

**Program Name: Residential Solar Water Heating**

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level % <sup>(1)</sup>
2010	4,010,837	4,010,837	1,366	0%
2011	4,056,428	4,055,061	4,588	0%
2012	4,141,910	4,135,955	4,882	0%
2013	4,226,978	4,216,141	4,974	0%
2014	4,311,223	4,295,412	4,970	0%
2015	4,394,802	4,374,021	0	0%
2016	4,477,937	4,457,157	0	0%
2017	4,560,569	4,539,788	0	0%
2018	4,642,575	4,621,795	0	0%
2019	4,720,827	4,700,047	0	0%

Notes: Column a - The total number of customers in residential rate class  
Column b - The total number of eligible customers in residential rate class.  
Column d - Column c cumulative / Column b

<sup>(1)</sup> Cumulative Penetration Level addresses participants in 2010 and beyond.

**At the Meter**

Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	1,482	0.45	0.22	2,024,835	615	301
2011	1,482	0.45	0.22	6,799,875	2,065	1,009
2012	1,482	0.45	0.22	7,235,124	2,197	1,074
2013	1,482	0.45	0.22	7,371,468	2,238	1,094
2014	1,482	0.45	0.22	7,365,540	2,237	1,093
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

**At the Generator**

Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	1,592	0.49	0.24	2,174,926	673	329
2011	1,592	0.49	0.24	7,303,918	2,261	1,105
2012	1,592	0.49	0.24	7,771,430	2,405	1,176
2013	1,592	0.49	0.24	7,917,881	2,451	1,198
2014	1,592	0.49	0.24	7,911,514	2,449	1,197
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

**Program Name: Residential Solar Water Heating (Low Income New Construction)**

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level % <sup>(1)</sup>
2010	4,010,837	404	20	5%
2011	4,056,428	404	200	50%
2012	4,141,910	404	200	50%
2013	4,226,978	404	200	50%
2014	4,311,223	404	200	50%
2015	4,394,802	404	0	0%
2016	4,477,937	404	0	0%
2017	4,560,569	404	0	0%
2018	4,642,575	404	0	0%
2019	4,720,827	404	0	0%

Notes: Column a - The total number of customers in residential rate class  
Column b - The projected annual number of program-eligible new homes  
Column d - Column c / Column b  
<sup>(1)</sup> Cumulative Penetration Level addresses participants in 2010 and beyond.

**At the Meter**

Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	1,482	0.45	0.22	29,640	9	4
2011	1,482	0.45	0.22	296,400	90	44
2012	1,482	0.45	0.22	296,400	90	44
2013	1,482	0.45	0.22	296,400	90	44
2014	1,482	0.45	0.22	296,400	90	44
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

**At the Generator**

Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	1,592	0.49	0.24	31,837	10	5
2011	1,592	0.49	0.24	318,371	99	48
2012	1,592	0.49	0.24	318,371	99	48
2013	1,592	0.49	0.24	318,371	99	48
2014	1,592	0.49	0.24	318,371	99	48
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

**Program Name: Business Solar Water Heating**

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level % <sup>(1)</sup>
2010	534,490	534,490	11	0%
2011	547,697	547,685	43	0%
2012	561,576	561,522	52	0%
2013	575,598	575,492	63	0%
2014	590,087	589,918	76	0%
2015	604,956	604,712	0	0%
2016	620,071	619,827	0	0%
2017	635,559	635,315	0	0%
2018	651,590	651,346	0	0%
2019	667,785	667,541	0	0%

Notes: Column a - The total number of customers in the business rate classes.  
Column b - The total number of eligible customers in the business rate classes.  
Column d - Column c cumulative / Column b  
<sup>(1)</sup> Cumulative Penetration Level addresses participants in 2010 and beyond.

**At the Meter**

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2010	3,652	0.07	1.00	41,994	1	11
2011	3,652	0.07	1.00	155,555	3	43
2012	3,652	0.07	1.00	189,299	4	52
2013	3,652	0.07	1.00	229,171	4	63
2014	3,652	0.07	1.00	275,797	5	75
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

**At the Generator**

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2010	3,923	0.08	1.09	45,107	1	13
2011	3,923	0.08	1.09	167,085	3	47
2012	3,923	0.08	1.09	203,331	4	57
2013	3,923	0.08	1.09	246,159	5	69
2014	3,923	0.08	1.09	296,240	6	83
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

**Program Name: Residential Photovoltaic**

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level % <sup>(1)</sup>
2010	4,010,837	4,010,837	113	0%
2011	4,056,428	4,056,315	340	0%
2012	4,141,910	4,141,457	340	0%
2013	4,226,978	4,226,185	340	0%
2014	4,311,223	4,310,090	340	0%
2015	4,394,802	4,393,329	0	0%
2016	4,477,937	4,476,465	0	0%
2017	4,560,569	4,559,096	0	0%
2018	4,642,575	4,641,103	0	0%
2019	4,720,827	4,719,355	0	0%

Notes: Column a - The total number of customers in residential rate class.  
Column b - The total number of eligible customers in residential rate class.  
Column d - Column c cumulative / Column b  
<sup>(1)</sup> Cumulative Penetration Level addresses participants in 2010 and beyond.

**At the Meter**

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2010	5,373	0.05	1.70	605,222	6	191
2011	5,373	0.05	1.70	1,826,888	17	578
2012	5,373	0.05	1.70	1,826,888	17	578
2013	5,373	0.05	1.70	1,826,888	17	578
2014	5,373	0.05	1.70	1,826,888	17	578
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

**At the Generator**

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2010	5,771	0.06	1.86	650,084	7	209
2011	5,771	0.05	1.86	1,962,307	19	633
2012	5,771	0.05	1.86	1,962,307	19	633
2013	5,771	0.05	1.86	1,962,307	19	633
2014	5,771	0.05	1.86	1,962,307	19	633
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

**Program Name: Business Photovoltaic**

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level % <sup>(1)</sup>
2010	534,490	534,490	20	0%
2011	547,697	547,676	63	0%
2012	561,576	561,492	66	0%
2013	575,598	575,448	71	0%
2014	590,087	589,865	79	0%
2015	604,956	604,655	0	0%
2016	620,071	619,770	0	0%
2017	635,559	635,258	0	0%
2018	651,590	651,289	0	0%
2019	667,785	667,484	0	0%

Notes: Column a - The total number of customers in the business rate classes.

Column b - The total number of eligible customers in the business rate classes.

Column d - Column c cumulative / Column b

<sup>(1)</sup> Cumulative Penetration Level addresses participants in 2010 and beyond.

**At the Meter**

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2010	22,344	0.21	7.07	453,327	4	143
2011	22,344	0.21	7.07	1,417,575	13	449
2012	22,344	0.21	7.07	1,484,617	14	470
2013	22,344	0.21	7.07	1,597,342	15	505
2014	22,344	0.21	7.07	1,772,634	17	561
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

**At the Generator**

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2010	24,000	0.23	7.74	486,930	5	157
2011	24,000	0.23	7.74	1,522,654	15	491
2012	24,000	0.23	7.74	1,594,665	15	514
2013	24,000	0.23	7.74	1,715,745	16	553
2014	24,000	0.23	7.74	1,904,031	18	614
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

**Program Name: Business Photoaltaics for Schools**

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level % <sup>(1)</sup>
2010	534,490	534,490	2	0%
2011	547,697	547,695	18	0%
2012	561,576	561,556	22	0%
2013	575,598	575,556	21	0%
2014	590,087	590,024	18	0%
2015	604,956	604,875	0	0%
2016	620,071	619,990	0	0%
2017	635,559	635,478	0	0%
2018	651,590	651,509	0	0%
2019	667,785	667,704	0	0%

Notes: Column a - The total number of customers in the business rate classes.

Column b - The total number of eligible customers in the business rate classes.

Column d - Column c cumulative / Column b

<sup>(1)</sup> Cumulative Penetration Level addresses participants in 2010 and beyond.

**At the Meter**

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2010	13,300	0.13	4.21	26,600	0	8
2011	8,128	0.08	2.57	146,300	1	46
2012	7,255	0.07	2.30	159,600	2	51
2013	6,967	0.07	2.20	146,300	1	46
2014	6,650	0.06	2.10	119,700	1	38
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

**At the Generator**

Year	Per Customer KWh Reduction	Per Customer Winter KW Reduction	Per Customer Summer KW Reduction	Total Annual KWh Reduction	Total Annual Winter KW Reduction	Total Annual Summer KW Reduction
2010	14,286	0.14	4.61	28,572	0	9
2011	8,730	0.08	2.82	157,145	2	51
2012	7,792	0.07	2.51	171,430	2	55
2013	7,483	0.07	2.41	157,145	2	51
2014	7,143	0.07	2.30	128,573	1	41
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

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BAUER IMPACT TEST  
PROGRAMMED SERIES-REV. 9/90  
PROGRAM NAME: Residential Power Window Sealing

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(1) YEAR	(2) INCREASED SURETY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) INCREASES \$(000)	(5) REVENUE LOSSES \$(000)	(6) OTHER COSTS \$(000)	(7) TOTAL COSTS \$(000)	(8) AVOIDED GEN UNIT-FUEL BENEFITS \$(000)	(9) AVOIDED T&D BENEFITS \$(000)	(10) REVENUE GAINS \$(000)	(11) OTHER BENEFITS \$(000)	(12) TOTAL BENEFITS \$(000)	(13) NET BENEFITS \$(000)	(14) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2010	0	0	0	0	0	0	0	0	0	0	0	0	(2,187)
2011	0	1,004	1,366	627	0	2,401	74	0	0	0	74	411	(1,657)
2012	0	588	4,382	4,982	0	6,489	390	28	0	1	411	(3,089)	
2013	0	372	4,474	4,874	0	7,625	740	87	0	3	972	(5,224)	
2014	0	480	4,578	5,078	0	8,256	2,053	282	0	283	1,894	(3,529)	
2015	0	0	0	0	0	3,397	2,853	382	0	229	2,774	(6,603)	
2016	0	0	0	0	0	4,316	2,771	312	0	351	3,438	(5,565)	
2017	0	0	0	0	0	4,461	3,115	393	0	399	3,897	(4,129)	
2018	0	0	0	0	0	4,025	3,308	294	0	429	4,482	(2,170)	
2019	0	0	0	0	0	4,754	3,628	288	0	465	4,978	(229)	
2020	0	0	0	0	0	4,928	5,930	277	0	485	6,693	(229)	
2021	0	0	0	0	0	4,944	6,016	270	0	427	6,713	(20,920)	
2022	0	0	0	0	0	5,023	6,197	262	0	400	6,800	(20,188)	
2023	0	0	0	0	0	5,198	6,263	255	0	513	7,036	(19,598)	
2024	0	0	0	0	0	5,355	6,404	249	0	543	7,194	(18,922)	
2025	0	0	0	0	0	5,573	6,605	243	0	601	7,446	(18,262)	
2026	0	0	0	0	0	5,794	6,782	236	0	656	7,691	(17,603)	
2027	0	0	0	0	0	6,027	6,931	226	0	697	7,925	(16,945)	
2028	0	0	0	0	0	6,269	6,997	218	0	707	7,903	(16,286)	
2029	0	0	0	0	0	6,499	7,138	211	0	813	8,162	(15,627)	
2030	0	0	0	0	0	6,765	7,269	204	0	945	8,407	(14,967)	
2031	0	0	0	0	0	7,022	7,403	197	0	971	8,638	(14,308)	
2032	0	0	0	0	0	7,262	7,633	190	0	1,055	8,859	(13,649)	
2033	0	0	0	0	0	7,499	7,856	183	0	1,182	9,131	(12,990)	
2034	0	0	0	0	0	7,725	8,069	177	0	1,296	9,392	(12,331)	
2035	0	0	0	0	0	7,988	8,262	172	0	1,396	9,678	(11,672)	
2036	0	0	0	0	0	8,228	8,531	168	0	1,493	9,862	(11,013)	
2037	0	0	0	0	0	8,489	8,772	165	0	1,513	10,451	(10,354)	
2038	0	0	0	0	0	8,683	9,029	162	0	1,634	10,941	(9,695)	
2039	0	0	0	0	0	8,883	9,293	159	0	1,783	11,515	(9,036)	
2040	0	0	0	0	0	9,111	9,539	156	0	1,899	12,089	(8,377)	
2041	0	0	0	0	0	9,321	9,829	153	0	2,044	12,654	(7,718)	
2042	0	0	0	0	0	9,511	10,131	150	0	2,397	13,229	(7,059)	
2043	0	0	0	0	0	9,723	10,415	147	0	2,433	13,804	(6,400)	
2045	0	0	0	0	0	10,011	10,823	144	0	2,580	14,379	(5,741)	
TOTAL	0	4,611	30,271	33,081	0	28,433	23,578	6,689	0	30,326	25,435	(3,770)	
NPV	0	3,609	15,692	16,692	0	23,149	18,273	2,597	0	23,644	20,443	(2,576)	

NPV = 2,597  
PV = 3,609

2) Internal Rate of Return (CAGR) / (CAGR) :

PROJECT: RIVERVIEW  
PROGRAM: RIVERVIEW WATER TREATING (New System - New Construction)

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	INCREASED SUEZY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	INCENTIVES \$(000)	REVENUE LOSSES \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN T&FUEL BENEFITS \$(000)	AVOIDED T&F BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE UNRECOVERED NETBENEFITS \$(000)	
2009	0	0	0	0	0	0	0	0	0	0	0	0	0	
2010	0	34	0	2	0	136	1	0	0	0	1	1	(135)	
2011	0	157	1,000	20	0	1,177	12	0	0	0	12	12	(1,165)	
2012	0	145	1,000	47	0	1,192	24	0	0	0	24	24	(1,168)	
2013	0	148	1,000	57	0	1,205	49	0	0	0	49	73	(1,132)	
2014	0	150	1,000	140	0	1,290	89	0	0	0	89	162	(1,128)	
2015	0	0	0	170	0	170	109	0	0	0	109	271	(857)	
2016	0	0	0	176	0	176	123	0	0	0	123	394	(463)	
2017	0	0	0	185	0	185	133	0	0	0	133	527	(330)	
2018	0	0	0	188	0	188	145	0	0	0	145	672	(188)	
2019	0	0	0	194	0	194	154	0	0	0	154	826	(62)	
2020	0	0	0	195	0	195	161	0	0	0	161	987	(235)	
2021	0	0	0	199	0	199	169	0	0	0	169	1,156	(100)	
2022	0	0	0	205	0	205	177	0	0	0	177	1,333	(67)	
2023	0	0	0	211	0	211	183	0	0	0	183	1,516	(51)	
2024	0	0	0	221	0	221	191	0	0	0	191	1,707	(36)	
2025	0	0	0	229	0	229	200	0	0	0	200	1,907	(20)	
2026	0	0	0	238	0	238	209	0	0	0	209	2,116	(4)	
2027	0	0	0	250	0	250	218	0	0	0	218	2,334	(10)	
2028	0	0	0	260	0	260	228	0	0	0	228	2,562	(16)	
2029	0	0	0	272	0	272	238	0	0	0	238	2,800	(22)	
2030	0	0	0	285	0	285	248	0	0	0	248	3,048	(28)	
2031	0	0	0	298	0	298	258	0	0	0	258	3,306	(34)	
2032	0	0	0	312	0	312	268	0	0	0	268	3,574	(40)	
2033	0	0	0	316	0	316	278	0	0	0	278	3,852	(46)	
2034	0	0	0	344	0	344	288	0	0	0	288	4,140	(52)	
2035	0	0	0	351	0	351	298	0	0	0	298	4,438	(58)	
2036	0	0	0	365	0	365	307	0	0	0	307	4,745	(64)	
2037	0	0	0	371	0	371	317	0	0	0	317	5,062	(70)	
2038	0	0	0	412	0	412	327	0	0	0	327	5,389	(76)	
2039	0	0	0	449	0	449	337	0	0	0	337	5,726	(82)	
2040	0	0	0	479	0	479	347	0	0	0	347	6,073	(88)	
2041	0	0	0	495	0	495	358	0	0	0	358	6,431	(94)	
2042	0	0	0	511	0	511	368	0	0	0	368	6,799	(100)	
2043	0	0	0	550	0	550	378	0	0	0	378	7,177	(106)	
2044	0	0	0	0	0	0	389	0	0	0	389	7,566	(112)	
2045	0	0	0	0	0	0	400	0	0	0	400	7,966	(118)	
TOTAL	0	635	4,100	2,386	0	7,121	3,512	271	0	573	4,356	3,045	(3,881)	
NET	0	439	3,075	1,109	0	5,293	1,792	82	0	159	1,943	1,943	(1,943)	

Discount Rate  
Benefit/Cost Ratio (Col(13)/Col(7)) : 0.29



RAISING/FACTORY  
PROGRAMS/GENERATED SEVERITY: RISK PROJ  
PROGRAM/NAME: Business Solar Water Heating

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	INCENTIVES \$(000)	REVENUE LOSSES \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT & FUEL BENEFITS \$(000)	RESERVE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CRIMINATIVE DISCONTINUED NET BENEFITS \$(000)	
2009	0	0	0	0	0	0	0	0	0	0	0	0	
2010	0	36	17	2	0	36	2	0	0	2	2	0	
2011	0	178	63	34	0	255	11	0	0	22	22	0	
2012	0	262	76	36	0	375	66	0	0	40	40	0	
2013	0	578	92	66	0	736	46	0	4	50	50	0	
2014	0	447	111	106	0	664	78	0	4	82	82	0	
2015	0	0	0	32	0	32	31	0	5	36	36	0	
2016	0	0	0	37	0	37	33	0	4	37	37	0	
2017	0	0	0	42	0	42	38	0	4	42	42	0	
2018	0	0	0	46	0	46	41	0	4	45	45	0	
2019	0	0	0	50	0	50	45	0	4	49	49	0	
2020	0	0	0	55	0	55	50	0	4	54	54	0	
2021	0	0	0	59	0	59	55	0	4	59	59	0	
2022	0	0	0	64	0	64	60	0	4	64	64	0	
2023	0	0	0	68	0	68	65	0	4	69	69	0	
2024	0	0	0	73	0	73	71	0	4	75	75	0	
2025	0	0	0	78	0	78	76	0	4	80	80	0	
2026	0	0	0	83	0	83	82	0	4	86	86	0	
2027	0	0	0	88	0	88	87	0	4	91	91	0	
2028	0	0	0	93	0	93	92	0	4	96	96	0	
2029	0	0	0	98	0	98	97	0	4	102	102	0	
2030	0	0	0	103	0	103	102	0	4	106	106	0	
2031	0	0	0	108	0	108	107	0	4	111	111	0	
2032	0	0	0	113	0	113	112	0	4	116	116	0	
2033	0	0	0	118	0	118	117	0	4	121	121	0	
2034	0	0	0	123	0	123	122	0	4	126	126	0	
2035	0	0	0	128	0	128	127	0	4	131	131	0	
2036	0	0	0	133	0	133	132	0	4	136	136	0	
2037	0	0	0	138	0	138	137	0	4	141	141	0	
2038	0	0	0	143	0	143	142	0	4	146	146	0	
2039	0	0	0	148	0	148	147	0	4	151	151	0	
2040	0	0	0	153	0	153	152	0	4	156	156	0	
2041	0	0	0	158	0	158	157	0	4	161	161	0	
2042	0	0	0	163	0	163	162	0	4	166	166	0	
2043	0	0	0	168	0	168	167	0	4	171	171	0	
2044	0	0	0	173	0	173	172	0	4	176	176	0	
2045	0	0	0	178	0	178	177	0	4	181	181	0	
2046	0	0	0	183	0	183	182	0	4	186	186	0	
2047	0	0	0	188	0	188	187	0	4	191	191	0	
2048	0	0	0	193	0	193	192	0	4	196	196	0	
2049	0	0	0	198	0	198	197	0	4	201	201	0	
2050	0	0	0	203	0	203	202	0	4	206	206	0	
2051	0	0	0	208	0	208	207	0	4	211	211	0	
2052	0	0	0	213	0	213	212	0	4	216	216	0	
2053	0	0	0	218	0	218	217	0	4	221	221	0	
2054	0	0	0	223	0	223	222	0	4	226	226	0	
2055	0	0	0	228	0	228	227	0	4	231	231	0	
2056	0	0	0	233	0	233	232	0	4	236	236	0	
2057	0	0	0	238	0	238	237	0	4	241	241	0	
2058	0	0	0	243	0	243	242	0	4	246	246	0	
2059	0	0	0	248	0	248	247	0	4	251	251	0	
2060	0	0	0	253	0	253	252	0	4	256	256	0	
2061	0	0	0	258	0	258	257	0	4	261	261	0	
2062	0	0	0	263	0	263	262	0	4	266	266	0	
2063	0	0	0	268	0	268	267	0	4	271	271	0	
2064	0	0	0	273	0	273	272	0	4	276	276	0	
2065	0	0	0	278	0	278	277	0	4	281	281	0	
2066	0	0	0	283	0	283	282	0	4	286	286	0	
2067	0	0	0	288	0	288	287	0	4	291	291	0	
2068	0	0	0	293	0	293	292	0	4	296	296	0	
2069	0	0	0	298	0	298	297	0	4	301	301	0	
2070	0	0	0	303	0	303	302	0	4	306	306	0	
2071	0	0	0	308	0	308	307	0	4	311	311	0	
2072	0	0	0	313	0	313	312	0	4	316	316	0	
2073	0	0	0	318	0	318	317	0	4	321	321	0	
2074	0	0	0	323	0	323	322	0	4	326	326	0	
2075	0	0	0	328	0	328	327	0	4	331	331	0	
2076	0	0	0	333	0	333	332	0	4	336	336	0	
2077	0	0	0	338	0	338	337	0	4	341	341	0	
2078	0	0	0	343	0	343	342	0	4	346	346	0	
2079	0	0	0	348	0	348	347	0	4	351	351	0	
2080	0	0	0	353	0	353	352	0	4	356	356	0	
2081	0	0	0	358	0	358	357	0	4	361	361	0	
2082	0	0	0	363	0	363	362	0	4	366	366	0	
2083	0	0	0	368	0	368	367	0	4	371	371	0	
2084	0	0	0	373	0	373	372	0	4	376	376	0	
2085	0	0	0	378	0	378	377	0	4	381	381	0	
2086	0	0	0	383	0	383	382	0	4	386	386	0	
2087	0	0	0	388	0	388	387	0	4	391	391	0	
2088	0	0	0	393	0	393	392	0	4	396	396	0	
2089	0	0	0	398	0	398	397	0	4	401	401	0	
2090	0	0	0	403	0	403	402	0	4	406	406	0	
2091	0	0	0	408	0	408	407	0	4	411	411	0	
2092	0	0	0	413	0	413	412	0	4	416	416	0	
2093	0	0	0	418	0	418	417	0	4	421	421	0	
2094	0	0	0	423	0	423	422	0	4	426	426	0	
2095	0	0	0	428	0	428	427	0	4	431	431	0	
2096	0	0	0	433	0	433	432	0	4	436	436	0	
2097	0	0	0	438	0	438	437	0	4	441	441	0	
2098	0	0	0	443	0	443	442	0	4	446	446	0	
2099	0	0	0	448	0	448	447	0	4	451	451	0	
2100	0	0	0	453	0	453	452	0	4	456	456	0	
2101	0	0	0	458	0	458	457	0	4	461	461	0	
2102	0	0	0	463	0	463	462	0	4	466	466	0	
2103	0	0	0	468	0	468	467	0	4	471	471	0	
2104	0	0	0	473	0	473	472	0	4	476	476	0	
2105	0	0	0	478	0	478	477	0	4	481	481	0	
2106	0	0	0	483	0	483	482	0	4	486	486	0	
2107	0	0	0	488	0	488	487	0	4	491	491	0	
2108	0	0	0	493	0	493	492	0	4	496	496	0	
2109	0	0	0	498	0	498	497	0	4	501	501	0	
2110	0	0	0	503	0	503	502	0	4	506	506	0	
2111	0	0	0	508	0	508	507	0	4	511	511	0	
2112	0	0	0	513	0	513	512	0	4	516	516	0	
2113	0	0	0	518	0	518	517	0	4	521	521	0	
2114	0	0	0	523	0	523	522	0	4	526	526	0	
2115	0	0	0	528	0	528	527	0	4	531	531	0	
2116	0	0	0	533	0	533	532	0	4	536	536	0	
2117	0	0	0	538	0	538	537	0	4	541	541	0	
2118	0	0	0	543	0	543	542	0	4	546	546	0	
2119	0	0	0	548	0	548	547	0	4	551	551	0	
2120	0	0	0	553	0	553	552	0	4	556	556	0	
2121	0	0	0	558	0	558	557	0	4	561	561	0	
2122	0	0	0	563	0	563	562	0	4	566	566	0	
2123	0	0	0	568	0	568	567	0	4	571	571	0	
2124	0	0	0	573	0	573	572	0	4	576	576	0	
2125	0	0	0	578	0	578	577	0	4	581	581	0	
2126	0	0	0	583	0	583	582	0	4	586	586	0	
2127	0	0	0	588	0	588	587	0	4	591	591	0	
2128	0	0	0	593	0	593	592	0	4	596	596	0	
2129	0	0	0	598	0	598	597	0	4	601	601	0	
2130	0	0	0	603	0	603	602	0	4	606	606	0	
2131	0	0	0	608	0	608	607	0	4	611	611	0	
2132	0	0	0	613	0	613	612	0	4	616	616	0	
2133	0	0	0	618	0	618	617	0	4	621	621	0	

PLACEMENT TEST PROGRAMMED SELECTION TEST PROGRAMS: Residential Photovoltaics (PV)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	INCREASED SUPPLY COSTS \$1000	UTILITY PROGRAM COSTS \$1000	INCENTIVES \$1000	REVENUE LOSSES \$1000	OTHER COSTS \$1000	TOTAL COSTS \$1000	AVOIDED GEN UNIT A/PUR. BENEFITS \$1000	AVOIDED T&D BENEFITS \$1000	REVENUE GAINS \$1000	OTHER BENEFITS \$1000	TOTAL BENEFITS \$1000	NET BENEFITS \$1000	CUMULATIVE UNDISCOUNTED BENEFITS \$1000
2009	0	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	492	290	23	0	1,426	27	0	0	0	28	(1,406)	(1,227)
2011	0	511	2,947	173	0	3,691	131	18	0	0	149	(3,542)	(6,179)
2012	0	529	2,947	482	0	3,958	287	39	0	0	326	(3,632)	(9,811)
2013	0	572	2,947	632	0	4,151	442	59	0	0	501	(3,650)	(13,461)
2014	0	574	2,947	796	0	4,377	615	106	0	0	721	(3,656)	(17,117)
2015	0	0	0	1,109	0	1,109	759	127	0	0	886	(1,283)	(18,400)
2016	0	0	0	1,147	0	1,147	836	124	0	0	960	(1,187)	(19,587)
2017	0	0	0	1,139	0	1,139	963	128	0	0	1,091	(1,058)	(20,645)
2018	0	0	0	1,145	0	1,145	1,046	116	0	0	1,162	(892)	(21,807)
2019	0	0	0	1,179	0	1,179	1,196	113	0	0	1,309	(745)	(23,112)
2020	0	0	0	1,175	0	1,175	1,288	110	0	0	1,398	(587)	(24,509)
2021	0	0	0	1,193	0	1,193	1,386	106	0	0	1,492	(429)	(26,007)
2022	0	0	0	1,219	0	1,219	1,522	103	0	0	1,625	(262)	(27,632)
2023	0	0	0	1,268	0	1,268	1,681	100	0	0	1,781	(95)	(29,353)
2024	0	0	0	1,295	0	1,295	1,862	94	0	0	1,956	121	(31,192)
2025	0	0	0	1,315	0	1,315	1,979	88	0	0	2,067	291	(33,131)
2026	0	0	0	1,377	0	1,377	2,129	81	0	0	2,210	464	(35,171)
2027	0	0	0	1,440	0	1,440	2,305	74	0	0	2,379	642	(37,313)
2028	0	0	0	1,489	0	1,489	2,504	67	0	0	2,571	827	(39,556)
2029	0	0	0	1,545	0	1,545	2,723	60	0	0	2,781	1,018	(41,899)
2030	0	0	0	1,600	0	1,600	2,960	54	0	0	2,994	1,214	(44,313)
2031	0	0	0	1,654	0	1,654	3,214	48	0	0	3,212	1,414	(46,797)
2032	0	0	0	1,706	0	1,706	3,483	43	0	0	3,440	1,617	(49,350)
2033	0	0	0	1,765	0	1,765	3,766	38	0	0	3,674	1,822	(51,972)
2034	0	0	0	1,822	0	1,822	4,063	34	0	0	3,913	2,029	(54,663)
2035	0	0	0	1,882	0	1,882	4,385	30	0	0	4,157	2,237	(57,426)
2036	0	0	0	1,944	0	1,944	4,731	27	0	0	4,406	2,446	(60,260)
2037	0	0	0	2,008	0	2,008	5,099	25	0	0	4,660	2,656	(63,164)
2038	0	0	0	2,074	0	2,074	5,487	23	0	0	4,919	2,866	(66,138)
2039	0	0	0	2,142	0	2,142	5,894	22	0	0	5,183	3,076	(69,181)
2040	0	0	0	2,212	0	2,212	6,319	21	0	0	5,452	3,285	(72,296)
2041	0	0	0	2,284	0	2,284	6,771	20	0	0	5,726	3,494	(75,480)
2042	0	0	0	2,358	0	2,358	7,239	19	0	0	6,005	3,703	(78,733)
2043	0	0	0	2,435	0	2,435	7,723	18	0	0	6,289	3,912	(82,045)
TOTAL PV	0	2,188	11,889	28,296	0	74,623	63,137	2,711	0	4,278	70,146	(2,467)	(8,692)
TOTAL	0	1,706	5,600	11,690	0	22,446	12,717	329	0	737	14,333	(8,692)	

Discounted Net Benefit/Cost Ratio (Col(13) / Col(12)) = 3.19 / 0.64



RAIEM/FACTSHEET  
 PROGRAM-RELATED INCURRED-REV\_YEQ  
 PROGRAM-RELATED BUSINESS-Related-For-Subsets

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	INCREASED ENERGY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	INCENTIVES \$(000)	REVENUE LOSSES \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED CNT UNIT & FUEL REVENUES \$(000)	AVOIDED T&D REVENUES \$(000)	REVENUE GAINS \$(000)	OTHER REVENUES \$(000)	TOTAL REVENUES \$(000)	NET REVENUES \$(000)	CUMULATIVE DISCOUNTED NET REVENUES \$(000)			
2009	0	0	0	0	0	0	0	0	0	0	0	(0)	(0)			
2010	0	12	0	1	0	12	1	0	0	0	0	(12)	(12)			
2011	0	429	0	7	0	436	2	0	0	0	0	(434)	(582)			
2012	0	528	0	18	0	546	23	1	0	0	24	(522)	(1,104)			
2013	0	1,301	0	44	0	1,345	37	3	0	0	40	(1,305)	(2,409)			
2014	0	1,657	0	44	0	1,701	39	5	0	0	44	(1,657)	(4,066)			
2015	0	1,534	0	51	0	1,585	61	6	0	0	67	(1,518)	(5,584)			
2016	0	1,207	0	54	0	1,261	74	6	0	0	80	(1,181)	(6,765)			
2017	0	88	0	56	0	144	81	6	0	0	87	(1,094)	(7,859)			
2018	0	496	0	57	0	553	86	7	0	0	93	(1,001)	(8,860)			
2019	0	126	0	61	0	187	93	7	0	0	100	(901)	(9,761)			
2020	0	0	0	63	0	63	151	6	0	0	157	(744)	(10,505)			
2021	0	0	0	63	0	63	151	6	0	0	157	(587)	(11,092)			
2022	0	0	0	62	0	62	151	6	0	0	157	(430)	(11,522)			
2023	0	0	0	64	0	64	154	6	0	0	160	(270)	(11,832)			
2024	0	0	0	67	0	67	153	6	0	0	159	(111)	(12,031)			
2025	0	0	0	67	0	67	153	6	0	0	159	48	(12,180)			
2026	0	0	0	70	0	70	157	6	0	0	163	111	(12,329)			
2027	0	0	0	74	0	74	158	6	0	0	164	173	(12,473)			
2028	0	0	0	78	0	78	158	6	0	0	164	235	(12,617)			
2029	0	0	0	83	0	83	158	6	0	0	164	297	(12,761)			
2030	0	0	0	87	0	87	160	6	0	0	166	359	(12,905)			
2031	0	0	0	91	0	91	159	6	0	0	165	421	(13,049)			
2032	0	0	0	96	0	96	162	4	0	0	166	483	(13,193)			
2033	0	0	0	101	0	101	162	4	0	0	166	545	(13,337)			
2034	0	0	0	106	0	106	163	4	0	0	167	607	(13,481)			
2035	0	0	0	109	0	109	164	4	0	0	168	669	(13,625)			
2036	0	0	0	111	0	111	164	4	0	0	168	731	(13,769)			
2037	0	0	0	111	0	111	163	4	0	0	167	793	(13,913)			
2038	0	0	0	111	0	111	163	4	0	0	167	855	(14,057)			
2039	0	0	0	117	0	117	164	4	0	0	168	917	(14,201)			
2040	0	0	0	121	0	121	164	4	0	0	168	979	(14,345)			
2041	0	0	0	121	0	121	164	4	0	0	168	1,041	(14,489)			
2042	0	0	0	121	0	121	164	4	0	0	168	1,103	(14,633)			
2043	0	0	0	121	0	121	164	4	0	0	168	1,165	(14,777)			
2044	0	0	0	121	0	121	164	4	0	0	168	1,227	(14,921)			
2045	0	0	0	121	0	121	164	4	0	0	168	1,289	(15,065)			
2046	0	0	0	121	0	121	164	4	0	0	168	1,351	(15,209)			
2047	0	0	0	121	0	121	164	4	0	0	168	1,413	(15,353)			
2048	0	0	0	121	0	121	164	4	0	0	168	1,475	(15,497)			
2049	0	0	0	121	0	121	164	4	0	0	168	1,537	(15,641)			
2050	0	0	0	121	0	121	164	4	0	0	168	1,599	(15,785)			
2051	0	0	0	121	0	121	164	4	0	0	168	1,661	(15,929)			
2052	0	0	0	121	0	121	164	4	0	0	168	1,723	(16,073)			
2053	0	0	0	121	0	121	164	4	0	0	168	1,785	(16,217)			
2054	0	0	0	121	0	121	164	4	0	0	168	1,847	(16,361)			
2055	0	0	0	121	0	121	164	4	0	0	168	1,909	(16,505)			
2056	0	0	0	121	0	121	164	4	0	0	168	1,971	(16,649)			
2057	0	0	0	121	0	121	164	4	0	0	168	2,033	(16,793)			
2058	0	0	0	121	0	121	164	4	0	0	168	2,095	(16,937)			
2059	0	0	0	121	0	121	164	4	0	0	168	2,157	(17,081)			
2060	0	0	0	121	0	121	164	4	0	0	168	2,219	(17,225)			
2061	0	0	0	121	0	121	164	4	0	0	168	2,281	(17,369)			
2062	0	0	0	121	0	121	164	4	0	0	168	2,343	(17,513)			
2063	0	0	0	121	0	121	164	4	0	0	168	2,405	(17,657)			
2064	0	0	0	121	0	121	164	4	0	0	168	2,467	(17,801)			
2065	0	0	0	121	0	121	164	4	0	0	168	2,529	(17,945)			
2066	0	0	0	121	0	121	164	4	0	0	168	2,591	(18,089)			
2067	0	0	0	121	0	121	164	4	0	0	168	2,653	(18,233)			
2068	0	0	0	121	0	121	164	4	0	0	168	2,715	(18,377)			
2069	0	0	0	121	0	121	164	4	0	0	168	2,777	(18,521)			
2070	0	0	0	121	0	121	164	4	0	0	168	2,839	(18,665)			
2071	0	0	0	121	0	121	164	4	0	0	168	2,901	(18,809)			
2072	0	0	0	121	0	121	164	4	0	0	168	2,963	(18,953)			
2073	0	0	0	121	0	121	164	4	0	0	168	3,025	(19,097)			
2074	0	0	0	121	0	121	164	4	0	0	168	3,087	(19,241)			
2075	0	0	0	121	0	121	164	4	0	0	168	3,149	(19,385)			
2076	0	0	0	121	0	121	164	4	0	0	168	3,211	(19,529)			
2077	0	0	0	121	0	121	164	4	0	0	168	3,273	(19,673)			
2078	0	0	0	121	0	121	164	4	0	0	168	3,335	(19,817)			
2079	0	0	0	121	0	121	164	4	0	0	168	3,397	(19,961)			
2080	0	0	0	121	0	121	164	4	0	0	168	3,459	(20,105)			
2081	0	0	0	121	0	121	164	4	0	0	168	3,521	(20,249)			
2082	0	0	0	121	0	121	164	4	0	0	168	3,583	(20,393)			
2083	0	0	0	121	0	121	164	4	0	0	168	3,645	(20,537)			
2084	0	0	0	121	0	121	164	4	0	0	168	3,707	(20,681)			
2085	0	0	0	121	0	121	164	4	0	0	168	3,769	(20,825)			
2086	0	0	0	121	0	121	164	4	0	0	168	3,831	(20,969)			
2087	0	0	0	121	0	121	164	4	0	0	168	3,893	(21,113)			
2088	0	0	0	121	0	121	164	4	0	0	168	3,955	(21,257)			
2089	0	0	0	121	0	121	164	4	0	0	168	4,017	(21,401)			
2090	0	0	0	121	0	121	164	4	0	0	168	4,079	(21,545)			
2091	0	0	0	121	0	121	164	4	0	0	168	4,141	(21,689)			
2092	0	0	0	121	0	121	164	4	0	0	168	4,203	(21,833)			
2093	0	0	0	121	0	121	164	4	0	0	168	4,265	(21,977)			
2094	0	0	0	121	0	121	164	4	0	0	168	4,327	(22,121)			
2095	0	0	0	121	0	121	164	4	0	0	168	4,389	(22,265)			
2096	0	0	0	121	0	121	164	4	0	0	168	4,451	(22,409)			
2097	0	0	0	121	0	121	164	4	0	0	168	4,513	(22,553)			
2098	0	0	0	121	0	121	164	4	0	0	168	4,575	(22,697)			
2099	0	0	0	121	0	121	164	4	0	0	168	4,637	(22,841)			
2100	0	0	0	121	0	121	164	4	0	0	168	4,699	(22,985)			
TOTAL	0	5,200	0	5,200	0	5,200	5,200	160	0	0	5,360	5,360	5,360			
YEQ	0	2,500	0	2,500	0	2,500	2,500	80	0	0	2,580	2,580	2,580			
TRAIL	0	2,700	0	2,700	0	2,700	2,700	80	0	0	2,780	2,780	2,780			

Discount Rate: 8.39  
 Benefit-Cost-Ratio (Col(15) / Col(7)) : 0.35