

**BEFORE THE FLORIDA PUBLIC SERVICE  
COMMISSION**

**DOCKET NO. 100155-EG**

**DEMAND-SIDE MANAGEMENT PLAN OF  
FLORIDA POWER & LIGHT COMPANY FOR 2010-2019**

**PLAN DOCUMENT APPENDIX A - REVISED**

**JULY 1, 2010**

DOCUMENT # 100155-EG-001

05439 JUL-10

FPSC-0015-10

**RESIDENTIAL LOW INCOME WEATHERIZATION**

INPUT DATA -- PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Low Income Weatherization

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.29 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.39 kW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KWH REDUCTION PER CUSTOMER .....	789.59 kWh
(5) KWH LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.03
(7) CUSTOMER KWH INCREASE AT METER .....	0.00 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
* (8) INCREASED SUPPLY COSTS .....	** \$/CUST/YR
* (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
^ (10) UTILITY DISCOUNT RATE .....	8.89 %
^ (11) UTILITY AFUDC RATE .....	8.48 %
* (12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
* (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2013-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.82 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN. TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* INPUT DATA - PART 1 CONTINUED  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Low Income Weatherization

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2009	0	0	0	0	0	0	0	0	0	
2010	120	297	0	417	40	0	304	0	304	
2011	123	297	0	420	125	0	312	0	312	
2012	126	297	0	423	220	0	320	0	320	
2013	129	297	0	426	324	0	328	0	328	
2014	170	357	0	527	442	0	404	0	404	
2015	223	432	0	655	566	0	501	0	501	
2016	229	432	0	661	691	0	514	0	514	
2017	235	432	0	667	827	0	526	0	526	
2018	282	492	0	774	953	0	614	0	614	
2019	139	195	0	334	1,057	0	250	0	250	
2020	253	432	0	685	1,061	0	567	0	567	
2021	259	432	0	691	1,084	0	581	0	581	
2022	312	492	0	804	1,115	0	678	0	678	
2023	272	432	0	704	1,149	0	610	0	610	
2024	218	357	0	575	1,200	0	517	0	517	
2025	286	432	0	718	1,243	0	641	0	641	
2026	344	492	0	836	1,293	0	749	0	749	
2027	300	432	0	732	1,361	0	674	0	674	
2028	308	432	0	740	1,416	0	691	0	691	
2029	178	195	0	373	1,479	0	320	0	320	
2030	380	492	0	872	1,552	0	826	0	826	
2031	331	432	0	763	1,622	0	744	0	744	
2032	340	432	0	772	1,718	0	762	0	762	
2033	348	432	0	780	1,872	0	781	0	781	
2034	341	417	0	758	1,907	0	773	0	773	
2035	366	432	0	798	1,982	0	821	0	821	
2036	375	432	0	807	2,124	0	841	0	841	
2037	384	432	0	816	2,238	0	862	0	862	
2038	463	492	0	955	2,335	0	1,007	0	1,007	
2039	228	195	0	423	2,442	0	409	0	409	
2040	414	432	0	846	2,556	0	929	0	929	
2041	424	432	0	856	2,691	0	952	0	952	
2042	511	492	0	1,003	2,835	0	1,111	0	1,111	
2043	446	432	0	878	2,989	0	1,000	0	1,000	
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	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	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	0	0	0	0	0	0	0	0	
NOM	9,860	13,632	0	23,492	48,519	0	21,920	0	21,920	
NPV	2,367	4,000	0	6,367	9,135	0	5,371	0	5,371	

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
 \*\* NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS



CALCULATION OF GEN K-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Residential Low Income Weatherization

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	BEG-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEFREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	3,858	120	0	269	178	65	23	150	0	805	805	805	3,762
2020	3,707	115	0	259	122	62	24	150	49	781	718	1,523	3,856
2021	3,507	109	0	245	121	60	24	150	42	750	633	2,156	3,953
2022	3,315	103	0	231	120	57	25	150	35	721	558	2,714	4,051
2023	3,130	97	0	218	118	54	25	150	28	692	492	3,206	4,153
2024	2,951	92	0	206	116	51	26	150	22	664	434	3,640	4,256
2025	2,779	86	0	194	114	49	27	150	16	637	382	4,022	4,363
2026	2,612	81	0	182	112	46	27	150	11	611	336	4,358	4,472
2027	2,450	76	0	171	106	43	28	150	10	585	296	4,654	4,584
2028	2,290	71	0	160	99	41	29	150	10	560	260	4,914	4,698
2029	2,128	66	0	149	92	38	29	150	10	535	228	5,143	4,816
2030	1,968	61	0	137	85	35	30	150	10	509	200	5,342	4,936
2031	1,807	56	0	126	78	33	31	150	10	484	174	5,517	5,060
2032	1,646	51	0	115	71	30	32	150	10	459	152	5,668	5,186
2033	1,486	46	0	104	64	27	32	150	10	434	132	5,800	5,316
2034	1,325	41	0	92	57	24	33	150	10	409	114	5,914	5,449
2035	1,164	36	0	81	49	22	34	150	10	383	98	6,012	5,585
2036	1,003	31	0	70	42	19	35	150	10	358	84	6,096	5,724
2037	842	26	0	59	35	16	36	150	10	333	72	6,168	5,868
2038	682	21	0	48	28	14	37	150	10	308	61	6,230	6,014
2039	521	16	0	36	21	11	38	150	(21)	283	52	6,281	6,165
2040	391	12	0	27	15	8	39	150	(53)	263	44	6,325	6,319
2041	294	9	0	20	10	5	40	150	(53)	247	38	6,363	6,477
2042	196	6	0	14	7	3	40	150	(53)	231	33	6,395	6,639
2043	98	3	0	7	4	2	42	150	(53)	215	28	6,423	6,805

IN SERVICE COST (\$000)	3,742
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFEC. TAX RATE	38.57%
DISCOUNT RATE	3.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST
DEBT	44%	7.03%
H/S	0%	0.00%
C/S	56%	12.50%

K-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Low Income Weatherization

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	137	137	150	150	136	136	0	351	0	0	0	0	(95)
2020	7.22%	264	401	150	301	136	273	49	351	0	0	0	49	(40)
2021	6.68%	244	646	150	451	136	409	42	351	0	0	0	42	(4)
2022	6.18%	226	872	150	522	136	546	35	351	0	0	0	35	30
2023	5.71%	209	1,081	150	752	136	682	28	351	0	0	0	28	58
2024	5.29%	193	1,274	150	903	136	819	22	351	0	0	0	22	80
2025	4.89%	179	1,453	150	1,053	136	955	16	351	0	0	0	16	97
2026	4.52%	165	1,618	150	1,204	136	1,092	11	351	0	0	0	11	108
2027	4.46%	163	1,782	150	1,354	136	1,228	10	351	0	0	0	10	118
2028	4.46%	163	1,945	150	1,505	136	1,364	10	351	0	0	0	10	128
2029	4.46%	163	2,108	150	1,655	136	1,501	10	351	0	0	0	10	139
2030	4.46%	163	2,271	150	1,806	136	1,637	10	351	0	0	0	10	149
2031	4.46%	163	2,434	150	1,956	136	1,774	10	351	0	0	0	10	159
2032	4.46%	163	2,598	150	2,107	136	1,910	10	351	0	0	0	10	170
2033	4.46%	163	2,761	150	2,257	136	2,047	10	351	0	0	0	10	180
2034	4.46%	163	2,924	150	2,408	136	2,183	10	351	0	0	0	10	190
2035	4.46%	163	3,087	150	2,558	136	2,319	10	351	0	0	0	10	201
2036	4.46%	163	3,250	150	2,709	136	2,456	10	351	0	0	0	10	211
2037	4.46%	163	3,414	150	2,859	136	2,592	10	351	0	0	0	10	221
2038	4.46%	163	3,577	150	3,010	136	2,729	10	351	0	0	0	10	232
2039	2.23%	82	3,659	150	3,160	136	2,865	(21)	351	0	0	0	10	241
2040	0.00%	0	3,659	150	3,311	136	3,002	(53)	351	0	0	0	(21)	158
2041	0.00%	0	3,659	150	3,461	136	3,138	(53)	351	0	0	0	(53)	105
2042	0.00%	0	3,659	150	3,612	136	3,275	(53)	351	0	0	0	(53)	53
2043	0.00%	0	3,659	150	3,762	136	3,411	(53)	351	0	0	0	(53)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(95)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	351
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Low Income Weatherization

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2019	3.75%	137	0	3,612	150	(95)	3,858	3,707	3,782
2020	7.22%	264	49	3,461	301	(46)	3,707	3,507	3,607
2021	6.68%	244	42	3,311	451	(4)	3,507	3,315	3,411
2022	6.18%	226	35	3,160	602	30	3,315	3,130	3,222
2023	5.71%	209	28	3,010	752	58	3,130	2,951	3,041
2024	5.29%	193	22	2,859	903	80	2,951	2,779	2,865
2025	4.89%	179	16	2,709	1,053	97	2,779	2,612	2,696
2026	4.52%	165	11	2,558	1,204	108	2,612	2,450	2,531
2027	4.46%	163	10	2,408	1,354	118	2,450	2,290	2,370
2028	4.46%	163	10	2,257	1,505	128	2,290	2,129	2,209
2029	4.46%	163	10	2,107	1,655	139	2,129	1,968	2,048
2030	4.46%	163	10	1,956	1,806	149	1,968	1,807	1,888
2031	4.46%	163	10	1,806	1,956	159	1,807	1,646	1,727
2032	4.46%	163	10	1,655	2,107	170	1,646	1,486	1,566
2033	4.46%	163	10	1,505	2,257	180	1,486	1,325	1,405
2034	4.46%	163	10	1,354	2,408	190	1,325	1,164	1,244
2035	4.46%	163	10	1,204	2,558	201	1,164	1,003	1,084
2036	4.46%	163	10	1,053	2,709	211	1,003	842	923
2037	4.46%	163	10	903	2,859	221	842	682	762
2038	4.46%	163	10	752	3,010	232	682	521	601
2039	2.23%	82	(21)	602	3,160	241	521	391	456
2040	0.00%	0	(53)	451	3,311	158	391	294	342
2041	0.00%	0	(53)	301	3,461	105	294	196	245
2042	0.00%	0	(53)	150	3,612	53	196	98	147
2043	0.00%	0	(53)	(0)	3,762	0	98	0	49

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.50%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00%      907.77

YEAR	NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WIDE AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.63	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.55
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	3,208	3,208	3,208
EQUITY AFUDC	351		
DEBT AFUDC	203	203	
CPI			451
TOTAL	3,762	3,411	3,659

\* Column not specified in workbook

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INPUT DATA -- PART 2  
 PROGRAM METHOD SELECTED : REV\_REQ  
 PROGRAM NAME: Residential Low Income Weatherization

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (C/KWh)	(5) AVOIDED MARGINAL FUEL COST (C/KWh)	(6)* INCREASED MARGINAL FUEL COST (C/KWh)	(7) REPLACEMENT FUEL COST (C/KWh)	(8) PROGRAM & W EFFECTIVENESS FACTOR	(9) PROGRAM KWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	1,000	1,000	6.41	8.81	6.74	0.00	1.00	1.00
2011	2,000	2,000	6.35	8.34	6.64	0.00	1.00	1.00
2012	3,000	3,000	6.43	8.30	6.69	0.00	1.00	1.00
2013	4,000	4,000	7.06	8.30	7.25	0.00	1.00	1.00
2014	5,000	5,000	7.53	8.57	7.70	0.00	1.00	1.00
2015	6,000	6,000	8.11	9.46	8.34	0.00	1.00	1.00
2016	7,000	7,000	9.00	11.34	9.35	0.00	1.00	1.00
2017	8,000	8,000	9.75	12.46	10.10	0.00	1.00	1.00
2018	9,000	9,000	10.52	13.30	10.90	0.00	1.00	1.00
2019	9,000	9,000	11.50	14.97	11.99	10.41	1.00	1.00
2020	9,000	9,000	12.08	15.61	12.63	10.74	1.00	1.00
2021	9,000	9,000	12.57	16.19	13.15	10.74	1.00	1.00
2022	9,000	9,000	13.06	16.78	13.65	10.81	1.00	1.00
2023	9,000	9,000	13.39	16.78	13.96	10.80	1.00	1.00
2024	9,000	9,000	13.95	17.45	14.52	10.84	1.00	1.00
2025	9,000	9,000	14.40	17.87	14.97	10.96	1.00	1.00
2026	9,000	9,000	14.70	17.97	15.24	11.05	1.00	1.00
2027	9,000	9,000	15.13	18.18	15.65	11.17	1.00	1.00
2028	9,000	9,000	15.60	18.53	16.10	11.36	1.00	1.00
2029	9,000	9,000	16.02	18.53	16.48	11.41	1.00	1.00
2030	9,000	9,000	16.52	18.55	16.96	11.59	1.00	1.00
2031	9,000	9,000	17.08	19.56	17.52	11.80	1.00	1.00
2032	9,000	9,000	17.50	19.39	17.87	11.88	1.00	1.00
2033	9,000	9,000	18.27	20.13	18.53	12.10	1.00	1.00
2034	9,000	9,000	18.73	19.93	18.88	12.14	1.00	1.00
2035	9,000	9,000	19.57	21.15	19.77	12.29	1.00	1.00
2036	9,000	9,000	20.40	22.15	20.57	12.55	1.00	1.00
2037	9,000	9,000	21.11	22.71	21.27	12.70	1.00	1.00
2038	9,000	9,000	22.02	23.65	22.19	13.04	1.00	1.00
2039	9,000	9,000	22.78	24.29	22.92	13.32	1.00	1.00
2040	9,000	9,000	23.59	24.86	23.70	13.44	1.00	1.00
2041	9,000	9,000	24.54	25.76	24.64	13.75	1.00	1.00
2042	9,000	9,000	25.50	26.71	25.61	14.10	1.00	1.00
2043	9,000	9,000	26.74	28.43	26.83	14.40	1.00	1.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Low Income Weatherization

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	805	442	19	1,125	1,423	967
2020	781	453	27	1,657	2,019	899
2021	750	464	28	1,729	2,109	863
2022	721	476	30	1,830	2,199	858
2023	692	488	32	1,924	2,262	873
2024	664	500	33	2,033	2,347	883
2025	637	512	36	2,172	2,475	881
2026	611	525	38	2,321	2,608	887
2027	585	538	40	2,450	2,719	894
2028	560	552	42	2,515	2,778	890
2029	535	565	44	2,621	2,851	914
2030	509	580	46	2,743	2,965	913
2031	484	594	47	2,800	3,019	907
2032	459	609	49	2,899	3,081	935
2033	434	624	54	3,190	3,369	933
2034	409	640	56	3,320	3,449	976
2035	383	656	58	3,396	3,502	991
2036	358	672	60	3,497	3,606	982
2037	333	689	61	3,577	3,657	1,002
2038	308	706	63	3,666	3,769	974
2039	283	724	65	3,741	3,856	957
2040	263	742	66	3,827	3,900	999
2041	247	761	68	3,911	3,998	989
2042	231	780	70	4,000	4,109	972
2043	215	799	72	4,103	4,215	975
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	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	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	0	0	0
0	0	0	0	0	0	0
NOM	12,256	15,089	1,202	71,048	76,282	23,313
NPV	2,742	2,505	182	10,874	12,095	4,207



TOTAL RESOURCE COST TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Low Income Weatherization

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) PARTICIPANT PROGRAM COSTS \$(000)	(5) OTHER COSTS \$(000)	(6) TOTAL COSTS \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)	(8) AVOIDED T&D BENEFITS \$(000)	(9) PROGRAM FUEL SAVINGS \$(000)	(10) OTHER BENEFITS \$(000)	(11) TOTAL BENEFITS \$(000)	(12) NET BENEFITS \$(000)	(13) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	(0)	(0)
2010	0	120	304	0	425	0	0	38	0	38	(387)	(355)
2011	0	123	312	0	435	0	17	106	0	124	(311)	(618)
2012	0	126	320	0	446	0	35	175	1	211	(235)	(800)
2013	0	129	328	0	457	0	54	240	20	314	(144)	(902)
2014	0	170	404	0	574	0	71	316	29	416	(159)	(1,006)
2015	0	223	501	0	724	0	89	429	39	556	(168)	(1,107)
2016	0	229	514	0	742	0	106	619	52	778	35	(1,088)
2017	0	235	526	0	761	0	124	787	66	978	217	(978)
2018	0	282	614	0	897	0	142	950	82	1,174	277	(849)
2019	0	139	250	0	389	967	158	1,140	52	2,318	1,929	(26)
2020	0	253	567	0	819	899	154	1,187	42	2,283	1,463	548
2021	0	259	581	0	840	863	149	1,231	43	2,286	1,446	1,068
2022	0	312	678	0	990	858	145	1,274	46	2,323	1,333	1,509
2023	0	272	610	0	882	873	141	1,267	45	2,326	1,444	1,947
2024	0	218	517	0	735	883	137	1,317	48	2,385	1,650	2,407
2025	0	286	641	0	927	881	133	1,346	49	2,409	1,482	2,787
2026	0	344	749	0	1,093	887	129	1,349	49	2,414	1,321	3,058
2027	0	300	674	0	974	894	125	1,359	49	2,427	1,453	3,412
2028	0	308	691	0	998	890	121	1,381	53	2,445	1,447	3,698
2029	0	178	320	0	498	914	117	1,372	58	2,460	1,962	4,056
2030	0	380	826	0	1,206	913	113	1,399	58	2,494	1,278	4,270
2031	0	331	744	0	1,075	907	109	1,443	64	2,523	1,447	4,492
2032	0	340	762	0	1,102	935	105	1,418	68	2,526	1,424	4,693
2033	0	348	781	0	1,130	933	102	1,470	56	2,561	1,431	4,879
2034	0	341	773	0	1,115	976	99	1,442	56	2,572	1,457	5,052
2035	0	366	821	0	1,187	991	96	1,536	59	2,682	1,495	5,216
2036	0	375	841	0	1,217	982	93	1,612	62	2,748	1,532	5,369
2037	0	384	862	0	1,247	1,002	91	1,648	66	2,807	1,560	5,513
2038	0	463	1,007	0	1,469	974	88	1,715	70	2,847	1,378	5,630
2039	0	228	409	0	637	957	87	1,758	72	2,873	2,236	5,804
2040	0	414	929	0	1,343	999	85	1,793	76	2,952	1,610	5,919
2041	0	424	952	0	1,376	989	83	1,856	81	3,009	1,633	6,026
2042	0	511	1,111	0	1,622	972	82	1,922	123	3,099	1,477	6,115
2043	0	446	1,000	0	1,446	975	80	2,055	169	3,279	1,833	6,216
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	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	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	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
NOM	0	9,860	21,920	0	31,780	23,313	3,459	40,950	1,902	69,623	37,846	
NPV	0	2,367	5,371	0	7,738	4,207	953	8,383	411	13,954	6,216	

Discount Rate: 8.39 %  
Benefit/Cost Ratio (Col(11) / Col(6)) : 1.80





RATE IMPACT TEST  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Low Income Weatherization

(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 & FUHL BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0	(0)
2010	0	120	297	40	0	458	38	0	0	0	38	(420)	(386)
2011	0	123	297	125	0	545	106	17	0	0	124	(422)	(741)
2012	0	126	297	220	0	643	175	35	0	1	211	(433)	(1,076)
2013	0	129	297	334	0	750	240	54	0	20	314	(437)	(1,387)
2014	0	170	357	442	0	969	316	71	0	29	416	(554)	(1,749)
2015	0	223	432	566	0	1,221	429	89	0	39	556	(665)	(2,148)
2016	0	229	432	691	0	1,352	619	106	0	52	778	(575)	(2,464)
2017	0	235	432	827	0	1,494	787	124	0	66	978	(516)	(2,725)
2018	0	282	492	963	0	1,738	950	142	0	82	1,174	(563)	(2,987)
2019	0	139	195	1,057	0	1,392	2,107	158	0	52	2,318	926	(2,592)
2020	0	253	432	1,061	0	1,745	2,087	154	0	42	2,283	537	(2,381)
2021	0	259	432	1,084	0	1,775	2,094	149	0	43	2,286	511	(2,197)
2022	0	312	492	1,115	0	1,919	2,132	145	0	46	2,323	404	(2,064)
2023	0	272	432	1,149	0	1,853	2,140	141	0	45	2,326	473	(1,920)
2024	0	218	357	1,200	0	1,775	2,200	137	0	48	2,385	610	(1,750)
2025	0	286	432	1,243	0	1,961	2,227	133	0	49	2,409	448	(1,635)
2026	0	344	492	1,293	0	2,129	2,236	129	0	49	2,414	285	(1,568)
2027	0	300	432	1,361	0	2,093	2,253	125	0	49	2,427	334	(1,439)
2028	0	308	432	1,416	0	2,156	2,271	121	0	53	2,445	289	(1,328)
2029	0	178	195	1,479	0	1,853	2,285	117	0	58	2,460	608	(1,318)
2030	0	380	492	1,552	0	2,423	2,313	113	0	58	2,484	61	(1,297)
2031	0	331	432	1,622	0	2,386	2,350	109	0	64	2,523	137	(1,292)
2032	0	340	432	1,718	0	2,490	2,353	105	0	68	2,526	36	(1,304)
2033	0	348	432	1,872	0	2,652	2,403	102	0	56	2,561	(91)	(1,315)
2034	0	341	417	1,907	0	2,665	2,418	99	0	56	2,572	(93)	(1,326)
2035	0	366	432	1,982	0	2,780	2,527	96	0	59	2,682	(98)	(1,344)
2036	0	375	432	2,124	0	2,931	2,593	93	0	62	2,748	(183)	(1,367)
2037	0	384	432	2,238	0	3,054	2,650	91	0	66	2,807	(247)	(1,404)
2038	0	463	492	2,335	0	3,289	2,689	88	0	70	2,847	(442)	(1,403)
2039	0	228	195	2,442	0	2,865	2,715	87	0	76	2,952	(449)	(1,436)
2040	0	414	432	2,556	0	3,402	2,792	85	0	72	2,873	8	(1,471)
2041	0	424	432	2,691	0	3,547	2,845	83	0	81	3,009	(538)	(1,515)
2042	0	511	492	2,835	0	3,838	2,894	82	0	123	3,099	(739)	(1,548)
2043	0	446	432	2,989	0	3,867	3,030	80	0	169	3,279	(588)	(1,548)
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	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	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	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	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOM.	0	9,860	13,632	48,519	0	72,910	64,264	3,459	0	1,902	69,625	(2,385)	
NPV	0	2,367	4,000	9,135	0	15,502	12,591	953	0	411	13,954	(1,548)	

Discount Rate  
 Beneff/Cost Ratio (Col(12) / Col(7)) : 8.89 %  
0.99

**RESIDENTIAL POWER SAVERS ENERGY AUDIT PROGRAM**

INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Duct System Testing and Repair

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER kW REDUCTION AT METER .....	0.19 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	0.25 kW
(3) kW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	374.32 kWh
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.03
(7) CUSTOMER kWh INCREASE AT METER .....	0.03 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR I & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
(8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
(9) SUPPLY COSTS ESCALATION RATES .....	*** %**
(10) UTILITY DISCOUNT RATE .....	8.89 %
(11) UTILITY AFUDC RATE .....	8.48 %
(12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2010-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN. TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.196 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

\* INPUT DATA -- PART 1 CONTINUED  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Duct System Testing and Repair

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2009	0	0	0	0	0	0	0	0	0	
2010	1,744	3,362	0	5,106	418	0	5,423	0	5,423	
2011	2,255	4,241	0	6,497	1,406	0	7,014	0	7,014	
2012	3,241	5,347	0	9,188	2,859	0	10,079	0	10,079	
2013	3,931	7,036	0	10,967	4,842	0	12,224	0	12,224	
2014	4,311	7,527	0	11,838	7,321	0	13,405	0	13,405	
2015	4,599	7,839	0	12,438	10,079	0	14,302	0	14,302	
2016	4,981	8,283	0	13,264	13,616	0	15,488	0	15,488	
2017	4,669	7,583	0	12,252	16,228	0	14,518	0	14,518	
2018	4,410	6,997	0	11,408	19,447	0	13,714	0	13,714	
2019	0	0	0	0	21,585	0	0	0	0	
2020	0	0	0	0	21,653	0	0	0	0	
2021	0	0	0	0	22,124	0	0	0	0	
2022	0	0	0	0	22,766	0	0	0	0	
2023	0	0	0	0	23,456	0	0	0	0	
2024	0	0	0	0	24,498	0	0	0	0	
2025	0	0	0	0	25,377	0	0	0	0	
2026	0	0	0	0	26,397	0	0	0	0	
2027	0	0	0	0	27,777	0	0	0	0	
2028	0	0	0	0	28,906	0	0	0	0	
2029	0	0	0	0	30,199	0	0	0	0	
2030	0	0	0	0	31,677	0	0	0	0	
2031	0	0	0	0	33,120	0	0	0	0	
2032	0	0	0	0	35,076	0	0	0	0	
2033	0	0	0	0	38,213	0	0	0	0	
2034	0	0	0	0	38,929	0	0	0	0	
2035	3,233	3,362	0	6,595	40,461	0	10,054	0	10,054	
2036	4,182	4,241	0	8,423	43,356	0	13,003	0	13,003	
2037	6,009	5,347	0	11,956	45,676	0	18,686	0	18,686	
2038	7,288	7,036	0	14,324	47,664	0	22,663	0	22,663	
2039	7,992	7,527	0	15,519	49,848	0	24,852	0	24,852	
2040	8,527	7,839	0	16,366	52,170	0	26,514	0	26,514	
2041	9,234	8,283	0	17,517	54,928	0	28,714	0	28,714	
2042	8,656	7,583	0	16,239	57,871	0	26,916	0	26,916	
2043	8,177	6,997	0	15,174	61,014	0	25,426	0	25,426	
	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	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	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	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	
NOM	97,440	117,631	0	215,071	980,356	0	302,994	0	302,994	
NPV	26,298	42,020	0	68,318	179,578	0	91,774	0	91,774	

- SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\*- NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS

CALCULATION OF GENK-FACTOR  
 PROGRAM/METHOD SELECTED REV. REQ  
 PROGRAM NAME: Residential Duct System Testing and Repair

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	BEG-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	105,424	3,275	0	7,337	4,834	1,777	627	4,113	8	22,010	22,010	22,010	102,815
2020	101,363	3,147	0	7,070	3,335	1,703	643	4,113	1,346	21,356	19,613	41,623	105,385
2021	95,845	2,977	0	6,689	3,305	1,629	639	4,113	1,137	20,508	17,297	58,920	108,020
2022	90,596	2,814	0	6,322	3,266	1,555	675	4,113	945	19,691	15,252	74,172	110,720
2023	85,538	2,657	0	5,969	3,225	1,481	692	4,113	765	18,902	13,446	87,618	113,488
2024	80,660	2,506	0	5,629	3,176	1,407	710	4,113	600	18,140	11,851	99,469	116,326
2025	75,948	2,359	0	5,300	3,123	1,332	727	4,113	447	17,401	10,441	109,910	119,234
2026	71,388	2,218	0	4,982	3,064	1,258	746	4,113	306	16,686	9,194	119,104	122,215
2027	66,970	2,080	0	4,674	2,894	1,184	764	4,113	283	15,991	8,092	127,197	125,270
2028	62,575	1,944	0	4,367	2,701	1,110	783	4,113	282	15,301	7,111	134,308	128,402
2029	58,180	1,807	0	4,060	2,508	1,036	803	4,113	283	14,610	6,236	140,544	131,612
2030	53,785	1,671	0	3,754	2,316	962	823	4,113	283	13,920	5,457	146,000	134,902
2031	49,390	1,534	0	3,447	2,123	888	843	4,113	282	13,231	4,763	150,763	138,775
2032	44,995	1,398	0	3,140	1,931	814	865	4,113	282	12,542	4,147	154,910	141,731
2033	40,600	1,261	0	2,833	1,738	740	886	4,113	283	11,854	3,599	158,509	145,275
2034	36,205	1,125	0	2,527	1,546	666	908	4,113	282	11,166	3,114	161,623	148,907
2035	31,810	988	0	2,220	1,353	592	931	4,113	283	10,479	2,684	164,306	152,629
2036	27,415	852	0	1,913	1,160	518	954	4,113	282	9,793	2,303	166,610	156,445
2037	23,020	715	0	1,607	967	444	978	4,113	283	9,107	1,967	168,577	160,356
2038	18,625	579	0	1,300	775	370	1,003	4,113	282	8,421	1,670	170,247	164,365
2039	14,230	442	0	993	1,443	296	1,028	4,113	(578)	7,735	1,409	171,656	168,474
2040	10,696	332	0	746	2,148	222	1,053	4,113	(1,438)	7,177	1,201	172,857	172,686
2041	8,022	249	0	560	2,031	148	1,080	4,113	(1,438)	6,742	1,036	173,893	177,003
2042	5,347	166	0	373	1,914	74	1,107	4,113	(1,438)	6,308	890	174,783	181,428
2043	2,673	83	0	187	1,797	0	1,134	4,113	(1,438)	5,875	761	175,544	185,964

IN SERVICE COST (\$000)	102,815
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.57%
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	44%	7.03 %
P/S	0%	0.00 %
C/S	56%	12.50 %

K-FACTOR =  $\frac{CPWFC}{IN-SVC\ COST} = 1.70738$

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Duct System Testing and Rr

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	3,749	3,749	4,113	4,113	3,729	3,729	8	9,597	0	0	0	8	(2,601)
2020	7.22%	7,218	10,967	4,113	8,225	3,729	7,457	1,346	9,597	0	0	0	1,346	(1,255)
2021	6.68%	6,676	17,643	4,113	12,338	3,729	11,186	1,137	9,597	0	0	0	1,137	(118)
2022	6.18%	6,179	23,822	4,113	16,450	3,729	14,915	945	9,597	0	0	0	945	827
2023	5.71%	5,712	29,534	4,113	20,563	3,729	18,644	765	9,597	0	0	0	765	1,592
2024	5.29%	5,284	34,818	4,113	24,676	3,729	22,372	600	9,597	0	0	0	600	2,192
2025	4.89%	4,887	39,705	4,113	28,788	3,729	26,101	447	9,597	0	0	0	447	2,639
2026	4.52%	4,521	44,226	4,113	32,901	3,729	29,830	306	9,597	0	0	0	306	2,944
2027	4.18%	4,461	48,587	4,113	37,013	3,729	33,559	283	9,597	0	0	0	283	3,227
2028	4.46%	4,460	53,147	4,113	41,126	3,729	37,287	282	9,597	0	0	0	282	3,509
2029	4.46%	4,461	57,609	4,113	45,239	3,729	41,016	283	9,597	0	0	0	283	3,791
2030	4.46%	4,460	62,069	4,113	49,351	3,729	44,745	282	9,597	0	0	0	282	4,074
2031	4.46%	4,461	66,530	4,113	53,464	3,729	48,473	283	9,597	0	0	0	283	4,356
2032	4.46%	4,460	70,990	4,113	57,576	3,729	52,202	282	9,597	0	0	0	282	4,638
2033	4.46%	4,461	75,451	4,113	61,689	3,729	55,931	283	9,597	0	0	0	283	4,921
2034	4.46%	4,460	79,911	4,113	65,801	3,729	59,660	282	9,597	0	0	0	282	5,203
2035	4.46%	4,461	84,373	4,113	69,914	3,729	63,388	283	9,597	0	0	0	283	5,486
2036	4.46%	4,460	88,833	4,113	74,027	3,729	67,117	282	9,597	0	0	0	282	5,768
2037	4.46%	4,461	93,294	4,113	78,139	3,729	70,846	283	9,597	0	0	0	283	6,050
2038	4.46%	4,460	97,754	4,113	82,252	3,729	74,574	282	9,597	0	0	0	282	6,332
2039	2.23%	2,231	99,985	4,113	86,364	3,729	78,303	(578)	9,597	0	0	0	(578)	5,755
2040	0.00%	0	99,985	4,113	90,477	3,729	82,032	(1,438)	9,597	0	0	0	(1,438)	4,316
2041	0.00%	0	99,985	4,113	94,590	3,729	85,761	(1,438)	9,597	0	0	0	(1,438)	2,878
2042	0.00%	0	99,985	4,113	98,702	3,729	89,489	(1,438)	9,597	0	0	0	(1,438)	1,440
2043	0.00%	0	99,985	4,113	102,815	3,729	93,218	(1,438)	9,597	0	0	0	(1,438)	1

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(2,609)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	9,597
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Duct System Testing and Repair

(1) YEAR	(2) TAX DEPRECIATION SCHEDULE	(3) TAX DEPRECIATION \$(000)	(4) DEFERRED TAX \$(000)	(5) END OF YEAR NET PLANT IN SERVICE \$(000)	(5a)* ACCUMULATED DEPRECIATION \$(000)	(5b)* ACCUMULATED DEF TAXES \$(000)	(6) BEGINNING YEAR RATE BASE \$(000)	(7) ENDING OF YEAR RATE BASE \$(000)	(8) MID-YEAR RATE BASE \$(000)
2019	3.75%	3,749	8	98,702	4,115	(2,601)	105,424	101,303	103,364
2020	7.22%	7,218	1,346	94,390	8,225	(1,255)	101,303	95,845	98,574
2021	6.08%	6,676	1,137	90,477	12,338	(118)	95,845	90,596	93,220
2022	6.18%	6,179	945	86,364	16,450	827	90,596	85,538	88,067
2023	5.71%	5,712	765	82,252	20,563	1,592	85,538	80,660	83,099
2024	5.29%	5,284	600	78,139	24,676	2,192	80,660	75,948	78,304
2025	4.89%	4,887	447	74,027	28,788	2,639	75,948	71,388	73,668
2026	4.52%	4,521	306	69,914	32,901	2,944	71,388	66,970	69,179
2027	4.46%	4,461	283	65,801	37,013	3,227	66,970	62,575	64,772
2028	4.46%	4,460	282	61,689	41,126	3,509	62,575	58,180	60,377
2029	4.46%	4,461	283	57,576	45,239	3,791	58,180	53,785	55,982
2030	4.46%	4,460	282	53,464	49,351	4,074	53,785	49,390	51,587
2031	4.46%	4,461	283	49,351	53,464	4,356	49,390	44,995	47,192
2032	4.46%	4,460	282	45,239	57,576	4,638	44,995	40,600	42,798
2033	4.46%	4,461	283	41,126	61,689	4,921	40,600	36,205	38,403
2034	4.46%	4,460	282	37,013	65,801	5,203	36,205	31,810	34,008
2035	4.46%	4,461	283	32,901	69,914	5,486	31,810	27,415	29,613
2036	4.46%	4,460	282	28,788	74,027	5,768	27,415	23,020	25,218
2037	4.46%	4,461	283	24,676	78,139	6,050	23,020	18,625	20,823
2038	4.46%	4,460	282	20,563	82,252	6,332	18,625	14,230	16,428
2039	2.23%	2,231	(578)	16,450	86,364	5,755	14,230	10,696	12,463
2040	0.00%	0	(1,438)	12,338	90,477	4,316	10,696	8,022	9,359
2041	0.00%	0	(1,438)	8,225	94,390	2,878	8,022	5,347	6,684
2042	0.00%	0	(1,438)	4,115	98,702	1,440	5,347	2,673	4,010
2043	0.00%	0	(1,438)	0	102,815	1	2,673	-1	1,336

\* Column not specified in workbook



(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	227.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	838.38

100.00%      907.77

YEAR	NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.64	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.5
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	87,668	87,668	87,668
EQUITY AFUDC	9,597		
DEBT AFUDC	5,550	5,550	
CPI			12,314
TOTAL	102,815	93,218	99,982

\* Column not specified in workbook

INPUT DATA -- PART 2  
 PROGRAM/METHOD SELECTED : REV\_REQ  
 PROGRAM NAME: Residential Duct System Testing and Repair

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (C/kWh)	(5) AVOIDED MARGINAL FUEL COST (C/kWh)	(6)* INCREASED MARGINAL FUEL COST (C/kWh)	(7) REPLACEMENT FUEL COST (C/kWh)	(8) PROGRAM kW EFFECTIVENESS FACTOR	(9) PROGRAM kWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	22,138	22,138	6.41	9.01	6.70	0.00	1.00	1.00
2011	50,069	50,069	6.35	8.48	6.61	0.00	1.00	1.00
2012	89,230	89,230	6.43	8.45	6.66	0.00	1.00	1.00
2013	135,567	135,567	7.06	8.41	7.23	0.00	1.00	1.00
2014	185,139	185,139	7.53	8.67	7.68	0.00	1.00	1.00
2015	236,738	236,738	8.11	9.61	8.31	0.00	1.00	1.00
2016	291,255	291,255	9.00	11.55	9.31	0.00	1.00	1.00
2017	341,111	341,111	9.75	12.72	10.06	0.00	1.00	1.00
2018	387,059	387,059	10.52	13.53	10.86	0.00	1.00	1.00
2019	387,059	387,059	11.50	15.25	11.94	10.41	1.00	1.00
2020	387,059	387,059	12.08	15.88	12.57	10.50	1.00	1.00
2021	387,059	387,059	12.57	16.53	13.08	10.74	1.00	1.00
2022	387,059	387,059	13.06	17.14	13.59	10.81	1.00	1.00
2023	387,059	387,059	13.39	17.16	13.92	10.80	1.00	1.00
2024	387,059	387,059	13.95	17.82	14.47	10.84	1.00	1.00
2025	387,059	387,059	14.40	18.22	14.92	10.96	1.00	1.00
2026	387,059	387,059	14.70	18.32	15.19	11.05	1.00	1.00
2027	387,059	387,059	15.13	18.54	15.60	11.17	1.00	1.00
2028	387,059	387,059	15.60	18.91	16.05	11.36	1.00	1.00
2029	387,059	387,059	16.02	18.85	16.44	11.41	1.00	1.00
2030	387,059	387,059	16.32	19.26	16.92	11.59	1.00	1.00
2031	387,059	387,059	17.08	19.86	17.47	11.80	1.00	1.00
2032	387,059	387,059	17.53	19.62	17.84	11.88	1.00	1.00
2033	387,059	387,059	18.27	20.38	18.50	12.10	1.00	1.00
2034	387,059	387,059	18.73	20.08	18.86	12.14	1.00	1.00
2035	387,059	387,059	19.57	21.37	19.75	12.29	1.00	1.00
2036	387,059	387,059	20.40	22.39	20.54	12.55	1.00	1.00
2037	387,059	387,059	21.11	22.91	21.24	12.70	1.00	1.00
2038	387,059	387,059	22.02	23.86	22.16	13.04	1.00	1.00
2039	387,059	387,059	22.78	24.49	22.89	13.32	1.00	1.00
2040	387,059	387,059	23.59	25.04	23.68	13.44	1.00	1.00
2041	387,059	387,059	24.54	25.93	24.62	13.75	1.00	1.00
2042	387,059	387,059	25.50	26.84	25.59	14.10	1.00	1.00
2043	387,059	387,059	26.74	28.65	26.85	14.40	1.00	1.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Duct System Testing and Repair

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	22,010	12,073	509	30,745	38,896	26,440
2020	21,356	12,375	735	45,297	55,184	24,577
2021	20,508	12,684	769	47,261	57,635	23,586
2022	19,691	13,001	816	50,021	60,087	23,442
2023	18,902	13,326	861	52,589	61,816	23,863
2024	18,140	13,659	913	55,553	64,135	24,129
2025	17,401	14,001	973	59,337	67,650	24,084
2026	16,686	14,351	1045	63,431	71,264	24,249
2027	15,991	14,709	1105	66,953	74,315	24,444
2028	15,301	15,077	1138	68,730	75,916	24,329
2029	14,610	15,454	1191	71,624	77,912	24,968
2030	13,920	15,840	1251	74,977	81,027	24,961
2031	13,231	16,236	1281	76,522	82,497	24,774
2032	12,542	16,642	1331	79,226	84,192	25,550
2033	11,854	17,058	1465	87,173	92,063	25,488
2034	11,166	17,485	1533	90,735	94,245	26,674
2035	10,479	17,922	1575	92,800	95,700	27,077
2036	9,793	18,370	1629	95,571	98,538	26,824
2037	9,107	18,829	1674	97,743	99,936	27,397
2038	8,421	19,300	1722	100,182	103,005	26,620
2039	7,736	19,783	1767	102,242	105,370	26,157
2040	7,177	20,277	1815	104,596	106,574	27,291
2041	6,742	20,784	1864	106,892	109,257	27,025
2042	6,308	21,304	1915	109,326	112,301	26,552
2043	5,875	21,836	1973	112,138	115,189	26,632
	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	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	0	0	0	0
NOM	334,947	412,378	32,854	1,941,682	2,084,724	637,136
NPV	74,926	68,465	4,961	297,175	330,542	114,985

AVOIDED T&D AND PROGRAM FUEL SAVINGS  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Duct System Testing and Repair

(1) YEAR	(2) AVOIDED TRANSMISSION CAP COST \$(000)	(3) AVOIDED TRANSMISSION O&M COST \$(000)	(4) TOTAL AVOIDED TRANSMISSION COST \$(000)	(5) AVOIDED DISTRIBUTION CAP COST \$(000)	(6) AVOIDED DISTRIBUTION O&M COST \$(000)	(7) TOTAL AVOIDED DISTRIBUTION COST \$(000)	(8) PROGRAM FUEL SAVINGS \$(000)	(8a)* PROGRAM OFF-PEAK PAYBACK \$(000)
2009	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	407	0
2011	207	16	223	17	4	22	1,236	0
2012	469	38	507	39	10	49	2,370	0
2013	842	105	947	70	19	89	3,719	0
2014	1,287	147	1,434	107	29	136	5,422	0
2015	1,765	193	1,958	147	40	187	7,956	0
2016	2,264	243	2,507	189	53	241	12,209	0
2017	2,794	292	3,087	233	67	300	16,161	0
2018	3,271	340	3,611	272	80	353	19,742	0
2019	3,702	348	4,051	308	93	402	23,813	0
2020	3,574	357	3,931	298	96	393	24,743	0
2021	3,447	366	3,813	287	98	385	25,762	0
2022	3,324	375	3,700	277	100	377	26,699	0
2023	3,205	385	3,590	267	103	370	26,578	0
2024	3,088	394	3,482	257	105	363	27,582	0
2025	2,973	404	3,377	248	108	356	28,152	0
2026	2,859	414	3,273	238	111	349	28,196	0
2027	2,745	424	3,170	229	114	342	28,423	0
2028	2,632	435	3,067	219	116	336	28,908	0
2029	2,518	446	2,964	210	119	329	28,594	0
2030	2,404	457	2,861	200	122	323	29,155	0
2031	2,291	469	2,760	191	125	316	30,053	0
2032	2,181	480	2,661	182	128	310	30,393	0
2033	2,074	492	2,566	173	132	304	30,492	0
2034	1,972	505	2,477	164	135	299	29,710	0
2035	1,876	517	2,393	156	138	295	31,775	0
2036	1,787	530	2,317	149	142	291	33,356	0
2037	1,706	543	2,249	142	145	287	34,018	0
2038	1,632	557	2,189	136	149	285	35,416	0
2039	1,566	571	2,137	130	153	283	36,256	0
2040	1,505	585	2,090	125	157	282	36,944	0
2041	1,446	600	2,046	120	160	281	38,208	0
2042	1,388	615	2,002	115	164	280	39,503	0
2043	1,329	630	1,959	111	169	279	42,386	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	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	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	0	0	0
NOM.	72,125	13,275	85,399	6,007	3,486	9,493	843,338	0
NPV	20,108	2,746	22,854	1,675	697	2,371	169,717	0

\* THESE VALUES REPRESENT THE COST OF THE INCREASED FUEL CONSUMPTION DUE TO GREATER OFF-PEAK ENERGY USAGE. USED FOR LOAD SHIFTING PROGRAMS ONLY.

AVOIDED GENERATING EMISSION IMPACT  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Duct System Testing and Repair

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	3	0	3
2011	0	0	5	0	5
2012	0	0	9	0	9
2013	0	0	306	0	306
2014	0	0	482	0	482
2015	0	0	705	0	705
2016	0	0	1,007	0	1,007
2017	0	0	1,329	0	1,329
2018	0	0	1,662	0	1,662
2019	3,676	4,807	1,939	0	808
2020	5,597	7,250	2,896	0	444
2021	6,167	7,995	2,259	0	431
2022	7,201	9,315	2,515	0	401
2023	7,947	10,272	2,680	0	354
2024	9,150	11,799	2,966	0	318
2025	10,561	13,579	3,270	0	252
2026	11,712	14,968	3,451	0	195
2027	13,249	16,908	3,751	0	92
2028	14,527	18,509	4,076	0	95
2029	16,617	21,093	4,528	0	53
2030	18,425	23,372	4,888	0	(58)
2031	20,025	25,384	5,304	0	(55)
2032	22,050	27,893	5,743	0	(100)
2033	25,692	32,481	6,222	0	(568)
2034	28,439	35,923	6,726	0	(758)
2035	30,889	39,036	7,295	0	(852)
2036	33,721	42,606	7,902	0	(983)
2037	36,548	46,164	8,532	0	(1,084)
2038	39,618	50,034	9,212	0	(1,203)
2039	42,787	54,105	9,930	0	(1,388)
2040	46,238	58,460	10,681	0	(1,541)
2041	49,820	62,981	11,485	0	(1,676)
2042	49,820	62,981	12,344	0	(817)
2043	49,820	62,981	13,274	0	113
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	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
<b>NCM</b>	<b>600,298</b>	<b>760,894</b>	<b>158,577</b>	<b>0</b>	<b>(2,919)</b>
<b>NPV</b>	<b>72,681</b>	<b>92,480</b>	<b>22,970</b>	<b>0</b>	<b>3,171</b>

TOTAL RESOURCE COST TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Duct System Testing and Repair

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	(0)	(0)
2010	0	1,744	5,423	0	7,167	0	0	407	3	410	(6,757)	(6,206)
2011	0	2,255	7,014	0	9,269	0	245	1,236	5	1,486	(7,783)	(12,770)
2012	0	3,241	10,079	0	13,320	0	556	2,370	9	2,936	(10,385)	(20,814)
2013	0	3,931	12,224	0	16,155	0	1,036	3,719	306	5,061	(11,094)	(28,707)
2014	0	4,311	13,405	0	17,716	0	1,570	5,422	482	7,475	(10,241)	(35,397)
2015	0	4,589	14,302	0	18,901	0	2,145	7,956	705	10,806	(8,095)	(40,254)
2016	0	4,981	15,488	0	20,469	0	2,749	12,209	1,007	15,965	(4,504)	(42,736)
2017	0	4,669	14,518	0	19,187	0	3,386	16,161	1,329	20,876	1,690	(41,381)
2018	0	4,410	13,714	0	18,125	0	3,964	19,742	1,662	25,368	7,243	(38,514)
2019	0	0	0	0	0	26,440	4,452	23,813	808	55,514	55,514	(14,820)
2020	0	0	0	0	0	24,577	4,324	24,743	444	54,089	54,089	6,382
2021	0	0	0	0	0	23,586	4,198	25,762	431	53,977	53,977	25,813
2022	0	0	0	0	0	23,442	4,077	26,699	401	54,619	54,619	43,871
2023	0	0	0	0	0	23,863	3,959	26,578	354	54,754	54,754	60,496
2024	0	0	0	0	0	24,129	3,845	27,582	318	55,874	55,874	76,077
2025	0	0	0	0	0	24,094	3,733	28,152	292	56,221	56,221	90,474
2026	0	0	0	0	0	24,249	3,622	28,196	195	56,262	56,262	103,706
2027	0	0	0	0	0	24,444	3,512	28,423	92	56,470	56,470	115,903
2028	0	0	0	0	0	24,329	3,402	28,908	95	56,734	56,734	127,158
2029	0	0	0	0	0	24,968	3,293	28,594	53	56,908	56,908	137,825
2030	0	0	0	0	0	24,961	3,184	29,155	(58)	57,342	57,342	147,102
2031	0	0	0	0	0	24,774	3,076	30,053	(55)	57,849	57,849	155,990
2032	0	0	0	0	0	25,530	2,971	30,492	(100)	57,814	57,814	164,149
2033	0	0	0	0	0	25,488	2,871	30,492	(568)	58,283	58,283	171,702
2034	0	0	0	0	0	26,674	2,776	29,710	(758)	58,402	58,402	178,653
2035	0	3,233	10,054	0	13,288	27,077	2,688	31,775	(852)	60,688	47,400	183,834
2036	0	4,182	13,003	0	17,184	26,824	2,608	33,356	(983)	61,805	44,621	188,313
2037	0	6,009	18,686	0	24,695	27,397	2,537	34,018	(1,084)	62,867	38,172	191,832
2038	0	7,268	22,663	0	29,951	26,620	2,474	35,416	(1,203)	63,306	33,355	194,656
2039	0	7,992	24,852	0	32,844	26,157	2,420	36,256	(1,388)	63,445	30,602	197,036
2040	0	8,527	26,534	0	35,041	27,291	2,372	36,944	(1,541)	65,066	30,026	199,180
2041	0	9,234	28,714	0	37,948	27,025	2,327	38,208	(1,676)	65,884	27,937	201,012
2042	0	8,656	26,916	0	35,571	26,552	2,282	39,503	(817)	67,519	31,948	202,936
2043	0	8,177	25,426	0	33,603	26,632	2,238	42,386	113	71,369	37,767	205,025
	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	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	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	0	0	0	0	0	0
NOM	0	97,440	302,994	0	400,433	637,136	94,893	843,338	(2,019)	1,573,347	1,172,914	
NPV	0	26,298	81,774	0	108,073	114,985	25,225	169,717	3,171	313,098	205,025	

Discount Rate: 8.89 %  
Benefit/Cost Ratio (Col(11) / Col(6)) : 2.90

PARTICIPANT COSTS AND BENEFITS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Duct System Testing and Repair

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
YEAR	SAVINGS IN PARTICIPANTS BILLS \$(000)	TAX CREDITS \$(000)	UTILITY REBATES \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	CUSTOMER EQUIPMENT COSTS \$(000)	CUSTOMER O&M COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0
2010	550	0	3,362	0	3,912	5,423	0	0	5,423	(1,511)	(1,388)
2011	1,851	0	4,241	0	6,092	7,014	0	0	7,014	(922)	(2,165)
2012	3,761	0	5,947	0	9,708	10,079	0	0	10,079	(371)	(2,453)
2013	6,372	0	7,036	0	13,407	12,224	0	0	13,405	1,183	(1,611)
2014	9,633	0	7,527	0	17,160	13,405	0	0	14,302	3,755	843
2015	13,262	0	7,839	0	21,101	14,302	0	0	15,488	5,921	4,922
2016	17,126	0	8,283	0	25,409	15,488	0	0	16,518	9,921	10,389
2017	21,352	0	7,583	0	28,935	14,518	0	0	17,160	14,417	17,685
2018	25,588	0	6,997	0	32,586	13,714	0	0	18,871	18,871	26,456
2019	28,402	0	0	0	28,402	0	0	0	28,402	28,402	38,578
2020	28,490	0	0	0	28,490	0	0	0	29,955	29,955	49,746
2021	29,111	0	0	0	29,111	0	0	0	30,863	30,863	60,226
2022	29,955	0	0	0	29,955	0	0	0	31,714	31,714	70,129
2023	30,863	0	0	0	30,863	0	0	0	32,234	32,234	79,500
2024	32,234	0	0	0	32,234	0	0	0	33,391	33,391	88,488
2025	33,391	0	0	0	33,391	0	0	0	34,733	34,733	97,039
2026	34,733	0	0	0	34,733	0	0	0	36,548	36,548	105,208
2027	36,548	0	0	0	36,548	0	0	0	38,034	38,034	113,102
2028	38,034	0	0	0	38,034	0	0	0	39,736	39,736	120,647
2029	39,736	0	0	0	39,736	0	0	0	41,680	41,680	127,886
2030	41,680	0	0	0	41,680	0	0	0	43,579	43,579	134,859
2031	43,579	0	0	0	43,579	0	0	0	46,153	46,153	141,555
2032	46,153	0	0	0	46,153	0	0	0	50,280	50,280	148,068
2033	50,280	0	0	0	50,280	0	0	0	51,223	51,223	154,584
2034	51,223	0	0	0	51,223	0	0	0	56,600	56,600	160,680
2035	53,238	0	3,362	0	56,600	10,054	0	0	61,289	61,289	165,768
2036	57,047	0	4,241	0	61,289	13,093	0	0	66,047	66,047	170,615
2037	60,100	0	5,947	0	66,047	18,686	0	0	69,732	69,732	174,981
2038	62,716	0	7,036	0	69,732	22,663	0	0	73,116	73,116	178,968
2039	65,589	0	7,527	0	73,116	24,852	0	0	76,484	76,484	182,721
2040	68,645	0	7,839	0	76,484	26,514	0	0	80,556	80,556	186,289
2041	72,273	0	8,283	0	80,556	28,714	0	0	83,730	83,730	189,689
2042	76,147	0	7,583	0	83,730	26,916	0	0	87,279	87,279	193,111
2043	80,282	0	6,997	0	87,279	25,426	0	0	0	0	196,532
	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	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	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	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
NOM	1,289,942	0	117,631	0	1,407,573	302,994	0	0	302,994	1,104,579	
NPV	236,287	0	42,020	0	278,307	81,774	0	0	81,774	196,532	

In Service of Gen Unit:  
 Discount Rate : 8.89 %  
 Benefit/Cost Ratio ( Col(6) / Col(10)) : 3.40





**RESIDENTIAL POWER SAVERS ENERGY EFFICIENCY PROGRAM**

INPUT DATA -- PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential New Construction - Buldsmart

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.83 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.11 kW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KWH REDUCTION PER CUSTOMER .....	1,545.21 kWh
(5) KWH LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.03
(7) CUSTOMER KWH INCREASE AT METER .....	0.33 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
* (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
* (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
^ (10) UTILITY DISCOUNT RATE .....	3.89 %
^ (11) UTILITY AFUDC RATE .....	3.48 %
^ (12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

\* INPUT DATA - PART I CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential New Construction - Buldsmart

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2009	0	0	0	0	0	0	0	0	0	
2010	764	2,982	0	3,687	216	0	3,974	0	3,974	
2011	1,395	5,764	0	7,160	878	0	7,873	0	7,873	
2012	1,841	7,485	0	9,327	1,977	0	10,500	0	10,500	
2013	2,267	9,090	0	11,357	3,468	0	13,085	0	13,085	
2014	2,772	11,903	0	13,775	5,476	0	16,259	0	16,259	
2015	2,694	10,612	0	13,306	7,776	0	16,100	0	16,100	
2016	2,900	10,762	0	13,562	10,128	0	16,737	0	16,737	
2017	2,901	10,878	0	13,780	12,689	0	17,341	0	17,341	
2018	3,041	11,125	0	14,166	15,332	0	18,177	0	18,177	
2019	0	0	0	0	17,096	0	0	0	0	
2020	0	0	0	0	17,149	0	0	0	0	
2021	0	0	0	0	17,523	0	0	0	0	
2022	0	0	0	0	18,031	0	0	0	0	
2023	0	0	0	0	18,577	0	0	0	0	
2024	0	0	0	0	19,402	0	0	0	0	
2025	0	0	0	0	20,099	0	0	0	0	
2026	0	0	0	0	20,906	0	0	0	0	
2027	0	0	0	0	21,999	0	0	0	0	
2028	0	0	0	0	22,893	0	0	0	0	
2029	0	0	0	0	23,918	0	0	0	0	
2030	0	0	0	0	25,088	0	0	0	0	
2031	0	0	0	0	26,231	0	0	0	0	
2032	0	0	0	0	27,780	0	0	0	0	
2033	0	0	0	0	30,265	0	0	0	0	
2034	0	0	0	0	30,832	0	0	0	0	
2035	0	0	0	0	32,045	0	0	0	0	
2036	0	0	0	0	34,338	0	0	0	0	
2037	0	0	0	0	36,176	0	0	0	0	
2038	0	0	0	0	37,750	0	0	0	0	
2039	0	0	0	0	39,480	0	0	0	0	
2040	1,477	2,982	0	4,460	41,319	0	8,335	0	8,335	
2041	2,927	5,764	0	8,691	43,503	0	16,513	0	16,513	
2042	3,862	7,485	0	11,348	45,834	0	22,025	0	22,025	
2043	4,734	9,090	0	13,845	48,324	0	27,447	0	27,447	
	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	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	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	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	
NOM	33,438	105,024	0	138,462	774,501	0	194,366	0	194,366	
NPV	13,508	51,571	0	65,079	140,890	0	78,982	0	78,982	

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS

CALCULATION OF GEN K-FACTOR  
 PROGRAM/METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Residential New Construction - Buldsmart

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
BEG-YEAR	RATE BASE	DEBT	PREFERRED STOCK	COMMON EQUITY	INCOME TAXES	PROPERTY TAX	PROPERTY INSURANCE	DEPRECC.	DEFERRED TAXES	TOTAL FIXED CHARGES	PRESENT WORTH FIXED CHARGES	CUMULATIVE PW FIXED CHARGES	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2019	89,648	2,785	0	6,256	4,127	1,511	533	3,497	7	18,716	18,716	18,716	87,429
2020	86,144	2,676	0	6,012	2,836	1,448	547	3,497	1,144	18,160	16,678	35,394	89,615
2021	81,502	2,532	0	5,688	2,810	1,385	560	3,497	967	17,439	14,709	50,103	91,855
2022	77,038	2,393	0	5,375	2,778	1,322	574	3,497	804	16,744	12,970	63,072	94,152
2023	72,737	2,260	0	5,076	2,742	1,259	589	3,497	651	16,073	11,434	74,507	96,505
2024	68,590	2,131	0	4,787	2,701	1,196	603	3,497	510	15,425	10,077	84,584	98,918
2025	64,582	2,006	0	4,507	2,655	1,133	618	3,497	380	14,797	8,878	93,462	101,391
2026	60,705	1,886	0	4,236	2,606	1,070	634	3,497	260	14,189	7,818	101,281	103,926
2027	56,948	1,769	0	3,974	2,461	1,007	650	3,497	240	13,598	6,881	108,162	106,524
2028	53,211	1,653	0	3,713	2,297	944	666	3,497	240	13,011	6,047	114,209	109,187
2029	49,474	1,537	0	3,453	2,133	881	683	3,497	240	12,424	5,303	119,512	111,917
2030	45,736	1,421	0	3,192	1,970	818	700	3,497	240	11,837	4,640	124,152	114,715
2031	41,999	1,305	0	2,931	1,805	755	717	3,497	240	11,251	4,050	128,202	117,582
2032	38,262	1,189	0	2,670	1,642	692	735	3,497	240	10,665	3,526	131,728	120,522
2033	34,525	1,072	0	2,409	1,478	629	754	3,497	240	10,080	3,061	134,789	123,535
2034	30,787	956	0	2,149	1,314	567	772	3,497	240	9,495	2,646	137,437	126,623
2035	27,050	840	0	1,888	1,150	504	792	3,497	240	8,911	2,282	139,719	129,789
2036	23,313	724	0	1,627	987	441	812	3,497	240	8,327	1,958	141,677	133,034
2037	19,575	608	0	1,366	823	378	832	3,497	240	7,744	1,673	143,350	136,360
2038	15,838	492	0	1,105	659	315	853	3,497	240	7,161	1,420	144,770	139,769
2039	12,101	376	0	844	1,227	252	874	3,497	(491)	6,579	1,198	145,969	143,263
2040	9,095	283	0	635	1,827	189	896	3,497	(1,223)	6,103	1,021	146,990	146,844
2041	6,821	212	0	476	1,727	126	918	3,497	(1,223)	5,733	881	147,871	150,515
2042	4,547	141	0	317	1,627	63	941	3,497	(1,223)	5,364	757	148,628	154,278
2043	2,273	71	0	159	1,528	0	965	3,497	(1,223)	4,996	647	149,275	158,135

IN SERVICE COST (\$000)	87,429
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.57%
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	44%	7.03 %
E/S	0%	0.00 %
C/S	56%	12.50 %

K-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential New Construction - Bulldsm

(1) YEAR	(2) TAX DEPRECIATION SCHEDULE	(3) TAX DEPRECIATION \$(000)	(4) ACCUMULATED TAX DEPRECIATION \$(000)	(5) BOOK DEPRECIATION \$(000)	(6) ACCUMULATED BOOK DEPRECIATION \$(000)	(7) BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	(8) ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	(9) DEFERRED TAX DUE TO DEPRECIATION \$(000)	(10) TOTAL EQUITY AFUDC \$(000)	(11) BOOK DEPR RATE MINUS LIFE	(12) (10)*(11) TAX RATE \$(000)	(13) SALVAGE TAX RATE \$(000)	(14) ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	(15) ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	3,188	3,188	3,497	3,497	3,171	3,171	7	8,161	0	0	0	7	(2,212)
2020	7.22%	6,138	9,326	3,497	6,994	3,171	6,341	1,144	8,161	0	0	0	1,144	(1,067)
2021	6.68%	5,677	15,003	3,497	10,491	3,171	9,512	967	8,161	0	0	0	967	(101)
2022	6.18%	5,254	20,257	3,497	13,989	3,171	12,683	804	8,161	0	0	0	804	703
2023	5.71%	4,857	25,114	3,497	17,486	3,171	15,854	651	8,161	0	0	0	651	1,354
2024	5.29%	4,493	29,607	3,497	20,983	3,171	19,024	510	8,161	0	0	0	510	1,864
2025	4.89%	4,156	33,763	3,497	24,480	3,171	22,195	380	8,161	0	0	0	380	2,244
2026	4.52%	3,845	37,608	3,497	27,977	3,171	25,366	260	8,161	0	0	0	260	2,504
2027	4.46%	3,794	41,401	3,497	31,474	3,171	28,537	240	8,161	0	0	0	240	2,744
2028	4.46%	3,793	45,194	3,497	34,972	3,171	31,707	240	8,161	0	0	0	240	2,984
2029	4.46%	3,794	48,988	3,497	38,469	3,171	34,878	240	8,161	0	0	0	240	3,224
2030	4.46%	3,793	52,780	3,497	41,966	3,171	38,049	240	8,161	0	0	0	240	3,464
2031	4.46%	3,794	56,574	3,497	45,463	3,171	41,220	240	8,161	0	0	0	240	3,704
2032	4.46%	3,793	60,367	3,497	48,960	3,171	44,390	240	8,161	0	0	0	240	3,944
2033	4.46%	3,794	64,160	3,497	52,457	3,171	47,561	240	8,161	0	0	0	240	4,185
2034	4.46%	3,793	67,953	3,497	55,955	3,171	50,732	240	8,161	0	0	0	240	4,424
2035	4.46%	3,794	71,747	3,497	59,452	3,171	53,903	240	8,161	0	0	0	240	4,665
2036	4.46%	3,793	75,539	3,497	62,949	3,171	57,073	240	8,161	0	0	0	240	4,905
2037	4.46%	3,794	79,333	3,497	66,446	3,171	60,244	240	8,161	0	0	0	240	5,145
2038	4.46%	3,793	83,126	3,497	69,943	3,171	63,415	240	8,161	0	0	0	240	5,385
2039	2.23%	1,897	85,023	3,497	73,440	3,171	66,586	(491)	8,161	0	0	0	240	5,625
2040	0.00%	0	85,023	3,497	76,938	3,171	69,756	(1,223)	8,161	0	0	0	(491)	5,865
2041	0.00%	0	85,023	3,497	80,435	3,171	72,927	(1,223)	8,161	0	0	0	(1,223)	6,105
2042	0.00%	0	85,023	3,497	83,932	3,171	76,098	(1,223)	8,161	0	0	0	(1,223)	6,345
2043	0.00%	0	85,023	3,497	87,429	3,171	79,268	(1,223)	8,161	0	0	0	(1,223)	6,585

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(2,212)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	8,161
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential New Construction - Bulldmart

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	END OF YEAR NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2019	3.75%	3,188	7	83,932	3,497	(2,212)	89,648	86,144	87,896
2020	7.22%	6,138	1,144	80,435	6,994	(1,067)	86,144	81,502	83,823
2021	6.68%	5,677	967	76,938	10,491	(101)	81,502	77,038	79,270
2022	6.18%	5,254	804	73,440	13,989	703	77,038	72,737	74,888
2023	5.71%	4,857	651	69,943	17,486	1,354	72,737	68,590	70,664
2024	5.29%	4,493	510	66,446	20,893	1,864	68,590	64,582	66,586
2025	4.89%	4,156	380	62,949	24,490	2,244	64,582	60,705	62,644
2026	4.52%	3,845	260	59,452	27,977	2,504	60,705	56,948	58,827
2027	4.46%	3,794	240	55,955	31,474	2,744	56,948	53,211	55,079
2028	4.46%	3,793	240	52,457	34,972	2,984	53,211	49,474	51,342
2029	4.46%	3,794	240	48,960	38,469	3,224	49,474	45,736	47,605
2030	4.46%	3,793	240	45,463	41,966	3,464	45,736	41,999	43,868
2031	4.46%	3,794	240	41,966	45,463	3,704	41,999	38,262	40,130
2032	4.46%	3,793	240	38,469	48,960	3,944	38,262	34,525	36,393
2033	4.46%	3,794	240	34,972	52,457	4,185	34,525	30,787	32,656
2034	4.46%	3,793	240	31,474	55,955	4,424	30,787	27,050	28,919
2035	4.46%	3,794	240	27,977	59,452	4,665	27,050	23,313	25,181
2036	4.46%	3,793	240	24,480	62,949	4,905	23,313	19,575	21,444
2037	4.46%	3,794	240	20,983	66,446	5,145	19,575	15,838	17,707
2038	4.46%	3,793	240	17,486	69,943	5,385	15,838	12,101	13,970
2039	2.23%	1,897	(491)	13,989	73,440	4,893	12,101	9,095	10,598
2040	0.00%	0	(1,223)	10,491	76,938	3,670	9,095	6,821	7,958
2041	0.00%	0	(1,223)	6,994	80,435	2,447	6,821	4,547	5,684
2042	0.00%	0	(1,223)	3,497	83,932	1,224	4,547	2,273	3,410
2043	0.00%	0	(1,223)	0	87,429	1	2,273	-1	1,136

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/KW)	(7) CUMULATIVE AVERAGE SPENDING (\$/KW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00%      907.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/KW)	(8a)* DEBT AFUDC (\$/KW)	(8b)* CUMULATIVE DEBT AFUDC (\$/KW)	(9) YEARLY TOTAL AFUDC (\$/KW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/KW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/KW)	(9c)* CUMULATIVE CPI (\$/KW)	(9d)* DEFERRED TAXES (\$/KW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/KW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/KW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/KW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.28)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(15.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.5
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	74,549	74,549	74,549
EQUITY AFUDC	8,161		
DEBT AFUDC	4,719	4,719	
CPI			10,471
TOTAL	87,429	79,268	85,020

\* Column not specified in workbook

INPUT DATA - PART 2  
PROGRAM METHOD SELECTED : REV REQ  
PROGRAM NAME: Residential New Construction - Bulldsmart

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (C/KWh)	(5) AVOIDED MARGINAL FUEL COST (C/KWh)	(6)* INCREASED MARGINAL FUEL COST (C/KWh)	(7) REPLACEMENT FUEL COST (C/KWh)	(8) PROGRAM KW EFFECTIVENESS FACTOR	(9) PROGRAM KW EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	2,879	2,879	6.41	9.41	6.63	0.00	1.00	1.00
2011	8,443	8,443	6.35	8.82	6.54	0.00	1.00	1.00
2012	15,608	15,608	6.43	8.81	6.60	0.00	1.00	1.00
2013	24,211	24,211	7.06	8.66	7.18	0.00	1.00	1.00
2014	34,477	34,477	7.53	8.94	7.65	0.00	1.00	1.00
2015	44,209	44,209	8.11	9.98	8.28	0.00	1.00	1.00
2016	54,680	54,680	9.00	12.06	9.25	0.00	1.00	1.00
2017	64,057	64,057	9.75	13.17	9.98	0.00	1.00	1.00
2018	74,261	74,261	10.52	13.94	10.77	0.00	1.00	1.00
2019	74,261	74,261	11.50	15.78	11.83	10.41	1.00	1.00
2020	74,261	74,261	12.08	16.43	12.45	10.50	1.00	1.00
2021	74,261	74,261	12.57	17.12	12.96	10.74	1.00	1.00
2022	74,261	74,261	13.06	17.90	13.47	10.81	1.00	1.00
2023	74,261	74,261	13.39	17.89	13.80	10.80	1.00	1.00
2024	74,261	74,261	13.95	18.59	14.37	10.84	1.00	1.00
2025	74,261	74,261	14.40	19.04	14.82	10.96	1.00	1.00
2026	74,261	74,261	14.70	19.13	15.10	11.05	1.00	1.00
2027	74,261	74,261	15.13	19.41	15.51	11.17	1.00	1.00
2028	74,261	74,261	15.60	19.86	15.97	11.36	1.00	1.00
2029	74,261	74,261	16.02	19.66	16.37	11.41	1.00	1.00
2030	74,261	74,261	16.52	20.03	16.85	11.59	1.00	1.00
2031	74,261	74,261	17.08	20.68	17.40	11.80	1.00	1.00
2032	74,261	74,261	17.50	20.32	17.78	11.88	1.00	1.00
2033	74,261	74,261	18.27	21.08	18.45	12.10	1.00	1.00
2034	74,261	74,261	18.73	20.55	18.83	12.14	1.00	1.00
2035	74,261	74,261	19.57	21.99	19.70	12.29	1.00	1.00
2036	74,261	74,261	20.40	23.09	20.49	12.55	1.00	1.00
2037	74,261	74,261	21.11	23.55	21.20	12.70	1.00	1.00
2038	74,261	74,261	22.02	24.51	22.13	13.04	1.00	1.00
2039	74,261	74,261	22.78	25.06	22.86	13.32	1.00	1.00
2040	74,261	74,261	23.59	25.57	23.65	13.44	1.00	1.00
2041	74,261	74,261	24.54	26.44	24.58	13.75	1.00	1.00
2042	74,261	74,261	25.50	27.34	25.55	14.10	1.00	1.00
2043	74,261	74,261	26.74	29.33	26.82	14.40	1.00	1.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.



AVOIDED GENERATING BENEFITS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential New Construction - Buildsmart

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	18,716	10,266	433	26,144	33,076	22,483
2020	18,160	10,523	625	38,518	46,926	20,900
2021	17,439	10,786	654	40,189	49,011	20,056
2022	16,744	11,055	694	42,536	51,095	19,934
2023	16,073	11,332	732	44,720	52,565	20,292
2024	15,425	11,615	776	47,240	54,538	20,519
2025	14,797	11,906	829	50,475	57,527	20,480
2026	14,189	12,203	889	53,939	60,599	20,620
2027	13,598	12,508	940	56,933	63,194	20,786
2028	13,011	12,821	967	58,445	64,556	20,688
2029	12,429	13,141	1013	60,906	66,253	21,231
2030	11,837	13,470	1064	63,757	68,902	21,226
2031	11,251	13,807	1090	65,071	70,152	21,067
2032	10,665	14,152	1132	67,370	71,583	21,727
2033	10,080	14,506	1246	74,128	78,286	21,674
2034	9,495	14,868	1304	77,157	80,142	22,682
2035	8,911	15,240	1340	78,913	81,379	23,025
2036	8,327	15,621	1385	81,269	83,793	22,810
2037	7,744	16,012	1423	83,116	84,998	23,297
2038	7,161	16,412	1464	85,190	87,591	23,636
2039	6,579	16,822	1502	86,942	89,602	22,043
2040	6,103	17,243	1544	88,944	90,626	23,207
2041	5,723	17,674	1585	90,896	92,907	22,981
2042	5,364	18,116	1629	92,965	95,496	22,578
2043	4,996	18,569	1678	95,357	97,952	22,647
	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	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
NOM	284,823	350,667	27,938	1,651,118	1,772,755	541,791
NPV	63,714	58,220	4,219	252,704	281,078	97,778

AVOIDED T&D AND PROGRAM FUEL SAVINGS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential New Construction - Buildsmart

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(8a)*
YEAR	AVOIDED TRANSMISSION CAP COST \$(000)	AVOIDED TRANSMISSION O&M COST \$(000)	TOTAL AVOIDED TRANSMISSION COST \$(000)	AVOIDED DISTRIBUTION CAP COST \$(000)	AVOIDED DISTRIBUTION O&M COST \$(000)	TOTAL AVOIDED DISTRIBUTION COST \$(000)	PROGRAM FUEL SAVINGS \$(000)	PROGRAM OFF-PEAK PAYBACK \$(000)
2009	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	230	0
2011	119	9	129	10	3	12	849	0
2012	353	28	381	29	8	37	1,777	0
2013	656	83	740	55	14	69	2,819	0
2014	1,824	122	1,945	85	23	108	4,254	0
2015	1,468	160	1,627	122	33	156	6,426	0
2016	1,885	200	2,085	157	44	201	9,893	0
2017	2,309	243	2,552	192	55	247	13,006	0
2018	2,737	289	3,026	228	67	295	16,048	0
2019	3,178	296	3,475	265	79	344	19,661	0
2020	3,068	304	3,372	256	81	337	20,432	0
2021	2,960	311	3,271	247	83	330	21,289	0
2022	2,855	319	3,174	238	85	323	22,296	0
2023	2,752	327	3,079	229	87	317	22,163	0
2024	2,652	335	2,987	221	90	311	23,014	0
2025	2,554	344	2,897	213	92	305	23,533	0
2026	2,456	352	2,808	205	94	299	23,562	0
2027	2,359	361	2,720	196	97	293	23,818	0
2028	2,262	370	2,632	188	99	287	24,334	0
2029	2,165	379	2,544	180	101	282	23,873	0
2030	2,068	389	2,457	172	104	276	24,251	0
2031	1,971	398	2,370	164	107	271	25,043	0
2032	1,876	408	2,285	156	109	266	24,334	0
2033	1,784	419	2,203	149	112	261	25,199	0
2034	1,696	429	2,125	141	115	256	24,241	0
2035	1,614	440	2,053	134	118	252	26,103	0
2036	1,537	451	1,988	128	121	249	27,464	0
2037	1,466	462	1,928	122	124	246	27,900	0
2038	1,402	474	1,876	117	127	244	29,028	0
2039	1,345	485	1,831	112	130	242	29,581	0
2040	1,293	498	1,791	108	133	241	30,062	0
2041	1,243	510	1,753	104	136	240	31,024	0
2042	1,193	523	1,715	99	140	239	32,033	0
2043	1,142	536	1,678	95	143	239	34,603	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	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	0	0	0	0	0
NOM.	61,443	11,254	72,697	5,118	2,954	8,071	694,137	0
NPV	16,942	2,312	19,254	1,411	586	1,997	139,354	0

\* THESE VALUES REPRESENT THE COST OF THE INCREASED FUEL CONSUMPTION DUE TO GREATER OFF-PEAK ENERGY USAGE. USED FOR LOAD SHIFTING PROGRAMS ONLY.

AVOIDED GENERATING EMISSION IMPACT  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAMNAME Residential New Construction - Buildsmart

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	2	0	2
2011	0	0	4	0	4
2012	0	0	9	0	9
2013	0	0	225	0	225
2014	0	0	368	0	368
2015	0	0	545	0	545
2016	0	0	786	0	786
2017	0	0	1,042	0	1,042
2018	0	0	1,323	0	1,323
2019	3,126	4,087	1,563	0	601
2020	4,760	6,165	1,689	0	284
2021	5,244	6,798	1,816	0	262
2022	6,124	7,921	2,042	0	245
2023	6,758	8,755	2,142	0	165
2024	7,781	10,033	2,395	0	143
2025	8,981	11,547	2,633	0	67
2026	9,959	12,728	2,752	0	(17)
2027	11,266	14,378	2,986	0	(125)
2028	12,353	15,739	3,242	0	(143)
2029	14,131	17,936	3,604	0	(202)
2030	15,668	19,874	3,892	0	(325)
2031	17,028	21,585	4,215	0	(342)
2032	18,751	23,719	4,556	0	(413)
2033	21,847	27,621	4,942	0	(831)
2034	24,183	30,547	5,337	0	(1,027)
2035	26,266	33,194	5,787	0	(1,141)
2036	28,675	36,230	6,269	0	(1,280)
2037	31,079	39,256	6,767	0	(1,410)
2038	33,689	42,546	7,302	0	(1,555)
2039	36,384	46,009	7,881	0	(1,744)
2040	39,319	49,712	8,460	0	(1,934)
2041	42,365	53,556	9,097	0	(2,095)
2042	42,365	53,556	9,776	0	(1,415)
2043	42,365	53,556	10,513	0	(679)
	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	0
	0	0	0	0	0
	0	0	0	0	0
NCM	510,466	647,030	125,993	0	(10,610)
NPV	61,805	78,641	18,261	0	1,425



PARTICIPANT COSTS AND BENEFITS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential New Construction - Buildsmart

(1) YEAR	(2) SAVINGS IN PARTICIPANTS BILLS \$(000)	(3) TAX CREDITS \$(000)	(4) UTILITY REBATES \$(000)	(5) OTHER BENEFITS \$(000)	(6) TOTAL BENEFITS \$(000)	(7) CUSTOMER EQUIPMENT COSTS \$(000)	(8) CUSTOMER O&M COSTS \$(000)	(9) OTHER COSTS \$(000)	(10) TOTAL COSTS \$(000)	(11) NET BENEFITS \$(000)	(12) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0
2010	285	0	2,982	0	3,267	3,974	0	0	3,974	(707)	(649)
2011	1,155	0	5,764	0	6,919	7,873	0	0	7,873	(953)	(1,453)
2012	2,602	0	7,485	0	10,087	10,500	0	0	10,500	(413)	(1,773)
2013	4,563	0	9,090	0	13,653	13,085	0	0	13,085	568	(1,369)
2014	7,205	0	11,003	0	18,208	16,259	0	0	16,259	1,949	(96)
2015	10,232	0	10,612	0	20,844	16,100	0	0	16,100	4,743	2,750
2016	13,327	0	10,762	0	24,089	16,737	0	0	16,737	7,352	6,801
2017	16,697	0	10,878	0	27,575	17,341	0	0	17,341	10,234	11,981
2018	20,174	0	11,125	0	31,299	18,177	0	0	18,177	13,122	18,079
2019	22,494	0	0	0	22,494	0	0	0	0	22,494	27,680
2020	22,565	0	0	0	22,565	0	0	0	0	22,565	36,525
2021	23,056	0	0	0	23,056	0	0	0	0	23,056	44,825
2022	23,725	0	0	0	23,725	0	0	0	0	23,725	52,669
2023	24,444	0	0	0	24,444	0	0	0	0	24,444	60,091
2024	25,529	0	0	0	25,529	0	0	0	0	25,529	67,209
2025	26,446	0	0	0	26,446	0	0	0	0	26,446	73,982
2026	27,508	0	0	0	27,508	0	0	0	0	27,508	80,451
2027	28,947	0	0	0	28,947	0	0	0	0	28,947	86,704
2028	30,123	0	0	0	30,123	0	0	0	0	30,123	92,679
2029	31,471	0	0	0	31,471	0	0	0	0	31,471	98,412
2030	33,011	0	0	0	33,011	0	0	0	0	33,011	103,935
2031	34,514	0	0	0	34,514	0	0	0	0	34,514	109,239
2032	36,553	0	0	0	36,553	0	0	0	0	36,553	114,387
2033	39,822	0	0	0	39,822	0	0	0	0	39,822	119,557
2034	40,569	0	0	0	40,569	0	0	0	0	40,569	124,386
2035	42,165	0	0	0	42,165	0	0	0	0	42,165	128,995
2036	45,182	0	0	0	45,182	0	0	0	0	45,182	133,530
2037	47,600	0	0	0	47,600	0	0	0	0	47,600	137,918
2038	49,671	0	0	0	49,671	0	0	0	0	49,671	142,124
2039	51,947	0	0	0	51,947	0	0	0	0	51,947	146,163
2040	54,367	0	2,982	0	57,349	8,335	0	0	8,335	49,014	149,663
2041	57,241	0	5,764	0	63,005	16,513	0	0	16,513	46,492	152,712
2042	60,309	0	7,485	0	67,794	22,025	0	0	22,025	45,769	155,469
2043	63,584	0	9,090	0	72,674	27,447	0	0	27,447	45,227	157,970
	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	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	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	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	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
<b>NOM</b>	1,019,080	0	105,024	0	1,124,104	194,366	0	0	194,366	929,738	
<b>NPV</b>	185,382	0	51,571	0	236,952	78,982	0	0	78,982	157,970	

In Service of Gen Unit:  
 Discount Rate :  
 Benefit/Cost Ratio ( Col(6) / Col(10))

2019  
 8.89 %  
 3.00

RATE IMPACT TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential New Construction - Bulldsmart

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) INCENTIVES \$(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)
2009	0	0	0	0	0	0	0	0	0	0	0	0	(0)
2010	0	704	2,982	216	0	3,903	230	0	0	2	232	(3,671)	(3,371)
2011	0	1,395	5,764	878	0	8,037	840	141	0	4	985	(7,052)	(9,320)
2012	0	1,841	7,485	1,977	0	11,304	1,777	418	0	9	2,204	(9,100)	(16,368)
2013	0	2,267	9,090	3,468	0	14,825	2,819	809	0	225	3,852	(10,972)	(24,174)
2014	0	2,772	11,005	5,476	0	19,251	4,254	1,253	0	368	5,876	(13,375)	(32,912)
2015	0	2,694	10,612	7,776	0	21,082	6,426	1,783	0	545	8,754	(12,328)	(40,908)
2016	0	2,800	10,762	10,128	0	23,691	9,893	2,286	0	786	12,965	(10,726)	(46,218)
2017	0	2,901	10,878	12,689	0	26,469	13,006	2,799	0	1,042	16,847	(9,622)	(51,087)
2018	0	3,041	11,125	15,332	0	29,498	16,048	3,321	0	1,323	20,693	(8,806)	(55,180)
2019	0	0	0	17,096	0	17,096	42,144	3,818	0	601	46,564	29,468	(42,602)
2020	0	0	0	17,149	0	17,149	41,331	3,709	0	284	45,324	28,175	(31,558)
2021	0	0	0	17,523	0	17,523	41,345	3,601	0	262	45,208	27,685	(21,592)
2022	0	0	0	18,031	0	18,031	42,231	3,497	0	245	45,973	27,942	(12,354)
2023	0	0	0	18,577	0	18,577	42,455	3,396	0	165	46,016	27,439	(4,023)
2024	0	0	0	19,402	0	19,402	43,533	3,298	0	143	46,974	27,571	3,666
2025	0	0	0	20,099	0	20,099	44,014	3,202	0	67	47,283	27,184	10,627
2026	0	0	0	20,906	0	20,906	44,182	3,107	0	(17)	47,272	26,366	16,828
2027	0	0	0	21,999	0	21,999	44,604	3,013	0	(125)	47,492	25,492	22,334
2028	0	0	0	22,893	0	22,893	45,022	2,919	0	(143)	47,798	24,905	27,275
2029	0	0	0	23,918	0	23,918	45,104	2,826	0	(202)	47,729	23,810	31,612
2030	0	0	0	25,088	0	25,088	45,477	2,733	0	(325)	47,885	22,797	35,426
2031	0	0	0	26,231	0	26,231	46,110	2,640	0	(342)	48,409	22,178	38,834
2032	0	0	0	27,780	0	27,780	46,061	2,550	0	(413)	48,198	20,418	41,715
2033	0	0	0	30,265	0	30,265	46,873	2,463	0	(831)	48,505	18,240	44,079
2034	0	0	0	30,832	0	30,832	46,924	2,381	0	(1,027)	48,279	17,446	46,155
2035	0	0	0	32,045	0	32,045	49,127	2,305	0	(1,141)	50,292	18,247	48,150
2036	0	0	0	34,338	0	34,338	50,274	2,236	0	(1,286)	51,225	16,886	49,845
2037	0	0	0	36,176	0	36,176	51,198	2,174	0	(1,410)	51,962	15,786	51,300
2038	0	0	0	37,750	0	37,750	51,665	2,120	0	(1,555)	52,230	14,479	52,526
2039	0	0	0	39,480	0	39,480	51,824	2,073	0	(1,744)	52,153	12,674	53,512
2040	0	1,477	2,982	41,319	0	45,779	53,270	2,031	0	(1,934)	53,368	7,589	54,051
2041	0	2,927	5,764	43,503	0	52,194	54,005	1,993	0	(2,095)	53,902	1,708	54,166
2042	0	3,862	7,485	45,834	0	57,182	54,612	1,954	0	(2,415)	55,151	(2,031)	54,043
2043	0	4,754	9,090	48,324	0	62,168	57,250	1,917	0	(679)	58,488	(3,680)	53,840
	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	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	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	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	0	0	0	0	0	0	0
NOM.	0	33,438	105,024	774,501	0	912,963	1,235,928	80,768	0	(10,610)	1,306,686	393,123	
NPV	0	13,508	51,571	140,890	0	205,969	237,132	21,251	0	1,425	239,808	53,840	

Discount Rate 8.89 %  
Benefit/Cost Ratio (Col(12) / Col(7)) : 1.36

**RESIDENTIAL SOLAR WATER HEATING**

INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Load Management Program

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER kW REDUCTION AT METER .....	1.13 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	1.50 kW
(3) kW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	52.22 kWh ****
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	29.71 kWh ****

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
* (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
* (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
^ (10) UTILITY DISCOUNT RATE .....	8.89 %
^ (11) UTILITY AFUDC RATE .....	8.48 %
* (12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
* (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	12.38 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh*** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/W/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)

\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

\*\*\*\* THIS IS A LOAD SHIFTING PROGRAM. VALUE SHOWN IN ITEM (4) IS ANNUAL KWH/CUST SHIFTED AWAY FROM PEAK HRS. VALUE SHOWN IN ITEM (7) IS ANNUAL KWH/CUST THAT IS PAID BACK DURING OFF-PEAK.





CALCULATION OF GENK-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Residential Load Management Program

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	BEG-YEAR RATE BASE \$ (000)	DEBT \$ (000)	PREFERRED STOCK \$ (000)	COMMON EQUITY \$ (000)	INCOME TAXES \$ (000)	PROPERTY TAX \$ (000)	PROPERTY INSURANCE \$ (000)	DEPREC. \$ (000)	DEFERRED TAXES \$ (000)	TOTAL FIXED CHARGES \$ (000)	PRESENT WORTH FIXED CHARGES \$ (000)	CUMULATIVE PW FIXED CHARGES \$ (000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$ (000)
2019	76,844	2,387	0	5,363	3,538	1,295	457	2,998	6	16,043	16,043	16,043	74,942
2020	73,940	2,294	0	5,153	2,451	1,241	469	2,998	981	15,566	14,296	30,339	76,815
2021	69,861	2,170	0	4,875	2,409	1,187	480	2,998	829	14,948	12,608	42,947	78,736
2022	66,035	2,051	0	4,608	2,381	1,133	492	2,998	689	14,353	11,117	54,064	80,704
2023	62,349	1,937	0	4,351	2,351	1,079	505	2,998	558	13,778	9,801	63,865	82,722
2024	58,793	1,826	0	4,103	2,315	1,025	517	2,998	437	13,222	8,638	72,503	84,790
2025	55,358	1,720	0	3,863	2,276	971	530	2,998	326	12,684	7,610	80,113	86,910
2026	52,035	1,616	0	3,631	2,233	917	543	2,998	223	12,162	6,702	86,815	89,082
2027	48,814	1,516	0	3,407	2,109	863	557	2,998	206	11,656	5,899	92,714	91,309
2028	45,611	1,417	0	3,183	1,969	809	571	2,998	206	11,153	5,183	97,897	93,592
2029	42,407	1,317	0	2,960	1,828	755	585	2,998	206	10,649	4,545	102,442	95,932
2030	39,204	1,218	0	2,736	1,688	701	600	2,998	206	10,147	3,977	106,420	98,330
2031	36,000	1,118	0	2,512	1,548	647	615	2,998	206	9,644	3,472	109,892	100,788
2032	32,797	1,019	0	2,289	1,407	594	630	2,998	206	9,142	3,022	112,914	103,308
2033	29,594	919	0	2,065	1,267	540	646	2,998	206	8,640	2,623	115,537	105,891
2034	26,390	820	0	1,842	1,127	486	662	2,998	206	8,139	2,270	117,807	108,538
2035	23,187	720	0	1,618	986	432	679	2,998	206	7,638	1,956	119,763	111,252
2036	19,983	621	0	1,395	846	378	696	2,998	206	7,138	1,679	121,442	114,033
2037	16,780	521	0	1,171	705	324	713	2,998	206	6,638	1,434	122,876	116,884
2038	13,576	422	0	947	565	270	731	2,998	206	6,138	1,218	124,093	119,806
2039	10,373	322	0	724	405	216	749	2,998	(421)	5,639	1,027	125,120	122,801
2040	7,170	242	0	544	266	162	768	2,998	(1,048)	5,231	875	125,996	125,871
2041	3,967	182	0	408	148	108	787	2,998	(1,048)	4,914	755	126,751	129,018
2042	3,808	121	0	272	139	54	807	2,998	(1,048)	4,598	649	127,400	132,243
2043	1,948	61	0	136	131	0	827	2,998	(1,048)	4,282	555	127,955	135,549

IN SERVICE COST (\$000)	74,942
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	8.5%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST	
DEBT	44%	7.03	%
P/S	0%	0.00	%
C/S	56%	12.50	%

K-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Load Management Program

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	2,733	2,733	2,998	2,998	2,718	2,718	6	6,995	0	0	0	6	(1,896)
2020	7.22%	5,261	7,994	2,998	5,995	2,718	5,436	981	6,995	0	0	0	981	(915)
2021	6.68%	4,866	12,860	2,998	8,993	2,718	8,154	829	6,995	0	0	0	829	(86)
2022	6.18%	4,504	17,364	2,998	11,991	2,718	10,871	689	6,995	0	0	0	689	603
2023	5.71%	4,163	21,527	2,998	14,988	2,718	13,589	558	6,995	0	0	0	558	1,160
2024	5.29%	3,852	25,379	2,998	17,996	2,718	16,307	437	6,995	0	0	0	437	1,598
2025	4.89%	3,562	28,941	2,998	20,984	2,718	19,025	326	6,995	0	0	0	326	1,923
2026	4.52%	3,295	32,236	2,998	23,981	2,718	21,743	223	6,995	0	0	0	223	2,146
2027	4.46%	3,252	35,488	2,998	26,979	2,718	24,461	206	6,995	0	0	0	206	2,352
2028	4.46%	3,251	38,739	2,998	29,977	2,718	27,179	206	6,995	0	0	0	206	2,558
2029	4.46%	3,252	41,991	2,998	32,974	2,718	29,897	206	6,995	0	0	0	206	2,764
2030	4.46%	3,251	45,242	2,998	35,972	2,718	32,614	206	6,995	0	0	0	206	2,969
2031	4.46%	3,252	48,494	2,998	38,970	2,718	35,332	206	6,995	0	0	0	206	3,175
2032	4.46%	3,251	51,745	2,998	41,967	2,718	38,050	206	6,995	0	0	0	206	3,381
2033	4.46%	3,252	54,996	2,998	44,965	2,718	40,768	206	6,995	0	0	0	206	3,587
2034	4.46%	3,251	58,248	2,998	47,963	2,718	43,486	206	6,995	0	0	0	206	3,793
2035	4.46%	3,252	61,499	2,998	50,960	2,718	46,204	206	6,995	0	0	0	206	3,998
2036	4.46%	3,251	64,750	2,998	53,958	2,718	48,922	206	6,995	0	0	0	206	4,204
2037	4.46%	3,252	68,002	2,998	56,956	2,718	51,640	206	6,995	0	0	0	206	4,410
2038	4.46%	3,251	71,253	2,998	59,953	2,718	54,357	206	6,995	0	0	0	206	4,616
2039	2.23%	1,625	72,879	2,998	62,951	2,718	57,075	(421)	6,995	0	0	0	(421)	4,195
2040	0.00%	0	72,879	2,998	65,949	2,718	59,793	(1,048)	6,995	0	0	0	(1,048)	3,146
2041	0.00%	0	72,879	2,998	68,946	2,718	62,511	(1,048)	6,995	0	0	0	(1,048)	2,098
2042	0.00%	0	72,879	2,998	71,944	2,718	65,229	(1,048)	6,995	0	0	0	(1,048)	1,049
2043	0.00%	0	72,879	2,998	74,942	2,718	67,947	(1,048)	6,995	0	0	0	(1,048)	1

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(1,902)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	6,995
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Load Management Program

(1)	(2)	(3)	(4)	(5) END OF YEAR NET PLANT IN SERVICE	(5a)* ACCUMULATED DEPRECIATION	(5b)* ACCUMULATED DEF TAXES	(6) BEGINNING YEAR RATE BASE	(7) ENDING OF YEAR RATE BASE	(8) MID-YEAR RATE BASE
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF TAXES \$(000)	YEAR RATE BASE \$(000)	YEAR RATE BASE \$(000)	RATE BASE \$(000)
2019	3.75%	2,733	6	71,944	2,998	(1,896)	76,844	73,840	75,342
2020	7.22%	5,261	981	68,946	5,995	(915)	73,840	69,861	71,851
2021	6.68%	4,866	829	65,949	8,993	(85)	69,861	66,035	67,948
2022	6.18%	4,504	689	62,951	11,991	603	66,035	62,349	64,192
2023	5.71%	4,163	558	59,953	14,988	1,160	62,349	58,793	60,571
2024	5.29%	3,852	437	56,956	17,986	1,598	58,793	55,358	57,076
2025	4.89%	3,562	326	53,958	20,984	1,923	55,358	52,035	53,697
2026	4.52%	3,295	223	50,960	23,981	2,146	52,035	48,814	50,425
2027	4.46%	3,252	206	47,963	26,979	2,352	48,814	45,611	47,213
2028	4.46%	3,251	206	44,965	29,977	2,558	45,611	42,407	44,009
2029	4.46%	3,252	206	41,967	32,974	2,764	42,407	39,204	40,806
2030	4.46%	3,251	206	38,970	35,972	2,969	39,204	36,000	37,602
2031	4.46%	3,252	206	35,972	38,970	3,175	36,000	32,797	34,399
2032	4.46%	3,251	206	32,974	41,967	3,381	32,797	29,594	31,195
2033	4.46%	3,252	206	29,977	44,965	3,587	29,594	26,390	27,992
2034	4.46%	3,251	206	26,979	47,963	3,793	26,390	23,187	24,788
2035	4.46%	3,252	206	23,981	50,960	3,998	23,187	19,983	21,585
2036	4.46%	3,251	206	20,984	53,958	4,204	19,983	16,780	18,381
2037	4.46%	3,252	206	17,986	56,956	4,410	16,780	13,576	15,178
2038	4.46%	3,251	206	14,988	59,953	4,616	13,576	10,373	11,974
2039	2.23%	1,626	(421)	11,991	62,951	4,195	10,373	7,796	9,084
2040	0.00%	0	(1,048)	8,993	65,949	3,146	7,796	5,847	6,822
2041	0.00%	0	(1,048)	5,995	68,946	2,098	5,847	3,898	4,872
2042	0.00%	0	(1,048)	2,998	71,944	1,049	3,898	1,948	2,923
2043	0.00%	0	(1,048)	0	74,942	1	1,948	-1	974

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.50%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00%      907.77

YEAR	NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.52	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.99	19.25	(3.41)	(4.13)	251.16	412.06
2017	-2	622.20	19.46	28.91	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASE	63,901	63,901	63,901
EQUITY AFUDC	6,995		
DEBT AFUDC	4,045	4,045	
CPI			8,975
TOTAL	74,942	67,947	72,877

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED : REV\_REQ  
 PROGRAM NAME: Residential Load Management Program

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (¢/kWh)	(5) AVOIDED MARGINAL FUEL COST (¢/kWh)	(6)* INCREASED MARGINAL FUEL COST (¢/kWh)	(7) REPLACEMENT FUEL COST (¢/kWh)	(8) PROGRAM kWh EFFECTIVENESS FACTOR	(9) PROGRAM kWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	9,615	9,615	6.41	16.51	6.41	0.00	1.00	1.00
2011	19,230	19,230	6.35	18.38	6.35	0.00	1.00	1.00
2012	28,845	28,845	6.43	13.34	6.43	0.00	1.00	1.00
2013	31,845	31,845	7.06	9.99	7.06	0.00	1.00	1.00
2014	34,845	34,845	7.53	10.61	7.53	0.00	1.00	1.00
2015	37,845	37,845	8.11	13.20	8.11	0.00	1.00	1.00
2016	40,845	40,845	9.00	13.90	9.00	0.00	1.00	1.00
2017	43,845	43,845	9.75	15.09	9.75	0.00	1.00	1.00
2018	46,845	46,845	10.52	15.46	10.52	0.00	1.00	1.00
2019	46,845	46,845	11.50	21.44	11.50	10.41	1.00	1.00
2020	46,845	46,845	12.08	20.17	12.08	10.50	1.00	1.00
2021	46,845	46,845	12.57	21.76	12.57	10.74	1.00	1.00
2022	46,845	46,845	13.06	23.66	13.06	10.81	1.00	1.00
2023	46,845	46,845	13.39	20.91	13.39	10.80	1.00	1.00
2024	46,845	46,845	13.95	22.19	13.95	10.84	1.00	1.00
2025	46,845	46,845	14.40	22.20	14.40	10.96	1.00	1.00
2026	46,845	46,845	14.70	22.41	14.70	11.05	1.00	1.00
2027	46,845	46,845	15.13	23.05	15.13	11.17	1.00	1.00
2028	46,845	46,845	15.60	23.70	15.60	11.36	1.00	1.00
2029	46,845	46,845	16.02	22.95	16.02	11.41	1.00	1.00
2030	46,845	46,845	16.52	23.78	16.52	11.59	1.00	1.00
2031	46,845	46,845	17.08	24.53	17.08	11.80	1.00	1.00
2032	46,845	46,845	17.50	24.55	17.50	11.88	1.00	1.00
2033	46,845	46,845	18.27	25.51	18.27	12.10	1.00	1.00
2034	46,845	46,845	18.73	25.89	18.73	12.14	1.00	1.00
2035	46,845	46,845	19.57	27.04	19.57	12.29	1.00	1.00
2036	46,845	46,845	20.40	28.26	20.40	12.55	1.00	1.00
2037	46,845	46,845	21.11	29.22	21.11	12.70	1.00	1.00
2038	46,845	46,845	22.02	30.23	22.02	13.04	1.00	1.00
2039	46,845	46,845	22.78	31.29	22.78	13.32	1.00	1.00
2040	46,845	46,845	23.59	32.02	23.59	13.44	1.00	1.00
2041	46,845	46,845	24.54	33.28	24.54	13.75	1.00	1.00
2042	46,845	46,845	25.50	34.66	25.50	14.10	1.00	1.00
2043	46,845	46,845	26.74	36.49	26.74	14.40	1.00	1.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.













RATE IMPACT TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Lead Management Program

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) INCENTIVES \$(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)
2009	0	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	515	216	10	0	741	40	0	0	0	40	(701)	(644)
2011	0	1,168	649	31	0	1,848	59	622	0	2	683	(1,165)	(1,622)
2012	0	1,811	1,082	55	0	2,948	146	1,247	0	3	1,396	(1,552)	(2,829)
2013	0	2,062	1,366	73	0	3,500	105	1,886	0	11	2,001	(1,499)	(4,942)
2014	0	2,197	1,501	85	0	3,783	122	2,045	0	12	2,408	(1,469)	(6,492)
2015	0	2,144	1,636	97	0	3,877	187	2,204	0	17	2,408	(1,469)	(7,961)
2016	0	1,892	1,771	108	0	3,771	205	2,365	0	20	2,590	(1,181)	(9,142)
2017	0	1,658	1,906	121	0	3,684	240	2,530	0	25	2,795	(889)	(10,031)
2018	0	1,577	2,041	133	0	3,751	252	2,697	0	27	2,975	(776)	(10,807)
2019	0	1,459	2,108	142	0	3,710	19,702	2,851	0	(791)	21,762	18,052	(9,015)
2020	0	1,281	2,108	143	0	3,542	18,291	2,770	0	(1,168)	19,899	16,351	(7,664)
2021	0	1,129	2,108	146	0	3,383	17,608	2,691	0	(1,294)	19,005	15,621	(6,043)
2022	0	976	2,108	150	0	3,234	17,554	2,613	0	(1,497)	18,670	15,436	(4,607)
2023	0	830	2,108	155	0	3,093	17,764	2,537	0	(1,654)	18,648	15,555	(3,092)
2024	0	765	2,108	162	0	3,034	17,987	2,462	0	(1,885)	18,564	15,530	(1,562)
2025	0	784	2,108	167	0	3,059	17,944	2,388	0	(2,151)	18,181	15,122	(420)
2026	0	803	2,108	174	0	3,085	18,064	2,315	0	(2,327)	18,051	14,966	(1,456)
2027	0	823	2,108	183	0	3,115	18,217	2,242	0	(2,618)	17,841	14,726	(2,730)
2028	0	844	2,108	191	0	3,143	18,144	2,169	0	(2,850)	17,463	14,320	(4,410)
2029	0	865	2,108	199	0	3,172	18,575	2,097	0	(3,200)	17,472	14,300	(6,110)
2030	0	887	2,108	209	0	3,204	18,586	2,024	0	(3,540)	17,070	13,867	(7,850)
2031	0	909	2,108	219	0	3,235	18,462	1,954	0	(3,835)	16,581	13,346	(9,590)
2032	0	932	2,108	231	0	3,271	19,018	1,899	0	(4,186)	16,722	13,451	(11,330)
2033	0	955	2,108	252	0	3,315	18,986	1,834	0	(4,869)	15,951	12,636	(13,070)
2034	0	979	2,108	257	0	3,344	19,853	1,785	0	(5,378)	16,260	12,916	(14,810)
2035	0	1,003	2,108	267	0	3,378	20,164	1,740	0	(5,849)	16,054	12,676	(16,550)
2036	0	1,028	2,108	286	0	3,422	20,001	1,697	0	(6,381)	15,317	11,895	(18,290)
2037	0	1,054	2,108	301	0	3,463	20,433	1,658	0	(6,906)	15,185	11,721	(20,030)
2038	0	1,080	2,108	314	0	3,503	19,879	1,622	0	(7,485)	14,616	10,513	(21,770)
2039	0	1,107	2,108	329	0	3,544	19,558	1,589	0	(8,136)	13,011	9,467	(23,510)
2040	0	1,133	2,108	344	0	3,585	20,290	1,559	0	(8,805)	12,144	9,159	(25,250)
2041	0	1,171	2,108	362	0	4,042	20,215	1,530	0	(9,481)	12,264	8,222	(26,990)
2042	0	1,611	2,108	382	0	4,100	19,893	1,501	0	(9,473)	11,921	7,821	(28,730)
2043	0	1,356	2,108	403	0	3,867	19,983	1,473	0	(9,463)	11,992	8,125	(30,470)
	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	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	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	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	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
NOM	0	41,599	64,866	6,681	0	113,146	476,627	66,396	0	(115,196)	428,106	314,960	
NPV	0	14,412	17,117	1,330	0	32,859	86,547	19,885	0	(14,100)	92,332	59,473	

Discount Rate 8.89 %  
Benefit/Cost Ratio (Col(12) / Col(7)) : 2.81

**RESIDENTIAL SOLAR WATER HEATING  
(LOW INCOME NEW CONSTRUCTION)**

INPUT DATA - PART I CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Refrigerator Replacement

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.03 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.04 kW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KWH REDUCTION PER CUSTOMER .....	107.41 kWh
(5) KWH LINE LOSS PERCENTAGE .....	6.50 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KWH INCREASE AT METER .....	0.20 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
* INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
* SUPPLY COSTS ESCALATION RATES .....	*** %**
* UTILITY DISCOUNT RATE .....	8.89 %
* UTILITY AFUDC RATE .....	8.48 %
* UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
* UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
* UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN. TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (in-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	8.25 CENTS PER kWh** (in-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2



CALCULATION OF GENK-FACTOR  
 PROGRAM METHOD SELECTED REV. REQ  
 PROGRAM NAME: Residential Refrigerator Replacement

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
BEG-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	7,865	244	0	549	362	133	47	307	1	1,642	1,642	7,670
2020	7,557	235	0	527	249	127	48	307	100	1,593	1,463	7,862
2021	7,150	222	0	499	247	121	49	307	85	1,530	1,290	8,058
2022	6,758	210	0	472	244	116	50	307	71	1,469	1,138	8,260
2023	6,381	198	0	445	241	110	52	307	57	1,410	1,003	8,466
2024	6,017	187	0	420	237	105	53	307	45	1,353	884	8,678
2025	5,666	176	0	395	233	99	54	307	33	1,298	779	8,895
2026	5,326	165	0	372	229	94	56	307	23	1,245	686	9,117
2027	4,996	155	0	349	216	88	57	307	21	1,193	604	9,345
2028	4,668	145	0	326	202	83	58	307	21	1,141	530	9,579
2029	4,340	135	0	303	187	77	60	307	21	1,090	465	9,818
2030	4,012	125	0	280	173	72	61	307	21	1,038	407	10,064
2031	3,685	114	0	257	158	66	63	307	21	987	355	10,315
2032	3,357	104	0	234	144	61	64	307	21	936	309	10,573
2033	3,029	94	0	211	130	55	66	307	21	884	269	10,838
2034	2,701	84	0	188	115	50	68	307	21	833	232	11,109
2035	2,373	74	0	166	101	44	69	307	21	782	200	11,386
2036	2,045	64	0	143	87	39	71	307	21	731	172	11,671
2037	1,717	53	0	120	72	33	73	307	21	679	147	11,963
2038	1,389	43	0	97	58	28	75	307	21	628	125	12,262
2039	1,062	33	0	74	108	22	77	307	(43)	577	105	12,568
2040	798	25	0	56	160	17	79	307	(107)	535	90	12,892
2041	598	19	0	42	152	11	81	307	(107)	503	77	13,205
2042	399	12	0	28	143	6	83	307	(107)	471	66	13,535
2043	199	6	0	14	134	(0)	85	307	(107)	438	57	13,873

IN SERVICE COST (\$000)	7,670
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	8.9%
PROPERTY TAX	1.800%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	44%	7.03 %
P/S	0%	0.00 %
C/S	56%	12.30 %

K-FACTOR =  $\frac{PWFC}{IN-SVC\ COST} = 1.70738$



DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAMNAME: Residential Refrigerator Replacement

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	280	280	307	307	278	278	1	716	0	0	0	1	(194)
2020	7.22%	538	818	307	614	278	556	100	716	0	0	0	100	(94)
2021	6.68%	498	1,316	307	920	278	834	85	716	0	0	0	85	(9)
2022	6.18%	461	1,777	307	1,227	278	1,113	71	716	0	0	0	71	62
2023	5.71%	426	2,203	307	1,534	278	1,391	57	716	0	0	0	57	119
2024	5.29%	394	2,597	307	1,841	278	1,669	45	716	0	0	0	45	164
2025	4.89%	365	2,962	307	2,148	278	1,947	33	716	0	0	0	33	197
2026	4.52%	337	3,299	307	2,454	278	2,225	23	716	0	0	0	23	220
2027	4.16%	333	3,632	307	2,761	278	2,503	21	716	0	0	0	21	241
2028	4.6%	333	3,965	307	3,068	278	2,782	21	716	0	0	0	21	262
2029	4.6%	333	4,298	307	3,375	278	3,060	21	716	0	0	0	21	283
2030	4.6%	333	4,630	307	3,682	278	3,338	21	716	0	0	0	21	304
2031	4.6%	333	4,963	307	3,988	278	3,616	21	716	0	0	0	21	325
2032	4.6%	333	5,296	307	4,295	278	3,894	21	716	0	0	0	21	346
2033	4.6%	333	5,629	307	4,602	278	4,172	21	716	0	0	0	21	367
2034	4.6%	333	5,961	307	4,909	278	4,451	21	716	0	0	0	21	388
2035	4.6%	333	6,294	307	5,216	278	4,729	21	716	0	0	0	21	409
2036	4.6%	333	6,627	307	5,522	278	5,007	21	716	0	0	0	21	430
2037	4.6%	333	6,960	307	5,829	278	5,285	21	716	0	0	0	21	451
2038	4.6%	333	7,293	307	6,136	278	5,563	21	716	0	0	0	21	472
2039	2.23%	166	7,459	307	6,443	278	5,841	(43)	716	0	0	0	(43)	429
2040	0.00%	0	7,459	307	6,750	278	6,120	(107)	716	0	0	0	(107)	322
2041	0.00%	0	7,459	307	7,056	278	6,398	(107)	716	0	0	0	(107)	215
2042	0.00%	0	7,459	307	7,363	278	6,676	(107)	716	0	0	0	(107)	107
2043	0.00%	0	7,459	307	7,670	278	6,954	(107)	716	0	0	0	(107)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(155)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	716
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Refrigerator Replacement

(1)	(2)	(3)	(4)	(5) END OF YEAR NET PLANT IN SERVICE	(5a)* ACCUMULATED DEPRECIATION	(5b)* ACCUMULATED DEF TAXES	(6) BEGINNING YEAR RATE BASE	(7) ENDING OF YEAR RATE BASE	(8) MID-YEAR RATE BASE
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2019	3.75%	280	1	7,363	307	(194)	7,865	7,557	7,711
2020	7.22%	538	100	7,056	614	(94)	7,557	7,150	7,354
2021	5.68%	458	85	6,750	920	(9)	7,150	6,758	6,954
2022	6.18%	461	71	6,443	1,227	82	6,758	6,381	6,570
2023	5.71%	426	57	6,136	1,534	119	6,381	6,017	6,189
2024	5.29%	394	45	5,829	1,841	164	6,017	5,666	5,842
2025	4.89%	365	33	5,522	2,148	197	5,666	5,326	5,496
2026	4.52%	337	23	5,216	2,454	220	5,326	4,996	5,161
2027	4.46%	333	21	4,909	2,761	241	4,996	4,668	4,832
2028	4.46%	333	21	4,602	3,068	262	4,668	4,340	4,504
2029	4.46%	333	21	4,295	3,375	283	4,340	4,012	4,176
2030	4.46%	333	21	3,988	3,682	304	4,012	3,685	3,848
2031	4.46%	333	21	3,682	3,988	325	3,685	3,357	3,521
2032	4.46%	333	21	3,375	4,295	346	3,357	3,029	3,193
2033	4.46%	333	21	3,068	4,602	367	3,029	2,701	2,865
2034	4.46%	333	21	2,761	4,909	388	2,701	2,373	2,537
2035	4.46%	333	21	2,454	5,216	409	2,373	2,045	2,209
2036	4.46%	333	21	2,148	5,522	430	2,045	1,717	1,881
2037	4.46%	333	21	1,841	5,829	451	1,717	1,389	1,553
2038	4.46%	333	21	1,534	6,136	472	1,389	1,062	1,226
2039	2.23%	166	(43)	1,227	6,443	429	1,062	798	930
2040	0.00%	0	(107)	920	6,750	322	798	598	698
2041	0.00%	0	(107)	614	7,056	215	598	399	499
2042	0.00%	0	(107)	307	7,363	107	399	199	299
2043	0.00%	0	(107)	(0)	7,670	0	199	0	100

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00%      907.77

YEAR	NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.55
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	6,540	6,540	6,540
EQUITY AFUDC	716		
DEBT AFUDC	414	414	
CPI			919
TOTAL	7,670	6,954	7,459

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Refrigerator Replacement

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (C/kWh)	AVOIDED MARGINAL FUEL COST (C/kWh)	INCREASED MARGINAL FUEL COST (C/kWh)	REPLACEMENT FUEL COST (C/kWh)	PROGRAM KW EFFECTIVENESS FACTOR	PROGRAM KWA EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	0	0	6.41	16.51	6.41	0.00	1.00	1.00
2011	20,390	20,390	6.35	7.80	6.84	0.00	1.00	1.00
2012	48,404	48,404	6.43	7.77	6.88	0.00	1.00	1.00
2013	85,696	85,696	7.06	7.94	7.38	0.00	1.00	1.00
2014	133,558	133,558	7.59	8.28	7.80	0.00	1.00	1.00
2015	166,636	166,636	8.11	9.05	8.45	0.00	1.00	1.00
2016	166,636	166,636	9.00	10.60	9.54	0.00	1.00	1.00
2017	166,636	166,636	9.75	11.58	10.34	0.00	1.00	1.00
2018	166,636	166,636	10.52	12.42	11.15	0.00	1.00	1.00
2019	166,636	166,636	11.50	13.91	12.32	10.41	1.00	1.00
2020	166,636	166,636	12.08	14.53	12.95	10.50	1.00	1.00
2021	166,636	166,636	12.57	15.14	13.47	10.74	1.00	1.00
2022	166,636	166,636	13.06	15.56	13.94	10.81	1.00	1.00
2023	166,636	166,636	13.39	15.66	14.23	10.80	1.00	1.00
2024	166,636	166,636	13.95	16.25	14.81	10.84	1.00	1.00
2025	166,636	166,636	14.40	16.69	15.26	10.96	1.00	1.00
2026	166,636	166,636	14.70	16.87	15.52	11.05	1.00	1.00
2027	166,636	166,636	15.13	17.12	15.90	11.17	1.00	1.00
2028	166,636	166,636	15.60	17.30	16.35	11.36	1.00	1.00
2029	166,636	166,636	16.02	17.67	16.70	11.41	1.00	1.00
2030	166,636	166,636	16.52	18.12	17.19	11.59	1.00	1.00
2031	166,636	166,636	17.08	18.72	17.74	11.80	1.00	1.00
2032	166,636	166,636	17.50	18.78	18.05	11.88	1.00	1.00
2033	166,636	166,636	18.27	19.48	18.72	12.10	1.00	1.00
2034	166,636	166,636	18.73	19.53	19.02	12.14	1.00	1.00
2035	166,636	166,636	19.57	20.59	19.94	12.29	1.00	1.00
2036	166,636	166,636	20.40	21.53	20.75	12.55	1.00	1.00
2037	166,636	166,636	21.11	22.14	21.43	12.70	1.00	1.00
2038	166,636	166,636	22.02	23.06	22.36	13.04	1.00	1.00
2039	166,636	166,636	22.78	23.75	23.08	13.32	1.00	1.00
2040	166,636	166,636	23.59	24.42	23.86	13.44	1.00	1.00
2041	166,636	166,636	24.54	25.36	24.79	13.75	1.00	1.00
2042	166,636	166,636	25.50	26.30	25.75	14.10	1.00	1.00
2043	166,636	166,636	26.74	27.84	27.07	14.40	1.00	1.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Refrigerator Replacement

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	1,642	901	38	2,284	2,902	1,972
2020	1,593	923	55	3,379	4,117	1,833
2021	1,530	946	57	3,526	4,300	1,760
2022	1,469	970	61	3,732	4,483	1,749
2023	1,410	984	64	3,923	4,611	1,780
2024	1,353	1,019	68	4,144	4,785	1,800
2025	1,298	1,044	73	4,428	5,047	1,797
2026	1,245	1,071	78	4,732	5,316	1,809
2027	1,193	1,097	82	4,995	5,544	1,824
2028	1,141	1,125	85	5,127	5,663	1,815
2029	1,090	1,153	89	5,343	5,812	1,863
2030	1,038	1,182	93	5,593	6,045	1,862
2031	987	1,211	96	5,709	6,154	1,848
2032	936	1,242	99	5,910	6,281	1,906
2033	884	1,273	109	6,503	6,868	1,901
2034	833	1,304	114	6,769	7,031	1,990
2035	782	1,337	118	6,923	7,139	2,020
2036	731	1,370	122	7,130	7,351	2,001
2037	679	1,405	125	7,292	7,457	2,044
2038	628	1,440	128	7,474	7,684	1,986
2039	577	1,476	132	7,627	7,861	1,951
2040	535	1,513	135	7,803	7,950	2,036
2041	503	1,551	139	7,974	8,151	2,016
2042	471	1,589	143	8,156	8,378	1,981
2043	438	1,629	147	8,366	8,593	1,987
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	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	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
NOM	24,987	30,764	2,451	144,651	155,522	47,531
NPV	5,590	5,108	370	22,169	24,659	8,578

65



AVOIDED GENERATING EMISSION IMPACT  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Refrigerator Replacement

(1)	(2)	(3)	(4)	(5)	(6)
YEAR	AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	REPLACEMENT EMISSION COST \$(000)	PROGRAM EMISSION BENEFIT \$(000)	OFF-PEAK EMISSION PAYBACK COST \$(000)	NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	0	0	1	0	1
2013	0	0	52	0	52
2014	0	0	94	0	94
2015	0	0	143	0	143
2016	0	0	179	0	179
2017	0	0	196	0	196
2018	0	0	213	0	213
2019	274	359	232	0	148
2020	418	541	253	0	130
2021	460	596	271	0	135
2022	537	695	304	0	147
2023	595	766	324	0	151
2024	683	880	362	0	164
2025	788	1,013	398	0	173
2026	874	1,117	420	0	177
2027	988	1,261	458	0	185
2028	1,084	1,381	499	0	202
2029	1,240	1,574	556	0	222
2030	1,375	1,744	600	0	231
2031	1,494	1,894	652	0	233
2032	1,645	2,081	707	0	271
2033	1,917	2,423	766	0	260
2034	2,122	2,680	830	0	271
2035	2,304	2,912	899	0	291
2036	2,516	3,178	974	0	311
2037	2,727	3,444	1,052	0	335
2038	2,956	3,733	1,136	0	359
2039	3,192	4,036	1,225	0	380
2040	3,449	4,361	1,320	0	408
2041	3,717	4,698	1,419	0	437
2042	3,717	4,698	1,525	0	543
2043	3,717	4,698	1,640	0	658
	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	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
NOM	44,783	56,763	19,699	0	7,718
NPV	5,422	6,899	2,930	0	1,453

TOTAL RESOURCE COST TEST  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Refrigerator Replacement

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0	0	0	0
2011	0	897	2,125	0	3,022	0	0	90	0	91	(2,931)	(2,472)
2012	0	1,263	2,993	0	4,255	0	40	303	1	344	(3,912)	(5,502)
2013	0	1,723	4,083	0	5,807	0	101	592	52	745	(5,062)	(9,103)
2014	0	2,267	5,372	0	7,639	0	178	1,004	94	1,276	(6,363)	(13,260)
2015	0	1,606	3,805	0	5,411	0	274	1,506	143	1,923	(3,488)	(15,353)
2016	0	0	0	0	0	0	335	1,987	179	2,501	2,501	(13,975)
2017	0	0	0	0	0	0	326	2,176	196	2,698	2,698	(12,609)
2018	0	0	0	0	0	0	316	2,331	213	2,861	2,861	(11,280)
2019	0	0	0	0	0	1,972	307	2,625	148	5,052	5,052	(9,124)
2020	0	0	0	0	0	1,833	288	2,738	130	4,999	4,999	(7,164)
2021	0	0	0	0	0	1,760	289	2,836	135	5,039	5,039	(5,350)
2022	0	0	0	0	0	1,749	281	2,927	147	5,104	5,104	(3,663)
2023	0	0	0	0	0	1,780	273	2,932	151	5,136	5,136	(2,103)
2024	0	0	0	0	0	1,800	265	3,040	164	5,269	5,269	(634)
2025	0	1,267	3,003	0	4,270	1,797	257	3,117	173	5,344	1,074	(359)
2026	0	1,784	4,229	0	6,013	1,809	250	3,141	177	5,376	(636)	(508)
2027	0	2,435	5,770	0	8,205	1,874	242	3,178	185	5,428	(2,777)	(1,108)
2028	0	3,203	7,590	0	10,793	1,815	234	3,241	202	5,492	(5,301)	(2,160)
2029	0	2,269	5,377	0	7,646	1,863	226	3,256	222	5,567	(2,079)	(2,539)
2030	0	0	0	0	0	1,862	218	3,334	231	5,646	5,646	(1,594)
2031	0	0	0	0	0	1,848	211	3,443	253	5,754	5,754	(710)
2032	0	0	0	0	0	1,906	203	3,434	271	5,814	5,814	111
2033	0	0	0	0	0	1,901	196	3,554	260	5,911	5,911	877
2034	0	0	0	0	0	1,990	189	3,540	271	5,991	5,991	1,590
2035	0	0	0	0	0	2,020	184	3,744	291	6,239	6,239	2,272
2036	0	0	0	0	0	2,001	180	3,918	311	6,409	6,409	2,915
2037	0	0	0	0	0	2,044	176	4,021	335	6,576	6,576	3,521
2038	0	0	0	0	0	1,986	173	4,187	359	6,704	6,704	4,089
2039	0	1,790	4,243	0	6,033	1,951	169	4,306	380	6,907	774	4,149
2040	0	2,521	5,975	0	8,496	2,036	166	4,418	408	7,028	(1,468)	4,044
2041	0	3,440	8,153	0	11,593	2,016	163	4,585	437	7,201	(4,391)	3,756
2042	0	4,526	10,725	0	15,250	1,981	160	4,752	543	7,436	(7,815)	3,286
2043	0	3,206	7,598	0	10,803	1,987	157	5,045	658	7,846	(2,957)	3,122
	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	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	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	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
NOM	0	34,197	81,039	0	115,235	47,531	7,037	99,321	7,718	161,607	46,372	
NFV	0	8,718	20,660	0	29,379	8,578	2,015	20,455	1,453	32,501	3,122	

Discount Rate: 8.89 %  
 Benefit/Cost Ratio (Col(11) / Col(6)) : 1.11



PARTICIPANT COSTS AND BENEFITS  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAMNAME: Residential Refrigerator Replacement

(1) YEAR	(2) SAVINGS IN PARTICIPANTS BILLS \$(000)	(3) TAX CREDITS \$(000)	(4) UTILITY REBATES \$(000)	(5) OTHER BENEFITS \$(000)	(6) TOTAL BENEFITS \$(000)	(7) CUSTOMER EQUIPMENT COSTS \$(000)	(8) CUSTOMER O&M COSTS \$(000)	(9) OTHER COSTS \$(000)	(10) TOTAL COSTS \$(000)	(11) NET BENEFITS \$(000)	(12) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0	0	0
2011	153	0	1,570	0	1,723	2,125	0	0	2,125	(402)	(339)
2012	543	0	2,157	0	2,700	2,993	0	0	2,993	(293)	(566)
2013	1,112	0	2,872	0	3,983	4,083	0	0	4,083	(100)	(637)
2014	1,928	0	3,685	0	5,614	5,372	0	0	5,372	242	(479)
2015	2,768	0	2,547	0	5,315	3,805	0	0	3,805	1,509	426
2016	3,177	0	0	0	3,177	0	0	0	0	3,177	2,177
2017	3,293	0	0	0	3,293	0	0	0	0	3,293	3,843
2018	3,384	0	0	0	3,384	0	0	0	0	3,384	5,416
2019	3,509	0	0	0	3,509	0	0	0	0	3,509	6,914
2020	3,520	0	0	0	3,520	0	0	0	0	3,520	8,293
2021	3,596	0	0	0	3,596	0	0	0	0	3,596	9,588
2022	3,701	0	0	0	3,701	0	0	0	0	3,701	10,812
2023	3,813	0	0	0	3,813	0	0	0	0	3,813	11,969
2024	3,982	0	0	0	3,982	0	0	0	0	3,982	13,080
2025	4,125	0	1,570	0	5,695	3,003	0	0	3,003	2,692	13,769
2026	4,291	0	2,157	0	6,448	4,229	0	0	4,229	2,219	14,291
2027	4,515	0	2,872	0	7,387	5,770	0	0	5,770	1,617	14,640
2028	4,699	0	3,685	0	8,384	7,590	0	0	7,590	794	14,798
2029	4,909	0	2,547	0	7,456	5,377	0	0	5,377	2,079	15,177
2030	5,149	0	0	0	5,149	0	0	0	0	5,149	16,038
2031	5,384	0	0	0	5,384	0	0	0	0	5,384	16,865
2032	5,702	0	0	0	5,702	0	0	0	0	5,702	17,670
2033	6,212	0	0	0	6,212	0	0	0	0	6,212	18,475
2034	6,328	0	0	0	6,328	0	0	0	0	6,328	19,228
2035	6,577	0	0	0	6,577	0	0	0	0	6,577	19,947
2036	7,048	0	0	0	7,048	0	0	0	0	7,048	20,654
2037	7,425	0	0	0	7,425	0	0	0	0	7,425	21,339
2038	7,748	0	0	0	7,748	0	0	0	0	7,748	21,995
2039	8,103	0	1,570	0	9,673	4,243	0	0	4,243	5,430	22,417
2040	8,480	0	2,157	0	10,637	5,975	0	0	5,975	4,663	22,750
2041	8,929	0	2,872	0	11,800	8,153	0	0	8,153	3,648	22,989
2042	9,407	0	3,685	0	13,092	10,725	0	0	10,725	2,368	23,132
2043	9,918	0	2,547	0	12,465	7,598	0	0	7,598	4,868	23,401
	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	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	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	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	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	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	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
NOM	163,425	0	38,493	0	201,918	81,039	0	0	81,039	120,879	
NPV	31,536	0	12,526	0	44,062	20,660	0	0	20,660	23,401	

In Service of Gen Unit:  
Discount Rate : 3.89 %  
Benefit/Cost Ratio ( Col(6) / Col(10)) 2.13



**BUSINESS SOLAR WATER HEATING**

INPUT DATA - PART 1 CONTINUED  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Lighting

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER kW REDUCTION AT METER .....	0.95 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	1.27 kW
(3) kW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	3,816.40 kWh
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	0.09 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.78738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
(8) INCREASED SUPPLY COSTS .....	** \$/CUST/YR
(9) SUPPLY COSTS ESCALATION RATES .....	*** %**
(10) UTILITY DISCOUNT RATE .....	8.89 %
(11) UTILITY AFUDC RATE .....	8.48 %
(12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	8.23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

\* INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Lighting

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	UTILITY INCENTIVES \$(000)	OTHER UTILITY COSTS \$(000)	TOTAL UTILITY PROGRAM COSTS \$(000)	ENERGY CHARGE REVENUE LOSSES \$(000)	DEMAND CHARGE REVENUE LOSSES \$(000)	PARTICIPANT EQUIPMENT COSTS \$(000)	PARTICIPANT O&M COSTS \$(000)	OTHER PARTICIPANT COSTS \$(000)	TOTAL PARTICIPANT COSTS \$(000)
2009	0	0	0	0	0	0	0	0	0
2010	118	2,964	0	3,082	565	210	6,670	0	6,670
2011	219	6,272	0	6,491	2,241	849	13,752	0	13,752
2012	232	5,757	0	5,989	4,637	1,790	13,683	0	13,683
2013	245	5,077	0	5,322	7,468	2,803	13,319	0	13,319
2014	255	4,066	0	4,321	10,760	3,998	11,913	0	11,913
2015	221	1,710	0	1,931	14,105	5,213	8,409	0	8,409
2016	238	1,893	0	2,131	17,362	6,200	9,184	0	9,184
2017	267	2,059	0	2,326	20,728	7,557	10,285	0	10,285
2018	308	3,275	0	2,583	24,527	8,781	11,814	0	11,814
2019	28	284	0	311	27,600	9,253	1,121	0	1,121
2020	28	284	0	312	27,795	9,050	1,149	0	1,149
2021	5	48	0	53	28,728	8,897	194	0	194
2022	30	284	0	313	30,049	8,803	1,207	0	1,207
2023	79	590	0	669	31,272	8,859	3,013	0	3,013
2024	88	578	0	666	33,115	8,946	3,256	0	3,256
2025	100	630	0	731	34,939	8,699	3,698	0	3,698
2026	115	687	0	802	36,756	8,729	4,196	0	4,196
2027	114	541	0	655	39,248	8,806	4,226	0	4,226
2028	161	846	0	1,007	41,240	8,503	6,093	0	6,093
2029	161	834	0	995	43,594	8,561	6,153	0	6,153
2030	278	3,266	0	3,545	46,256	9,047	14,206	0	14,206
2031	439	6,611	0	7,050	48,893	9,105	25,542	0	25,542
2032	311	5,437	0	5,748	52,332	9,283	20,230	0	20,230
2033	284	4,465	0	4,749	57,802	9,598	17,805	0	17,805
2034	317	3,629	0	3,946	58,950	9,747	16,235	0	16,235
2035	236	1,365	0	1,600	62,086	9,557	9,072	0	9,072
2036	298	1,629	0	1,926	67,348	9,692	11,324	0	11,324
2037	334	1,723	0	2,057	71,386	9,933	12,591	0	12,591
2038	397	1,938	0	2,335	75,080	9,963	14,857	0	14,857
2039	120	451	0	572	79,125	10,009	4,250	0	4,250
2040	179	749	0	928	83,444	10,045	6,543	0	6,543
2041	203	812	0	1,015	88,560	10,097	7,360	0	7,360
2042	199	795	0	993	94,026	10,148	7,228	0	7,228
2043	236	875	0	1,111	99,864	10,200	8,878	0	8,878
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	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	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	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	0	0	0	0
0	0	0	0	0	0	0	0	0	0
NOM	6,842	71,423	0	78,265	1,461,884	271,736	309,457	0	309,457
NPV	1,890	28,564	0	30,554	254,870	63,465	94,929	0	94,929

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS

CALCULATION OF GEN K-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Business Lighting

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
BEG-YEAR RATE BASE \$ (000)	DEBT \$ (000)	PREFERRED STOCK \$ (000)	COMMON EQUITY \$ (000)	INCOME TAXES \$ (000)	PROPERTY TAX \$ (000)	PROPERTY INSURANCE \$ (000)	DEPREC. \$ (000)	DEFERRED TAXES \$ (000)	TOTAL FIXED CHARGES \$ (000)	PRESENT WORTH FIXED CHARGES \$ (000)	CUMULATIVE PW FIXED CHARGES \$ (000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$ (000)
2019	93,054	2,891	0	6,494	4,284	1,568	554	3,630	7	19,427	19,427	90,751
2020	89,417	2,778	0	6,240	2,944	1,503	567	3,630	1,188	18,850	17,311	93,019
2021	84,599	2,628	0	5,904	2,917	1,437	582	3,630	1,003	18,102	15,267	95,345
2022	79,965	2,484	0	5,581	2,883	1,372	596	3,630	834	17,380	13,463	97,729
2023	75,501	2,345	0	5,269	2,846	1,307	611	3,630	675	16,684	11,869	100,172
2024	71,196	2,212	0	4,969	2,803	1,241	626	3,630	530	16,011	10,460	102,676
2025	67,036	2,082	0	4,678	2,756	1,176	642	3,630	394	15,360	9,216	105,243
2026	63,012	1,957	0	4,397	2,705	1,111	658	3,630	270	14,728	8,116	107,874
2027	59,112	1,836	0	4,125	2,554	1,045	674	3,630	249	14,115	7,143	110,571
2028	55,232	1,716	0	3,855	2,384	980	691	3,630	249	13,505	6,277	113,335
2029	51,353	1,595	0	3,584	2,214	915	709	3,630	249	12,896	5,504	116,169
2030	47,474	1,475	0	3,313	2,044	849	726	3,630	249	12,287	4,816	119,073
2031	43,595	1,354	0	3,042	1,874	784	745	3,630	249	11,679	4,204	122,050
2032	39,715	1,234	0	2,772	1,704	719	763	3,630	249	11,071	3,660	125,101
2033	35,836	1,113	0	2,501	1,534	653	782	3,630	249	10,463	3,177	128,228
2034	31,957	993	0	2,230	1,364	588	802	3,630	249	9,856	2,748	131,430
2035	28,078	872	0	1,959	1,194	523	822	3,630	249	9,250	2,369	134,720
2036	24,198	752	0	1,689	1,024	457	842	3,630	249	8,644	2,033	138,088
2037	20,319	631	0	1,418	854	392	863	3,630	249	8,038	1,736	141,340
2038	16,440	511	0	1,147	684	327	885	3,630	249	7,433	1,474	145,079
2039	12,561	390	0	877	1,273	261	907	3,630	(510)	6,829	1,244	148,706
2040	9,441	293	0	659	1,396	196	930	3,630	(1,270)	6,334	1,060	152,423
2041	7,080	220	0	494	1,793	131	953	3,630	(1,270)	5,931	914	156,234
2042	4,720	147	0	329	1,688	65	977	3,630	(1,270)	5,568	786	160,140
2043	2,359	73	0	165	1,586	(0)	1,001	3,630	(1,270)	5,185	672	164,143

IN SERVICE COST (\$000)	90,751
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.57%
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

SOURCE	WEIGHT	COST	%
DEBT	44%	7.03	%
P/S	0%	0.00	%
C/S	56%	12.50	%

K-FACTOR =  $\frac{CPWFC}{IN-SVC\ COST} = 1.70738$

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Lighting

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAXRATE \$(000)	SALVAGE TAXRATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	3,309	3,309	3,630	3,630	3,291	3,291	7	8,471	0	0	7	(2,296)	
2020	7.22%	6,371	9,680	3,630	7,260	3,291	6,582	1,188	8,471	0	0	1,188	(1,105)	
2021	6.68%	5,892	15,573	3,630	10,890	3,291	9,874	1,003	8,471	0	0	1,003	(105)	
2022	6.18%	5,454	21,026	3,630	14,520	3,291	13,165	834	8,471	0	0	834	730	
2023	5.71%	5,042	26,068	3,630	18,150	3,291	16,456	675	8,471	0	0	675	1,405	
2024	5.29%	4,664	30,732	3,630	21,780	3,291	19,747	530	8,471	0	0	530	1,935	
2025	4.89%	4,314	35,046	3,630	25,410	3,291	23,038	394	8,471	0	0	394	2,329	
2026	4.52%	3,991	39,037	3,630	29,040	3,291	26,330	270	8,471	0	0	270	2,589	
2027	4.46%	3,938	42,974	3,630	32,670	3,291	29,621	249	8,471	0	0	249	2,848	
2028	4.46%	3,937	46,911	3,630	36,300	3,291	32,912	249	8,471	0	0	249	3,097	
2029	4.46%	3,938	50,849	3,630	39,930	3,291	36,203	249	8,471	0	0	249	3,347	
2030	4.46%	3,937	54,786	3,630	43,560	3,291	38,494	249	8,471	0	0	249	3,596	
2031	4.46%	3,938	58,723	3,630	47,190	3,291	42,786	249	8,471	0	0	249	3,845	
2032	4.46%	3,937	62,660	3,630	50,820	3,291	46,077	249	8,471	0	0	249	4,094	
2033	4.46%	3,938	66,598	3,630	54,450	3,291	49,368	249	8,471	0	0	249	4,343	
2034	4.46%	3,937	70,535	3,630	58,080	3,291	52,659	249	8,471	0	0	249	4,593	
2035	4.46%	3,938	74,472	3,630	61,710	3,291	55,950	249	8,471	0	0	249	4,842	
2036	4.46%	3,937	78,409	3,630	65,341	3,291	59,242	249	8,471	0	0	249	5,091	
2037	4.46%	3,938	82,347	3,630	68,971	3,291	62,533	249	8,471	0	0	249	5,340	
2038	4.46%	3,937	86,284	3,630	72,601	3,291	65,824	249	8,471	0	0	249	5,589	
2039	2.23%	1,969	88,253	3,630	76,231	3,291	69,115	(510)	8,471	0	0	(510)	5,079	
2040	0.00%	0	88,253	3,630	79,861	3,291	72,406	(1,270)	8,471	0	0	(1,270)	3,810	
2041	0.00%	0	88,253	3,630	83,491	3,291	75,698	(1,270)	8,471	0	0	(1,270)	2,540	
2042	0.00%	0	88,253	3,630	87,121	3,291	78,989	(1,270)	8,471	0	0	(1,270)	1,271	
2043	0.00%	0	88,253	3,630	90,751	3,291	82,280	(1,270)	8,471	0	0	(1,270)	1	

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(2,303)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	8,471
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Lighting

(1)	(2)	(3)	(4)	(5) END OF YEAR NET PLANT IN SERVICE	(5a)* ACCUMULATED DEPRECIATION	(5b)* ACCUMULATED DEF TAXES	(6) BEGINNING YEAR RATE BASE	(7) ENDING OF YEAR RATE BASE	(8) MID-YEAR RATE BASE
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2019	3.75%	3,309	7	87,121	3,630	(2,296)	93,054	89,417	91,235
2020	7.22%	6,371	1,188	83,491	7,260	(1,108)	89,417	84,599	87,008
2021	6.68%	5,892	1,003	79,861	10,890	(105)	84,599	79,965	82,282
2022	6.18%	5,454	834	76,231	14,520	730	79,965	75,501	77,733
2023	5.71%	5,042	675	72,601	18,150	1,405	75,501	71,196	73,348
2024	5.29%	4,664	530	68,971	21,780	1,935	71,196	67,036	69,116
2025	4.89%	4,314	394	65,341	25,410	2,329	67,036	63,012	65,024
2026	4.52%	3,991	270	61,710	29,040	2,599	63,012	59,112	61,062
2027	4.46%	3,938	249	58,080	32,670	2,848	59,112	55,232	57,172
2028	4.46%	3,937	249	54,450	36,300	3,097	55,232	51,353	53,293
2029	4.46%	3,938	249	50,820	39,930	3,347	51,353	47,474	49,414
2030	4.46%	3,937	249	47,190	43,560	3,596	47,474	43,595	45,534
2031	4.46%	3,938	249	43,560	47,190	3,845	43,595	39,715	41,655
2032	4.46%	3,937	249	39,930	50,820	4,094	39,715	35,836	37,776
2033	4.46%	3,938	249	36,300	54,450	4,343	35,836	31,957	33,897
2034	4.46%	3,937	249	32,670	58,080	4,593	31,957	28,078	30,017
2035	4.46%	3,938	249	29,040	61,710	4,842	28,078	24,198	26,138
2036	4.46%	3,937	249	25,410	65,341	5,091	24,198	20,319	22,259
2037	4.46%	3,938	249	21,780	68,971	5,340	20,319	16,440	18,379
2038	4.46%	3,937	249	18,150	72,601	5,589	16,440	12,561	14,500
2039	2.23%	1,569	(510)	14,520	76,231	5,079	12,561	9,441	11,001
2040	0.00%	0	(1,270)	10,890	79,861	3,810	9,441	7,080	8,261
2041	0.00%	0	(1,270)	7,260	83,491	2,540	7,080	4,720	5,900
2042	0.00%	0	(1,270)	3,630	87,121	1,271	4,720	2,359	3,540
2043	0.00%	0	(1,270)	(0)	90,751	1	2,359	-1	1,179

\* Column not specified in workbook



(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.50%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	58.79	858.38

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.65	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

	57.47	156.84	127.50	(27.02)	1,064.61
IN SERVICE YEAR	2019				
PLANT COSTS	725,389,805.5				
AFUDC RATE	8.48%				
CONSTRUCTION CASE	77,381	77,381	77,381	77,381	
EQUITY AFUDC	8,471				
DEBT AFUDC	4,899	4,899			
CPI			10,869		
TOTAL	90,751	82,280	88,250		

\* Column not specified in workbook

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INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Lighting

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (¢/kWh)	(5) AVOIDED MARGINAL FUEL COST (¢/kWh)	(6)* INCREASED MARGINAL FUEL COST (¢/kWh)	(7) REPLACEMENT FUEL COST (¢/kWh)	(8) PROGRAM & W EFFECTIVENESS FACTOR	(9) PROGRAM kWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	4,352	4,352	6.41	7.78	7.09	0.00	1.00	1.00
2011	12,240	12,240	6.35	7.54	6.97	0.00	1.00	1.00
2012	20,394	20,394	6.43	7.53	7.00	0.00	1.00	1.00
2013	28,784	28,784	7.06	7.79	7.44	0.00	1.00	1.00
2014	37,316	37,316	7.53	8.16	7.87	0.00	1.00	1.00
2015	44,514	44,514	8.11	8.88	8.53	0.00	1.00	1.00
2016	51,281	51,281	9.00	10.32	9.69	0.00	1.00	1.00
2017	58,751	58,751	9.75	11.25	10.50	0.00	1.00	1.00
2018	67,258	67,258	10.52	12.08	11.32	0.00	1.00	1.00
2019	67,258	67,258	11.50	13.49	12.52	10.41	1.00	1.00
2020	67,258	67,258	12.08	14.09	13.15	10.50	1.00	1.00
2021	67,258	67,258	12.57	14.70	13.69	10.74	1.00	1.00
2022	67,258	67,258	13.06	15.11	14.14	10.81	1.00	1.00
2023	67,258	67,258	13.39	15.26	14.41	10.80	1.00	1.00
2024	67,258	67,258	13.95	15.82	14.99	10.84	1.00	1.00
2025	67,258	67,258	14.40	16.26	15.44	10.96	1.00	1.00
2026	67,258	67,258	14.70	16.47	15.70	11.05	1.00	1.00
2027	67,258	67,258	15.13	16.78	16.07	11.17	1.00	1.00
2028	67,258	67,258	15.60	17.17	16.51	11.36	1.00	1.00
2029	67,258	67,258	16.02	17.39	16.84	11.41	1.00	1.00
2030	67,258	67,258	16.52	17.85	17.33	11.59	1.00	1.00
2031	67,258	67,258	17.08	18.43	17.89	11.80	1.00	1.00
2032	67,258	67,258	17.50	18.59	18.18	11.88	1.00	1.00
2033	67,258	67,258	18.27	19.27	18.84	12.10	1.00	1.00
2034	67,258	67,258	18.73	19.40	19.13	12.14	1.00	1.00
2035	67,258	67,258	19.57	20.42	20.06	12.29	1.00	1.00
2036	67,258	67,258	20.40	21.31	20.89	12.55	1.00	1.00
2037	67,258	67,258	21.11	21.95	21.56	12.70	1.00	1.00
2038	67,258	67,258	22.02	22.88	22.49	13.04	1.00	1.00
2039	67,258	67,258	22.78	23.59	23.22	13.32	1.00	1.00
2040	67,258	67,258	23.59	24.29	23.98	13.44	1.00	1.00
2041	67,258	67,258	24.54	25.20	24.91	13.75	1.00	1.00
2042	67,258	67,258	25.50	26.16	25.87	14.10	1.00	1.00
2043	67,258	67,258	26.74	27.64	27.22	14.40	1.00	1.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
PROGRAMMETHOD SELECTED: REV\_REQ  
PROGRAMNAME: Business Lighting

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	19,427	10,656	449	27,137	34,332	23,338
2020	18,850	10,923	648	39,982	48,709	21,694
2021	18,102	11,196	678	41,716	50,873	20,810
2022	17,380	11,475	721	44,152	53,037	20,692
2023	16,684	11,762	760	46,419	54,562	21,063
2024	16,011	12,056	806	49,035	56,610	21,298
2025	15,360	12,358	861	52,392	59,712	21,258
2026	14,728	12,667	922	55,988	62,902	21,403
2027	14,115	12,983	976	59,897	65,595	21,575
2028	13,525	13,308	1004	60,665	67,008	21,474
2029	12,896	13,641	1052	63,226	68,770	22,038
2030	12,287	13,982	1104	66,179	71,520	22,032
2031	11,679	14,331	1151	67,543	72,817	21,867
2032	11,071	14,690	1175	69,928	74,313	22,552
2033	10,463	15,057	1293	76,944	81,260	22,497
2034	9,856	15,433	1353	80,088	83,187	23,544
2035	9,250	15,819	1391	81,911	84,471	23,900
2036	8,644	16,215	1438	84,357	86,976	23,677
2037	8,038	16,620	1477	86,274	88,727	24,182
2038	7,433	17,035	1520	88,427	90,918	23,496
2039	6,829	17,461	1559	90,245	93,006	23,088
2040	6,334	17,898	1602	92,323	94,069	24,089
2041	5,951	18,345	1646	94,349	96,437	23,854
2042	5,568	18,804	1691	96,497	99,124	23,456
2043	5,185	19,274	1741	98,980	101,673	23,507
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	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	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
NOM	295,644	363,990	28,999	1,713,848	1,840,106	562,375
NPV	66,134	60,432	4,379	262,305	291,757	101,493





TOTAL RESOURCE COST TEST
PROGRAM METHOD SELECTED: REV\_REQ
PROGRAM NAME: Business Lighting

Table with 13 columns: (1) YEAR, (2) INCREASED SUPPLY COSTS \$(000), (3) UTILITY PROGRAM COSTS \$(000), (4) PARTICIPANT PROGRAM COSTS \$(000), (5) OTHER COSTS \$(000), (6) TOTAL COSTS \$(000), (7) AVOIDED GEN UNIT BENEFITS \$(000), (8) AVOIDED T&D BENEFITS \$(000), (9) PROGRAM FUEL SAVINGS \$(000), (10) OTHER BENEFITS \$(000), (11) TOTAL BENEFITS \$(000), (12) NET BENEFITS \$(000), (13) CUMULATIVE DISCOUNTED NET BENEFITS \$(000). Rows include years 2009-2043 and summary rows NOM and NPV.

Discount Rate: 8.89 %
Benefit/Cost Ratio (Col(11) / Col(6)): 4.30

PARTICIPANT COSTS AND BENEFITS  
 PROGRAM METHOD SELECTED: RHV\_REQ  
 PROGRAM NAME: Business Lighting

(1) YEAR	(2) SAVINGS IN PARTICIPANTS BILLS \$(000)	(3) TAX CREDITS \$(000)	(4) UTILITY REBATES \$(000)	(5) OTHER BENEFITS \$(000)	(6) TOTAL BENEFITS \$(000)	(7) CUSTOMER EQUIPMENT COSTS \$(000)	(8) CUSTOMER O&M COSTS \$(000)	(9) OTHER COSTS \$(000)	(10) TOTAL COSTS \$(000)	(11) NET BENEFITS \$(000)	(12) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0
2010	893	0	2,964	0	3,857	6,670	0	0	6,670	(2,813)	(2,584)
2011	3,550	0	6,272	0	9,821	13,752	0	0	13,752	(3,931)	(5,899)
2012	7,377	0	5,757	0	13,134	13,683	0	0	13,683	(549)	(6,325)
2013	11,801	0	5,077	0	16,878	13,319	0	0	13,319	3,558	(3,794)
2014	16,862	0	4,066	0	21,028	11,913	0	0	11,913	9,115	2,161
2015	22,207	0	1,710	0	23,917	8,409	0	0	8,409	15,509	11,466
2016	27,118	0	1,893	0	29,011	9,184	0	0	9,184	19,826	22,391
2017	32,531	0	2,059	0	34,590	10,285	0	0	10,285	24,305	34,691
2018	38,332	0	2,275	0	40,608	11,814	0	0	11,814	28,794	48,073
2019	42,506	0	284	0	42,790	1,121	0	0	1,121	41,669	65,858
2020	42,538	0	284	0	42,822	1,149	0	0	1,149	41,673	82,193
2021	43,510	0	48	0	43,557	194	0	0	194	43,364	97,804
2022	45,006	0	284	0	45,290	1,207	0	0	1,207	44,083	112,378
2023	46,537	0	590	0	47,126	3,013	0	0	3,013	44,114	125,772
2024	48,843	0	578	0	49,421	3,256	0	0	3,256	46,165	138,645
2025	50,795	0	630	0	51,425	3,698	0	0	3,698	47,727	150,868
2026	53,014	0	687	0	53,702	4,196	0	0	4,196	49,506	162,511
2027	56,093	0	541	0	56,634	4,226	0	0	4,226	52,408	173,831
2028	58,589	0	846	0	59,435	6,093	0	0	6,093	53,341	184,412
2029	61,484	0	834	0	62,318	6,153	0	0	6,153	56,166	194,644
2030	64,777	0	3,266	0	68,044	14,206	0	0	14,206	53,838	203,651
2031	68,013	0	6,611	0	74,624	25,542	0	0	25,542	49,081	211,193
2032	72,333	0	5,437	0	77,770	20,230	0	0	20,230	57,540	219,312
2033	79,240	0	4,465	0	83,705	17,805	0	0	17,805	65,899	227,853
2034	80,771	0	3,629	0	84,400	16,235	0	0	16,235	68,165	235,965
2035	84,360	0	1,365	0	85,724	9,072	0	0	9,072	76,632	244,344
2036	90,834	0	1,629	0	92,463	11,324	0	0	11,324	81,139	252,489
2037	95,840	0	1,723	0	97,663	12,391	0	0	12,391	85,072	260,332
2038	100,422	0	1,938	0	102,361	14,857	0	0	14,857	87,503	267,740
2039	105,340	0	451	0	105,792	4,250	0	0	4,250	101,542	275,636
2040	110,579	0	749	0	111,328	6,543	0	0	6,543	104,785	283,118
2041	116,796	0	812	0	117,608	7,360	0	0	7,360	110,248	290,349
2042	123,433	0	795	0	124,227	7,228	0	0	7,228	116,999	297,395
2043	130,519	0	875	0	131,394	8,878	0	0	8,878	122,515	304,172
	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	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	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	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	0	0	0	0	0	0	0
NOM	2,033,042	0	71,423	0	2,104,465	309,457	0	0	309,457	1,795,008	
NPV	370,537	0	28,564	0	399,101	94,929	0	0	94,929	304,172	

In Service of Gen Util:  
 Discount Rate :  
 Benefit/Cost Ratio ( Col(6) / Col(10))

2019
8.89 %
4.20

RATE IMPACT TEST  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAMNAME: Business Lighting

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) INCENTIVES \$(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)
2009	0	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	118	2,964	777	0	3,859	669	0	0	0	0	0	0
2011	0	219	6,272	3,091	0	9,581	2,466	244	0	3	672	(3,186)	(3,186)
2012	0	232	5,757	6,427	0	12,416	4,827	694	0	7	2,718	(6,863)	(2,926)
2013	0	245	5,877	10,271	0	15,593	7,452	1,294	0	14	5,536	(6,880)	(7,715)
2014	0	255	4,866	14,758	0	19,079	10,453	1,677	0	676	9,322	(6,271)	(14,044)
2015	0	221	1,710	19,318	0	21,249	14,118	2,163	0	1,007	13,137	(5,943)	(22,388)
2016	0	238	1,893	23,562	0	25,693	19,358	2,568	0	1,380	17,653	(3,596)	(24,545)
2017	0	267	2,059	28,285	0	30,611	24,272	2,951	0	1,813	23,740	(1,953)	(25,622)
2018	0	308	2,275	33,309	0	35,892	29,821	3,387	0	2,289	29,513	(1,098)	(26,177)
2019	0	28	284	36,853	0	37,165	38,925	3,857	0	2,850	36,059	167	(26,100)
2020	0	28	284	36,845	0	37,157	39,683	3,747	0	2,327	65,183	28,018	(14,141)
2021	0	5	48	37,625	0	37,678	60,568	3,533	0	2,140	64,812	27,654	(3,301)
2022	0	30	284	38,852	0	39,165	61,214	3,431	0	2,246	65,568	27,890	6,739
2023	0	79	590	40,131	0	40,801	62,885	3,233	0	2,371	66,571	27,406	15,800
2024	0	88	578	42,061	0	42,727	63,573	3,213	0	2,520	67,216	26,415	23,821
2025	0	100	630	43,639	0	44,369	64,605	3,136	0	3,022	69,036	26,309	31,157
2026	0	115	687	45,486	0	46,288	65,505	3,040	0	3,333	70,228	25,858	37,779
2027	0	114	541	48,054	0	48,709	66,370	2,944	0	3,122	70,863	24,575	43,559
2028	0	161	846	50,142	0	51,149	67,408	2,849	0	3,632	72,946	21,797	52,887
2029	0	161	834	52,555	0	53,550	68,448	2,754	0	4,014	74,271	20,721	56,662
2030	0	278	3,266	55,303	0	58,848	69,893	2,660	0	4,615	77,168	16,708	59,457
2031	0	439	6,611	57,998	0	61,615	70,835	2,569	0	4,970	79,948	11,012	61,319
2032	0	311	5,437	67,401	0	72,150	72,476	2,483	0	4,988	78,375	11,012	62,873
2033	0	284	4,465	68,697	0	72,642	73,698	2,404	0	5,283	81,385	7,742	63,884
2034	0	317	3,629	71,643	0	75,244	76,766	2,331	0	5,698	84,794	11,551	64,924
2035	0	236	1,365	77,040	0	78,967	78,865	2,265	0	6,111	87,241	8,274	66,187
2036	0	288	1,629	83,376	0	83,376	80,965	2,205	0	6,588	89,758	6,382	67,606
2037	0	334	1,723	87,380	0	89,706	82,670	2,151	0	7,083	91,904	4,524	67,989
2038	0	397	1,938	89,706	0	94,417	84,052	2,104	0	7,569	93,725	4,019	68,301
2039	0	120	749	93,488	0	98,657	86,796	2,062	0	8,136	96,994	2,578	68,485
2040	0	179	812	99,672	0	104,174	88,897	2,023	0	8,731	99,651	(21)	68,484
2041	0	203	795	110,064	0	111,176	90,918	1,984	0	10,252	103,154	(2,014)	68,363
2042	0	236	875	0	0	0	94,527	1,945	0	11,900	108,772	(2,404)	68,230
2043	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	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	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	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	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	0	0	0	0	0	0	0	0	0	0	0	0
NOML	0	6,842	71,423	1,733,620	0	1,811,885	1,923,887	83,556	0	137,900	2,145,343	333,458	
NPV	0	1,990	28,564	318,335	0	348,889	371,354	22,735	0	23,030	417,119	68,230	

Discount Rate

Benefit/Cost Ratio (Col(12) / Col(7)) :

8.89 %  
**1.20**



**RESIDENTIAL PHOTOVOLTAICS**

INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Water Heating

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.94 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.26 KW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KWH REDUCTION PER CUSTOMER .....	7,095.49 kWh
(5) KWH LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.20
(7) CUSTOMER KWA INCREASE AT METER .....	0.00 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	L70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
(8) INCREASED SUPPLY COSTS .....	^^^ \$/CUST/YR
(9) SUPPLY COSTS ESCALATION RATES .....	*** %**
(10) UTILITY DISCOUNT RATE .....	8.89 %
(11) UTILITY AFUDC RATE .....	8.48 %
(12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Water Heating

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	UTILITY INCENTIVES \$(000)	OTHER UTILITY COSTS \$(000)	TOTAL UTILITY PROGRAM COSTS \$(000)	ENERGY CHARGE REVENUE LOSSES \$(000)	DEMAND CHARGE REVENUE LOSSES \$(000)	PARTICIPANT EQUIPMENT COSTS \$(000)	PARTICIPANT O&M COSTS \$(000)	OTHER PARTICIPANT COSTS \$(000)	TOTAL PARTICIPANT COSTS \$(000)
YEAR									
2009	0	0	0	0	0	0	0	0	0
2010	72	902	0	974	99	20	1,420	0	1,420
2011	94	746	0	830	344	71	1,494	0	1,494
2012	94	919	0	913	666	140	1,681	0	1,681
2013	186	2,268	0	2,454	1,124	242	3,706	0	3,706
2014	118	979	0	1,097	1,681	366	2,108	0	2,108
2015	75	604	0	678	2,150	458	1,332	0	1,332
2016	46	367	0	413	2,506	506	890	0	830
2017	48	367	0	414	2,303	563	850	0	850
2018	49	367	0	416	3,097	600	872	0	872
2019	0	0	0	0	3,273	608	0	0	0
2020	0	0	0	0	3,398	595	0	0	0
2021	0	0	0	0	3,517	584	0	0	0
2022	0	0	0	0	3,685	578	0	0	0
2023	0	0	0	0	3,839	582	0	0	0
2024	0	0	0	0	4,071	588	0	0	0
2025	63	384	0	447	4,304	571	1,130	0	1,130
2026	163	1,265	0	1,428	4,533	573	3,112	0	3,112
2027	136	919	0	955	4,847	578	2,434	0	2,434
2028	153	897	0	1,050	5,098	585	2,733	0	2,733
2029	291	2,349	0	2,640	5,395	589	5,752	0	5,752
2030	108	604	0	712	5,731	594	1,930	0	1,930
2031	67	367	0	434	6,064	598	1,201	0	1,201
2032	69	367	0	436	6,497	610	1,232	0	1,232
2033	71	367	0	437	7,185	631	1,262	0	1,262
2034	0	0	0	0	7,328	640	0	0	0
2035	0	0	0	0	7,728	628	0	0	0
2036	0	0	0	0	8,392	637	0	0	0
2037	0	0	0	0	8,900	652	0	0	0
2038	0	0	0	0	9,367	655	0	0	0
2039	0	0	0	0	9,878	637	0	0	0
2040	92	384	0	475	10,424	660	1,637	0	1,637
2041	175	746	0	922	11,071	663	3,134	0	3,134
2042	260	1,337	0	1,597	11,762	667	4,934	0	4,934
2043	221	897	0	1,118	12,501	670	3,958	0	3,958
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	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	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	0	0	0	0	0	0	0	0
NOM	2,642	18,199	0	20,841	183,357	18,359	48,740	0	48,740
REV	797	6,907	0	7,704	32,640	4,482	14,791	0	14,791

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS

CALCULATION OF GEN K-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Business Water Heating

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
REG-YEAR	RAIR BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	6,299	196	0	440	220	196	37	246	0	1,315	1,315	1,315	6,144
2020	6,053	188	0	422	199	102	38	246	80	1,276	1,172	2,487	6,297
2021	5,727	178	0	400	197	97	39	246	68	1,225	1,034	3,521	6,455
2022	5,413	168	0	378	195	93	40	246	56	1,177	911	4,432	6,616
2023	5,111	159	0	357	193	88	41	246	46	1,129	803	5,236	6,781
2024	4,820	150	0	336	190	84	42	246	36	1,084	708	5,944	6,951
2025	4,538	141	0	317	187	80	43	246	27	1,040	624	6,568	7,125
2026	4,266	133	0	298	183	75	45	246	18	997	549	7,117	7,303
2027	4,002	124	0	279	173	71	46	246	17	956	484	7,600	7,485
2028	3,739	116	0	261	161	66	47	246	17	914	425	8,025	7,672
2029	3,476	108	0	243	150	62	48	246	17	873	373	8,398	7,864
2030	3,214	100	0	224	138	58	49	246	17	832	326	8,724	8,061
2031	2,951	92	0	206	127	53	50	246	17	791	285	9,009	8,262
2032	2,689	84	0	188	115	49	52	246	17	749	248	9,256	8,469
2033	2,426	75	0	169	104	44	53	246	17	708	215	9,472	8,681
2034	2,163	67	0	151	92	40	54	246	17	667	186	9,658	8,898
2035	1,901	59	0	133	81	35	56	246	17	625	160	9,818	9,120
2036	1,638	51	0	114	69	31	57	246	17	583	138	9,956	9,348
2037	1,376	43	0	96	58	27	58	246	17	544	118	10,073	9,582
2038	1,113	35	0	78	46	22	60	246	17	503	100	10,173	9,821
2039	850	26	0	59	36	18	61	246	(35)	462	84	10,257	10,067
2040	639	20	0	45	28	13	63	246	(86)	429	72	10,329	10,319
2041	479	15	0	33	21	9	65	246	(86)	403	62	10,391	10,577
2042	320	10	0	22	14	4	66	246	(86)	377	53	10,444	10,841
2043	160	5	0	11	107	(0)	68	246	(86)	351	45	10,489	11,112

IN SERVICE COST (\$000)	6,144
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.57%
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST	
DEBT	44%	7.03	%
P/S	0%	0.00	%
C/S	56%	12.50	%

K-FACTOR =  $\frac{CPWFIC}{IN-SVC\ COST} = 1.70738$

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Water Heating

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	224	224	246	246	223	223	0	573	0	0	0	0	(155)
2020	7.22%	431	655	246	491	223	446	80	573	0	0	0	80	(75)
2021	6.68%	399	1,054	246	737	223	668	68	573	0	0	0	68	(7)
2022	6.18%	369	1,423	246	983	223	891	56	573	0	0	0	56	49
2023	5.71%	341	1,765	246	1,229	223	1,114	46	573	0	0	0	46	95
2024	5.29%	316	2,080	246	1,474	223	1,337	36	573	0	0	0	36	131
2025	4.89%	292	2,373	246	1,720	223	1,560	27	573	0	0	0	27	158
2026	4.52%	270	2,643	246	1,966	223	1,782	18	573	0	0	0	18	176
2027	4.46%	267	2,909	246	2,212	223	2,005	17	573	0	0	0	17	193
2028	4.46%	267	3,176	246	2,457	223	2,228	17	573	0	0	0	17	210
2029	4.46%	267	3,442	246	2,703	223	2,451	17	573	0	0	0	17	227
2030	4.46%	267	3,709	246	2,949	223	2,674	17	573	0	0	0	17	243
2031	4.46%	267	3,975	246	3,195	223	2,896	17	573	0	0	0	17	260
2032	4.46%	267	4,242	246	3,440	223	3,119	17	573	0	0	0	17	277
2033	4.46%	267	4,508	246	3,686	223	3,342	17	573	0	0	0	17	294
2034	4.46%	267	4,775	246	3,932	223	3,565	17	573	0	0	0	17	311
2035	4.46%	267	5,042	246	4,178	223	3,788	17	573	0	0	0	17	328
2036	4.46%	267	5,308	246	4,423	223	4,010	17	573	0	0	0	17	345
2037	4.46%	267	5,575	246	4,669	223	4,233	17	573	0	0	0	17	362
2038	4.46%	267	5,841	246	4,915	223	4,456	17	573	0	0	0	17	378
2039	2.23%	133	5,974	246	5,161	223	4,679	(35)	573	0	0	0	(35)	344
2040	0.00%	0	5,974	246	5,406	223	4,902	(86)	573	0	0	0	(86)	258
2041	0.00%	0	5,974	246	5,652	223	5,125	(86)	573	0	0	0	(86)	172
2042	0.00%	0	5,974	246	5,898	223	5,347	(86)	573	0	0	0	(86)	86
2043	0.00%	0	5,974	246	6,144	223	5,570	(86)	573	0	0	0	(86)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(156)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	573
BOOK DEPR. RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_RRQ  
 PROGRAM NAME: Business Water Heating

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	END OF YEAR NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2019	3.75%	224	0	5,898	246	(155)	6,299	6,053	6,176
2020	7.22%	431	80	5,652	491	(75)	6,053	5,727	5,890
2021	6.68%	399	68	5,406	737	(7)	5,727	5,413	5,570
2022	6.18%	369	56	5,161	983	49	5,413	5,111	5,262
2023	5.71%	341	46	4,915	1,229	95	5,111	4,820	4,965
2024	5.29%	316	36	4,669	1,474	131	4,820	4,538	4,679
2025	4.89%	292	27	4,423	1,720	158	4,538	4,266	4,402
2026	4.52%	270	18	4,178	1,966	176	4,266	4,002	4,134
2027	4.46%	267	17	3,932	2,212	193	4,002	3,739	3,870
2028	4.46%	267	17	3,686	2,457	210	3,739	3,476	3,608
2029	4.46%	267	17	3,440	2,703	227	3,476	3,214	3,345
2030	4.46%	267	17	3,195	2,949	243	3,214	2,951	3,083
2031	4.46%	267	17	2,949	3,195	260	2,951	2,689	2,820
2032	4.46%	267	17	2,703	3,440	277	2,689	2,426	2,557
2033	4.46%	267	17	2,457	3,686	294	2,426	2,163	2,295
2034	4.46%	267	17	2,212	3,932	311	2,163	1,901	2,032
2035	4.46%	267	17	1,966	4,178	328	1,901	1,638	1,769
2036	4.46%	267	17	1,720	4,423	345	1,638	1,376	1,507
2037	4.46%	267	17	1,474	4,669	362	1,376	1,113	1,244
2038	4.46%	267	17	1,229	4,915	378	1,113	850	982
2039	2.23%	133	(35)	983	5,161	344	850	639	745
2040	0.00%	0	(86)	737	5,406	258	639	479	559
2041	0.00%	0	(86)	491	5,652	172	479	320	399
2042	0.00%	0	(86)	246	5,898	86	320	160	240
2043	0.00%	0	(86)	(0)	6,144	0	160	0	80

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.59	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00%      907.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	534.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.5
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	5,239	5,239	5,239
EQUITY AFUDC	573		
DEBT AFUDC	332	332	
CPI			736
TOTAL	6,144	5,570	5,974

\* Column not specified in workbook

INPUT DATA -- PART 2  
 PROGRAM METHOD SELECTED : REV\_REQ  
 PROGRAM NAME: Business Water Heating

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (C/kWh)	AVOIDED MARGINAL FUEL COST (C/kWh)	INCREASED MARGINAL FUEL COST (C/kWh)	REPLACEMENT FUEL COST (C/kWh)	PROGRAM kW EFFECTIVENESS FACTOR	PROGRAM kWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	465	465	6.41	6.72	8.91	0.00	1.00	1.00
2011	992	992	6.35	6.62	8.40	0.00	1.00	1.00
2012	1,570	1,570	6.43	6.68	8.37	0.00	1.00	1.00
2013	2,686	2,686	7.06	7.24	8.35	0.00	1.00	1.00
2014	3,377	3,377	7.53	7.69	8.62	0.00	1.00	1.00
2015	3,803	3,803	8.11	8.22	9.53	0.00	1.00	1.00
2016	4,062	4,062	9.00	9.33	11.45	0.00	1.00	1.00
2017	4,320	4,320	9.75	10.08	12.59	0.00	1.00	1.00
2018	4,579	4,579	10.52	10.88	13.42	0.00	1.00	1.00
2019	4,579	4,579	11.50	11.97	15.12	10.41	1.00	1.00
2020	4,579	4,579	12.08	12.60	15.76	10.50	1.00	1.00
2021	4,579	4,579	12.57	13.12	16.36	10.74	1.00	1.00
2022	4,579	4,579	13.06	13.62	16.96	10.81	1.00	1.00
2023	4,579	4,579	13.39	13.94	16.96	10.80	1.00	1.00
2024	4,579	4,579	13.95	14.49	17.62	10.84	1.00	1.00
2025	4,579	4,579	14.40	14.95	18.05	10.96	1.00	1.00
2026	4,579	4,579	14.70	15.22	18.15	11.05	1.00	1.00
2027	4,579	4,579	15.13	15.63	18.36	11.17	1.00	1.00
2028	4,579	4,579	15.60	16.08	18.71	11.36	1.00	1.00
2029	4,579	4,579	16.02	16.46	18.68	11.41	1.00	1.00
2030	4,579	4,579	16.52	16.94	19.10	11.59	1.00	1.00
2031	4,579	4,579	17.08	17.50	19.71	11.80	1.00	1.00
2032	4,579	4,579	17.50	17.86	19.50	11.88	1.00	1.00
2033	4,579	4,579	18.27	18.52	20.25	12.10	1.00	1.00
2034	4,579	4,579	18.73	18.87	20.00	12.14	1.00	1.00
2035	4,579	4,579	19.57	19.76	21.25	12.29	1.00	1.00
2036	4,579	4,579	20.40	20.56	22.27	12.55	1.00	1.00
2037	4,579	4,579	21.11	21.25	22.81	12.70	1.00	1.00
2038	4,579	4,579	22.02	22.17	23.74	13.04	1.00	1.00
2039	4,579	4,579	22.78	22.90	24.38	13.32	1.00	1.00
2040	4,579	4,579	23.59	23.69	24.94	13.44	1.00	1.00
2041	4,579	4,579	24.54	24.63	25.85	13.75	1.00	1.00
2042	4,579	4,579	25.50	25.60	26.77	14.10	1.00	1.00
2043	4,579	4,579	26.74	26.86	28.52	14.40	1.00	1.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.









TOTAL RESOURCE COST TEST  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Water Heating

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	(0)	(0)
2010	0	72	1,420	0	1,492	0	0	112	0	112	(1,379)	(1,267)
2011	0	84	1,494	0	1,578	0	26	345	1	372	(1,205)	(2,283)
2012	0	94	1,681	0	1,775	0	56	612	2	669	(1,106)	(3,140)
2013	0	186	3,786	0	3,892	0	93	1,098	108	1,299	(2,593)	(4,985)
2014	0	118	2,188	0	2,226	0	157	1,662	171	1,990	(235)	(5,138)
2015	0	75	1,332	0	1,407	0	195	2,131	224	2,550	1,143	(4,452)
2016	0	46	830	0	876	0	216	2,622	273	3,111	2,235	(3,221)
2017	0	48	850	0	898	0	227	3,619	320	3,565	2,667	(1,871)
2018	0	49	872	0	920	0	238	3,458	369	4,065	3,145	(410)
2019	0	0	0	0	0	1,580	248	3,919	347	6,094	6,094	2,191
2020	0	0	0	0	0	1,469	241	4,129	349	6,188	6,188	4,617
2021	0	0	0	0	0	1,409	234	4,298	375	6,316	6,316	6,891
2022	0	0	0	0	0	1,401	228	4,464	418	6,510	6,510	9,043
2023	0	0	0	0	0	1,426	221	4,565	442	6,654	6,654	11,064
2024	0	0	0	0	0	1,442	215	4,744	490	6,890	6,890	12,985
2025	0	63	1,130	0	1,194	1,439	208	4,893	535	7,075	5,881	14,491
2026	0	163	3,112	0	3,276	1,449	202	4,979	560	7,189	3,914	15,412
2027	0	136	2,434	0	2,570	1,461	195	5,110	608	7,374	4,804	16,449
2028	0	153	2,733	0	2,885	1,454	189	5,257	662	7,562	4,677	17,377
2029	0	291	5,752	0	6,043	1,492	183	5,377	737	7,789	1,746	17,623
2030	0	188	1,936	0	2,038	1,492	177	5,531	791	7,991	5,953	18,691
2031	0	67	1,201	0	1,269	1,480	170	5,712	861	8,224	6,955	19,759
2032	0	69	1,232	0	1,301	1,527	165	5,825	931	8,447	7,147	20,768
2033	0	71	1,262	0	1,333	1,523	159	6,032	982	8,697	7,364	21,722
2034	0	0	0	0	0	1,594	154	6,139	1,056	8,944	8,944	22,787
2035	0	0	0	0	0	1,618	150	6,432	1,143	9,342	9,342	23,808
2036	0	0	0	0	0	1,603	146	6,691	1,233	9,672	9,672	24,779
2037	0	0	0	0	0	1,637	143	6,915	1,331	10,026	10,026	25,703
2038	0	0	0	0	0	1,591	140	7,215	1,436	10,381	10,381	26,582
2039	0	0	0	0	0	1,563	137	7,449	1,546	10,695	10,695	27,414
2040	0	92	1,637	0	1,729	1,631	134	7,704	1,665	11,134	9,405	28,085
2041	0	175	3,134	0	3,309	1,615	132	8,010	1,789	11,546	8,236	28,625
2042	0	260	4,854	0	5,193	1,587	129	8,324	1,982	12,021	6,828	29,037
2043	0	221	3,958	0	4,179	1,591	126	8,737	2,190	12,646	8,467	29,505
	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	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	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	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	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	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
	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	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	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
NOM	0	2,642	48,740	0	51,383	38,071	5,631	163,513	25,928	233,143	181,761	
NPV	0	797	14,791	0	15,588	6,871	1,613	32,567	4,043	45,093	29,505	

Discount Rate: 8.89 %  
 Benefit/Cost Ratio (Col(11) / Col(6)) : 2.89



RATE IMPACT TEST  
 PROGRAM METHOD SELECTED: REV REQ  
 PROGRAM NAME: Business Water Heating

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) INCENTIVES \$(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)
2009	0	0	0	0	0	0	0	0	0	0	0	0	(0)
2010	0	72	902	119	0	1,093	112	0	0	0	112	(981)	(901)
2011	0	84	746	415	0	1,245	345	26	0	1	372	(872)	(1,637)
2012	0	94	819	806	0	1,719	612	56	0	2	669	(1,050)	(2,450)
2013	0	186	2,268	1,366	0	3,820	1,098	93	0	108	1,299	(2,520)	(4,243)
2014	0	118	979	2,947	0	3,143	1,662	157	0	171	1,990	(1,153)	(4,997)
2015	0	75	604	2,608	0	3,287	2,131	195	0	224	2,550	(736)	(5,439)
2016	0	46	367	3,012	0	3,426	2,622	216	0	273	3,111	(315)	(5,612)
2017	0	48	367	3,366	0	3,761	3,019	227	0	320	3,565	(216)	(5,721)
2018	0	49	367	3,697	0	4,112	3,438	238	0	369	4,065	(47)	(5,743)
2019	0	0	0	3,981	0	3,981	5,499	248	0	347	6,094	2,113	(4,841)
2020	0	0	0	3,993	0	3,993	5,597	241	0	349	6,188	2,195	(3,981)
2021	0	0	0	4,101	0	4,101	5,707	234	0	375	6,316	2,215	(3,183)
2022	0	0	0	4,263	0	4,263	5,865	228	0	418	6,510	2,247	(2,440)
2023	0	0	0	4,421	0	4,421	5,991	221	0	442	6,654	2,233	(1,762)
2024	0	0	0	4,659	0	4,659	6,186	215	0	490	6,890	2,231	(1,140)
2025	0	63	384	4,875	0	5,322	6,332	208	0	535	7,075	1,753	(691)
2026	0	163	1,265	5,106	0	6,534	6,428	202	0	560	7,189	655	(537)
2027	0	136	819	5,425	0	6,381	6,571	195	0	608	7,374	994	(323)
2028	0	153	897	5,683	0	6,732	6,711	189	0	662	7,562	830	(158)
2029	0	291	2,349	5,984	0	8,624	6,869	183	0	737	7,789	(835)	(310)
2030	0	108	604	6,325	0	7,037	7,023	177	0	791	7,991	954	(151)
2031	0	67	367	6,662	0	7,096	7,193	170	0	861	8,224	1,128	23
2032	0	69	367	7,106	0	7,542	7,352	165	0	931	8,447	905	150
2033	0	71	367	7,815	0	8,253	7,555	159	0	982	8,697	444	208
2034	0	0	0	7,968	0	7,968	7,733	154	0	1,056	8,944	975	324
2035	0	0	0	8,355	0	8,355	8,050	150	0	1,143	9,342	987	432
2036	0	0	0	9,028	0	9,028	8,293	146	0	1,233	9,672	644	497
2037	0	0	0	9,552	0	9,552	8,552	143	0	1,331	10,026	474	540
2038	0	0	0	10,021	0	10,021	8,806	140	0	1,436	10,381	360	571
2039	0	0	0	10,536	0	10,536	9,012	137	0	1,546	10,635	159	583
2040	0	92	384	11,084	0	11,559	9,335	134	0	1,665	11,134	(425)	553
2041	0	175	746	11,734	0	12,656	9,625	132	0	1,789	11,546	(1,110)	480
2042	0	260	1,337	12,429	0	14,026	9,910	129	0	1,982	12,021	(2,005)	359
2043	0	221	897	13,171	0	14,289	10,329	126	0	2,190	12,646	(1,643)	268
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	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	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	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	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOM.	0	2,642	18,199	201,716	0	222,557	281,584	5,631	0	25,928	233,143	10,586	
NPV	0	797	6,907	37,121	0	44,825	39,438	1,613	0	4,043	45,093	268	

Discount Rate 8.89 %  
 Benefit/Cost Ratio (Col(12) / Col(7)) : 1.01

**BUSINESS PHOTOVOLTAICS**

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER kW REDUCTION AT METER .....	0.85 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	1.14 kW
(3) kW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	2.65 kWh ****
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	1.46 kWh ****

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON-RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
^ (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
^ (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
^ (10) UTILITY DISCOUNT RATE .....	8.89 %
^ (11) UTILITY AFUDC RATE .....	8.48 %
^ (12) UTILITY NON-RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	12.38 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	\$7.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)

\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

\*\*\*\* THIS IS A LOAD SHIFTING PROGRAM. VALUE SHOWN IN ITEM (4) IS ANNUAL KWH/CUST SHIFTED AWAY FROM PEAK HRS. VALUE SHOWN IN ITEM (7) IS ANNUAL KWH/CUST THAT IS PAID BACK DURING OFF-PEAK.





CALCULATION OF GENK-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Business On Call

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	BEG-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE FW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	40,790	1,267	0	2,847	1,878	687	243	1,591	3	8,516	8,516	8,516	39,781
2020	38,196	1,218	0	2,735	1,290	659	249	1,591	521	8,263	7,588	16,104	46,775
2021	37,084	1,152	0	2,588	1,279	630	255	1,591	440	7,935	6,692	22,797	41,794
2022	35,053	1,089	0	2,446	1,264	601	261	1,591	366	7,619	5,901	28,698	42,839
2023	33,096	1,028	0	2,310	1,248	573	268	1,591	296	7,313	5,203	33,901	43,910
2024	31,209	969	0	2,178	1,229	544	275	1,591	232	7,018	4,585	38,486	45,008
2025	29,385	913	0	2,051	1,208	516	281	1,591	173	6,733	4,040	42,526	46,133
2026	27,621	858	0	1,928	1,186	487	289	1,591	118	6,456	3,557	46,083	47,287
2027	25,912	805	0	1,808	1,120	458	296	1,591	109	6,187	3,131	49,214	48,469
2028	24,311	752	0	1,690	1,045	430	303	1,591	109	5,920	2,751	51,966	49,681
2029	22,511	699	0	1,571	971	401	311	1,591	109	5,653	2,413	54,378	50,923
2030	20,810	646	0	1,452	896	372	318	1,591	109	5,386	2,111	56,490	52,196
2031	19,110	594	0	1,334	821	344	326	1,591	109	5,119	1,843	58,333	53,500
2032	17,409	541	0	1,215	747	315	335	1,591	109	4,853	1,604	59,937	54,838
2033	15,709	488	0	1,096	672	286	343	1,591	109	4,587	1,393	61,330	56,209
2034	14,008	435	0	978	598	258	351	1,591	109	4,320	1,205	62,534	57,614
2035	12,308	382	0	859	523	229	360	1,591	109	4,055	1,038	63,573	59,055
2036	10,607	330	0	740	449	200	369	1,591	109	3,789	891	64,464	60,531
2037	8,907	277	0	622	374	172	378	1,591	109	3,523	761	65,225	62,044
2038	7,206	224	0	503	300	143	388	1,591	109	3,258	646	65,871	63,595
2039	5,506	171	0	384	228	115	398	1,591	(224)	2,993	545	66,416	65,185
2040	4,138	129	0	289	159	86	408	1,591	(557)	2,777	465	66,881	66,815
2041	3,104	96	0	217	786	57	418	1,591	(557)	2,609	401	67,282	68,485
2042	2,069	64	0	144	740	29	428	1,591	(557)	2,441	344	67,626	70,197
2043	1,034	32	0	72	695	(0)	439	1,591	(557)	2,273	295	67,921	71,952

IN SERVICE COST (\$000)	39,781
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	44%	7.03 %
E/S	0%	0.00 %
C/S	56%	12.50 %

K-FACTOR =  $\frac{CPWFC}{IN-SVC COST} = 1.70738$

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business On Call

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	1,451	1,451	1,591	1,591	1,443	1,443	3	3,713	0	0	0	3	(1,006)
2020	7.22%	2,793	4,243	1,591	3,182	1,443	2,885	521	3,713	0	0	0	521	(486)
2021	6.88%	2,583	6,826	1,591	4,774	1,443	4,328	440	3,713	0	0	0	440	(46)
2022	6.18%	2,391	9,217	1,591	6,365	1,443	5,771	366	3,713	0	0	0	366	320
2023	5.71%	2,210	11,427	1,591	7,956	1,443	7,213	296	3,713	0	0	0	296	616
2024	5.29%	2,044	13,471	1,591	9,547	1,443	8,656	232	3,713	0	0	0	232	848
2025	4.89%	1,891	15,362	1,591	11,139	1,443	10,099	173	3,713	0	0	0	173	1,021
2026	4.52%	1,749	17,112	1,591	12,730	1,443	11,542	118	3,713	0	0	0	118	1,139
2027	4.46%	1,726	18,838	1,591	14,321	1,443	12,984	109	3,713	0	0	0	109	1,248
2028	4.46%	1,726	20,563	1,591	15,912	1,443	14,427	109	3,713	0	0	0	109	1,358
2029	4.46%	1,726	22,290	1,591	17,503	1,443	15,870	109	3,713	0	0	0	109	1,467
2030	4.46%	1,726	24,015	1,591	19,095	1,443	17,312	109	3,713	0	0	0	109	1,576
2031	4.46%	1,726	25,741	1,591	20,686	1,443	18,755	109	3,713	0	0	0	109	1,685
2032	4.46%	1,726	27,467	1,591	22,277	1,443	20,198	109	3,713	0	0	0	109	1,795
2033	4.46%	1,726	29,193	1,591	23,868	1,443	21,640	109	3,713	0	0	0	109	1,904
2034	4.46%	1,726	30,919	1,591	25,460	1,443	23,083	109	3,713	0	0	0	109	2,013
2035	4.46%	1,726	32,645	1,591	27,051	1,443	24,526	109	3,713	0	0	0	109	2,122
2036	4.46%	1,726	34,371	1,591	28,642	1,443	25,969	109	3,713	0	0	0	109	2,232
2037	4.46%	1,726	36,097	1,591	30,233	1,443	27,411	109	3,713	0	0	0	109	2,341
2038	4.46%	1,726	37,823	1,591	31,824	1,443	28,854	109	3,713	0	0	0	109	2,450
2039	2.23%	863	38,686	1,591	33,416	1,443	30,297	(224)	3,713	0	0	0	(224)	2,227
2040	0.00%	0	38,686	1,591	35,007	1,443	31,739	(557)	3,713	0	0	0	(557)	1,670
2041	0.00%	0	38,686	1,591	36,598	1,443	33,182	(557)	3,713	0	0	0	(557)	1,113
2042	0.00%	0	38,686	1,591	38,189	1,443	34,625	(557)	3,713	0	0	0	(557)	557
2043	0.00%	0	38,686	1,591	39,781	1,443	36,067	(557)	3,713	0	0	0	(557)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(1,009)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	3,713
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business On Call

(1)	(2)	(3)	(4)	(5) END OF YEAR NET PLANT IN SERVICE \$(000)	(5a)* ACCUMULATED DEPRECIATION \$(000)	(5b)* ACCUMULATED DEF TAXES \$(000)	(6) BEGINNING YEAR RATE BASE \$(000)	(7) ENDING OF YEAR RATE BASE \$(000)	(8) MID-YEAR RATE BASE \$(000)
2019	3.75%	1,451	3	38,189	1,591	(1,006)	40,790	39,196	39,993
2020	7.22%	2,793	521	36,598	3,182	(486)	39,196	37,084	38,140
2021	6.68%	2,583	440	35,007	4,774	(46)	37,084	35,053	36,068
2022	6.18%	2,391	366	33,416	6,365	320	35,053	33,096	34,074
2023	5.71%	2,210	296	31,824	7,956	616	33,096	31,209	32,152
2024	5.29%	2,044	232	30,233	9,547	848	31,209	29,385	30,297
2025	4.89%	1,891	173	28,642	11,139	1,021	29,385	27,621	28,503
2026	4.52%	1,749	118	27,051	12,730	1,139	27,621	25,912	26,766
2027	4.46%	1,726	109	25,460	14,321	1,248	25,912	24,211	25,061
2028	4.46%	1,726	109	23,868	15,912	1,358	24,211	22,511	23,361
2029	4.46%	1,726	109	22,277	17,503	1,467	22,511	20,810	21,660
2030	4.46%	1,726	109	20,686	19,095	1,576	20,810	19,110	19,960
2031	4.46%	1,726	109	19,095	20,686	1,685	19,110	17,409	18,259
2032	4.46%	1,726	109	17,503	22,277	1,795	17,409	15,709	16,559
2033	4.46%	1,726	109	15,912	23,868	1,904	15,709	14,008	14,859
2034	4.46%	1,726	109	14,321	25,460	2,013	14,008	12,308	13,158
2035	4.46%	1,726	109	12,730	27,051	2,122	12,308	10,607	11,458
2036	4.46%	1,726	109	11,139	28,642	2,232	10,607	8,907	9,757
2037	4.46%	1,726	109	9,547	30,233	2,341	8,907	7,206	8,057
2038	4.46%	1,726	109	7,956	31,824	2,450	7,206	5,506	6,356
2039	2.23%	863	(234)	6,365	33,416	2,227	5,506	4,138	4,822
2040	0.00%	0	(557)	4,774	35,007	1,670	4,138	3,104	3,621
2041	0.00%	0	(557)	3,182	36,598	1,113	3,104	2,069	2,586
2042	0.00%	0	(557)	1,591	38,189	557	2,069	1,034	1,552
2043	0.00%	0	(557)	(0)	39,781	0	1,034	0	517

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	223.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10)	(11)
											INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.37	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47		156.84		127.50		(27.02)		1,064.61							
<table border="1"> <tr><td>IN SERVICE YEAR</td><td>2019</td></tr> <tr><td>PLANT COSTS</td><td>725,389,805.5</td></tr> <tr><td>AFUDC RATE</td><td>8.48%</td></tr> </table>		IN SERVICE YEAR	2019	PLANT COSTS	725,389,805.5	AFUDC RATE	8.48%	BOOK BASIS		BOOK BASIS FOR DEF TAX		TAX BASIS			
		IN SERVICE YEAR	2019												
		PLANT COSTS	725,389,805.5												
		AFUDC RATE	8.48%												
		CONSTRUCTION CASE		33,920		33,920		33,920							
EQUITY AFUDC		3,713													
DEBT AFUDC		2,147		2,147											
CPI						4,764									
TOTAL		39,781		36,067		38,684									

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED : REV\_REQ  
 PROGRAM NAME: Business On Call

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (\$/kWh)	(5) AVOIDED MARGINAL FUEL COST (\$/kWh)	(6)* INCREASED MARGINAL FUEL COST (\$/kWh)	(7) REPLACEMENT FUEL COST (\$/kWh)	(8) PROGRAM KW EFFECTIVENESS FACTOR	(9) PROGRAM kWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	3,657	3,657	6.41	16.51	6.41	0.00	1.00	1.00
2011	7,314	7,314	6.35	10.38	6.35	0.00	1.00	1.00
2012	10,970	10,970	6.43	13.34	6.43	0.00	1.00	1.00
2013	14,627	14,627	7.06	9.99	7.06	0.00	1.00	1.00
2014	18,284	18,284	7.53	10.61	7.53	0.00	1.00	1.00
2015	21,941	21,941	8.11	13.20	8.11	0.00	1.00	1.00
2016	25,598	25,598	9.00	13.50	9.00	0.00	1.00	1.00
2017	29,254	29,254	9.75	15.09	9.75	0.00	1.00	1.00
2018	32,911	32,911	10.52	15.46	10.52	0.00	1.00	1.00
2019	32,911	32,911	11.50	21.44	11.50	10.41	1.00	1.00
2020	32,911	32,911	12.08	20.17	12.08	10.50	1.00	1.00
2021	32,911	32,911	12.57	21.76	12.57	10.74	1.00	1.00
2022	32,911	32,911	13.06	23.66	13.06	10.81	1.00	1.00
2023	32,911	32,911	13.39	20.91	13.39	10.80	1.00	1.00
2024	32,911	32,911	13.95	22.19	13.95	10.84	1.00	1.00
2025	32,911	32,911	14.40	22.20	14.40	10.96	1.00	1.00
2026	32,911	32,911	14.70	22.41	14.70	11.05	1.00	1.00
2027	32,911	32,911	15.13	23.05	15.13	11.17	1.00	1.00
2028	32,911	32,911	15.60	23.70	15.60	11.36	1.00	1.00
2029	32,911	32,911	16.02	22.95	16.02	11.41	1.00	1.00
2030	32,911	32,911	16.52	23.78	16.52	11.59	1.00	1.00
2031	32,911	32,911	17.08	24.53	17.08	11.80	1.00	1.00
2032	32,911	32,911	17.50	24.55	17.50	11.88	1.00	1.00
2033	32,911	32,911	18.27	25.51	18.27	12.10	1.00	1.00
2034	32,911	32,911	18.73	25.89	18.73	12.14	1.00	1.00
2035	32,911	32,911	19.57	27.04	19.57	12.29	1.00	1.00
2036	32,911	32,911	20.40	28.26	20.40	12.55	1.00	1.00
2037	32,911	32,911	21.11	29.22	21.11	12.70	1.00	1.00
2038	32,911	32,911	22.02	30.23	22.02	13.04	1.00	1.00
2039	32,911	32,911	22.78	31.29	22.78	13.32	1.00	1.00
2040	32,911	32,911	23.59	32.02	23.59	13.44	1.00	1.00
2041	32,911	32,911	24.54	33.28	24.54	13.75	1.00	1.00
2042	32,911	32,911	25.50	34.66	25.50	14.10	1.00	1.00
2043	32,911	32,911	26.74	36.49	26.74	14.40	1.00	1.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAMNAME: Business On Call

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	8,516	4,671	197	11,896	15,050	10,230
2020	8,263	4,788	284	17,526	21,351	9,509
2021	7,935	4,908	297	18,286	22,300	9,126
2022	7,619	5,030	316	19,354	23,249	9,070
2023	7,313	5,156	333	20,348	23,917	9,233
2024	7,018	5,285	353	21,494	24,815	9,336
2025	6,733	5,417	377	22,966	26,175	9,319
2026	6,456	5,552	404	24,542	27,573	9,382
2027	6,187	5,691	428	25,905	28,754	9,458
2028	5,920	5,834	440	26,593	29,373	9,413
2029	5,653	5,979	461	27,712	30,145	9,660
2030	5,386	6,129	484	29,010	31,351	9,658
2031	5,119	6,282	496	29,608	31,919	9,586
2032	4,853	6,439	515	30,654	32,575	9,886
2033	4,587	6,600	567	33,729	35,620	9,862
2034	4,320	6,765	593	35,107	36,465	10,321
2035	4,055	6,934	610	35,906	37,028	10,476
2036	3,789	7,108	630	36,978	38,126	10,379
2037	3,523	7,285	648	37,818	38,674	10,600
2038	3,258	7,467	666	38,762	39,854	10,300
2039	2,993	7,654	684	39,559	40,769	10,121
2040	2,777	7,846	702	40,470	41,235	10,559
2041	2,609	8,042	721	41,358	42,273	10,456
2042	2,441	8,243	741	42,300	43,451	10,273
2043	2,273	8,449	763	43,388	44,568	10,304
	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	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
NOM	129,596	159,558	12,712	751,265	806,611	246,517
NPV	28,990	26,490	1,919	114,981	127,892	44,489

AVOIDED T&D AND PROGRAM FUEL SAVINGS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business On Call

(1) YEAR	(2) AVOIDED TRANSMISSION CAP COST \$(000)	(3) AVOIDED TRANSMISSION O&M COST \$(000)	(4) TOTAL AVOIDED TRANSMISSION COST \$(000)	(5) AVOIDED DISTRIBUTION CAP COST \$(000)	(6) AVOIDED DISTRIBUTION O&M COST \$(000)	(7) TOTAL AVOIDED DISTRIBUTION COST \$(000)	(8) PROGRAM FUEL SAVINGS \$(000)	(9a)* PROGRAM OFF-PEAK PAYBACK \$(000)
2009	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0
2011	155	12	168	8	3	11	2	1
2012	311	25	336	16	7	22	4	1
2013	466	52	517	23	10	34	5	2
2014	620	81	701	31	14	45	8	3
2015	773	97	870	39	18	57	9	3
2016	927	114	1,041	46	22	69	12	4
2017	1,081	131	1,212	54	27	81	14	5
2018	1,235	138	1,373	62	31	93	16	6
2019	1,389	145	1,534	69	36	105	19	7
2020	1,541	149	1,690	77	37	114	21	7
2021	1,693	152	1,845	85	40	125	23	8
2022	1,847	156	2,003	93	41	134	24	8
2023	1,999	160	2,159	101	42	143	25	9
2024	2,151	164	2,315	109	43	152	26	9
2025	2,303	168	2,471	117	44	161	27	10
2026	2,455	173	2,628	125	45	170	28	11
2027	2,607	177	2,784	133	46	179	29	11
2028	2,759	181	2,940	141	47	188	30	12
2029	2,911	186	3,097	149	48	197	31	12
2030	3,063	190	3,253	157	49	206	32	13
2031	3,215	195	3,410	165	50	215	33	13
2032	3,367	200	3,567	173	51	224	34	14
2033	3,519	205	3,724	181	52	233	35	14
2034	3,671	210	3,881	189	53	242	36	15
2035	3,823	215	4,038	197	54	251	37	15
2036	3,975	221	4,195	205	55	260	38	16
2037	4,127	226	4,352	213	56	269	39	16
2038	4,279	232	4,509	221	57	278	40	17
2039	4,431	238	4,666	229	58	287	41	17
2040	4,583	244	4,823	237	59	296	42	18
2041	4,735	249	4,980	245	60	305	43	18
2042	4,887	255	5,137	253	61	314	44	19
2043	5,039	260	5,294	261	62	323	45	19
2044	5,191	266	5,451	269	63	332	46	20
2045	5,343	271	5,608	277	64	341	47	20
2046	5,495	277	5,765	285	65	350	48	21
2047	5,647	282	5,922	293	66	359	49	21
2048	5,799	288	6,079	301	67	368	50	22
2049	5,951	293	6,236	309	68	377	51	22
2050	6,103	299	6,393	317	69	386	52	23
2051	6,255	304	6,550	325	70	395	53	23
2052	6,407	310	6,707	333	71	404	54	24
2053	6,559	315	6,864	341	72	413	55	24
2054	6,711	321	7,021	349	73	422	56	25
2055	6,863	326	7,178	357	74	431	57	25
2056	7,015	332	7,335	365	75	440	58	26
2057	7,167	337	7,492	373	76	449	59	26
2058	7,319	343	7,649	381	77	458	60	27
2059	7,471	348	7,806	389	78	467	61	27
2060	7,623	354	7,963	397	79	476	62	28
2061	7,775	359	8,120	405	80	485	63	28
2062	7,927	365	8,277	413	81	494	64	29
2063	8,079	370	8,434	421	82	503	65	29
2064	8,231	376	8,591	429	83	512	66	30
2065	8,383	381	8,748	437	84	521	67	30
2066	8,535	387	8,905	445	85	530	68	31
2067	8,687	392	9,062	453	86	539	69	31
2068	8,839	398	9,219	461	87	548	70	32
2069	8,991	403	9,376	469	88	557	71	32
2070	9,143	409	9,533	477	89	566	72	33
2071	9,295	414	9,690	485	90	575	73	33
2072	9,447	420	9,847	493	91	584	74	34
2073	9,599	425	10,004	501	92	593	75	34
2074	9,751	431	10,161	509	93	602	76	35
2075	9,903	436	10,318	517	94	611	77	35
2076	10,055	442	10,475	525	95	620	78	36
2077	10,207	447	10,632	533	96	629	79	36
2078	10,359	453	10,789	541	97	638	80	37
2079	10,511	458	10,946	549	98	647	81	37
2080	10,663	464	11,103	557	99	656	82	38
2081	10,815	469	11,260	565	100	665	83	38
2082	10,967	475	11,417	573	101	674	84	39
2083	11,119	480	11,574	581	102	683	85	39
2084	11,271	486	11,731	589	103	692	86	40
2085	11,423	491	11,888	597	104	701	87	40
2086	11,575	497	12,045	605	105	710	88	41
2087	11,727	502	12,202	613	106	719	89	41
2088	11,879	508	12,359	621	107	728	90	42
2089	12,031	513	12,516	629	108	737	91	42
2090	12,183	519	12,673	637	109	746	92	43
2091	12,335	524	12,830	645	110	755	93	43
2092	12,487	530	12,987	653	111	764	94	44
2093	12,639	535	13,144	661	112	773	95	44
2094	12,791	541	13,301	669	113	782	96	45
2095	12,943	546	13,458	677	114	791	97	45
2096	13,095	552	13,615	685	115	800	98	46
2097	13,247	557	13,772	693	116	809	99	46
2098	13,399	563	13,929	701	117	818	100	47
2099	13,551	568	14,086	709	118	827	101	47
2100	13,703	574	14,243	717	119	836	102	48
NOM	27,723	5,184	32,907	1,385	1,365	2,750	662	251
NPV	8,029	1,096	9,125	401	280	682	135	48

\* THESE VALUES REPRESENT THE COST OF THE INCREASED FUEL CONSUMPTION DUE TO GREATER OFF-PEAK ENERGY USAGE. USED FOR LOAD SHIFTING PROGRAMS ONLY.



AVOIDED GENERATING EMISSION IMPACT  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business On Call

	(2)	(3)	(4)	(5)	(6)
YEAR	AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	REPLACEMENT EMISSION COST \$(000)	PROGRAM EMISSION BENEFIT \$(000)	OFF-PEAK EMISSION PAYBACK COST \$(000)	NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	0	0	0	0	0
2013	0	0	0	0	0
2014	0	0	1	0	0
2015	0	0	1	0	0
2016	0	0	1	0	1
2017	0	0	1	1	1
2018	0	0	2	1	1
2019	1,422	1,860	2	1	(436)
2020	2,166	2,805	2	1	(638)
2021	2,386	3,093	2	1	(706)
2022	2,786	3,604	3	1	(816)
2023	3,075	3,975	3	1	(898)
2024	3,540	4,565	3	1	(1,025)
2025	4,086	5,254	3	1	(1,166)
2026	4,531	5,791	3	1	(1,258)
2027	5,126	6,542	3	1	(1,414)
2028	5,621	7,161	3	2	(1,539)
2029	6,430	8,161	4	2	(1,729)
2030	7,129	9,043	4	2	(1,912)
2031	7,748	9,821	5	2	(2,071)
2032	8,532	10,792	5	2	(2,258)
2033	9,941	12,568	5	2	(2,624)
2034	11,003	13,899	5	3	(2,893)
2035	11,951	15,104	6	3	(3,149)
2036	13,047	16,485	6	3	(3,434)
2037	14,141	17,861	7	3	(3,717)
2038	15,329	19,359	7	3	(4,026)
2039	16,555	20,834	8	4	(4,375)
2040	17,890	22,619	8	4	(4,725)
2041	19,276	24,368	8	4	(5,088)
2042	19,276	24,368	9	5	(5,088)
2043	19,276	24,368	10	5	(5,087)
	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	0
	0	0	0	0	0
	0	0	0	0	0
NOM	232,264	294,401	130	59	(62,066)
NPV	28,121	35,782	20	9	(7,649)





RATE IMPACT TEST  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business On Call

(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)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	84	64	0	0	148	1	0	0	0	1	(148)	(148)
2011	0	249	192	1	0	442	1	179	0	0	180	(262)	(357)
2012	0	412	320	1	0	733	3	358	0	0	361	(372)	(645)
2013	0	572	448	2	0	1,021	2	551	0	0	553	(468)	(978)
2014	0	729	576	2	0	1,307	3	731	0	0	734	(573)	(1,352)
2015	0	837	704	3	0	1,544	5	912	0	0	917	(627)	(1,728)
2016	0	894	832	3	0	1,729	6	1,093	0	1	1,100	(629)	(2,075)
2017	0	953	960	4	0	1,917	8	1,276	0	1	1,284	(633)	(2,395)
2018	0	1,014	1,088	5	0	2,107	8	1,450	0	1	1,469	(638)	(2,691)
2019	0	973	1,152	4	0	2,129	10,245	1,629	0	0	11,438	9,308	1,281
2020	0	833	1,152	5	0	1,990	9,522	1,583	0	0	10,467	8,477	4,604
2021	0	699	1,152	5	0	1,856	9,140	1,537	0	0	9,971	8,115	7,526
2022	0	571	1,152	5	0	1,728	9,086	1,493	0	0	8,161	9,763	8,035
2023	0	450	1,152	5	0	1,607	9,246	1,450	0	0	8,998	9,797	8,191
2024	0	392	1,152	5	0	1,549	9,350	1,408	0	0	1,023	9,735	8,185
2025	0	402	1,152	5	0	1,559	9,332	1,367	0	0	1,166	9,533	7,974
2026	0	412	1,152	6	0	1,570	9,596	1,526	0	0	1,288	9,463	7,864
2027	0	422	1,152	6	0	1,580	9,471	1,286	0	0	1,414	9,343	7,763
2028	0	433	1,152	6	0	1,591	9,427	1,245	0	0	1,539	9,134	7,543
2029	0	444	1,152	6	0	1,602	9,673	1,205	0	0	1,729	9,149	7,547
2030	0	455	1,152	7	0	1,613	9,671	1,165	0	0	1,912	8,925	7,312
2031	0	466	1,152	7	0	1,625	9,599	1,126	0	0	2,071	8,654	7,029
2032	0	478	1,152	7	0	1,637	9,899	1,089	0	0	2,258	8,730	7,092
2033	0	490	1,152	8	0	1,650	9,876	1,053	0	0	2,624	8,305	6,655
2034	0	502	1,152	8	0	1,662	10,335	1,020	0	0	2,893	8,462	6,800
2035	0	515	1,152	9	0	1,675	10,491	990	0	0	3,149	8,332	6,657
2036	0	528	1,152	9	0	1,689	10,394	962	0	0	3,434	7,923	6,234
2037	0	541	1,152	10	0	1,702	10,616	937	0	0	3,717	7,837	6,135
2038	0	554	1,152	10	0	1,716	10,316	915	0	0	4,026	7,205	5,489
2039	0	568	1,152	11	0	1,731	10,138	896	0	0	4,375	6,658	4,928
2040	0	582	1,152	12	0	1,746	10,577	878	0	0	4,725	6,730	4,984
2041	0	597	1,152	12	0	1,761	10,474	862	0	0	5,088	6,248	4,488
2042	0	612	1,152	13	0	1,776	10,292	846	0	0	5,088	6,050	4,274
2043	0	627	1,152	13	0	1,792	10,324	830	0	0	5,087	6,067	4,274
	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	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	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	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	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
NOM.	0	19,291	33,981	212	0	53,484	246,929	35,657	0	(62,066)	220,520	167,035	
NPV	0	6,066	8,343	40	0	14,448	44,576	9,806	0	(7,649)	46,734	32,285	

Discount Rate  
 Benefit/Cost Ratio (Col(12) / Col(7)) :

8.89 %  
3.23

**BUSINESS PHOTOVOLTAICS FOR SCHOOLS**

INPUT DATA - PART I CONTINUED  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Commercial/Industrial Demand Reduction

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER kW REDUCTION AT METER .....	1.00 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	1.34 kW
(3) kW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	8.59 kWh *****
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	0.40 kWh *****

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63234

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	** %**
(8) INCREASED SUPPLY COSTS .....	^^ \$/CUST/YR
(9) SUPPLY COSTS ESCALATION RATES .....	*** %**
(10) UTILITY DISCOUNT RATE .....	8.89 %
(11) UTILITY AFUDC RATE .....	8.48 %
(12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2013-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	0.00 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/kW
(7) GEN. TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	0.00 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)

\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

\*\*\*\* THIS IS A LOAD SHIFTING PROGRAM. VALUE SHOWN IN ITEM (4) IS ANNUAL kWh/CUST SHIFTED AWAY FROM PEAK HRS. VALUE SHOWN IN ITEM (7) IS ANNUAL kWh/CUST THAT IS PAID BACK DURING OFF-PEAK.



CALCULATION OF GENK-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Commercial/Industrial Demand Reduction

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
BEG-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE FW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	170,978	5,311	0	11,932	7,871	2,881	1,017	6,670	13	35,696	35,696	166,747
2020	164,295	5,104	0	11,466	5,409	2,761	1,043	6,670	2,183	34,625	31,808	170,915
2021	155,443	4,828	0	10,848	5,360	2,641	1,069	6,670	1,844	33,260	28,052	175,188
2022	146,929	4,564	0	10,254	5,298	2,521	1,095	6,670	1,533	31,935	24,737	179,568
2023	138,727	4,309	0	9,681	5,230	2,401	1,123	6,670	1,241	30,655	21,808	184,057
2024	130,816	4,064	0	9,129	5,151	2,281	1,151	6,670	973	29,419	19,220	188,659
2025	123,173	3,826	0	8,596	5,065	2,161	1,180	6,670	725	28,222	16,933	193,375
2026	115,778	3,597	0	8,080	4,969	2,041	1,209	6,670	496	27,062	14,912	198,210
2027	108,613	3,374	0	7,580	4,693	1,921	1,239	6,670	259	25,935	13,124	203,165
2028	101,485	3,153	0	7,082	4,381	1,801	1,270	6,670	458	24,815	11,533	208,244
2029	94,357	2,931	0	6,585	4,068	1,681	1,302	6,670	458	23,695	10,114	213,450
2030	87,229	2,710	0	6,088	3,756	1,561	1,335	6,670	458	22,576	8,850	218,786
2031	80,102	2,488	0	5,590	3,443	1,441	1,368	6,670	458	21,458	7,725	224,256
2032	72,974	2,267	0	5,093	3,132	1,321	1,402	6,670	458	20,341	6,725	229,862
2033	65,846	2,045	0	4,595	2,819	1,201	1,437	6,670	458	19,225	5,837	235,609
2034	58,718	1,824	0	4,098	2,507	1,081	1,473	6,670	458	18,110	5,050	241,499
2035	51,590	1,603	0	3,600	2,194	960	1,510	6,670	458	16,995	4,352	247,537
2036	44,462	1,381	0	3,103	1,882	840	1,548	6,670	458	15,882	3,735	253,725
2037	37,335	1,160	0	2,606	1,569	720	1,586	6,670	458	14,769	3,190	260,068
2038	30,207	938	0	2,108	1,257	600	1,626	6,670	458	13,657	2,709	266,570
2039	23,079	717	0	1,611	940	480	1,667	6,670	(937)	12,547	2,286	273,234
2040	17,347	539	0	1,211	754	360	1,708	6,670	(2,333)	11,439	1,947	280,065
2041	13,009	404	0	908	608	240	1,751	6,670	(2,333)	10,334	1,680	287,067
2042	8,672	269	0	605	458	120	1,795	6,670	(2,333)	9,228	1,444	294,243
2043	4,335	135	0	303	2514	0	1,840	6,670	(2,333)	8,115	1,235	301,599

IN SERVICE COST (\$000)	166,747
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	8.9%
PROPERTY TAX	1.809%
PROPERTY INSURANCE	0.611%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST	%
DEBT	44%	7.03	%
P/S	0%	0.00	%
C/S	56%	12.50	%

K-FACTOR = CPWFC / IN-SVC COST = 1.70738



DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Commercial/Industrial Demand Reduct

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	6,081	6,081	6,670	6,670	6,047	6,047	13	15,564	0	0	0	13	(4,219)
2020	7.22%	11,706	17,786	6,670	13,340	6,047	12,095	2,183	15,564	0	0	0	2,183	(2,036)
2021	6.68%	10,827	28,613	6,670	20,010	6,047	18,142	1,844	15,564	0	0	0	1,844	(192)
2022	6.18%	10,021	38,634	6,670	26,679	6,047	24,189	24,189	15,564	0	0	0	1,533	1,341
2023	5.71%	9,264	47,898	6,670	33,349	6,047	30,237	1,241	15,564	0	0	0	1,241	2,582
2024	5.29%	8,570	56,468	6,670	40,019	6,047	36,284	973	15,564	0	0	0	973	3,555
2025	4.89%	7,926	64,394	6,670	46,689	6,047	42,331	725	15,564	0	0	0	725	4,279
2026	4.52%	7,333	71,726	6,670	53,359	6,047	48,378	496	15,564	0	0	0	496	4,775
2027	4.46%	7,235	78,962	6,670	60,029	6,047	54,426	458	15,564	0	0	0	458	5,233
2028	4.46%	7,234	86,195	6,670	66,699	6,047	60,473	458	15,564	0	0	0	458	5,691
2029	4.46%	7,235	93,430	6,670	73,369	6,047	66,520	458	15,564	0	0	0	458	6,149
2030	4.46%	7,234	100,664	6,670	80,038	6,047	72,568	458	15,564	0	0	0	458	6,607
2031	4.46%	7,235	107,899	6,670	86,708	6,047	78,615	458	15,564	0	0	0	458	7,065
2032	4.46%	7,234	115,133	6,670	93,378	6,047	84,662	458	15,564	0	0	0	458	7,523
2033	4.46%	7,235	122,368	6,670	100,048	6,047	90,710	458	15,564	0	0	0	458	7,981
2034	4.46%	7,234	129,602	6,670	106,718	6,047	96,757	458	15,564	0	0	0	458	8,438
2035	4.46%	7,235	136,837	6,670	113,388	6,047	102,804	458	15,564	0	0	0	458	8,897
2036	4.46%	7,234	144,071	6,670	120,058	6,047	108,852	458	15,564	0	0	0	458	9,354
2037	4.46%	7,235	151,306	6,670	126,728	6,047	114,899	458	15,564	0	0	0	458	9,813
2038	4.46%	7,234	158,539	6,670	133,397	6,047	120,946	458	15,564	0	0	0	458	10,270
2039	2.23%	3,618	162,157	6,670	140,067	6,047	126,993	(937)	15,564	0	0	0	(937)	9,333
2040	0.00%	0	162,157	6,670	146,737	6,047	133,041	(2,333)	15,564	0	0	0	(2,333)	7,000
2041	0.00%	0	162,157	6,670	153,407	6,047	139,088	(2,333)	15,564	0	0	0	(2,333)	4,667
2042	0.00%	0	162,157	6,670	160,077	6,047	145,135	(2,333)	15,564	0	0	0	(2,333)	2,335
2043	0.00%	0	162,157	6,670	166,747	6,047	151,183	(2,333)	15,564	0	0	0	(2,333)	2

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(4,231)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	15,564
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Commercial/Industrial Demand Reduction

(1) YEAR	(2) TAX DEPRECIATION SCHEDULE	(3) TAX DEPRECIATION \$(000)	(4) DEFERRED TAX \$(000)	(5) END OF YEAR NET PLANT IN SERVICE \$(000)	(5a)* ACCUMULATED DEPRECIATION \$(000)	(5b)* ACCUMULATED DEF TAXES \$(000)	(6) BEGINNING YEAR RATE BASE \$(000)	(7) ENDING OF YEAR RATE BASE \$(000)	(8) MID-YEAR RATE BASE \$(000)
2019	3.75%	6,081	13	160,077	6,670	(4,219)	170,978	164,295	167,637
2020	7.22%	11,706	2,183	153,407	13,340	(2,036)	164,295	155,443	159,869
2021	6.68%	10,827	1,844	146,737	20,010	(192)	155,443	146,929	151,186
2022	6.18%	10,021	1,533	140,067	26,679	1,341	146,929	138,727	142,828
2023	5.71%	9,264	1,241	133,397	33,349	2,582	138,727	130,816	134,771
2024	5.29%	8,570	973	126,728	40,019	3,555	130,816	123,173	126,994
2025	4.89%	7,926	725	120,058	46,689	4,279	123,173	115,778	119,476
2026	4.52%	7,333	496	113,388	53,359	4,775	115,778	108,613	112,196
2027	4.46%	7,235	458	106,718	60,029	5,233	108,613	101,485	105,049
2028	4.46%	7,234	458	100,048	66,699	5,691	101,485	94,357	97,921
2029	4.46%	7,235	458	93,378	73,369	6,149	94,357	87,229	90,793
2030	4.46%	7,234	458	86,708	80,038	6,607	87,229	80,102	83,665
2031	4.46%	7,235	458	80,038	86,708	7,065	80,102	72,974	76,538
2032	4.46%	7,234	458	73,369	93,378	7,523	72,974	65,846	69,410
2033	4.46%	7,235	458	66,699	100,048	7,981	65,846	58,718	62,282
2034	4.46%	7,234	458	60,029	106,718	8,438	58,718	51,590	55,154
2035	4.46%	7,235	458	53,359	113,388	8,897	51,590	44,462	48,026
2036	4.46%	7,234	458	46,689	120,058	9,354	44,462	37,335	40,899
2037	4.46%	7,235	458	40,019	126,728	9,813	37,335	30,207	33,771
2038	4.46%	7,234	458	33,349	133,397	10,270	30,207	23,079	26,643
2039	2.23%	3,618	(937)	26,679	140,067	9,333	23,079	17,347	20,213
2040	0.00%	0	(2,333)	20,010	146,737	7,000	17,347	13,009	15,178
2041	0.00%	0	(2,333)	13,340	153,407	4,667	13,009	8,672	10,841
2042	0.00%	0	(2,333)	6,670	160,077	2,335	8,672	4,335	6,504
2043	0.00%	0	(2,333)	0	166,747	2	4,335	-2	2,167

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	5.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

		100.00%		907.77									
YEAR	NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)	
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2013	-6	0.62	0.02	0.02	0.05	0.04	0.04	0.00	(0.01)	(0.01)	1.29	1.29	
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07	
2015	-4	37.87	1.18	1.49	3.22	4.05	2.65	3.35	(0.57)	(0.72)	42.83	60.90	
2016	-3	226.84	7.97	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06	
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43	
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61	

	57.47		156.84		127.50		(27.02)		1,064.61																								
IN SERVICE YEAR    2019 PLANT COSTS        725,389,805.55 AFUDC RATE         8.48%		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>BOOK BASIS</th> <th>BOOK BASIS FOR DEF TAX</th> <th>TAX BASIS</th> </tr> </thead> <tbody> <tr> <td>CONSTRUCTION CASH</td> <td>142,182</td> <td>142,182</td> <td>142,182</td> </tr> <tr> <td>EQUITY AFUDC</td> <td>15,564</td> <td></td> <td></td> </tr> <tr> <td>DEBT AFUDC</td> <td>9,001</td> <td>9,001</td> <td></td> </tr> <tr> <td>CPI</td> <td></td> <td></td> <td>19,970</td> </tr> <tr> <td><b>TOTAL</b></td> <td><b>166,747</b></td> <td><b>151,183</b></td> <td><b>162,152</b></td> </tr> </tbody> </table>		BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS	CONSTRUCTION CASH	142,182	142,182	142,182	EQUITY AFUDC	15,564			DEBT AFUDC	9,001	9,001		CPI			19,970	<b>TOTAL</b>	<b>166,747</b>	<b>151,183</b>	<b>162,152</b>							
	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS																														
CONSTRUCTION CASH	142,182	142,182	142,182																														
EQUITY AFUDC	15,564																																
DEBT AFUDC	9,001	9,001																															
CPI			19,970																														
<b>TOTAL</b>	<b>166,747</b>	<b>151,183</b>	<b>162,152</b>																														

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Commercial/Industrial Demand Reduction

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (C/kWh)	(5) AVOIDED MARGINAL FUEL COST (C/kWh)	(6)* INCREASED MARGINAL FUEL COST (C/kWh)	(7) REPLACEMENT FUEL COST (C/kWh)	(8) PROGRAM kW EFFECTIVENESS FACTOR	(9) PROGRAM kWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	13,073	13,073	6.41	16.51	6.41	0.00	1.00	1.00
2011	26,146	26,146	6.35	10.38	6.35	0.00	1.00	1.00
2012	39,219	39,219	6.43	13.34	6.43	0.00	1.00	1.00
2013	52,292	52,292	7.06	9.99	7.06	0.00	1.00	1.00
2014	65,286	65,286	7.53	10.61	7.53	0.00	1.00	1.00
2015	78,279	78,279	8.11	13.20	8.11	0.00	1.00	1.00
2016	91,273	91,273	9.00	13.90	9.00	0.00	1.00	1.00
2017	104,266	104,266	9.75	15.09	9.75	0.00	1.00	1.00
2018	117,260	117,260	10.52	15.46	10.52	0.00	1.00	1.00
2019	117,260	117,260	11.50	21.44	11.50	10.41	1.00	1.00
2020	117,260	117,260	12.08	20.17	12.08	10.50	1.00	1.00
2021	117,260	117,260	12.57	21.76	12.57	10.74	1.00	1.00
2022	117,260	117,260	13.06	23.66	13.06	10.81	1.00	1.00
2023	117,260	117,260	13.39	20.91	13.39	10.80	1.00	1.00
2024	117,260	117,260	13.95	22.19	13.95	10.84	1.00	1.00
2025	117,260	117,260	14.40	22.20	14.40	10.96	1.00	1.00
2026	117,260	117,260	14.70	22.41	14.70	11.05	1.00	1.00
2027	117,260	117,260	15.13	23.05	15.13	11.17	1.00	1.00
2028	117,260	117,260	15.60	23.70	15.60	11.36	1.00	1.00
2029	117,260	117,260	16.02	22.95	16.02	11.41	1.00	1.00
2030	117,260	117,260	16.32	23.78	16.32	11.59	1.00	1.00
2031	117,260	117,260	17.08	24.53	17.08	11.80	1.00	1.00
2032	117,260	117,260	17.50	24.55	17.50	11.88	1.00	1.00
2033	117,260	117,260	18.27	25.51	18.27	12.10	1.00	1.00
2034	117,260	117,260	18.73	25.89	18.73	12.14	1.00	1.00
2035	117,260	117,260	19.57	27.04	19.57	12.29	1.00	1.00
2036	117,260	117,260	20.40	28.26	20.40	12.55	1.00	1.00
2037	117,260	117,260	21.11	29.22	21.11	12.70	1.00	1.00
2038	117,260	117,260	22.02	30.23	22.02	13.04	1.00	1.00
2039	117,260	117,260	22.78	31.28	22.78	13.32	1.00	1.00
2040	117,260	117,260	23.59	32.02	23.59	13.44	1.00	1.00
2041	117,260	117,260	24.54	33.28	24.54	13.75	1.00	1.00
2042	117,260	117,260	25.50	34.66	25.50	14.10	1.00	1.00
2043	117,260	117,260	26.74	36.49	26.74	14.40	1.00	1.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Commercial/Industrial Demand Reduction

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	35,696	19,580	826	49,362	63,083	42,891
2020	34,635	20,069	1191	73,463	89,498	39,860
2021	33,260	20,571	1247	76,649	93,474	38,252
2022	31,935	21,085	1324	81,125	97,450	38,019
2023	30,655	21,612	1397	85,280	100,254	38,702
2024	29,419	22,153	1480	90,097	104,015	39,133
2025	28,222	22,707	1582	96,267	109,717	39,061
2026	27,062	23,274	1695	102,873	115,576	39,327
2027	25,935	23,856	1792	108,585	120,526	39,643
2028	24,815	24,452	1845	111,467	123,122	39,457
2029	23,695	25,064	1932	116,161	126,359	40,493
2030	22,576	25,690	2028	121,599	131,412	40,483
2031	21,458	26,333	2078	124,105	133,795	40,179
2032	20,341	26,991	2159	128,489	136,543	41,438
2033	19,225	27,666	2376	141,379	149,309	41,337
2034	18,110	28,357	2487	147,155	152,848	43,261
2035	16,995	29,066	2555	150,504	155,207	43,913
2036	15,882	29,793	2642	154,998	159,811	43,504
2037	14,769	30,538	2715	158,521	162,110	44,433
2038	13,657	31,301	2793	162,476	167,055	43,173
2039	12,547	32,084	2865	165,817	170,891	42,422
2040	11,639	32,886	2944	169,636	172,844	44,262
2041	10,934	33,708	3024	173,358	177,194	43,830
2042	10,230	34,551	3106	177,306	182,131	43,062
2043	9,528	35,414	3199	181,867	186,816	43,193
	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	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
NCM	543,222	668,801	53,283	3,149,051	3,381,040	1,033,317
NPV	121,516	111,038	8,046	491,963	536,078	186,484

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AVOIDED GENERATING EMISSION IMPACT  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Commercial/Industrial Demand Reduction

(1)	(2)	(3)	(4)	(5)	(6)
YEAR	AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	REPLACEMENT EMISSION COST \$(000)	PROGRAM EMISSION BENEFIT \$(000)	OFF-PEAK EMISSION PAYBACK COST \$(000)	NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	0	0	1	0	1
2013	0	0	4	0	4
2014	0	0	5	0	5
2015	0	0	8	0	7
2016	0	0	10	0	9
2017	0	0	13	0	12
2018	0	0	15	1	15
2019	5,962	7,796	18	1	(1,816)
2020	9,078	11,758	20	1	(2,660)
2021	10,001	12,966	21	1	(2,944)
2022	11,679	15,107	24	1	(3,404)
2023	12,889	16,660	24	1	(3,748)
2024	14,840	19,136	27	1	(4,270)
2025	17,128	22,022	29	1	(4,866)
2026	18,994	24,276	29	1	(5,254)
2027	21,487	27,421	31	1	(5,905)
2028	23,561	30,018	33	2	(6,426)
2029	26,930	34,208	38	2	(7,221)
2030	29,882	37,904	41	2	(7,984)
2031	32,476	41,168	44	2	(8,649)
2032	35,761	45,238	46	2	(9,432)
2033	41,668	52,679	50	2	(10,963)
2034	46,123	58,260	51	2	(12,089)
2035	50,096	63,309	57	3	(13,158)
2036	54,690	69,099	61	3	(14,351)
2037	59,275	74,869	66	3	(15,531)
2038	64,253	81,145	70	3	(16,825)
2039	69,393	87,749	75	4	(18,284)
2040	74,989	94,812	74	4	(19,752)
2041	80,799	102,144	80	4	(21,269)
2042	80,799	102,144	86	4	(21,263)
2043	80,799	102,144	92	5	(21,257)
	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	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
NOM	973,574	1,234,031	1,244	58	(259,271)
NPV	117,875	149,986	195	9	(31,924)

TOTAL RESOURCE COST TEST  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Commercial/Industrial Demand Reduction

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	19	0	0	19	0	0	10	0	10	(8)	(8)
2011	0	38	0	0	38	0	0	18	0	18	(20)	(24)
2012	0	59	0	0	59	0	0	41	1	41	(18)	(38)
2013	0	81	0	0	81	0	0	40	4	44	(37)	(64)
2014	0	103	0	0	103	0	0	55	5	60	(44)	(93)
2015	0	127	0	0	127	0	0	85	7	93	(34)	(114)
2016	0	152	0	0	152	0	0	105	9	115	(37)	(134)
2017	0	178	0	0	178	0	0	132	12	144	(34)	(151)
2018	0	205	0	0	205	0	0	152	15	166	(39)	(169)
2019	0	210	0	0	210	42,881	0	231	(1,816)	41,296	41,085	17,267
2020	0	215	0	0	215	39,860	0	214	(2,660)	37,414	37,198	31,948
2021	0	221	0	0	221	38,252	0	232	(2,944)	35,540	35,319	44,663
2022	0	226	0	0	226	38,619	0	254	(3,404)	34,869	34,643	56,116
2023	0	232	0	0	232	38,702	0	219	(3,748)	35,173	34,941	66,725
2024	0	238	0	0	238	39,133	0	234	(4,270)	35,097	34,859	75,446
2025	0	244	0	0	244	39,061	0	233	(4,866)	34,427	34,183	85,200
2026	0	250	0	0	250	39,327	0	234	(5,254)	34,308	34,058	93,210
2027	0	256	0	0	256	39,643	0	241	(5,905)	33,979	33,723	100,494
2028	0	262	0	0	262	39,457	0	248	(6,426)	33,279	33,017	107,043
2029	0	269	0	0	269	40,493	0	237	(7,221)	33,509	33,240	113,098
2030	0	276	0	0	276	40,483	0	246	(7,984)	32,745	32,469	118,531
2031	0	283	0	0	283	40,179	0	254	(8,649)	31,784	31,501	123,371
2032	0	290	0	0	290	41,438	0	253	(9,432)	32,258	31,969	127,882
2033	0	297	0	0	297	41,337	0	263	(10,963)	30,637	30,340	131,814
2034	0	304	0	0	304	43,261	0	265	(12,689)	31,438	31,134	135,520
2035	0	312	0	0	312	43,913	0	278	(13,158)	31,033	30,721	138,878
2036	0	320	0	0	320	43,504	0	291	(14,351)	29,444	29,124	141,801
2037	0	328	0	0	328	44,433	0	301	(15,531)	29,202	28,874	144,463
2038	0	336	0	0	336	43,173	0	310	(16,825)	26,658	26,322	146,692
2039	0	344	0	0	344	42,422	0	321	(18,284)	24,459	24,115	148,567
2040	0	353	0	0	353	44,262	0	328	(19,752)	24,838	24,485	150,315
2041	0	362	0	0	362	43,830	0	341	(21,269)	22,902	22,540	151,793
2042	0	371	0	0	371	43,062	0	355	(21,263)	22,154	21,783	153,105
2043	0	380	0	0	380	43,193	0	374	(21,257)	22,310	21,930	154,318
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	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	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	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
NOM	0	8,140	0	0	8,140	1,033,317	0	7,397	(239,271)	781,443	773,302	
NPV	0	1,757	0	0	1,757	186,484	0	1,516	(31,924)	156,076	154,318	

Discount Rate: 8.99 %  
Benefit/Cost Ratio (Col(11) / Col(6)) : 88.8



PARTICIPANT COSTS AND BENEFITS  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Commercial/Industrial Demand Reduction

(1) YEAR	(2) SAVINGS IN PARTICIPANTS BILLS \$(000)	(3) TAX CREDITS \$(000)	(4) UTILITY REBATES \$(000)	(5) OTHER BENEFITS \$(000)	(6) TOTAL BENEFITS \$(000)	(7) CUSTOMER EQUIPMENT COSTS \$(000)	(8) CUSTOMER O&M COSTS \$(000)	(9) OTHER COSTS \$(000)	(10) TOTAL COSTS \$(000)	(11) NET BENEFITS \$(000)	(12) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0
2010	5	0	366	0	371	0	0	0	0	371	341
2011	16	0	1,098	0	1,114	0	0	0	0	1,114	1,281
2012	28	0	1,830	0	1,858	0	0	0	0	1,858	2,720
2013	41	0	2,562	0	2,604	0	0	0	0	2,604	4,572
2014	57	0	3,292	0	3,349	0	0	0	0	3,349	6,760
2015	73	0	4,026	0	4,092	0	0	0	0	4,092	9,215
2016	90	0	4,747	0	4,837	0	0	0	0	4,837	11,881
2017	107	0	5,475	0	5,582	0	0	0	0	5,582	14,706
2018	126	0	6,203	0	6,329	0	0	0	0	6,329	17,647
2019	141	0	6,567	0	6,708	0	0	0	0	6,708	20,510
2020	143	0	6,567	0	6,709	0	0	0	0	6,709	23,140
2021	148	0	6,567	0	6,714	0	0	0	0	6,714	25,557
2022	154	0	6,567	0	6,720	0	0	0	0	6,720	27,779
2023	160	0	6,567	0	6,726	0	0	0	0	6,726	29,821
2024	169	0	6,567	0	6,735	0	0	0	0	6,735	31,699
2025	178	0	6,567	0	6,744	0	0	0	0	6,744	33,427
2026	186	0	6,567	0	6,753	0	0	0	0	6,753	35,015
2027	198	0	6,567	0	6,765	0	0	0	0	6,765	36,476
2028	208	0	6,567	0	6,774	0	0	0	0	6,774	37,820
2029	219	0	6,567	0	6,786	0	0	0	0	6,786	39,056
2030	232	0	6,567	0	6,798	0	0	0	0	6,798	40,193
2031	244	0	6,567	0	6,811	0	0	0	0	6,811	41,240
2032	261	0	6,567	0	6,827	0	0	0	0	6,827	42,203
2033	287	0	6,567	0	6,854	0	0	0	0	6,854	43,091
2034	293	0	6,567	0	6,859	0	0	0	0	6,859	43,908
2035	307	0	6,567	0	6,874	0	0	0	0	6,874	44,659
2036	332	0	6,567	0	6,899	0	0	0	0	6,899	45,352
2037	352	0	6,567	0	6,918	0	0	0	0	6,918	45,989
2038	369	0	6,567	0	6,936	0	0	0	0	6,936	46,577
2039	388	0	6,567	0	6,955	0	0	0	0	6,955	47,117
2040	409	0	6,567	0	6,975	0	0	0	0	6,975	47,616
2041	433	0	6,567	0	7,000	0	0	0	0	7,000	48,075
2042	459	0	6,567	0	7,025	0	0	0	0	7,025	48,498
2043	486	0	6,567	0	7,053	0	0	0	0	7,053	48,888
	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	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	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	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	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
NCM	7,299	0	193,758	0	201,056	0	0	0	0	201,056	
NPV	1,299	0	47,588	0	48,888	0	0	0	0	48,888	

In Service of Gen Unit:  
Discount Rate :  
Benefit/Cost Ratio ( Col(6) / Col(10) )

2019  
8.89 %  
Infinite

RATE IMPACT TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Commercial/Industrial Demand Reduction

(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)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	19	366	4	0	389	10	0	0	0	10	(379)	(348)
2011	0	38	1,098	13	0	1,150	18	0	0	0	19	(1,131)	(1,302)
2012	0	59	1,830	23	0	1,912	41	0	0	1	41	(1,871)	(2,751)
2013	0	81	2,562	34	0	2,677	46	0	0	4	44	(2,634)	(4,625)
2014	0	103	3,292	47	0	3,443	55	0	0	5	60	(3,383)	(6,805)
2015	0	127	4,020	60	0	4,207	85	0	0	7	93	(4,114)	(9,303)
2016	0	152	4,747	74	0	4,974	105	0	0	9	115	(4,859)	(11,981)
2017	0	178	5,475	89	0	5,742	132	0	0	12	144	(5,598)	(14,813)
2018	0	205	6,203	105	0	6,513	152	0	0	15	166	(6,346)	(17,763)
2019	0	210	6,567	117	0	6,894	43,112	0	0	(1,816)	41,296	34,402	(3,080)
2020	0	215	6,567	119	0	6,901	40,074	0	0	(2,660)	37,414	30,513	8,881
2021	0	221	6,567	123	0	6,910	38,484	0	0	(2,944)	35,540	28,630	19,188
2022	0	226	6,567	128	0	6,921	38,273	0	0	(3,404)	34,869	27,948	28,428
2023	0	232	6,567	133	0	6,931	38,521	0	0	(3,748)	35,173	28,242	37,003
2024	0	238	6,567	140	0	6,944	39,367	0	0	(4,270)	35,097	28,153	44,853
2025	0	244	6,567	147	0	6,958	39,293	0	0	(4,866)	34,427	27,469	51,888
2026	0	250	6,567	155	0	6,971	39,561	0	0	(5,254)	34,308	27,337	58,317
2027	0	256	6,567	165	0	6,987	39,884	0	0	(5,905)	33,979	26,592	64,147
2028	0	262	6,567	173	0	7,001	39,705	0	0	(6,426)	33,279	26,277	69,359
2029	0	269	6,567	182	0	7,017	40,730	0	0	(7,221)	33,509	26,492	74,186
2030	0	276	6,567	192	0	7,035	40,729	0	0	(7,984)	32,745	25,711	78,487
2031	0	283	6,567	203	0	7,052	40,433	0	0	(8,649)	31,784	24,732	82,287
2032	0	290	6,567	216	0	7,073	41,691	0	0	(9,432)	32,258	25,186	85,841
2033	0	297	6,567	238	0	7,102	41,600	0	0	(10,963)	30,637	23,535	88,891
2034	0	304	6,567	243	0	7,114	43,527	0	0	(12,089)	31,438	24,324	91,786
2035	0	312	6,567	255	0	7,134	44,191	0	0	(13,158)	31,033	23,899	94,399
2036	0	320	6,567	276	0	7,162	43,794	0	0	(14,351)	29,444	22,282	96,635
2037	0	328	6,567	292	0	7,186	44,733	0	0	(15,531)	29,292	22,016	98,665
2038	0	336	6,567	306	0	7,209	43,483	0	0	(16,825)	26,658	19,449	100,312
2039	0	344	6,567	322	0	7,233	42,744	0	0	(18,284)	24,459	17,226	101,651
2040	0	353	6,567	339	0	7,259	44,390	0	0	(19,752)	24,838	17,579	102,906
2041	0	362	6,567	359	0	7,288	44,171	0	0	(21,269)	22,902	15,614	103,930
2042	0	371	6,567	381	0	7,318	43,417	0	0	(21,263)	22,154	14,836	104,824
2043	0	380	6,567	404	0	7,350	43,567	0	0	(21,257)	22,310	14,960	105,651
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	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	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	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	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
NOM.	0	8,140	193,758	6,058	0	207,956	1,040,714	0	0	(259,271)	781,443	573,487	
NPV	0	1,757	47,588	1,079	0	50,424	188,000	0	0	(31,924)	156,076	105,651	

Discount Rate 8.89 %  
Benefit/Cost Ratio (Col(12) / Col(7)) : 3.10

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**RESIDENTIAL AIR CONDITIONING**

INPUT DATA - PART I CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Power Savers Energy Audit Program

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER kW REDUCTION AT METER .....	0.04 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	0.05 kW
(3) kW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	493.26 kWh
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	0.09 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
* (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
* (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
* (10) UTILITY DISCOUNT RATE .....	8.89 %
* (11) UTILITY ADJDC RATE .....	8.48 %
* (12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
* (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
* (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN. TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* INPUT DATA - PART 1 CONTINUED  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Power Savers Energy Audit Program

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2009	0	0	0	0	0	0	0	0	0	
2010	0	0	0	0	0	0	0	0	0	
2011	755	730	0	1,485	392	0	767	0	767	
2012	774	730	0	1,504	1,239	0	786	0	786	
2013	793	730	0	1,523	2,170	0	806	0	806	
2014	813	730	0	1,543	3,223	0	826	0	826	
2015	833	730	0	1,563	4,344	0	847	0	847	
2016	1,068	1,191	0	2,259	5,490	0	1,416	0	1,416	
2017	1,094	1,191	0	2,286	6,724	0	1,451	0	1,451	
2018	1,122	1,191	0	2,313	7,975	0	1,487	0	1,487	
2019	230	461	0	691	8,819	0	590	0	590	
2020	236	461	0	697	8,846	0	605	0	605	
2021	966	1,037	0	2,004	9,039	0	1,395	0	1,395	
2022	991	1,037	0	2,028	9,301	0	1,430	0	1,430	
2023	1,015	1,037	0	2,053	9,583	0	1,466	0	1,466	
2024	1,041	730	0	1,771	10,008	0	1,057	0	1,057	
2025	1,067	730	0	1,797	10,368	0	1,084	0	1,084	
2026	1,367	1,191	0	2,558	10,784	0	1,812	0	1,812	
2027	1,401	1,191	0	2,592	11,348	0	1,858	0	1,858	
2028	1,436	1,191	0	2,627	11,809	0	1,904	0	1,904	
2029	589	615	0	1,204	12,338	0	1,007	0	1,007	
2030	603	615	0	1,218	12,941	0	1,033	0	1,033	
2031	1,546	1,191	0	2,737	13,531	0	2,050	0	2,050	
2032	1,268	1,037	0	2,305	14,330	0	1,831	0	1,831	
2033	1,300	1,037	0	2,337	15,612	0	1,876	0	1,876	
2034	999	576	0	1,576	15,904	0	1,068	0	1,068	
2035	1,024	576	0	1,601	16,530	0	1,095	0	1,095	
2036	1,400	1,037	0	2,437	17,713	0	2,021	0	2,021	
2037	1,793	1,191	0	2,984	18,661	0	2,378	0	2,378	
2038	1,838	1,191	0	3,029	19,473	0	2,437	0	2,437	
2039	754	615	0	1,368	20,365	0	1,289	0	1,289	
2040	773	615	0	1,387	21,314	0	1,322	0	1,322	
2041	1,980	1,191	0	3,171	22,440	0	2,625	0	2,625	
2042	2,029	1,191	0	3,220	23,643	0	2,690	0	2,690	
2043	2,080	1,191	0	3,271	24,927	0	2,758	0	2,758	
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	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	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	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	
NOM	36,978	30,161	0	67,139	401,184	0	49,068	0	49,068	
NPV	9,109	8,433	0	17,542	73,690	0	11,498	0	11,498	

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
 \*\* NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS

CALCULATION OF GEN K-FACTOR  
 PROGRAM/METHOD SELECTED REV\_RHQ  
 PROGRAM NAME: Residential Power Savers Energy Audit Program

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	REG-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	7,140	222	0	498	329	120	42	279	1	1,491	1,491	1,491	6,963
2020	6,861	213	0	479	226	115	44	279	91	1,446	1,328	2,819	7,137
2021	6,491	202	0	453	224	110	45	279	77	1,389	1,171	3,990	7,316
2022	6,136	191	0	428	221	105	46	279	64	1,334	1,033	5,023	7,499
2023	5,793	180	0	404	218	100	47	279	52	1,280	911	5,934	7,686
2024	5,463	170	0	381	215	95	48	279	41	1,229	803	6,737	7,878
2025	5,144	160	0	359	211	90	49	279	30	1,179	707	7,444	8,075
2026	4,835	150	0	337	208	85	50	279	21	1,130	623	8,067	8,277
2027	4,536	141	0	317	196	80	52	279	19	1,083	548	8,615	8,484
2028	4,238	132	0	296	183	75	53	279	19	1,036	482	9,096	8,696
2029	3,940	122	0	275	170	70	54	279	19	990	422	9,519	8,914
2030	3,643	113	0	254	157	65	56	279	19	943	370	9,888	9,136
2031	3,345	104	0	233	144	60	57	279	19	896	323	10,211	9,365
2032	3,047	95	0	213	131	55	59	279	19	849	281	10,492	9,599
2033	2,750	85	0	192	118	50	60	279	19	803	244	10,735	9,839
2034	2,452	76	0	171	105	45	62	279	19	756	211	10,946	10,085
2035	2,154	67	0	150	92	40	63	279	19	710	182	11,128	10,337
2036	1,857	58	0	130	79	35	65	279	19	663	156	11,284	10,596
2037	1,559	48	0	109	66	30	66	279	19	617	133	11,417	10,860
2038	1,261	39	0	88	53	25	68	279	19	570	113	11,530	11,132
2039	964	30	0	67	38	20	70	279	(39)	524	95	11,626	11,410
2040	724	23	0	51	24	15	71	279	(97)	485	81	11,707	11,695
2041	543	17	0	38	13	10	73	279	(97)	457	70	11,777	11,983
2042	362	11	0	25	130	5	75	279	(97)	427	60	11,837	12,288
2043	181	6	0	13	122	(0)	77	279	(97)	398	52	11,889	12,595

IN SERVICE COST (\$000)	6,963
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST	
DEBT	44%	7.03	%
P/S	0%	0.00	%
C/S	56%	12.50	%

K-FACTOR =  $\frac{CFWFC}{IN-SVC. COST} = 1.70738$

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Power Savers Energy Audit

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	254	254	279	279	253	253	1	650	0	0	0	1	(176)
2020	7.22%	489	743	279	557	253	505	91	650	0	0	0	91	(85)
2021	6.68%	452	1,195	279	836	253	758	77	650	0	0	0	77	(8)
2022	6.18%	418	1,613	279	1,114	253	1,010	94	650	0	0	0	64	56
2023	5.71%	387	2,000	279	1,393	253	1,263	52	650	0	0	0	52	108
2024	5.29%	358	2,338	279	1,671	253	1,515	41	650	0	0	0	41	148
2025	4.89%	334	2,689	279	1,950	253	1,768	30	650	0	0	0	30	179
2026	4.52%	306	2,995	279	2,228	253	2,020	21	650	0	0	0	21	199
2027	4.16%	302	3,297	279	2,507	253	2,273	19	650	0	0	0	19	219
2028	4.46%	302	3,599	279	2,785	253	2,525	19	650	0	0	0	19	238
2029	4.46%	302	3,902	279	3,064	253	2,778	19	650	0	0	0	19	257
2030	4.46%	302	4,204	279	3,342	253	3,030	19	650	0	0	0	19	276
2031	4.46%	302	4,506	279	3,621	253	3,283	19	650	0	0	0	19	295
2032	4.46%	302	4,808	279	3,899	253	3,535	19	650	0	0	0	19	314
2033	4.46%	302	5,110	279	4,178	253	3,788	19	650	0	0	0	19	333
2034	4.46%	302	5,412	279	4,457	253	4,041	19	650	0	0	0	19	352
2035	4.46%	302	5,714	279	4,735	253	4,293	19	650	0	0	0	19	372
2036	4.46%	302	6,016	279	5,014	253	4,546	19	650	0	0	0	19	391
2037	4.46%	302	6,319	279	5,292	253	4,798	19	650	0	0	0	19	410
2038	4.46%	302	6,621	279	5,571	253	5,051	19	650	0	0	0	19	429
2039	2.23%	151	6,772	279	5,849	253	5,303	(39)	650	0	0	0	(39)	390
2040	0.00%	0	6,772	279	6,128	253	5,556	(97)	650	0	0	0	(97)	292
2041	0.00%	0	6,772	279	6,406	253	5,808	(97)	650	0	0	0	(97)	195
2042	0.00%	0	6,772	279	6,685	253	6,061	(97)	650	0	0	0	(97)	97
2043	0.00%	0	6,772	279	6,963	253	6,313	(97)	650	0	0	0	(97)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(177)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	650
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Power Savers Energy Audit Program

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	END OF YEAR NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2019	3.75%	254	1	6,685	279	(176)	7,140	6,861	7,000
2020	7.22%	489	91	6,406	557	(85)	6,861	6,491	6,676
2021	6.68%	452	77	6,128	836	(8)	6,491	6,136	6,314
2022	6.18%	418	64	5,849	1,114	56	6,136	5,793	5,964
2023	5.71%	387	52	5,571	1,393	108	5,793	5,463	5,628
2024	5.29%	358	41	5,292	1,671	148	5,463	5,144	5,303
2025	4.89%	331	30	5,014	1,950	179	5,144	4,835	4,989
2026	4.52%	306	21	4,735	2,228	199	4,835	4,536	4,685
2027	4.46%	302	19	4,457	2,507	219	4,536	4,238	4,387
2028	4.46%	302	19	4,178	2,785	238	4,238	3,940	4,089
2029	4.46%	302	19	3,899	3,064	257	3,940	3,643	3,792
2030	4.46%	302	19	3,621	3,342	276	3,643	3,345	3,494
2031	4.46%	302	19	3,342	3,621	295	3,345	3,047	3,196
2032	4.46%	302	19	3,064	3,899	314	3,047	2,750	2,899
2033	4.46%	302	19	2,785	4,178	333	2,750	2,452	2,601
2034	4.46%	302	19	2,507	4,457	352	2,452	2,154	2,303
2035	4.46%	302	19	2,228	4,735	372	2,154	1,857	2,006
2036	4.46%	302	19	1,950	5,014	391	1,857	1,559	1,708
2037	4.46%	302	19	1,671	5,292	410	1,559	1,261	1,410
2038	4.46%	302	19	1,393	5,571	429	1,261	964	1,113
2039	2.23%	151	(39)	1,114	5,849	396	964	724	844
2040	0.00%	0	(97)	836	6,128	292	724	543	634
2041	0.00%	0	(97)	557	6,406	195	543	362	453
2042	0.00%	0	(97)	279	6,685	97	362	181	272
2043	0.00%	0	(97)	(0)	6,963	0	181	0	90

\* Column not specified in workbook



(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

(11) YEAR	(12) NO. YEARS BEFORE IN-SERVICE	(13) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(14)* DEBT AFUDC (\$/kW)	100.00%		(15)* CUMULATIVE DEBT AFUDC (\$/kW)	(16) YEARLY TOTAL AFUDC (\$/kW)	(17)* CUMULATIVE TOTAL AFUDC (\$/kW)	(18)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(19)* CUMULATIVE CPI (\$/kW)	(20)* DEFERRED TAXES (\$/kW)	(21)* CUMULATIVE DEFERRED TAXES (\$/kW)	(22) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(23) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
				(8b)*	(9)									
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	0.04	(0.01)	(0.01)	1.29	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	0.14	(0.14)	(0.15)	16.78	18.07	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.57)	(0.72)	42.83	60.90	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	(4.13)	351.16	412.06	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	(13.39)	473.37	885.43	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	(27.02)	179.18	1,064.61	1,064.61

IN SERVICE YEAR	2019			
PLANT COSTS	725,389,805.5			
AFUDC RATE	8.48%			

  

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	5,937	5,937	5,937
EQUITY AFUDC	650		
DEBT AFUDC	376	376	
CPI			834
<b>TOTAL</b>	<b>6,963</b>	<b>6,313</b>	<b>6,771</b>

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED : REV\_REQ  
 PROGRAM NAME: Residential Power Savers Energy Audit Program

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (¢/kWh)	(5) AVOIDED MARGINAL FUEL COST (¢/kWh)	(6)* INCREASED MARGINAL FUEL COST (¢/kWh)	(7) REPLACEMENT FUEL COST (¢/kWh)	(8) PROGRAM KW EFFECTIVENESS FACTOR	(9) PROGRAM kWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	0	0	6.41	16.51	6.41	0.00	1.00	1.00
2011	15,000	15,000	6.35	6.35	10.38	0.00	1.00	1.00
2012	30,000	30,000	6.43	6.43	13.34	0.00	1.00	1.00
2013	45,000	45,000	7.06	7.06	9.89	0.00	1.00	1.00
2014	60,000	60,000	7.53	7.53	10.61	0.00	1.00	1.00
2015	75,000	75,000	8.11	8.11	13.20	0.00	1.00	1.00
2016	90,000	90,000	9.00	9.00	13.90	0.00	1.00	1.00
2017	105,000	105,000	9.75	9.75	15.09	0.00	1.00	1.00
2018	120,000	120,000	10.52	10.52	15.46	0.00	1.00	1.00
2019	120,000	120,000	11.50	11.50	21.44	10.41	1.00	1.00
2020	120,000	120,000	12.08	12.08	20.17	10.50	1.00	1.00
2021	120,000	120,000	12.57	12.57	21.76	10.74	1.00	1.00
2022	120,000	120,000	13.06	13.06	23.66	10.91	1.00	1.00
2023	120,000	120,000	13.39	13.39	20.91	10.80	1.00	1.00
2024	120,000	120,000	13.95	13.95	22.19	10.84	1.00	1.00
2025	120,000	120,000	14.40	14.40	22.20	10.96	1.00	1.00
2026	120,000	120,000	14.70	14.70	22.41	11.05	1.00	1.00
2027	120,000	120,000	15.13	15.13	23.05	11.17	1.00	1.00
2028	120,000	120,000	15.60	15.60	23.70	11.36	1.00	1.00
2029	120,000	120,000	16.02	16.02	22.95	11.41	1.00	1.00
2030	120,000	120,000	16.52	16.52	23.78	11.59	1.00	1.00
2031	120,000	120,000	17.08	17.08	24.53	11.80	1.00	1.00
2032	120,000	120,000	17.50	17.50	24.55	11.88	1.00	1.00
2033	120,000	120,000	18.27	18.27	25.51	12.10	1.00	1.00
2034	120,000	120,000	18.73	18.73	25.89	12.14	1.00	1.00
2035	120,000	120,000	19.57	19.57	27.04	12.29	1.00	1.00
2036	120,000	120,000	20.40	20.40	28.26	12.55	1.00	1.00
2037	120,000	120,000	21.11	21.11	29.22	12.70	1.00	1.00
2038	120,000	120,000	22.02	22.02	30.23	13.04	1.00	1.00
2039	120,000	120,000	22.78	22.78	31.29	13.32	1.00	1.00
2040	120,000	120,000	23.59	23.59	32.02	13.44	1.00	1.00
2041	120,000	120,000	24.54	24.54	33.28	13.75	1.00	1.00
2042	120,000	120,000	25.50	25.50	34.66	14.10	1.00	1.00
2043	120,000	120,000	26.74	26.74	36.49	14.40	1.00	1.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS, THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.





TOTAL RESOURCE COST TEST  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Power Savers Energy Audit Program

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) PARTICIPANT PROGRAM COSTS \$(000)	(5) OTHER COSTS \$(000)	(6) TOTAL COSTS \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)	(8) AVOIDED T&D BENEFITS \$(000)	(9) PROGRAM FUEL SAVINGS \$(000)	(10) OTHER BENEFITS \$(000)	(11) TOTAL BENEFITS \$(000)	(12) NET BENEFITS \$(000)	(13) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	(0)	(0)
2010	0	0	0	0	0	0	0	0	0	0	0	(0)
2011	0	755	767	0	1,522	0	0	235	1	236	(1,286)	(1,085)
2012	0	774	786	0	1,560	0	37	714	2	753	(807)	(1,710)
2013	0	793	806	0	1,599	0	77	1,306	133	1,517	(82)	(1,769)
2014	0	813	826	0	1,639	0	115	1,949	206	2,270	631	(1,357)
2015	0	833	847	0	1,680	0	152	2,702	293	3,147	1,467	(477)
2016	0	1,068	1,416	0	2,484	0	190	3,663	398	4,251	1,767	497
2017	0	1,094	1,451	0	2,546	0	223	4,690	516	5,434	2,888	1,959
2018	0	1,122	1,487	0	2,609	0	266	-5,838	647	6,751	4,142	3,884
2019	0	230	590	0	820	1,791	301	6,809	676	9,577	8,757	7,621
2020	0	236	605	0	841	1,665	293	7,151	702	9,810	8,969	11,137
2021	0	966	1,395	0	2,362	1,597	284	7,437	755	10,074	7,712	13,913
2022	0	991	1,430	0	2,421	1,588	276	7,730	846	10,439	8,018	16,564
2023	0	1,015	1,466	0	2,481	1,616	268	7,928	899	10,711	8,229	19,063
2024	0	1,041	1,057	0	2,098	1,634	260	8,256	995	11,146	9,048	21,586
2025	0	1,067	1,084	0	2,150	1,631	253	8,522	1,093	11,499	9,348	23,980
2026	0	1,367	1,812	0	3,179	1,642	245	8,703	1,151	11,741	8,362	25,993
2027	0	1,401	1,858	0	3,259	1,655	238	8,955	1,253	12,101	8,843	27,903
2028	0	1,436	1,904	0	3,340	1,648	230	9,232	1,366	12,476	9,136	29,716
2029	0	589	1,007	0	1,596	1,691	223	9,484	1,524	12,922	11,326	31,779
2030	0	603	1,033	0	1,636	1,691	215	9,778	1,641	13,325	11,689	33,735
2031	0	1,546	2,050	0	3,597	1,678	208	10,108	1,785	13,778	10,181	35,289
2032	0	1,268	1,831	0	3,099	1,730	201	10,361	1,934	14,226	11,128	36,869
2033	0	1,300	1,876	0	3,176	1,726	194	10,817	2,067	14,804	11,628	38,376
2034	0	999	1,068	0	2,068	1,807	188	11,086	2,231	15,311	13,243	39,952
2035	0	1,024	1,095	0	2,119	1,834	182	11,585	2,415	16,016	13,896	41,471
2036	0	1,400	2,021	0	3,420	1,817	176	12,072	2,609	16,675	13,254	42,802
2037	0	1,793	2,378	0	4,171	1,856	172	12,498	2,820	17,345	13,173	44,016
2038	0	1,838	2,437	0	4,276	1,803	167	13,033	3,042	18,046	13,770	45,182
2039	0	754	1,289	0	2,043	1,772	164	13,484	3,283	18,702	16,659	46,478
2040	0	773	1,322	0	2,094	1,848	161	13,966	3,536	19,511	17,417	47,721
2041	0	1,980	2,625	0	4,604	1,830	157	14,523	3,801	20,312	15,708	48,751
2042	0	2,029	2,690	0	4,719	1,798	154	15,096	4,152	21,201	16,481	49,744
2043	0	2,080	2,758	0	4,837	1,804	151	15,825	4,532	22,312	17,474	50,711
	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	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	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	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
NOM	0	36,578	49,068	0	85,046	43,151	6,427	285,538	53,301	388,416	302,370	
NPV	0	9,109	11,498	0	20,607	7,788	1,708	53,943	7,879	71,318	50,711	

Discount Rate: 8.89 %  
 Benefit/Cost Ratio (Col(11) / Col(6)) : 3.46

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RATE IMPACT TEST  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Power Savers Energy Audit Program

(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)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0	(0)
2010	0	0	0	0	0	0	0	0	0	0	0	0	(0)
2011	0	735	730	392	0	1,877	235	0	0	0	0	0	(0)
2012	0	774	730	1,239	0	2,743	714	37	0	1	236	(1,641)	(1,384)
2013	0	793	730	2,170	0	3,693	1,306	77	0	2	753	(1,590)	(2,926)
2014	0	813	730	3,223	0	4,766	1,949	115	0	133	1,517	(2,177)	(4,475)
2015	0	833	730	4,344	0	5,907	2,702	152	0	206	2,270	(2,496)	(6,105)
2016	0	1,068	1,191	5,490	0	7,748	3,663	190	0	293	3,147	(2,761)	(7,762)
2017	0	1,094	1,191	6,724	0	9,010	4,690	228	0	398	4,251	(3,498)	(9,689)
2018	0	1,122	1,191	7,975	0	10,287	5,838	266	0	516	5,434	(3,576)	(11,499)
2019	0	230	461	8,819	0	9,510	8,600	301	0	647	6,751	(3,536)	(13,142)
2020	0	236	461	8,846	0	9,543	8,815	293	0	676	9,577	67	(13,114)
2021	0	966	1,037	9,039	0	11,043	9,035	284	0	702	9,810	267	(13,095)
2022	0	991	1,037	9,301	0	11,329	9,317	276	0	755	10,074	(969)	(13,358)
2023	0	1,015	1,037	9,583	0	11,636	9,544	268	0	846	10,439	(890)	(13,632)
2024	0	1,041	730	10,008	0	11,779	9,891	260	0	889	10,711	(925)	(13,933)
2025	0	1,067	730	10,368	0	12,164	10,153	253	0	995	11,146	(633)	(14,109)
2026	0	1,367	1,191	10,784	0	13,342	10,345	245	0	1,093	11,439	(666)	(14,280)
2027	0	1,401	1,191	11,348	0	13,940	10,611	238	0	1,151	11,741	(1,601)	(14,636)
2028	0	1,436	1,191	11,809	0	14,436	10,880	230	0	1,253	12,101	(1,839)	(15,054)
2029	0	589	615	12,338	0	13,541	11,175	223	0	1,366	12,476	(1,960)	(15,442)
2030	0	603	615	12,941	0	14,160	11,469	215	0	1,524	12,922	(619)	(15,555)
2031	0	1,346	1,191	13,531	0	16,268	11,785	208	0	1,641	13,325	(834)	(15,695)
2032	0	1,268	1,037	14,330	0	16,636	12,092	201	0	1,785	13,778	(2,490)	(16,077)
2033	0	1,300	1,037	15,612	0	17,549	12,543	194	0	1,934	14,226	(2,409)	(16,417)
2034	0	999	576	15,904	0	17,480	12,893	188	0	2,067	14,804	(3,145)	(16,825)
2035	0	1,024	576	16,530	0	18,151	13,419	182	0	2,231	15,311	(2,169)	(17,083)
2036	0	1,400	1,037	17,713	0	20,150	13,889	176	0	2,415	16,016	(2,115)	(17,314)
2037	0	1,793	1,191	18,661	0	21,645	14,353	172	0	2,609	16,675	(3,475)	(17,663)
2038	0	1,838	1,191	19,473	0	22,502	14,836	167	0	2,820	17,345	(4,301)	(18,060)
2039	0	754	615	20,365	0	21,733	15,256	164	0	3,042	18,046	(4,457)	(18,437)
2040	0	773	615	21,314	0	22,701	15,814	161	0	3,283	18,702	(3,031)	(18,673)
2041	0	1,980	1,191	22,440	0	25,611	16,354	157	0	3,536	19,511	(3,190)	(18,900)
2042	0	2,029	1,191	23,643	0	26,863	16,895	154	0	3,801	20,312	(5,299)	(19,248)
2043	0	2,080	1,191	24,927	0	28,198	17,629	151	0	4,152	21,201	(5,662)	(19,589)
2044	0	0	0	0	0	0	0	0	0	4,532	22,312	(5,886)	(19,915)
2045	0	0	0	0	0	0	0	0	0	0	0	0	0
2046	0	0	0	0	0	0	0	0	0	0	0	0	0
2047	0	0	0	0	0	0	0	0	0	0	0	0	0
2048	0	0	0	0	0	0	0	0	0	0	0	0	0
2049	0	0	0	0	0	0	0	0	0	0	0	0	0
2050	0	0	0	0	0	0	0	0	0	0	0	0	0
2051	0	0	0	0	0	0	0	0	0	0	0	0	0
2052	0	0	0	0	0	0	0	0	0	0	0	0	0
2053	0	0	0	0	0	0	0	0	0	0	0	0	0
2054	0	0	0	0	0	0	0	0	0	0	0	0	0
2055	0	0	0	0	0	0	0	0	0	0	0	0	0
2056	0	0	0	0	0	0	0	0	0	0	0	0	0
2057	0	0	0	0	0	0	0	0	0	0	0	0	0
2058	0	0	0	0	0	0	0	0	0	0	0	0	0
2059	0	0	0	0	0	0	0	0	0	0	0	0	0
2060	0	0	0	0	0	0	0	0	0	0	0	0	0
NOM.	0	36,978	30,161	401,184	0	468,323	328,689	6,427	0	53,301	388,416	(79,906)	
NPV	0	9,109	8,433	73,690	0	91,232	61,730	1,708	0	7,879	71,318	(19,915)	

Discount Rate 8.89 %  
 Benefit/Cost Ratio (Col(12) / Col(7)) : 0.78

**RESIDENTIAL DUCT SYSTEM TESTING & REPAIR**



INPUT DATA -- PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_RHQ  
PROGRAM NAME: Residential Power Savers Energy Efficiency Program

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.62 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.83 kW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	1,588.27 kWh
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	0.05 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
(8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
(9) SUPPLY COSTS ESCALATION RATES .....	*** %**
(10) UTILITY DISCOUNT RATE .....	8.89 %
(11) UTILITY AFUDC RATE .....	8.48 %
(12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2013-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN. TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* INPUT DATA - PART 1 CONTINUED  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Power Savers Energy Efficiency Program

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2009	0	0	0	0	0	0	0	0	0	
2010	0	0	0	0	0	0	0	0	0	
2011	479	6,096	0	6,575	420	0	6,405	0	6,405	
2012	491	6,096	0	6,587	1,330	0	6,565	0	6,565	
2013	503	6,096	0	6,599	2,329	0	6,729	0	6,729	
2014	516	6,096	0	6,612	3,459	0	6,897	0	6,897	
2015	594	6,396	0	6,990	4,663	0	7,417	0	7,417	
2016	609	6,396	0	7,005	5,892	0	7,603	0	7,603	
2017	624	6,396	0	7,020	7,217	0	7,793	0	7,793	
2018	639	6,396	0	7,035	8,559	0	7,988	0	7,988	
2019	144	600	0	744	9,465	0	768	0	768	
2020	147	600	0	747	9,495	0	787	0	787	
2021	283	1,410	0	1,693	9,701	0	1,896	0	1,896	
2022	290	1,410	0	1,700	9,983	0	1,944	0	1,944	
2023	297	1,410	0	1,707	10,285	0	1,992	0	1,992	
2024	305	1,410	0	1,715	10,742	0	2,042	0	2,042	
2025	569	3,910	0	4,479	11,128	0	5,804	0	5,804	
2026	583	3,910	0	4,493	11,575	0	5,950	0	5,950	
2027	598	3,910	0	4,508	12,180	0	6,098	0	6,098	
2028	612	3,910	0	4,522	12,675	0	6,251	0	6,251	
2029	467	3,100	0	3,567	13,242	0	5,080	0	5,080	
2030	479	3,100	0	3,579	13,890	0	5,207	0	5,207	
2031	704	5,440	0	6,144	14,523	0	9,365	0	9,365	
2032	721	5,440	0	6,161	15,381	0	9,600	0	9,600	
2033	427	2,940	0	3,367	16,756	0	5,318	0	5,318	
2034	438	2,940	0	3,378	17,070	0	5,451	0	5,451	
2035	449	2,940	0	3,389	17,742	0	5,587	0	5,587	
2036	661	3,896	0	4,557	19,011	0	7,589	0	7,589	
2037	677	3,896	0	4,573	20,029	0	7,778	0	7,778	
2038	694	3,896	0	4,590	20,900	0	7,973	0	7,973	
2039	814	4,056	0	4,870	21,858	0	8,508	0	8,508	
2040	835	4,056	0	4,891	22,876	0	8,720	0	8,720	
2041	1,072	4,866	0	5,938	24,085	0	10,723	0	10,723	
2042	1,098	4,866	0	5,964	25,376	0	10,992	0	10,992	
2043	1,126	4,866	0	5,992	26,755	0	11,266	0	11,266	
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	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	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	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	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	
NOM	18,942	132,746	0	151,688	430,594	0	210,083	0	210,083	
NEV	4,849	43,887	0	48,736	79,092	0	56,619	0	56,619	

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
 \*\* NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS

CALCULATION OF GENK-FACTOR  
PROGRAM METHOD SELECTED REV\_REQ  
PROGRAM NAME: Residential Power Savers Energy Efficiency Program

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
BEG-YEAR	DEBT	PREFERRED STOCK	COMMON EQUITY	INCOME TAXES	PROPERTY TAX	PROPERTY INSURANCE	DEPREC.	DEFERRED TAXES	TOTAL FIXED CHARGES	PRESENT WORTH FIXED CHARGES	CUMULATIVE PW FIXED CHARGES	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2019	36,026	1,119	0	2,514	1,659	607	214	1,405	3	7,521	7,521	35,134
2020	34,617	1,075	0	2,416	1,140	582	220	1,405	460	7,298	6,702	36,012
2021	32,752	1,017	0	2,286	1,129	557	225	1,405	388	7,008	5,911	36,913
2022	30,958	962	0	2,161	1,116	531	231	1,405	323	6,729	5,212	37,835
2023	29,230	908	0	2,040	1,102	506	237	1,405	261	6,459	4,595	38,781
2024	27,563	856	0	1,924	1,085	481	242	1,405	205	6,189	4,050	39,751
2025	25,953	806	0	1,811	1,067	455	249	1,405	153	5,946	3,568	40,745
2026	24,395	758	0	1,702	1,047	430	255	1,405	104	5,702	3,142	41,763
2027	22,885	711	0	1,597	989	405	261	1,405	97	5,465	2,765	42,807
2028	21,383	664	0	1,492	923	379	268	1,405	96	5,229	2,430	43,877
2029	19,881	618	0	1,387	857	354	274	1,405	97	4,993	2,131	44,974
2030	18,379	571	0	1,283	791	329	281	1,405	96	4,757	1,865	46,099
2031	16,878	524	0	1,178	726	304	288	1,405	97	4,521	1,628	47,251
2032	15,376	478	0	1,073	660	278	295	1,405	96	4,286	1,417	48,433
2033	13,874	431	0	968	594	253	303	1,405	97	4,051	1,230	49,643
2034	12,372	384	0	863	528	228	310	1,405	96	3,816	1,064	50,884
2035	10,870	338	0	759	462	202	318	1,405	97	3,581	917	52,157
2036	9,368	291	0	654	397	177	326	1,405	96	3,346	787	53,460
2037	7,867	244	0	549	331	152	334	1,405	97	3,112	672	54,797
2038	6,365	198	0	444	265	126	343	1,405	96	2,878	571	56,167
2039	4,863	151	0	339	199	101	351	1,405	(197)	2,644	482	57,571
2040	3,361	114	0	235	134	76	360	1,405	(492)	2,432	410	59,010
2041	1,859	85	0	131	69	51	369	1,405	(492)	2,204	354	60,486
2042	367	57	0	28	12	25	378	1,405	(492)	1,982	304	61,998
2043	913	28	0	64	613	0	388	1,405	(492)	2,088	260	63,548

IN SERVICE COST (\$000)	35,134
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	44%	7.03 %
P/S	0%	0.00 %
C/S	56%	12.50 %

K-FACTOR =  $\frac{CPWFC}{IN-SVC\ COST} = 1.70738$

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Power Savers Energy Effctk

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	1,281	1,281	1,405	1,405	1,274	1,274	3	3,279	0	0	0	3	(889)
2020	7.22%	2,466	3,748	1,405	2,811	1,274	2,548	460	3,279	0	0	0	460	(429)
2021	6.68%	2,261	6,029	1,405	4,216	1,274	3,823	388	3,279	0	0	0	388	(40)
2022	6.18%	2,111	8,140	1,405	5,621	1,274	5,097	323	3,279	0	0	0	323	283
2023	5.71%	1,952	10,092	1,405	7,027	1,274	6,371	261	3,279	0	0	0	261	544
2024	5.29%	1,806	11,898	1,405	8,432	1,274	7,645	205	3,279	0	0	0	205	749
2025	4.89%	1,670	13,568	1,405	9,838	1,274	8,919	153	3,279	0	0	0	153	902
2026	4.52%	1,545	15,113	1,405	11,243	1,274	10,193	104	3,279	0	0	0	104	1,006
2027	4.46%	1,524	16,637	1,405	12,648	1,274	11,468	97	3,279	0	0	0	97	1,103
2028	4.46%	1,524	18,162	1,405	14,054	1,274	12,742	96	3,279	0	0	0	96	1,199
2029	4.46%	1,524	19,686	1,405	15,459	1,274	14,016	97	3,279	0	0	0	97	1,296
2030	4.46%	1,524	21,210	1,405	16,864	1,274	15,290	96	3,279	0	0	0	96	1,392
2031	4.46%	1,524	22,735	1,405	18,270	1,274	16,564	97	3,279	0	0	0	97	1,489
2032	4.46%	1,524	24,259	1,405	19,675	1,274	17,839	96	3,279	0	0	0	96	1,585
2033	4.46%	1,524	25,783	1,405	21,080	1,274	19,113	97	3,279	0	0	0	97	1,682
2034	4.46%	1,524	27,307	1,405	22,486	1,274	20,387	96	3,279	0	0	0	96	1,778
2035	4.46%	1,524	28,832	1,405	23,891	1,274	21,661	97	3,279	0	0	0	97	1,875
2036	4.46%	1,524	30,356	1,405	25,296	1,274	22,935	96	3,279	0	0	0	96	1,971
2037	4.46%	1,524	31,880	1,405	26,702	1,274	24,209	97	3,279	0	0	0	97	2,068
2038	4.46%	1,524	33,405	1,405	28,107	1,274	25,484	96	3,279	0	0	0	96	2,164
2039	2.23%	762	34,167	1,405	29,513	1,274	26,758	(197)	3,279	0	0	0	(197)	1,966
2040	0.00%	0	34,167	1,405	30,918	1,274	28,032	(492)	3,279	0	0	0	(492)	1,475
2041	0.00%	0	34,167	1,405	32,323	1,274	29,306	(492)	3,279	0	0	0	(492)	983
2042	0.00%	0	34,167	1,405	33,729	1,274	30,580	(492)	3,279	0	0	0	(492)	492
2043	0.00%	0	34,167	1,405	35,134	1,274	31,855	(492)	3,279	0	0	0	(492)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAGS DURING CONSTRUCTION (SEE PAGE 5)	(892)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	3,279
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Power Savers Energy Efficiency Program

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	END OF YEAR NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2019	3.75%	1,281	3	33,729	1,405	(389)	36,026	34,617	35,321
2020	7.22%	2,466	460	32,323	2,811	(429)	34,617	32,752	33,685
2021	6.63%	2,281	388	30,918	4,216	(40)	32,752	30,958	31,855
2022	6.18%	2,111	323	29,513	5,621	283	30,958	29,230	30,094
2023	5.71%	1,952	261	28,107	7,027	544	29,230	27,563	28,397
2024	5.29%	1,806	205	26,702	8,432	749	27,563	25,993	26,758
2025	4.89%	1,670	153	25,296	9,838	902	25,993	24,395	25,174
2026	4.52%	1,545	104	23,891	11,243	1,006	24,395	22,885	23,640
2027	4.46%	1,524	97	22,486	12,648	1,103	22,885	21,383	22,134
2028	4.46%	1,524	96	21,080	14,054	1,199	21,383	19,881	20,632
2029	4.46%	1,524	97	19,675	15,459	1,296	19,881	18,379	19,130
2030	4.46%	1,524	96	18,270	16,864	1,392	18,379	16,878	17,628
2031	4.46%	1,524	97	16,864	18,270	1,489	16,878	15,376	16,127
2032	4.46%	1,524	96	15,459	19,675	1,585	15,376	13,874	14,625
2033	4.46%	1,524	97	14,054	21,080	1,682	13,874	12,372	13,123
2034	4.46%	1,524	96	12,648	22,486	1,778	12,372	10,870	11,621
2035	4.46%	1,524	97	11,243	23,891	1,875	10,870	9,368	10,119
2036	4.46%	1,524	96	9,838	25,296	1,971	9,368	7,867	8,617
2037	4.46%	1,524	97	8,432	26,702	2,068	7,867	6,365	7,116
2038	4.46%	1,524	96	7,027	28,107	2,164	6,365	4,863	5,614
2039	2.23%	762	(197)	5,621	29,513	1,966	4,863	3,655	4,259
2040	0.00%	0	(492)	4,216	30,918	1,475	3,655	2,741	3,198
2041	0.00%	0	(492)	2,811	32,323	983	2,741	1,827	2,284
2042	0.00%	0	(492)	1,405	33,729	492	1,827	913	1,378
2043	0.00%	0	(492)	0	35,134	0	913	0	437

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	358.38

100.00% 907.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.5
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF. TAX	TAX BASIS
CONSTRUCTION CASH	29,958	29,958	29,958
EQUITY AFUDC	3,279		
DEBT AFUDC	1,897	1,897	
CPI			4,208
TOTAL	35,134	31,855	34,166

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED : REV\_REQ  
 PROGRAM NAME: Residential Power Savers Energy Efficiency Program

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (\$/KWh)	(5) AVOIDED MARGINAL FUEL COST (\$/KWh)	(6)* INCREASED MARGINAL FUEL COST (\$/KWh)	(7) REPLACEMENT FUEL COST (\$/KWh)	(8) PROGRAM KW EFFECTIVENESS FACTOR	(9) PROGRAM KW EFFECTIVENESS FACTOR
2008	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	0	0	6.41	16.51	6.41	0.00	1.00	1.00
2011	5,000	5,000	6.35	8.20	6.68	0.00	1.00	1.00
2012	10,000	10,000	6.43	8.15	6.73	0.00	1.00	1.00
2013	15,000	15,000	7.06	8.21	7.27	0.00	1.00	1.00
2014	20,000	20,000	7.53	8.49	7.72	0.00	1.00	1.00
2015	25,000	25,000	8.11	9.34	8.36	0.00	1.00	1.00
2016	30,000	30,000	9.00	11.13	9.39	0.00	1.00	1.00
2017	35,000	35,000	9.75	12.22	10.15	0.00	1.00	1.00
2018	40,000	40,000	10.52	13.07	10.94	0.00	1.00	1.00
2019	40,000	40,000	11.50	14.68	12.05	10.41	1.00	1.00
2020	40,000	40,000	12.08	15.35	12.69	10.50	1.00	1.00
2021	40,000	40,000	12.57	15.89	13.21	10.74	1.00	1.00
2022	40,000	40,000	13.06	16.45	13.70	10.81	1.00	1.00
2023	40,000	40,000	13.59	16.48	14.02	10.80	1.00	1.00
2024	40,000	40,000	13.95	17.12	14.58	10.84	1.00	1.00
2025	40,000	40,000	14.40	17.54	15.03	10.96	1.00	1.00
2026	40,000	40,000	14.70	17.67	15.30	11.05	1.00	1.00
2027	40,000	40,000	15.13	17.88	15.70	11.17	1.00	1.00
2028	40,000	40,000	15.60	18.23	16.15	11.36	1.00	1.00
2029	40,000	40,000	16.02	18.29	16.53	11.41	1.00	1.00
2030	40,000	40,000	16.52	18.70	17.01	11.59	1.00	1.00
2031	40,000	40,000	17.08	19.32	17.56	11.80	1.00	1.00
2032	40,000	40,000	17.50	19.20	17.91	11.88	1.00	1.00
2033	40,000	40,000	18.27	19.94	18.56	12.10	1.00	1.00
2034	40,000	40,000	18.73	19.81	18.90	12.14	1.00	1.00
2035	40,000	40,000	19.57	20.99	19.80	12.29	1.00	1.00
2036	40,000	40,000	20.40	21.98	20.61	12.55	1.00	1.00
2037	40,000	40,000	21.11	22.55	21.30	12.70	1.00	1.00
2038	40,000	40,000	22.02	23.48	22.21	13.04	1.00	1.00
2039	40,000	40,000	22.78	24.12	22.94	13.32	1.00	1.00
2040	40,000	40,000	23.59	24.73	23.73	13.44	1.00	1.00
2041	40,000	40,000	24.54	25.65	24.67	13.75	1.00	1.00
2042	40,000	40,000	25.50	26.60	25.63	14.10	1.00	1.00
2043	40,000	40,000	26.74	28.27	26.91	14.40	1.00	1.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
 PROGRAM METHOD SELECTED: REV REQ  
 PROGRAM NAME: Residential Power Savers Energy Efficiency Program

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	7,521	4,126	174	10,506	13,292	9,035
2020	7,298	4,229	251	15,479	18,857	8,399
2021	7,008	4,334	263	16,150	19,695	8,060
2022	6,729	4,443	279	17,693	20,533	8,011
2023	6,459	4,554	294	17,971	21,124	8,155
2024	6,199	4,668	312	18,984	21,916	8,246
2025	5,946	4,784	333	20,284	23,118	8,230
2026	5,702	4,904	357	21,676	24,352	8,286
2027	5,465	5,027	378	22,879	25,395	8,353
2028	5,229	5,152	389	23,486	25,942	8,314
2029	4,993	5,281	407	24,475	26,624	8,532
2030	4,757	5,413	427	25,621	27,689	8,530
2031	4,521	5,548	438	26,149	28,191	8,466
2032	4,286	5,687	455	27,079	28,770	8,731
2033	4,051	5,829	501	29,789	31,460	8,710
2034	3,816	5,975	524	31,006	32,206	9,115
2035	3,581	6,124	538	31,712	32,703	9,253
2036	3,346	6,277	557	32,659	33,673	9,166
2037	3,112	6,434	572	33,401	34,157	9,362
2038	2,878	6,593	588	34,234	35,159	9,087
2039	2,644	6,760	604	34,938	36,007	8,938
2040	2,452	6,929	620	35,743	36,419	9,326
2041	2,304	7,102	637	36,527	37,335	9,235
2042	2,156	7,280	654	37,359	38,376	9,073
2043	2,008	7,462	674	38,320	39,362	9,101
	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	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
NOM	114,458	140,918	11,227	663,513	712,393	217,722
NPV	25,604	23,396	1,695	101,551	112,953	39,293





AVOIDED GENERATING EMISSION IMPACT  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Power Savers Energy Efficiency Program

	(2)	(3)	(4)	(5)	(6)
YEAR	AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	REPLACEMENT EMISSION COST \$(000)	PROGRAM EMISSION BENEFIT \$(000)	OFF-PEAK EMISSION PAYBACK COST \$(000)	NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	1	0	1
2012	0	0	4	0	4
2013	0	0	144	0	144
2014	0	0	223	0	223
2015	0	0	319	0	319
2016	0	0	440	0	440
2017	0	0	573	0	573
2018	0	0	726	0	726
2019	1,256	1,643	839	0	453
2020	1,913	2,477	998	0	343
2021	2,107	2,732	980	0	355
2022	2,461	3,183	1,092	0	370
2023	2,716	3,510	1,161	0	367
2024	3,127	4,032	1,291	0	386
2025	3,609	4,640	1,429	0	398
2026	4,002	5,115	1,501	0	388
2027	4,527	5,778	1,634	0	384
2028	4,964	6,325	1,778	0	417
2029	5,679	7,208	1,978	0	449
2030	6,296	7,987	2,137	0	447
2031	6,843	8,674	2,320	0	489
2032	7,535	9,532	2,513	0	517
2033	8,780	11,100	2,727	0	406
2034	9,718	12,276	2,947	0	390
2035	10,555	13,339	3,195	0	411
2036	11,523	14,559	3,459	0	423
2037	12,489	15,775	3,738	0	452
2038	13,538	17,098	4,035	0	476
2039	14,621	18,469	4,350	0	483
2040	15,800	19,977	4,684	0	507
2041	17,025	21,522	5,036	0	539
2042	17,025	21,522	5,413	0	915
2043	17,025	21,522	5,820	0	1,323
	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	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
NOM	205,134	260,013	69,396	0	14,517
NPV	24,837	31,602	10,045	0	3,279

TOTAL RESOURCE COST TEST  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Power Savers Energy Efficiency Program

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) PARTICIPANT PROGRAM COSTS \$(000)	(5) OTHER COSTS \$(000)	(6) TOTAL COSTS \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)	(8) AVOIDED T&D BENEFITS \$(000)	(9) PROGRAM FUEL SAVINGS \$(000)	(10) OTHER BENEFITS \$(000)	(11) TOTAL BENEFITS \$(000)	(12) NET BENEFITS \$(000)	(13) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0	0	0	0
2011	0	479	6,405	0	6,883	0	0	349	1	350	(6,534)	(6,511)
2012	0	491	6,565	0	7,056	0	188	1,036	4	1,228	(5,827)	(10,025)
2013	0	503	6,729	0	7,232	0	390	1,703	4	2,097	(4,935)	(13,578)
2014	0	516	6,897	0	7,413	0	579	2,445	223	3,248	(4,165)	(16,300)
2015	0	594	7,417	0	8,011	0	769	3,476	319	4,563	(3,448)	(18,368)
2016	0	609	7,603	0	8,211	0	959	5,157	440	6,556	(1,655)	(19,280)
2017	0	634	7,793	0	8,417	0	1,150	6,713	573	8,435	19	(19,271)
2018	0	639	7,948	0	8,627	0	1,342	8,262	726	10,330	1,703	(18,480)
2019	0	144	768	0	912	5,035	1,520	9,967	453	20,974	20,063	(9,916)
2020	0	147	787	0	935	8,399	1,476	10,410	343	20,629	19,694	(2,197)
2021	0	283	1,896	0	2,179	8,060	1,433	10,759	355	20,608	18,428	4,437
2022	0	290	1,944	0	2,234	8,011	1,392	11,134	370	20,906	18,673	10,611
2023	0	297	1,992	0	2,290	8,155	1,332	11,087	367	20,960	18,671	16,280
2024	0	305	2,042	0	2,347	8,246	1,313	11,513	386	21,457	19,111	21,609
2025	0	569	5,804	0	6,373	8,230	1,274	11,772	398	21,674	15,301	25,527
2026	0	583	5,950	0	6,532	8,286	1,237	11,821	398	21,732	15,200	29,102
2027	0	598	6,098	0	6,696	8,353	1,199	11,911	384	21,846	15,151	32,374
2028	0	612	6,251	0	6,863	8,314	1,161	12,108	417	22,001	15,138	35,377
2029	0	467	5,080	0	5,547	8,532	1,124	12,072	449	22,177	16,630	38,407
2030	0	479	5,207	0	5,685	8,530	1,087	12,320	447	22,384	16,698	41,200
2031	0	704	9,365	0	10,069	8,466	1,050	12,721	489	22,726	12,657	43,145
2032	0	721	9,600	0	10,321	8,731	1,013	12,542	517	22,803	12,482	44,907
2033	0	427	5,319	0	5,745	8,710	979	12,998	406	23,093	17,349	47,155
2034	0	438	5,451	0	5,888	9,115	947	12,802	390	23,254	17,565	49,222
2035	0	449	5,587	0	6,035	9,253	917	13,618	411	24,199	18,164	51,207
2036	0	661	7,589	0	8,249	9,166	891	14,279	423	24,798	16,509	52,964
2037	0	677	7,778	0	8,455	9,362	866	14,617	452	25,297	16,842	54,417
2038	0	694	7,973	0	8,667	9,097	845	15,208	476	25,626	16,959	55,853
2039	0	814	8,508	0	9,322	8,938	826	15,591	483	25,838	16,516	57,137
2040	0	835	8,720	0	9,555	9,326	810	15,940	507	26,583	17,028	58,353
2041	0	1,072	10,723	0	11,795	9,235	795	16,518	539	27,087	15,292	59,356
2042	0	1,098	10,992	0	12,090	9,073	779	17,118	915	27,885	15,796	60,307
2043	0	1,126	11,265	0	12,392	9,101	764	18,267	1,323	29,455	17,063	61,251
	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	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	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	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	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	0	0	0	0	0	0	0	0	0	0
NOM	0	18,942	210,065	0	229,007	217,722	32,427	358,234	14,517	622,901	393,874	
NPV	0	4,849	56,619	0	61,469	39,293	8,618	71,530	3,279	122,720	61,251	

Discount Rate: 8.89 %  
 Benefit/Cost Ratio (Col(11) / Col(6)) : 2.00



RATE IMPACT TEST  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Power Savers Energy Efficiency Program

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) INCENTIVES \$(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)
2009	0	0	0	0	0	0	0	0	0	0	0	0	(0)
2010	0	0	0	0	0	0	0	0	0	0	0	0	(0)
2011	0	479	6,096	420	0	6,995	349	0	0	1	350	(6,645)	(5,605)
2012	0	491	6,096	1,330	0	7,917	1,036	188	0	4	1,228	(6,689)	(10,786)
2013	0	503	6,096	2,329	0	8,928	1,703	390	0	144	2,237	(6,692)	(15,547)
2014	0	516	6,096	3,459	0	10,071	2,445	579	0	223	3,248	(6,824)	(20,005)
2015	0	594	6,396	4,663	0	11,652	3,476	769	0	319	4,563	(7,089)	(24,258)
2016	0	609	6,396	5,892	0	12,897	5,157	959	0	440	6,556	(6,341)	(27,752)
2017	0	624	6,396	7,217	0	14,237	6,713	1,150	0	573	8,435	(5,802)	(30,688)
2018	0	639	6,396	8,559	0	15,594	8,262	1,342	0	726	10,330	(5,265)	(33,135)
2019	0	144	600	9,465	0	10,209	19,002	1,520	0	453	20,974	10,766	(28,540)
2020	0	147	600	9,495	0	10,242	18,809	1,476	0	343	20,629	10,387	(24,468)
2021	0	283	1,410	9,701	0	11,394	18,819	1,433	0	355	20,608	9,213	(21,152)
2022	0	290	1,410	9,983	0	11,683	19,144	1,392	0	370	20,906	9,224	(18,102)
2023	0	297	1,410	10,285	0	11,993	19,242	1,352	0	367	20,960	8,968	(15,379)
2024	0	305	1,410	10,742	0	12,457	19,758	1,313	0	386	21,457	9,001	(12,869)
2025	0	569	3,910	11,128	0	15,606	20,002	1,274	0	398	21,674	6,068	(11,316)
2026	0	583	3,910	11,575	0	16,068	20,108	1,237	0	388	21,732	5,664	(9,983)
2027	0	598	3,910	12,180	0	16,688	20,264	1,199	0	384	21,846	5,159	(8,869)
2028	0	612	3,910	12,675	0	17,197	20,422	1,161	0	417	22,001	4,803	(7,916)
2029	0	467	3,100	13,242	0	16,809	20,604	1,124	0	449	22,177	5,368	(6,938)
2030	0	479	3,100	13,890	0	17,469	20,850	1,087	0	447	22,384	4,915	(6,116)
2031	0	704	5,440	14,523	0	20,667	21,187	1,050	0	489	22,726	2,059	(5,800)
2032	0	721	5,440	15,381	0	21,542	21,273	1,013	0	517	22,803	1,261	(5,622)
2033	0	427	2,940	16,756	0	20,123	21,708	979	0	406	23,093	2,970	(5,237)
2034	0	438	2,940	17,070	0	20,448	21,917	947	0	390	23,254	2,806	(4,903)
2035	0	449	2,940	17,742	0	21,130	22,871	917	0	411	24,199	3,069	(4,568)
2036	0	661	3,896	19,011	0	23,568	23,445	891	0	423	24,758	1,190	(4,448)
2037	0	677	3,896	20,029	0	24,602	23,979	866	0	452	25,297	695	(4,384)
2038	0	694	3,896	20,900	0	25,491	24,305	845	0	476	25,626	155	(4,372)
2039	0	814	4,056	21,858	0	26,728	24,529	826	0	483	25,838	(890)	(4,442)
2040	0	835	4,056	22,876	0	27,767	25,266	810	0	507	26,583	(1,184)	(4,526)
2041	0	1,072	4,866	24,085	0	30,023	25,753	795	0	539	27,087	(2,936)	(4,719)
2042	0	1,095	4,866	25,376	0	31,241	26,191	779	0	515	27,886	(3,455)	(4,927)
2043	0	1,126	4,866	26,755	0	32,746	27,368	764	0	1,323	29,455	(3,281)	(5,109)
	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	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	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	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	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
NOM.	0	18,942	132,746	430,594	0	582,283	575,556	32,427	0	14,517	622,961	40,618	
NPV	0	4,849	43,887	79,092	0	127,829	110,822	8,618	0	3,279	122,720	(5,109)	

Discount Rate **3.89** %  
 Benefit/Cost Ratio (Col(12) / Col(7)) : **0.96**

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**RESIDENTIAL BUILDING ENVELOPE**

INPUT DATA -- PART 1 CONTINUED  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Solar Water Heating

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.25 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.34 kW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	1,591.85 kWh
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	0.00 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON-RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
* (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
* (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
^ (10) UTILITY DISCOUNT RATE .....	8.89 %
^ (11) UTILITY AFUDC RATE .....	8.48 %
* (12) UTILITY NON-RECURRING REBATE/INCENTIVE .....	*** \$/CUST
* (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	12.38 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* INPUT DATA - PART I CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Solar Water Heating

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	UTILITY INCENTIVES \$(000)	OTHER UTILITY COSTS \$(000)	TOTAL UTILITY PROGRAM COSTS \$(000)	ENERGY CHARGE REVENUE LOSSES \$(000)	DEMAND CHARGE REVENUE LOSSES \$(000)	PARTICIPANT EQUIPMENT COSTS \$(000)	PARTICIPANT O&M COSTS \$(000)	OTHER PARTICIPANT COSTS \$(000)	TOTAL PARTICIPANT COSTS \$(000)
YEAR									
2009	0	0	0	0	0	0	0	0	0
2010	923	1,366	0	2,289	112	0	5,291	0	5,291
2011	1,204	4,588	0	5,792	617	0	18,213	0	18,213
2012	888	4,892	0	5,779	1,492	0	19,863	0	19,863
2013	293	4,974	0	5,267	2,488	0	20,743	0	20,743
2014	803	4,970	0	5,773	3,625	0	21,245	0	21,245
2015	0	0	0	0	4,316	0	0	0	0
2016	0	0	0	0	4,462	0	0	0	0
2017	0	0	0	0	4,625	0	0	0	0
2018	0	0	0	0	4,754	0	0	0	0
2019	0	0	0	0	4,928	0	0	0	0
2020	0	0	0	0	4,944	0	0	0	0
2021	0	0	0	0	5,051	0	0	0	0
2022	0	0	0	0	5,198	0	0	0	0
2023	0	0	0	0	5,355	0	0	0	0
2024	0	0	0	0	5,593	0	0	0	0
2025	0	0	0	0	5,794	0	0	0	0
2026	0	0	0	0	6,027	0	0	0	0
2027	0	0	0	0	6,342	0	0	0	0
2028	0	0	0	0	6,600	0	0	0	0
2029	0	0	0	0	6,885	0	0	0	0
2030	0	0	0	0	7,232	0	0	0	0
2031	0	0	0	0	7,562	0	0	0	0
2032	0	0	0	0	8,009	0	0	0	0
2033	0	0	0	0	8,725	0	0	0	0
2034	0	0	0	0	8,888	0	0	0	0
2035	0	0	0	0	9,238	0	0	0	0
2036	0	0	0	0	9,899	0	0	0	0
2037	0	0	0	0	10,429	0	0	0	0
2038	0	0	0	0	10,883	0	0	0	0
2039	0	0	0	0	11,381	0	0	0	0
2040	0	0	0	0	11,911	0	0	0	0
2041	0	0	0	0	12,541	0	0	0	0
2042	0	0	0	0	13,213	0	0	0	0
2043	0	0	0	0	13,931	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
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	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
NOM	4,611	20,781	0	25,392	233,061	0	85,356	0	85,356
NPV	3,640	15,692	0	19,331	46,817	0	64,242	0	64,242

- SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
-- NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS



CALCULATION OF GEN-K-FACTOR  
 PROGRAM METHOD SELECTED RBV\_REQ  
 PROGRAM NAME: Residential Solar Water Heating

YEAR	(2) BEG-YEAR RATE BASE \$(000)	(3) DEBT \$(000)	(4) PREFERRED STOCK \$(000)	(5) COMMON EQUITY \$(000)	(6) INCOME TAXES \$(000)	(7) PROPERTY TAX \$(000)	(8) PROPERTY INSURANCE \$(000)	(9) DEPREC. \$(000)	(10) DEFERRED TAXES \$(000)	(11) TOTAL FIXED CHARGES \$(000)	(12) PRESENT WORTH FIXED CHARGES \$(000)	(13) CUMULATIVE PW FIXED CHARGES \$(000)	(14) REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	7,711	240	0	538	355	130	46	301	1	1,610	1,610	1,610	7,321
2020	7,410	230	0	517	244	125	47	301	98	1,562	1,435	3,045	7,709
2021	7,011	218	0	489	242	119	48	301	83	1,500	1,265	4,310	7,901
2022	6,627	206	0	462	239	114	49	301	69	1,440	1,116	5,425	8,099
2023	6,257	194	0	437	236	108	51	301	56	1,383	984	6,409	8,301
2024	5,900	183	0	412	232	103	52	301	44	1,327	867	7,276	8,509
2025	5,555	173	0	388	228	97	53	301	33	1,273	764	8,040	8,722
2026	5,222	162	0	364	224	92	55	301	22	1,221	673	8,712	8,940
2027	4,899	152	0	342	212	87	56	301	21	1,170	592	9,304	9,163
2028	4,577	142	0	319	198	81	57	301	21	1,119	520	9,824	9,392
2029	4,256	132	0	297	183	76	59	301	21	1,069	456	10,280	9,627
2030	3,934	122	0	275	169	70	60	301	21	1,018	399	10,680	9,868
2031	3,613	112	0	252	155	65	62	301	21	968	348	11,028	10,114
2032	3,291	102	0	230	141	60	63	301	21	917	303	11,331	10,367
2033	2,970	92	0	207	127	54	65	301	21	867	263	11,595	10,626
2034	2,648	82	0	185	113	49	66	301	21	817	228	11,822	10,892
2035	2,327	72	0	162	99	43	68	301	21	767	196	12,019	11,164
2036	2,005	62	0	140	85	38	70	301	21	716	168	12,187	11,444
2037	1,684	52	0	118	71	32	72	301	21	666	144	12,331	11,730
2038	1,362	42	0	95	57	27	73	301	21	616	122	12,453	12,023
2039	1,041	32	0	73	43	22	75	301	(42)	566	103	12,556	12,323
2040	782	24	0	55	31	16	77	301	(105)	525	88	12,644	12,632
2041	587	18	0	41	21	11	79	301	(105)	493	76	12,720	12,947
2042	391	12	0	27	14	5	81	301	(105)	461	65	12,785	13,271
2043	196	6	0	14	13	(0)	83	301	(105)	430	56	12,841	13,603

IN SERVICE COST (\$000)	7,521
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	8.5%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST	%
DEBT	44%	7.03	%
P/S	0%	0.00	%
C/S	56%	12.50	%

K-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Solar Water Heating

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINDS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	274	274	301	301	273	273	1	702	0	0	0	1	(150)
2020	7.22%	528	802	301	602	273	545	98	702	0	0	0	98	(92)
2021	6.68%	488	1,291	301	902	273	818	83	702	0	0	0	83	(9)
2022	6.18%	452	1,742	301	1,203	273	1,091	69	702	0	0	0	69	60
2023	5.71%	418	2,160	301	1,504	273	1,364	56	702	0	0	0	56	116
2024	5.29%	387	2,547	301	1,805	273	1,636	44	702	0	0	0	44	160
2025	4.89%	357	2,904	301	2,106	273	1,909	33	702	0	0	0	33	193
2026	4.52%	331	3,235	301	2,407	273	2,182	22	702	0	0	0	22	215
2027	4.46%	326	3,561	301	2,707	273	2,455	21	702	0	0	0	21	236
2028	4.46%	326	3,888	301	3,008	273	2,727	21	702	0	0	0	21	257
2029	4.46%	326	4,214	301	3,309	273	3,000	21	702	0	0	0	21	277
2030	4.46%	326	4,540	301	3,610	273	3,273	21	702	0	0	0	21	298
2031	4.46%	326	4,866	301	3,911	273	3,546	21	702	0	0	0	21	319
2032	4.46%	326	5,193	301	4,212	273	3,818	21	702	0	0	0	21	339
2033	4.46%	326	5,519	301	4,512	273	4,091	21	702	0	0	0	21	360
2034	4.46%	326	5,845	301	4,813	273	4,364	21	702	0	0	0	21	381
2035	4.46%	326	6,172	301	5,114	273	4,637	21	702	0	0	0	21	401
2036	4.46%	326	6,498	301	5,415	273	4,909	21	702	0	0	0	21	422
2037	4.46%	326	6,824	301	5,716	273	5,182	21	702	0	0	0	21	443
2038	4.46%	326	7,150	301	6,017	273	5,455	21	702	0	0	0	21	463
2039	2.23%	163	7,314	301	6,317	273	5,728	(42)	702	0	0	0	(42)	421
2040	0.00%	0	7,314	301	6,618	273	6,000	(105)	702	0	0	0	(105)	316
2041	0.00%	0	7,314	301	6,919	273	6,273	(105)	702	0	0	0	(105)	211
2042	0.00%	0	7,314	301	7,220	273	6,546	(105)	702	0	0	0	(105)	105
2043	0.00%	0	7,314	301	7,521	273	6,819	(105)	702	0	0	0	(105)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(191)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	702
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Solar Water Heating

(1)	(2)	(3)	(4)	(5) END OF YEAR NET PLANT IN SERVICE \$(000)	(5a)* ACCUMULATED DEPRECIATION \$(000)	(5b)* ACCUMULATED DEF TAXES \$(000)	(6) BEGINNING YEAR RATE BASE \$(000)	(7) ENDING OF YEAR RATE BASE \$(000)	(8) MID-YEAR RATE BASE \$(000)
2019	3.75%	274	1	7,320	301	(190)	7,711	7,410	7,561
2020	7.22%	528	98	6,919	602	(92)	7,410	7,011	7,210
2021	6.68%	488	83	6,618	902	(9)	7,011	6,627	6,819
2022	6.18%	452	69	6,317	1,203	60	6,627	6,257	6,442
2023	5.71%	418	56	6,017	1,504	116	6,257	5,900	6,078
2024	5.29%	387	44	5,716	1,805	160	5,900	5,555	5,728
2025	4.89%	357	33	5,415	2,106	193	5,555	5,222	5,389
2026	4.52%	331	22	5,114	2,407	215	5,222	4,899	5,060
2027	4.46%	326	21	4,813	2,707	236	4,899	4,577	4,738
2028	4.46%	326	21	4,512	3,008	257	4,577	4,256	4,416
2029	4.46%	326	21	4,212	3,309	277	4,256	3,934	4,095
2030	4.46%	326	21	3,911	3,610	298	3,934	3,613	3,773
2031	4.46%	326	21	3,610	3,911	319	3,613	3,291	3,452
2032	4.46%	326	21	3,309	4,212	339	3,291	2,970	3,131
2033	4.46%	326	21	3,008	4,512	360	2,970	2,648	2,809
2034	4.46%	326	21	2,707	4,813	381	2,648	2,327	2,488
2035	4.46%	326	21	2,407	5,114	401	2,327	2,005	2,166
2036	4.46%	326	21	2,106	5,415	422	2,005	1,684	1,845
2037	4.46%	326	21	1,805	5,716	443	1,684	1,362	1,523
2038	4.46%	326	21	1,504	6,017	463	1,362	1,041	1,202
2039	2.23%	163	(42)	1,203	6,317	421	1,041	782	912
2040	0.00%	0	(105)	902	6,618	316	782	587	685
2041	0.00%	0	(103)	602	6,919	211	587	391	489
2042	0.00%	0	(105)	301	7,220	105	391	196	253
2043	0.00%	0	(105)	(0)	7,521	0	196	0	98

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.09%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00%      907.77

YEAR	NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(9a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.13	1,064.61

37.47      156.84      127.50      (27.02)      1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.55
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	6,413	6,413	6,413
EQUITY AFUDC	702		
DEBT AFUDC	406	406	
CPI			901
TOTAL	7,521	6,819	7,313

\* Column not specified in workbook

INPUT DATA -- PART 2  
 PROGRAM METHOD SELECTED : REV\_REQ  
 PROGRAM NAME: Residential Solar Water Heating

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (¢/kWh)	(5) AVOIDED MARGINAL FUEL COST (¢/kWh)	(6)* INCREASED MARGINAL FUEL COST (¢/kWh)	(7) REPLACEMENT FUEL COST (¢/kWh)	(8) PROGRAM KW EFFECTIVENESS FACTOR	(9) PROGRAM kWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	1,366	1,366	6.41	6.70	9.01	0.00	1.00	1.00
2011	5,955	5,955	6.35	6.61	8.48	0.00	1.00	1.00
2012	10,837	10,837	6.43	6.66	8.45	0.00	1.00	1.00
2013	15,811	15,811	7.06	7.23	8.41	0.00	1.00	1.00
2014	20,781	20,781	7.53	7.68	8.67	0.00	1.00	1.00
2015	20,781	20,781	8.11	8.31	9.61	0.00	1.00	1.00
2016	20,781	20,781	9.00	9.31	11.55	0.00	1.00	1.00
2017	20,781	20,781	9.75	10.06	12.72	0.00	1.00	1.00
2018	20,781	20,781	10.52	10.86	13.53	0.00	1.00	1.00
2019	20,781	20,781	11.50	11.94	15.25	10.41	1.00	1.00
2020	20,781	20,781	12.08	12.57	15.88	10.50	1.00	1.00
2021	20,781	20,781	12.57	13.08	16.53	10.74	1.00	1.00
2022	20,781	20,781	13.06	13.59	17.14	10.81	1.00	1.00
2023	20,781	20,781	13.39	13.92	17.16	10.80	1.00	1.00
2024	20,781	20,781	13.95	14.47	17.82	10.84	1.00	1.00
2025	20,781	20,781	14.40	14.92	18.22	10.96	1.00	1.00
2026	20,781	20,781	14.70	15.19	18.32	11.05	1.00	1.00
2027	20,781	20,781	15.13	15.60	18.54	11.17	1.00	1.00
2028	20,781	20,781	15.60	16.05	18.91	11.36	1.00	1.00
2029	20,781	20,781	16.02	16.44	18.85	11.41	1.00	1.00
2030	20,781	20,781	16.52	16.92	19.26	11.59	1.00	1.00
2031	20,781	20,781	17.08	17.47	19.86	11.80	1.00	1.00
2032	20,781	20,781	17.50	17.84	19.62	11.88	1.00	1.00
2033	20,781	20,781	18.27	18.50	20.38	12.10	1.00	1.00
2034	20,781	20,781	18.73	18.86	20.08	12.14	1.00	1.00
2035	20,781	20,781	19.57	19.75	21.37	12.29	1.00	1.00
2036	20,781	20,781	20.40	20.54	22.39	12.55	1.00	1.00
2037	20,781	20,781	21.11	21.24	22.91	12.70	1.00	1.00
2038	20,781	20,781	22.02	22.16	23.86	13.04	1.00	1.00
2039	20,781	20,781	22.78	22.89	24.49	13.32	1.00	1.00
2040	20,781	20,781	23.59	23.68	25.04	13.44	1.00	1.00
2041	20,781	20,781	24.54	24.62	25.93	13.75	1.00	1.00
2042	20,781	20,781	25.50	25.59	26.84	14.10	1.00	1.00
2043	20,781	20,781	26.74	26.85	28.65	14.40	1.00	1.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Solar Water Heating

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	1,610	883	37	2,249	2,845	1,934
2020	1,562	905	54	3,313	4,037	1,798
2021	1,500	928	56	3,457	4,216	1,725
2022	1,440	951	60	3,659	4,395	1,715
2023	1,383	975	63	3,847	4,522	1,746
2024	1,327	999	67	4,064	4,691	1,765
2025	1,273	1,024	71	4,342	4,948	1,762
2026	1,221	1,050	76	4,640	5,213	1,774
2027	1,170	1,076	81	4,897	5,456	1,788
2028	1,119	1,103	83	5,027	5,553	1,780
2029	1,069	1,130	87	5,239	5,699	1,825
2030	1,018	1,159	91	5,484	5,927	1,826
2031	968	1,188	94	5,597	6,034	1,812
2032	917	1,217	97	5,795	6,158	1,869
2033	867	1,248	107	6,376	6,734	1,864
2034	817	1,279	112	6,637	6,894	1,851
2035	767	1,311	115	6,788	7,060	1,981
2036	716	1,344	119	6,991	7,268	1,962
2037	666	1,377	122	7,150	7,312	2,004
2038	616	1,412	126	7,328	7,535	1,947
2039	566	1,447	129	7,479	7,708	1,913
2040	525	1,483	133	7,651	7,796	1,996
2041	493	1,520	136	7,819	7,992	1,977
2042	461	1,558	140	7,997	8,215	1,942
2043	430	1,597	144	8,203	8,426	1,948
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	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	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
NOM	24,500	30,164	2,403	142,029	152,492	46,605
NPV	5,481	5,008	363	21,738	24,178	8,411

AVOIDED T&D AND PROGRAM FUEL SAVINGS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME : Residential Solar Water Heating

(1) YEAR	(2) AVOIDED TRANSMISSION CAP COST \$(000)	(3) AVOIDED TRANSMISSION O&M COST \$(000)	(4) TOTAL AVOIDED TRANSMISSION COST \$(000)	(5) AVOIDED DISTRIBUTION CAP COST \$(000)	(6) AVOIDED DISTRIBUTION O&M COST \$(000)	(7) TOTAL AVOIDED DISTRIBUTION COST \$(000)	(8) PROGRAM FUEL SAVINGS \$(000)	(8a)* PROGRAM OFF-PEAK PAYBACK \$(000)
2009	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	74	0
2011	17	1	19	1	0	1	390	0
2012	77	6	83	4	2	5	900	0
2013	141	17	157	7	3	10	1,544	0
2014	205	23	228	10	5	15	2,253	0
2015	269	23	292	13	6	20	2,771	0
2016	260	24	284	13	6	19	3,113	0
2017	251	24	275	13	6	19	3,360	0
2018	242	25	267	12	7	19	3,626	0
2019	233	25	259	12	7	18	3,996	0
2020	225	26	251	11	7	18	4,209	0
2021	217	27	244	11	7	18	4,382	0
2022	209	27	237	10	7	18	4,553	0
2023	202	28	230	10	8	18	4,658	0
2024	194	29	223	10	8	17	4,840	0
2025	186	30	216	9	8	17	4,991	0
2026	178	30	209	9	8	17	5,077	0
2027	171	31	202	9	8	17	5,210	0
2028	163	32	195	8	9	17	5,359	0
2029	155	33	188	8	9	16	5,482	0
2030	147	33	181	7	9	16	5,639	0
2031	139	34	174	7	9	16	5,821	0
2032	132	35	167	7	9	16	5,937	0
2033	125	36	161	6	10	16	6,144	0
2034	119	37	156	6	10	16	6,251	0
2035	114	38	152	6	10	16	6,550	0
2036	110	39	149	6	10	16	6,811	0
2037	106	40	146	5	11	16	7,041	0
2038	102	41	143	5	11	16	7,346	0
2039	98	42	140	5	11	16	7,583	0
2040	94	43	137	5	11	16	7,843	0
2041	90	44	134	4	12	16	8,154	0
2042	86	45	131	4	12	16	8,473	0
2043	82	46	128	4	12	16	8,895	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	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	0	0	0	0	0
0	0	0	0	0	0	0	0	0
NOM.	5,142	1,013	6,155	237	268	525	169,273	0
NPV	1,657	228	1,885	83	59	142	34,862	0

\* THESE VALUES REPRESENT THE COST OF THE INCREASED FUEL CONSUMPTION DUE TO GREATER OFF-PEAK ENERGY USAGE. USED FOR LOAD SHIFTING PROGRAMS ONLY.

AVOIDED GENERATING EMISSION IMPACT  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Solar Water Heating

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	1	0	1
2012	0	0	3	0	3
2013	0	0	183	0	183
2014	0	0	279	0	279
2015	0	0	351	0	351
2016	0	0	390	0	390
2017	0	0	429	0	429
2018	0	0	466	0	466
2019	269	352	508	0	425
2020	409	530	548	0	427
2021	451	585	594	0	460
2022	527	681	668	2	513
2023	581	751	713	0	543
2024	669	863	795	0	601
2025	773	993	877	0	656
2026	857	1,095	925	0	687
2027	969	1,237	1,014	0	747
2028	1,063	1,354	1,104	0	813
2029	1,216	1,543	1,232	0	905
2030	1,348	1,710	1,333	0	971
2031	1,465	1,857	1,447	0	1,055
2032	1,513	2,040	1,570	0	1,142
2033	1,879	2,376	1,703	0	1,206
2034	2,080	2,628	1,844	0	1,296
2035	2,259	2,855	1,999	0	1,403
2036	2,467	3,116	2,163	0	1,513
2037	2,673	3,377	2,338	0	1,634
2038	2,898	3,660	2,524	0	1,763
2039	3,130	3,958	2,726	0	1,899
2040	3,382	4,276	2,938	0	2,044
2041	3,644	4,607	3,159	0	2,197
2042	3,644	4,607	3,396	0	2,433
2043	3,644	4,607	3,651	0	2,689
	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	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	0	0
NOM	43,910	55,637	43,872	0	32,124
NPV	5,316	6,765	6,592	0	5,144



TOTAL RESOURCE COST TEST  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Solar Water Heating

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	923	5,291	0	6,214	0	0	74	0	74	(6,140)	(5,639)
2011	0	1,204	18,213	0	19,417	0	20	390	1	411	(19,006)	(21,669)
2012	0	888	19,863	0	20,751	0	89	900	3	992	(19,760)	(36,975)
2013	0	793	20,743	0	21,537	0	167	1,544	183	1,894	(19,642)	(50,948)
2014	0	803	21,245	0	22,047	0	242	2,253	279	2,774	(19,273)	(63,539)
2015	0	0	0	0	0	0	312	2,771	351	3,435	3,435	(61,478)
2016	0	0	0	0	0	0	303	3,113	390	3,807	3,807	(59,381)
2017	0	0	0	0	0	0	294	3,360	429	4,082	4,082	(57,315)
2018	0	0	0	0	0	0	286	3,626	466	4,378	4,378	(55,280)
2019	0	0	0	0	0	1,934	277	3,996	425	6,633	6,633	(52,449)
2020	0	0	0	0	0	1,798	270	4,209	427	6,703	6,703	(49,822)
2021	0	0	0	0	0	1,725	262	4,382	460	6,830	6,830	(47,363)
2022	0	0	0	0	0	1,715	255	4,553	513	7,036	7,036	(45,037)
2023	0	0	0	0	0	1,746	247	4,658	543	7,194	7,194	(42,853)
2024	0	0	0	0	0	1,765	240	4,840	601	7,446	7,446	(40,777)
2025	0	0	0	0	0	1,762	233	4,991	656	7,641	7,641	(38,820)
2026	0	0	0	0	0	1,774	226	5,077	697	7,763	7,763	(36,994)
2027	0	0	0	0	0	1,788	218	5,210	747	7,963	7,963	(35,274)
2028	0	0	0	0	0	1,780	211	5,359	813	8,162	8,162	(33,655)
2029	0	0	0	0	0	1,826	204	5,482	905	8,417	8,417	(32,121)
2030	0	0	0	0	0	1,826	197	5,639	971	8,633	8,633	(30,677)
2031	0	0	0	0	0	1,812	190	5,821	1,055	8,879	8,879	(29,313)
2032	0	0	0	0	0	1,869	183	5,937	1,142	9,131	9,131	(28,024)
2033	0	0	0	0	0	1,864	177	6,144	1,206	9,392	9,392	(26,807)
2034	0	0	0	0	0	1,951	172	6,251	1,296	9,670	9,670	(25,656)
2035	0	0	0	0	0	1,981	168	6,550	1,403	10,102	10,102	(24,552)
2036	0	0	0	0	0	1,962	163	6,811	1,513	10,451	10,451	(23,503)
2037	0	0	0	0	0	2,004	162	7,041	1,634	10,841	10,841	(22,504)
2038	0	0	0	0	0	1,947	159	7,346	1,763	11,215	11,215	(21,554)
2039	0	0	0	0	0	1,913	156	7,583	1,899	11,550	11,550	(20,656)
2040	0	0	0	0	0	1,996	153	7,843	2,044	12,036	12,036	(19,796)
2041	0	0	0	0	0	1,977	150	8,154	2,197	12,478	12,478	(18,978)
2042	0	0	0	0	0	1,942	147	8,473	2,433	12,995	12,995	(18,195)
2043	0	0	0	0	0	1,948	144	8,895	2,689	13,676	13,676	(17,439)
	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	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	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	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	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	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
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
NOM	0	4,611	85,356	0	89,967	46,605	6,680	169,273	32,124	254,683	164,717	
NPV	0	3,646	64,242	0	67,882	8,411	2,027	34,862	5,144	50,443	(17,439)	

Discount Rate:  
 Benefit/Cost Ratio (Col(11) / Col(6)) : 0.74 %

PARTICIPANT COSTS AND BENEFITS  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Solar Water Heating

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
YEAR	SAVINGS IN PARTICIPANTS BILLS \$(000)	TAX CREDITS \$(000)	UTILITY REBATES \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	CUSTOMER EQUIPMENT COSTS \$(000)	CUSTOMER O&M COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0
2010	147	1,617	1,366	0	3,130	5,291	0	0	5,291	(2,161)	(1,985)
2011	812	5,560	4,588	0	10,960	18,213	0	0	18,213	(7,253)	(8,102)
2012	1,964	6,058	4,882	0	12,903	19,863	0	0	19,863	(6,960)	(13,493)
2013	3,274	6,320	4,974	0	14,568	20,743	0	0	20,743	(6,175)	(17,886)
2014	4,770	6,467	4,970	0	16,206	21,245	0	0	21,245	(5,039)	(21,178)
2015	5,679	0	0	0	5,679	0	0	0	0	5,679	(17,770)
2016	5,872	0	0	0	5,872	0	0	0	0	5,872	(14,535)
2017	6,086	0	0	0	6,086	0	0	0	0	6,086	(11,455)
2018	6,255	0	0	0	6,255	0	0	0	0	6,255	(8,548)
2019	6,485	0	0	0	6,485	0	0	0	0	6,485	(5,780)
2020	6,505	0	0	0	6,505	0	0	0	0	6,505	(3,231)
2021	6,647	0	0	0	6,647	0	0	0	0	6,647	(838)
2022	6,839	0	0	0	6,839	0	0	0	0	6,839	1,423
2023	7,047	0	0	0	7,047	0	0	0	0	7,047	3,563
2024	7,360	0	0	0	7,360	0	0	0	0	7,360	5,615
2025	7,624	0	0	0	7,624	0	0	0	0	7,624	7,567
2026	7,930	0	0	0	7,930	0	0	0	0	7,930	9,432
2027	8,345	0	0	0	8,345	0	0	0	0	8,345	11,235
2028	8,684	0	0	0	8,684	0	0	0	0	8,684	12,957
2029	9,073	0	0	0	9,073	0	0	0	0	9,073	14,610
2030	9,516	2,606	0	0	12,122	0	0	0	0	12,122	16,638
2031	9,950	8,964	0	0	18,914	0	0	0	0	18,914	19,545
2032	10,538	9,770	0	0	20,308	0	0	0	0	20,308	22,410
2033	11,480	10,197	0	0	21,677	0	0	0	0	21,677	25,219
2034	11,693	10,437	0	0	22,133	0	0	0	0	22,133	27,854
2035	12,155	0	0	0	12,155	0	0	0	0	12,155	29,182
2036	13,025	0	0	0	13,025	0	0	0	0	13,025	30,490
2037	13,722	0	0	0	13,722	0	0	0	0	13,722	31,755
2038	14,319	0	0	0	14,319	0	0	0	0	14,319	32,967
2039	14,975	0	0	0	14,975	0	0	0	0	14,975	34,132
2040	15,673	0	0	0	15,673	0	0	0	0	15,673	35,251
2041	16,501	0	0	0	16,501	0	0	0	0	16,501	36,333
2042	17,386	0	0	0	17,386	0	0	0	0	17,386	37,380
2043	18,330	0	0	0	18,330	0	0	0	0	18,330	38,394
	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	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	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	0	0	0	0	0	0	0	0
NOM	306,660	67,996	20,781	0	395,436	85,356	0	0	85,356	310,081	
NPV	61,602	25,343	15,692	0	102,636	64,242	0	0	64,242	38,394	

In Service of Gen Unit: 2019  
 Discount Rate: 8.89 %  
 Benefit/Cost Ratio (Cof(6) / Cof(10)) 1.60



**RESIDENTIAL NEW CONSTRUCTION**

INPUT DATA -- PART 1 CONTINUED  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Solar Water Heating (Low Income New Construction)

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.25 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.34 KW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KWH REDUCTION PER CUSTOMER .....	1.59185 kWh
(5) KWH LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.09
(7) CUSTOMER KWH INCREASE AT METER .....	0.09 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
* (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
* (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
^ (10) UTILITY DISCOUNT RATE .....	8.89 %
* (11) UTILITY AFUDC RATE .....	8.48 %
* (12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
* (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
- (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN. TRAN & DIST COST ESCALATION RATE .....	3.08 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.23 CENTS PER kWh** (in-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2



CALCULATION OF GENK-FACTOR  
 PROGRAM METHOD SELECTED REV REQ  
 PROGRAM NAME: Residential Solar Water Heating (Low Income New Construction)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	BEG-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	304	9	0	21	14	5	2	12	0	64	64	64	297
2020	292	9	0	20	10	5	2	12	4	62	57	120	304
2021	277	9	0	19	10	5	2	12	3	59	50	170	312
2022	261	8	0	18	9	4	2	12	3	57	44	214	320
2023	247	8	0	17	9	4	2	12	2	55	39	253	328
2024	233	7	0	16	9	4	2	12	1	52	34	287	336
2025	219	7	0	15	9	4	2	12	1	50	30	317	344
2026	206	6	0	14	9	4	2	12	1	48	27	344	353
2027	193	6	0	13	8	3	2	12	1	46	23	367	362
2028	181	6	0	13	8	3	2	12	1	44	21	388	371
2029	168	5	0	12	7	3	2	12	1	42	18	406	380
2030	155	5	0	11	7	3	2	12	1	40	16	421	389
2031	143	4	0	10	6	3	2	12	1	38	14	435	399
2032	130	4	0	9	6	3	2	12	1	36	12	447	409
2033	117	4	0	8	5	2	3	12	1	34	10	458	419
2034	105	3	0	7	4	2	3	12	1	32	9	467	430
2035	92	3	0	6	4	2	3	12	1	30	8	474	441
2036	79	2	0	6	4	2	3	12	1	28	7	481	452
2037	66	2	0	5	3	1	3	12	1	26	6	487	463
2038	54	2	0	4	3	1	3	12	1	24	5	491	474
2039	41	1	0	3	4	1	3	12	(2)	22	4	495	486
2040	31	1	0	2	6	1	3	12	(4)	21	3	499	498
2041	23	1	0	2	6	0	3	12	(4)	19	3	502	511
2042	15	0	0	1	6	0	3	12	(4)	18	3	504	524
2043	8	0	0	1	5	(0)	3	12	(4)	17	2	507	537

IN SERVICE COST (\$000)	297
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.57%
DISCOUNT RATE	8.9%
PROPERTY TAX	1.800%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST
DEBT	44%	7.03
P/S	0%	0.00
C/S	56%	12.50

K-FACTOR =  $\frac{CPWFC}{IN-SVC\ COST} = 1.70738$

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Solar Water Heating (Low I)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRRD TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS MLIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.79%	11	11	12	12	11	11	0	28	0	0	0	0	(8)
2020	7.22%	21	32	12	24	11	22	4	28	0	0	0	4	(4)
2021	6.68%	19	51	12	36	11	32	3	28	0	0	0	3	(0)
2022	6.18%	18	69	12	47	11	43	3	28	0	0	0	3	2
2023	5.71%	16	85	12	59	11	54	2	28	0	0	0	2	5
2024	5.29%	15	100	12	71	11	65	2	28	0	0	0	2	6
2025	4.89%	14	115	12	83	11	75	1	28	0	0	0	1	8
2026	4.52%	13	128	12	95	11	86	1	28	0	0	0	1	8
2027	4.46%	13	141	12	107	11	97	1	28	0	0	0	1	9
2028	4.46%	13	153	12	119	11	108	1	28	0	0	0	1	10
2029	4.46%	13	166	12	131	11	118	1	28	0	0	0	1	11
2030	4.46%	13	179	12	142	11	129	1	28	0	0	0	1	12
2031	4.46%	13	192	12	154	11	140	1	28	0	0	0	1	13
2032	4.46%	13	205	12	166	11	151	1	28	0	0	0	1	13
2033	4.46%	13	218	12	178	11	161	1	28	0	0	0	1	14
2034	4.46%	13	231	12	190	11	172	1	28	0	0	0	1	15
2035	4.46%	13	244	12	202	11	183	1	28	0	0	0	1	16
2036	4.46%	13	256	12	214	11	194	1	28	0	0	0	1	17
2037	4.46%	13	269	12	226	11	204	1	28	0	0	0	1	17
2038	4.46%	13	282	12	237	11	215	1	28	0	0	0	1	18
2039	2.23%	6	289	12	249	11	226	(2)	28	0	0	0	(2)	17
2040	0.00%	0	289	12	261	11	237	(4)	28	0	0	0	(4)	12
2041	0.00%	0	289	12	273	11	248	(4)	28	0	0	0	(4)	8
2042	0.00%	0	289	12	285	11	258	(4)	28	0	0	0	(4)	4
2043	0.00%	0	289	12	297	11	269	(4)	28	0	0	0	(4)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(8)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	28
BOOK DEPR RATE - 1/USEFUL LIFE	4.09%



DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAMNAME: Residential Solar Water Heating (Low Income New Construction)

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	END OF YEAR NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2019	3.75%	11	0	285	12	(8)	304	292	298
2020	7.22%	21	4	273	24	(4)	292	277	285
2021	6.68%	19	3	261	36	(0)	277	261	269
2022	6.18%	18	3	249	47	2	261	247	254
2023	5.71%	16	2	237	59	5	247	233	240
2024	5.29%	15	2	226	71	6	233	219	226
2025	4.89%	14	1	214	83	8	219	206	213
2026	4.52%	13	1	202	95	8	206	193	200
2027	4.46%	13	1	190	107	9	193	181	187
2028	4.46%	13	1	178	119	10	181	168	174
2029	4.46%	13	1	166	131	11	168	155	162
2030	4.46%	13	1	154	142	12	155	143	149
2031	4.46%	13	1	142	154	13	143	130	136
2032	4.46%	13	1	131	166	13	130	117	124
2033	4.46%	13	1	119	178	14	117	105	111
2034	4.46%	13	1	107	190	15	105	92	98
2035	4.46%	13	1	95	202	16	92	79	85
2036	4.46%	13	1	83	214	17	79	66	73
2037	4.46%	13	1	71	226	17	66	54	60
2038	4.46%	13	1	59	237	18	54	41	47
2039	2.23%	6	(2)	47	249	17	41	31	36
2040	0.00%	0	(4)	36	261	12	31	23	27
2041	0.00%	0	(4)	24	273	8	23	15	19
2042	0.00%	0	(4)	12	285	4	15	8	12
2043	0.00%	0	(4)	(0)	297	0	8	0	4

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00%      907.77

YEAR	NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	26.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.5
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	253	253	253
EQUITY AFUDC	28		
DEBT AFUDC	16	16	
CPI			36
TOTAL	297	269	289

\* Column not specified in workbook

INPUT DATA -- PART 2  
 PROGRAM METHOD SELECTED : REV\_REQ  
 PROGRAM NAME: Residential Solar Water Heating (Low Income New Construction)

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (C/kWh)	(5) AVOIDED MARGINAL FUEL COST (C/kWh)	(6)* INCREASED MARGINAL FUEL COST (C/kWh)	(7) REPLACEMENT FUEL COST (C/kWh)	(8) PROGRAM kW EFFECTIVENESS FACTOR	(9) PROGRAM kWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	20	20	6.41	6.70	9.01	0.00	1.00	1.00
2011	220	220	6.35	6.61	8.48	0.00	1.00	1.00
2012	420	420	6.43	6.66	8.45	0.00	1.00	1.00
2013	620	620	7.06	7.23	8.41	0.00	1.00	1.00
2014	820	820	7.53	7.68	8.67	0.00	1.00	1.00
2015	820	820	8.11	8.31	9.61	0.00	1.00	1.00
2016	820	820	9.00	9.31	11.55	0.00	1.00	1.00
2017	820	820	9.75	10.06	12.72	0.00	1.00	1.00
2018	820	820	10.52	10.86	13.53	0.00	1.00	1.00
2019	820	820	11.50	11.94	15.25	10.41	1.00	1.00
2020	820	820	12.08	12.57	15.88	10.50	1.00	1.00
2021	820	820	12.57	13.08	16.53	10.74	1.00	1.00
2022	820	820	13.06	13.59	17.14	10.81	1.00	1.00
2023	820	820	13.39	13.92	17.16	10.80	1.00	1.00
2024	820	820	13.95	14.47	17.82	10.84	1.00	1.00
2025	820	820	14.40	14.92	18.22	10.96	1.00	1.00
2026	820	820	14.70	15.19	18.32	11.05	1.00	1.00
2027	820	820	15.13	15.60	18.54	11.17	1.00	1.00
2028	820	820	15.60	16.05	18.91	11.36	1.00	1.00
2029	820	820	16.02	16.44	18.85	11.41	1.00	1.00
2030	820	820	16.52	16.92	19.26	11.59	1.00	1.00
2031	820	820	17.08	17.47	19.86	11.80	1.00	1.00
2032	820	820	17.50	17.84	19.62	11.88	1.00	1.00
2033	820	820	18.27	18.50	20.38	12.10	1.00	1.00
2034	820	820	18.73	18.86	20.08	12.14	1.00	1.00
2035	820	820	19.57	19.75	21.37	12.29	1.00	1.00
2036	820	820	20.40	20.54	22.39	12.55	1.00	1.00
2037	820	820	21.11	21.24	22.91	12.70	1.00	1.00
2038	820	820	22.02	22.16	23.86	13.04	1.00	1.00
2039	820	820	22.78	22.89	24.49	13.32	1.00	1.00
2040	820	820	23.59	23.68	25.04	13.44	1.00	1.00
2041	820	820	24.54	24.62	25.93	13.75	1.00	1.00
2042	820	820	25.50	25.59	26.84	14.10	1.00	1.00
2043	820	820	26.74	26.85	28.65	14.40	1.00	1.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.





AVOIDED GENERATING EMISSION IMPACT  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Solar Water Heating (Low Income New Construction)

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	0	0	0	0	0
2013	0	0	0	0	0
2014	0	0	5	0	5
2015	0	0	9	0	9
2016	0	0	12	0	12
2017	0	0	13	0	13
2018	0	0	14	0	14
2019	0	0	15	0	15
2020	11	14	17	0	13
2021	16	21	18	0	13
2022	18	23	19	0	14
2023	21	27	22	0	16
2024	23	30	23	0	17
2025	26	34	26	0	18
2026	30	39	29	0	20
2027	34	43	30	0	21
2028	38	49	33	0	21
2029	42	53	36	0	23
2030	48	61	40	0	25
2031	53	67	44	0	27
2032	58	73	47	0	29
2033	64	81	51	0	32
2034	71	94	56	0	35
2035	82	104	60	0	36
2036	89	113	65	0	39
2037	97	123	71	0	42
2038	105	133	77	0	45
2039	114	144	83	0	49
2040	124	156	89	0	53
2041	133	169	96	0	57
2042	144	182	103	0	61
2043	144	182	111	0	65
2044	144	182	120	0	73
2045	0	0	0	0	82
2046	0	0	0	0	0
2047	0	0	0	0	0
2048	0	0	0	0	0
2049	0	0	0	0	0
2050	0	0	0	0	0
2051	0	0	0	0	0
2052	0	0	0	0	0
2053	0	0	0	0	0
2054	0	0	0	0	0
2055	0	0	0	0	0
2056	0	0	0	0	0
2057	0	0	0	0	0
2058	0	0	0	0	0
2059	0	0	0	0	0
2060	0	0	0	0	0
2061	0	0	0	0	0
2062	0	0	0	0	0
2063	0	0	0	0	0
2064	0	0	0	0	0
2065	0	0	0	0	0
2066	0	0	0	0	0
2067	0	0	0	0	0
2068	0	0	0	0	0
2069	0	0	0	0	0
2070	0	0	0	0	0
2071	0	0	0	0	0
2072	0	0	0	0	0
2073	0	0	0	0	0
2074	0	0	0	0	0
2075	0	0	0	0	0
2076	0	0	0	0	0
2077	0	0	0	0	0
2078	0	0	0	0	0
2079	0	0	0	0	0
2080	0	0	0	0	0
2081	0	0	0	0	0
2082	0	0	0	0	0
2083	0	0	0	0	0
2084	0	0	0	0	0
2085	0	0	0	0	0
2086	0	0	0	0	0
2087	0	0	0	0	0
2088	0	0	0	0	0
2089	0	0	0	0	0
2090	0	0	0	0	0
2091	0	0	0	0	0
2092	0	0	0	0	0
2093	0	0	0	0	0
2094	0	0	0	0	0
2095	0	0	0	0	0
2096	0	0	0	0	0
2097	0	0	0	0	0
2098	0	0	0	0	0
2099	0	0	0	0	0
2100	0	0	0	0	0
NOM	1,733	2,196	1,437	0	973
NPV	210	267	216	0	159

TOTAL RESOURCE COST TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Solar Water Heating (Low Income New Construction)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	(0)	(0)
2010	0	34	100	0	134	0	0	1	0	1	(133)	(122)
2011	0	157	1,000	0	1,157	0	0	13	0	13	(1,144)	(1,087)
2012	0	146	1,000	0	1,146	0	3	34	0	38	(1,108)	(1,945)
2013	0	148	1,000	0	1,148	0	7	60	6	73	(1,075)	(2,710)
2014	0	150	1,000	0	1,150	0	10	89	9	108	(1,043)	(3,391)
2015	0	0	0	0	0	0	13	109	12	134	134	(3,311)
2016	0	0	0	0	0	0	12	123	13	148	148	(3,229)
2017	0	0	0	0	0	0	12	133	14	159	159	(3,149)
2018	0	0	0	0	0	0	12	143	15	170	170	(3,070)
2019	0	0	0	0	0	76	11	158	13	259	259	(2,950)
2020	0	0	0	0	0	71	11	166	13	261	261	(2,857)
2021	0	0	0	0	0	68	11	173	14	266	266	(2,762)
2022	0	0	0	0	0	68	10	180	16	273	273	(2,671)
2023	0	0	0	0	0	69	10	184	17	279	279	(2,586)
2024	0	0	0	0	0	70	10	191	18	289	289	(2,506)
2025	0	0	0	0	0	70	9	197	20	296	296	(2,430)
2026	0	0	0	0	0	70	9	200	21	300	300	(2,360)
2027	0	0	0	0	0	71	9	206	23	308	308	(2,293)
2028	0	0	0	0	0	70	9	211	25	315	315	(2,231)
2029	0	0	0	0	0	72	8	216	27	324	324	(2,172)
2030	0	0	0	0	0	72	8	223	29	332	332	(2,116)
2031	0	0	0	0	0	72	8	230	32	341	341	(2,064)
2032	0	0	0	0	0	74	7	234	35	350	350	(2,014)
2033	0	0	0	0	0	74	7	242	36	359	359	(1,968)
2034	0	0	0	0	0	77	7	247	39	369	369	(1,924)
2035	0	0	0	0	0	78	7	258	42	385	385	(1,882)
2036	0	0	0	0	0	77	7	269	45	398	398	(1,842)
2037	0	0	0	0	0	79	7	278	49	412	412	(1,804)
2038	0	0	0	0	0	77	6	290	53	426	426	(1,768)
2039	0	0	0	0	0	75	6	299	57	438	438	(1,734)
2040	0	0	0	0	0	79	6	309	61	455	455	(1,701)
2041	0	0	0	0	0	78	6	322	65	471	471	(1,670)
2042	0	0	0	0	0	77	6	334	73	490	490	(1,641)
2043	0	0	0	0	0	77	6	351	82	515	515	(1,612)
	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	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	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	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	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	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
	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	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	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
NOM	0	635	4,100	0	4,735	1,839	271	6,673	973	5,756	5,021	
NPV	0	480	3,075	0	3,555	332	82	1,370	159	1,943	(1,612)	

Discount Rate: 8.89 %  
Benefit/Cost Ratio (Col(11) / Col(6)) : 0.55

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RATE IMPACT TEST  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Solar Water Heating (Low Income New Construction)

(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)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0	(0)
2010	0	34	100	2	0	136	1	0	0	0	1	(135)	(134)
2011	0	157	1,000	20	0	1,177	13	0	0	0	13	(1,164)	(1,106)
2012	0	146	1,000	57	0	1,203	34	3	0	0	38	(1,165)	(2,008)
2013	0	148	1,000	97	0	1,245	60	7	0	6	73	(1,172)	(2,842)
2014	0	150	1,000	143	0	1,293	89	10	0	9	108	(1,185)	(3,616)
2015	0	0	0	170	0	170	109	13	0	12	134	(37)	(3,638)
2016	0	0	0	175	0	175	123	12	0	13	148	(28)	(3,654)
2017	0	0	0	183	0	183	133	12	0	14	159	(24)	(3,666)
2018	0	0	0	188	0	188	143	12	0	15	170	(18)	(3,674)
2019	0	0	0	194	0	194	234	11	0	13	259	64	(3,646)
2020	0	0	0	195	0	195	237	11	0	13	261	66	(3,621)
2021	0	0	0	199	0	199	241	11	0	14	266	67	(3,597)
2022	0	0	0	205	0	205	247	10	0	16	273	68	(3,574)
2023	0	0	0	211	0	211	253	10	0	17	279	68	(3,553)
2024	0	0	0	221	0	221	261	10	0	18	289	68	(3,534)
2025	0	0	0	229	0	229	266	9	0	20	296	67	(3,517)
2026	0	0	0	238	0	238	270	9	0	21	300	63	(3,502)
2027	0	0	0	250	0	250	275	9	0	23	308	57	(3,490)
2028	0	0	0	260	0	260	282	9	0	25	315	54	(3,479)
2029	0	0	0	272	0	272	288	8	0	27	324	52	(3,470)
2030	0	0	0	285	0	285	295	8	0	29	332	47	(3,462)
2031	0	0	0	298	0	298	301	8	0	32	341	42	(3,455)
2032	0	0	0	316	0	316	308	7	0	35	350	34	(3,451)
2033	0	0	0	344	0	344	316	7	0	36	359	15	(3,449)
2034	0	0	0	351	0	351	324	7	0	39	369	19	(3,446)
2035	0	0	0	365	0	365	337	7	0	42	385	21	(3,444)
2036	0	0	0	391	0	391	346	7	0	45	398	7	(3,443)
2037	0	0	0	412	0	412	357	7	0	49	412	1	(3,443)
2038	0	0	0	429	0	429	367	6	0	53	426	(4)	(3,444)
2039	0	0	0	449	0	449	375	6	0	57	438	(11)	(3,445)
2040	0	0	0	470	0	470	388	6	0	61	455	(15)	(3,446)
2041	0	0	0	495	0	495	400	6	0	65	471	(24)	(3,447)
2042	0	0	0	521	0	521	411	6	0	73	490	(31)	(3,449)
2043	0	0	0	550	0	550	428	6	0	82	515	(34)	(3,451)
	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	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	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	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	0	0	0	0	0	0	0
NOM.	0	635	4,100	9,186	0	13,921	8,512	271	0	973	9,756	(4,166)	
NPV	0	480	3,075	1,839	0	5,393	1,702	82	0	159	1,943	(3,451)	

Discount Rate 8.89 %  
 Benefit/Cost Ratio (Col(12) / Col(7)) : 0.36

**RESIDENTIAL LOAD MANAGEMENT**

INPUT DATA -- PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Solar Water Heating

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.86 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.15 kW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	3,927.00 kWh
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	0.00 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
* (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
* (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
^ (10) UTILITY DISCOUNT RATE .....	8.89 %
v (11) UTILITY AFUDC RATE .....	8.48 %
* (12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
* (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2010-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	29.64 \$/kW
(7) GEN. TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (in-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.23 CENTS PER kWh** (in-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2



CALCULATION OF GEN K-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Business Solar Water Heating

YEAR	(2) BEG-YEAR RATE BASE \$(000)	(3) DEBT \$(000)	(4) PREFERRED STOCK \$(000)	(5) COMMON EQUITY \$(000)	(6) INCOME TAXES \$(000)	(7) PROPERTY TAX \$(000)	(8) PROPERTY INSURANCE \$(000)	(9) DEPREC. \$(000)	(10) DEFERRED TAXES \$(000)	(11) TOTAL FIXED CHARGES \$(000)	(12) PRESENT WORTH FIXED CHARGES \$(000)	(13) CUMULATIVE PW FIXED CHARGES \$(000)	(14) REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	306	10	0	21	14	5	2	12	0	64	64	289	
2020	294	9	0	21	10	5	2	12	4	62	57	306	
2021	278	9	0	19	10	5	2	12	3	60	50	314	
2022	263	8	0	18	9	5	2	12	3	57	44	322	
2023	248	8	0	17	9	4	2	12	2	55	39	330	
2024	234	7	0	16	9	4	2	12	2	53	34	338	
2025	221	7	0	15	9	4	2	12	1	51	30	346	
2026	207	6	0	14	9	4	2	12	1	48	27	355	
2027	194	6	0	13	8	3	2	12	1	46	24	364	
2028	182	5	0	12	8	3	2	12	1	44	21	373	
2029	169	5	0	11	7	3	2	12	1	42	18	382	
2030	156	4	0	10	6	3	2	12	1	40	16	392	
2031	143	4	0	9	6	3	2	12	1	38	14	402	
2032	131	4	0	8	5	2	3	12	1	36	12	412	
2033	118	3	0	7	4	2	3	12	1	34	10	422	
2034	105	3	0	6	4	2	3	12	1	32	9	432	
2035	92	2	0	6	3	2	3	12	1	30	8	443	
2036	80	2	0	5	3	2	3	12	1	28	7	454	
2037	67	2	0	5	3	1	3	12	1	26	6	466	
2038	54	2	0	4	2	1	3	12	1	24	5	477	
2039	41	1	0	3	4	1	3	12	(2)	22	4	489	
2040	31	1	0	2	6	1	3	12	(4)	21	3	502	
2041	23	1	0	2	6	0	3	12	(4)	20	3	514	
2042	16	0	0	1	6	0	3	12	(4)	18	3	527	
2043	8	0	0	1	5	(0)	3	12	(4)	17	2	540	

IN SERVICE COST (\$000)	259
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
HFEC. TAX RATE	38.575
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST
DEBT	44%	7.03 %
P/S	0%	0.00 %
C/S	56%	12.50 %

K-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Solar Water Heating

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	11	11	12	12	11	11	0	28	0	0	0	0	(8)
2020	7.22%	21	32	12	24	11	22	4	28	0	0	0	4	(4)
2021	6.68%	19	51	12	36	11	32	3	28	0	0	0	3	(0)
2022	5.18%	18	69	12	48	11	43	3	28	0	0	0	3	2
2023	5.71%	17	86	12	60	11	54	2	28	0	0	0	2	5
2024	5.29%	15	101	12	72	11	65	2	28	0	0	0	2	6
2025	4.89%	14	115	12	84	11	76	1	28	0	0	0	1	8
2026	4.52%	13	128	12	96	11	87	1	28	0	0	0	1	9
2027	4.46%	13	141	12	107	11	97	1	28	0	0	0	1	9
2028	4.46%	13	154	12	119	11	108	1	28	0	0	0	1	10
2029	4.46%	13	167	12	131	11	119	1	28	0	0	0	1	11
2030	4.46%	13	180	12	143	11	130	1	28	0	0	0	1	12
2031	4.46%	13	193	12	155	11	141	1	28	0	0	0	1	13
2032	4.46%	13	206	12	167	11	152	1	28	0	0	0	1	13
2033	4.46%	13	219	12	179	11	162	1	28	0	0	0	1	14
2034	4.46%	13	232	12	191	11	173	1	28	0	0	0	1	15
2035	4.46%	13	245	12	203	11	184	1	28	0	0	0	1	16
2036	4.46%	13	258	12	215	11	195	1	28	0	0	0	1	17
2037	4.46%	13	271	12	227	11	206	1	28	0	0	0	1	18
2038	4.46%	13	284	12	239	11	217	1	28	0	0	0	1	18
2039	2.23%	6	290	12	251	11	227	(2)	28	0	0	0	(2)	17
2040	0.00%	0	290	12	263	11	238	(4)	28	0	0	0	(4)	13
2041	0.00%	0	290	12	275	11	249	(4)	28	0	0	0	(4)	8
2042	0.00%	0	290	12	287	11	260	(4)	28	0	0	0	(4)	4
2043	0.00%	0	290	12	299	11	271	(4)	28	0	0	0	(4)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(8)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	28
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Solar Water Heating

(1)	(2)	(3)	(4)	(5) END OF YEAR NET PLANT IN SERVICE	(5a)* ACCUMULATED DEPRECIATION	(5b)* ACCUMULATED DEF TAXES	(6) BEGINNING YEAR RATE BASE	(7) ENDING OF YEAR RATE BASE	(8) MID-YEAR RATE BASE
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2019	3.73%	11	0	287	12	(8)	305	294	300
2020	7.22%	21	4	275	24	(4)	294	278	286
2021	6.68%	19	3	263	36	(0)	278	263	271
2022	6.18%	18	3	251	48	2	263	248	256
2023	5.71%	17	2	239	60	5	248	234	241
2024	5.29%	15	2	227	72	6	234	221	227
2025	4.89%	14	1	215	84	8	221	207	214
2026	4.52%	13	1	203	96	9	207	194	201
2027	4.46%	13	1	191	107	9	194	182	188
2028	4.46%	13	1	179	119	10	182	169	175
2029	4.46%	13	1	167	131	11	169	156	163
2030	4.46%	13	1	155	143	12	156	143	150
2031	4.46%	13	1	143	155	13	143	131	137
2032	4.46%	13	1	131	167	13	131	118	124
2033	4.46%	13	1	119	179	14	118	105	112
2034	4.46%	13	1	107	191	15	105	92	99
2035	4.46%	13	1	96	203	16	92	80	86
2036	4.46%	13	1	84	215	17	80	67	73
2037	4.46%	13	1	72	227	18	67	54	60
2038	4.46%	13	1	60	239	18	54	41	48
2039	2.23%	6	(2)	48	251	17	41	31	36
2040	0.00%	0	(4)	36	263	13	31	23	27
2041	0.00%	0	(4)	24	275	8	23	16	19
2042	0.00%	0	(4)	12	287	4	16	8	12
2043	0.00%	0	(4)	(0)	299	0	8	0	4

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	426.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00% 907.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	855.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.55
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	255	255	255
EQUITY AFUDC	28		
DEBT AFUDC	16	16	
CPI			36
TOTAL	299	271	290

\* Column not specified in workbook



INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED : REV\_REQ  
 PROGRAMNAME: Business Solar Water Heating

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (\$/kWh)	(5) AVOIDED MARGINAL FUEL COST (\$/kWh)	(6)* INCREASED MARGINAL FUEL COST (\$/kWh)	(7) REPLACEMENT FUEL COST (\$/kWh)	(8) PROGRAM KW EFFECTIVENESS FACTOR	(9) PROGRAM KW EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	11	11	6.41	8.55	6.80	0.00	1.00	1.00
2011	54	54	6.35	8.15	6.70	0.00	1.00	1.00
2012	106	106	6.43	8.09	6.74	0.00	1.00	1.00
2013	169	169	7.06	8.17	7.28	0.00	1.00	1.00
2014	244	244	7.53	8.46	7.73	0.00	1.00	1.00
2015	244	244	8.11	9.29	8.37	0.00	1.00	1.00
2016	244	244	9.00	11.04	9.41	0.00	1.00	1.00
2017	244	244	9.75	12.12	10.17	0.00	1.00	1.00
2018	244	244	10.52	12.96	10.97	0.00	1.00	1.00
2019	244	244	11.50	14.57	12.08	10.41	1.00	1.00
2020	244	244	12.08	15.21	12.73	10.50	1.00	1.00
2021	244	244	12.57	15.76	13.24	10.74	1.00	1.00
2022	244	244	13.06	16.30	13.73	10.81	1.00	1.00
2023	244	244	13.39	16.34	14.04	10.80	1.00	1.00
2024	244	244	13.95	16.98	14.61	10.84	1.00	1.00
2025	244	244	14.40	17.40	15.06	10.96	1.00	1.00
2026	244	244	14.70	17.53	15.33	11.05	1.00	1.00
2027	244	244	15.13	17.74	15.73	11.17	1.00	1.00
2028	244	244	15.60	18.09	16.17	11.36	1.00	1.00
2029	244	244	16.02	18.18	16.55	11.41	1.00	1.00
2030	244	244	16.52	18.60	17.03	11.59	1.00	1.00
2031	244	244	17.08	19.21	17.59	11.80	1.00	1.00
2032	244	244	17.50	19.14	17.93	11.88	1.00	1.00
2033	244	244	18.27	19.86	18.58	12.10	1.00	1.00
2034	244	244	18.73	19.76	18.91	12.14	1.00	1.00
2035	244	244	19.57	20.92	19.82	12.29	1.00	1.00
2036	244	244	20.40	21.89	20.62	12.55	1.00	1.00
2037	244	244	21.11	22.47	21.31	12.70	1.00	1.00
2038	244	244	22.02	23.40	22.23	13.04	1.00	1.00
2039	244	244	22.78	24.05	22.95	13.32	1.00	1.00
2040	244	244	23.59	24.67	23.74	13.44	1.00	1.00
2041	244	244	24.54	25.60	24.68	13.75	1.00	1.00
2042	244	244	25.50	26.54	25.65	14.10	1.00	1.00
2043	244	244	26.74	28.19	26.92	14.40	1.00	1.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.









PARTICIPANT COSTS AND BENEFITS  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Solar Water Heating

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
YEAR	SAVINGS IN PARTICIPANT'S BILLS \$(000)	TAX CREDITS \$(000)	UTILITY REBATES \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	CUSTOMER EQUIPMENT COSTS \$(000)	CUSTOMER O&M COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0
2010	3	23	17	0	43	76	0	0	76	(33)	(30)
2011	16	87	61	0	166	288	0	0	288	(122)	(133)
2012	41	109	76	0	227	359	0	0	359	(133)	(266)
2013	75	133	92	0	302	446	0	0	446	(144)	(339)
2014	120	167	111	0	398	550	0	0	550	(153)	(438)
2015	150	0	0	0	150	0	0	0	0	150	(348)
2016	155	0	0	0	155	0	0	0	0	155	(263)
2017	162	0	0	0	162	0	0	0	0	162	(181)
2018	166	0	0	0	166	0	0	0	0	166	(104)
2019	171	0	0	0	171	0	0	0	0	171	(31)
2020	171	0	0	0	171	0	0	0	0	171	36
2021	174	0	0	0	174	0	0	0	0	174	99
2022	180	0	0	0	180	0	0	0	0	180	158
2023	185	0	0	0	185	0	0	0	0	185	214
2024	194	0	0	0	194	0	0	0	0	194	268
2025	201	0	0	0	201	0	0	0	0	201	320
2026	209	0	0	0	209	0	0	0	0	209	369
2027	221	0	0	0	221	0	0	0	0	221	417
2028	230	0	0	0	230	0	0	0	0	230	462
2029	241	0	0	0	241	0	0	0	0	241	506
2030	253	37	0	0	291	0	0	0	0	291	555
2031	266	141	0	0	407	0	0	0	0	407	618
2032	282	176	0	0	458	0	0	0	0	458	682
2033	308	219	0	0	527	0	0	0	0	527	750
2034	314	269	0	0	584	0	0	0	0	584	820
2035	327	0	0	0	327	0	0	0	0	327	856
2036	352	0	0	0	352	0	0	0	0	352	891
2037	371	0	0	0	371	0	0	0	0	371	925
2038	388	0	0	0	388	0	0	0	0	388	958
2039	406	0	0	0	406	0	0	0	0	406	990
2040	426	0	0	0	426	0	0	0	0	426	1,020
2041	449	0	0	0	449	0	0	0	0	449	1,049
2042	474	0	0	0	474	0	0	0	0	474	1,078
2043	500	0	0	0	500	0	0	0	0	500	1,106
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	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	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	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
NOM	8,181	1,364	359	0	9,903	1,720	0	0	1,720	8,183	
NPV	1,611	498	265	0	2,374	1,268	0	0	1,268	1,106	

In Service of Gen Unit: 2019  
Discount Rate : 8.89 %  
Benefit/Cost Ratio ( Col(6) / Col(10)) 1.87

RATE IMPACT TEST  
PROGRAM/METHOD SELECTED: REV\_REQ  
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)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0	(0)
2010	0	86	17	2	0	106	2	0	0	0	2	(104)	(95)
2011	0	178	63	14	0	255	11	1	0	0	12	(243)	(301)
2012	0	262	76	36	0	375	26	3	0	0	29	(345)	(568)
2013	0	378	92	66	0	536	45	6	0	4	55	(481)	(910)
2014	0	447	111	106	0	664	70	9	0	6	86	(578)	(1,288)
2015	0	0	0	132	0	132	91	13	0	9	113	(19)	(1,300)
2016	0	0	0	137	0	137	110	13	0	10	132	(5)	(1,302)
2017	0	0	0	142	0	142	121	12	0	11	144	1	(1,302)
2018	0	0	0	145	0	145	129	12	0	12	152	7	(1,298)
2019	0	0	0	150	0	150	222	11	0	9	243	93	(1,259)
2020	0	0	0	149	0	149	223	11	0	9	243	94	(1,222)
2021	0	0	0	152	0	152	225	11	0	9	246	94	(1,188)
2022	0	0	0	156	0	156	230	11	0	10	251	95	(1,157)
2023	0	0	0	161	0	161	231	10	0	11	252	91	(1,129)
2024	0	0	0	169	0	169	238	10	0	12	260	92	(1,104)
2025	0	0	0	174	0	174	242	10	0	13	265	91	(1,080)
2026	0	0	0	181	0	181	244	9	0	13	266	85	(1,060)
2027	0	0	0	191	0	191	246	9	0	14	269	78	(1,043)
2028	0	0	0	199	0	199	249	9	0	15	273	74	(1,029)
2029	0	0	0	208	0	208	251	8	0	17	276	68	(1,016)
2030	0	0	0	218	0	218	255	8	0	18	281	63	(1,006)
2031	0	0	0	228	0	228	260	8	0	19	287	59	(997)
2032	0	0	0	242	0	242	261	8	0	21	289	47	(990)
2033	0	0	0	264	0	264	267	7	0	21	296	32	(986)
2034	0	0	0	269	0	269	269	7	0	23	298	29	(983)
2035	0	0	0	280	0	280	281	7	0	25	313	33	(979)
2036	0	0	0	300	0	300	290	7	0	26	323	24	(977)
2037	0	0	0	316	0	316	297	7	0	28	332	16	(975)
2038	0	0	0	330	0	330	304	7	0	31	341	11	(974)
2039	0	0	0	345	0	345	309	6	0	33	348	2	(974)
2040	0	0	0	362	0	362	318	6	0	35	359	(3)	(974)
2041	0	0	0	381	0	381	326	6	0	38	369	(12)	(975)
2042	0	0	0	402	0	402	333	6	0	43	383	(19)	(976)
2043	0	0	0	424	0	424	350	6	0	50	405	(18)	(977)
	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	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	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	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	0	0	0	0	0	0	0
NOM.	0	1,352	359	7,031	0	8,741	7,326	272	0	594	8,192	(549)	
NPV	0	994	265	1,398	0	2,657	1,496	81	0	102	1,680	(977)	

Discount Rate 8.59 %  
Benefit/Cost Ratio (Col(12) / Col(7)) : 0.632

**RESIDENTIAL AC TUNE-UP AND MAINTENANCE**



INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Photovoltaics (PV)

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	1.45 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.94 kW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KWH REDUCTION PER CUSTOMER .....	5,771.49 kWh
(5) KWH LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.01
(7) CUSTOMER KWH INCREASE AT METER .....	0.00 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
* (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
* (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
^ (10) UTILITY DISCOUNT RATE .....	8.89 %
^ (11) UTILITY AFUDC RATE .....	8.48 %
* (12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
* (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS\$/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (in-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh** (in-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
 \*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
 \*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Photovoltaics (PV)

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2009	0	0	0	0	0	0	0	0	0	
2010	492	910	0	1,402	33	0	4,498	51	4,550	
2011	571	2,747	0	3,318	173	0	13,941	263	14,204	
2012	379	2,747	0	3,126	402	0	14,359	593	14,952	
2013	372	2,747	0	3,119	652	0	14,790	940	15,730	
2014	374	2,747	0	3,121	936	0	15,234	1,303	16,537	
2015	0	0	0	0	1,109	0	0	1,510	1,510	
2016	0	0	0	0	1,147	0	0	1,548	1,548	
2017	0	0	0	0	1,189	0	0	1,587	1,587	
2018	0	0	0	0	1,145	0	0	1,626	1,626	
2019	0	0	0	0	1,179	0	0	1,667	1,667	
2020	0	0	0	0	1,175	0	0	1,709	1,709	
2021	0	0	0	0	1,193	0	0	1,751	1,751	
2022	0	0	0	0	1,219	0	0	1,795	1,795	
2023	0	0	0	0	1,248	0	0	1,840	1,840	
2024	0	0	0	0	1,295	0	0	1,886	1,886	
2025	0	0	0	0	1,333	0	0	1,933	1,933	
2026	0	0	0	0	1,377	0	0	1,981	1,981	
2027	0	0	0	0	1,440	0	0	2,031	2,031	
2028	0	0	0	0	1,489	0	0	2,082	2,082	
2029	0	0	0	0	1,545	0	0	2,134	2,134	
2030	0	0	0	0	1,930	0	7,888	2,271	10,159	
2031	0	0	0	0	2,154	0	24,446	2,500	26,946	
2032	0	0	0	0	2,266	0	25,179	2,563	27,742	
2033	0	0	0	0	2,453	0	25,934	2,627	28,561	
2034	0	0	0	0	2,482	0	26,712	2,693	29,405	
2035	0	0	0	0	2,298	0	0	2,474	2,474	
2036	0	0	0	0	2,446	0	0	2,536	2,536	
2037	0	0	0	0	2,561	0	0	2,600	2,600	
2038	0	0	0	0	2,797	0	0	2,665	2,665	
2039	0	0	0	0	2,906	0	0	2,731	2,731	
2040	0	0	0	0	3,022	0	0	2,800	2,800	
2041	0	0	0	0	3,161	0	0	2,870	2,870	
2042	0	0	0	0	3,308	0	0	2,941	2,941	
2043	0	0	0	0	3,465	0	0	3,015	3,015	
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	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	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
NOM	2,183	11,899	0	14,087	58,526	0	172,982	67,514	240,496	
NPV	1,736	9,030	0	10,766	11,680	0	62,655	15,178	77,833	

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS

CALCULATION OF GENK-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Residential Photovoltaics (PV)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	BEG-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPRBC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	3,120	97	0	218	144	53	19	122	0	651	651	651	3,042
2020	2,998	93	0	209	99	50	19	122	40	632	580	1,232	3,119
2021	2,836	88	0	198	98	48	19	122	34	607	512	1,744	3,197
2022	2,681	83	0	187	97	46	20	122	28	583	451	2,195	3,276
2023	2,531	79	0	177	95	44	20	122	23	559	398	2,593	3,358
2024	2,387	74	0	167	94	42	21	122	18	537	351	2,943	3,442
2025	2,247	70	0	157	92	39	22	122	13	515	309	3,252	3,528
2026	2,113	66	0	147	91	37	22	122	9	494	272	3,525	3,617
2027	1,982	62	0	138	86	35	23	122	8	473	239	3,764	3,707
2028	1,852	58	0	129	80	33	23	122	8	453	210	3,974	3,800
2029	1,722	53	0	120	74	31	24	122	8	432	185	4,159	3,895
2030	1,592	49	0	111	69	28	24	122	8	412	161	4,320	3,992
2031	1,462	45	0	102	63	26	25	122	8	392	141	4,461	4,092
2032	1,331	41	0	93	57	24	26	122	8	371	123	4,584	4,194
2033	1,201	37	0	84	51	22	26	122	8	351	107	4,691	4,299
2034	1,071	33	0	75	46	20	27	122	8	330	92	4,783	4,406
2035	941	29	0	66	40	18	28	122	8	310	79	4,862	4,517
2036	811	25	0	57	34	15	28	122	8	290	68	4,930	4,629
2037	691	21	0	48	29	13	29	122	8	269	58	4,988	4,745
2038	551	17	0	38	23	11	30	122	8	249	49	5,038	4,864
2039	421	13	0	29	13	9	30	122	(17)	229	42	5,080	4,985
2040	317	10	0	22	64	7	31	122	(43)	212	36	5,115	5,110
2041	237	7	0	17	60	4	32	122	(43)	200	31	5,146	5,238
2042	158	5	0	11	57	2	33	122	(43)	187	26	5,172	5,369
2043	79	2	0	6	53	(0)	34	122	(43)	174	23	5,195	5,503

IN SERVICE COST (\$000)	3,042
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.57%
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST	%
DEBT	44%	7.03	%
P/S	0%	0.00	%
C/S	56%	12.50	%

K-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Photovoltaics (PV)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS LLIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	111	111	122	122	110	110	0	284	0	0	0	0	(77)
2020	7.22%	214	325	122	243	110	221	40	284	0	0	0	40	(37)
2021	6.68%	198	522	122	365	110	331	34	284	0	0	0	34	(4)
2022	6.18%	183	705	122	487	110	441	28	284	0	0	0	28	24
2023	5.71%	169	874	122	608	110	552	23	284	0	0	0	23	47
2024	5.25%	156	1,030	122	730	110	662	18	284	0	0	0	18	65
2025	4.83%	143	1,175	122	852	110	772	13	284	0	0	0	13	73
2026	4.52%	134	1,309	122	974	110	883	9	284	0	0	0	9	87
2027	4.46%	132	1,441	122	1,095	110	993	8	284	0	0	0	8	95
2028	4.46%	132	1,573	122	1,217	110	1,103	8	284	0	0	0	8	104
2029	4.46%	132	1,705	122	1,339	110	1,214	8	284	0	0	0	8	112
2030	4.46%	132	1,837	122	1,460	110	1,324	8	284	0	0	0	8	121
2031	4.46%	132	1,969	122	1,582	110	1,434	8	284	0	0	0	8	129
2032	4.46%	132	2,101	122	1,704	110	1,545	8	284	0	0	0	8	137
2033	4.46%	132	2,233	122	1,825	110	1,655	8	284	0	0	0	8	146
2034	4.46%	132	2,365	122	1,947	110	1,765	8	284	0	0	0	8	154
2035	4.46%	132	2,497	122	2,069	110	1,876	8	284	0	0	0	8	162
2036	4.46%	132	2,629	122	2,191	110	1,986	8	284	0	0	0	8	171
2037	4.46%	132	2,761	122	2,312	110	2,096	8	284	0	0	0	8	179
2038	4.46%	132	2,893	122	2,434	110	2,207	8	284	0	0	0	8	187
2039	2.23%	66	2,959	122	2,556	110	2,317	(17)	284	0	0	0	(17)	170
2040	0.00%	0	2,959	122	2,677	110	2,427	(43)	284	0	0	0	(43)	128
2041	0.00%	0	2,959	122	2,799	110	2,538	(43)	284	0	0	0	(43)	85
2042	0.00%	0	2,959	122	2,921	110	2,648	(43)	284	0	0	0	(43)	43
2043	0.00%	0	2,959	122	3,042	110	2,758	(43)	284	0	0	0	(43)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(77)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	284
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Photovoltaics (PV)

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	END OF YEAR NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2019	3.75%	111	0	2,921	122	(77)	3,120	2,998	3,059
2020	7.22%	214	40	2,799	243	(37)	2,998	2,836	2,917
2021	6.68%	198	34	2,677	365	(4)	2,836	2,681	2,759
2022	6.18%	183	28	2,556	487	24	2,681	2,531	2,606
2023	5.71%	169	23	2,434	608	47	2,531	2,387	2,459
2024	5.29%	156	18	2,312	730	65	2,387	2,247	2,317
2025	4.89%	145	13	2,191	852	78	2,247	2,113	2,180
2026	4.52%	134	9	2,069	974	87	2,113	1,982	2,047
2027	4.46%	132	8	1,947	1,095	95	1,982	1,852	1,917
2028	4.46%	132	8	1,825	1,217	104	1,852	1,722	1,787
2029	4.46%	132	8	1,704	1,339	112	1,722	1,592	1,657
2030	4.46%	132	8	1,582	1,460	121	1,592	1,462	1,527
2031	4.46%	132	8	1,460	1,582	129	1,462	1,331	1,397
2032	4.46%	132	8	1,339	1,704	137	1,331	1,201	1,266
2033	4.46%	132	8	1,217	1,825	146	1,201	1,071	1,136
2034	4.46%	132	8	1,095	1,947	154	1,071	941	1,006
2035	4.46%	132	8	974	2,069	162	941	811	876
2036	4.46%	132	8	852	2,191	171	811	681	746
2037	4.46%	132	8	730	2,312	179	681	551	616
2038	4.46%	132	8	608	2,434	187	551	421	486
2039	2.23%	66	(17)	487	2,556	170	421	317	369
2040	0.00%	0	(43)	365	2,677	128	317	237	277
2041	0.00%	0	(43)	243	2,799	85	237	158	198
2042	0.00%	0	(43)	122	2,921	43	158	79	119
2043	0.00%	0	(43)	(0)	3,042	0	79	0	40

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(9a)* DEBT AFUDC (\$/kW)	100.00%		(9b)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9c)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9d)* CUMULATIVE CPI (\$/kW)	(9e)* DEFERRED TAXES (\$/kW)	(9f)* DEFERRED TAXES (\$/kW)	(10) YEAR-END BOOK VALUE (\$/kW)	(11) YEAR-END CUMULATIVE BOOK VALUE (\$/kW)
				(9) YEARLY TOTAL AFUDC (\$/kW)	(9b)* CUMULATIVE TOTAL AFUDC (\$/kW)							
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.79	(0.14)	(0.15)	16.78	
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	
2017	-2	822.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.55
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	2,594	2,594	2,594
EQUITY AFUDC	284		
DEBT AFUDC	164	164	
CPI			364
TOTAL	3,042	2,758	2,959

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED : REV\_REQ  
 PROGRAM NAME: Residential Photovoltaics (PV)

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (¢/kWh)	(5) AVOIDED MARGINAL FUEL COST (¢/kWh)	(6)* INCREASED MARGINAL FUEL COST (¢/kWh)	(7) REPLACEMENT FUEL COST (¢/kWh)	(8) PROGRAM KW EFFECTIVENESS FACTOR	(9) PROGRAM KW EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	0.99	0.99
2010	113	113	6.41	8.02	6.98	0.00	0.99	0.99
2011	453	453	6.35	7.75	6.86	0.00	0.98	0.98
2012	793	793	6.43	7.77	6.88	0.00	0.97	0.97
2013	1,133	1,133	7.06	7.94	7.38	0.00	0.97	0.97
2014	1,473	1,473	7.53	8.28	7.80	0.00	0.96	0.96
2015	1,473	1,473	8.11	9.05	8.45	0.00	0.96	0.96
2016	1,473	1,473	9.00	10.60	9.54	0.00	0.95	0.95
2017	1,473	1,473	9.75	11.66	10.31	0.00	0.94	0.94
2018	1,473	1,473	10.52	12.51	11.12	0.00	0.94	0.94
2019	1,473	1,473	11.50	14.01	12.28	10.41	0.93	0.93
2020	1,473	1,473	12.08	14.63	12.92	10.50	0.92	0.92
2021	1,473	1,473	12.57	15.24	13.43	10.74	0.92	0.92
2022	1,473	1,473	13.06	15.79	13.87	10.81	0.91	0.91
2023	1,473	1,473	13.39	15.87	14.16	10.80	0.91	0.91
2024	1,473	1,473	13.95	16.47	14.74	10.84	0.90	0.90
2025	1,473	1,473	14.40	16.90	15.19	10.96	0.90	0.90
2026	1,473	1,473	14.70	17.05	15.45	11.05	0.89	0.89
2027	1,473	1,473	15.15	17.30	15.84	11.17	0.88	0.88
2028	1,473	1,473	15.60	17.77	16.26	11.36	0.88	0.88
2029	1,473	1,473	16.02	17.90	16.62	11.41	0.87	0.87
2030	1,473	1,473	16.52	18.19	17.15	11.59	1.00	1.00
2031	1,473	1,473	17.08	18.66	17.77	11.80	0.99	0.99
2032	1,473	1,473	17.50	18.74	18.07	11.88	0.99	0.99
2033	1,473	1,473	18.27	19.43	18.74	12.10	0.98	0.98
2034	1,473	1,473	18.73	19.53	19.02	12.14	0.97	0.97
2035	1,473	1,473	19.57	20.59	19.94	12.29	0.97	0.97
2036	1,473	1,473	20.40	21.53	20.75	12.55	0.96	0.96
2037	1,473	1,473	21.11	22.14	21.43	12.70	0.96	0.96
2038	1,473	1,473	22.02	23.06	22.36	13.04	1.00	1.00
2039	1,473	1,473	22.78	23.71	23.11	13.32	0.99	0.99
2040	1,473	1,473	23.59	24.40	23.89	13.44	0.99	0.99
2041	1,473	1,473	24.54	25.33	24.82	13.75	0.98	0.98
2042	1,473	1,473	25.50	26.30	25.75	14.10	0.97	0.97
2043	1,473	1,473	26.74	27.84	27.07	14.40	0.97	0.97
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.







AVOIDED GENERATING EMISSION IMPACT  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Photovoltaics (PV)

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	0	0	1	0	1
2013	0	0	39	0	39
2014	0	0	58	0	58
2015	0	0	72	0	72
2016	0	0	81	0	81
2017	0	0	88	0	88
2018	0	0	96	0	96
2019	109	142	103	0	70
2020	166	215	111	0	62
2021	182	237	118	0	54
2022	213	276	133	0	70
2023	235	304	140	0	72
2024	271	349	155	0	76
2025	313	402	169	0	80
2026	347	443	177	0	81
2027	392	500	192	0	84
2028	430	548	208	0	90
2029	492	624	230	0	98
2030	545	692	255	0	139
2031	593	751	308	0	149
2032	653	825	331	0	158
2033	760	961	357	0	156
2034	842	1,063	384	0	162
2035	914	1,155	413	0	172
2036	998	1,261	445	0	182
2037	1,082	1,366	477	0	193
2038	1,172	1,481	539	0	231
2039	1,266	1,601	578	0	243
2040	1,368	1,730	619	0	257
2041	1,474	1,864	661	0	271
2042	1,474	1,864	706	0	316
2043	1,474	1,864	754	0	364
	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	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	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
NOM	17,764	22,516	9,030	0	4,278
NPV	2,151	2,737	1,343	0	757

TOTAL RESOURCE COST TEST  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Photovoltaics (PV)

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) PARTICIPANT PROGRAM COSTS \$(000)	(5) OTHER COSTS \$(000)	(6) TOTAL COSTS \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)	(8) AVOIDED T&D BENEFITS \$(000)	(9) PROGRAM FUEL SAVINGS \$(000)	(10) OTHER BENEFITS \$(000)	(11) TOTAL BENEFITS \$(000)	(12) NET BENEFITS \$(000)	(13) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	(0)	(0)
2010	0	492	4,550	0	5,042	0	0	27	0	28	(5,014)	(4,605)
2011	0	571	14,204	0	14,775	0	10	131	0	141	(14,634)	(16,948)
2012	0	379	14,932	0	15,331	0	39	287	1	327	(15,004)	(28,570)
2013	0	372	15,730	0	16,101	0	71	442	39	552	(15,550)	(39,631)
2014	0	374	16,537	0	16,911	0	100	616	58	774	(16,136)	(50,173)
2015	0	0	1,510	0	1,510	0	127	759	72	958	(552)	(50,505)
2016	0	0	1,548	0	1,548	0	124	896	81	1,100	(448)	(50,751)
2017	0	0	1,587	0	1,587	0	120	983	88	1,190	(396)	(50,952)
2018	0	0	1,626	0	1,626	0	116	1,046	96	1,259	(368)	(51,123)
2019	0	0	1,667	0	1,667	736	113	1,171	70	2,089	422	(50,942)
2020	0	0	1,709	0	1,709	674	110	1,213	62	2,060	351	(50,805)
2021	0	0	1,751	0	1,751	640	106	1,256	64	2,067	315	(50,691)
2022	0	0	1,795	0	1,795	630	103	1,292	70	2,096	301	(50,592)
2023	0	0	1,840	0	1,840	637	100	1,284	72	2,093	253	(50,515)
2024	0	0	1,886	0	1,886	640	97	1,322	76	2,136	250	(50,446)
2025	0	0	1,933	0	1,933	634	94	1,346	80	2,153	220	(50,389)
2026	0	0	1,981	0	1,981	634	91	1,346	81	2,151	170	(50,349)
2027	0	0	2,031	0	2,031	635	88	1,351	84	2,157	126	(50,322)
2028	0	0	2,082	0	2,082	627	85	1,377	90	2,179	97	(50,303)
2029	0	0	2,134	0	2,134	641	82	1,371	98	2,191	57	(50,292)
2030	0	0	10,159	0	10,159	636	79	1,592	139	2,445	(7,714)	(51,583)
2031	0	0	26,946	0	26,946	631	76	1,618	149	2,473	(24,473)	(55,343)
2032	0	0	27,742	0	27,742	668	73	1,605	158	2,504	(25,238)	(58,904)
2033	0	0	28,561	0	28,561	689	71	1,650	156	2,566	(25,995)	(62,473)
2034	0	0	29,405	0	29,405	747	69	1,638	162	2,617	(26,789)	(65,461)
2035	0	0	2,474	0	2,474	781	68	1,721	172	2,742	268	(65,432)
2036	0	0	2,536	0	2,536	781	67	1,789	182	2,820	283	(65,404)
2037	0	0	2,600	0	2,600	793	66	1,825	193	2,876	276	(65,378)
2038	0	0	2,665	0	2,665	764	64	1,989	231	3,048	384	(65,346)
2039	0	0	2,731	0	2,731	747	63	2,028	243	3,081	349	(65,319)
2040	0	0	2,800	0	2,800	782	62	2,068	257	3,169	369	(65,292)
2041	0	0	2,870	0	2,870	779	61	2,132	271	3,243	373	(65,268)
2042	0	0	2,941	0	2,941	769	60	2,199	316	3,344	402	(65,244)
2043	0	0	3,015	0	3,015	776	59	2,319	364	3,518	503	(65,216)
	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	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	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	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
NOM	0	2,188	240,496	0	242,684	17,468	2,711	45,689	4,278	70,146	(172,538)	
NPV	0	1,736	77,833	0	79,569	3,110	829	9,657	757	14,353	(65,216)	

Discount Rate: 8.89 %  
 Benefit/Cost Ratio (Col(11) / Col(6)) : 0.18

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PARTICIPANT COSTS AND BENEFITS  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAMNAME: Residential Photovoltaics (PV)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
YEAR	SAVINGS IN PARTICIPANTS BILLS \$(000)	TAX CREDITS \$(000)	UTILITY REBATES \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	CUSTOMER EQUIPMENT COSTS \$(000)	CUSTOMER O&M COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0
2010	44	2,308	910	0	3,262	4,498	51	0	4,550	(1,287)	(1,287)
2011	228	7,043	2,747	0	10,018	13,941	263	0	14,204	(4,186)	(4,713)
2012	528	7,144	2,747	0	10,419	14,359	593	0	14,952	(4,535)	(8,224)
2013	858	7,247	2,747	0	10,852	14,790	940	0	15,730	(4,878)	(11,694)
2014	1,232	7,352	2,747	0	11,331	15,234	1,303	0	16,537	(5,206)	(15,095)
2015	1,459	0	0	0	1,459	0	1,510	0	1,510	(51)	(15,126)
2016	1,509	0	0	0	1,509	0	1,548	0	1,548	(39)	(15,147)
2017	1,564	0	0	0	1,564	0	1,587	0	1,587	(22)	(15,138)
2018	1,506	0	0	0	1,506	0	1,626	0	1,626	(120)	(15,214)
2019	1,551	0	0	0	1,551	0	1,667	0	1,667	(116)	(15,264)
2020	1,546	0	0	0	1,546	0	1,709	0	1,709	(163)	(15,327)
2021	1,569	0	0	0	1,569	0	1,751	0	1,751	(182)	(15,393)
2022	1,604	0	0	0	1,604	0	1,795	0	1,795	(191)	(15,456)
2023	1,642	0	0	0	1,642	0	1,840	0	1,840	(198)	(15,516)
2024	1,704	0	0	0	1,704	0	1,886	0	1,886	(182)	(15,507)
2025	1,754	0	0	0	1,754	0	1,933	0	1,933	(179)	(15,612)
2026	1,812	0	0	0	1,812	0	1,981	0	1,981	(169)	(15,652)
2027	1,895	0	0	0	1,895	0	2,031	0	2,031	(136)	(15,682)
2028	1,959	0	0	0	1,959	0	2,082	0	2,082	(123)	(15,706)
2029	2,033	0	0	0	2,033	0	2,134	0	2,134	(100)	(15,724)
2030	2,539	3,141	0	0	5,680	7,888	2,271	0	10,159	(4,479)	(16,474)
2031	2,834	9,611	0	0	12,445	24,446	2,500	0	26,946	(14,501)	(18,702)
2032	2,982	9,776	0	0	12,757	25,179	2,563	0	27,742	(14,985)	(20,816)
2033	3,227	9,945	0	0	13,172	25,934	2,627	0	28,561	(15,390)	(22,811)
2034	3,266	10,118	0	0	13,384	26,712	2,693	0	29,405	(16,021)	(24,717)
2035	3,024	0	0	0	3,024	0	2,474	0	2,474	549	(24,657)
2036	3,219	0	0	0	3,219	0	2,536	0	2,536	683	(24,589)
2037	3,369	0	0	0	3,369	0	2,600	0	2,600	769	(24,518)
2038	3,680	0	0	0	3,680	0	2,665	0	2,665	1,015	(24,432)
2039	3,824	0	0	0	3,824	0	2,731	0	2,731	1,092	(24,347)
2040	3,976	0	0	0	3,976	0	2,800	0	2,800	1,176	(24,263)
2041	4,159	0	0	0	4,159	0	2,870	0	2,870	1,289	(24,179)
2042	4,353	0	0	0	4,353	0	2,941	0	2,941	1,412	(24,094)
2043	4,560	0	0	0	4,560	0	3,015	0	3,015	1,545	(24,008)
	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	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	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	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
NOM	77,038	73,684	11,899	0	162,591	172,982	67,514	0	240,496	(77,905)	
NPV	15,368	29,427	9,030	0	53,825	62,655	15,178	0	77,833	(24,008)	

In Service of Gen Unit:  
 Discount Rate : 2019  
 8.89 %  
 Benefit/Cost Ratio ( Col(6) / Col(10) ) 0.69



**RESIDENTIAL REFRIGERATOR REPLACEMENT**

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER kW REDUCTION AT METER .....	0.86 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	1.15 kW
(3) kW LINE LOSS PERCENTAGE .....	3.66 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	3,394.93 kWh
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	0.09 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
* (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
* (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
~ (10) UTILITY DISCOUNT RATE .....	8.89 %
~ (11) UTILITY AFUDC RATE .....	8.48 %
* (12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
* (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
~ (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* INPUT DATA - PART 1 CONTINUED  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Photovoltaics (PV)

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2009	0	0	0	0	0	0	0	0	0	
2010	437	613	0	1,050	17	0	3,023	42	3,065	
2011	498	1,915	0	2,414	90	0	9,689	223	9,912	
2012	342	2,006	0	2,348	211	0	10,401	513	10,914	
2013	346	2,158	0	2,504	357	0	11,471	836	12,306	
2014	362	2,395	0	2,757	537	0	13,048	1,204	14,252	
2015	0	0	0	0	633	0	0	1,421	1,421	
2016	0	0	0	0	686	0	0	1,457	1,457	
2017	0	0	0	0	716	0	0	1,493	1,493	
2018	0	0	0	0	738	0	0	1,531	1,531	
2019	0	0	0	0	777	0	0	1,569	1,569	
2020	0	0	0	0	782	0	0	1,608	1,608	
2021	0	0	0	0	808	0	0	1,648	1,648	
2022	0	0	0	0	845	0	0	1,690	1,690	
2023	0	0	0	0	879	0	0	1,732	1,732	
2024	0	0	0	0	931	0	0	1,775	1,775	
2025	0	0	0	0	982	0	0	1,820	1,820	
2026	0	0	0	0	1,033	0	0	1,865	1,865	
2027	0	0	0	0	1,103	0	0	1,912	1,912	
2028	0	0	0	0	1,159	0	0	1,959	1,959	
2029	0	0	0	0	1,225	0	0	2,008	2,008	
2030	0	0	0	0	1,300	0	0	2,059	2,059	
2031	0	0	0	0	1,374	0	0	2,110	2,110	
2032	0	0	0	0	1,471	0	0	2,163	2,163	
2033	0	0	0	0	1,625	0	0	2,217	2,217	
2034	0	0	0	0	1,657	0	0	2,272	2,272	
2035	0	0	0	0	1,746	0	0	2,329	2,329	
2036	0	0	0	0	1,894	0	0	2,387	2,387	
2037	0	0	0	0	2,007	0	0	2,447	2,447	
2038	0	0	0	0	2,111	0	0	2,508	2,508	
2039	0	0	0	0	2,225	0	0	2,571	2,571	
2040	0	0	0	0	2,347	0	0	2,635	2,635	
2041	0	0	0	0	2,491	0	0	2,701	2,701	
2042	0	0	0	0	2,645	0	0	2,769	2,769	
2043	0	0	0	0	2,809	0	0	2,838	2,838	
	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	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	0	0	0	0	
	0	0	0	0	0	0	0	0	0	
NOM	1,985	9,087	0	11,072	42,233	0	47,632	62,312	109,945	
NPV	1,569	6,832	0	8,401	7,865	0	35,690	14,025	49,715	

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
 \*\* NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS



CALCULATION OF GEN K-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Business Photovoltaics (PV)

YEAR	(2) REG-YEAR RATE BASE \$(000)	(3) DEBT \$(000)	(4) PREFERRED STOCK \$(000)	(5) COMMON EQUITY \$(000)	(6) INCOME TAXES \$(000)	(7) PROPERTY TAX \$(000)	(8) PROPERTY INSURANCE \$(000)	(9) DEPRECC. \$(000)	(10) DEFERRED TAXES \$(000)	(11) TOTAL FIXED CHARGES \$(000)	(12) PRESENT WORTH FIXED CHARGES \$(000)	(13) CUMULATIVE PW FIXED CHARGES \$(000)	(14) REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	2,661	83	0	186	122	45	16	104	0	555	555	555	2,595
2020	2,557	79	0	178	84	43	16	104	34	539	495	1,050	2,660
2021	2,419	75	0	169	83	41	17	104	29	518	437	1,487	2,726
2022	2,286	71	0	160	82	39	17	104	24	497	385	1,872	2,794
2023	2,159	67	0	151	81	37	17	104	19	477	339	2,211	2,864
2024	2,036	63	0	142	80	35	18	104	15	458	299	2,510	2,936
2025	1,917	60	0	134	79	34	18	104	11	439	263	2,774	3,009
2026	1,802	56	0	126	77	32	19	104	8	421	232	3,006	3,084
2027	1,690	53	0	118	73	30	19	104	7	404	204	3,210	3,161
2028	1,579	49	0	110	68	28	20	104	7	386	179	3,389	3,240
2029	1,468	46	0	102	63	26	20	104	7	369	157	3,547	3,321
2030	1,357	42	0	95	58	24	21	104	7	351	138	3,685	3,404
2031	1,246	39	0	87	54	22	21	104	7	334	120	3,805	3,490
2032	1,136	35	0	79	49	21	22	104	7	317	105	3,909	3,577
2033	1,025	32	0	72	44	19	22	104	7	299	91	4,000	3,666
2034	914	28	0	64	39	17	23	104	7	282	79	4,079	3,758
2035	803	25	0	56	34	15	23	104	7	264	68	4,147	3,852
2036	692	21	0	48	29	13	24	104	7	247	58	4,205	3,948
2037	581	18	0	41	24	11	25	104	7	230	50	4,254	4,047
2038	470	15	0	33	20	9	25	104	7	213	42	4,296	4,148
2039	359	11	0	25	16	7	26	104	(15)	195	36	4,332	4,252
2040	270	8	0	19	12	6	27	104	(36)	181	30	4,362	4,358
2041	202	6	0	14	9	5	27	104	(36)	170	26	4,388	4,467
2042	135	4	0	9	6	4	28	104	(36)	159	22	4,411	4,579
2043	67	2	0	5	4	3	29	104	(36)	148	19	4,430	4,693

IN SERVICE COST (\$000)	2,595
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAXRATE	38.575
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.51%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST	
DEBT	44%	7.03	%
P/S	0%	0.00	%
C/S	56%	12.50	%

K-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: *Business Photovoltaics (PV)*

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	95	95	104	104	94	94	0	242	0	0	0	0	(66)
2020	7.22%	182	277	104	208	94	188	34	242	0	0	0	34	(32)
2021	5.58%	168	445	104	311	94	282	29	242	0	0	0	29	(3)
2022	6.18%	156	601	104	415	94	376	24	242	0	0	0	24	21
2024	5.29%	133	879	104	623	94	471	19	242	0	0	0	19	40
2025	4.89%	123	1,002	104	727	94	565	15	242	0	0	0	15	55
2026	4.52%	114	1,116	104	830	94	659	11	242	0	0	0	11	67
2027	4.46%	113	1,229	104	934	94	753	8	242	0	0	0	8	74
2028	4.46%	113	1,341	104	1,038	94	847	7	242	0	0	0	7	81
2029	4.46%	113	1,454	104	1,142	94	941	7	242	0	0	0	7	89
2030	4.46%	113	1,566	104	1,245	94	1,035	7	242	0	0	0	7	96
2031	4.46%	113	1,679	104	1,349	94	1,129	7	242	0	0	0	7	103
2032	4.46%	113	1,792	104	1,453	94	1,223	7	242	0	0	0	7	110
2033	4.46%	113	1,904	104	1,557	94	1,317	7	242	0	0	0	7	117
2034	4.46%	113	2,017	104	1,661	94	1,412	7	242	0	0	0	7	124
2035	4.46%	113	2,129	104	1,764	94	1,506	7	242	0	0	0	7	131
2036	4.46%	113	2,242	104	1,868	94	1,600	7	242	0	0	0	7	138
2037	4.46%	113	2,354	104	1,972	94	1,694	7	242	0	0	0	7	146
2038	4.46%	113	2,467	104	2,076	94	1,788	7	242	0	0	0	7	153
2039	2.23%	56	2,523	104	2,180	94	1,882	7	242	0	0	0	7	160
2040	0.00%	0	2,523	104	2,283	94	1,976	(15)	242	0	0	0	(15)	145
2041	0.00%	0	2,523	104	2,387	94	2,070	(36)	242	0	0	0	(36)	109
2042	0.00%	0	2,523	104	2,491	94	2,164	(36)	242	0	0	0	(36)	73
2043	0.00%	0	2,523	104	2,595	94	2,258	(36)	242	0	0	0	(36)	36
							2,353	(36)	242	0	0	0	(36)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(66)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	242
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Photovoltaics (PV)

(1)	(2)	(3)	(4)	(5) END OF YEAR NET PLANT IN SERVICE \$(000)	(5a)* ACCUMULATED DEPRECIATION \$(000)	(5b)** ACCUMULATED DEF TAXES \$(000)	(6) BEGINNING YEAR RATE BASE \$(000)	(7) ENDING OF YEAR RATE BASE \$(000)	(8) MID-YEAR RATE BASE \$(000)
2019	3.75%	95	0	2,491	104	(65)	2,661	2,557	2,609
2020	7.22%	182	34	2,387	298	(32)	2,357	2,419	2,488
2021	6.68%	168	29	2,283	311	(5)	2,419	2,286	2,353
2022	6.18%	156	24	2,180	415	21	2,286	2,159	2,223
2023	5.71%	144	19	2,076	519	40	2,159	2,036	2,097
2024	5.29%	133	15	1,972	623	55	2,036	1,917	1,976
2025	4.89%	123	11	1,868	727	67	1,917	1,802	1,859
2026	4.52%	114	8	1,764	830	74	1,802	1,690	1,746
2027	4.46%	113	7	1,661	934	81	1,690	1,579	1,635
2028	4.46%	113	7	1,557	1,038	89	1,579	1,468	1,524
2029	4.46%	113	7	1,453	1,142	96	1,468	1,357	1,413
2030	4.46%	113	7	1,349	1,245	103	1,357	1,246	1,302
2031	4.46%	113	7	1,245	1,349	110	1,246	1,136	1,191
2032	4.46%	113	7	1,142	1,453	117	1,136	1,025	1,080
2033	4.46%	113	7	1,038	1,557	124	1,025	914	969
2034	4.46%	113	7	934	1,661	131	914	803	858
2035	4.46%	113	7	830	1,764	138	803	692	747
2036	4.46%	113	7	727	1,868	146	692	581	636
2037	4.46%	113	7	623	1,972	153	581	470	525
2038	4.46%	113	7	519	2,076	160	470	359	415
2039	2.23%	56	(15)	415	2,180	145	359	270	315
2040	0.00%	0	(36)	311	2,283	109	270	202	236
2041	0.00%	0	(36)	208	2,387	73	202	135	169
2042	0.00%	0	(36)	104	2,491	36	135	67	101
2043	0.00%	0	(36)	(0)	2,595	0	67	0	34

\* Column Not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00%      907.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.04	0.04	0.00	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.33	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.5
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASE	2,212	2,212	2,212
EQUITY AFUDC	242		
DEBT AFUDC	140	140	
CPI			311
TOTAL	2,594	2,353	2,523

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED : REV\_REQ  
 PROGRAM NAME: Business Photovoltaics (PV)

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (\$/kWh)	AVOIDED MARGINAL FUEL COST (\$/kWh)	INCREASED MARGINAL FUEL COST (\$/kWh)	REPLACEMENT FUEL COST (\$/kWh)	PROGRAM kW EFFECTIVENESS FACTOR	PROGRAM kWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	0.00	0.00
2010	143	143	6.41	16.51	6.41	0.00	0.00	0.00
2011	592	592	6.35	10.38	6.35	0.00	0.00	0.00
2012	1,062	1,062	6.43	9.01	6.58	0.00	1.00	1.00
2013	1,567	1,567	7.06	8.30	7.25	0.00	0.99	0.99
2014	2,128	2,128	7.53	8.57	7.70	0.00	0.99	0.99
2015	2,128	2,128	8.11	9.53	8.32	0.00	0.98	0.98
2016	2,128	2,128	9.00	11.45	9.33	0.00	0.97	0.97
2017	2,128	2,128	9.75	12.59	10.08	0.00	0.97	0.97
2018	2,128	2,128	10.52	13.42	10.88	0.00	0.96	0.96
2019	2,128	2,128	11.50	15.12	11.97	10.41	0.96	0.96
2020	2,128	2,128	12.08	15.76	12.60	10.50	0.95	0.95
2021	2,128	2,128	12.57	16.36	13.12	10.74	0.94	0.94
2022	2,128	2,128	13.06	17.14	13.59	10.81	0.94	0.94
2023	2,128	2,128	13.39	17.16	13.92	10.80	0.93	0.93
2024	2,128	2,128	13.95	17.82	14.47	10.84	0.92	0.92
2025	2,128	2,128	14.40	18.22	14.92	10.96	0.92	0.92
2026	2,128	2,128	14.70	18.32	15.19	11.05	0.91	0.91
2027	2,128	2,128	15.13	18.54	15.60	11.17	0.91	0.91
2028	2,128	2,128	15.60	18.91	16.05	11.36	0.90	0.90
2029	2,128	2,128	16.02	18.85	16.44	11.41	0.90	0.90
2030	2,128	2,128	16.52	19.44	16.90	11.59	0.89	0.89
2031	2,128	2,128	17.08	20.04	17.45	11.80	0.88	0.88
2032	2,128	2,128	17.50	19.76	17.82	11.88	0.88	0.88
2033	2,128	2,128	18.27	20.52	18.49	12.10	0.87	0.87
2034	2,128	2,128	18.73	20.17	18.85	12.14	0.87	0.87
2035	2,128	2,128	19.57	21.50	19.73	12.29	0.86	0.86
2036	2,128	2,128	20.40	22.53	20.53	12.55	0.86	0.86
2037	2,128	2,128	21.11	23.05	21.23	12.70	0.85	0.85
2038	2,128	2,128	22.02	24.00	22.15	13.04	0.84	0.84
2039	2,128	2,128	22.73	24.74	22.87	13.32	0.84	0.84
2040	2,128	2,128	23.59	25.27	23.66	13.44	0.83	0.83
2041	2,128	2,128	24.54	26.14	24.60	13.75	0.83	0.83
2042	2,128	2,128	25.50	27.05	25.57	14.10	0.82	0.82
2043	2,128	2,128	26.74	28.95	26.83	14.40	0.82	0.82
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Photovoltaics (PV)

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	530	291	12	776	982	628
2020	511	296	18	1,143	1,393	576
2021	488	302	18	1,193	1,455	546
2022	465	307	19	1,262	1,516	538
2023	444	313	20	1,327	1,560	544
2024	423	319	21	1,402	1,619	547
2025	403	324	23	1,488	1,707	541
2026	384	330	24	1,601	1,798	541
2027	366	337	25	1,690	1,875	542
2028	348	343	26	1,735	1,916	535
2029	330	349	27	1,808	1,966	547
2030	312	355	28	1,892	2,045	543
2031	295	362	29	1,931	2,082	535
2032	278	369	29	1,999	2,125	550
2033	261	375	32	2,200	2,323	545
2034	244	382	34	2,290	2,378	571
2035	228	389	34	2,342	2,415	578
2036	211	396	35	2,412	2,487	568
2037	195	404	36	2,467	2,523	579
2038	179	411	37	2,528	2,600	556
2039	164	418	37	2,580	2,659	541
2040	151	426	38	2,640	2,690	565
2041	141	434	39	2,698	2,757	554
2042	131	442	40	2,759	2,834	537
2043	121	450	41	2,830	2,907	535
	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	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	0	0	0	0
NOM	7,603	9,125	722	49,002	52,612	13,840
NPV	1,737	1,558	112	7,500	8,342	2,565

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TOTAL RESOURCE COST TEST  
PROGRAM METHOD SELECTED: REV. REQ  
PROGRAM NAME: Business Photovoltaics (PV)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	(0)	(0)
2010	0	437	3,065	0	3,502	0	0	0	0	0	(3,502)	(3,217)
2011	0	498	9,912	0	10,410	0	0	0	0	0	(10,410)	(11,997)
2012	0	342	10,914	0	11,256	0	0	288	1	289	(10,987)	(20,508)
2013	0	346	12,306	0	12,652	0	2	379	32	413	(12,239)	(29,214)
2014	0	362	14,252	0	14,613	0	8	544	50	602	(14,012)	(38,368)
2015	0	0	1,421	0	1,421	0	20	695	63	779	(642)	(38,754)
2016	0	0	1,457	0	1,457	0	22	841	72	935	(522)	(39,042)
2017	0	0	1,493	0	1,493	0	24	921	79	1,024	(470)	(39,279)
2018	0	0	1,531	0	1,531	0	26	974	85	1,084	(446)	(39,487)
2019	0	0	1,569	0	1,569	628	25	1,095	64	1,812	243	(39,383)
2020	0	0	1,608	0	1,608	576	25	1,132	58	1,791	183	(39,311)
2021	0	0	1,648	0	1,648	546	25	1,168	59	1,797	149	(39,258)
2022	0	0	1,690	0	1,690	538	25	1,217	64	1,843	154	(39,207)
2023	0	0	1,732	0	1,732	544	24	1,205	66	1,840	108	(39,174)
2024	0	0	1,775	0	1,775	547	24	1,243	70	1,884	109	(39,144)
2025	0	0	1,820	0	1,820	541	24	1,262	74	1,900	81	(39,123)
2026	0	0	1,865	0	1,865	541	24	1,257	75	1,896	31	(39,116)
2027	0	0	1,912	0	1,912	542	23	1,260	77	1,903	(9)	(39,118)
2028	0	0	1,959	0	1,959	535	23	1,275	83	1,915	(44)	(39,127)
2029	0	0	2,008	0	2,008	547	23	1,256	89	1,915	(93)	(39,144)
2030	0	0	2,059	0	2,059	543	23	1,287	92	1,945	(114)	(39,163)
2031	0	0	2,110	0	2,110	535	22	1,318	99	1,974	(136)	(39,184)
2032	0	0	2,163	0	2,163	550	22	1,282	104	1,959	(204)	(39,212)
2033	0	0	2,217	0	2,217	545	22	1,322	99	1,988	(225)	(39,242)
2034	0	0	2,272	0	2,272	571	22	1,281	102	1,976	(297)	(39,277)
2035	0	0	2,329	0	2,329	578	22	1,361	108	2,069	(261)	(39,306)
2036	0	0	2,387	0	2,387	568	22	1,419	113	2,121	(266)	(39,335)
2037	0	0	2,447	0	2,447	579	22	1,439	119	2,158	(289)	(39,359)
2038	0	0	2,508	0	2,508	556	22	1,488	125	2,190	(318)	(39,386)
2039	0	0	2,571	0	2,571	541	22	1,523	130	2,215	(356)	(39,414)
2040	0	0	2,635	0	2,635	565	22	1,542	135	2,264	(371)	(39,440)
2041	0	0	2,701	0	2,701	554	22	1,583	142	2,300	(401)	(39,467)
2042	0	0	2,769	0	2,769	537	22	1,626	174	2,359	(410)	(39,491)
2043	0	0	2,838	0	2,838	535	22	1,736	209	2,501	(337)	(39,510)
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	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	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	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	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	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	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	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
NOM	0	1,985	109,945	0	111,930	13,840	671	38,199	2,909	55,619	(56,311)	
NPV	0	1,569	49,715	0	51,284	2,565	163	8,450	596	11,774	(39,510)	

Discount Rate: 8.89 %  
Benefit/Cost Ratio (Col(11) / Col(6)) : 0.23

222



RATE IMPACT TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Photovoltaics (PV)

(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)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0	(0)
2010	0	437	613	17	0	1,067	0	0	0	0	0	(1,067)	(980)
2011	0	498	1,915	90	0	2,504	0	0	0	0	0	(2,504)	(3,092)
2012	0	342	2,006	211	0	2,559	268	0	0	1	269	(2,290)	(4,866)
2013	0	346	2,158	357	0	2,861	379	2	0	32	413	(2,448)	(6,608)
2014	0	362	2,395	537	0	3,294	544	8	0	50	602	(2,692)	(8,367)
2015	0	0	0	653	0	653	695	20	0	63	779	126	(8,291)
2016	0	0	0	686	0	686	841	22	0	72	935	249	(8,154)
2017	0	0	0	716	0	716	921	24	0	79	1,024	308	(7,998)
2018	0	0	0	738	0	738	974	26	0	85	1,084	346	(7,838)
2019	0	0	0	777	0	777	1,723	25	0	64	1,812	1,035	(7,396)
2020	0	0	0	782	0	782	1,708	25	0	58	1,791	1,009	(7,000)
2021	0	0	0	808	0	808	1,714	25	0	59	1,797	990	(6,644)
2022	0	0	0	845	0	845	1,755	25	0	64	1,843	998	(6,314)
2023	0	0	0	879	0	879	1,750	24	0	66	1,840	960	(6,022)
2024	0	0	0	931	0	931	1,790	24	0	70	1,884	953	(5,757)
2025	0	0	0	982	0	982	1,803	24	0	74	1,900	918	(5,522)
2026	0	0	0	1,033	0	1,033	1,798	24	0	75	1,896	863	(5,318)
2027	0	0	0	1,103	0	1,103	1,802	23	0	77	1,903	800	(5,146)
2028	0	0	0	1,159	0	1,159	1,810	23	0	83	1,915	756	(4,995)
2029	0	0	0	1,225	0	1,225	1,803	23	0	89	1,915	690	(4,870)
2030	0	0	0	1,300	0	1,300	1,830	23	0	92	1,945	644	(4,702)
2031	0	0	0	1,374	0	1,374	1,853	22	0	99	1,974	600	(4,670)
2032	0	0	0	1,471	0	1,471	1,833	22	0	104	1,959	487	(4,601)
2033	0	0	0	1,625	0	1,625	1,867	22	0	99	1,988	363	(4,554)
2034	0	0	0	1,657	0	1,657	1,852	22	0	102	1,976	318	(4,516)
2035	0	0	0	1,746	0	1,746	1,939	22	0	108	2,068	322	(4,481)
2036	0	0	0	1,894	0	1,894	1,987	22	0	113	2,121	227	(4,458)
2037	0	0	0	2,007	0	2,007	2,017	22	0	119	2,158	150	(4,445)
2038	0	0	0	2,111	0	2,111	2,044	22	0	125	2,190	79	(4,438)
2039	0	0	0	2,225	0	2,225	2,064	22	0	130	2,215	(10)	(4,439)
2040	0	0	0	2,347	0	2,347	2,107	22	0	135	2,264	(83)	(4,445)
2041	0	0	0	2,491	0	2,491	2,137	22	0	142	2,300	(191)	(4,457)
2042	0	0	0	2,645	0	2,645	2,163	22	0	174	2,359	(285)	(4,474)
2043	0	0	0	2,809	0	2,809	2,271	22	0	209	2,501	(308)	(4,491)
	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	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	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	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
NOM.	0	1,985	9,087	42,233	0	53,305	52,039	671	0	2,909	55,619	2,314	
NPV	0	1,569	6,832	7,865	0	16,265	11,014	163	0	596	11,774	(4,491)	

Discount Rate 8.89 %  
Benefit/Cost Ratio (Col(12) / Col(7)) : 0.72

**BUSINESS HEATING, VENTILATING AND AIR CONDITIONING**

INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Photovoltaics for Schools

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER kW REDUCTION AT METER .....	0.86 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	1.15 kW
(3) kW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	3,394.93 kWh
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER.....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	0.00 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D.....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON-RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
^ (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
^ (9) SUPPLY COSTS ESCALATION RATES.....	*** %**
^ (10) UTILITY DISCOUNT RATE .....	8.89 %
^ (11) UTILITY AFUDC RATE.....	8.48 %
^ (12) UTILITY NON-RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %



CALCULATION OF GENK-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Business Photovoltaics for Schools

YEAR	(2) REG-YEAR RATE BASE \$(000)	(3) DEBT \$(000)	(4) PREFERRED STOCK \$(000)	(5) COMMON EQUITY \$(000)	(6) INCOME TAXES \$(000)	(7) PROPERTY TAX \$(000)	(8) PROPERTY INSURANCE \$(000)	(9) DEPREC. \$(000)	(10) DEFERRED TAXES \$(000)	(11) TOTAL FIXED CHARGES \$(000)	(12) PRESENT WORTH FIXED CHARGES \$(000)	(13) CUMULATIVE PW FIXED CHARGES \$(000)	(14) REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	237	7	0	17	11	4	1	9	0	49	49	49	231
2020	228	7	0	16	7	4	1	9	3	48	44	93	237
2021	215	7	0	15	7	4	1	9	3	46	39	132	243
2022	203	6	0	14	7	3	2	9	2	44	34	167	249
2023	192	6	0	13	7	3	2	9	2	42	30	197	255
2024	181	6	0	13	7	3	2	9	1	41	27	223	261
2025	172	5	0	12	7	3	2	9	1	39	23	247	268
2026	160	5	0	11	7	3	2	9	1	37	21	268	274
2027	150	5	0	10	6	3	2	9	1	36	18	286	281
2028	141	4	0	10	6	2	2	9	1	34	16	302	288
2029	131	4	0	9	6	2	2	9	1	33	14	316	296
2030	121	4	0	8	5	2	2	9	1	31	12	328	303
2031	111	3	0	8	5	2	2	9	1	30	11	339	311
2032	101	3	0	7	4	2	2	9	1	28	9	348	318
2033	91	3	0	6	4	2	2	9	1	27	8	356	326
2034	81	3	0	6	3	1	2	9	1	25	7	363	334
2035	71	2	0	5	3	1	2	9	1	24	6	369	343
2036	62	2	0	4	3	1	2	9	1	22	5	374	351
2037	52	2	0	4	2	1	2	9	1	20	4	379	360
2038	42	1	0	3	2	1	2	9	1	19	4	382	369
2039	32	1	0	2	3	1	2	9	(1)	17	3	386	378
2040	24	1	0	2	5	0	2	9	(3)	16	3	388	388
2041	18	1	0	1	5	0	2	9	(3)	15	2	391	398
2042	12	0	0	1	4	0	2	9	(3)	14	2	393	407
2043	6	0	0	0	4	(0)	3	9	(3)	13	2	394	418

IN SERVICE COST (\$000)	231
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST	%
DEBT	44%	7.03	%
P/S	0%	0.00	%
C/S	56%	12.50	%

X-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Photovoltaics for Schools

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	8	8	9	9	8	8	0	22	0	0	0	0	(6)
2020	7.32%	16	25	9	18	8	17	3	22	0	0	0	3	(3)
2021	6.68%	15	40	9	28	8	25	3	22	0	0	0	3	(6)
2022	6.18%	14	54	9	37	8	33	2	22	0	0	0	2	2
2023	5.71%	13	66	9	46	8	42	2	22	0	0	0	2	4
2024	5.29%	12	78	9	55	8	50	1	22	0	0	0	1	5
2025	4.89%	11	89	9	65	8	59	1	22	0	0	0	1	6
2026	4.52%	10	99	9	74	8	67	1	22	0	0	0	1	7
2027	4.46%	10	109	9	83	8	75	1	22	0	0	0	1	7
2028	4.46%	10	119	9	92	8	84	1	22	0	0	0	1	8
2029	4.46%	10	129	9	102	8	92	1	22	0	0	0	1	9
2030	4.46%	10	139	9	111	8	100	1	22	0	0	0	1	9
2031	4.46%	10	149	9	120	8	109	1	22	0	0	0	1	10
2032	4.46%	10	159	9	129	8	117	1	22	0	0	0	1	10
2033	4.46%	10	169	9	139	8	126	1	22	0	0	0	1	11
2034	4.46%	10	179	9	148	8	134	1	22	0	0	0	1	12
2035	4.46%	10	190	9	157	8	142	1	22	0	0	0	1	12
2036	4.46%	10	200	9	166	8	151	1	22	0	0	0	1	13
2037	4.46%	10	210	9	176	8	159	1	22	0	0	0	1	14
2038	4.46%	10	220	9	185	8	167	1	22	0	0	0	1	14
2039	2.23%	5	225	9	194	8	176	(1)	22	0	0	0	(1)	13
2040	0.00%	0	225	9	203	8	184	(3)	22	0	0	0	(3)	10
2041	0.00%	0	225	9	212	8	193	(3)	22	0	0	0	(3)	6
2042	0.00%	0	225	9	222	8	201	(3)	22	0	0	0	(3)	3
2043	0.00%	0	225	9	231	8	209	(3)	22	0	0	0	(3)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(5)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	22
BOOK DEPR RATE - USEFUL LIFE	4.00%



DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Photovoltaics for Schools

(1) YEAR	(2) TAX DEPRECIATION SCHEDULE	(3) TAX DEPRECIATION \$(000)	(4) DEFERRED TAX \$(000)	(5) END OF YEAR NET PLANT IN SERVICE \$(000)	(5a)* ACCUMULATED DEPRECIATION \$(000)	(5b)* ACCUMULATED DEF TAXES \$(000)	(6) BEGINNING YEAR RATE BASE \$(000)	(7) ENDING OF YEAR RATE BASE \$(000)	(8) MID-YEAR RATE BASE \$(000)
2019	3.75%	8	0	222	9	(6)	237	228	232
2020	7.22%	16	3	212	18	(3)	228	215	221
2021	6.68%	15	3	203	28	(0)	215	203	209
2022	6.18%	14	2	194	37	2	203	192	198
2023	5.71%	13	2	185	46	4	192	181	187
2024	5.29%	12	1	176	55	5	181	171	176
2025	4.89%	11	1	166	65	6	171	160	165
2026	4.52%	10	1	157	74	7	160	150	155
2027	4.46%	10	1	148	83	7	150	141	145
2028	4.46%	10	1	139	92	8	141	131	136
2029	4.46%	10	1	129	102	9	131	121	126
2030	4.46%	10	1	120	111	9	121	111	116
2031	4.46%	10	1	111	120	10	111	101	106
2032	4.46%	10	1	102	129	10	101	91	96
2033	4.46%	10	1	92	139	11	91	81	86
2034	4.46%	10	1	83	148	12	81	71	76
2035	4.46%	10	1	74	157	12	71	62	67
2036	4.46%	10	1	65	166	13	62	52	57
2037	4.46%	10	1	55	176	14	52	42	47
2038	4.46%	10	1	46	185	14	42	32	37
2039	2.23%	5	(1)	37	194	13	32	24	28
2040	0.00%	0	(3)	28	203	10	24	18	21
2041	0.00%	0	(3)	18	212	6	18	12	15
2042	0.00%	0	(3)	9	222	3	12	6	9
2043	0.00%	0	(3)	(0)	231	0	6	0	3

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00% 907.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	855.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.5
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	197	197	197
EQUITY AFUDC	22		
DEBT AFUDC	12	12	
CPI			28
TOTAL	231	209	225

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Photovoltaics for Schools

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (C/kWh)	(5) AVOIDED MARGINAL FUEL COST (C/kWh)	(6)* INCREASED MARGINAL FUEL COST (C/kWh)	(7) REPLACEMENT FUEL COST (C/kWh)	(8) PROGRAM kW EFFECTIVENESS FACTOR	(9) PROGRAM kWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	0.00	0.00
2010	8	8	6.41	8.81	6.74	0.00	1.00	1.00
2011	55	55	6.35	8.34	6.64	0.00	0.99	0.99
2012	105	105	6.43	8.30	6.69	0.00	0.99	0.99
2013	152	152	7.06	8.30	7.25	0.00	0.98	0.98
2014	189	189	7.53	8.62	7.69	0.00	0.97	0.97
2015	189	189	8.11	9.53	8.32	0.00	0.97	0.97
2016	189	189	9.00	11.45	9.33	0.00	0.96	0.96
2017	189	189	9.75	12.59	10.08	0.00	0.96	0.96
2018	189	189	10.52	13.42	10.88	0.00	0.95	0.95
2019	189	189	11.50	15.12	11.97	10.41	0.94	0.94
2020	189	189	12.08	15.88	12.57	10.50	0.94	0.94
2021	189	189	12.57	16.53	13.08	10.74	0.93	0.93
2022	189	189	13.06	17.14	13.59	10.81	0.92	0.92
2023	189	189	13.39	17.16	13.92	10.89	0.92	0.92
2024	189	189	13.95	17.82	14.47	10.84	0.91	0.91
2025	189	189	14.40	18.22	14.92	10.96	0.91	0.91
2026	189	189	14.70	18.32	15.19	11.05	0.90	0.90
2027	189	189	15.13	18.54	15.60	11.17	0.90	0.90
2028	189	189	15.60	19.12	16.04	11.36	0.89	0.89
2029	189	189	16.02	19.04	16.42	11.41	0.88	0.88
2030	189	189	16.52	19.44	16.90	11.59	0.88	0.88
2031	189	189	17.08	20.04	17.45	11.80	0.87	0.87
2032	189	189	17.50	19.76	17.82	11.88	0.87	0.87
2033	189	189	18.27	20.52	18.49	12.10	0.86	0.86
2034	189	189	18.73	20.17	18.85	12.14	0.86	0.86
2035	189	189	19.57	21.50	19.73	12.29	0.85	0.85
2036	189	189	20.40	22.53	20.53	12.55	0.84	0.84
2037	189	189	21.11	23.18	21.22	12.70	0.84	0.84
2038	189	189	22.02	24.15	22.14	13.04	0.83	0.83
2039	189	189	22.78	24.74	22.87	13.32	0.83	0.83
2040	189	189	23.59	25.27	23.66	13.44	0.82	0.82
2041	189	189	24.54	26.14	24.60	13.75	0.82	0.82
2042	189	189	25.50	27.05	25.57	14.10	0.81	0.81
2043	189	189	26.74	28.95	26.83	14.40	0.81	0.81
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Photovoltaics for Schools

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	47	26	1	69	97	55
2020	45	26	2	102	124	50
2021	43	26	2	106	129	48
2022	41	27	2	112	135	47
2023	39	27	2	118	139	47
2024	37	28	2	125	144	48
2025	35	28	2	133	152	47
2026	34	29	2	142	160	47
2027	32	30	2	150	167	47
2028	31	30	2	154	171	47
2029	29	31	2	161	175	48
2030	27	31	2	168	182	47
2031	26	32	3	172	185	47
2032	24	32	3	178	189	48
2033	23	33	3	196	207	48
2034	21	34	3	204	212	50
2035	20	34	3	208	215	51
2036	19	35	3	215	221	50
2037	17	35	3	220	225	51
2038	16	36	3	225	231	49
2039	14	37	3	230	237	47
2040	13	37	3	235	239	50
2041	12	38	3	240	245	49
2042	11	39	3	246	252	47
2043	11	40	4	252	259	47
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	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
NOM	667	801	63	4,361	4,682	1,211
NPV	132	137	10	667	742	224



AVOIDED GENERATING EMISSION IMPACT  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Photovoltaics for Schools

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	0	0	0	0	0
2013	0	0	3	0	3
2014	0	0	5	0	5
2015	0	0	6	0	6
2016	0	0	6	0	6
2017	0	0	7	0	7
2018	0	0	7	0	7
2019	8	11	8	0	6
2020	13	16	9	0	5
2021	14	18	9	0	5
2022	16	21	10	0	6
2023	18	23	11	0	6
2024	21	27	12	0	6
2025	24	30	13	0	6
2026	26	34	14	0	6
2027	30	38	15	0	7
2028	33	42	16	0	7
2029	37	47	18	0	8
2030	41	52	19	0	8
2031	45	57	21	0	9
2032	50	63	22	0	9
2033	58	73	24	0	9
2034	64	81	26	0	9
2035	69	88	28	0	9
2036	76	96	30	0	10
2037	82	104	32	0	10
2038	89	112	34	0	11
2039	96	122	36	0	11
2040	104	131	39	0	12
2041	112	141	42	0	12
2042	112	141	44	0	15
2043	112	141	47	0	18
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	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	0	0	0	0
NOM	1,348	1,709	612	0	251
NPV	163	208	97	0	52

**TOTAL RESOURCE COST TEST**  
**PROGRAM METHOD SELECTED: REV\_REQ**  
**PROGRAM NAME: Business Photovoltaics for Schools**

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) PARTICIPANT PROGRAM COSTS \$(000)	(5) OTHER COSTS \$(000)	(6) TOTAL COSTS \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)	(8) AVOIDED T&D BENEFITS \$(000)	(9) PROGRAM FUEL SAVINGS \$(000)	(10) OTHER BENEFITS \$(000)	(11) TOTAL BENEFITS \$(000)	(12) NET BENEFITS \$(000)	(13) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	(0)	(0)
2010	0	112	0	0	112	0	0	1	0	1	(111)	(102)
2011	0	479	0	0	479	0	0	9	0	9	(470)	(498)
2012	0	928	0	0	928	0	1	23	0	24	(904)	(1,198)
2013	0	1,331	0	0	1,331	0	3	37	3	42	(1,288)	(2,115)
2014	0	1,635	0	0	1,635	0	5	50	5	59	(1,576)	(3,144)
2015	0	1,514	0	0	1,514	0	6	61	6	73	(1,441)	(4,009)
2016	0	1,217	0	0	1,217	0	6	74	6	86	(1,131)	(4,632)
2017	0	808	0	0	808	0	6	81	7	94	(714)	(4,993)
2018	0	436	0	0	436	0	6	86	7	99	(337)	(5,150)
2019	0	136	0	0	136	55	6	96	6	162	27	(5,139)
2020	0	0	0	0	0	50	6	100	5	161	161	(5,073)
2021	0	0	0	0	0	48	6	104	5	162	162	(5,017)
2022	0	0	0	0	0	47	5	107	6	165	165	(4,963)
2023	0	0	0	0	0	47	5	106	6	164	164	(4,913)
2024	0	0	0	0	0	48	5	109	6	168	168	(4,866)
2025	0	0	0	0	0	47	5	111	6	169	169	(4,823)
2026	0	0	0	0	0	47	5	110	6	169	169	(4,783)
2027	0	0	0	0	0	47	5	111	7	169	169	(4,746)
2028	0	0	0	0	0	47	5	113	7	172	172	(4,712)
2029	0	0	0	0	0	48	4	112	8	172	172	(4,681)
2030	0	0	0	0	0	47	4	113	8	173	173	(4,652)
2031	0	0	0	0	0	47	4	116	9	175	175	(4,625)
2032	0	0	0	0	0	48	4	113	9	174	174	(4,601)
2033	0	0	0	0	0	48	4	116	9	176	176	(4,578)
2034	0	0	0	0	0	50	4	113	9	175	175	(4,557)
2035	0	0	0	0	0	51	4	120	9	183	183	(4,537)
2036	0	0	0	0	0	50	4	125	10	188	188	(4,518)
2037	0	0	0	0	0	51	4	127	10	192	192	(4,500)
2038	0	0	0	0	0	49	3	132	11	195	195	(4,484)
2039	0	0	0	0	0	47	3	134	11	196	196	(4,469)
2040	0	0	0	0	0	50	3	135	12	200	200	(4,454)
2041	0	0	0	0	0	49	3	139	12	203	203	(4,441)
2042	0	0	0	0	0	47	3	143	15	208	208	(4,429)
2043	0	0	0	0	0	47	3	152	18	220	220	(4,416)
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	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	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	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	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	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	0	0	0	0
NOM	0	8,596	0	0	8,596	1,211	140	3,378	251	4,979	(3,617)	
NPV	0	5,490	0	0	5,490	224	41	756	52	1,073	(4,416)	

Discount Rate: 8.89 %  
 Benefit/Cost Ratio (Col(11) / Col(6)) : 0.20







**BUSINESS LIGHTING**

INPUT DATA -- PART 1 CONTINUED  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Air-Conditioning

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.50 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.67 kW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KWH REDUCTION PER CUSTOMER .....	1,122.27 kWh
(5) KWH LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KWH INCREASE AT METER .....	0.00 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
(8) INCREASED SUPPLY COSTS .....	** \$/CUST/YR
(9) SUPPLY COSTS ESCALATION RATES .....	*** %**
(10) UTILITY DISCOUNT RATE .....	8.89 %
(11) UTILITY AFUDC RATE .....	8.48 %
(12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O & M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.105 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	8.23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* INPUT DATA - PART 1 CONTINUED  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Air-Conditioning

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2009	0	0	0	0	0	0	0	0	0	
2010	4,332	64,551	0	68,883	4,647	0	107,272	0	107,272	
2011	3,892	54,967	0	58,859	13,732	0	92,357	0	92,357	
2012	4,515	62,680	0	67,195	23,816	0	108,579	0	108,579	
2013	4,962	67,066	0	72,028	35,831	0	118,905	0	118,905	
2014	5,280	69,251	0	74,530	50,073	0	125,604	0	125,604	
2015	5,334	69,222	0	74,556	65,310	0	128,792	0	128,792	
2016	5,099	63,414	0	68,513	80,286	0	122,330	0	122,330	
2017	4,162	54,804	0	58,965	95,011	0	108,419	0	108,419	
2018	3,827	49,051	0	52,877	108,255	0	100,512	0	100,512	
2019	0	0	0	0	117,458	0	0	0	0	
2020	0	0	0	0	117,824	0	0	0	0	
2021	0	0	0	0	120,390	0	0	0	0	
2022	0	0	0	0	123,882	0	0	0	0	
2023	0	0	0	0	127,636	0	0	0	0	
2024	0	0	0	0	133,304	0	0	0	0	
2025	6,273	64,551	0	70,825	138,089	0	155,362	0	155,362	
2026	5,637	54,967	0	60,604	143,639	0	133,760	0	133,760	
2027	6,539	62,680	0	69,219	151,149	0	157,255	0	157,255	
2028	7,186	67,066	0	74,252	157,291	0	172,210	0	172,210	
2029	7,646	69,251	0	76,897	164,331	0	181,912	0	181,912	
2030	7,726	69,222	0	76,948	172,370	0	186,529	0	186,529	
2031	7,384	63,414	0	70,799	180,222	0	177,171	0	177,171	
2032	6,027	54,804	0	60,831	190,868	0	157,023	0	157,023	
2033	5,542	49,051	0	54,593	207,936	0	145,571	0	145,571	
2034	0	0	0	0	211,836	0	0	0	0	
2035	0	0	0	0	220,169	0	0	0	0	
2036	0	0	0	0	235,922	0	0	0	0	
2037	0	0	0	0	248,549	0	0	0	0	
2038	0	0	0	0	259,366	0	0	0	0	
2039	0	0	0	0	271,247	0	0	0	0	
2040	9,086	64,551	0	73,637	283,885	0	225,010	0	225,010	
2041	8,165	54,967	0	63,131	298,891	0	193,725	0	193,725	
2042	9,471	62,680	0	72,151	314,908	0	227,752	0	227,752	
2043	10,407	67,066	0	77,473	332,012	0	249,411	0	249,411	
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	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	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	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	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
NOM	138,492	1,359,276	0	1,497,767	5,400,138	0	3,375,462	0	3,375,462	
NPV	41,121	494,183	0	535,304	1,020,331	0	1,001,675	0	1,001,675	

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
 \*\* NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS

CALCULATION OF GEN X-FACTOR  
 PROGRAM/METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Residential Air-Conditioning

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
BEG-YEAR	RATE BASE	DEBT	PREFERRED	COMMON	INCOME	PROPERTY	PROPERTY	DEFERRED	TOTAL	PRESENT	CUMULATIVE	REPLACEMENT
YEAR	\$(000)	\$(000)	STOCK	EQUITY	TAXES	TAX	INSURANCE	TAXES	FIXED	WORTH	PW FIXED	COST BASIS
			\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	CHARGES	\$(000)	CHARGES	FOR
												PROPERTY INSURANCE
												\$(000)
2019	516,346	16,040	0	36,034	23,772	8,702	3,072	20,143	39	107,801	107,801	503,567
2020	496,164	15,413	0	34,626	16,334	8,339	3,149	20,143	6,592	104,595	96,059	516,156
2021	469,430	14,582	0	32,760	16,186	7,976	3,227	20,143	5,568	100,443	84,717	529,060
2022	443,719	13,784	0	30,966	15,998	7,614	3,308	20,143	4,629	96,442	74,703	542,286
2023	418,947	13,014	0	29,237	15,795	7,251	3,391	20,143	3,747	92,578	65,858	555,844
2024	395,057	12,272	0	27,570	15,556	6,889	3,475	20,143	2,938	88,844	58,043	569,740
2025	371,976	11,555	0	25,959	15,295	6,526	3,562	20,143	2,189	85,229	51,137	583,983
2026	349,645	10,861	0	24,401	15,007	6,164	3,651	20,143	1,497	81,724	45,032	598,583
2027	328,005	10,189	0	22,891	14,172	5,801	3,743	20,143	1,384	78,322	39,635	613,547
2028	306,479	9,521	0	21,388	13,231	5,439	3,836	20,143	1,382	74,939	34,828	628,886
2029	284,954	8,852	0	19,886	12,285	5,076	3,932	20,143	1,384	71,558	30,542	644,608
2030	263,427	8,183	0	18,384	11,344	4,713	4,030	20,143	1,382	68,179	26,725	660,723
2031	241,903	7,515	0	16,882	10,399	4,351	4,131	20,143	1,384	64,803	23,329	677,241
2032	220,376	6,846	0	15,380	9,457	3,988	4,234	20,143	1,382	61,430	20,309	694,172
2033	198,852	6,177	0	13,877	8,512	3,626	4,340	20,143	1,384	58,059	17,628	711,527
2034	177,325	5,508	0	12,375	7,570	3,263	4,449	20,143	1,382	54,690	15,250	729,315
2035	155,800	4,840	0	10,873	6,625	2,901	4,560	20,143	1,384	51,325	13,144	747,548
2036	134,274	4,171	0	9,371	5,684	2,538	4,674	20,143	1,382	47,962	11,280	766,236
2037	112,749	3,502	0	7,868	4,738	2,175	4,791	20,143	1,384	44,602	9,634	785,392
2038	91,223	2,834	0	6,366	3,797	1,813	4,911	20,143	1,382	41,245	8,182	805,027
2039	69,698	2,165	0	4,864	2,856	1,450	5,033	20,143	(2,830)	37,891	6,903	825,153
2040	52,386	1,627	0	3,656	10,521	1,088	5,159	20,143	(7,045)	35,149	5,881	845,782
2041	39,288	1,220	0	2,742	9,947	725	5,288	20,143	(7,045)	33,021	5,074	866,926
2042	26,190	814	0	1,828	9,373	363	5,420	20,143	(7,045)	30,896	4,360	888,599
2043	13,092	407	0	914	8,799	0	5,556	20,143	(7,045)	28,774	3,729	910,814

IN SERVICE COST (\$000)	503,567
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST	
DEBT	44%	7.03	%
P/S	0%	0.00	%
C/S	56%	12.50	%

X-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Air-Conditioning

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	18,363	18,363	20,143	20,143	18,263	18,263	39	47,003	0	0	0	39	(12,740)
2020	7.22%	35,351	53,714	20,143	40,285	18,263	36,525	6,592	47,003	0	0	0	6,592	(6,148)
2021	6.68%	32,697	86,411	20,143	60,428	18,263	54,788	5,568	47,003	0	0	0	5,568	(580)
2022	6.18%	30,263	116,674	20,143	80,571	18,263	73,050	4,629	47,003	0	0	0	4,629	4,045
2023	5.71%	27,976	144,650	20,143	108,713	18,263	91,313	3,747	47,003	0	0	0	3,747	7,796
2024	5.29%	25,880	170,530	20,143	120,856	18,263	109,575	2,938	47,003	0	0	0	2,938	10,734
2025	4.89%	23,936	194,466	20,143	140,999	18,263	127,838	2,189	47,003	0	0	0	2,189	12,923
2026	4.52%	22,144	216,610	20,143	161,141	18,263	146,100	1,497	47,003	0	0	0	1,497	14,420
2027	4.46%	21,850	238,460	20,143	181,284	18,263	164,363	1,384	47,003	0	0	0	1,384	15,804
2028	4.46%	21,845	260,305	20,143	201,427	18,263	182,626	1,382	47,003	0	0	0	1,382	17,186
2029	4.46%	21,850	282,155	20,143	221,569	18,263	200,888	1,384	47,003	0	0	0	1,384	18,570
2030	4.46%	21,845	304,000	20,143	241,712	18,263	219,151	1,382	47,003	0	0	0	1,382	19,952
2031	4.46%	21,850	325,850	20,143	261,855	18,263	237,413	1,384	47,003	0	0	0	1,384	21,336
2032	4.46%	21,845	347,695	20,143	281,997	18,263	255,676	1,382	47,003	0	0	0	1,382	22,718
2033	4.46%	21,850	369,545	20,143	302,140	18,263	273,938	1,384	47,003	0	0	0	1,384	24,102
2034	4.46%	21,845	391,390	20,143	322,283	18,263	292,201	1,382	47,003	0	0	0	1,382	25,484
2035	4.46%	21,850	413,240	20,143	342,425	18,263	310,464	1,384	47,003	0	0	0	1,384	26,867
2036	4.46%	21,845	435,086	20,143	362,568	18,263	328,726	1,382	47,003	0	0	0	1,382	28,249
2037	4.46%	21,850	456,936	20,143	382,711	18,263	346,989	1,384	47,003	0	0	0	1,384	29,633
2038	4.46%	21,845	478,781	20,143	402,853	18,263	365,251	1,382	47,003	0	0	0	1,382	31,015
2039	2.23%	10,925	489,706	20,143	422,995	18,263	383,514	(2,830)	47,003	0	0	0	(2,830)	28,185
2040	0.00%	0	489,706	20,143	443,139	18,263	401,776	(7,045)	47,003	0	0	0	(7,045)	21,140
2041	0.00%	0	489,706	20,143	463,281	18,263	420,039	(7,045)	47,003	0	0	0	(7,045)	14,095
2042	0.00%	0	489,706	20,143	483,424	18,263	438,301	(7,045)	47,003	0	0	0	(7,045)	7,050
2043	0.00%	0	489,706	20,143	503,567	18,263	456,564	(7,045)	47,003	0	0	0	(7,045)	6

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(12,779)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	47,003
BOOK DEPR.RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Air-Conditioning

(1)	(2)	(3)	(4)	(5)	(3a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	END OF YEAR NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2019	3.75%	18,363	39	483,424	20,143	(12,740)	516,346	496,164	506,255
2020	7.22%	35,351	6,592	463,281	40,285	(6,148)	496,164	469,430	482,797
2021	6.68%	32,697	5,568	443,139	60,428	(580)	469,430	443,719	456,574
2022	6.18%	30,263	4,629	422,996	80,571	4,049	443,719	418,947	431,333
2023	5.71%	27,976	3,747	402,853	100,713	7,796	418,947	395,057	407,002
2024	5.28%	25,880	2,938	382,711	120,856	10,734	395,057	371,976	383,517
2025	4.89%	23,936	2,189	362,568	140,999	12,923	371,976	349,645	360,811
2026	4.52%	22,144	1,497	342,425	161,141	14,420	349,645	328,005	338,825
2027	4.46%	21,850	1,384	322,283	181,284	15,804	328,005	306,479	317,242
2028	4.46%	21,845	1,382	302,140	201,427	17,186	306,479	284,954	295,716
2029	4.46%	21,850	1,384	281,997	221,569	18,570	284,954	263,427	274,191
2030	4.46%	21,845	1,382	261,855	241,712	19,952	263,427	241,903	252,665
2031	4.46%	21,850	1,384	241,712	261,855	21,336	241,903	220,376	231,140
2032	4.46%	21,845	1,382	221,569	281,997	22,718	220,376	198,852	209,614
2033	4.46%	21,850	1,384	201,427	302,140	24,102	198,852	177,325	188,088
2034	4.46%	21,845	1,382	181,284	322,283	25,484	177,325	155,800	166,563
2035	4.46%	21,850	1,384	161,141	342,425	26,867	155,800	134,274	145,037
2036	4.46%	21,845	1,382	140,999	362,568	28,249	134,274	112,749	123,512
2037	4.46%	21,850	1,384	120,856	382,711	29,633	112,749	91,223	101,986
2038	4.46%	21,845	1,382	100,713	402,853	31,015	91,223	69,698	80,460
2039	2.23%	10,925	(2,830)	80,571	422,996	28,185	69,698	52,386	61,042
2040	0.00%	0	(7,045)	60,428	443,139	21,140	52,386	39,288	45,837
2041	0.00%	0	(7,045)	40,285	463,281	14,055	39,288	26,190	32,739
2042	0.00%	0	(7,045)	20,143	483,424	7,050	26,190	13,092	19,641
2043	0.00%	0	(7,045)	0	503,567	6	13,092	-6	6,543

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.39

100.00%      907.77

(8) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	(13.63)	(27.02)	179.18	1,064.61

57.47      156.84      127.50      (27.02)      1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.55
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	429,382	429,382	429,382
EQUITY AFUDC	47,003		
DEBT AFUDC	27,182	27,182	
CPI			60,309
<b>TOTAL</b>	<b>503,567</b>	<b>456,564</b>	<b>489,691</b>

\* Column not specified in workbook



INPUT DATA - PART 2  
 PROGRAM/METHOD SELECTED : REV\_REQ  
 PROGRAMNAME: Residential Air-Conditioning

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (\$/kWh)	(5) AVOIDED MARGINAL FUEL COST (\$/kWh)	(6) INCREASED MARGINAL FUEL COST (\$/kWh)	(7) REPLACEMENT FUEL COST (\$/kWh)	(8) PROGRAM KW EFFECTIVENESS FACTOR	(9) PROGRAM KW/h EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	81,604	81,604	6.41	9.01	6.70	0.00	1.00	1.00
2011	152,466	152,466	6.35	8.48	6.61	0.00	1.00	1.00
2012	232,680	232,680	6.43	8.45	6.66	0.00	1.00	1.00
2013	318,670	318,670	7.06	8.41	7.23	0.00	1.00	1.00
2014	408,118	408,118	7.53	8.67	7.68	0.00	1.00	1.00
2015	495,213	495,213	8.11	9.61	8.31	0.00	1.00	1.00
2016	578,557	578,557	9.00	11.55	9.31	0.00	1.00	1.00
2017	643,877	643,877	9.75	12.72	10.06	0.00	1.00	1.00
2018	702,497	702,497	10.52	13.53	10.86	0.00	1.00	1.00
2019	702,497	702,497	11.50	15.25	11.94	10.41	1.00	1.00
2020	702,497	702,497	12.08	15.88	12.57	10.50	1.00	1.00
2021	702,497	702,497	12.57	16.53	13.08	10.74	1.00	1.00
2022	702,497	702,497	13.06	17.14	13.59	10.81	1.00	1.00
2023	702,497	702,497	13.29	17.16	13.92	10.80	1.00	1.00
2024	702,497	702,497	13.95	17.82	14.47	10.84	1.00	1.00
2025	702,497	702,497	14.40	18.22	14.92	10.96	1.00	1.00
2026	702,497	702,497	14.70	18.32	15.19	11.05	1.00	1.00
2027	702,497	702,497	15.13	18.54	15.60	11.17	1.00	1.00
2028	702,497	702,497	15.60	18.91	16.05	11.36	1.00	1.00
2029	702,497	702,497	16.02	18.85	16.44	11.41	1.00	1.00
2030	702,497	702,497	16.52	19.26	16.92	11.59	1.00	1.00
2031	702,497	702,497	17.08	19.86	17.47	11.80	1.00	1.00
2032	702,497	702,497	17.50	19.62	17.84	11.88	1.00	1.00
2033	702,497	702,497	18.27	20.38	18.50	12.10	1.00	1.00
2034	702,497	702,497	18.73	20.08	18.86	12.14	1.00	1.00
2035	702,497	702,497	19.57	21.37	19.75	12.29	1.00	1.00
2036	702,497	702,497	20.40	22.39	20.54	12.55	1.00	1.00
2037	702,497	702,497	21.11	22.91	21.24	12.70	1.00	1.00
2038	702,497	702,497	22.02	23.86	22.16	13.04	1.00	1.00
2039	702,497	702,497	22.78	24.49	22.89	13.32	1.00	1.00
2040	702,497	702,497	23.59	25.04	23.68	13.44	1.00	1.00
2041	702,497	702,497	24.54	25.93	24.62	13.75	1.00	1.00
2042	702,497	702,497	25.50	26.84	25.59	14.10	1.00	1.00
2043	702,497	702,497	26.74	28.65	26.85	14.40	1.00	1.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Air-Conditioning

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	107,801	59,130	2494	150,581	190,587	129,498
2020	104,595	60,603	3598	221,855	270,280	120,376
2021	100,443	62,123	3765	231,475	282,287	115,520
2022	96,442	63,676	3998	244,995	294,295	114,816
2023	92,578	65,268	4219	257,573	302,761	116,877
2024	88,844	66,900	4470	272,088	314,121	118,181
2025	85,229	68,573	4778	290,721	331,339	117,961
2026	81,724	70,287	5118	310,671	349,035	118,766
2027	78,322	72,044	5413	327,921	363,981	119,720
2028	74,939	73,845	5572	336,625	371,823	119,159
2029	71,558	75,691	5835	350,800	381,598	122,287
2030	68,179	77,584	6126	367,223	396,856	122,256
2031	64,803	79,523	6276	374,790	404,053	121,340
2032	61,430	81,511	6521	388,031	412,354	125,140
2033	58,059	83,549	7176	426,957	450,905	124,836
2034	54,690	85,638	7509	444,401	461,594	130,645
2035	51,325	87,779	7716	454,515	468,719	132,616
2036	47,962	89,973	7978	468,087	482,622	131,379
2037	44,602	92,222	8198	478,725	489,564	134,185
2038	41,245	94,528	8433	490,671	504,498	130,379
2039	37,891	96,891	8653	500,760	516,081	128,113
2040	35,149	99,313	8892	512,282	521,979	123,668
2041	33,021	101,796	9132	523,534	535,118	132,364
2042	30,896	104,341	9381	535,455	550,028	130,045
2043	28,774	106,950	9662	549,228	564,173	130,441
	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	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	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
NOM	1,640,502	2,019,745	160,913	9,509,974	10,210,569	3,120,564
NPV	366,972	335,329	24,287	1,455,503	1,618,929	563,172

AVOIDED T&D AND PROGRAM FUEL SAVINGS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Air-Conditioning

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(8a)*
YEAR	AVOIDED TRANSMISSION CAP COST \$(000)	AVOIDED TRANSMISSION O&M COST \$(000)	TOTAL AVOIDED TRANSMISSION COST \$(000)	AVOIDED DISTRIBUTION CAP COST \$(000)	AVOIDED DISTRIBUTION O&M COST \$(000)	TOTAL AVOIDED DISTRIBUTION COST \$(000)	PROGRAM FUEL SAVINGS \$(000)	PROGRAM OFF-PEAK PAYBACK \$(000)
2009	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	4,498	0
2011	2,057	163	2,220	171	44	215	12,013	0
2012	3,835	312	4,147	319	83	403	15,648	0
2013	5,853	667	6,520	487	130	618	27,347	0
2014	8,024	876	8,900	688	183	871	36,838	0
2015	10,289	1,092	11,381	857	240	1,097	51,132	0
2016	12,511	1,305	13,816	1,042	299	1,342	74,514	0
2017	14,560	1,488	16,048	1,213	358	1,571	93,666	0
2018	16,083	1,665	17,747	1,340	408	1,748	109,443	0
2019	17,397	1,706	19,103	1,449	457	1,906	129,582	0
2020	16,790	1,749	18,539	1,398	468	1,866	134,642	0
2021	16,193	1,793	17,986	1,349	480	1,828	140,183	0
2022	15,613	1,837	17,450	1,300	492	1,792	145,282	0
2023	15,045	1,883	16,929	1,253	504	1,757	144,624	0
2024	14,488	1,930	16,418	1,207	517	1,723	150,088	0
2025	13,936	1,979	15,915	1,161	529	1,690	153,190	0
2026	13,389	2,028	15,417	1,115	543	1,658	153,431	0
2027	12,842	2,079	14,921	1,070	556	1,626	154,664	0
2028	12,296	2,131	14,427	1,024	570	1,594	157,306	0
2029	11,751	2,184	13,935	979	584	1,563	155,598	0
2030	11,205	2,239	13,444	933	599	1,532	158,650	0
2031	10,666	2,295	12,961	888	614	1,502	163,536	0
2032	10,147	2,352	12,499	845	629	1,474	159,943	0
2033	9,653	2,411	12,064	804	645	1,449	165,923	0
2034	9,188	2,471	11,659	765	661	1,427	161,669	0
2035	8,754	2,533	11,287	729	678	1,407	172,905	0
2036	8,353	2,596	10,949	696	695	1,390	181,507	0
2037	7,986	2,661	10,647	665	712	1,377	185,108	0
2038	7,650	2,728	10,377	637	730	1,367	192,715	0
2039	7,342	2,796	10,137	611	748	1,360	197,291	0
2040	7,052	2,866	9,918	587	767	1,354	201,030	0
2041	6,770	2,937	9,707	564	786	1,350	207,909	0
2042	6,487	3,011	9,498	540	806	1,346	214,955	0
2043	6,204	3,086	9,290	517	826	1,343	230,647	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	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	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	0	0	0
NOM.	350,409	65,848	416,257	29,185	17,341	46,526	4,641,478	0
NPV	102,420	14,003	116,423	8,530	3,583	12,113	958,145	0

\* THESE VALUES REPRESENT THE COST OF THE INCREASED FUEL CONSUMPTION DUE TO GREATER OFF-PEAK ENERGY USAGE. USED FOR LOAD SHIFTING PROGRAMS ONLY.

AVOIDED GENERATING EMISSION IMPACT  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Air-Conditioning

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	38	0	38
2011	0	0	47	0	47
2012	0	0	74	0	74
2013	0	0	2,250	0	2,250
2014	0	0	3,277	0	3,277
2015	0	0	4,529	0	4,529
2016	0	0	6,145	0	6,145
2017	0	0	7,704	0	7,704
2018	0	0	9,213	0	9,213
2019	18,004	23,543	10,549	0	5,011
2020	27,415	35,508	11,407	0	3,315
2021	30,204	39,156	12,294	0	3,342
2022	35,271	45,021	13,683	0	3,333
2023	38,923	50,312	14,581	0	3,192
2024	44,817	57,789	16,142	0	3,169
2025	51,726	66,505	17,792	0	3,012
2026	57,362	73,311	18,779	0	2,830
2027	64,889	82,811	20,410	0	2,489
2028	71,153	90,654	22,182	0	2,681
2029	81,389	103,307	24,640	0	2,722
2030	90,242	114,470	26,601	0	2,373
2031	98,077	124,325	28,864	0	2,616
2032	107,998	136,617	31,252	0	2,633
2033	125,835	159,088	33,855	0	602
2034	139,288	175,943	36,599	0	(50)
2035	151,287	191,189	39,695	0	(207)
2036	165,160	208,675	42,996	0	(518)
2037	179,007	226,101	46,425	0	(669)
2038	194,042	245,055	50,129	0	(885)
2039	209,563	264,996	54,033	0	(1,400)
2040	226,464	286,326	58,124	0	(1,739)
2041	244,009	308,470	62,499	0	(1,962)
2042	244,009	308,470	67,169	0	2,709
2043	244,009	308,470	72,230	0	7,769
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	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
NOM	2,940,143	3,726,711	866,207	0	79,639
NPV	355,977	452,950	126,989	0	30,017

TOTAL RESOURCE COST TEST  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Air-Conditioning

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	(0)	(0)
2010	0	4,332	107,272	0	111,603	0	0	4,498	38	4,536	(107,067)	(98,329)
2011	0	3,892	92,357	0	96,249	0	2,435	12,013	47	14,495	(81,755)	(167,283)
2012	0	4,515	108,579	0	113,094	0	4,549	19,648	74	24,271	(88,823)	(236,085)
2013	0	4,962	118,905	0	123,866	0	7,138	27,347	2,250	36,735	(87,131)	(298,068)
2014	0	5,280	125,604	0	130,884	0	9,752	36,838	3,277	49,867	(81,017)	(350,997)
2015	0	5,334	128,792	0	134,126	0	12,478	51,132	4,529	68,139	(65,988)	(394,590)
2016	0	5,099	122,330	0	127,429	0	15,157	74,514	6,145	95,816	(31,612)	(408,009)
2017	0	4,162	108,419	0	112,581	0	17,619	93,666	7,704	118,989	6,408	(404,766)
2018	0	3,827	100,512	0	104,339	0	19,495	109,443	9,213	138,151	33,812	(389,052)
2019	0	0	0	0	0	129,498	21,009	129,582	5,011	285,100	285,100	(267,366)
2020	0	0	0	0	0	120,376	20,406	134,642	3,315	278,738	278,738	(158,104)
2021	0	0	0	0	0	115,520	19,814	140,183	3,342	278,858	278,858	(57,717)
2022	0	0	0	0	0	114,816	19,242	145,282	3,333	282,673	282,673	35,738
2023	0	0	0	0	0	116,877	18,686	144,624	3,192	283,378	283,378	121,779
2024	0	6,273	155,362	0	161,635	117,961	17,605	153,190	3,169	289,579	289,579	202,528
2025	0	5,637	133,760	0	139,398	118,766	17,075	153,431	3,012	291,769	130,134	235,854
2026	0	6,539	157,255	0	163,794	119,720	16,547	154,664	2,830	292,101	152,703	271,768
2027	0	7,186	172,210	0	179,396	119,159	16,022	157,306	2,489	293,420	129,626	299,766
2028	0	7,646	181,912	0	189,559	122,287	15,498	155,598	2,722	295,168	115,772	322,731
2029	0	7,726	186,529	0	194,255	122,256	14,976	158,650	2,373	298,254	103,989	359,541
2030	0	7,384	177,171	0	184,555	121,340	14,463	163,536	2,616	301,689	117,400	377,580
2031	0	6,027	157,023	0	163,050	125,140	13,973	159,943	2,633	301,689	138,638	397,143
2032	0	5,542	145,571	0	151,114	124,836	13,513	165,923	602	304,874	153,761	417,070
2033	0	0	0	0	0	130,645	13,086	161,669	(50)	305,344	305,344	453,412
2034	0	0	0	0	0	132,616	12,694	172,905	(207)	318,008	318,008	488,171
2035	0	0	0	0	0	131,379	12,340	181,507	(518)	324,708	324,708	520,766
2036	0	0	0	0	0	134,185	12,024	185,108	(669)	330,648	330,648	551,249
2037	0	0	0	0	0	130,379	11,744	192,715	(885)	333,954	333,954	579,524
2038	0	9,086	223,010	0	234,096	128,113	11,497	197,291	(1,400)	335,501	335,501	605,611
2039	0	8,165	193,725	0	201,890	133,668	11,272	201,030	(1,739)	344,231	110,136	613,476
2040	0	9,471	227,752	0	237,223	132,364	11,057	207,909	(1,962)	349,368	147,479	623,148
2041	0	10,407	249,411	0	259,818	130,045	10,844	214,955	2,709	358,532	121,229	630,455
2042	0	0	0	0	0	130,441	10,633	230,647	7,769	379,489	119,671	637,075
2043	0	0	0	0	0	0	0	0	0	0	0	0
2044	0	0	0	0	0	0	0	0	0	0	0	0
2045	0	0	0	0	0	0	0	0	0	0	0	0
2046	0	0	0	0	0	0	0	0	0	0	0	0
2047	0	0	0	0	0	0	0	0	0	0	0	0
2048	0	0	0	0	0	0	0	0	0	0	0	0
2049	0	0	0	0	0	0	0	0	0	0	0	0
2050	0	0	0	0	0	0	0	0	0	0	0	0
NOM	0	138,492	3,375,402	0	3,513,894	3,120,564	462,783	4,641,478	79,639	8,304,464	4,790,510	
NPV	0	41,121	1,001,675	0	1,042,796	563,172	128,536	958,145	30,017	1,679,871	637,075	

Discount Rate:  
Benefit/Cost Ratio (Col(11) / Col(6)) :

8.89 %  
1.61

250

PARTICIPANT COSTS AND BENEFITS  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Air-Conditioning

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
YEAR	SAVINGS IN PARTICIPANTS BILLS \$(000)	TAX CREDITS \$(000)	UTILITY REBATES \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	CUSTOMER EQUIPMENT COSTS \$(000)	CUSTOMER O&M COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0
2010	6,115	0	64,551	0	70,666	107,272	0	0	107,272	(36,606)	(33,618)
2011	18,058	0	54,967	0	73,025	92,357	0	0	92,357	(19,322)	(49,915)
2012	31,336	0	62,680	0	94,016	108,579	0	0	108,579	(14,563)	(61,196)
2013	47,146	0	67,066	0	114,212	118,905	0	0	118,905	(4,693)	(64,534)
2014	65,886	0	69,251	0	135,137	125,604	0	0	125,604	9,532	(58,306)
2015	85,934	0	69,222	0	155,156	128,792	0	0	128,792	26,364	(42,488)
2016	105,640	0	63,414	0	169,054	122,330	0	0	122,330	46,724	(16,742)
2017	125,014	0	54,804	0	179,818	108,419	0	0	108,419	71,399	19,390
2018	142,440	0	49,051	0	191,491	100,512	0	0	100,512	90,979	61,672
2019	154,550	0	0	0	154,550	0	0	0	154,550	127,637	127,637
2020	155,032	0	0	0	155,032	0	0	0	155,032	188,408	188,408
2021	158,408	0	0	0	158,408	0	0	0	158,408	245,433	245,433
2022	163,003	0	0	0	163,003	0	0	0	163,003	299,324	299,324
2023	167,943	0	0	0	167,943	0	0	0	167,943	350,316	350,316
2024	175,400	0	0	0	175,400	0	0	0	175,400	399,226	399,226
2025	181,697	0	64,551	0	246,248	155,362	0	0	155,362	90,886	422,501
2026	188,998	0	54,967	0	243,965	133,760	0	0	133,760	110,205	448,420
2027	198,880	0	62,680	0	261,560	157,255	0	0	157,255	104,305	470,949
2028	206,982	0	67,066	0	274,029	172,210	0	0	172,210	101,819	491,147
2029	216,226	0	69,251	0	285,476	181,912	0	0	181,912	103,564	510,014
2030	226,803	0	69,222	0	296,025	186,529	0	0	186,529	109,496	528,333
2031	237,135	0	63,414	0	300,549	177,171	0	0	177,171	123,378	547,290
2032	251,142	0	54,804	0	305,946	157,023	0	0	157,023	148,923	568,305
2033	273,601	0	49,051	0	322,651	145,571	0	0	145,571	177,080	591,254
2034	278,732	0	0	0	278,732	0	0	0	278,732	624,428	624,428
2035	289,696	0	0	0	289,696	0	0	0	289,696	656,093	656,093
2036	310,424	0	0	0	310,424	0	0	0	310,424	687,254	687,254
2037	327,038	0	0	0	327,038	0	0	0	327,038	717,404	717,404
2038	341,271	0	0	0	341,271	0	0	0	341,271	746,298	746,298
2039	356,904	0	0	0	356,904	0	0	0	356,904	774,050	774,050
2040	373,532	0	64,551	0	438,084	225,010	0	0	225,010	213,074	789,265
2041	393,277	0	54,967	0	448,244	193,725	0	0	193,725	254,519	805,957
2042	414,354	0	62,680	0	477,034	227,752	0	0	227,752	249,282	820,971
2043	436,858	0	67,066	0	503,924	249,411	0	0	249,411	254,513	835,049
	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	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	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
NOM	7,105,445	0	1,339,276	0	8,464,720	3,375,462	0	0	3,375,462	5,089,258	
NPV	1,342,541	0	494,183	0	1,836,724	1,001,675	0	0	1,001,675	835,049	

In Service of Gen Unit:  
Discount Rate : 8.89 %  
Benefit/Cost Ratio ( Col(6) / Col(10) )

2019	8.89	%
Benefit/Cost Ratio	1.83	

RATE IMPACT TEST  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Air-Conditioning

(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)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	4,332	64,551	4,647	0	73,530	4,498	0	0	38	4,536	(68,994)	(63,363)
2011	0	3,892	54,967	13,732	0	72,591	12,013	2,433	0	47	14,495	(58,096)	(112,363)
2012	0	4,515	62,680	23,816	0	91,011	19,648	4,549	0	74	24,271	(56,739)	(164,059)
2013	0	4,962	67,066	35,831	0	107,859	27,347	7,138	0	2,250	36,735	(71,123)	(214,654)
2014	0	5,280	69,251	50,073	0	124,603	36,838	9,752	0	3,277	49,867	(74,737)	(263,481)
2015	0	5,334	69,222	65,310	0	139,866	51,132	12,478	0	4,529	68,139	(71,728)	(306,517)
2016	0	5,099	63,414	80,286	0	148,799	74,514	15,157	0	6,145	95,816	(30,983)	(335,712)
2017	0	4,162	54,804	95,021	0	153,976	93,666	17,619	0	7,704	118,989	(34,987)	(359,417)
2018	0	3,827	49,051	108,255	0	161,132	109,443	19,495	0	9,213	138,151	(22,981)	(364,098)
2019	0	0	0	117,458	0	117,458	259,080	21,009	0	5,011	285,100	167,642	(292,545)
2020	0	0	0	117,824	0	117,824	255,018	20,406	0	3,315	278,738	160,914	(229,469)
2021	0	0	0	120,390	0	120,390	255,703	19,814	0	3,342	278,858	158,469	(172,422)
2022	0	0	0	123,882	0	123,882	260,098	19,242	0	3,333	282,673	158,790	(119,924)
2023	0	0	0	127,636	0	127,636	261,501	18,686	0	3,192	283,378	155,742	(72,636)
2024	0	0	0	133,304	0	133,304	268,269	18,141	0	3,169	289,579	156,275	(29,059)
2025	0	6,273	64,551	138,089	0	208,914	271,151	17,605	0	3,012	291,769	82,854	(7,841)
2026	0	5,637	54,967	143,639	0	204,243	272,197	17,075	0	2,830	292,101	87,858	12,823
2027	0	6,539	62,680	151,149	0	220,368	274,384	16,547	0	2,488	293,420	73,652	28,601
2028	0	7,186	67,066	157,291	0	231,544	276,465	16,022	0	2,681	295,158	63,624	41,222
2029	0	7,646	69,251	164,331	0	241,228	277,895	15,498	0	2,722	296,194	54,875	51,219
2030	0	7,726	69,222	172,370	0	249,318	280,906	14,976	0	2,373	298,254	48,937	59,407
2031	0	7,384	63,414	180,222	0	251,021	284,876	14,463	0	2,616	301,955	50,934	67,233
2032	0	6,027	54,804	190,868	0	251,699	285,082	13,973	0	2,633	301,689	49,990	74,287
2033	0	5,542	49,051	207,936	0	262,329	290,759	13,513	0	602	304,874	42,345	79,775
2034	0	0	0	211,836	0	211,836	292,314	13,086	0	(56)	305,344	93,507	90,904
2035	0	0	0	220,169	0	220,169	295,521	12,694	0	(207)	318,008	97,840	101,598
2036	0	0	0	235,922	0	235,922	312,886	12,340	0	(518)	324,708	88,785	110,510
2037	0	0	0	248,549	0	248,549	319,293	12,024	0	(669)	330,648	82,099	118,079
2038	0	0	0	259,366	0	259,366	323,095	11,744	0	(885)	333,954	74,589	124,394
2039	0	0	0	271,247	0	271,247	325,404	11,497	0	(1,400)	335,501	64,254	129,390
2040	0	9,086	64,551	283,885	0	357,522	334,698	11,272	0	(1,739)	344,231	(13,290)	128,441
2041	0	8,165	54,967	298,891	0	362,022	340,274	11,057	0	(1,962)	349,368	(12,653)	127,612
2042	0	9,471	62,680	314,909	0	387,060	345,000	10,844	0	2,709	358,552	(28,508)	125,895
2043	0	10,407	67,066	332,012	0	409,486	361,087	10,633	0	7,769	379,489	(29,997)	124,235
	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	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	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	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	0	0	0	0	0	0	0
NOM	0	138,492	1,359,276	5,400,138	0	6,897,905	7,762,042	462,783	0	79,639	8,304,464	1,406,559	
NPV	0	41,121	494,183	1,620,331	0	1,555,635	1,521,317	128,536	0	30,017	1,679,871	124,235	

Discount Rate  
 Benefit/Cost Ratio (Col(12) / Col(7)) :

8.89 %  
 1.98

## **BUSINESS REFRIGERATION**



INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Building Envelope

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER kW REDUCTION AT METER .....	0.36 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	0.48 kW
(3) kW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	867.50 kWh
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	0.03 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
o (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
o (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
o (10) UTILITY DISCOUNT RATE .....	8.89 %
o (11) UTILITY AFUDC RATE .....	8.48 %
o (12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
o (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
o (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YBAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2010-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.29 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2



CALCULATION OF GENK-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Residential Building Envelope

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
BEG-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	164,044	5,096	0	11,448	7,552	2,765	976	6,399	12	34,249	34,249	159,985
2020	157,633	4,897	0	11,001	5,189	2,649	1,080	6,399	2,094	33,230	30,518	163,984
2021	149,139	4,633	0	10,408	5,142	2,534	1,025	6,399	1,769	31,911	26,915	168,084
2022	140,971	4,379	0	9,838	5,083	2,419	1,051	6,399	1,471	30,640	23,733	172,286
2023	133,101	4,135	0	9,289	5,018	2,304	1,077	6,399	1,190	29,412	20,923	176,593
2024	125,511	3,899	0	8,759	4,942	2,189	1,104	6,399	934	28,226	18,440	181,008
2025	118,178	3,671	0	8,247	4,859	2,073	1,132	6,399	695	27,077	16,246	185,533
2026	111,083	3,451	0	7,752	4,768	1,958	1,160	6,399	476	25,964	14,307	190,171
2027	104,208	3,237	0	7,272	4,503	1,843	1,189	6,399	440	24,883	12,592	194,926
2028	97,369	3,025	0	6,795	4,203	1,728	1,219	6,399	439	23,808	11,065	199,799
2029	90,531	2,812	0	6,318	3,903	1,613	1,249	6,399	440	22,734	9,703	204,794
2030	83,692	2,600	0	5,841	3,604	1,497	1,280	6,399	439	21,661	8,491	209,914
2031	76,853	2,387	0	5,363	3,304	1,382	1,312	6,399	440	20,588	7,412	215,162
2032	70,014	2,175	0	4,886	3,005	1,267	1,345	6,399	439	19,516	6,452	220,541
2033	63,176	1,963	0	4,409	2,704	1,152	1,379	6,399	440	18,445	5,601	226,054
2034	56,337	1,750	0	3,932	2,405	1,037	1,413	6,399	440	17,375	4,845	231,705
2035	49,498	1,538	0	3,454	2,105	922	1,449	6,399	439	16,306	4,176	237,498
2036	42,659	1,325	0	2,977	1,806	806	1,485	6,399	439	15,238	3,584	243,436
2037	35,821	1,113	0	2,500	1,505	691	1,522	6,399	440	14,170	3,061	249,521
2038	28,982	900	0	2,023	1,206	576	1,560	6,399	439	13,104	2,599	255,759
2039	22,143	688	0	1,545	2,245	461	1,599	6,399	(899)	12,038	2,193	262,153
2040	15,303	476	0	1,067	3,343	346	1,639	6,399	(2,238)	11,167	1,868	268,707
2041	12,462	264	0	871	3,160	230	1,680	6,399	(2,238)	10,491	1,612	275,425
2042	8,321	152	0	581	2,978	115	1,722	6,399	(2,238)	9,816	1,385	282,311
2043	4,159	76	0	290	2,796	(0)	1,765	6,399	(2,238)	9,141	1,185	289,368

IN SERVICE COST (\$000)	159,985
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.57%
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST
DEBT	44%	7.03%
P/S	0%	0.00%
C/S	56%	12.50%

K-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Building Envelope

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	5,834	5,834	6,399	6,399	5,802	5,802	12	14,933	0	0	0	12	(4,947)
2020	7.22%	11,231	17,065	6,399	12,799	5,802	11,604	2,094	14,933	0	0	0	2,094	(1,953)
2021	6.58%	10,388	27,453	6,399	19,198	5,802	17,406	1,769	14,933	0	0	0	1,769	(184)
2022	6.18%	9,615	37,068	6,399	25,598	5,802	23,208	1,471	14,933	0	0	0	1,471	1,286
2023	5.71%	8,888	45,956	6,399	31,997	5,802	29,010	1,190	14,933	0	0	0	1,190	2,477
2024	5.29%	8,222	54,178	6,399	38,396	5,802	34,812	934	14,933	0	0	0	934	3,410
2025	4.89%	7,605	61,782	6,399	44,796	5,802	40,614	695	14,933	0	0	0	695	4,106
2026	4.52%	7,035	68,818	6,399	51,195	5,802	46,417	476	14,933	0	0	0	476	4,581
2027	4.46%	6,942	75,759	6,399	57,594	5,802	52,219	440	14,933	0	0	0	440	5,021
2028	4.46%	6,940	82,700	6,399	63,994	5,802	58,021	439	14,933	0	0	0	439	5,460
2029	4.46%	6,942	89,641	6,399	70,393	5,802	63,823	440	14,933	0	0	0	440	5,900
2030	4.46%	6,940	96,582	6,399	76,793	5,802	69,625	439	14,933	0	0	0	439	6,339
2031	4.46%	6,942	103,524	6,399	83,192	5,802	75,427	440	14,933	0	0	0	440	6,778
2032	4.46%	6,940	110,464	6,399	89,591	5,802	81,229	439	14,933	0	0	0	439	7,217
2033	4.46%	6,942	117,406	6,399	95,991	5,802	87,031	440	14,933	0	0	0	440	7,657
2034	4.46%	6,940	124,346	6,399	102,390	5,802	92,833	439	14,933	0	0	0	439	8,096
2035	4.46%	6,942	131,288	6,399	108,790	5,802	98,635	440	14,933	0	0	0	440	8,536
2036	4.46%	6,940	138,228	6,399	115,189	5,802	104,437	439	14,933	0	0	0	439	8,975
2037	4.46%	6,942	145,170	6,399	121,588	5,802	110,239	440	14,933	0	0	0	440	9,415
2038	4.46%	6,940	152,110	6,399	127,988	5,802	116,041	439	14,933	0	0	0	439	9,854
2039	2.23%	3,471	155,581	6,399	134,387	5,802	121,843	(899)	14,933	0	0	0	(899)	8,954
2040	0.00%	0	155,581	6,399	140,786	5,802	127,645	(2,238)	14,933	0	0	0	(2,238)	6,716
2041	0.00%	0	155,581	6,399	147,186	5,802	133,448	(2,238)	14,933	0	0	0	(2,238)	4,478
2042	0.00%	0	155,581	6,399	153,585	5,802	139,250	(2,238)	14,933	0	0	0	(2,238)	2,240
2043	0.00%	0	155,581	6,399	159,985	5,802	145,052	(2,238)	14,933	0	0	0	(2,238)	2

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(4,060)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	14,933
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Building Envelope

(1) YEAR	(2) TAX DEPRECIATION SCHEDULE	(3) TAX DEPRECIATION \$(000)	(4) DEFERRED TAX \$(000)	(5) END OF YEAR NET PLANT IN SERVICE \$(000)	(5a)* ACCUMULATED DEPRECIATION \$(000)	(5b)* ACCUMULATED DEF TAXES \$(000)	(6) BEGINNING YEAR RATE BASE \$(000)	(7) ENDING OF YEAR RATE BASE \$(000)	(8) MID-YEAR RATE BASE \$(000)
2019	3.75%	5,834	12	153,585	6,399	(4,047)	184,044	157,633	160,839
2020	7.22%	11,231	2,094	147,186	12,799	(1,953)	157,633	149,139	153,386
2021	6.68%	10,388	1,769	140,786	19,198	(184)	149,139	140,971	145,055
2022	6.18%	9,615	1,471	134,387	25,598	1,286	140,971	133,101	137,036
2023	5.71%	8,888	1,190	127,988	31,997	2,477	133,101	125,511	129,366
2024	5.29%	8,222	934	121,588	38,396	3,410	125,511	118,178	121,844
2025	4.89%	7,605	695	115,189	44,796	4,106	118,178	111,083	114,631
2026	4.52%	7,035	476	108,790	51,195	4,581	111,083	104,208	107,646
2027	4.46%	6,940	440	102,390	57,594	5,021	104,208	97,369	100,789
2028	4.46%	6,940	439	95,991	63,994	5,460	97,369	90,531	93,950
2029	4.46%	6,942	440	89,591	70,393	5,900	90,531	83,692	87,111
2030	4.46%	6,940	439	83,192	76,793	6,339	83,692	76,853	80,272
2031	4.46%	6,942	440	76,793	83,192	6,778	76,853	70,014	73,434
2032	4.46%	6,940	439	70,393	89,591	7,217	70,014	63,176	66,595
2033	4.46%	6,942	440	63,994	95,991	7,657	63,176	56,337	59,756
2034	4.46%	6,940	439	57,594	102,390	8,096	56,337	49,498	52,917
2035	4.46%	6,942	440	51,195	108,790	8,536	49,498	42,659	46,079
2036	4.46%	6,940	439	44,796	115,189	8,975	42,659	35,821	39,240
2037	4.46%	6,942	440	38,396	121,588	9,415	35,821	28,982	32,401
2038	4.46%	6,940	439	31,997	127,988	9,854	28,982	22,143	25,563
2039	2.23%	3,471	(899)	25,598	134,387	8,954	22,143	16,643	19,393
2040	0.00%	0	(2,238)	19,198	140,786	6,716	16,643	12,482	14,563
2041	0.00%	0	(2,238)	12,799	147,186	4,478	12,482	8,321	10,401
2042	0.00%	0	(2,238)	6,399	153,585	2,240	8,321	4,159	6,240
2043	0.00%	0	(2,238)	(0)	159,985	2	4,159	-2	2,079

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00%      907.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,8055
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASE	136,416	136,416	136,416
EQUITY AFUDC	14,933		
DEBT AFUDC	8,636	8,636	
CPI			19,160
TOTAL	159,985	145,052	155,576

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED: REV\_RBQ  
 PROGRAM NAME: Residential Building Envelope

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (CkWh)	(5) AVOIDED MARGINAL FUEL COST (CkWh)	(6)* INCREASED MARGINAL FUEL COST (CkWh)	(7) REPLACEMENT FUEL COST (CkWh)	(8) PROGRAM KW EFFECTIVENESS FACTOR	(9) PROGRAM KW EFFECTIVENESS FACTOR
2009	0	0	6.79	5.17	6.79	0.00	1.00	1.00
2010	12,685	12,685	6.41	3.81	6.74	0.00	1.00	1.00
2011	39,640	39,640	6.35	3.34	6.64	0.00	1.00	1.00
2012	71,748	71,748	6.43	3.30	6.69	0.00	1.00	1.00
2013	108,853	108,853	7.06	3.30	7.25	0.00	1.00	1.00
2014	150,028	150,028	7.53	3.57	7.70	0.00	1.00	1.00
2015	193,836	193,836	8.11	3.46	8.34	0.00	1.00	1.00
2016	236,183	236,183	9.00	11.34	9.35	0.00	1.00	1.00
2017	277,470	277,470	9.75	12.46	10.10	0.00	1.00	1.00
2018	314,053	314,053	10.52	13.30	10.90	0.00	1.00	1.00
2019	314,053	314,053	11.50	14.57	11.99	10.41	1.00	1.00
2020	314,053	314,053	12.08	15.61	12.63	10.30	1.00	1.00
2021	314,053	314,053	12.57	16.19	13.15	10.74	1.00	1.00
2022	314,053	314,053	13.06	16.78	13.65	10.81	1.00	1.00
2023	314,053	314,053	13.39	16.78	13.96	10.80	1.00	1.00
2024	314,053	314,053	13.95	17.45	14.52	10.84	1.00	1.00
2025	314,053	314,053	14.40	17.87	14.97	10.96	1.00	1.00
2026	314,053	314,053	14.70	17.97	15.24	11.05	1.00	1.00
2027	314,053	314,053	15.13	18.18	15.65	11.17	1.00	1.00
2028	314,053	314,053	15.60	18.33	16.10	11.36	1.00	1.00
2029	314,053	314,053	16.02	18.53	16.48	11.41	1.00	1.00
2030	314,053	314,053	16.52	18.95	16.96	11.59	1.00	1.00
2031	314,053	314,053	17.08	19.56	17.52	11.80	1.00	1.00
2032	314,053	314,053	17.50	19.39	17.87	11.88	1.00	1.00
2033	314,053	314,053	18.27	20.13	18.53	12.10	1.00	1.00
2034	314,053	314,053	18.73	19.93	18.88	12.14	1.00	1.00
2035	314,053	314,053	19.57	21.15	19.77	12.29	1.00	1.00
2036	314,053	314,053	20.40	22.15	20.57	12.55	1.00	1.00
2037	314,053	314,053	21.11	22.71	21.27	12.70	1.00	1.00
2038	314,053	314,053	22.02	23.65	22.19	13.04	1.00	1.00
2039	314,053	314,053	22.78	24.29	22.92	13.32	1.00	1.00
2040	314,053	314,053	23.59	24.86	23.70	13.44	1.00	1.00
2041	314,053	314,053	24.54	25.76	24.64	13.75	1.00	1.00
2042	314,053	314,053	25.50	26.71	25.61	14.10	1.00	1.00
2043	314,053	314,053	26.74	28.43	26.88	14.40	1.00	1.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.







AVOIDED GENERATING EMISSION IMPACT  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Building Envelope

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	3	0	3
2011	0	0	8	0	8
2012	0	0	17	0	17
2013	0	0	570	0	570
2014	0	0	902	0	902
2015	0	0	1,331	0	1,331
2016	0	0	1,901	0	1,901
2017	0	0	2,502	0	2,502
2018	0	0	3,129	0	3,129
2019	5,720	7,480	3,598	0	1,839
2020	8,710	11,281	3,942	0	1,371
2021	9,596	12,440	4,201	0	1,357
2022	11,206	14,494	4,728	0	1,440
2023	12,366	15,984	4,998	0	1,380
2024	14,238	18,360	5,578	0	1,457
2025	16,433	21,129	6,127	0	1,432
2026	18,224	23,291	6,452	0	1,385
2027	20,616	26,309	7,022	0	1,329
2028	22,605	28,801	7,637	0	1,442
2029	25,857	32,921	8,515	0	1,551
2030	28,670	36,367	9,183	0	1,485
2031	31,159	39,498	9,966	0	1,627
2032	34,311	43,403	10,800	0	1,707
2033	39,978	50,543	11,692	0	1,128
2034	44,252	55,897	12,647	0	1,002
2035	48,064	60,741	13,711	0	1,034
2036	52,472	66,297	14,844	0	1,019
2037	56,871	71,833	16,031	0	1,069
2038	61,648	77,855	17,316	0	1,109
2039	66,579	84,190	18,666	0	1,055
2040	71,948	90,967	20,086	0	1,067
2041	77,522	98,002	21,598	0	1,118
2042	77,522	98,002	23,212	0	2,732
2043	77,522	98,002	24,960	0	4,481
	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	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
NOM	934,092	1,183,987	297,873	0	47,979
NPV	113,095	143,903	43,108	0	12,300

TOTAL RESOURCE COST TEST  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Building Envelope

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) PARTICIPANT PROGRAM COSTS \$(000)	(5) OTHER COSTS \$(000)	(6) TOTAL COSTS \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)	(8) AVOIDED T&D BENEFITS \$(000)	(9) PROGRAM FUEL SAVINGS \$(000)	(10) OTHER BENEFITS \$(000)	(11) TOTAL BENEFITS \$(000)	(12) NET BENEFITS \$(000)	(13) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	(0)	(0)
2010	0	293	16,210	0	16,503	0	0	527	3	530	(15,973)	(14,670)
2011	0	1,082	22,173	0	23,256	0	269	2,034	8	2,311	(20,944)	(32,335)
2012	0	1,346	28,834	0	30,180	0	851	4,292	17	5,159	(25,021)	(51,716)
2013	0	1,632	37,219	0	38,851	0	1,604	6,811	570	8,985	(29,866)	(72,962)
2014	0	1,898	44,274	0	46,172	0	2,427	9,997	902	13,327	(32,845)	(94,421)
2015	0	2,115	48,975	0	51,091	0	3,346	14,741	1,331	19,418	(31,672)	(113,424)
2016	0	1,974	53,489	0	55,462	0	4,326	22,525	1,901	28,751	(26,711)	(128,142)
2017	0	2,012	56,768	0	58,780	0	5,274	29,636	2,502	37,432	(21,348)	(138,845)
2018	0	2,022	58,512	0	60,534	0	6,191	36,381	3,129	45,701	(14,834)	(145,839)
2019	0	0	0	0	0	41,142	6,933	43,750	1,839	93,664	93,664	(105,862)
2020	0	129	16,283	0	16,412	38,244	6,734	45,379	1,371	91,927	75,515	(76,261)
2021	0	813	19,635	0	20,448	36,701	6,338	47,237	1,357	91,832	71,384	(50,563)
2022	0	1,019	26,276	0	27,295	36,477	6,349	48,909	1,440	93,176	65,881	(28,782)
2023	0	1,247	35,124	0	36,371	37,132	6,166	48,647	1,380	93,325	56,954	(11,489)
2024	0	1,452	42,440	0	43,892	37,546	5,988	50,549	1,457	95,540	51,648	2,913
2025	0	1,608	47,080	0	48,688	37,477	5,813	51,661	1,432	96,382	47,684	15,127
2026	0	1,325	51,939	0	53,264	37,732	5,641	51,772	1,385	96,530	43,267	25,303
2027	0	1,301	55,810	0	57,111	38,035	5,469	52,179	1,329	97,004	39,893	33,919
2028	0	1,341	59,865	0	61,207	37,857	5,299	53,001	1,442	97,598	36,391	41,138
2029	0	0	0	0	0	38,851	5,129	52,654	1,551	98,185	98,185	59,025
2030	0	454	26,412	0	26,866	38,841	4,959	53,720	1,485	99,005	72,139	71,094
2031	0	1,554	35,019	0	36,573	38,550	4,791	55,409	1,627	100,376	63,803	80,897
2032	0	1,923	45,550	0	47,473	39,757	4,627	54,443	1,707	100,534	53,062	88,385
2033	0	2,316	58,835	0	61,151	39,661	4,469	56,432	1,128	101,690	40,539	93,639
2034	0	2,665	69,875	0	72,540	41,506	4,322	55,337	1,002	102,167	29,628	97,165
2035	0	2,925	77,003	0	79,928	42,133	4,185	58,976	1,034	106,327	26,399	100,051
2036	0	2,591	83,787	0	86,378	41,739	4,061	61,872	1,019	108,692	22,314	102,290
2037	0	2,549	88,531	0	91,080	42,631	3,950	63,253	1,069	110,903	19,823	104,118
2038	0	2,461	90,762	0	93,223	41,422	3,852	65,827	1,109	112,210	18,987	105,725
2039	0	0	0	0	0	40,702	3,768	67,466	1,055	112,991	112,991	114,511
2040	0	243	26,876	0	27,119	42,467	3,694	68,826	1,067	116,053	88,935	120,862
2041	0	1,613	33,857	0	35,470	42,053	3,624	71,251	1,118	118,045	82,575	126,277
2042	0	2,032	45,230	0	47,261	41,316	3,554	73,797	2,732	121,399	74,137	130,743
2043	0	2,502	60,311	0	62,813	41,441	3,485	78,900	4,481	128,307	65,494	134,365
	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	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	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	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	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
NOM	0	50,437	1,462,954	0	1,513,392	991,412	147,685	1,558,400	47,979	2,745,476	1,232,084	
NPV	0	14,285	393,986	0	408,271	178,921	39,194	312,221	12,300	542,637	134,365	

Discount Rate: 8.89 %  
 Benefit/Cost Ratio (Col(11) / Col(6)) : 1.33





**BUSINESS BUILDING ENVELOPE PROGRAM**

INPUT DATA - PART I CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential AC Tune-up and Maintenance

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.21 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.28 kW
(3) KW LINE LOSS PERCENTAGE .....	8.65 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	446.65 kWh
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	0.00 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	75 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
* (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
* (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
^ (10) UTILITY DISCOUNT RATE .....	8.89 %
^ (11) UTILITY AFUDC RATE .....	8.48 %
o (12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
o (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	26.64 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

\* INPUT DATA - PART 1 CONTINUED  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential AC Tune-up and Maintenance

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2009	0	0	0	0	0	0	0	0	0	
2010	0	0	0	0	0	0	0	0	0	
2011	534	357	0	891	158	0	1,237	0	1,237	
2012	605	395	0	1,000	519	0	1,403	0	1,403	
2013	685	437	0	1,122	954	0	1,590	0	1,590	
2014	776	483	0	1,258	1,491	0	1,799	0	1,799	
2015	1,141	643	0	1,784	2,117	0	2,506	0	2,506	
2016	1,289	709	0	1,998	2,819	0	2,832	0	2,832	
2017	1,455	781	0	2,236	3,643	0	3,196	0	3,196	
2018	1,640	859	0	2,499	4,557	0	3,602	0	3,602	
2019	725	277	0	1,002	5,166	0	1,299	0	1,299	
2020	820	306	0	1,126	5,182	0	1,469	0	1,469	
2021	1,303	583	0	1,886	5,295	0	2,695	0	2,695	
2022	1,472	643	0	2,116	5,449	0	3,047	0	3,047	
2023	1,284	578	0	1,862	5,614	0	2,764	0	2,764	
2024	1,453	638	0	2,091	3,863	0	3,127	0	3,127	
2025	1,642	703	0	2,345	6,074	0	3,534	0	3,534	
2026	1,853	774	0	2,627	6,318	0	3,988	0	3,988	
2027	1,672	721	0	2,393	6,648	0	3,749	0	3,749	
2028	1,887	793	0	2,680	6,918	0	4,229	0	4,229	
2029	1,128	337	0	1,465	7,228	0	2,022	0	2,022	
2030	1,273	371	0	1,644	7,581	0	2,281	0	2,281	
2031	1,458	523	0	1,981	7,927	0	3,073	0	3,073	
2032	1,650	578	0	2,228	8,395	0	3,479	0	3,479	
2033	1,866	638	0	2,503	9,146	0	3,935	0	3,935	
2034	2,107	703	0	2,810	9,317	0	4,445	0	4,445	
2035	1,869	643	0	2,513	9,694	0	4,107	0	4,107	
2036	2,112	709	0	2,822	10,377	0	4,640	0	4,640	
2037	2,385	781	0	3,165	10,932	0	5,237	0	5,237	
2038	2,688	859	0	3,547	11,408	0	5,902	0	5,902	
2039	1,188	277	0	1,465	11,930	0	2,128	0	2,128	
2040	1,343	306	0	1,649	12,486	0	2,407	0	2,407	
2041	2,135	583	0	2,718	13,146	0	4,416	0	4,416	
2042	2,413	643	0	3,056	13,851	0	4,992	0	4,992	
2043	2,105	578	0	2,683	14,603	0	4,529	0	4,529	
	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	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	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	0	0	0	0	0	0	
NCM	49,957	19,211	0	69,168	232,796	0	105,662	0	105,662	
NFV	11,602	5,385	0	16,987	41,785	0	24,931	0	24,931	

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS



CALCULATION OF GENK-FACTOR  
 PROGRAM/METHOD SELECTED RIV\_REQ  
 PROGRAMNAME: Residential AC Tune-up and Maintenance

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
BEG-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
YEAR												
2019	23,391	727	0	1,632	1,077	394	139	912	2	4,884	4,884	22,812
2020	22,477	698	0	1,569	740	378	143	912	299	4,738	4,352	23,383
2021	21,266	661	0	1,484	733	361	146	912	252	4,550	3,838	23,967
2022	20,101	624	0	1,403	725	345	150	912	210	4,369	3,384	24,566
2023	18,979	590	0	1,324	716	328	154	912	170	4,194	2,983	25,181
2024	17,897	556	0	1,249	705	312	157	912	133	4,025	2,629	25,810
2025	16,851	523	0	1,176	693	296	161	912	99	3,861	2,317	26,455
2026	15,839	492	0	1,105	680	279	165	912	68	3,702	2,040	27,117
2027	14,859	462	0	1,037	642	263	170	912	63	3,548	1,796	27,795
2028	13,884	431	0	969	599	246	174	912	63	3,395	1,578	28,490
2029	12,909	401	0	901	557	230	178	912	63	3,242	1,384	29,202
2030	11,934	371	0	833	514	214	183	912	63	3,089	1,211	29,932
2031	10,959	340	0	765	471	197	187	912	63	2,936	1,057	30,680
2032	9,983	310	0	697	428	181	192	912	63	2,783	920	31,447
2033	9,008	280	0	629	386	164	197	912	63	2,630	799	32,233
2034	8,033	250	0	561	343	148	202	912	63	2,478	691	33,039
2035	7,058	219	0	493	300	131	207	912	63	2,325	595	33,865
2036	6,083	189	0	425	257	115	212	912	63	2,173	511	34,712
2037	5,108	159	0	356	215	99	217	912	63	2,021	436	35,580
2038	4,133	128	0	288	172	82	222	912	63	1,868	371	36,469
2039	3,157	98	0	220	130	66	228	912	(128)	1,717	313	37,381
2040	2,373	74	0	166	477	49	234	912	(319)	1,592	266	38,315
2041	1,780	55	0	124	451	33	240	912	(319)	1,496	230	39,273
2042	1,186	37	0	83	425	16	246	912	(319)	1,400	198	40,255
2043	593	18	0	41	399	(0)	252	912	(319)	1,303	169	41,261

IN SERVICE COST (\$000)	22,812
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	8.3%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	44%	7.03
P/S	0%	0.00
CS	56%	12.50

K-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential AC Tune-up and Maintenance

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAXRATE \$(000)	SALVAGE TAXRATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	832	832	912	912	827	827	2	2,129	0	0	0	2	(577)
2020	7.22%	1,601	2,433	912	1,825	827	1,655	299	2,129	0	0	0	299	(279)
2021	6.68%	1,481	3,915	912	2,737	827	2,482	252	2,129	0	0	0	252	(26)
2022	6.18%	1,371	5,286	912	3,650	827	3,309	210	2,129	0	0	0	210	183
2023	5.71%	1,267	6,553	912	4,562	827	4,137	170	2,129	0	0	0	170	353
2024	5.29%	1,172	7,725	912	5,475	827	4,964	133	2,129	0	0	0	133	486
2025	4.89%	1,084	8,810	912	6,387	827	5,791	99	2,129	0	0	0	99	585
2026	4.52%	1,003	9,813	912	7,300	827	6,619	68	2,129	0	0	0	68	653
2027	4.46%	990	10,803	912	8,212	827	7,446	63	2,129	0	0	0	63	716
2028	4.46%	990	11,792	912	9,125	827	8,273	63	2,129	0	0	0	63	779
2029	4.46%	990	12,782	912	10,037	827	9,101	63	2,129	0	0	0	63	841
2030	4.46%	990	13,772	912	10,950	827	9,928	63	2,129	0	0	0	63	904
2031	4.46%	990	14,762	912	11,862	827	10,755	63	2,129	0	0	0	63	967
2032	4.46%	990	15,751	912	12,775	827	11,583	63	2,129	0	0	0	63	1,029
2033	4.46%	990	16,741	912	13,687	827	12,410	63	2,129	0	0	0	63	1,092
2034	4.46%	990	17,731	912	14,600	827	13,237	63	2,129	0	0	0	63	1,154
2035	4.46%	990	18,720	912	15,512	827	14,065	63	2,129	0	0	0	63	1,217
2036	4.46%	990	19,710	912	16,425	827	14,892	63	2,129	0	0	0	63	1,280
2037	4.46%	990	20,700	912	17,337	827	15,719	63	2,129	0	0	0	63	1,342
2038	4.46%	990	21,690	912	18,250	827	16,546	63	2,129	0	0	0	63	1,405
2039	2.23%	495	22,184	912	19,162	827	17,374	(128)	2,129	0	0	0	(128)	1,277
2040	0.00%	0	22,184	912	20,075	827	18,201	(319)	2,129	0	0	0	(319)	958
2041	0.00%	0	22,184	912	20,987	827	19,028	(319)	2,129	0	0	0	(319)	639
2042	0.00%	0	22,184	912	21,900	827	19,856	(319)	2,129	0	0	0	(319)	319
2043	0.00%	0	22,184	912	22,812	827	20,683	(319)	2,129	0	0	0	(319)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(579)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	2,129
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential AC Tune-up and Maintenance

(1)	(2)	(3)	(4)	(5) END OF YEAR NET PLANT IN SERVICE \$(000)	(5a)* ACCUMULATED DEPRECIATION \$(000)	(5b)* ACCUMULATED DEF TAXES \$(000)	(6) BEGINNING YEAR RATE BASE \$(000)	(7) ENDING OF YEAR RATE BASE \$(000)	(8) MID-YEAR RATE BASE \$(000)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)						
2019	3.75%	832	2	21,900	912	(577)	23,391	22,477	22,934
2020	7.22%	1,601	299	20,987	1,825	(279)	22,477	21,266	21,871
2021	6.68%	1,481	252	20,075	2,737	(26)	21,266	20,101	20,684
2022	6.18%	1,371	210	19,162	3,650	183	20,101	18,979	19,540
2023	5.71%	1,267	170	18,250	4,562	353	18,979	17,897	18,438
2024	5.29%	1,172	133	17,337	5,475	486	17,897	16,851	17,374
2025	4.89%	1,084	99	16,425	6,387	585	16,851	15,839	16,345
2026	4.52%	1,003	68	15,512	7,300	653	15,839	14,859	15,349
2027	4.46%	990	63	14,600	8,212	716	14,859	13,884	14,372
2028	4.46%	990	63	13,687	9,125	779	13,884	12,909	13,396
2029	4.46%	990	63	12,775	10,037	841	12,909	11,934	12,421
2030	4.46%	990	63	11,862	10,950	904	11,934	10,959	11,446
2031	4.46%	990	63	10,950	11,862	967	10,959	9,983	10,471
2032	4.46%	990	63	10,037	12,775	1,029	9,983	9,008	9,496
2033	4.46%	990	63	9,125	13,687	1,092	9,008	8,033	8,521
2034	4.46%	990	63	8,212	14,600	1,154	8,033	7,058	7,546
2035	4.46%	990	63	7,300	15,512	1,217	7,058	6,083	6,570
2036	4.46%	990	63	6,387	16,425	1,280	6,083	5,108	5,595
2037	4.46%	990	63	5,475	17,337	1,342	5,108	4,133	4,620
2038	4.46%	990	63	4,562	18,250	1,405	4,133	3,157	3,645
2039	2.23%	495	(128)	3,650	19,162	1,277	3,157	2,373	2,765
2040	0.00%	0	(319)	2,737	20,075	958	2,373	1,780	2,076
2041	0.00%	0	(319)	1,825	20,987	639	1,780	1,186	1,483
2042	0.00%	0	(319)	912	21,900	319	1,186	593	890
2043	0.00%	0	(319)	(0)	22,812	0	593	0	296

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	853.38

100.00%      907.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47      156.84      127.50      (27.02)      1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.5
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	19,452	19,452	19,452
EQUITY AFUDC	2,129		
DEBT AFUDC	1,231	1,231	
CPI			2,732
TOTAL	22,812	20,683	22,184

\* Column not specified in workbook

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INPUT DATA -- PART 2  
PROGRAM METHOD SELECTED : REV\_REQ  
PROGRAMNAME: Residential AC Tune-up and Maintenance

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (C/kWh)	AVOIDED MARGINAL FUEL COST (C/kWh)	INCREASED MARGINAL FUEL COST (C/kWh)	REPLACEMENT FUEL COST (C/kWh)	PROGRAM KW EFFECTIVENESS FACTOR	PROGRAM KW EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	0	0	6.41	16.51	6.41	0.00	1.00	1.00
2011	6,697	6,697	6.35	8.64	6.58	0.00	1.00	1.00
2012	14,105	14,105	6.43	8.62	6.63	0.00	1.00	1.00
2013	22,294	22,294	7.06	8.53	7.20	0.00	1.00	1.00
2014	31,334	31,334	7.53	8.80	7.67	0.00	1.00	1.00
2015	41,304	41,304	8.11	9.77	8.29	0.00	1.00	1.00
2016	52,285	52,285	9.00	11.78	9.28	0.00	1.00	1.00
2017	64,365	64,365	9.75	12.96	10.02	0.00	1.00	1.00
2018	77,635	77,635	10.52	13.73	10.81	0.00	1.00	1.00
2019	77,635	77,635	11.50	15.53	11.89	10.41	1.00	1.00
2020	77,635	77,635	12.08	16.18	12.51	10.50	1.00	1.00
2021	77,635	77,635	12.57	16.83	13.02	10.74	1.00	1.00
2022	77,635	77,635	13.06	17.52	13.54	10.81	1.00	1.00
2023	77,635	77,635	13.39	17.56	13.86	10.80	1.00	1.00
2024	77,635	77,635	13.95	18.19	14.42	10.84	1.00	1.00
2025	77,635	77,635	14.40	18.66	14.87	10.96	1.00	1.00
2026	77,635	77,635	14.70	18.69	15.15	11.05	1.00	1.00
2027	77,635	77,635	15.13	18.94	15.56	11.17	1.00	1.00
2028	77,635	77,635	15.60	19.36	16.02	11.41	1.00	1.00
2029	77,635	77,635	16.02	19.22	16.40	11.41	1.00	1.00
2030	77,635	77,635	16.52	19.60	16.88	11.59	1.00	1.00
2031	77,635	77,635	17.08	20.24	17.44	11.80	1.00	1.00
2032	77,635	77,635	17.50	19.92	17.81	11.88	1.00	1.00
2033	77,635	77,635	18.27	20.69	18.47	12.10	1.00	1.00
2034	77,635	77,635	18.73	20.28	18.84	12.14	1.00	1.00
2035	77,635	77,635	19.57	21.64	19.72	12.29	1.00	1.00
2036	77,635	77,635	20.40	22.69	20.51	12.55	1.00	1.00
2037	77,635	77,635	21.11	23.18	21.22	12.70	1.00	1.00
2038	77,635	77,635	22.02	24.15	22.14	13.04	1.00	1.00
2039	77,635	77,635	22.78	24.74	22.87	13.32	1.00	1.00
2040	77,635	77,635	23.59	25.27	23.66	13.44	1.00	1.00
2041	77,635	77,635	24.54	26.14	24.60	13.75	1.00	1.00
2042	77,635	77,635	25.50	27.05	25.57	14.10	1.00	1.00
2043	77,635	77,635	26.74	28.95	26.83	14.40	1.00	1.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential AC Tune-up and Maintenance

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	4,884	2,679	113	6,822	8,630	5,866
2020	4,738	2,746	163	10,050	12,244	5,453
2021	4,550	2,814	171	10,486	12,788	5,235
2022	4,369	2,885	181	11,099	13,332	5,201
2023	4,194	2,957	191	11,669	13,716	5,295
2024	4,025	3,031	203	12,326	14,230	5,354
2025	3,861	3,106	216	13,170	15,010	5,344
2026	3,702	3,184	232	14,074	15,812	5,380
2027	3,548	3,264	245	14,855	16,489	5,423
2028	3,395	3,345	252	15,250	16,844	5,398
2029	3,242	3,429	264	15,892	17,287	5,540
2030	3,089	3,515	278	16,636	17,978	5,538
2031	2,936	3,603	294	16,979	18,304	5,497
2032	2,783	3,693	295	17,378	18,680	5,669
2033	2,630	3,785	325	19,342	20,427	5,655
2034	2,478	3,880	340	20,132	20,911	5,918
2035	2,325	3,977	350	20,590	21,234	6,008
2036	2,173	4,076	361	21,205	21,864	5,952
2037	2,021	4,178	371	21,687	22,178	6,079
2038	1,868	4,282	382	22,228	22,855	5,906
2039	1,717	4,389	392	22,685	23,379	5,804
2040	1,592	4,499	403	23,208	23,646	6,055
2041	1,496	4,612	414	23,717	24,242	5,996
2042	1,400	4,727	425	24,257	24,917	5,891
2043	1,303	4,845	438	24,881	25,558	5,909
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	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	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
NM	74,317	91,498	7,290	430,817	462,556	141,367
NPV	16,624	15,191	1,101	65,937	73,340	23,513



AVOIDED GENERATING EMISSION IMPACT  
PROGRAM METHOD SELECTED: REV\_RBQ  
PROGRAM NAME: Residential AC Tune-up and Maintenance

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	1	0	1
2012	0	0	2	0	2
2013	0	0	60	0	60
2014	0	0	97	0	97
2015	0	0	146	0	146
2016	0	0	216	0	216
2017	0	0	298	0	298
2018	0	0	387	0	387
2019	816	1,067	464	0	213
2020	1,242	1,609	502	0	135
2021	1,368	1,774	541	0	135
2022	1,598	2,067	608	0	139
2023	1,763	2,279	647	0	131
2024	2,030	2,618	716	0	129
2025	2,343	3,013	789	0	119
2026	2,599	3,321	826	0	103
2027	2,940	3,751	902	0	91
2028	3,223	4,107	980	0	96
2029	3,687	4,680	1,085	0	92
2030	4,088	5,186	1,173	0	75
2031	4,443	5,632	1,272	0	83
2032	4,892	6,189	1,375	0	78
2033	5,701	7,207	1,492	0	(14)
2034	6,310	7,970	1,611	0	(49)
2035	6,854	8,661	1,747	0	(61)
2036	7,482	9,453	1,892	0	(79)
2037	8,109	10,243	2,043	0	(91)
2038	8,790	11,101	2,207	0	(104)
2039	9,494	12,005	2,378	0	(133)
2040	10,259	12,971	2,556	0	(155)
2041	11,054	13,974	2,749	0	(171)
2042	11,054	13,974	2,954	0	34
2043	11,054	13,974	3,177	0	257
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	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
NOM	133,193	168,826	37,891	0	2,238
NPV	16,126	20,519	5,442	0	1,049





PARTICIPANT COSTS AND BENEFITS  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential AC Tune-up and Maintenance

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
YEAR	SAVINGS IN PARTICIPANTS BILLS \$(000)	TAX CREDITS \$(000)	UTILITY REBATES \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	CUSTOMER EQUIPMENT COSTS \$(000)	CUSTOMER O&M COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0	0	0
2011	208	0	357	0	566	1,237	0	0	1,237	(672)	(566)
2012	683	0	395	0	1,078	1,403	0	0	1,403	(325)	(818)
2013	1,255	0	437	0	1,692	1,590	0	0	1,590	102	(746)
2014	1,961	0	483	0	2,444	1,799	0	0	1,799	645	(324)
2015	2,785	0	643	0	3,428	2,506	0	0	2,506	922	229
2016	3,710	0	709	0	4,419	2,832	0	0	2,832	1,587	1,104
2017	4,793	0	781	0	5,574	3,196	0	0	3,196	2,378	2,307
2018	5,996	0	859	0	6,855	3,602	0	0	3,602	3,253	3,819
2019	6,798	0	277	0	7,075	1,299	0	0	1,299	5,776	6,284
2020	6,819	0	306	0	7,125	1,469	0	0	1,469	5,656	8,501
2021	6,967	0	583	0	7,550	2,695	0	0	2,695	4,855	10,249
2022	7,169	0	643	0	7,813	3,047	0	0	3,047	4,766	11,824
2023	7,387	0	578	0	7,965	2,764	0	0	2,764	5,201	13,403
2024	7,715	0	638	0	8,353	3,127	0	0	3,127	5,226	14,960
2025	7,992	0	703	0	8,695	3,534	0	0	3,534	5,161	16,182
2026	8,313	0	774	0	9,087	3,988	0	0	3,988	5,099	17,381
2027	8,747	0	721	0	9,468	3,749	0	0	3,749	5,719	18,617
2028	9,103	0	793	0	9,896	4,229	0	0	4,229	5,667	19,741
2029	9,510	0	337	0	9,847	2,022	0	0	2,022	7,825	21,166
2030	9,976	0	371	0	10,347	2,281	0	0	2,281	8,065	22,516
2031	10,430	0	523	0	10,953	3,073	0	0	3,073	7,881	23,727
2032	11,046	0	578	0	11,624	3,479	0	0	3,479	8,145	24,876
2033	12,034	0	638	0	12,672	3,935	0	0	3,935	8,737	26,003
2034	12,260	0	703	0	12,963	4,445	0	0	4,445	8,517	27,022
2035	12,742	0	643	0	13,385	4,107	0	0	4,107	9,278	28,036
2036	13,654	0	709	0	14,363	4,640	0	0	4,640	9,722	29,012
2037	14,384	0	781	0	15,165	5,237	0	0	5,237	9,928	29,927
2038	15,010	0	859	0	15,869	5,902	0	0	5,902	9,967	30,771
2039	15,698	0	277	0	15,975	2,128	0	0	2,128	13,847	31,848
2040	16,429	0	306	0	16,735	2,407	0	0	2,407	14,328	32,871
2041	17,298	0	583	0	17,881	4,416	0	0	4,416	13,464	33,754
2042	18,225	0	643	0	18,868	4,992	0	0	4,992	13,875	34,590
2043	19,215	0	578	0	19,793	4,529	0	0	4,529	15,263	35,434
	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	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	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	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	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
NOM	306,310	0	19,211	0	325,521	105,662	0	0	105,662	219,859	
NPV	54,980	0	5,385	0	60,365	24,931	0	0	24,931	35,434	

In Service of Gen Unit: 2019  
 Discount Rate : 8.89 %  
 Benefit/Cost Ratio ( Col(6) / Col(10)) 2.42

RATE IMPACT TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential AC Tune-up and Maintenance

(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)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0	(0)
2010	0	0	0	0	0	0	0	0	0	0	0	0	(0)
2011	0	534	357	158	0	1,049	140	0	0	0	0	0	(0)
2012	0	605	395	519	0	1,519	433	84	0	1	141	(909)	(767)
2013	0	685	437	954	0	2,076	731	185	0	2	519	(1,001)	(1,542)
2014	0	776	483	1,491	0	2,749	1,101	291	0	60	976	(1,100)	(2,325)
2015	0	1,141	643	2,117	0	3,901	1,670	408	0	97	1,489	(1,260)	(3,148)
2016	0	1,289	709	2,819	0	4,818	2,645	529	0	146	2,223	(1,678)	(4,154)
2017	0	1,455	781	3,643	0	5,879	3,639	685	0	216	3,400	(1,418)	(4,936)
2018	0	1,640	859	4,537	0	7,056	4,677	848	0	298	4,621	(1,258)	(5,573)
2019	0	725	277	5,166	0	6,168	11,694	1,016	0	387	5,912	(1,144)	(6,104)
2020	0	820	306	5,182	0	6,308	11,514	987	0	213	12,923	6,755	(3,221)
2021	0	1,363	583	5,295	0	7,181	11,334	958	0	135	12,636	6,328	(741)
2022	0	1,472	643	5,449	0	7,564	11,767	930	0	126	12,628	5,446	1,220
2023	0	1,284	578	5,614	0	7,476	11,838	904	0	139	12,837	5,272	2,963
2024	0	1,453	638	5,863	0	7,954	12,128	877	0	131	12,873	5,397	4,502
2025	0	1,642	703	6,074	0	8,419	12,280	852	0	129	13,134	5,180	6,046
2026	0	1,853	774	6,318	0	8,945	12,297	827	0	119	13,252	4,833	7,284
2027	0	1,672	721	6,648	0	9,041	12,406	802	0	103	13,227	4,282	8,291
2028	0	1,887	793	6,918	0	9,599	12,525	777	0	91	13,299	4,258	9,211
2029	0	1,128	337	7,228	0	8,693	12,555	753	0	96	13,399	3,801	9,964
2030	0	1,273	371	7,581	0	9,226	12,674	728	0	92	13,400	4,707	10,822
2031	0	1,458	523	7,927	0	9,908	12,860	704	0	75	13,478	4,252	11,533
2032	0	1,650	578	8,395	0	10,623	12,842	680	0	83	13,647	3,740	12,108
2033	0	1,866	638	9,146	0	11,649	13,093	656	0	78	13,600	2,977	12,528
2034	0	2,107	703	9,217	0	12,127	13,119	634	0	(14)	13,735	2,085	12,798
2035	0	1,869	643	9,694	0	12,156	13,736	614	0	(49)	13,704	1,577	12,986
2036	0	2,112	709	10,377	0	13,198	14,070	595	0	(61)	14,289	2,092	13,215
2037	0	2,385	781	10,932	0	14,097	14,344	578	0	(79)	14,586	1,387	13,354
2038	0	2,688	859	11,408	0	14,954	14,515	562	0	(91)	14,831	734	13,422
2039	0	1,188	277	11,930	0	13,395	14,596	550	0	(104)	14,973	19	13,423
2040	0	1,343	306	12,486	0	14,135	15,002	539	0	(133)	15,013	1,618	13,549
2041	0	2,135	583	13,146	0	15,865	15,236	528	0	(155)	15,385	1,250	13,638
2042	0	2,413	643	13,851	0	16,907	15,441	518	0	(171)	15,593	(272)	13,620
2043	0	2,105	578	14,603	0	17,286	16,192	508	0	34	15,993	(914)	13,565
2044	0	0	0	0	0	0	0	0	0	257	16,957	(328)	13,547
2045	0	0	0	0	0	0	0	0	0	0	0	0	0
2046	0	0	0	0	0	0	0	0	0	0	0	0	0
2047	0	0	0	0	0	0	0	0	0	0	0	0	0
2048	0	0	0	0	0	0	0	0	0	0	0	0	0
2049	0	0	0	0	0	0	0	0	0	0	0	0	0
2050	0	0	0	0	0	0	0	0	0	0	0	0	0
2051	0	0	0	0	0	0	0	0	0	0	0	0	0
2052	0	0	0	0	0	0	0	0	0	0	0	0	0
2053	0	0	0	0	0	0	0	0	0	0	0	0	0
2054	0	0	0	0	0	0	0	0	0	0	0	0	0
2055	0	0	0	0	0	0	0	0	0	0	0	0	0
2056	0	0	0	0	0	0	0	0	0	0	0	0	0
2057	0	0	0	0	0	0	0	0	0	0	0	0	0
2058	0	0	0	0	0	0	0	0	0	0	0	0	0
2059	0	0	0	0	0	0	0	0	0	0	0	0	0
2060	0	0	0	0	0	0	0	0	0	0	0	0	0
NOM	0	49,537	19,211	232,796	0	301,964	345,296	21,117	0	2,258	368,671	66,707	
NPV	0	11,602	5,385	41,785	0	58,772	65,842	5,427	0	1,049	72,319	13,547	

Discount Rate 8.89 %  
Benefit/Cost Ratio (Col(12) / Col(7)) : 1.23

**BUSINESS WATER HEATING**

INPUT DATA - PART I CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Heating, Ventilating and Air-Conditioning

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	1.05 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.40 kW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KWH REDUCTION PER CUSTOMER .....	4,804.68 kWh ****
(5) KWH LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.03
(7) CUSTOMER KWH INCREASE AT METER .....	461.43 kWh ****

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	25 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
(8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
(9) SUPPLY COSTS ESCALATION RATES .....	*** %**
(10) UTILITY DISCOUNT RATE .....	8.89 %
(11) UTILITY AFUDC RATE .....	8.48 %
(12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
(14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK.

\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)

\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

\*\*\*\* THIS IS A LOAD SHIFTING PROGRAM. VALUE SHOWN IN ITEM (4) IS ANNUAL KWH/CUST SHIFTED AWAY FROM PEAK HRS. VALUE SHOWN IN ITEM (7) IS ANNUAL KWH/CUST THAT IS PAID BACK DURING OFF-PEAK.

\* INPUT DATA - PART 1 CONTINUED
PROGRAM/METHOD SELECTED: REV\_REQ
PROGRAM NAME: Business Heating, Ventilating and Air-Conditioning

Table with 11 columns: (1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000), (2) UTILITY INCENTIVES \$(000), (3) OTHER UTILITY COSTS \$(000), (4) TOTAL UTILITY PROGRAM COSTS \$(000), (5) ENERGY CHARGE REVENUE LOSSES \$(000), (6) DEMAND CHARGE REVENUE LOSSES \$(000), (7) PARTICIPANT EQUIPMENT COSTS \$(000), (8) PARTICIPANT O&M COSTS \$(000), (9) OTHER PARTICIPANT COSTS \$(000), (10) TOTAL PARTICIPANT COSTS \$(000). Rows include years from 2009 to 2043 and summary rows for NOM and NPV.

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK
\*\* NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS

CALCULATION OF GENK-FACTOR  
PROGRAM METHOD SELECTED REV\_REQ  
PROGRAM NAME: Business Heating, Ventilating and Air-Conditioning

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
REG-YEAR	RATE BASE	DEBT	PREFERRED	COMMON	INCOME	PROPERTY	PROPERTY	DEFERRED	TOTAL	PRESENT	CUMULATIVE	REPLACEMENT
YEAR	\$ (000)	\$ (000)	STOCK	EQUITY	TAXES	TAX	INSURANCE	TAXES	FIXED	WORTH	PW FIXED	COST BASIS
			\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	CHARGES	FIXED	CHARGES	FOR
									\$ (000)	\$ (000)	\$ (000)	PROPERTY INSURANCE
												\$ (000)
2019	235,139	7,304	0	16,410	10,825	3,963	1,399	9,173	18	49,092	49,092	229,320
2020	225,949	7,019	0	15,768	7,438	3,798	1,434	9,173	3,002	47,632	43,744	235,053
2021	213,774	6,641	0	14,919	7,371	3,632	1,470	9,173	2,536	45,741	38,579	240,929
2022	202,066	6,277	0	14,102	7,285	3,467	1,506	9,173	2,108	43,919	34,019	246,953
2023	190,785	5,927	0	13,314	7,193	3,302	1,544	9,173	1,706	42,159	29,991	253,126
2024	179,906	5,589	0	12,555	7,084	3,137	1,583	9,173	1,338	40,459	26,432	259,455
2025	169,395	5,262	0	11,822	6,965	2,972	1,622	9,173	997	38,812	23,287	265,941
2026	159,225	4,946	0	11,112	6,834	2,807	1,663	9,173	682	37,217	20,507	272,589
2027	149,371	4,640	0	10,424	6,454	2,642	1,704	9,173	630	35,667	18,050	279,404
2028	139,568	4,336	0	9,740	6,025	2,477	1,747	9,173	629	34,127	15,860	286,389
2029	129,766	4,031	0	9,056	5,595	2,312	1,791	9,173	630	32,587	13,909	293,549
2030	119,963	3,727	0	8,372	5,166	2,146	1,835	9,173	629	31,048	12,170	300,888
2031	110,160	3,422	0	7,688	4,735	1,981	1,881	9,173	630	29,511	10,624	308,410
2032	100,357	3,118	0	7,004	4,307	1,816	1,928	9,173	629	27,975	9,249	316,120
2033	90,555	2,813	0	6,320	3,876	1,651	1,977	9,173	630	26,440	8,028	324,023
2034	80,752	2,509	0	5,636	3,447	1,486	2,026	9,173	629	24,906	6,945	332,124
2035	70,950	2,204	0	4,951	3,017	1,321	2,077	9,173	630	23,373	5,985	340,427
2036	61,147	1,899	0	4,267	2,588	1,156	2,129	9,173	629	21,841	5,137	348,938
2037	51,345	1,595	0	3,583	2,158	991	2,182	9,173	630	20,311	4,387	357,661
2038	41,542	1,290	0	2,899	1,729	826	2,236	9,173	629	18,783	3,726	366,603
2039	31,740	986	0	2,215	1,301	660	2,292	9,173	(1,289)	17,255	3,143	375,768
2040	23,856	741	0	1,665	4,791	495	2,349	9,173	(3,208)	16,007	2,678	385,162
2041	17,891	556	0	1,249	4,530	330	2,408	9,173	(3,208)	15,037	2,311	394,791
2042	11,927	370	0	832	4,269	165	2,468	9,173	(3,208)	14,070	1,985	404,661
2043	5,962	185	0	416	4,007	(0)	2,530	9,173	(3,208)	13,103	1,698	414,777

IN SERVICE COST (\$000)	229,320
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	8.5%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WRIGHT	COST	
DEBT	44%	7.03	%
P/S	0%	0.00	%
C/S	56%	12.50	%

K-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Heating, Ventilating and Air-C

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	8,363	8,363	9,173	9,173	8,317	8,317	18	21,405	0	0	0	18	(5,802)
2020	7.22%	16,098	24,461	9,173	18,346	8,317	16,633	3,002	21,405	0	0	0	3,002	(2,800)
2021	6.68%	14,890	39,351	9,173	27,518	8,317	24,950	2,536	21,405	0	0	0	2,536	(264)
2022	6.18%	13,781	53,132	9,173	36,691	8,317	33,266	2,108	21,405	0	0	0	2,108	1,844
2023	5.71%	12,740	65,872	9,173	45,864	8,317	41,583	1,706	21,405	0	0	0	1,706	3,550
2024	5.29%	11,786	77,658	9,173	55,037	8,317	49,900	1,338	21,405	0	0	0	1,338	4,888
2025	4.89%	10,900	88,558	9,173	64,210	8,317	58,216	997	21,405	0	0	0	997	5,885
2026	4.52%	10,084	98,642	9,173	73,382	8,317	66,533	682	21,405	0	0	0	682	6,567
2027	4.46%	9,950	108,593	9,173	82,555	8,317	74,850	630	21,405	0	0	0	630	7,197
2028	4.46%	9,948	118,541	9,173	91,728	8,317	83,166	629	21,405	0	0	0	629	7,826
2029	4.46%	9,950	128,491	9,173	100,901	8,317	91,483	630	21,405	0	0	0	630	8,457
2030	4.46%	9,948	138,439	9,173	110,074	8,317	99,799	629	21,405	0	0	0	629	9,086
2031	4.46%	9,950	148,389	9,173	119,246	8,317	108,116	630	21,405	0	0	0	630	9,716
2032	4.46%	9,948	158,337	9,173	128,419	8,317	116,433	629	21,405	0	0	0	629	10,345
2033	4.46%	9,950	168,288	9,173	137,592	8,317	124,749	630	21,405	0	0	0	630	10,976
2034	4.46%	9,948	178,236	9,173	146,765	8,317	133,066	629	21,405	0	0	0	629	11,605
2035	4.46%	9,950	188,186	9,173	155,938	8,317	141,382	630	21,405	0	0	0	630	12,235
2036	4.46%	9,948	198,134	9,173	165,110	8,317	149,699	629	21,405	0	0	0	629	12,865
2037	4.46%	9,950	208,085	9,173	174,283	8,317	158,016	630	21,405	0	0	0	630	13,495
2038	4.46%	9,948	218,033	9,173	183,456	8,317	166,332	629	21,405	0	0	0	629	14,124
2039	2.23%	4,975	223,008	9,173	192,629	8,317	174,649	(1,289)	21,405	0	0	0	(1,289)	12,835
2040	0.00%	0	223,008	9,173	201,802	8,317	182,965	(3,208)	21,405	0	0	0	(3,208)	9,627
2041	0.00%	0	223,008	9,173	210,974	8,317	191,282	(3,208)	21,405	0	0	0	(3,208)	6,419
2042	0.00%	0	223,008	9,173	220,147	8,317	199,599	(3,208)	21,405	0	0	0	(3,208)	3,211
2043	0.00%	0	223,008	9,173	229,320	8,317	207,915	(3,208)	21,405	0	0	0	(3,208)	3

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(5,819)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	21,405
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%



DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Heating, Ventilating and Air-Conditioning

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2019	3.75%	8,363	18	220,147	9,173	(5,802)	235,139	225,949	230,544
2020	7.22%	16,098	3,002	210,974	18,346	(2,800)	225,949	213,774	219,862
2021	6.58%	14,850	2,536	201,802	27,518	(264)	213,774	202,066	207,920
2022	6.18%	13,781	2,108	192,629	36,691	1,844	202,066	190,785	196,425
2023	5.71%	12,740	1,706	183,456	45,864	3,550	190,785	179,906	185,345
2024	5.29%	11,786	1,338	174,283	55,037	4,888	179,906	169,395	174,650
2025	4.89%	10,900	997	165,110	64,210	5,885	169,395	159,225	164,310
2026	4.52%	10,084	682	155,938	73,382	6,567	159,225	149,371	154,298
2027	4.46%	9,950	630	146,765	82,555	7,197	149,371	139,568	144,469
2028	4.46%	9,948	629	137,592	91,728	7,826	139,568	129,766	134,687
2029	4.46%	9,950	630	128,419	100,901	8,457	129,766	119,963	124,864
2030	4.46%	9,948	629	119,246	110,074	9,086	119,963	110,160	115,062
2031	4.46%	9,950	630	110,074	119,246	9,716	110,160	100,357	105,259
2032	4.46%	9,948	629	100,901	128,419	10,345	100,357	90,555	95,456
2033	4.46%	9,950	630	91,728	137,592	10,976	90,555	80,752	85,654
2034	4.46%	9,948	629	82,555	146,765	11,605	80,752	70,950	75,851
2035	4.46%	9,950	630	73,382	155,938	12,235	70,950	61,147	66,049
2036	4.46%	9,948	629	64,210	165,110	12,865	61,147	51,345	56,246
2037	4.46%	9,950	630	55,037	174,283	13,495	51,345	41,542	46,444
2038	4.46%	9,948	629	45,864	183,456	14,124	41,542	31,740	36,641
2039	2.23%	4,975	(1,289)	36,691	192,629	12,835	31,740	23,856	27,798
2040	0.00%	0	(3,208)	27,518	201,802	9,627	23,856	17,891	20,874
2041	0.00%	0	(3,208)	18,346	210,974	6,419	17,891	11,927	14,909
2042	0.00%	0	(3,208)	9,173	220,147	3,211	11,927	5,962	8,944
2043	0.00%	0	(3,208)	(0)	229,320	3	5,962	-3	2,980

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00%      907.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.65	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.15)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.5
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASE	195,537	195,537	195,537
EQUITY AFUDC	21,405		
DEBT AFUDC	12,379	12,379	
CPI			27,464
TOTAL	229,321	207,915	223,001

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED : REV\_REQ  
 PROGRAM NAME: Business Heating, Ventilating and Air-Conditioning

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (\$/kWh)	AVOIDED MARGINAL FUEL COST (\$/kWh)	INCREASED MARGINAL FUEL COST (\$/kWh)	REPLACEMENT FUEL COST (\$/kWh)	PROGRAM kWh EFFECTIVENESS FACTOR	PROGRAM kWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	12,111	12,111	6.41	7.35	7.43	0.00	1.00	1.00
2011	30,424	30,424	6.35	7.19	7.26	0.00	1.00	1.00
2012	53,110	53,110	6.43	7.21	7.27	0.00	1.00	1.00
2013	78,628	78,628	7.05	7.58	7.62	0.00	1.00	1.00
2014	104,689	104,689	7.33	7.97	8.01	0.00	1.00	1.00
2015	126,376	126,376	8.11	8.65	8.69	0.00	1.00	1.00
2016	144,779	144,779	9.00	9.92	10.00	0.00	1.00	1.00
2017	149,464	149,464	9.75	10.78	10.87	0.00	1.00	1.00
2018	154,016	154,016	10.52	11.59	11.69	0.00	1.00	1.00
2019	154,016	154,016	11.50	12.87	13.00	10.41	1.00	1.00
2020	154,016	154,016	12.08	13.50	13.61	10.50	1.00	1.00
2021	154,016	154,016	12.57	14.06	14.18	10.74	1.00	1.00
2022	154,016	154,016	13.06	14.51	14.63	10.81	1.00	1.00
2023	154,016	154,016	13.39	14.72	14.83	10.80	1.00	1.00
2024	154,016	154,016	13.95	15.29	15.40	10.84	1.00	1.00
2025	154,016	154,016	14.40	15.75	15.85	10.96	1.00	1.00
2026	154,016	154,016	14.70	15.99	16.09	11.05	1.00	1.00
2027	154,016	154,016	15.13	16.34	16.42	11.17	1.00	1.00
2028	154,016	154,016	15.60	16.76	16.84	11.36	1.00	1.00
2029	154,016	154,016	16.02	17.05	17.13	11.41	1.00	1.00
2030	154,016	154,016	16.52	17.54	17.60	11.59	1.00	1.00
2031	154,016	154,016	17.08	18.11	18.17	11.80	1.00	1.00
2032	154,016	154,016	17.50	18.35	18.39	11.88	1.00	1.00
2033	154,016	154,016	18.27	19.02	19.06	12.10	1.00	1.00
2034	154,016	154,016	18.73	19.25	19.28	12.14	1.00	1.00
2035	154,016	154,016	19.57	20.22	20.26	12.29	1.00	1.00
2036	154,016	154,016	20.40	21.08	21.12	12.55	1.00	1.00
2037	154,016	154,016	21.11	21.74	21.78	12.70	1.00	1.00
2038	154,016	154,016	22.02	22.66	22.70	13.04	1.00	1.00
2039	154,016	154,016	22.78	23.38	23.42	13.32	1.00	1.00
2040	154,016	154,016	23.59	24.13	24.16	13.44	1.00	1.00
2041	154,016	154,016	24.54	25.06	25.09	13.75	1.00	1.00
2042	154,016	154,016	25.50	26.02	26.05	14.10	1.00	1.00
2043	154,016	154,016	26.74	27.40	27.45	14.40	1.00	1.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.







TOTAL RESOURCE COST TEST  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Heating, Ventilating and Air-Conditioning

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	804	31,520	0	32,324	0	0	2,027	9	2,035	(30,289)	(27,817)
2011	0	1,173	39,572	0	40,746	0	751	6,945	15	7,710	(33,036)	(35,680)
2012	0	1,441	50,600	0	52,041	0	1,900	13,618	33	15,551	(36,490)	(83,945)
2013	0	1,670	56,956	0	58,626	0	3,449	22,311	2,049	27,808	(30,828)	(105,875)
2014	0	1,783	58,758	0	60,542	0	5,086	32,539	3,159	40,785	(18,757)	(118,783)
2015	0	1,640	50,135	0	51,774	0	6,742	44,604	4,415	55,761	3,986	(116,391)
2016	0	1,488	40,069	0	41,557	0	8,093	60,545	5,795	74,434	32,876	(98,275)
2017	0	386	18,118	0	18,504	0	9,156	71,517	6,912	87,585	69,081	(63,317)
2018	0	387	18,336	0	18,723	0	9,249	79,228	7,749	96,226	77,503	(27,297)
2019	0	0	0	0	0	58,972	9,315	89,647	6,021	163,955	163,955	42,683
2020	0	0	0	0	0	54,818	9,047	93,985	5,555	163,406	163,406	106,735
2021	0	0	0	0	0	52,607	8,788	97,981	5,904	165,279	165,279	166,235
2022	0	0	0	0	0	52,286	8,536	100,878	6,506	168,206	168,206	221,846
2023	0	0	0	0	0	53,225	8,291	102,048	6,779	170,342	170,342	273,566
2024	0	0	0	0	0	53,819	8,049	105,934	7,438	175,240	175,240	322,432
2025	0	464	20,123	0	20,587	53,718	7,810	109,010	7,985	178,524	157,936	362,877
2026	0	723	30,889	0	31,612	54,083	7,572	110,541	8,282	180,480	148,868	397,889
2027	0	687	31,812	0	32,500	54,519	7,336	112,712	8,872	183,439	150,940	430,491
2028	0	746	34,785	0	35,530	54,264	7,100	115,394	9,690	186,447	150,917	460,428
2029	0	726	34,016	0	34,742	55,688	6,865	117,179	10,741	190,473	155,731	488,798
2030	0	1,234	50,153	0	51,387	55,674	6,630	120,347	11,369	194,021	142,634	512,662
2031	0	1,521	50,461	0	51,982	55,257	6,399	124,218	12,399	198,273	146,291	535,140
2032	0	1,889	62,570	0	64,458	56,988	6,177	125,488	13,372	202,024	137,566	554,552
2033	0	2,204	69,946	0	72,150	56,849	5,969	129,708	13,522	206,048	133,898	571,905
2034	0	2,100	57,797	0	59,897	59,494	5,780	130,801	14,356	210,431	150,534	589,821
2035	0	2,187	58,087	0	60,273	60,382	5,612	137,625	15,492	219,121	158,848	607,184
2036	0	1,968	42,390	0	44,358	59,829	5,466	143,446	16,629	225,369	181,011	625,354
2037	0	287	11,983	0	12,270	61,107	5,340	147,773	17,942	232,161	219,891	645,626
2038	0	281	11,993	0	12,274	59,374	5,229	154,004	19,307	237,914	225,640	664,730
2039	0	0	0	0	0	58,342	5,126	158,789	20,679	242,936	242,936	683,620
2040	0	673	29,144	0	29,817	60,871	5,027	163,675	22,240	251,813	221,996	699,473
2041	0	1,048	44,737	0	45,784	60,278	4,931	169,918	23,880	259,007	213,223	713,456
2042	0	996	46,074	0	47,069	59,221	4,836	176,362	27,867	268,286	221,217	726,780
2043	0	1,080	50,379	0	51,459	59,402	4,741	186,048	32,186	282,378	230,919	739,553
	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	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	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	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	0	0	0	0	0	0	0	0
NOM	0	31,586	1,101,411	0	1,132,997	1,421,078	210,396	3,556,844	375,151	5,563,468	4,430,471	
NPV	0	10,859	346,885	0	356,944	256,464	59,768	716,784	63,481	1,096,497	739,553	

Discount Rate: 8.89 %  
 Benefit/Cost Ratio (Col(11) / Col(5)) : 3.07

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**BUSINESS ON CALL**

INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Refrigeration

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.98 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.31 kW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KWH REDUCTION PER CUSTOMER .....	9,508.68 kWh
(5) KWH LINE LOSS PERCENTAGE .....	6.50 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KWH INCREASE AT METER .....	0.00 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
* (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
* (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
- (10) UTILITY DISCOUNT RATE .....	8.89 %
- (11) UTILITY AFUDC RATE .....	8.48 %
* (12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
* (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
- (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2010-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN. TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh*** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2



CALCULATION OF GENK-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Business Refrigeration

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
BEG-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH EDGED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	11,097	344	0	774	510	187	66	433	1	2,315	2,315	10,813
2020	10,654	331	0	744	351	179	68	433	142	2,246	2,063	11,083
2021	10,080	313	0	703	348	171	69	433	120	2,157	1,819	11,360
2022	9,528	296	0	665	344	163	71	433	99	2,071	1,604	11,644
2023	8,996	279	0	628	339	156	73	433	80	1,988	1,414	11,935
2024	8,483	264	0	592	334	148	75	433	63	1,908	1,246	12,234
2025	7,987	248	0	557	328	140	76	433	47	1,830	1,098	12,540
2026	7,508	233	0	524	322	132	78	433	32	1,755	967	12,853
2027	7,043	219	0	492	304	125	80	433	30	1,682	851	13,174
2028	6,581	204	0	459	284	117	82	433	30	1,609	748	13,504
2029	6,119	190	0	427	264	109	84	433	30	1,537	656	13,841
2030	5,656	176	0	395	244	101	87	433	30	1,464	574	14,187
2031	5,194	161	0	362	223	93	89	433	30	1,391	501	14,542
2032	4,732	147	0	330	203	86	91	433	30	1,319	436	14,906
2033	4,270	133	0	298	183	78	93	433	30	1,247	379	15,278
2034	3,808	118	0	266	163	70	96	433	30	1,174	327	15,660
2035	3,345	104	0	233	142	62	98	433	30	1,102	282	16,052
2036	2,883	90	0	201	122	54	100	433	30	1,030	242	16,453
2037	2,421	75	0	169	102	47	103	433	30	958	207	16,864
2038	1,959	61	0	137	82	39	105	433	30	886	176	17,286
2039	1,497	46	0	104	152	31	108	433	(61)	814	148	17,718
2040	1,125	35	0	79	226	23	111	433	(151)	755	126	18,151
2041	844	26	0	59	214	16	114	433	(151)	709	109	18,588
2042	562	17	0	39	201	8	116	433	(151)	663	94	19,080
2043	281	9	0	20	189	0	118	433	(151)	618	80	19,557

IN SERVICE COST (\$000)	10,813
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST	
DEBT	44%	7.63	%
P/S	0%	0.00	%
C/S	56%	12.50	%

K-FACTOR = GPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Refrigeration

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	394	394	433	433	392	392	1	1,009	0	0	0	1	(274)
2020	7.22%	759	1,153	433	865	392	784	142	1,009	0	0	0	142	(132)
2021	6.68%	702	1,855	433	1,298	392	1,176	120	1,009	0	0	0	120	(12)
2022	6.18%	650	2,505	433	1,730	392	1,569	99	1,009	0	0	0	99	87
2023	5.71%	601	3,106	433	2,163	392	1,961	80	1,009	0	0	0	80	167
2024	5.29%	556	3,662	433	2,595	392	2,353	63	1,009	0	0	0	63	230
2025	4.89%	514	4,176	433	3,028	392	2,745	47	1,009	0	0	0	47	277
2026	4.52%	475	4,651	433	3,460	392	3,137	32	1,009	0	0	0	32	310
2027	4.46%	469	5,120	433	3,893	392	3,529	30	1,009	0	0	0	30	339
2028	4.46%	469	5,589	433	4,325	392	3,921	30	1,009	0	0	0	30	369
2029	4.46%	469	6,059	433	4,758	392	4,314	30	1,009	0	0	0	30	399
2030	4.46%	469	6,528	433	5,190	392	4,706	30	1,009	0	0	0	30	428
2031	4.46%	469	6,997	433	5,623	392	5,098	30	1,009	0	0	0	30	458
2032	4.46%	469	7,466	433	6,055	392	5,490	30	1,009	0	0	0	30	488
2033	4.46%	469	7,935	433	6,488	392	5,882	30	1,009	0	0	0	30	518
2034	4.46%	469	8,404	433	6,920	392	6,274	30	1,009	0	0	0	30	547
2035	4.46%	469	8,873	433	7,353	392	6,666	30	1,009	0	0	0	30	577
2036	4.46%	469	9,342	433	7,785	392	7,059	30	1,009	0	0	0	30	607
2037	4.46%	469	9,812	433	8,218	392	7,451	30	1,009	0	0	0	30	636
2038	4.46%	469	10,281	433	8,650	392	7,843	30	1,009	0	0	0	30	666
2039	2.23%	235	10,515	433	9,083	392	8,235	(61)	1,009	0	0	0	(61)	605
2040	0.00%	0	10,515	433	9,515	392	8,627	(151)	1,009	0	0	0	(151)	454
2041	0.00%	0	10,515	433	9,948	392	9,019	(151)	1,009	0	0	0	(151)	303
2042	0.00%	0	10,515	433	10,380	392	9,411	(151)	1,009	0	0	0	(151)	151
2043	0.00%	0	10,515	433	10,813	392	9,804	(151)	1,009	0	0	0	(151)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(274)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	1,009
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: KEY\_REQ  
 PROGRAM NAME: Business Refrigeration

(1)	(2)	(3)	(4)	(5) END OF YEAR NET PLANT IN SERVICE	(5a)* ACCUMULATED DEPRECIATION	(5b)* ACCUMULATED DEF TAXES	(6) BEGINNING YEAR RATE BASE	(7) ENDING OF YEAR RATE BASE	(8) MID-YEAR RATE BASE
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2019	3.75%	394	1	10,380	433	(274)	11,087	10,654	10,871
2020	7.22%	759	142	9,948	865	(132)	10,654	10,080	10,367
2021	6.68%	702	120	9,515	1,298	(12)	10,080	9,528	9,804
2022	6.18%	650	99	9,083	1,730	87	9,528	8,996	9,262
2023	5.71%	601	80	8,650	2,163	167	8,996	8,483	8,739
2024	5.29%	556	63	8,218	2,595	230	8,483	7,987	8,235
2025	4.89%	514	47	7,785	3,028	277	7,987	7,508	7,747
2026	4.52%	475	32	7,353	3,460	310	7,508	7,043	7,275
2027	4.46%	469	30	6,920	3,893	339	7,043	6,581	6,812
2028	4.46%	469	30	6,488	4,325	369	6,581	6,119	6,350
2029	4.46%	469	30	6,055	4,758	399	6,119	5,656	5,888
2030	4.46%	469	30	5,623	5,190	428	5,656	5,194	5,425
2031	4.46%	469	30	5,190	5,623	456	5,194	4,732	4,963
2032	4.46%	469	30	4,758	6,055	488	4,732	4,270	4,501
2033	4.46%	469	30	4,325	6,488	518	4,270	3,808	4,039
2034	4.46%	469	30	3,893	6,920	547	3,808	3,345	3,577
2035	4.46%	469	30	3,460	7,353	577	3,345	2,883	3,114
2036	4.46%	469	30	3,028	7,785	607	2,883	2,421	2,652
2037	4.46%	469	30	2,595	8,218	636	2,421	1,959	2,190
2038	4.46%	469	30	2,163	8,650	666	1,959	1,497	1,728
2039	2.23%	235	(61)	1,730	9,083	605	1,497	1,125	1,311
2040	0.00%	0	(151)	1,298	9,515	454	1,125	844	984
2041	0.00%	0	(152)	865	9,948	303	844	562	703
2042	0.00%	0	(151)	433	10,380	151	562	281	422
2043	0.00%	0	(151)	0	10,813	0	281	0	141

\* Column not specified in workbook

300

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.59	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.236	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00%      907.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.5
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAXBASIS
CONSTRUCTION CASE	9,220	9,220	9,220
EQUITY AFUDC	1,009		
DEBT AFUDC	584	584	
CPI			1,295
TOTAL	10,813	9,804	10,515

\* Column not specified in workbook



INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Refrigeration

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (C/KWh)	AVOIDED MARGINAL FUEL COST (C/KWh)	INCREASED MARGINAL FUEL COST (C/KWh)	REPLACEMENT FUEL COST (C/KWh)	PROGRAM KW EFFECTIVENESS FACTOR	PROGRAM KWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	535	535	6.41	6.41	16.51	0.00	1.00	1.00
2011	1,774	1,774	6.35	6.35	10.38	0.00	1.00	1.00
2012	2,701	2,701	6.43	6.43	13.34	0.00	1.00	1.00
2013	3,666	3,666	7.06	7.06	9.99	0.00	1.00	1.00
2014	4,572	4,572	7.53	7.53	10.61	0.00	1.00	1.00
2015	5,377	5,377	8.11	8.11	13.20	0.00	1.00	1.00
2016	6,158	6,158	9.00	9.00	13.90	0.00	1.00	1.00
2017	6,962	6,962	9.75	9.75	15.09	0.00	1.00	1.00
2018	7,771	7,771	10.52	10.52	15.46	0.00	1.00	1.00
2019	7,771	7,771	11.50	11.50	21.44	10.41	1.00	1.00
2020	7,771	7,771	12.08	12.08	20.17	10.50	1.00	1.00
2021	7,771	7,771	12.57	12.57	21.76	10.74	1.00	1.00
2022	7,771	7,771	13.06	13.06	23.66	10.81	1.00	1.00
2023	7,771	7,771	13.39	13.39	20.91	10.80	1.00	1.00
2024	7,771	7,771	13.95	13.95	22.19	10.84	1.00	1.00
2025	7,771	7,771	14.40	14.40	22.20	10.96	1.00	1.00
2026	7,771	7,771	14.70	14.70	22.41	11.05	1.00	1.00
2027	7,771	7,771	15.13	15.13	23.05	11.17	1.00	1.00
2028	7,771	7,771	15.60	15.60	23.70	11.36	1.00	1.00
2029	7,771	7,771	16.02	16.02	22.95	11.41	1.00	1.00
2030	7,771	7,771	16.52	16.52	23.78	11.59	1.00	1.00
2031	7,771	7,771	17.08	17.08	24.53	11.80	1.00	1.00
2032	7,771	7,771	17.50	17.50	24.55	11.88	1.00	1.00
2033	7,771	7,771	18.27	18.27	25.51	12.10	1.00	1.00
2034	7,771	7,771	18.73	18.73	25.89	12.14	1.00	1.00
2035	7,771	7,771	19.57	19.57	27.04	12.29	1.00	1.00
2036	7,771	7,771	20.40	20.40	28.26	12.55	1.00	1.00
2037	7,771	7,771	21.11	21.11	29.22	12.70	1.00	1.00
2038	7,771	7,771	22.02	22.02	30.23	13.04	1.00	1.00
2039	7,771	7,771	22.78	22.78	31.29	13.32	1.00	1.00
2040	7,771	7,771	23.59	23.59	32.02	13.44	1.00	1.00
2041	7,771	7,771	24.54	24.54	33.28	13.75	1.00	1.00
2042	7,771	7,771	25.50	25.50	34.66	14.10	1.00	1.00
2043	7,771	7,771	26.74	26.74	36.49	14.40	1.00	1.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Refrigeration

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	2,315	1,270	54	3,233	4,091	2,781
2020	2,246	1,301	77	4,764	5,804	2,585
2021	2,157	1,334	81	4,970	6,061	2,480
2022	2,071	1,367	86	5,261	6,319	2,465
2023	1,988	1,401	91	5,531	6,501	2,510
2024	1,908	1,437	96	5,842	6,745	2,538
2025	1,830	1,472	103	6,242	7,115	2,533
2026	1,755	1,509	110	6,671	7,495	2,550
2027	1,682	1,547	116	7,041	7,816	2,571
2028	1,609	1,586	120	7,228	7,984	2,559
2029	1,537	1,625	125	7,533	8,194	2,626
2030	1,464	1,666	132	7,885	8,521	2,625
2031	1,391	1,708	135	8,048	8,676	2,605
2032	1,319	1,750	140	8,332	8,854	2,687
2033	1,247	1,794	154	9,168	9,682	2,681
2034	1,174	1,839	161	9,542	9,912	2,805
2035	1,102	1,885	166	9,760	10,065	2,848
2036	1,030	1,932	171	10,051	10,363	2,821
2037	958	1,980	176	10,279	10,512	2,881
2038	886	2,030	181	10,336	10,833	2,860
2039	814	2,080	186	10,753	11,082	2,751
2040	755	2,133	191	11,000	11,208	2,870
2041	709	2,186	196	11,242	11,430	2,842
2042	663	2,240	201	11,498	11,810	2,792
2043	618	2,296	207	11,793	12,114	2,801
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	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	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
NOM	33,226	43,369	3,453	204,203	219,246	67,006
NPV	7,880	7,200	522	31,253	34,762	12,093





TOTAL RESOURCE COST TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Refrigeration

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) PARTICIPANT PROGRAM COSTS \$(000)	(5) OTHER COSTS \$(000)	(6) TOTAL COSTS \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)	(8) AVOIDED T&D BENEFITS \$(000)	(9) PROGRAM FUEL SAVINGS \$(000)	(10) OTHER BENEFITS \$(000)	(11) TOTAL BENEFITS \$(000)	(12) NET BENEFITS \$(000)	(13) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	(0)	(0)
2010	0	58	1,191	0	1,249	0	0	163	1	164	(1,085)	(997)
2011	0	163	2,788	0	2,951	0	31	697	2	730	(2,222)	(2,871)
2012	0	144	2,072	0	2,217	0	104	1,369	3	1,476	(740)	(3,444)
2013	0	158	2,199	0	2,357	0	162	2,138	217	2,517	161	(3,330)
2014	0	152	2,117	0	2,269	0	218	2,948	312	3,478	1,209	(2,540)
2015	0	138	1,908	0	2,046	0	271	3,838	416	4,525	2,479	(1,052)
2016	0	147	1,964	0	2,111	0	317	4,936	536	5,789	3,678	974
2017	0	155	2,079	0	2,235	0	362	6,084	669	7,114	4,880	3,444
2018	0	161	2,158	0	2,319	0	469	7,369	817	8,595	6,276	6,361
2019	0	0	0	0	0	2,781	453	8,501	820	12,554	12,554	11,719
2020	0	18	250	0	268	2,585	440	8,927	842	12,794	12,326	16,629
2021	0	59	577	0	1,036	2,480	427	9,285	905	13,097	12,061	20,971
2022	0	83	1,365	0	1,389	2,465	415	9,650	1,012	13,542	12,153	24,989
2023	0	110	1,655	0	1,765	2,510	403	9,897	1,074	13,894	12,119	28,668
2024	0	94	1,461	0	1,555	2,538	391	10,307	1,188	14,424	12,868	32,257
2025	0	118	2,375	0	2,493	2,533	379	10,639	1,302	14,853	12,361	35,422
2026	0	152	3,101	0	3,252	2,550	368	10,864	1,370	15,153	11,901	38,221
2027	0	170	2,556	0	2,727	2,571	357	11,180	1,488	15,596	12,869	41,001
2028	0	180	2,590	0	2,770	2,559	345	11,525	1,624	16,053	13,283	43,635
2029	0	149	1,317	0	1,977	2,626	334	11,840	1,811	15,611	14,644	46,303
2030	0	185	2,283	0	2,467	2,625	323	12,207	1,947	17,102	14,635	48,752
2031	0	186	2,514	0	2,700	2,605	312	12,618	2,117	17,653	14,953	51,049
2032	0	210	2,845	0	3,055	2,687	301	12,935	2,294	18,217	15,162	53,189
2033	0	228	3,122	0	3,351	2,681	291	13,504	2,440	18,916	15,565	55,206
2034	0	225	3,066	0	3,292	2,805	282	13,840	2,630	19,558	16,266	57,142
2035	0	78	1,299	0	1,376	2,848	274	14,463	2,847	20,431	19,055	59,225
2036	0	95	1,560	0	1,655	2,821	266	15,071	3,074	21,232	19,577	61,190
2037	0	105	1,699	0	1,804	2,881	259	15,602	3,322	22,065	20,261	63,058
2038	0	113	1,817	0	1,930	2,900	253	16,270	3,583	22,906	20,976	64,834
2039	0	63	711	0	774	2,751	248	16,834	3,865	23,697	22,923	66,616
2040	0	169	3,018	0	3,186	2,870	243	17,435	4,162	24,711	21,524	68,153
2041	0	268	5,001	0	5,270	2,842	238	18,131	4,474	25,685	20,415	69,492
2042	0	208	3,263	0	3,471	2,792	234	18,846	4,912	26,784	23,313	70,896
2043	0	243	3,624	0	3,867	2,801	229	19,756	5,386	28,172	24,305	72,241
2044	0	0	0	0	0	0	0	0	0	0	0	0
2045	0	0	0	0	0	0	0	0	0	0	0	0
2046	0	0	0	0	0	0	0	0	0	0	0	0
2047	0	0	0	0	0	0	0	0	0	0	0	0
2048	0	0	0	0	0	0	0	0	0	0	0	0
2049	0	0	0	0	0	0	0	0	0	0	0	0
2050	0	0	0	0	0	0	0	0	0	0	0	0
2051	0	0	0	0	0	0	0	0	0	0	0	0
2052	0	0	0	0	0	0	0	0	0	0	0	0
2053	0	0	0	0	0	0	0	0	0	0	0	0
2054	0	0	0	0	0	0	0	0	0	0	0	0
2055	0	0	0	0	0	0	0	0	0	0	0	0
2056	0	0	0	0	0	0	0	0	0	0	0	0
2057	0	0	0	0	0	0	0	0	0	0	0	0
2058	0	0	0	0	0	0	0	0	0	0	0	0
2059	0	0	0	0	0	0	0	0	0	0	0	0
2060	0	0	0	0	0	0	0	0	0	0	0	0
2061	0	0	0	0	0	0	0	0	0	0	0	0
2062	0	0	0	0	0	0	0	0	0	0	0	0
2063	0	0	0	0	0	0	0	0	0	0	0	0
2064	0	0	0	0	0	0	0	0	0	0	0	0
2065	0	0	0	0	0	0	0	0	0	0	0	0
2066	0	0	0	0	0	0	0	0	0	0	0	0
2067	0	0	0	0	0	0	0	0	0	0	0	0
2068	0	0	0	0	0	0	0	0	0	0	0	0
2069	0	0	0	0	0	0	0	0	0	0	0	0
2070	0	0	0	0	0	0	0	0	0	0	0	0
NOM	0	4,788	72,384	0	77,171	67,006	9,939	359,669	63,462	500,077	422,905	
NPV	0	1,356	20,349	0	21,706	12,093	2,750	69,532	9,572	93,946	72,241	

Discount Rate: 8.89 %  
 Benefit/Cost Ratio (Col(11) / Col(6)) : 4.33

PARTICIPANT COSTS AND BENEFITS
PROGRAM METHOD SELECTED: REV\_REQ
PROGRAM NAME: Business Refrigeration

Table with 12 columns: (1) YEAR, (2) SAVINGS IN PARTICIPANTS BILLS \$(000), (3) TAX CREDITS \$(000), (4) UTILITY REBATES \$(000), (5) OTHER BENEFITS \$(000), (6) TOTAL BENEFITS \$(000), (7) CUSTOMER EQUIPMENT COSTS \$(000), (8) CUSTOMER O&M COSTS \$(000), (9) OTHER COSTS \$(000), (10) TOTAL COSTS \$(000), (11) NET BENEFITS \$(000), (12) CUMULATIVE DISCOUNTED NET BENEFITS \$(000). Rows include years 2009-2043 and summary rows for NORM and NPV.

In Service of Gen Unit: 2019
Discount Rate: 3.89 %
Benefit/Cost Ratio (Col(6) / Col(10)): 4.81

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RATE IMPACT TEST  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Refrigeration

(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)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	(0)	(0)
2010	0	58	391	171	0	620	163	0	0	1	164	(456)	(419)
2011	0	163	842	782	0	1,787	697	31	0	2	730	(1,057)	(1,311)
2012	0	144	551	1,622	0	2,317	1,369	104	0	3	1,476	(841)	(1,962)
2013	0	158	562	2,492	0	3,212	2,138	162	0	217	2,517	(695)	(2,456)
2014	0	152	451	3,503	0	4,106	2,948	218	0	312	3,478	(628)	(2,867)
2015	0	138	356	4,540	0	5,034	3,838	271	0	416	4,525	(508)	(3,172)
2016	0	147	346	5,586	0	6,079	4,836	317	0	536	5,789	(290)	(3,331)
2017	0	155	359	6,701	0	7,215	6,084	362	0	669	7,114	(101)	(3,382)
2018	0	161	366	7,823	0	8,350	7,369	409	0	817	8,595	245	(3,269)
2019	0	0	0	8,672	0	8,672	11,281	453	0	820	12,554	3,882	(1,612)
2020	0	18	83	8,707	0	8,808	11,512	440	0	842	12,794	3,986	(49)
2021	0	59	269	8,959	0	9,287	11,765	427	0	905	13,097	3,810	1,322
2022	0	83	331	9,332	0	9,746	12,115	415	0	1,012	13,542	3,795	2,577
2023	0	110	382	9,688	0	10,180	12,407	403	0	1,074	13,884	3,703	3,702
2024	0	94	259	10,226	0	10,579	12,845	391	0	1,188	14,424	3,845	4,774
2025	0	118	448	10,727	0	11,293	13,172	379	0	1,302	14,853	3,561	5,686
2026	0	152	630	11,251	0	12,033	13,414	368	0	1,370	15,153	3,120	6,419
2027	0	170	383	11,974	0	12,527	13,751	357	0	1,488	15,596	3,068	7,082
2028	0	180	364	12,555	0	13,089	14,084	345	0	1,624	16,033	2,954	7,668
2029	0	149	221	13,237	0	13,607	14,466	334	0	1,811	16,611	3,004	8,215
2030	0	185	316	14,010	0	14,511	14,832	323	0	1,947	17,102	2,591	8,649
2031	0	186	415	14,774	0	15,375	15,224	312	0	2,117	17,653	2,278	8,999
2032	0	210	471	15,777	0	16,458	15,622	301	0	2,294	18,217	1,759	9,247
2033	0	228	509	17,376	0	18,113	16,184	291	0	2,440	18,916	803	9,351
2034	0	226	399	17,718	0	18,342	16,645	282	0	2,630	19,558	1,215	9,496
2035	0	78	147	18,606	0	18,831	17,311	274	0	2,847	20,431	1,600	9,671
2036	0	95	182	20,131	0	20,408	17,892	266	0	3,074	21,232	824	9,753
2037	0	105	192	21,312	0	21,609	18,484	259	0	3,322	22,065	455	9,795
2038	0	113	200	22,378	0	22,691	19,070	253	0	3,583	22,986	215	9,813
2039	0	63	45	23,546	0	23,654	19,585	248	0	3,865	23,697	43	9,817
2040	0	169	423	24,792	0	25,383	20,305	243	0	4,162	24,711	(673)	9,769
2041	0	268	758	26,269	0	27,295	20,973	238	0	4,474	25,685	(1,610)	9,663
2042	0	208	450	27,846	0	28,504	21,639	234	0	4,912	26,784	(1,720)	9,500
2043	0	243	497	29,531	0	30,271	22,557	229	0	5,386	28,172	(2,099)	9,443
	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	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	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	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	
NOM	0	4,788	12,597	442,614	0	459,999	426,676	9,939	0	63,462	500,677	40,078	
NPV	0	1,356	4,335	78,811	0	84,503	81,625	2,750	0	9,572	93,946	9,443	

Discount Rate 8.89 %  
Benefit/Cost Ratio (Col(12) / Col(7)): 1.11

**COMERCIAL/INDUSTRIAL DEMAND REDUCTION**



INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Building Envelope Program

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER kW REDUCTION AT METER .....	0.86 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	1.15 kW
(3) kW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KVA REDUCTION PER CUSTOMER .....	2,135.08 kWh
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	0.05 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
* (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
* (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
^ (10) UTILITY DISCOUNT RATE .....	5.89 %
v (11) UTILITY AFUDC RATE .....	3.48 %
v (12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
v (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	26.64 \$/kW
(7) GEN. TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

\* INPUT DATA -- PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Building Envelope Program

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2009	0	0	0	0	0	0	0	0	0	
2010	258	7,707	0	7,964	489	208	13,923	0	13,923	
2011	698	20,591	0	21,289	2,267	1,019	38,370	0	38,370	
2012	831	24,171	0	25,003	5,211	2,428	46,268	0	46,268	
2013	925	26,538	0	27,463	8,891	4,096	52,105	0	52,105	
2014	922	26,024	0	26,946	13,099	6,068	52,477	0	52,477	
2015	922	25,707	0	26,630	17,462	8,172	53,288	0	53,288	
2016	649	17,867	0	18,516	21,363	9,701	37,869	0	37,869	
2017	639	17,216	0	17,855	24,830	11,343	37,397	0	37,397	
2018	334	8,633	0	8,967	27,638	12,273	19,216	0	19,216	
2019	0	0	0	0	29,771	12,360	0	0	0	
2020	21	418	0	440	29,967	12,088	980	0	980	
2021	37	557	0	594	30,928	11,884	1,494	0	1,494	
2022	38	561	0	599	32,282	11,758	1,544	0	1,544	
2023	42	713	0	755	33,555	11,853	1,856	0	1,856	
2024	17	261	0	278	35,472	11,949	701	0	701	
2025	303	6,896	0	7,199	37,341	11,620	18,030	0	18,030	
2026	863	19,146	0	20,009	39,231	11,660	51,506	0	51,506	
2027	1,048	22,686	0	23,734	41,818	11,763	62,730	0	62,730	
2028	1,181	24,924	0	26,105	43,891	11,891	70,840	0	70,840	
2029	1,210	24,924	0	26,134	46,333	11,969	72,807	0	72,807	
2030	1,326	25,858	0	27,183	49,097	12,084	77,611	0	77,611	
2031	1,064	19,042	0	20,106	51,832	12,162	58,568	0	58,568	
2032	1,064	18,476	0	19,540	55,412	12,399	58,249	0	58,249	
2033	632	10,057	0	10,689	61,111	12,821	32,410	0	32,410	
2034	142	1,100	0	1,241	62,318	13,018	3,616	0	3,616	
2035	101	661	0	762	65,534	12,765	2,241	0	2,241	
2036	49	269	0	318	70,993	12,946	993	0	993	
2037	42	225	0	267	75,201	13,267	853	0	853	
2038	37	190	0	226	79,025	13,310	737	0	737	
2039	0	0	0	0	83,213	13,369	0	0	0	
2040	474	7,314	0	7,788	87,683	13,417	27,719	0	27,719	
2041	1,310	19,703	0	21,013	92,981	13,486	77,043	0	77,043	
2042	1,581	23,247	0	24,827	98,639	13,555	93,382	0	93,382	
2043	1,779	25,637	0	27,416	104,682	13,624	105,639	0	105,639	
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	0	0	0	0	0	0	
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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	
NOM	20,541	427,318	0	447,859	1,559,501	368,301	1,172,460	0	1,172,460	
NPV	6,104	154,596	0	160,700	279,020	87,750	346,640	0	346,640	

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\*\* NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR IRC AND RIM TESTS

CALCULATION OF GENK-FACTOR  
 PROGRAM/METHOD SELECTED REV. REQ  
 PROGRAM/NAME: Business Building Envelope Program

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
BEG-YEAR	BEG-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	156,044	4,847	0	10,890	7,134	2,630	928	6,087	12	32,578	32,578	32,578	152,182
2020	149,945	4,658	0	10,464	4,936	2,520	952	6,087	1,992	31,610	29,030	61,608	155,987
2021	141,866	4,407	0	9,900	4,892	2,411	975	6,087	1,683	30,355	25,602	87,210	159,886
2022	134,096	4,166	0	9,358	4,835	2,301	1,000	6,087	1,399	29,146	22,576	109,786	163,384
2023	126,609	3,933	0	8,836	4,773	2,191	1,025	6,087	1,132	27,978	19,903	129,689	167,981
2024	119,390	3,709	0	8,332	4,701	2,082	1,050	6,087	888	26,849	17,541	147,230	172,180
2025	112,414	3,492	0	7,845	4,622	1,972	1,077	6,087	661	25,757	15,454	162,684	176,485
2026	105,666	3,282	0	7,374	4,535	1,863	1,103	6,087	452	24,698	13,609	176,293	180,897
2027	99,126	3,079	0	6,918	4,283	1,753	1,131	6,087	418	23,670	11,978	188,271	185,419
2028	92,620	2,877	0	6,464	3,998	1,644	1,159	6,087	418	22,647	10,525	198,796	190,055
2029	86,116	2,675	0	6,010	3,713	1,534	1,188	6,087	418	21,625	9,230	208,027	194,806
2030	79,610	2,473	0	5,556	3,428	1,424	1,218	6,087	418	20,604	8,077	216,103	199,676
2031	73,105	2,271	0	5,102	3,143	1,315	1,248	6,087	418	19,584	7,050	223,153	204,668
2032	66,600	2,069	0	4,648	2,858	1,205	1,280	6,087	418	18,565	6,138	229,291	209,785
2033	60,095	1,867	0	4,194	2,572	1,096	1,312	6,087	418	17,546	5,327	234,619	215,029
2034	53,589	1,665	0	3,740	2,288	986	1,344	6,087	418	16,528	4,609	239,227	220,405
2035	47,084	1,463	0	3,286	2,002	877	1,378	6,087	418	15,511	3,972	243,199	225,915
2036	40,579	1,261	0	2,832	1,718	767	1,413	6,087	418	14,495	3,409	246,608	231,563
2037	34,074	1,058	0	2,378	1,432	657	1,448	6,087	418	13,479	2,911	249,520	237,352
2038	27,568	856	0	1,924	1,147	548	1,484	6,087	418	12,465	2,473	251,992	243,286
2039	21,063	654	0	1,470	2,135	438	1,521	6,087	(855)	11,451	2,086	254,078	249,368
2040	15,831	492	0	1,105	3,180	329	1,559	6,087	(2,129)	10,622	1,777	255,856	255,602
2041	11,873	369	0	829	3,006	219	1,598	6,087	(2,129)	9,979	1,533	257,389	261,992
2042	7,915	246	0	552	2,833	110	1,638	6,087	(2,129)	9,337	1,318	258,707	268,542
2043	3,957	123	0	276	2,659	0	1,679	6,087	(2,129)	8,696	1,127	259,833	275,256

IN SERVICE COST (\$000)	152,182
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST	
DEBT	44%	7.03	%
P/S	0%	0.00	%
C/S	56%	12.50	%

K-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAMNAME: Business Bulldog Envelope Program

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAXRATE \$(000)	SALVAGE TAXRATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	5,550	5,550	6,087	6,087	5,519	5,519	12	14,205	0	0	0	12	(3,850)
2020	7.22%	10,683	16,233	6,087	12,175	5,519	11,038	1,992	14,205	0	0	0	1,992	(1,858)
2021	6.68%	9,881	26,114	6,087	18,262	5,519	16,557	1,683	14,205	0	0	0	1,683	(175)
2022	6.18%	9,146	35,260	6,087	24,349	5,519	22,076	1,399	14,205	0	0	0	1,399	1,224
2023	5.71%	8,455	43,714	6,087	30,436	5,519	27,596	1,132	14,205	0	0	0	1,132	2,356
2024	5.29%	7,821	51,536	6,087	36,524	5,519	33,115	888	14,205	0	0	0	888	3,244
2025	4.89%	7,234	58,769	6,087	42,611	5,519	38,634	661	14,205	0	0	0	661	3,905
2026	4.52%	6,692	65,461	6,087	48,698	5,519	44,153	452	14,205	0	0	0	452	4,358
2027	4.46%	6,603	72,065	6,087	54,786	5,519	49,672	418	14,205	0	0	0	418	4,776
2028	4.46%	6,602	78,666	6,087	60,873	5,519	55,191	418	14,205	0	0	0	418	5,194
2029	4.46%	6,603	85,270	6,087	66,960	5,519	60,710	418	14,205	0	0	0	418	5,612
2030	4.46%	6,602	91,871	6,087	73,047	5,519	66,229	418	14,205	0	0	0	418	6,030
2031	4.46%	6,603	98,475	6,087	79,135	5,519	71,748	418	14,205	0	0	0	418	6,448
2032	4.46%	6,602	105,076	6,087	85,222	5,519	77,267	418	14,205	0	0	0	418	6,865
2033	4.46%	6,603	111,680	6,087	91,309	5,519	82,787	418	14,205	0	0	0	418	7,284
2034	4.46%	6,602	118,282	6,087	97,397	5,519	88,306	418	14,205	0	0	0	418	7,701
2035	4.46%	6,603	124,885	6,087	103,484	5,519	93,825	418	14,205	0	0	0	418	8,120
2036	4.46%	6,602	131,487	6,087	109,571	5,519	99,344	418	14,205	0	0	0	418	8,537
2037	4.46%	6,603	138,090	6,087	115,658	5,519	104,863	418	14,205	0	0	0	418	8,955
2038	4.46%	6,602	144,692	6,087	121,746	5,519	110,382	418	14,205	0	0	0	418	9,373
2039	2.23%	3,302	147,993	6,087	127,833	5,519	115,901	(855)	14,205	0	0	0	(855)	8,518
2040	0.00%	0	147,993	6,087	133,920	5,519	121,420	(2,129)	14,205	0	0	0	(2,129)	6,389
2041	0.00%	0	147,993	6,087	140,008	5,519	126,939	(2,129)	14,205	0	0	0	(2,129)	4,260
2042	0.00%	0	147,993	6,087	146,095	5,519	132,458	(2,129)	14,205	0	0	0	(2,129)	2,131
2043	0.00%	0	147,993	6,087	152,182	5,519	137,978	(2,129)	14,205	0	0	0	(2,129)	2

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(3,862)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	14,205
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Building Envelope Program

(1) YEAR	(2) TAX DEPRECIATION SCHEDULE	(3) TAX DEPRECIATION \$(000)	(4) DEFERRED TAX \$(000)	(5) END OF YEAR NET PLANT IN SERVICE \$(000)	(5a)* ACCUMULATED DEPRECIATION \$(000)	(5b)* ACCUMULATED DEF TAXES \$(000)	(6) BEGINNING YEAR RATE BASE \$(000)	(7) ENDING OF YEAR RATE BASE \$(000)	(8) MID-YEAR RATE BASE \$(000)
2019	3.75%	5,550	12	146,095	6,087	(3,850)	156,044	149,945	152,994
2020	7.22%	10,683	1,992	140,068	12,175	(1,858)	149,945	141,866	145,905
2021	6.68%	9,881	1,683	133,920	18,262	(175)	141,866	134,096	137,981
2022	6.18%	9,146	1,389	127,833	24,349	1,224	134,096	126,609	130,352
2023	5.71%	8,455	1,132	121,746	30,436	2,356	126,609	119,390	123,000
2024	5.29%	7,821	888	115,658	36,524	3,244	119,390	112,414	115,902
2025	4.89%	7,234	661	109,571	42,611	3,905	112,414	105,666	109,040
2026	4.52%	6,692	452	103,484	48,698	4,358	105,666	99,126	102,396
2027	4.46%	6,603	418	97,397	54,786	4,776	99,126	92,620	95,873
2028	4.46%	6,602	418	91,309	60,873	5,194	92,620	86,116	89,268
2029	4.46%	6,603	418	85,222	66,960	5,612	86,116	79,610	82,863
2030	4.46%	6,602	418	79,135	73,047	6,030	79,610	73,105	76,358
2031	4.46%	6,603	418	73,047	79,135	6,448	73,105	66,600	69,852
2032	4.46%	6,602	418	66,960	85,222	6,865	66,600	60,095	63,347
2033	4.46%	6,603	418	60,873	91,309	7,284	60,095	53,589	56,842
2034	4.46%	6,602	418	54,786	97,397	7,701	53,589	47,084	50,317
2035	4.46%	6,603	418	48,698	103,484	8,120	47,084	40,579	43,831
2036	4.46%	6,602	418	42,611	109,571	8,537	40,579	34,074	37,326
2037	4.46%	6,603	418	36,524	115,658	8,955	34,074	27,568	30,821
2038	4.46%	6,602	418	30,436	121,746	9,373	27,568	21,063	24,316
2039	2.23%	3,302	(855)	24,349	127,833	8,518	21,063	15,831	18,447
2040	0.00%	0	(2,129)	18,262	133,920	6,389	15,831	11,873	13,852
2041	0.00%	0	(2,129)	12,175	140,008	4,260	11,873	7,915	9,894
2042	0.00%	0	(2,129)	6,087	146,095	2,131	7,915	3,957	5,936
2043	0.00%	0	(2,129)	0	152,182	2	3,957	-2	1,977

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00% 907.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805.55
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	129,763	129,763	129,763
EQUITY AFUDC	14,205		
DEBT AFUDC	8,215	8,215	
CPI			18,226
TOTAL	152,182	137,978	147,989

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED : REV\_REQ  
 PROGRAM NAME: Business Building Envelope Program

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (¢/kWh)	AVOIDED MARGINAL FUEL COST (¢/kWh)	INCREASED MARGINAL FUEL COST (¢/kWh)	REPLACEMENT FUEL COST (¢/kWh)	PROGRAM KW EFFECTIVENESS FACTOR	PROGRAM kWh EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	5,710	5,710	6.41	9.01	6.70	0.00	1.00	1.00
2011	20,793	20,793	6.35	8.48	6.61	0.00	1.00	1.00
2012	36,318	36,318	6.43	8.45	6.66	0.00	1.00	1.00
2013	57,349	57,349	7.06	8.41	7.23	0.00	1.00	1.00
2014	75,849	75,849	7.53	8.67	7.68	0.00	1.00	1.00
2015	93,905	93,905	8.11	9.61	8.31	0.00	1.00	1.00
2016	106,306	106,306	9.00	11.55	9.31	0.00	1.00	1.00
2017	118,205	118,205	9.75	12.72	10.06	0.00	1.00	1.00
2018	124,282	124,282	10.52	13.53	10.86	0.00	1.00	1.00
2019	124,282	124,282	11.50	15.25	11.94	10.41	1.00	1.00
2020	124,282	124,282	12.08	15.88	12.57	10.50	1.00	1.00
2021	124,282	124,282	12.57	16.53	13.08	10.74	1.00	1.00
2022	124,282	124,282	13.06	17.14	13.59	10.81	1.00	1.00
2023	124,282	124,282	13.39	17.16	13.92	10.80	1.00	1.00
2024	124,282	124,282	13.95	17.82	14.47	10.84	1.00	1.00
2025	124,282	124,282	14.40	18.22	14.92	10.96	1.00	1.00
2026	124,282	124,282	14.70	18.32	15.19	11.05	1.00	1.00
2027	124,282	124,282	15.13	18.54	15.60	11.17	1.00	1.00
2028	124,282	124,282	15.60	18.51	16.05	11.36	1.00	1.00
2029	124,282	124,282	16.02	18.85	16.44	11.41	1.00	1.00
2030	124,282	124,282	16.52	19.26	16.92	11.59	1.00	1.00
2031	124,282	124,282	17.08	19.86	17.47	11.80	1.00	1.00
2032	124,282	124,282	17.59	19.62	17.84	11.88	1.00	1.00
2033	124,282	124,282	18.27	20.38	18.50	12.10	1.00	1.00
2034	124,282	124,282	18.73	20.08	18.86	12.14	1.00	1.00
2035	124,282	124,282	19.57	21.37	19.75	12.29	1.00	1.00
2036	124,282	124,282	20.40	22.39	20.54	12.55	1.00	1.00
2037	124,282	124,282	21.11	22.91	21.24	12.70	1.00	1.00
2038	124,282	124,282	22.02	23.86	22.16	13.04	1.00	1.00
2039	124,282	124,282	22.78	24.49	22.89	13.32	1.00	1.00
2040	124,282	124,282	23.59	25.04	23.68	13.44	1.00	1.00
2041	124,282	124,282	24.54	25.93	24.62	13.75	1.00	1.00
2042	124,282	124,282	25.50	26.84	25.59	14.10	1.00	1.00
2043	124,282	124,282	26.74	28.65	26.85	14.40	1.00	1.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Building Envelope Program

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	32,578	17,870	754	45,507	57,573	39,135
2020	31,610	18,316	1087	67,046	81,681	36,379
2021	30,355	18,774	1138	69,954	85,309	34,911
2022	29,146	19,244	1208	74,039	88,938	34,698
2023	27,978	19,725	1275	77,841	91,497	35,321
2024	26,849	20,218	1351	82,227	94,930	35,715
2025	25,757	20,723	1444	87,858	100,133	35,649
2026	24,698	21,241	1547	93,887	105,481	35,892
2027	23,670	21,772	1636	99,100	109,998	36,180
2028	22,647	22,317	1684	101,731	112,368	36,011
2029	21,625	22,875	1764	106,015	115,322	36,956
2030	20,604	23,446	1851	110,978	119,933	36,947
2031	19,584	24,033	1897	113,265	122,108	36,670
2032	18,565	24,633	1971	117,266	124,617	37,818
2033	17,546	25,249	2169	129,030	136,267	37,726
2034	16,528	25,880	2269	134,302	139,498	39,482
2035	15,511	26,527	2332	137,358	141,651	40,078
2036	14,495	27,191	2411	141,460	145,832	39,704
2037	13,479	27,870	2477	144,675	147,950	40,552
2038	12,465	28,567	2549	148,285	152,463	39,402
2039	11,451	29,281	2615	151,334	155,964	38,717
2040	10,622	30,013	2687	154,819	157,746	40,396
2041	9,979	30,764	2760	158,216	161,717	40,002
2042	9,337	31,533	2835	161,819	166,223	39,301
2043	8,696	32,321	2920	165,981	170,498	39,420
	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	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	0	0	0	0
NOM	495,774	610,384	48,629	2,873,995	3,085,721	943,061
NPV	110,902	101,339	7,343	439,865	489,254	170,195









PARTICIPANT COSTS AND BENEFITS
PROGRAM METHOD SELECTED: REV\_REQ
PROGRAM NAME: Business Building Envelope Program

Table with 12 columns: (1) YEAR, (2) SAVINGS IN PARTICIPANTS BILLS \$(000), (3) TAX CREDITS \$(000), (4) UTILITY REBATES \$(000), (5) OTHER BENEFITS \$(000), (6) TOTAL BENEFITS \$(000), (7) CUSTOMER EQUIPMENT COSTS \$(000), (8) CUSTOMER O&M COSTS \$(000), (9) OTHER COSTS \$(000), (10) TOTAL COSTS \$(000), (11) NET BENEFITS \$(000), (12) CUMULATIVE DISCOUNTED NET BENEFITS \$(000). Rows include years 2009-2043 and summary rows NOM and NPV.

In Service of Gen Unit: 2019
Discount Rate: 8.89 %
Benefit/Cost Ratio ( Col(6) / Col(10) ): 1.67

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**BUSINESS MOTORS**

INPUT DATA -- PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Motors

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.85 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.14 kW
(3) kW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KWH REDUCTION PER CUSTOMER .....	5,393.41 kWh
(5) KWH LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KWH INCREASE AT METER .....	0.00 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
° (8) INCREASED SUPPLY COSTS .....	*** \$/CUST/YR
° (9) SUPPLY COSTS ESCALATION RATES .....	*** %**
- (10) UTILITY DISCOUNT RATE .....	8.39 %
- (11) UTILITY AFUDC RATE .....	8.48 %
° (12) UTILITY NON RECURRING REBATE/INCENTIVE .....	*** \$/CUST
° (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUST
^ (14) UTILITY REBATE/INCENTIVE ESCALATION RATE .....	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2009
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.39 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.52 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.66 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	2.82 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	1.01 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.21 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.70 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
\*\* VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)  
\*\*\* PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

\* INPUT DATA - PART 1 CONTINUED  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Motors

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2009	0	0	0	0	0	0	0	0	0	
2010	0	0	0	0	0	0	0	0	0	
2011	4	5	0	9	15	4	94	0	84	
2012	4	5	0	9	46	14	90	0	90	
2013	4	6	0	10	84	25	96	0	96	
2014	4	6	0	10	128	37	102	0	102	
2015	5	6	0	11	177	51	108	0	108	
2016	5	6	0	11	232	64	113	0	113	
2017	5	6	0	11	290	80	118	0	118	
2018	5	6	0	11	351	93	122	0	122	
2019	0	0	0	0	397	98	0	0	98	
2020	0	0	0	0	401	96	0	0	96	
2021	0	0	0	0	415	94	0	0	94	
2022	0	0	0	0	435	93	0	0	93	
2023	0	0	0	0	453	94	0	0	94	
2024	0	0	0	0	481	95	0	0	95	
2025	0	0	0	0	508	92	0	0	92	
2026	5	5	0	10	535	93	121	0	121	
2027	6	5	0	11	573	93	130	0	130	
2028	6	6	0	12	603	95	139	0	139	
2029	6	6	0	12	638	95	148	0	148	
2030	7	6	0	13	678	96	156	0	156	
2031	7	6	0	13	717	97	164	0	164	
2032	7	6	0	13	769	99	171	0	171	
2033	8	6	0	14	850	102	177	0	177	
2034	0	0	0	0	867	103	0	0	867	
2035	0	0	0	0	915	101	0	0	915	
2036	0	0	0	0	994	103	0	0	994	
2037	0	0	0	0	1,054	105	0	0	1,054	
2038	0	0	0	0	1,110	106	0	0	1,110	
2039	0	0	0	0	1,171	106	0	0	1,171	
2040	0	0	0	0	1,236	107	0	0	1,236	
2041	8	5	0	13	1,312	107	176	0	176	
2042	8	5	0	13	1,395	108	189	0	189	
2043	9	6	0	14	1,482	108	201	0	201	
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	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	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	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	
NOM	112	108	0	220	21,312	2,855	2,605	0	2,605	
NPV	33	38	0	71	3,610	652	762	0	762	

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK  
 \*\* NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS



CALCULATION OF GEN K-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Business Motors

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	BEG-YEAR RATE BASE \$ (000)	DEBT \$ (000)	PREFERRED STOCK \$ (000)	COMMON EQUITY \$ (000)	INCOME TAXES \$ (000)	PROPERTY TAX \$ (000)	PROPERTY INSURANCE \$ (000)	DEPREC. \$ (000)	DEFERRED TAXES \$ (000)	TOTAL FIXED CHARGES \$ (000)	PRESENT WORTH EDGED CHARGES \$ (000)	CUMULATIVE PW FIXED CHARGES \$ (000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$ (000)
2019	892	28	0	62	41	15	5	35	0	186	186	186	870
2020	858	27	0	60	28	14	5	35	11	181	166	352	892
2021	811	25	0	57	28	14	6	35	10	174	146	499	914
2022	767	24	0	54	28	13	6	35	8	167	129	628	937
2023	724	22	0	51	27	13	6	35	6	160	114	742	961
2024	683	21	0	48	27	12	6	35	5	154	100	842	985
2025	643	20	0	45	26	11	6	35	4	147	88	930	1,009
2026	604	19	0	42	26	11	6	35	3	141	78	1,008	1,035
2027	567	18	0	40	24	10	6	35	2	135	69	1,077	1,060
2028	530	16	0	37	23	9	7	35	2	130	60	1,137	1,087
2029	492	15	0	34	21	9	7	35	2	124	53	1,190	1,114
2030	455	14	0	32	20	8	7	35	2	118	46	1,236	1,142
2031	418	13	0	29	18	8	7	35	2	112	40	1,276	1,170
2032	381	12	0	27	16	7	7	35	2	106	35	1,311	1,200
2033	344	11	0	24	15	6	8	35	2	100	30	1,342	1,230
2034	306	10	0	21	13	6	8	35	2	95	26	1,368	1,260
2035	269	8	0	19	11	5	8	35	2	89	23	1,391	1,292
2036	232	7	0	16	10	4	8	35	2	83	19	1,410	1,324
2037	195	6	0	14	8	4	8	35	2	77	17	1,427	1,357
2038	158	5	0	11	7	3	8	35	2	71	14	1,441	1,391
2039	120	4	0	8	12	3	9	35	(5)	65	12	1,453	1,426
2040	91	3	0	6	18	2	9	35	(12)	61	10	1,463	1,462
2041	68	2	0	5	17	1	9	35	(12)	57	9	1,472	1,498
2042	45	1	0	3	16	1	9	35	(12)	53	8	1,479	1,536
2043	23	1	0	2	15	(0)	10	35	(12)	50	6	1,486	1,574

IN SERVICE COST (\$000)	870
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.5%
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST	
DEBT	44%	7.03	%
P/S	0%	0.00	%
C/S	56%	12.50	%

K-FACTOR = CPWFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Motors

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	32	32	35	35	32	32	0	81	0	0	0	0	(22)
2020	7.22%	61	93	35	70	32	63	11	81	0	0	0	11	(11)
2021	6.68%	57	149	35	104	32	95	10	81	0	0	0	10	(1)
2022	6.18%	52	202	35	139	32	126	8	81	0	0	0	8	7
2023	5.71%	48	250	35	174	32	158	6	81	0	0	0	6	13
2024	5.29%	45	295	35	209	32	189	5	81	0	0	0	5	18
2025	4.89%	41	336	35	244	32	221	4	81	0	0	0	4	22
2026	4.52%	38	374	35	278	32	253	3	81	0	0	0	3	25
2027	4.46%	38	412	35	313	32	284	2	81	0	0	0	2	27
2028	4.46%	38	450	35	348	32	316	2	81	0	0	0	2	30
2029	4.46%	38	488	35	383	32	347	2	81	0	0	0	2	32
2030	4.46%	38	526	35	418	32	379	2	81	0	0	0	2	34
2031	4.46%	38	563	35	453	32	410	2	81	0	0	0	2	37
2032	4.46%	38	601	35	487	32	442	2	81	0	0	0	2	39
2033	4.46%	38	639	35	522	32	473	2	81	0	0	0	2	42
2034	4.46%	38	676	35	557	32	505	2	81	0	0	0	2	44
2035	4.46%	38	714	35	592	32	537	2	81	0	0	0	2	46
2036	4.46%	38	752	35	627	32	568	2	81	0	0	0	2	49
2037	4.46%	38	790	35	661	32	600	2	81	0	0	0	2	51
2038	4.46%	38	827	35	696	32	631	2	81	0	0	0	2	54
2039	2.23%	19	846	35	731	32	663	(5)	81	0	0	0	(5)	49
2040	0.00%	0	846	35	766	32	694	(12)	81	0	0	0	(12)	37
2041	0.00%	0	846	35	801	32	726	(12)	81	0	0	0	(12)	24
2042	0.00%	0	846	35	835	32	758	(12)	81	0	0	0	(12)	12
2043	0.00%	0	846	35	870	32	789	(12)	81	0	0	0	(12)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(22)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	81
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

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DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Motors

(1) YEAR	(2) TAX DEPRECIATION SCHEDULE	(3) TAX DEPRECIATION \$(000)	(4) DEFERRED TAX \$(000)	(5) END OF YEAR NET PLANT IN SERVICE \$(000)	(5a)* ACCUMULATED DEPRECIATION \$(000)	(5b)* ACCUMULATED DEF TAXES \$(000)	(6) BEGINNING YEAR RATE BASE \$(000)	(7) ENDING OF YEAR RATE BASE \$(000)	(8) MID-YEAR RATE BASE \$(000)
2019	3.75%	32	0	835	35	(22)	892	858	875
2020	7.22%	61	11	801	76	(11)	858	811	834
2021	6.68%	57	10	766	104	(1)	811	767	789
2022	6.18%	52	8	731	139	7	767	724	745
2023	5.71%	48	6	696	174	13	724	683	703
2024	5.29%	45	5	661	209	19	683	643	663
2025	4.89%	41	4	627	244	22	643	604	624
2026	4.52%	38	3	592	278	25	604	567	586
2027	4.46%	38	2	557	313	27	567	530	548
2028	4.46%	38	2	522	348	30	530	492	511
2029	4.46%	38	2	487	383	32	492	455	474
2030	4.46%	38	2	453	418	34	455	418	437
2031	4.46%	38	2	418	453	37	418	381	399
2032	4.46%	38	2	383	487	39	381	344	362
2033	4.46%	38	2	348	522	42	344	306	325
2034	4.46%	38	2	313	557	44	306	269	288
2035	4.46%	38	2	278	592	46	269	232	251
2036	4.46%	38	2	244	627	49	232	195	213
2037	4.46%	38	2	209	661	51	195	158	176
2038	4.46%	38	2	174	696	54	158	120	139
2039	2.23%	19	(3)	139	731	49	120	91	105
2040	0.00%	0	(12)	104	766	37	91	68	79
2041	0.00%	0	(12)	70	801	24	68	45	57
2042	0.00%	0	(12)	35	835	12	45	23	34
2043	0.00%	0	(12)	(9)	870	0	23	0	11

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.030	0.00%	0.00	0.00
2011	-8	3.00%	1.061	0.00%	0.00	0.00
2012	-7	3.00%	1.093	0.00%	0.00	0.00
2013	-6	3.00%	1.126	0.15%	1.24	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	98.79	858.38

100.00% 907.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2009	-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.02	0.05	0.05	0.04	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.50	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	822.20	19.46	28.01	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2015
PLANT COSTS	725,389,805.5
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	742	742	742
EQUITY AFUDC	81		
DEBT AFUDC	47	47	
CPI			104
TOTAL	870	789	846

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAMMETHOD SELECTED : REV\_REQ  
 PROGRAMNAME: Business Motors

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (CkWh)	(5) AVOIDED MARGINAL FUEL COST (CkWh)	(6)* INCREASED MARGINAL FUEL COST (CkWh)	(7) REPLACEMENT FUEL COST (CkWh)	(8) PROGRAM KW EFFECTIVENESS FACTOR	(9) PROGRAM KW EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	0	0	6.41	16.51	6.41	0.00	1.00	1.00
2011	79	79	6.35	7.00	7.50	0.00	1.00	1.00
2012	162	162	6.43	7.03	7.49	0.00	1.00	1.00
2013	248	248	7.06	7.46	7.76	0.00	1.00	1.00
2014	337	337	7.53	7.88	8.13	0.00	1.00	1.00
2015	429	429	8.11	8.55	8.85	0.00	1.00	1.00
2016	523	523	9.00	9.72	10.27	0.00	1.00	1.00
2017	619	619	9.75	10.54	11.20	0.00	1.00	1.00
2018	716	716	10.52	11.35	12.02	0.00	1.00	1.00
2019	716	716	11.50	12.57	13.41	10.41	1.00	1.00
2020	716	716	12.08	13.20	14.02	10.50	1.00	1.00
2021	716	716	12.57	13.74	14.62	10.74	1.00	1.00
2022	716	716	13.06	14.19	15.03	10.81	1.00	1.00
2023	716	716	13.39	14.45	15.20	10.80	1.00	1.00
2024	716	716	13.95	15.02	15.74	10.84	1.00	1.00
2025	716	716	14.40	15.48	16.18	10.96	1.00	1.00
2026	716	716	14.70	15.74	16.40	11.05	1.00	1.00
2027	716	716	15.13	16.11	16.72	11.17	1.00	1.00
2028	716	716	15.60	16.54	17.12	11.36	1.00	1.00
2029	716	716	16.02	16.87	17.35	11.41	1.00	1.00
2030	716	716	16.52	17.35	17.81	11.59	1.00	1.00
2031	716	716	17.08	17.92	18.39	11.80	1.00	1.00
2032	716	716	17.50	18.20	18.55	11.88	1.00	1.00
2033	716	716	18.27	18.87	19.23	12.10	1.00	1.00
2034	716	716	18.73	19.15	19.38	12.14	1.00	1.00
2035	716	716	19.57	20.09	20.40	12.29	1.00	1.00
2036	716	716	20.40	20.92	21.28	12.35	1.00	1.00
2037	716	716	21.11	21.59	21.92	12.70	1.00	1.00
2038	716	716	22.02	22.52	22.85	13.04	1.00	1.00
2039	716	716	22.78	23.25	23.55	13.32	1.00	1.00
2040	716	716	23.59	24.01	24.27	13.44	1.00	1.00
2041	716	716	24.54	24.94	25.18	13.75	1.00	1.00
2042	716	716	25.50	25.90	26.14	14.10	1.00	1.00
2043	716	716	26.74	27.25	27.61	14.40	1.00	1.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00

\* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.  
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.





AVOIDED GENERATING EMISSION IMPACT  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Motors

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	0	0	0	0	0
2013	0	0	8	0	8
2014	0	0	13	0	13
2015	0	0	18	0	18
2016	0	0	25	0	25
2017	0	0	33	0	33
2018	0	0	42	0	42
2019	31	41	49	0	40
2020	47	61	54	0	40
2021	52	68	58	0	42
2022	51	79	65	0	47
2023	67	87	69	0	50
2024	77	100	77	0	55
2025	89	115	85	0	60
2026	99	127	90	0	62
2027	112	143	99	0	68
2028	123	157	107	0	74
2029	141	179	120	0	82
2030	156	198	129	0	87
2031	170	215	141	0	95
2032	187	236	152	0	103
2033	217	275	165	0	108
2034	241	304	179	0	116
2035	261	330	194	0	125
2036	285	361	210	0	135
2037	309	391	227	0	145
2038	335	424	245	0	157
2039	362	458	264	0	169
2040	391	495	285	0	181
2041	422	533	306	0	195
2042	422	533	329	0	218
2043	422	533	354	0	243
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	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
NOM	5,081	6,441	4,193	0	2,834
NPV	615	783	601	0	434



TOTAL RESOURCE COST TEST  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Motors

YEAR

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) PARTICIPANT PROGRAM COSTS \$(000)	(5) OTHER COSTS \$(000)	(6) TOTAL COSTS \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)	(8) AVOIDED T&D BENEFITS \$(000)	(9) PROGRAM FUEL SAVINGS \$(000)	(10) OTHER BENEFITS \$(000)	(11) TOTAL BENEFITS \$(000)	(12) NET BENEFITS \$(000)	(13) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	(0)	(0)
2010	0	0	0	0	0	0	0	0	0	0	0	(0)
2011	0	4	84	0	87	0	0	15	0	15	(72)	(61)
2012	0	4	90	0	94	0	4	46	0	51	(43)	(94)
2013	0	4	96	0	100	0	9	83	8	100	(0)	(95)
2014	0	4	102	0	106	0	13	125	13	151	45	(65)
2015	0	5	108	0	112	0	18	179	18	215	102	(4)
2016	0	5	113	0	118	0	23	254	25	302	184	98
2017	0	5	118	0	123	0	28	330	33	391	268	233
2018	0	5	122	0	128	0	33	415	42	490	363	402
2019	0	0	0	0	0	234	38	494	40	796	796	741
2020	0	0	0	0	0	208	37	519	40	803	803	1,056
2021	0	0	0	0	0	200	36	540	42	818	818	1,351
2022	0	0	0	0	0	198	35	557	47	838	838	1,628
2023	0	0	0	0	0	202	34	567	50	852	852	1,886
2024	0	0	0	0	0	204	33	589	55	881	881	2,132
2025	0	0	0	0	0	204	32	607	60	902	902	2,363
2026	0	5	121	0	127	205	31	617	62	915	788	2,548
2027	0	6	130	0	136	207	30	630	68	925	799	2,721
2028	0	6	139	0	145	206	29	647	74	955	810	2,882
2029	0	6	148	0	154	211	28	659	82	980	826	3,032
2030	0	7	156	0	163	211	27	677	87	1,003	841	3,173
2031	0	7	164	0	171	210	26	699	95	1,030	860	3,305
2032	0	7	171	0	178	216	25	709	103	1,053	875	3,428
2033	0	8	177	0	185	216	24	734	108	1,082	897	3,545
2034	0	0	0	0	0	226	24	743	116	1,108	1,108	3,676
2035	0	0	0	0	0	229	23	780	125	1,158	1,158	3,803
2036	0	0	0	0	0	227	22	813	135	1,197	1,197	3,923
2037	0	0	0	0	0	232	22	838	145	1,237	1,237	4,037
2038	0	0	0	0	0	225	21	874	157	1,277	1,277	4,145
2039	0	0	0	0	0	221	21	902	169	1,313	1,313	4,247
2040	0	0	0	0	0	231	20	931	181	1,364	1,364	4,345
2041	0	8	176	0	183	229	20	967	195	1,411	1,227	4,425
2042	0	8	189	0	197	225	19	1,004	218	1,466	1,269	4,502
2043	0	9	201	0	210	225	19	1,057	243	1,544	1,334	4,575
	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	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	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	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	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
NOM	0	112	2,605	0	2,717	5,393	804	19,601	2,834	28,632	25,915	
NPV	0	33	762	0	795	973	212	3,752	434	5,371	4,575	

Discount Rate: 8.89 %  
Benefit/Cost Ratio (Col(11) / Col(6)) : 6.75

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**PARTICIPANT COSTS AND BENEFITS**  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Motors

(1) YEAR	(2) SAVINGS IN PARTICIPANTS BILLS \$(000)	(3) TAX CREDITS \$(000)	(4) UTILITY REBATES \$(000)	(5) OTHER BENEFITS \$(000)	(6) TOTAL BENEFITS \$(000)	(7) CUSTOMER EQUIPMENT COSTS \$(000)	(8) CUSTOMER O&M COSTS \$(000)	(9) OTHER COSTS \$(000)	(10) TOTAL COSTS \$(000)	(11) NET BENEFITS \$(000)	(12) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0	0	0
2011	22	0	5	0	27	84	0	0	84	(57)	(48)
2012	70	0	5	0	75	90	0	0	90	(15)	(60)
2013	126	0	6	0	131	96	0	0	96	35	(35)
2014	192	0	6	0	197	102	0	0	102	95	28
2015	265	0	6	0	271	108	0	0	108	163	125
2016	343	0	6	0	349	113	0	0	113	256	256
2017	429	0	6	0	435	118	0	0	118	317	416
2018	516	0	6	0	522	122	0	0	122	400	602
2019	577	0	0	0	577	0	0	0	0	577	848
2020	579	0	0	0	579	0	0	0	0	579	1,075
2021	594	0	0	0	594	0	0	0	0	594	1,289
2022	617	0	0	0	617	0	0	0	0	617	1,493
2023	640	0	0	0	640	0	0	0	0	640	1,687
2024	674	0	0	0	674	0	0	0	0	674	1,875
2025	705	0	0	0	705	0	0	0	0	705	2,056
2026	738	0	5	0	743	121	0	0	121	621	2,202
2027	784	0	5	0	789	130	0	0	130	659	2,344
2028	820	0	6	0	826	139	0	0	139	687	2,480
2029	864	0	6	0	869	148	0	0	148	722	2,612
2030	913	0	6	0	919	156	0	0	156	763	2,739
2031	961	0	6	0	967	164	0	0	164	803	2,863
2032	1,025	0	6	0	1,031	171	0	0	171	860	2,984
2033	1,127	0	6	0	1,133	177	0	0	177	955	3,108
2034	1,149	0	0	0	1,149	0	0	0	0	1,149	3,245
2035	1,204	0	0	0	1,204	0	0	0	0	1,204	3,376
2036	1,300	0	0	0	1,300	0	0	0	0	1,300	3,507
2037	1,376	0	0	0	1,376	0	0	0	0	1,376	3,634
2038	1,443	0	0	0	1,443	0	0	0	0	1,443	3,756
2039	1,517	0	0	0	1,517	0	0	0	0	1,517	3,874
2040	1,595	0	0	0	1,595	0	0	0	0	1,595	3,988
2041	1,688	0	5	0	1,694	176	0	0	176	1,518	4,087
2042	1,788	0	5	0	1,793	189	0	0	189	1,605	4,184
2043	1,894	0	6	0	1,900	201	0	0	201	1,698	4,278
	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	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	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
NOM	28,532	0	108	0	28,639	2,605	0	0	2,605	26,034	
NPV	5,002	0	36	0	5,040	762	0	0	762	4,278	

In Service of Gen Unit: 2019  
 Discount Rate: 8.89 %  
 Benefit/Cost Ratio (Col(6) / Col(10)) 5.61

RATE IMPACT TEST  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Motors

(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)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2009	0	0	0	0	0	0	0	0	0	0	0	(9)	(0)
2010	0	0	0	0	0	0	0	0	0	0	0	0	(9)
2011	0	4	5	19	0	28	15	0	0	0	15	(12)	(11)
2012	0	4	5	90	0	69	46	4	0	0	51	(19)	(25)
2013	0	4	6	108	0	118	83	9	0	8	100	(18)	(38)
2014	0	4	6	165	0	175	125	13	0	13	151	(24)	(54)
2015	0	5	6	228	0	239	179	18	0	18	215	(24)	(68)
2016	0	5	6	296	0	307	254	23	0	25	302	(5)	(71)
2017	0	5	6	370	0	381	330	28	0	33	391	10	(66)
2018	0	5	6	444	0	456	415	33	0	42	490	35	(50)
2019	0	0	0	496	0	496	713	38	0	40	796	300	78
2020	0	0	0	497	0	497	727	37	0	40	803	307	199
2021	0	0	0	509	0	509	740	36	0	42	818	309	310
2022	0	0	0	528	0	528	756	35	0	47	838	310	412
2023	0	0	0	547	0	547	769	34	0	50	852	305	505
2024	0	0	0	575	0	575	793	33	0	55	881	305	590
2025	0	0	0	601	0	601	811	32	0	60	902	302	667
2026	0	5	5	628	0	638	822	31	0	62	915	277	732
2027	0	6	5	666	0	677	837	30	0	68	935	247	788
2028	0	6	6	697	0	709	852	29	0	74	955	247	837
2029	0	6	6	733	0	745	870	28	0	82	980	235	880
2030	0	7	6	774	0	786	889	27	0	87	1,003	217	916
2031	0	7	6	814	0	827	909	26	0	95	1,030	203	947
2032	0	7	6	867	0	881	925	25	0	103	1,053	173	971
2033	0	8	6	952	0	966	950	24	0	108	1,082	116	986
2034	0	0	0	971	0	971	969	24	0	116	1,108	137	1,003
2035	0	0	0	1,016	0	1,016	1,010	23	0	125	1,158	141	1,018
2036	0	0	0	1,097	0	1,097	1,040	22	0	135	1,197	100	1,028
2037	0	0	0	1,160	0	1,160	1,070	22	0	145	1,237	77	1,035
2038	0	0	0	1,216	0	1,216	1,099	21	0	157	1,277	62	1,041
2039	0	0	0	1,277	0	1,277	1,123	21	0	169	1,313	36	1,043
2040	0	0	0	1,342	0	1,342	1,162	20	0	181	1,364	22	1,045
2041	0	8	5	1,420	0	1,432	1,196	20	0	195	1,411	(22)	1,044
2042	0	8	5	1,502	0	1,516	1,229	19	0	218	1,466	(50)	1,040
2043	0	9	6	1,591	0	1,605	1,282	19	0	243	1,544	(61)	1,037
	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	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	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	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	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	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
NOM.	0	112	108	24,167	0	24,387	24,995	804	0	2,834	28,632	4,246	
NPV	0	33	38	4,263	0	4,334	4,726	212	0	434	5,371	1,037	

Discount Rate 8.99 %  
 Benefit/Cost Ratio (Col(12) / Col(7)) : 1.24