1.80	0.06
103	Efficient Electric Water Heaters- 0.95 Energy Factor	0.06	0.05	0.06	0.06	0.06	2.09	0.06
104	Solar Water Heaters	0.23	0.43	0.50	0.47	0.47	0.29	0.44
105	Heat Pump Water Heaters- 2.0 Energy Factor	0.06	0.05	0.06	0.06	0.06	2.11	0.05
106	Heat Pump Water Heaters- 2.3 Energy Factor	0.05	0.05	0.06	0.05	0.05	2.31	0.05
107	Electric Water Heater Pipe Insulation	0.02	0.02	0.02	0.02	0.02	6.59	0.02
108	Low Flow Showerheads- 1.5 GPM	0.01	0.01	0.01	0.01	0.01	15.53	0.01
109	Low Flow Faucet Aerators	0.00	0.00	0.00	0.00	0.00	52.21	0.00
110	Water Heater Tank Wrap	0.10	0.09	0.10	0.10	0.10	1.03	0.10
111	Efficient Electric Water Heaters- 0.93 Energy Factor	0.08	0.08	0.09	0.08	0.08	1.46	0.08
112	Efficient Electric Water Heaters- 0.94 Energy Factor	0.07	0.06	0.07	0.07	0.07	1.80	0.06
113	Efficient Electric Water Heaters- 0.95 Energy Factor	0.06	0.05	0.06	0.06	0.06	2.09	0.06
114	Solar Water Heaters	0.23	0.43	0.50	0.47	0.47	0.29	0.44
115	Heat Pump Water Heaters- 2.0 Energy Factor	0.06	0.05	0.06	0.06	0.06	2.11	0.05
116	Heat Pump Water Heaters- 2.3 Energy Factor	0.05	0.05	0.06	0.05	0.05	2.31	0.05
117	Electric Water Heater Pipe Insulation	0.02	0.02	0.02	0.02	0.02	6.59	0.02
118	Low Flow Showerheads- 1.5 GPM	0.01	0.01	0.01	0.01	0.01	15.53	0.01
119	Low Flow Faucet Aerators	0.00	0.00	0.00	0.00	0.00	52.21	0.00
120	Water Heater Tank Wrap	0.10	0.09	0.10	0.10	0.10	1.03	0.10
121	Efficient Electric Water Heaters- 0.93 Energy Factor	0.08	0.08	0.09	0.08	0.08	1.46	0.08
122	Efficient Electric Water Heaters- 0.94 Energy Factor	0.07	0.06	0.07	0.07	0.07	1.80	0.06
123	Efficient Electric Water Heaters- 0.95 Energy Factor	0.06	0.05	0.06	0.06	0.06	2.09	0.06
124	Solar Water Heaters	0.23	0.43	0.50	0.47	0.47	0.29	0.44
125	Heat Pump Water Heaters- 2.0 Energy Factor	0.06	0.05	0.06	0.06	0.06	2.11	0.05
126	Heat Pump Water Heaters- 2.3 Energy Factor	0.05	0.05	0.06	0.05	0.05	2.31	0.05
127	Electric Water Heater Pipe Insulation	0.02	0.02	0.02	0.02	0.02	6.59	0.02
128	Low Flow Showerheads- 1.5 GPM	0.01	0.01	0.01	0.01	0.01	15.53	0.01
129	Low Flow Faucet Aerators	0.00	0.00	0.00	0.00	0.00	52.21	0.00
130	Water Heater Tank Wrap	0.10	0.09	0.10	0.10	0.10	1.03	0.10
200	Lighting							
201	Ceiling Fan with ENERGY STAR Light Fixture	0.06	0.06	0.07	0.06	0.06	1.80	0.06
202	Electroluminescent Nightlight	0.01	0.01	0.02	0.01	0.01	6.27	0.01
203	LED Nightlight	0.01	0.01	0.01	0.01	0.01	11.67	0.01
204	ENERGY STAR CFL Bulbs (screw-in) 60 Watt Incan. To a 14 Watt CFL	0.01	0.01	0.01	0.01	0.01	10.24	0.01
205	ENERGY STAR CFL Bulbs (screw-in) 75 Watt Incan. To a 19 Watt CFL	0.01	0.01	0.01	0.01	0.01	12.01	0.01
206	ENERGY STAR CFL Bulbs (screw-in) 100 Watt Incan. To a 23 Watt CFL	0.01	0.01	0.01	0.01	0.01	17.30	0.01
207	ENERGY STAR Indoor Fixture (hard-wired, pin-based)	0.05	0.05	0.06	0.06	0.06	1.87	0.05
208	ENERGY STAR LEDs - General Service Lamps	0.08	0.07	0.08	0.08	0.08	1.52	0.07
209	ENERGY STAR LEDs -Reflector Lamp	0.04	0.04	0.05	0.04	0.04	2.45	0.04
210	ENERGY STAR Outdoor Fixture (hard wired, pin-based)	0.02	0.02	0.03	0.02	0.02	4.15	0.02
211	ENERGY STAR Torchiere	0.06	0.06	0.06	0.06	0.06	1.74	0.06
212	ENERGY STAR Holiday Lights	0.28	0.26	0.29	0.28	0.28	0.36	0.27
213	Residential Occupancy Sensors- 14 W CFL	0.57	0.54	0.61	0.58	0.58	0.17	0.55
214	Residential Occupancy Sensors 19 W CFL	0.42	0.40	0.45	0.43	0.43	0.23	0.41
215	Residential Occupancy Sensors- 23 W CFL	0.35	0.33	0.37	0.35	0.35	0.28	0.34
216	Ceiling Fan with ENERGY STAR Light Fixture	0.06	0.06	0.07	0.06	0.06	1.80	0.06
217	Electroluminescent Nightlight	0.01	0.01	0.02	0.01	0.01	6.27	0.01
218	LED Nightlight	0.01	0.01	0.01	0.01	0.01	11.67	0.01
219	ENERGY STAR CFL Bulbs (screw-in) 60 Watt Incan. To a 14 Watt CFL	0.01	0.01	0.01	0.01	0.01	10.24	0.01
220	ENERGY STAR CFL Bulbs (screw-in) 75 Watt Incan. To a 19 Watt CFL	0.01	0.01	0.01	0.01	0.01	12.01	0.01
221	ENERGY STAR CFL Bulbs (screw-in) 100 Watt Incan. To a 23 Watt CFL	0.01	0.01	0.01	0.01	0.01	17.30	0.01
222	ENERGY STAR Indoor Fixture (hard-wired, pin-based)	0.05	0.05	0.06	0.06	0.06	1.87	0.05
223	ENERGY STAR LEDs - General Service Lamps	0.08	0.07	0.08	0.08	0.08	1.52	0.07
224	ENERGY STAR LEDs -Reflector Lamp	0.04	0.04	0.05	0.04	0.04	2.45	0.04
225	ENERGY STAR Outdoor Fixture (hard wired, pin-based)	0.02	0.02	0.03	0.02	0.02	4.15	0.02
226	ENERGY STAR Torchiere	0.06	0.06	0.06	0.06	0.06	1.74	0.06
227	ENERGY STAR Holiday Lights	0.28	0.26	0.29	0.28	0.28	0.36	0.27
228	Residential Occupancy Sensors- 14 W CFL	0.57	0.54	0.61	0.58	0.58	0.17	0.55
229	Residential Occupancy Sensors 19 W CFL	0.42	0.40	0.45	0.43	0.43	0.23	0.41
230	Residential Occupancy Sensors- 23 W CFL	0.35	0.33	0.37	0.35	0.35	0.28	0.34
231	Ceiling Fan with ENERGY STAR Light Fixture	0.06	0.06	0.07	0.06	0.06	1.80	0.06
232	Electroluminescent Nightlight	0.01	0.01	0.02	0.01	0.01	6.27	0.01
233	LED Nightlight	0.01	0.01	0.01	0.01	0.01	11.67	0.01
234	ENERGY STAR CFL Bulbs (screw-in) 60 Watt Incan. To a 14 Watt CFL	0.01	0.01	0.01	0.01	0.01	10.24	0.01
235	ENERGY STAR CFL Bulbs (screw-in) 75 Watt Incan. To a 19 Watt CFL	0.01	0.01	0.01	0.01	0.01	12.01	0.01
236	ENERGY STAR CFL Bulbs (screw-in) 100 Watt Incan. To a 23 Watt CFL	0.01	0.01	0.01	0.01	0.01	17.30	0.01
237	ENERGY STAR Indoor Fixture (hard-wired, pin-based)	0.05	0.05	0.06	0.06	0.06	1.87	0.05
238	ENERGY STAR LEDs - General Service Lamps	0.08	0.07	0.08	0.08	0.08	1.52	0.07
239	ENERGY STAR LEDs -Reflector Lamp	0.04	0.04	0.05	0.04	0.04	2.45	0.04
240	ENERGY STAR Outdoor Fixture (hard wired, pin-based)	0.02	0.02	0.03	0.02	0.02	4.15	0.02
241	ENERGY STAR Torchiere	0.06	0.06	0.06	0.06	0.06	1.74	0.06
242	ENERGY STAR Holiday Lights	0.28	0.26	0.29	0.28	0.28	0.36	0.27
243	Residential Occupancy Sensors- 14 W CFL	0.57	0.54	0.61	0.58	0.58	0.17	0.55
244	Residential Occupancy Sensors 19 W CFL	0.42	0.40	0.45	0.43	0.43	0.23	0.41
245	Residential Occupancy Sensors- 23 W CFL	0.35	0.33	0.37	0.35	0.35	0.28	0.34
300	Appliances							
301	Refrigerator / Freezer Recycling and Replacement With a New Unit	0.02	0.02	0.02	0.02	0.02	5.40	0.02
302	Refrigerator / Freezer Retirement (and Recycling) - No Replacement	0.01	0.01	0.01	0.01	0.01	8.55	0.01
303	Energy Star top mount freezer without door ice	0.11	0.10	0.12	0.11	0.11	1.10	0.11
304	Energy Star side mount freezer without door ice	0.09	0.09	0.10	0.09	0.09	1.29	0.09
305	Energy Star bottom mount freezer without door ice	0.10	0.09	0.11	0.10	0.10	1.19	0.10

Measure-level Levelized Costs (listed by EDC)

Measure #	Measure Name	EDCs						
		PBCO	PPL	WPP	ME	PE	PP	Duq.
306	Energy Star top mount freezer with door ice	0.09	0.09	0.10	0.10	0.10	1.26	0.09
307	Energy Star side mount freezer with door ice	0.09	0.08	0.10	0.09	0.09	1.35	0.08
308	Energy Star upright with manual defrost	0.23	0.22	0.25	0.24	0.24	0.56	0.23
309	Energy Star upright with automatic defrost	0.15	0.14	0.16	0.15	0.15	0.83	0.14
310	Energy Star chest freezer	0.06	0.06	0.06	0.06	0.06	2.30	0.06
311	Energy Star dehumidifiers (35-45 pints/day)	0.00	0.00	0.00	0.00	0.00	179.83	0.00
312	Energy Star Electric Clothes Dryer with Moisture Sensor	0.27	0.26	0.29	0.28	0.28	0.54	0.26
313	ENERGY STAR Clothes Washers- with Electric Heat	0.16	0.15	0.17	0.17	0.17	0.66	0.16
314	ENERGY STAR Clothes Washers- with Gas Heat	1.52	1.44	1.63	1.55	1.55	0.12	1.48
315	ENERGY STAR Dishwashers- with Electric Water Heating	0.02	0.02	0.02	0.02	0.02	6.33	0.02
316	ENERGY STAR Dishwashers- with Gas Heat	0.05	0.05	0.05	0.05	0.05	3.81	0.05
317	ENERGY STAR Room Air Conditioners	0.07	0.07	0.08	0.08	0.08	1.80	0.07
318	Energy Star Exhaust Fans	1.83	1.73	1.95	1.86	1.86	2.13	1.77
319	Energy Star Residential Whole House Fans	0.17	0.16	0.19	0.18	0.18	0.64	0.17
320	Refrigerator / Freezer Recycling and Replacement With a New Unit	0.02	0.02	0.02	0.02	0.02	5.40	0.02
321	Refrigerator / Freezer Retirement (and Recycling) - No Replacement	0.01	0.01	0.01	0.01	0.01	8.55	0.01
322	Energy Star top mount freezer without door ice	0.11	0.10	0.12	0.11	0.11	1.10	0.11
323	Energy Star side mount freezer without door ice	0.09	0.09	0.10	0.09	0.09	1.29	0.09
324	Energy Star bottom mount freezer without door ice	0.10	0.09	0.11	0.10	0.10	1.19	0.10
325	Energy Star top mount freezer with door ice	0.09	0.09	0.10	0.10	0.10	1.26	0.09
326	Energy Star side mount freezer with door ice	0.09	0.08	0.10	0.09	0.09	1.35	0.08
327	Energy Star upright with manual defrost	0.23	0.22	0.25	0.24	0.24	0.56	0.23
328	Energy Star upright with automatic defrost	0.15	0.14	0.16	0.15	0.15	0.83	0.14
329	Energy Star chest freezer	0.06	0.06	0.06	0.06	0.06	2.30	0.06
330	Energy Star dehumidifiers (35-45 pints/day)	0.00	0.00	0.00	0.00	0.00	179.83	0.00
331	Energy Star Electric Clothes Dryer with Moisture Sensor	0.27	0.26	0.29	0.28	0.28	0.54	0.26
332	ENERGY STAR Clothes Washers- with Electric Heat	0.16	0.15	0.17	0.17	0.17	0.66	0.16
333	ENERGY STAR Clothes Washers- with Gas Heat	1.52	1.44	1.63	1.55	1.55	0.12	1.48
334	ENERGY STAR Dishwashers- with Electric Water Heating	0.02	0.02	0.02	0.02	0.02	6.33	0.02
335	ENERGY STAR Dishwashers- with Gas Heat	0.05	0.05	0.05	0.05	0.05	3.81	0.05
336	ENERGY STAR Room Air Conditioners	0.07	0.07	0.08	0.08	0.08	1.80	0.07
337	Energy Star Exhaust Fans	1.83	1.73	1.95	1.86	1.86	2.13	1.77
338	Energy Star Residential Whole House Fans	0.17	0.16	0.19	0.18	0.18	0.64	0.17
339	Refrigerator / Freezer Recycling and Replacement With a New Unit	0.02	0.02	0.02	0.02	0.02	5.40	0.02
340	Refrigerator / Freezer Retirement (and Recycling) - No Replacement	0.01	0.01	0.01	0.01	0.01	8.55	0.01
341	Energy Star top mount freezer without door ice	0.11	0.10	0.12	0.11	0.11	1.10	0.11
342	Energy Star side mount freezer without door ice	0.09	0.09	0.10	0.09	0.09	1.29	0.09
343	Energy Star bottom mount freezer without door ice	0.10	0.09	0.11	0.10	0.10	1.19	0.10
344	Energy Star top mount freezer with door ice	0.09	0.09	0.10	0.10	0.10	1.26	0.09
345	Energy Star side mount freezer with door ice	0.09	0.08	0.10	0.09	0.09	1.35	0.08
346	Energy Star upright with manual defrost	0.23	0.22	0.25	0.24	0.24	0.56	0.23
347	Energy Star upright with automatic defrost	0.15	0.14	0.16	0.15	0.15	0.83	0.14
348	Energy Star chest freezer	0.06	0.06	0.06	0.06	0.06	2.30	0.06
349	Energy Star dehumidifiers (35-45 pints/day)	0.00	0.00	0.00	0.00	0.00	179.83	0.00
350	Energy Star Electric Clothes Dryer with Moisture Sensor	0.27	0.26	0.29	0.28	0.28	0.54	0.26
351	ENERGY STAR Clothes Washers- with Electric Heat	0.16	0.15	0.17	0.17	0.17	0.66	0.16
352	ENERGY STAR Clothes Washers- with Gas Heat	1.52	1.44	1.63	1.55	1.55	0.12	1.48
353	ENERGY STAR Dishwashers- with Electric Water Heating	0.02	0.02	0.02	0.02	0.02	6.33	0.02
354	ENERGY STAR Dishwashers- with Gas Heat	0.05	0.05	0.05	0.05	0.05	3.81	0.05
355	ENERGY STAR Room Air Conditioners	0.07	0.07	0.08	0.08	0.08	1.80	0.07
356	Energy Star Exhaust Fans	1.83	1.73	1.95	1.86	1.86	2.13	1.77
357	Energy Star Residential Whole House Fans	0.17	0.16	0.19	0.18	0.18	0.64	0.17
400	Electronics							
401	ENERGY STAR Computer	0.00	0.00	0.00	0.00	0.00	26.52	0.00
402	ENERGY STAR Copier	0.18	0.17	0.18	0.18	0.18	0.57	0.17
403	ENERGY STAR Fax Machine	0.23	0.22	0.24	0.23	0.23	0.40	0.23
404	ENERGY STAR Monitor	0.35	0.34	0.37	0.36	0.36	0.27	0.35
405	ENERGY STAR Multifunction	0.00	0.00	0.00	0.00	0.00	36.46	0.00
406	ENERGY STAR Printer	0.01	0.01	0.01	0.01	0.01	10.04	0.01
407	>50 in	0.00	0.00	0.00	0.00	0.00	493.54	0.00
408	<50 in	0.00	0.00	0.00	0.00	0.00	217.56	0.00
409	Smart Strip Plug Outlets	0.03	0.03	0.03	0.03	0.03	2.98	0.03
410	ENERGY STAR Computer	0.00	0.00	0.00	0.00	0.00	26.52	0.00
411	ENERGY STAR Copier	0.18	0.17	0.18	0.18	0.18	0.57	0.17
412	ENERGY STAR Fax Machine	0.23	0.22	0.24	0.23	0.23	0.40	0.23
413	ENERGY STAR Monitor	0.35	0.34	0.37	0.36	0.36	0.27	0.35
414	ENERGY STAR Multifunction	0.00	0.00	0.00	0.00	0.00	36.46	0.00
415	ENERGY STAR Printer	0.01	0.01	0.01	0.01	0.01	10.04	0.01
416	>50 in	0.00	0.00	0.00	0.00	0.00	493.54	0.00
417	<50 in	0.00	0.00	0.00	0.00	0.00	217.56	0.00
418	Smart Strip Plug Outlets	0.03	0.03	0.03	0.03	0.03	2.98	0.03
419	ENERGY STAR Computer	0.00	0.00	0.00	0.00	0.00	26.52	0.00
420	ENERGY STAR Copier	0.18	0.17	0.18	0.18	0.18	0.57	0.17
421	ENERGY STAR Fax Machine	0.23	0.22	0.24	0.23	0.23	0.40	0.23
422	ENERGY STAR Monitor	0.35	0.34	0.37	0.36	0.36	0.27	0.35
423	ENERGY STAR Multifunction	0.00	0.00	0.00	0.00	0.00	36.46	0.00
424	ENERGY STAR Printer	0.01	0.01	0.01	0.01	0.01	10.04	0.01
425	>50 in	0.00	0.00	0.00	0.00	0.00	493.54	0.00
426	<50 in	0.00	0.00	0.00	0.00	0.00	217.56	0.00
427	Smart Strip Plug Outlets	0.03	0.03	0.03	0.03	0.03	2.98	0.03
500	Pool							
501	High Efficiency Two-Speed Pool Pump	0.05	0.05	0.05	0.05	0.05	2.75	0.05
502	Variable Speed Pool Pumps	0.12	0.11	0.13	0.12	0.12	0.72	0.12

Measure-level Levelized Costs (listed by EDC)

Measure #	Measure Name	EDCs						
		PBCO	PPL	WPP	ME	PE	PP	Duq.
503	High Efficiency Two-Speed Pool Pump	0.05	0.05	0.05	0.05	0.05	2.75	0.05
504	Variable Speed Pool Pumps	0.12	0.11	0.13	0.12	0.12	0.72	0.12
505	High Efficiency Two-Speed Pool Pump	0.05	0.05	0.05	0.05	0.05	2.75	0.05
506	Variable Speed Pool Pumps	0.12	0.11	0.13	0.12	0.12	0.72	0.12
600	HVAC (Envelope)							
601	Air Sealing (cost per sf of living space for a typical single-family home)	0.05	0.04	0.04	0.02	0.04	3.82	0.04
602	Attic Insulation- R0 to R19 (Cost Per Square Foot installed)	0.04	0.04	0.03	0.03	0.03	3.92	0.03
603	Attic Insulation- R0-R38 (Cost Per Square Foot installed)	0.04	0.04	0.04	0.03	0.04	3.63	0.03
604	Attic Insulation R0 to R60 (Cost Per Square Foot installed)	0.04	0.05	0.05	0.04	0.05	2.93	0.04
605	Attic Insulation - R19 to R-60 (Cost Per Square Foot installed)	0.11	0.16	0.16	0.14	0.15	0.84	0.13
606	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	0.03	0.04	0.04	0.03	0.03	4.53	0.02
607	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	0.04	0.04	0.05	0.03	0.03	4.02	0.03
608	ENERGY STAR Windows	0.06	0.04	0.05	0.17	0.02	2.83	0.04
609	Floor Insulation - R0 to R-13 (Cost Per Square Foot Installed)	0.24	0.07	0.12	0.11	0.11	0.86	0.11
610	Floor Insulation - R0 to R-19 (Cost Per Square Foot Installed)	0.26	0.08	0.13	0.12	0.12	0.78	0.13
611	HVAC Duct Sealing (Cost per typical single-family home)	0.05	0.03	0.03	0.02	0.03	7.01	0.02
612	Air Sealing (cost per sf of living space for a typical single-family home)	1.90	2.12	-1.89	-0.60	-1.97	-0.09	-1.24
613	Attic Insulation- R0 to R19 (Cost Per Square Foot installed)	0.22	0.52	0.63	0.88	0.60	0.99	0.55
614	Attic Insulation- R0-R38 (Cost Per Square Foot installed)	0.23	0.56	0.68	0.96	0.65	0.77	0.59
615	Attic Insulation R0 to R60 (Cost Per Square Foot installed)	0.29	0.69	0.85	1.19	0.81	0.68	0.74
616	Attic Insulation - R19 to R-60 (Cost Per Square Foot installed)	0.96	2.42	3.01	4.41	2.94	0.05	2.56
617	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	0.36	0.71	1.80	9.52	1.29	0.10	2.46
618	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	0.41	0.80	2.03	10.83	1.45	0.08	2.79
619	ENERGY STAR Windows	-3.01	-1.47	-1.11	-0.71	-0.44	-0.10	-0.76
620	Floor Insulation - R0 to R-13 (Cost Per Square Foot Installed)	-2.11	-1.91	-1.20	-0.86	-1.01	-0.09	-0.83
621	Floor Insulation - R0 to R-19 (Cost Per Square Foot Installed)	-2.41	-2.09	-1.33	-0.95	-1.12	-0.08	-0.92
622	HVAC Duct Sealing (Cost per typical single-family home)	0.26	0.20	0.31	0.33	0.33	0.37	0.32
623	Air Sealing (cost per sf of living space for a typical single-family home)	1.71	0.02	-2.29	-0.70	-2.28	-0.01	-1.38
624	Attic Insulation- R0 to R19 (Cost Per Square Foot installed)	0.20	0.02	0.52	0.70	0.51	0.27	0.48
625	Attic Insulation- R0-R38 (Cost Per Square Foot installed)	0.21	0.02	0.57	0.78	0.56	0.26	0.52
626	Attic Insulation R0 to R60 (Cost Per Square Foot installed)	0.27	0.03	0.72	0.97	0.70	0.21	0.64
627	Attic Insulation - R19 to R-60 (Cost Per Square Foot installed)	0.89	0.09	2.91	3.88	2.74	0.07	2.30
628	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	0.36	0.03	1.66	4.59	1.19	0.10	1.89
629	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	0.41	0.03	1.87	5.15	1.34	0.09	2.14
630	ENERGY STAR Windows	-13.06	0.03	-1.41	-0.87	-0.38	-0.02	-0.90
631	Floor Insulation - R0 to R-13 (Cost Per Square Foot Installed)	-0.62	0.04	-1.10	-0.86	-0.91	-0.09	-0.80
632	Floor Insulation - R0 to R-19 (Cost Per Square Foot Installed)	-0.71	0.04	-1.22	-0.95	-1.01	-0.10	-0.89
633	HVAC Duct Sealing (Cost per typical single-family home)	0.76	#DIV/0!	6.40	4.01	2.73	-0.05	2.09
634	Air Sealing (cost per sf of living space for a typical single-family home)	0.05	0.04	0.04	0.02	0.04	4.19	0.03
635	Attic Insulation- R0 to R19 (Cost Per Square Foot installed)	0.04	0.03	0.03	0.03	0.03	4.18	0.03
636	Attic Insulation- R0-R38 (Cost Per Square Foot installed)	0.04	0.04	0.04	0.03	0.03	3.92	0.03
637	Attic Insulation R0 to R60 (Cost Per Square Foot installed)	0.05	0.05	0.05	0.04	0.04	3.14	0.04
638	Attic Insulation - R19 to R-60 (Cost Per Square Foot installed)	0.15	0.15	0.16	0.14	0.13	0.92	0.12
639	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	0.08	0.11	0.10	0.05	0.06	2.10	0.06
640	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	0.09	0.13	0.11	0.06	0.07	1.88	0.06
641	ENERGY STAR Windows	0.06	0.02	0.05	0.04	0.02	3.03	0.04
642	Floor Insulation - R0 to R-13 (Cost Per Square Foot Installed)	1.85	0.38	0.32	0.07	0.09	0.86	0.09
643	Floor Insulation - R0 to R-19 (Cost Per Square Foot Installed)	2.00	0.41	0.35	0.08	0.10	0.76	0.10
644	HVAC Duct Sealing (Cost per typical single-family home)	0.07	0.04	0.03	0.04	0.03	6.64	0.03
645	Air Sealing (cost per sf of living space for a typical single-family home)	1.13	4.56	-1.66	-0.74	-5.17	-0.08	-1.72
646	Attic Insulation- R0 to R19 (Cost Per Square Foot installed)	0.33	0.39	0.63	1.90	0.43	0.32	0.52
647	Attic Insulation- R0-R38 (Cost Per Square Foot installed)	0.34	0.42	0.67	2.16	0.46	0.29	0.56
648	Attic Insulation R0 to R60 (Cost Per Square Foot installed)	0.42	0.52	0.84	2.71	0.57	0.23	0.70
649	Attic Insulation - R19 to R-60 (Cost Per Square Foot installed)	1.25	1.83	2.95	12.42	1.91	0.06	2.44
650	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	1.14	3.15	6.67	20.73	1.84	0.06	3.93
651	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	1.32	3.55	7.51	21.91	2.11	0.05	4.43
652	ENERGY STAR Windows	-1.75	-0.87	-0.95	-0.66	-0.63	-0.09	-0.82
653	Floor Insulation - R0 to R-13 (Cost Per Square Foot Installed)	-0.71	-0.93	-1.26	-0.81	-1.05	-0.08	-0.80
654	Floor Insulation - R0 to R-19 (Cost Per Square Foot Installed)	-0.78	-1.01	-1.38	-0.91	-1.14	-0.07	-0.90
655	HVAC Duct Sealing (Cost per typical single-family home)	0.26	0.21	0.33	0.34	0.26	0.37	0.28
656	Air Sealing (cost per sf of living space for a typical single-family home)	1.01	0.03	-1.87	-0.95	-4.43	-0.01	-1.76
657	Attic Insulation- R0 to R19 (Cost Per Square Foot installed)	0.29	0.02	0.55	1.47	0.38	0.30	0.46
658	Attic Insulation- R0-R38 (Cost Per Square Foot installed)	0.30	0.02	0.58	2.10	0.41	0.29	0.49
659	Attic Insulation R0 to R60 (Cost Per Square Foot installed)	0.37	0.03	0.73	2.83	0.51	0.23	0.61
660	Attic Insulation - R19 to R-60 (Cost Per Square Foot installed)	1.04	0.10	2.48	-18.62	1.77	0.07	2.10
661	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	1.08	0.07	5.41	7.68	1.71	0.05	3.25
662	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	1.25	0.08	6.15	8.76	1.92	0.04	3.68
663	ENERGY STAR Windows	-8.16	0.03	-1.15	-0.90	-0.72	0.00	-0.96
664	Floor Insulation - R0 to R-13 (Cost Per Square Foot Installed)	-0.38	0.06	-1.06	-0.78	-0.84	-0.11	-0.73
665	Floor Insulation - R0 to R-19 (Cost Per Square Foot Installed)	-0.41	0.07	-1.16	-0.87	-0.94	-0.10	-0.81
666	HVAC Duct Sealing (Cost per typical single-family home)	0.81	#DIV/0!	2.02	3.77	0.71	-0.04	0.94
667	Air Sealing (cost per sf of living space for a typical multi-family home)	0.07	0.07	0.06	0.03	0.06	2.79	0.05
668	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	0.25	0.31	0.26	0.33	0.32	0.72	0.32
669	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	0.29	0.34	0.29	0.37	0.37	0.62	0.36
670	ENERGY STAR Windows	0.07	0.06	0.06	0.05	0.03	2.81	0.04
671	HVAC Duct Sealing (Cost per typical multi-family home)	0.08	0.04	0.10	0.10	0.10	2.47	0.07
672	Air Sealing (cost per sf of living space for a typical multi-family home)	1.72	0.93	-11.20	-1.04	-2.49	0.03	-5.24
673	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	4.61	6.58	15.28	-20.18	-38.13	0.01	15.88
674	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	5.39	7.36	17.23	-21.93	-36.26	0.03	17.62
675	ENERGY STAR Windows	-1.15	-1.56	-1.24	-0.75	-0.36	0.05	-1.16
676	HVAC Duct Sealing (Cost per typical multi-family home)	0.15	0.16	0.48	0.54	0.54	0.13	0.57
677	Air Sealing (cost per sf of living space for a typical multi-family home)	-0.94	0.04	-7.47	-0.90	-2.06	-0.01	-4.03
678	Wall Insulation - R0 to R11 (Cost Per Square Foot Installed)	7.89	0.20	15.28	-20.18	-28.60	0.01	15.88

Measure-level Levelized Costs (listed by EDC)

Measure #	Measure Name	EDCs						
		PBCO	PPL	WPP	ME	PE	PP	Duq.
679	Wall Insulation - R0 to R19 (Cost Per Square Foot Installed)	8.76	0.23	17.23	-21.93	-36.26	0.01	17.62
680	ENERGY STAR Windows	-0.71	0.04	-1.12	-0.68	-0.33	-0.09	-1.04
681	HVAC Duct Sealing (Cost per typical multi-family home)	0.09	#DIV/0!	0.43	0.48	0.49	0.00	0.50
700	HVAC (Equipment/Controls)							
701	Programmable Thermostat (ASHP)	0.01	0.01	0.01	0.01	0.01	13.21	0.01
702	Air Source Heat Pump (Maintenance)	0.01	0.01	0.01	0.01	0.01	8.46	0.01
703	Air Source Heat Pump (Equipment Only) - SEER 13 to SEER 15 (3.5 ton)	0.14	0.14	0.14	0.88	0.16	0.43	0.13
704	Air Source Heat Pump (Equipment Only) - SEER 13 to SEER 16 (3.5 ton)	0.20	0.19	0.21	1.25	0.24	0.67	0.20
705	GSHP w/ Desuperheater	0.18	0.32	0.45	0.43	0.79	0.19	0.34
706	Ductless Mini-Split Heat Pumps	0.04	0.03	0.03	0.03	0.03	6.36	0.03
707	Ground Source Heat Pumps (GSHP)	0.21	0.45	0.58	0.53	1.45	0.16	0.40
708	Central AC (Equipment Only) - SEER 13 to SEER 15 (3.5 tons)	0.64	0.72	1.07	1.30	1.09	0.12	1.14
709	Central AC (Equipment Only) - SEER 13 to SEER 16 (3.5 tons)	0.82	0.92	1.37	1.67	1.41	0.08	1.47
710	HVAC Tune Up (Cooling Season Only Tune Up)	0.03	0.04	0.05	0.06	0.05	1.26	0.06
711	Furnace High Efficiency Fan	0.05	0.04	0.05	0.05	0.05	2.38	0.04
712	Programmable Thermostat (CAC)	0.05	0.04	0.01	0.11	0.09	0.97	0.09
713	Furnace Whistle	0.00	0.00	0.00	0.00	0.00	86.83	0.00
714	Room AC (RAC) Retirement with no replacement (per AC unit)	0.03	0.05	0.06	0.06	0.06	3.24	0.05
715	Room AC (RAC) Retirement with replacement (per AC unit)	0.46	0.67	0.77	0.75	0.75	0.10	0.68
716	Programmable Thermostat (ASHP)	0.02	0.01	0.01	0.02	0.02	10.56	0.01
717	Air Source Heat Pump (Maintenance)	0.03	0.03	0.02	0.02	0.02	6.92	0.01
718	Air Source Heat Pump (Equipment Only) - SEER 13 to SEER 15 (3.5 ton)	0.25	0.12	0.21	0.24	0.23	0.36	0.19
719	Air Source Heat Pump (Equipment Only) - SEER 13 to SEER 16 (3.5 ton)	0.35	0.28	0.31	0.35	0.33	0.56	0.28
720	GSHP w/ Desuperheater	0.45	0.27	0.91	2.20	1.54	0.13	0.80
721	Ductless Mini-Split Heat Pumps	0.06	0.04	0.04	0.04	0.06	5.57	0.04
722	Ground Source Heat Pumps (GSHP)	0.62	0.33	1.56	235.82	10.60	0.08	1.41
723	Central AC (Equipment Only) - SEER 13 to SEER 15 (3.5 tons)	1.08	0.92	1.37	1.58	1.19	0.12	1.22
724	Central AC (Equipment Only) - SEER 13 to SEER 16 (3.5 tons)	1.39	1.19	1.77	2.03	1.53	0.07	1.57
725	HVAC Tune Up (Cooling Season Only Tune Up)	0.05	0.05	0.07	0.08	0.06	1.22	0.06
726	Furnace High Efficiency Fan	0.05	0.04	0.05	0.05	0.05	2.38	0.04
727	Programmable Thermostat (CAC)	0.09	0.01	0.14	0.19	0.11	0.74	0.13
728	Furnace Whistle	0.00	0.00	0.00	0.00	0.00	86.83	0.00
729	Room AC (RAC) Retirement with no replacement (per AC unit)	0.03	0.05	0.06	0.06	0.06	3.24	0.05
730	Room AC (RAC) Retirement with replacement (per AC unit)	0.46	0.67	0.77	0.75	0.75	0.10	0.68
731	Programmable Thermostat (ASHP)	-0.08	0.04	0.12	0.05	0.05	1.56	0.05
732	Air Source Heat Pump (Maintenance)	0.12	0.08	0.06	0.05	0.06	1.55	0.04
733	Air Source Heat Pump (Equipment Only) - SEER 13 to SEER 15 (3.5 ton)	0.66	0.75	0.74	0.65	0.67	0.08	0.45
734	Air Source Heat Pump (Equipment Only) - SEER 13 to SEER 16 (3.5 ton)	0.92	1.06	1.08	0.96	0.98	0.13	0.66
735	GSHP w/ Desuperheater	1.09	-1.92	-2.11	-1.64	-1.70	-0.09	-40.98
736	Ductless Mini-Split Heat Pumps	0.22	0.24	0.24	0.20	0.20	1.02	0.13
737	Ground Source Heat Pumps (GSHP)	2.18	-1.01	-1.24	-1.06	-1.08	-0.10	-2.09
738	Central AC (Equipment Only) - SEER 13 to SEER 15 (3.5 tons)	1.55	1.81	2.42	2.60	2.51	0.04	1.70
739	Central AC (Equipment Only) - SEER 13 to SEER 16 (3.5 tons)	1.99	2.33	3.13	3.34	3.23	0.05	2.19
740	HVAC Tune Up (Cooling Season Only Tune Up)	0.08	0.09	0.12	0.13	0.12	0.61	0.09
741	Furnace High Efficiency Fan	0.05	0.04	0.05	0.05	0.05	2.38	0.04
742	Programmable Thermostat (CAC)	-0.04	0.02	-0.19	0.32	0.24	0.08	-0.55
743	Furnace Whistle	0.00	0.00	0.00	0.00	0.00	86.83	0.00
744	Room AC (RAC) Retirement with no replacement (per AC unit)	0.03	0.05	0.06	0.06	0.06	3.24	0.05
745	Room AC (RAC) Retirement with replacement (per AC unit)	0.46	0.67	0.77	0.75	0.75	0.10	0.68
800	Whole House							
801	Direct (Real Time) Feedback	0.03	0.03	0.03	0.03	0.03	4.65	0.03
802	Indirect Feedback (O-Power)	0.02	0.02	0.02	0.02	0.02	6.94	0.02
803	Direct (Real Time) Feedback	0.12	0.13	0.11	0.12	0.12	1.04	0.11
804	Indirect Feedback (O-Power)	0.08	0.08	0.07	0.07	0.08	1.55	0.07
805	Direct (Real Time) Feedback	0.13	0.03	0.11	0.12	0.13	0.96	0.12
806	Indirect Feedback	0.08	0.02	0.07	0.08	0.08	1.44	0.07
807	Direct (Real Time) Feedback	0.05	0.04	0.04	0.04	0.04	4.15	0.04
808	Indirect Feedback (O-Power)	0.03	0.03	0.02	0.03	0.03	6.19	0.02
809	Direct (Real Time) Feedback	0.18	0.16	0.13	0.16	0.15	1.04	0.14
810	Indirect Feedback (O-Power)	0.12	0.10	0.08	0.10	0.10	1.56	0.09
811	Direct (Real Time) Feedback	0.20	0.04	0.13	0.17	0.16	0.98	0.15
812	Indirect Feedback (O-Power)	0.13	0.02	0.09	0.11	0.10	1.46	0.09
813	Direct (Real Time) Feedback	0.08	0.09	0.08	0.07	0.07	1.80	0.06
814	Indirect Feedback (O-Power)	0.05	0.06	0.05	0.05	0.05	2.69	0.04
815	Direct (Real Time) Feedback	0.26	0.28	0.23	0.20	0.21	0.56	0.18
816	Indirect Feedback (O-Power)	0.16	0.18	0.15	0.13	0.14	0.84	0.11
817	Direct (Real Time) Feedback	0.24	0.09	0.23	0.20	0.21	0.55	0.17
818	Indirect Feedback (O-Power)	0.15	0.06	0.14	0.13	0.14	0.82	0.11
900	New Construction							
901	Residential New Construction-Tier 1	0.17	0.22	0.17	0.14	0.17	0.85	0.15
902	Residential New Construction-Tier 2	0.13	0.16	0.13	0.10	0.13	1.13	0.11
903	Residential New Construction-Tier 1	0.33	0.44	0.35	0.34	0.37	0.34	0.32
904	Residential New Construction-Tier 2	0.25	0.33	0.26	0.26	0.28	0.45	0.24
905	Residential New Construction Tier 1	0.16	0.19	0.18	0.14	0.15	0.42	0.13
906	Residential New Construction Tier 2	0.12	0.14	0.13	0.11	0.11	0.57	0.10
907	Residential New Construction Tier 1	0.32	0.46	0.37	0.30	0.32	0.18	0.25
908	Residential New Construction Tier 2	0.24	0.34	0.28	0.23	0.24	0.24	0.19