

**BEFORE THE FLORIDA PUBLIC SERVICE  
COMMISSION**

**DOCKET NO. 100155-EG**

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

**MODIFIED PLAN APPENDIX A**

**March 25, 2011**

COM \_\_\_  
APA \_\_\_  
ECR \_\_\_  
GCL 1  
RAD 14  
SSC \_\_\_  
ADM \_\_\_  
OPC \_\_\_  
CLK \_\_\_

DOCUMENT NUMBER-DATE

01988 MAR 25 =

FPSC-COMMISSION CLERK

**RESIDENTIAL LOW INCOME WEATHERIZATION**

INPUT DATA - PART 1, CONTINUED  
PROGRAM METHOD SELECTED: RIV\_RRQ  
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 .....	0.30 KW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	788.59 KVA
(5) KW LINE LOSS PERCENTAGE .....	6.91 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KVA INCREASE AT METER .....	0.00 KVA

II. ECONOMIC LIFE & K.F. 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.F. FACTOR FOR GENERATION .....	1.79738
(5) K.F. 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 .....	8.20 %
(11) UTILITY AFDISC 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 .....	185.92 \$/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/KVA
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	8% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	8.23 CENTS PER KW-HR*** (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/KVA
(2) NON-FUEL COST ESCALATION RATE .....	--- %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	--- \$/KW&M
(4) DEMAND CHARGE ESCALATION RATE .....	--- %



**CALCULATION OF GENE-FACTOR  
PROGRAMMED SELECTED KEY REQ  
PROGRAMNAME: Residential Low Income Water/Wastewater**

YEAR	(2) REG-YEAR RATEBASE \$(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) DEPRECI- ATION \$(000)	(10) DEFERRED TAXES \$(000)	(11) TOTAL FIXED CHARGES \$(000)	(12) EMERENT WORKER FIXED CHARGES \$(000)	(13) CUMULATIVE PW FIXED CHARGES \$(000)	(14) REPLACEMENT COST BASE FOR PROPERTY INSURANCE \$(000)
2019	1,858	120	0	289	178	65	25	150	6	305	305	305	3,762
2020	1,907	115	0	299	122	62	24	150	49	781	718	1,523	3,856
2021	1,907	109	0	345	121	60	24	150	42	750	633	2,156	3,953
2022	1,915	103	0	331	120	57	25	150	35	721	558	2,714	4,051
2023	1,930	97	0	218	118	54	25	150	28	692	492	3,206	4,153
2024	1,951	92	0	206	116	51	26	150	22	664	434	3,680	4,256
2025	1,779	86	0	194	114	49	27	150	16	637	382	4,022	4,363
2026	1,612	81	0	182	112	46	27	150	11	611	334	4,358	4,472
2027	1,450	76	0	171	106	43	28	150	10	585	294	4,654	4,584
2028	1,290	71	0	160	99	41	28	150	10	568	267	4,914	4,698
2029	1,239	66	0	149	92	38	29	150	10	535	228	5,143	4,816
2030	1,068	61	0	137	85	35	30	150	10	509	200	5,342	4,936
2031	1,007	56	0	126	78	33	31	150	10	484	174	5,517	5,060
2032	1,644	51	0	115	71	30	32	150	10	459	152	5,669	5,186
2033	1,498	46	0	104	64	27	32	150	10	434	132	5,800	5,316
2034	1,285	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	1,040	31	0	70	42	19	35	150	10	358	84	6,096	5,724
2037	923	26	0	59	35	16	36	150	10	333	72	6,168	5,868
2038	822	21	0	48	28	14	37	150	10	308	61	6,230	6,014
2039	721	16	0	36	23	11	38	150	10	283	52	6,281	6,165
2040	631	12	0	27	19	8	39	150	(23)	265	44	6,325	6,319
2041	554	9	0	20	14	5	40	150	(33)	247	38	6,363	6,477
2042	496	6	0	14	10	3	41	150	(33)	231	33	6,395	6,639
2043	458	3	0	7	6	(0)	42	150	(33)	215	28	6,423	6,805

IN SERVICE COST (\$000)	3,762
IN SERVICE YEAR	2019
BOOK-LINE (YRS)	25
DEPRECIATION RATE	38.57%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	6.61%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	44%	7.83
PS	0%	8.00
CS	56%	12.50

$K\text{-FACTOR} = \text{CFWFC} / \text{IN-SVC COST} = 1.70728$

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 FUND \$(000)	BOOK DEPR RATE	(10)*(11) TACRATE \$(000)	SALVAGE TACRATE \$(000)	ANNUAL DEFERRED TAX (7)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	1.75%	157	157	150	150	136	136	0	351	0	0	0	0	(95)
2020	7.22%	264	411	150	301	136	273	49	351	0	0	0	49	(46)
2021	6.88%	244	656	150	451	136	409	42	351	0	0	0	42	(4)
2022	6.18%	226	872	150	602	136	546	35	351	0	0	0	35	30
2023	5.71%	209	1,081	150	753	136	682	28	351	0	0	0	28	58
2024	5.09%	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%	163	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	2,762	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	231
2039	2.23%	82	3,639	150	3,160	136	2,865	(21)	351	0	0	0	(21)	211
2040	0.00%	0	3,639	150	3,311	136	3,002	(23)	351	0	0	0	(23)	188
2041	0.00%	0	3,639	150	3,461	136	3,138	(23)	351	0	0	0	(23)	165
2042	0.00%	0	3,639	150	3,612	136	3,275	(23)	351	0	0	0	(23)	143
2043	0.00%	0	3,639	150	3,762	136	3,411	(23)	351	0	0	0	(23)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(95)
TOTAL EQUITY FUND CAPITALIZED (SEE PAGE 5)	351
BOOK DEPR RATE - USEFUL LIFE	4.89%

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

(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)
2010	3.75%	137	0	3,612	130	(95)	3,654	3,707	3,782
2020	7.22%	264	49	3,461	301	(46)	3,767	3,507	3,607
2021	6.68%	244	42	3,311	451	(6)	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%	191	22	2,859	903	89	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	4.18%	163	10	2,408	1,354	118	2,450	2,290	2,370
2028	4.48%	163	10	2,257	1,505	128	2,290	2,129	2,209
2029	4.48%	163	10	2,107	1,655	139	2,129	1,968	2,048
2030	4.48%	163	10	1,956	1,806	149	1,968	1,807	1,888
2031	4.48%	163	10	1,806	1,956	159	1,807	1,646	1,727
2032	4.48%	163	10	1,655	2,107	170	1,646	1,486	1,566
2033	4.48%	163	10	1,505	2,257	180	1,486	1,325	1,405
2034	4.48%	163	10	1,354	2,408	190	1,325	1,164	1,244
2035	4.48%	163	10	1,204	2,558	201	1,164	1,003	1,084
2036	4.48%	163	10	1,053	2,709	211	1,003	842	923
2037	4.48%	163	10	903	2,859	221	842	682	762
2038	4.48%	163	10	752	3,010	232	682	521	601
2039	2.33%	82	(21)	602	3,160	211	521	391	456
2040	0.80%	0	(3)	451	3,311	198	391	294	342
2041	0.80%	0	(3)	301	3,461	105	294	196	245
2042	0.80%	0	(3)	150	3,612	55	196	98	147
2043	0.80%	0	(3)	0	3,762	0	98	0	49

\* Columns not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (\$K/W)	(6) ANNUAL SPENDING (\$K/W)	(7) CUMULATIVE AVERAGE SPENDING (\$K/W)
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%	15.59	9.24
2015	-4	3.00%	1.194	4.37%	30.61	37.63
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	428.27	298.84
2018	-1	3.00%	1.305	10.44%	38.79	338.38

YEAR	NO. YEARS IN-SERVICE	(8) CUMULATIVE SPENDING W/PLANT ESCALATION (\$K/W)	(9) DEBT AFUDC (\$K/W)	(10) CUMULATIVE DEBT AFUDC (\$K/W)	(11) TOTAL AFUDC (\$K/W)	(12) CUMULATIVE CONSTRUCTION INTEREST (\$K/W)	(13) CUMULATIVE CPI (\$K/W)	(14) DEPRECIATED TAXES (\$K/W)	(15) CUMULATIVE DEPRECIATED TAXES (\$K/W)	(16) INCREMENTAL YEAR-END BOOK VALUE (\$K/W)	(17) CUMULATIVE YEAR-END BOOK VALUE (\$K/W)
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	0.65	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.30	0.30	6.79	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	2.22	4.64	2.65	(0.37)	(0.72)	42.83	60.90
2016	-3	236.84	7.97	8.56	23.36	15.90	19.25	(1.41)	(4.13)	251.16	432.06
2017	-2	622.20	19.46	22.01	53.10	74.45	43.47	(9.26)	(13.39)	473.37	885.43
2018	-1	534.83	29.46	37.47	80.39	156.84	64.78	(27.50)	(27.62)	179.18	1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,655
AFUDC RATE	3.48%

57.47	156.84	227.50	(27.62)	1,064.61
	BOOK BASIS	BOOK BASIS FOR DEBT 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



INPUT DATA - PART 2  
 PROGRAM(MODEL) SECTED : RIV\_REQ  
 PROGRAM NAME : Residential Low Income Weatherization

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (Ct/kWh)	AVOIDED MARGINAL FUEL COST (Ct/kWh)	INCREASED MARGINAL FUEL COST (Ct/kWh)	REPLACEMENT FUEL COST (Ct/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	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	6.62	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	9.04	11.34	9.25	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	13.38	10.90	0.00	1.00	1.00
2019	9,000	9,000	11.56	14.97	11.99	10.41	1.00	1.00
2020	9,000	9,000	12.08	15.61	12.63	10.50	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	17.97	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	18.35	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	18.79	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	12.53	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	13.84	1.00	1.00
2039	9,000	9,000	22.78	24.29	22.92	13.92	1.00	1.00
2040	9,000	9,000	23.39	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	26.88	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.













**RESIDENTIAL LOW INCOME HOME ENERGY SURVEY**



INPUT DATA -- PART I CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Low Income Home Energy Survey

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 .....	0.00 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 .....	1.91 \$/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



CALCULATION OF GEN K-FACTOR  
 PROGRAM METHOD SELECTED REV. REQ  
 PROGRAM NAME: Residential Low Income Home Energy Survey

(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	7,140	222	0	498	329	120	42	279	1	1,491	1,491	6,963
2020	6,861	213	0	479	226	115	44	279	91	1,446	1,328	7,137
2021	6,491	202	0	453	224	110	45	279	77	1,389	1,171	7,316
2022	6,136	191	0	428	221	105	46	279	64	1,334	1,033	7,499
2023	5,793	180	0	404	218	100	47	279	52	1,280	911	7,686
2024	5,463	170	0	381	215	95	48	279	41	1,229	803	7,878
2025	5,144	160	0	359	211	90	49	279	30	1,179	707	8,075
2026	4,835	150	0	337	208	85	50	279	21	1,130	623	8,277
2027	4,536	141	0	317	196	80	52	279	19	1,083	548	8,484
2028	4,238	132	0	296	183	75	53	279	19	1,036	482	8,696
2029	3,940	122	0	275	170	70	54	279	19	990	422	8,914
2030	3,643	113	0	254	157	65	56	279	19	943	370	9,136
2031	3,345	104	0	233	144	60	57	279	19	896	323	9,365
2032	3,047	95	0	213	131	55	59	279	19	849	281	9,599
2033	2,750	85	0	192	118	50	60	279	19	803	244	9,839
2034	2,452	76	0	171	105	45	62	279	19	756	211	10,085
2035	2,154	67	0	150	92	40	63	279	19	710	182	10,337
2036	1,857	58	0	130	79	35	65	279	19	663	156	10,596
2037	1,559	48	0	109	66	30	66	279	19	617	133	10,860
2038	1,261	39	0	88	53	25	68	279	19	570	113	11,132
2039	964	30	0	67	38	20	70	279	(39)	524	95	11,410
2040	724	23	0	51	145	15	71	279	(97)	486	81	11,695
2041	543	17	0	38	138	10	73	279	(97)	457	70	11,988
2042	362	11	0	25	130	5	75	279	(97)	427	60	12,288
2043	181	6	0	13	122	(0)	77	279	(97)	398	52	12,595

IN SERVICE COST (\$000)	6,963
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 Low Income Home Energy S

(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	64	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	2,358	279	1,671	253	1,515	41	650	0	0	0	41	148
2025	4.89%	331	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	4.46%	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 Low Income Home Energy Survey

(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%	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	390	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

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	725.3898055
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
TOTAL	6,963	6,313	6,771

\* Column not specified in workbook

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

(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	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	9.99	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	10.81	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	0.00	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.















**RESIDENTIAL / LOW INCOME ENERGY  
EFFICIENCY RETROFIT**

INPUT DATA -- PART I CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Low Income Energy Efficiency Retrofit

**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 .....	0.00 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 .....	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





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

(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	36,026	1,119	0	2,514	1,659	607	214	1,405	3	7,521	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	14,223	36,012
2021	32,752	1,017	0	2,286	1,129	557	225	1,405	388	7,008	5,911	20,134	36,913
2022	30,958	962	0	2,161	1,116	531	231	1,405	323	6,729	5,212	25,346	37,835
2023	29,230	908	0	2,040	1,102	506	237	1,405	261	6,459	4,595	29,941	38,781
2024	27,563	856	0	1,924	1,085	481	242	1,405	205	6,199	4,050	33,991	39,751
2025	25,953	806	0	1,811	1,067	455	249	1,405	153	5,946	3,568	37,558	40,745
2026	24,395	758	0	1,702	1,047	430	255	1,405	104	5,702	3,142	40,700	41,763
2027	22,885	711	0	1,597	989	405	261	1,405	97	5,465	2,765	43,466	42,807
2028	21,383	664	0	1,492	923	379	268	1,405	96	5,229	2,430	45,896	43,877
2029	19,881	618	0	1,387	857	354	274	1,405	97	4,993	2,131	48,027	44,974
2030	18,379	571	0	1,283	791	329	281	1,405	96	4,757	1,865	49,891	46,099
2031	16,878	524	0	1,178	726	304	288	1,405	97	4,521	1,628	51,519	47,251
2032	15,376	478	0	1,073	660	278	295	1,405	96	4,286	1,417	52,936	48,433
2033	13,874	431	0	968	594	253	303	1,405	97	4,051	1,230	54,166	49,643
2034	12,372	384	0	863	528	228	310	1,405	96	3,816	1,064	55,230	50,884
2035	10,870	338	0	759	462	202	318	1,405	97	3,581	917	56,147	52,157
2036	9,368	291	0	654	397	177	326	1,405	96	3,346	787	56,934	53,460
2037	7,867	244	0	549	331	152	334	1,405	97	3,112	672	57,606	54,797
2038	6,365	198	0	444	265	126	343	1,405	96	2,878	571	58,177	56,167
2039	4,863	151	0	339	493	101	351	1,405	(197)	2,644	482	58,659	57,571
2040	3,655	114	0	235	734	76	360	1,405	(492)	2,452	410	59,069	59,010
2041	2,741	85	0	191	694	51	369	1,405	(492)	2,304	354	59,423	60,486
2042	1,827	57	0	128	654	25	378	1,405	(492)	2,156	294	59,727	61,998
2043	913	28	0	64	614	0	388	1,405	(492)	2,008	260	59,987	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 = CPWFC / IN-SVC COST = 1.70738

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

(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%	2,281	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 TAXES 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 Low Income Energy Efficiency Retrofit

(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%	1,281	3	33,729	1,405	(889)	36,026	34,617	35,321
2020	7.22%	2,466	460	32,323	2,811	(429)	34,617	32,752	33,685
2021	6.68%	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	25,953	26,758
2025	4.89%	1,670	153	25,296	9,838	902	25,953	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)	5,216	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	1,370
2043	0.00%	0	(492)	0	35,134	0	913	0	457

\* 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 3498055
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 Low Income Energy Efficiency Retrofit

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (C&Wh)	(5) AVOIDED MARGINAL FUEL COST (C&Wh)	(6)* INCREASED MARGINAL FUEL COST (C&Wh)	(7) REPLACEMENT FUEL COST (C&Wh)	(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	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	13.39	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	0.00	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.















## **RESIDENTIAL SOLAR WATER HEATING**

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

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.25 KW
(2) GENERATOR KW PRODUCTION PER CUSTOMER .....	0.34 KW
(3) KW LINE LOSS PERCENTAGE .....	2.60 %
(4) GENERATOR KWH REDUCTION PER CUSTOMER .....	1,91.85 KWH
(5) KWH LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KVA INCREASE AT METER .....	3.00 KVA

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 .....	1.70788
(5) K FACTOR FOR T & D .....	1.0254

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 .....	*** \$/CUSTOMER
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %
(8) INCREASED SUPPLY COSTS .....	*** \$/CUSTOMER
(9) SUPPLY COSTS ESCALATION RATE .....	*** %
(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 .....	2015-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	755.39 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.21 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	12.38 \$/KW
(7) GEN. TRAN & DIST. COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	37.66 \$/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 .....	894 ** (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/KVA
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/KW&D
(4) DEMAND CHARGE ESCALATION RATE .....	*** %

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



CALCULATION OF GENEX-FACTOR  
 PROGRAMMED SELECTION REV REQ  
 PROGRAMNAME: Road and Water Heating

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	REQ-YEAR RATEBASE \$000	DEBT \$000	PREMIERED STOCK \$000	COMMON EQUITY \$000	INCOME TAXES \$000	PROPERTY TAX \$000	PROPERTY INSURANCE \$000	DEPRECIATION \$000	DEPRECIATED TAXES \$000	TOTAL FIXED CHARGES \$000	PRESENT WORTH FIXED CHARGES \$000	CUMULATIVE PW FIXED CHARGES \$000	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$000
2019	7,711	240	0	338	333	130	46	301	1	1,610	1,610	1,610	7,321
2020	7,410	230	0	317	244	125	47	301	38	1,562	1,435	3,045	7,769
2021	7,011	218	0	289	242	119	48	301	83	1,500	1,263	4,310	7,901
2022	6,627	206	0	262	239	114	49	301	69	1,440	1,116	5,425	8,099
2023	6,257	194	0	237	236	108	51	301	56	1,383	984	6,409	8,361
2024	5,906	183	0	212	232	103	52	301	44	1,327	867	7,276	8,589
2025	5,555	173	0	188	228	97	53	301	33	1,273	764	8,040	8,722
2026	5,222	162	0	164	224	92	55	301	22	1,221	673	8,712	8,840
2027	4,899	152	0	142	212	87	56	301	21	1,170	592	9,304	9,163
2028	4,577	142	0	119	198	81	57	301	21	1,119	520	9,824	9,392
2029	4,254	132	0	97	183	76	59	301	21	1,069	456	10,280	9,627
2030	3,934	122	0	75	169	70	60	301	21	1,018	399	10,680	9,868
2031	3,613	112	0	52	155	65	62	301	21	968	348	11,028	10,134
2032	3,291	102	0	30	141	60	63	301	21	917	303	11,331	10,367
2033	2,970	92	0	7	127	54	65	301	21	867	263	11,595	10,626
2034	2,648	82	0	(15)	113	49	66	301	21	817	222	11,822	10,892
2035	2,327	72	0	(32)	102	43	68	301	21	767	194	12,019	11,164
2036	2,005	62	0	(49)	140	37	70	301	21	716	168	12,187	11,444
2037	1,684	52	0	(66)	118	32	72	301	21	666	144	12,331	11,730
2038	1,362	42	0	(83)	95	27	73	301	21	616	122	12,453	12,023
2039	1,041	32	0	(100)	73	22	75	301	(40)	566	103	12,556	12,323
2040	720	24	0	(117)	55	16	77	301	(105)	525	88	12,644	12,632
2041	397	18	0	(134)	41	11	79	301	(165)	493	76	12,720	12,947
2042	91	12	0	(151)	27	5	81	301	(185)	461	65	12,785	13,271
2043	196	6	0	(168)	14	(0)	83	301	(185)	430	56	12,841	13,603

IN SERVICE COST (\$000)	7,321
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
DEPRECIATION RATE	38.57%
DISCOUNT RATE	8.5%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	1.62%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	46%	7.43%
P/S	0%	0.00%
C/S	54%	12.50%

X-FACTOR = CPWFC / IN-SVC COST = 1.7973

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 MINUS L/IFE	(10)*(11) TAXRATE \$(000)	SALVAGE TAXRATE \$(000)	ANNUAL DEFERRED TAX (7)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	274	274	301	301	273	273	1	702	0	0	0	1	(190)
2020	7.22%	528	802	301	602	273	545	58	702	0	0	0	58	(92)
2021	6.88%	488	1,291	301	902	273	818	83	702	0	0	0	83	(9)
2022	6.38%	452	1,742	301	1,203	273	1,091	69	702	0	0	0	69	68
2023	5.71%	418	2,160	301	1,504	273	1,364	56	702	0	0	0	56	116
2024	5.09%	387	2,547	301	1,805	273	1,636	44	702	0	0	0	44	160
2025	4.49%	357	2,904	301	2,106	273	1,909	33	702	0	0	0	33	193
2026	4.32%	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	2,435	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	4,513	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	7,514	301	6,618	273	6,000	(105)	702	0	0	0	(105)	316
2041	0.00%	0	7,514	301	6,919	273	6,273	(105)	702	0	0	0	(105)	211
2042	0.00%	0	7,514	301	7,220	273	6,546	(105)	702	0	0	0	(105)	106
2043	0.00%	0	7,514	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\_XBQ  
 PROGRAM NAME: Residential Solar Water Heating

(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 RATEBASE \$(000)
2019	3.73%	374	1	7,220	301	(194)	7,711	7,618	7,561
2020	7.22%	328	38	6,919	602	(92)	7,410	7,811	7,210
2021	6.68%	488	83	6,618	902	(7)	7,011	6,627	6,819
2022	6.18%	431	69	6,317	1,203	61	6,627	6,257	6,442
2023	5.71%	418	56	6,017	1,594	115	6,257	5,960	6,078
2024	5.27%	387	44	5,716	1,985	160	5,900	5,555	5,725
2025	4.86%	357	35	5,415	2,104	193	5,555	5,220	5,280
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	226	4,899	4,577	4,738
2028	4.46%	326	21	4,512	3,008	237	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	(62)	1,203	6,317	481	1,041	782	912
2040	0.00%	0	(165)	902	6,618	316	782	587	685
2041	0.00%	0	(165)	602	6,919	211	587	391	489
2042	0.00%	0	(165)	301	7,220	185	391	196	295
2043	0.00%	0	(165)	(7)	7,521	0	196	0	28

\* 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 (\$K/W)	(7) CUMULATIVE AVERAGE SPENDING (\$K/W)
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%	1.04	0.82
2014	-5	3.00%	1.159	1.90%	15.39	9.26
2015	-4	3.00%	1.194	4.57%	39.61	37.63
2016	-3	3.00%	1.230	37.20%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	398.24
2018	-1	3.00%	1.305	10.44%	98.79	85.28

100.00% 307.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(9) CUMULATIVE SPENDING W/DEBT AFUDC (\$K/W)	(10)* DEBT AFUDC (\$K/W)	(11)* CUMULATIVE DEBT AFUDC (\$K/W)	(12) YEARLY TOTAL AFUDC (\$K/W)	(13)* CUMULATIVE TOTAL AFUDC (\$K/W)	(14)* CONSTRUCTION PERIOD INTEREST (\$K/W)	(15)* CUMULATIVE CPI (\$K/W)	(16)* DEFERRED TAXES (\$K/W)	(17)* CUMULATIVE DEFERRED TAXES (\$K/W)	(18) INCREMENTAL YEAR-END BOOK VALUE (\$K/W)	(19) CUMULATIVE YEAR-END BOOK VALUE (\$K/W)
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	0.82	0.22	0.82	0.85	0.85	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.29	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	2.85	3.35	(0.57)	(0.75)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	15.90	19.25	(4.41)	(4.15)	351.16	412.06
2017	-2	622.23	19.46	28.81	53.10	76.45	43.47	62.72	(9.26)	(13.39)	673.57	825.43
2018	-1	304.83	29.46	37.47	98.29	156.84	64.78	127.50	(13.63)	(27.02)	179.13	1,004.56

37.47

156.84

227.50

(27.62)

1,004.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,055
AFUDC RATE	4.48%

	BOOK BASIS	BOOK BASIS FOR DEBT TAX	TAX BASIS
CONSTRUCTION CASE	6,413	6,413	6,413
EQUALY AFUDC	702		
DEBT AFUDC	406	406	
CPI			901
TOTAL	7,321	6,819	7,314

\* Column set specified in workbook

INPUT DATA - PART 2  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Solar 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 (Ct/kWh)	AVOIDED MARGINAL FUEL COST (Ct/kWh)	INCREASED MARGINAL FUEL COST (Ct/kWh)	REPLACEMENT FUEL COST (Ct/kWh)	PROGRAM KW EFFICIENCY FACTOR	PROGRAM KW EFFICIENCY FACTOR
2009	0	0	6.79	9.37	6.79	9.00	1.00	1.00
2010	1,366	1,366	6.41	6.70	9.41	9.00	1.00	1.00
2011	5,935	5,935	6.35	6.61	8.48	9.00	1.00	1.00
2012	10,877	10,877	6.45	6.64	8.45	9.00	1.00	1.00
2013	15,811	15,811	7.86	7.23	8.41	9.00	1.00	1.00
2014	20,781	20,781	7.33	7.68	8.87	9.00	1.00	1.00
2015	20,781	20,781	8.11	8.31	9.61	9.00	1.00	1.00
2016	20,781	20,781	9.80	9.31	11.55	9.00	1.00	1.00
2017	20,781	20,781	9.75	10.06	12.72	9.00	1.00	1.00
2018	20,781	20,781	10.52	10.86	13.53	9.00	1.00	1.00
2019	20,781	20,781	11.54	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	12.68	13.09	16.43	10.74	1.00	1.00
2022	20,781	20,781	13.39	13.59	17.14	10.81	1.00	1.00
2023	20,781	20,781	13.06	13.92	17.14	10.80	1.00	1.00
2024	20,781	20,781	13.39	14.07	17.82	10.84	1.00	1.00
2025	20,781	20,781	13.95	14.92	18.22	10.96	1.00	1.00
2026	20,781	20,781	14.44	15.29	18.22	11.65	1.00	1.00
2027	20,781	20,781	14.74	15.39	18.54	11.17	1.00	1.00
2028	20,781	20,781	15.33	15.60	18.54	11.36	1.00	1.00
2029	20,781	20,781	15.69	16.05	18.91	11.36	1.00	1.00
2030	20,781	20,781	16.02	16.44	18.85	11.41	1.00	1.00
2031	20,781	20,781	16.52	16.92	19.26	11.59	1.00	1.00
2032	20,781	20,781	17.08	17.47	19.26	11.80	1.00	1.00
2033	20,781	20,781	17.59	17.84	19.62	11.88	1.00	1.00
2034	20,781	20,781	18.27	18.50	20.28	12.10	1.00	1.00
2035	20,781	20,781	18.73	18.88	20.82	12.14	1.00	1.00
2036	20,781	20,781	19.57	19.75	21.57	12.29	1.00	1.00
2037	20,781	20,781	20.54	20.54	22.39	12.55	1.00	1.00
2038	20,781	20,781	20.40	21.04	22.91	12.70	1.00	1.00
2039	20,781	20,781	21.11	21.86	23.86	13.04	1.00	1.00
2040	20,781	20,781	22.02	22.16	24.49	13.32	1.00	1.00
2041	20,781	20,781	22.72	22.89	25.04	13.64	1.00	1.00
2042	20,781	20,781	23.59	23.88	25.53	13.75	1.00	1.00
2043	20,781	20,781	24.54	24.82	26.94	14.10	1.00	1.00
2044	20,781	20,781	25.59	25.59	28.65	14.40	1.00	1.00
2045	20,781	20,781	26.74	26.83	29.65	14.88	1.00	1.00
2046	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2047	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2048	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2049	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2050	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2051	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2052	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2053	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2054	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2055	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2056	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2057	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2058	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2059	0	0	0.00	0.00	0.00	0.00	0.00	0.00
2060	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.















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

INPUT DATA -- PART 1 CONTINUED  
 PROGRAM/MS/DCID SELECTED: REV\_002  
 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 .....	2.66 %
(4) GENERATOR KW/LINE REDUCTION PER CUSTOMER .....	1.59185 KW
(5) KW/LINE LOSS PERCENTAGE .....	6.99 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KVA INCREASE AT METER .....	0.00 KVA

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 .....	2.89 %
(11) UTILITY AFUD-C RATE .....	2.48 %
(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 .....	185.92 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	26.64 \$/KW
(7) GEN. TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	37.66 \$/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 .....	0.186 CENTS/KVA
(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 KVA** (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\$/KW
(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  
 \*\* VALUES 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)

YEAR	(2) BASE-YEAR RAISEBASE \$(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) DEPRECI- ATION \$(000)	(10) DEPRECI- ATION TAXES \$(000)	(11) TOTAL EFFECTIVE CHARGES \$(000)	(12) PRESENT WORTH FIXED CHARGES \$(000)	(13) CUMULATIVE PW FIXED CHARGES \$(000)	(14) 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	2	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	2	2	12	1	36	12	447	408
2033	117	4	0	8	5	2	3	12	1	34	10	458	418
2034	105	3	0	7	4	2	3	12	1	32	9	467	429
2035	92	3	0	6	4	2	3	12	1	30	8	474	441
2036	79	2	0	6	3	1	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	2	1	3	12	1	24	5	491	474
2039	41	1	0	3	4	1	3	12	(2)	22	4	495	485
2040	31	1	0	2	6	1	3	12	(5)	21	3	499	496
2041	23	1	0	2	6	0	3	12	(6)	19	3	502	511
2042	15	0	0	1	6	0	3	12	(6)	18	3	504	526
2043	8	0	0	1	5	(0)	3	12	(6)	17	2	507	537

IN SERVICE COST (\$000)	297
IN SERVICE YEAR	2019
BOOKING (YRS)	25
EFFEC. TAXRATE	28.57%
DISCOUNT RATE	3.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	46%	7.03 %
PS	0%	0.00 %
CS	54%	12.50 %

K FACTOR = CPWFC / IN-SVC COST = 1.7078

DEFERRED TAX AND MID-YEAR RATE-BASE CALCULATION  
 PROGRAM METHOD SELECTED: KEY\_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 DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS LLEE	(10)*(11)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	11	11	12	12	11	11	0	28	0	0	0	0	(5)
2020	7.23%	21	32	12	24	11	22	4	28	0	0	0	4	(4)
2021	6.83%	19	51	12	36	11	32	3	28	0	0	0	3	(9)
2022	4.18%	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	7
2025	4.89%	14	115	12	83	11	75	1	28	0	0	0	1	6
2026	4.52%	13	128	12	95	11	84	1	28	0	0	0	1	8
2027	4.46%	13	141	12	107	11	97	1	28	0	0	0	1	8
2028	4.46%	13	153	12	119	11	108	1	28	0	0	0	1	9
2029	4.46%	13	166	12	131	11	118	1	28	0	0	0	1	10
2030	4.46%	13	179	12	142	11	129	1	28	0	0	0	1	11
2031	4.46%	13	192	12	154	11	140	1	28	0	0	0	1	12
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	13
2034	4.46%	13	231	12	190	11	172	1	28	0	0	0	1	14
2035	4.46%	13	244	12	202	11	183	1	28	0	0	0	1	15
2036	4.46%	13	256	12	214	11	194	1	28	0	0	0	1	16
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)	13
2041	0.00%	0	289	12	273	11	248	(6)	28	0	0	0	(6)	8
2042	0.00%	0	289	12	285	11	258	(8)	28	0	0	0	(8)	0
2043	0.00%	0	289	12	297	11	269	(6)	28	0	0	0	(6)	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/PROJECT SELECTED: RESV\_RBQ  
 PROGRAM NAME: Residential Solar Water Heating (Low Income New Construction)

(1)	(2)	(3)	(4)	(5) END OF YEAR NEW 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%	11	0	283	12	(3)	204	252	228
2020	7.25%	21	4	273	24	(4)	282	277	285
2021	6.68%	19	3	261	36	(5)	277	261	269
2022	6.18%	18	3	249	47	2	261	247	254
2023	5.73%	16	2	237	59	5	247	233	240
2024	5.29%	15	2	226	71	6	233	219	224
2025	4.89%	14	1	214	83	8	219	206	213
2026	4.52%	13	1	202	95	8	206	193	200
2027	4.16%	13	1	190	107	9	193	181	187
2028	4.44%	13	1	178	119	10	181	168	174
2029	4.44%	13	1	166	131	11	168	155	162
2030	4.44%	13	1	154	142	12	155	143	149
2031	4.44%	13	1	142	154	13	143	130	136
2032	4.44%	13	1	131	166	13	130	117	124
2033	4.44%	13	1	119	178	14	117	105	111
2034	4.44%	13	1	107	190	15	105	92	98
2035	4.44%	13	1	95	202	16	92	79	85
2036	4.44%	13	1	83	214	17	79	66	73
2037	4.44%	13	1	71	226	17	66	54	60
2038	4.44%	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 (\$K)	(6) ANNUAL SPENDING (\$K/W)	(7) CUMULATIVE AVERAGE SPENDING (\$K/W)
2009	-10	3.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.029	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%	1.94	4.62
2014	-5	3.00%	1.159	1.90%	15.59	3.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	331.87	232.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	58.79	838.38

YEAR	NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$K/W)	(9a) DEBT AFUDC (\$K/W)	100.00%		(9b) CUMULATIVE DEBT AFUDC (\$K/W)	(10) TOTAL AFUDC (\$K/W)	(9c) CONSTRUCTION PERIOD INVEST (\$K/W)	(9d) CUMULATIVE CFI (\$K/W)	(9e) DEFERRED TAXES (\$K/W)	(9f) CUMULATIVE DEFERRED TAXES (\$K/W)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$K/W)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$K/W)
				(9b) CUMULATIVE DEBT AFUDC (\$K/W)	(9) TOTAL AFUDC (\$K/W)								
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	(0.61)	(0.61)	1.29	1.29	
2014	-5	9.29	0.29	0.30	0.79	0.84	0.65	0.70	(0.34)	(0.15)	16.78	18.07	
2015	-4	37.87	1.18	1.49	3.22	4.06	2.65	3.25	(0.57)	(0.72)	42.83	60.90	
2016	-3	226.84	7.07	8.56	19.29	23.36	15.99	19.25	(0.41)	(4.13)	251.16	412.06	
2017	-2	822.20	19.46	28.01	53.10	76.65	43.47	62.72	(9.26)	(13.39)	473.37	885.43	
2018	-1	534.83	29.46	57.47	84.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61	

IN SERVICE YEAR	2019	37.49	156.84		127.50		(27.02)	1,064.61	
PLANT COSTS	725,389,045	BOOK BASIS		BOOK BASIS FOR DEF TAX		TAX BASIS			
AFUDC RATE	3.48%	CONSTRUCTION CARE	253	253	253				
		EQUITY AFUDC	28						
		DEBT AFUDC	16						
		CFI			36				
		TOTAL	297	289	289				

\* Column not specified in wordbook

















**BUSINESS SOLAR WATER HEATING**



INPUT DATA - PART 1 CONTINUED  
PROGRAM/METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Sales 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 .....	1,927.00 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 & X 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 RATE .....	*** %
(10) UTILITY DISCOUNT RATE .....	8.19 %
(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 .....	*** %

\* SUPPLEMENTAL INFORMATION NOT RECEIVED IN WORKBOOK  
- VALUES 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 .....	2000
(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 .....	725.30 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.92 \$/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 .....	1.81 \$/KW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.206 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	6% ** (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&O
(4) DEMAND CHARGE ESCALATION RATE .....	*** %



**CALCULATION OF K-FACTOR  
PROGRAM(S) USED: SELECTED MSV\_BQ  
PROGRAM NAME: Business Solar Water Heating**

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	BBQ-YEAR RATE BASE \$1000	DEBT \$1000	PREFERRED STOCK \$1000	COMMON EQUITY \$1000	INCOME TAXES \$1000	PROPERTY TAX \$1000	PROPERTY INSURANCE \$1000	DEPRECC. \$1000	DEFERRED TAXES \$1000	TOTAL FIXED CHARGES \$1000	PRESENT WORTH FIXED CHARGES \$1000	CUMULATIVE PW/FIXED CHARGES \$1000	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$1000
2019	306	10	0	21	14	5	2	12	0	64	64	64	289
2020	294	9	0	21	10	5	2	12	4	62	57	121	306
2021	273	9	0	19	10	5	2	12	3	60	50	171	314
2022	263	8	0	18	9	5	2	12	3	57	44	215	322
2023	248	8	0	17	9	4	2	12	2	55	39	254	330
2024	234	7	0	16	9	4	2	12	2	53	34	289	338
2025	221	7	0	15	9	4	2	12	1	51	30	319	346
2026	207	6	0	14	9	4	2	12	1	48	27	346	355
2027	194	6	0	14	8	3	2	12	1	46	24	369	364
2028	182	6	0	13	8	3	2	12	1	44	21	390	373
2029	169	5	0	12	7	3	2	12	1	42	18	408	382
2030	156	5	0	11	7	3	2	12	1	40	16	424	392
2031	143	4	0	10	6	3	2	12	1	38	14	438	402
2032	131	4	0	9	6	2	3	12	1	36	12	450	412
2033	118	4	0	8	5	2	3	12	1	34	10	460	421
2034	105	3	0	7	4	2	3	12	1	32	9	469	432
2035	92	3	0	6	4	2	3	12	1	30	8	477	443
2036	80	2	0	6	3	2	3	12	1	28	7	484	454
2037	67	2	0	5	3	1	3	12	1	26	6	490	466
2038	54	2	0	4	2	1	3	12	1	24	5	494	477
2039	41	1	0	3	4	1	3	12	(2)	22	4	498	489
2040	31	1	0	2	6	1	3	12	(4)	21	3	502	501
2041	23	1	0	2	6	0	3	12	(4)	20	3	505	514
2042	16	0	0	1	6	0	3	12	(6)	18	3	508	527
2043	8	0	0	1	5	(0)	3	12	(6)	17	2	510	540

IN SERVICE COST (\$1000)	289
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	28.57%
DISCOUNT RATE	8.7%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	44%	7.00 %
INS	0%	0.00 %
CE	56%	12.50 %

K-FACTOR = CPWFC / IN-SVC COST = 1.70736

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV' 82Q  
 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 LAFEE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (7)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	5.75%	11	11	12	12	11	11	0	28	0	0	0	0	(8)
2020	7.25%	21	32	12	24	11	22	4	28	0	0	0	4	(4)
2021	6.65%	19	51	12	36	11	32	3	28	0	0	0	3	(5)
2022	6.15%	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	(5)	28	0	0	0	(5)	17
2040	0.00%	0	290	12	263	11	238	(6)	28	0	0	0	(6)	13
2041	0.00%	0	290	12	275	11	249	(6)	28	0	0	0	(6)	8
2042	0.00%	0	290	12	287	11	260	(6)	28	0	0	0	(6)	4
2043	0.00%	0	290	12	299	11	271	(6)	28	0	0	0	(6)	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)	28
BOOK DEPR RATE - 1/USEFUL LIFE	4.85%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/STATION SELECTED: NY1\_NY2  
 PROGRAM NAME: Business Solar Water Heating

(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%	11	0	287	13	(0)	264	294	300
2020	7.22%	21	4	270	24	(4)	264	278	286
2021	6.88%	19	3	260	36	(0)	278	263	271
2022	6.18%	18	3	231	48	2	263	248	256
2023	5.71%	17	2	209	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	98
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	2.22%	6	(3)	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	10
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 (M)	(6) ANNUAL SPENDING (M/W)	(7) CUMULATIVE AVERAGE SPENDING (M/W)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	0.00%	1.000	0.00%	0.00	0.00
2011	-8	0.00%	1.061	0.00%	0.00	0.00
2012	-7	0.00%	1.073	0.00%	0.00	0.00
2013	-6	0.00%	1.126	0.19%	1.24	0.62
2014	-5	0.00%	1.149	1.90%	15.99	9.24
2015	-4	0.00%	1.194	4.57%	39.61	37.03
2016	-3	0.00%	1.230	37.00%	331.87	221.77
2017	-2	0.00%	1.267	45.70%	408.27	398.34
2018	-1	0.00%	1.305	18.40%	58.79	833.58

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) CUMULATIVE SPENDING WITH AFUDC (M/W)	(4)* DEBT AFUDC (M/W)	(5)* CUMULATIVE DEBT AFUDC (M/W)	(6) YEARLY TOTAL AFUDC (M/W)	(7)* CUMULATIVE TOTAL AFUDC (M/W)	(8)* CONSTRUCTION PERIOD INTEREST (M/W)	(9)* CUMULATIVE CPI (M/W)	(10)* DEFERRED TAXES (M/W)	(11)* CUMULATIVE DEFERRED TAXES (M/W)	(12) INCREMENTAL YEAR-END BOOK VALUE (M/W)	(13) CUMULATIVE YEAR-END BOOK VALUE (M/W)
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	0.02	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.20	0.20	0.79	0.84	0.63	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.37	1.18	1.49	3.22	4.06	2.63	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.97	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.61	33.10	76.46	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	30.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	723,389,025
AFUDC RATE	0.48%

	57.47	156.84	127.50	(27.02)	1,064.61
	BOOK BASIS	FOR DEBT 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

















## **RESIDENTIAL PHOTOVOLTAICS**

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

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	145 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.94 KW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	5.7748 KVA
(5) KW LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MOLTYE/LEER .....	1.00
(7) CUSTOMER KW INCREASE AT METER .....	0.00 KVA

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 .....	1.7878
(5) K FACTOR FOR T & D .....	1.0254

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 .....	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 .....	725.30 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	281.52 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	28.64 \$/KW
(7) GEN. TRAN & DIST COST ESCALATION RATE .....	3.80 %
(8) GENERATOR FIXED O & M COST .....	37.46 \$/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/\$/KVA
(14) GENERATOR VARIABLE O & M COST ESCALATION RATE .....	2.50 %
(15) GENERATOR CAPACITY FACTOR .....	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	5.23 CENTS PER KW-HR ** (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/KVA
(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 KEY KEY  
 PROGRAM NAME: Residential Photovoltaics (PV)

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	REG-YEAR RATEBASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPRFC. \$(000)	DEFERRED TAXES \$(000)	TOTAL EFFECTED CHARGES \$(000)	PRESENT WORTH EFFECTED CHARGES \$(000)	CUMULATIVE PW EFFECTED CHARGES \$(000)	REPLACEMENT COST BASES FOR PROPERTY INSURANCE \$(000)
2019	2,120	97	0	238	144	53	19	122	0	651	651	651	3,042
2020	2,398	93	0	209	39	50	19	122	40	632	580	1,232	3,119
2021	2,836	88	0	198	38	48	19	122	34	607	512	1,744	3,197
2022	2,481	83	0	187	46	46	20	122	28	583	431	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	2,907	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	1,832	58	0	128	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	1,301	41	0	93	57	24	26	122	8	372	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	681	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	17	9	30	122	(17)	229	42	5,080	4,985
2040	317	10	0	22	11	7	31	122	(63)	212	36	5,115	5,110
2041	237	7	0	17	6	4	32	122	(63)	206	31	5,146	5,238
2042	158	5	0	11	3	2	33	122	(63)	187	26	5,172	5,368
2043	79	2	0	6	1	0	34	122	(63)	176	23	5,195	5,503

IN SERVICE COST (\$000)	3,042
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
WFTC T/CORRAIS	38.373
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

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

K FACTOR = CPWFC / IN-SVC COST = 1.7073

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/METRIC SELECTED: REV\_REQ  
 PROGRAM NAME: Residential First-Flats (FV)

(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 LEASE	(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	7.25%	214	325	122	243	110	221	40	284	0	0	0	40	(37)
2021	6.88%	198	522	122	363	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	5.29%	156	1,030	122	730	110	662	18	284	0	0	0	18	65
2025	4.89%	145	1,175	122	852	110	772	13	284	0	0	0	13	78
2026	4.52%	134	1,309	122	974	110	883	9	284	0	0	0	9	87
2027	4.18%	123	1,441	122	1,095	110	993	5	284	0	0	0	5	93
2028	4.48%	132	1,573	122	1,217	110	1,103	3	284	0	0	0	3	104
2029	4.48%	132	1,705	122	1,339	110	1,214	3	284	0	0	0	3	112
2030	4.48%	132	1,837	122	1,461	110	1,324	3	284	0	0	0	3	121
2031	4.48%	132	1,969	122	1,582	110	1,434	3	284	0	0	0	3	129
2032	4.48%	132	2,101	122	1,704	110	1,544	3	284	0	0	0	3	137
2033	4.48%	132	2,233	122	1,825	110	1,653	3	284	0	0	0	3	146
2034	4.48%	132	2,365	122	1,947	110	1,763	3	284	0	0	0	3	154
2035	4.48%	132	2,497	122	2,069	110	1,873	3	284	0	0	0	3	162
2036	4.48%	132	2,629	122	2,191	110	1,983	3	284	0	0	0	3	171
2037	4.48%	132	2,761	122	2,312	110	2,093	3	284	0	0	0	3	179
2038	4.48%	132	2,893	122	2,434	110	2,203	3	284	0	0	0	3	187
2039	2.25%	65	2,959	122	2,556	110	2,313	(17)	284	0	0	0	(17)	170
2040	0.00%	0	2,959	122	2,677	110	2,423	(43)	284	0	0	0	(43)	128
2041	0.00%	0	2,959	122	2,799	110	2,533	(43)	284	0	0	0	(43)	85
2042	0.00%	0	2,959	122	2,921	110	2,643	(43)	284	0	0	0	(43)	43
2043	0.00%	0	2,959	122	3,042	110	2,753	(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 - USEFUL LIFE	4.00%



(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (\$K/W)	(6) ANNUAL SPENDING (\$K/W)	(7) CUMULATIVE AVERAGE SPENDING (\$K/W)
2009	-10	0.00%	1.000	0.00%	0.00	0.00
2010	-9	0.00%	1.000	0.00%	0.00	0.00
2011	-8	0.00%	1.001	0.00%	0.00	0.00
2012	-7	0.00%	1.003	0.00%	0.00	0.00
2013	-6	0.00%	1.006	0.15%	1.04	0.02
2014	-5	0.00%	1.139	1.90%	15.39	9.24
2015	-4	0.00%	1.194	4.57%	39.61	37.03
2016	-3	0.00%	1.230	37.20%	331.87	222.77
2017	-2	0.00%	1.267	45.74%	428.27	393.84
2018	-1	0.00%	1.305	10.44%	38.79	353.38

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) CUMULATIVE SPENDING WITH AFUDC (\$K/W)	(4) DEBT AFUDC (\$K/W)	(5) CUMULATIVE DEBT AFUDC (\$K/W)	(6) YEARLY TOTAL AFUDC (\$K/W)	(7) TOTAL AFUDC (\$K/W)	(8) CONSTRUCTION PERIOD INTEREST (\$K/W)	(9) CUMULATIVE CPI (\$K/W)	(10) DEFERRED TAXES (\$K/W)	(11) CUMULATIVE DEFERRED TAXES (\$K/W)	(12) INCREMENTAL YEAR-END BOOK VALUE (\$K/W)	(13) CUMULATIVE YEAR-END BOOK VALUE (\$K/W)
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	0.02	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	1.40	3.22	4.06	2.65	3.35	(0.57)	(0.72)	42.83	60.90
2016	-3	226.84	7.87	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.33)	351.16	412.06
2017	-2	622.20	19.46	28.01	39.10	76.45	43.47	62.72	(9.86)	(13.39)	473.37	885.63
2018	-1	394.83	29.46	37.47	30.39	156.84	64.78	127.50	(13.02)	(27.82)	179.18	1,064.81

IN SERVICE YEAR	2019
PLANT COSTS	725,289,835
AFUDC RATE	3.48%

	57.47	156.84	227.50	(27.82)	1,064.81
	BOOK BASIS	BOOK BASIS	FOR DEF TAX	TAX BASIS	
CONSTRUCTION CASE		2,394	2,394	2,394	
EQUITY AFUDC		284			
DEBT AFUDC		164	164		
CPI				364	
TOTAL		3,042	2,758	2,959	

\* Columns not specified in workbook

INPUT DATA - PART 2  
 PROGRAM/METHOD SELECTED : KSV\_REQ  
 PROGRAM NAME: Residential Photo-voltaics (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/AV EFFECTIVENESS FACTOR	(9) PROGRAM/AV EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.99	0.00	0.99	0.99
2010	113	113	6.41	8.82	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	7.86	7.94	7.98	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	9.85	8.45	0.00	0.96	0.96
2016	1,473	1,473	9.08	10.68	9.54	0.00	0.95	0.95
2017	1,473	1,473	9.73	11.66	10.31	0.00	0.94	0.94
2018	1,473	1,473	10.22	12.51	11.22	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	14.83	12.92	10.50	0.92	0.92
2021	1,473	1,473	12.57	15.34	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	13.59	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	15.39	10.96	0.90	0.90
2026	1,473	1,473	14.78	17.06	15.45	11.45	0.89	0.89
2027	1,473	1,473	15.13	17.38	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	16.32	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	18.78	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	20.49	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	22.56	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	24.48	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	25.30	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.











**PARTICIPANT COSTS AND BENEFITS  
 PROGRAM(METHOD SELECTED): REV\_REQ  
 PROGRAMNAME: Residential Photovoltaics (P.V)**

(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	44	2,308	910	0	3,262	4,498	51	0	4,549	(1,287)	(1,182)
2011	228	7,043	2,747	0	10,018	13,941	263	0	14,204	(4,186)	(4,733)
2012	528	7,144	2,747	0	10,419	14,359	393	0	14,752	(4,333)	(8,224)
2013	858	7,247	2,747	0	10,852	14,790	940	0	15,730	(4,878)	(11,604)
2014	1,232	7,332	2,747	0	11,311	15,234	1,383	0	16,577	(5,266)	(15,095)
2015	1,459	0	0	0	1,459	0	1,510	0	1,510	(51)	(15,146)
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)	(15,150)
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)	(15,294)
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)	(15,610)
2026	1,812	0	0	0	1,812	0	1,981	0	1,981	(169)	(15,602)
2027	1,885	0	0	0	1,885	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	2,339	3,141	0	0	5,680	7,888	2,371	0	10,139	(4,479)	(16,474)
2031	2,834	3,611	0	0	12,445	24,446	2,500	0	26,946	(14,501)	(18,702)
2032	2,982	3,776	0	0	12,737	25,179	2,563	0	27,742	(14,985)	(20,818)
2033	3,227	3,845	0	0	19,172	29,944	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)	(24,712)
2035	3,024	0	0	0	3,024	0	2,474	0	2,474	549	(24,637)
2036	3,213	0	0	0	3,213	0	2,336	0	2,336	683	(24,580)
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	2,721	0	2,721	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	
<b>NUM</b>	77,008	73,684	11,899	0	162,591	172,582	67,534	0	240,496	(77,985)	
<b>NPV</b>	15,368	29,427	5,030	0	53,825	62,655	15,178	0	77,833	(24,808)	

In Service of Gen Unit: 2019  
 Discount Rate: 3.89 %  
 Benefit/Cost Ratio (Col(6) / Col(10)) 0.69



## **BUSINESS PHOTOVOLTAICS**

INPUT DATA - PART 1 CONTINUED  
PROGRAM/DESIGN SEARCHED: REV\_REQ  
PROGRAMNAME: Business Photovoltaics (P7)

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	6.86 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.15 KW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KVA REDUCTION PER CUSTOMER .....	3,204.93 KVA
(5) KVA LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KVA INCREASE AT METER .....	0.00 KVA

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 .....	1.79738
(5) K FACTOR FOR T & D .....	1.62254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER .....	*** \$/COST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/COST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$/COST
(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 RATE .....	*** %**
+ (10) UTILITY DISCOUNT RATE .....	3.89 %
- (11) UTILITY AFUDC RATE .....	3.48 %
+ (12) UTILITY NONRECURRING REBATE/INCENTIVE .....	*** \$/COST
+ (13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/COST
- (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 .....	725.28 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.72 \$/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 .....	2.81 \$/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 .....	0.126 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 KW-H** (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/60
(4) DEMAND CHARGE ESCALATION RATE .....	*** %



CALCULATION OF GEN-K-FACTOR  
 PROGRAM METHOD SELECTED REV. REQ  
 PROGRAM NAME: Business Photovoltaics (P<sup>2</sup>)

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	NEG-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(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	2,661	83	0	186	122	43	16	104	8	335	335	2,385
2020	2,537	79	0	178	84	43	16	104	34	339	495	2,669
2021	2,419	75	0	169	83	41	17	104	29	318	437	2,726
2022	2,285	71	0	160	82	39	17	104	24	497	385	2,794
2023	2,159	67	0	151	81	37	17	104	19	477	339	2,864
2024	2,036	63	0	142	80	35	18	104	15	458	299	2,936
2025	1,917	60	0	134	79	34	18	104	11	439	263	3,009
2026	1,802	56	0	126	77	32	19	104	8	421	222	3,084
2027	1,690	53	0	118	75	30	19	104	7	404	204	3,161
2028	1,579	49	0	110	68	28	20	104	7	386	179	3,240
2029	1,468	46	0	102	63	26	20	104	7	369	157	3,321
2030	1,357	42	0	95	58	24	21	104	7	351	138	3,404
2031	1,246	39	0	87	54	22	21	104	7	334	120	3,490
2032	1,136	35	0	79	49	21	22	104	7	317	105	3,577
2033	1,025	32	0	72	44	19	22	104	7	299	91	3,666
2034	914	28	0	64	39	17	23	104	7	282	79	3,758
2035	805	25	0	56	34	15	23	104	7	264	68	3,852
2036	692	21	0	48	29	13	24	104	7	247	58	3,948
2037	581	18	0	41	24	11	25	104	7	230	50	4,047
2038	470	15	0	33	20	9	25	104	7	213	42	4,148
2039	359	11	0	25	16	7	26	104	(13)	195	36	4,252
2040	250	8	0	19	14	6	27	104	(30)	181	30	4,358
2041	202	6	0	14	11	5	27	104	(30)	170	26	4,467
2042	135	4	0	9	8	4	28	104	(30)	159	22	4,579
2043	67	2	0	5	5	(0)	29	104	(30)	148	19	4,695

IN SERVICE COST (\$000)	2,595
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	32.57%
DISCOUNT RATE	8.59%
PROPERTY TAX	1.88%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE		
SOURCE	WRIGHT	COST
DEBT	40%	7.03%
P/S	9%	0.00%
CS	50%	12.50%

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

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Boston Pharmaceuticals (P7)

(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 DEPRECIATION 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%	35	35	104	104	34	34	0	242	0	0	0	0	(66)
2020	7.22%	182	277	104	208	34	138	34	242	0	0	0	34	(24)
2021	6.68%	168	445	104	311	34	202	29	242	0	0	0	29	(5)
2022	6.18%	156	601	104	415	34	276	24	242	0	0	0	24	21
2023	5.71%	144	745	104	519	34	371	19	242	0	0	0	19	48
2024	5.29%	133	879	104	623	34	485	15	242	0	0	0	15	53
2025	4.89%	123	1,002	104	727	34	609	11	242	0	0	0	11	67
2026	4.53%	114	1,116	104	830	34	733	8	242	0	0	0	8	74
2027	4.46%	113	1,229	104	934	34	847	7	242	0	0	0	7	81
2028	4.46%	113	1,341	104	1,038	34	941	7	242	0	0	0	7	89
2029	4.46%	113	1,454	104	1,142	34	1,035	7	242	0	0	0	7	96
2030	4.46%	113	1,566	104	1,247	34	1,129	7	242	0	0	0	7	103
2031	4.46%	113	1,679	104	1,349	34	1,223	7	242	0	0	0	7	110
2032	4.46%	113	1,792	104	1,453	34	1,317	7	242	0	0	0	7	117
2033	4.46%	113	1,904	104	1,557	34	1,412	7	242	0	0	0	7	124
2034	4.46%	113	2,017	104	1,661	34	1,506	7	242	0	0	0	7	131
2035	4.46%	113	2,129	104	1,764	34	1,600	7	242	0	0	0	7	138
2036	4.46%	113	2,242	104	1,868	34	1,694	7	242	0	0	0	7	146
2037	4.46%	113	2,354	104	1,972	34	1,788	7	242	0	0	0	7	153
2038	4.46%	113	2,467	104	2,076	34	1,882	7	242	0	0	0	7	160
2039	2.23%	36	2,523	104	2,180	34	1,976	(13)	242	0	0	0	(13)	145
2040	0.00%	0	2,523	104	2,283	34	2,070	(36)	242	0	0	0	(36)	109
2041	0.00%	0	2,523	104	2,387	34	2,164	(36)	242	0	0	0	(36)	73
2042	0.00%	0	2,523	104	2,491	34	2,258	(36)	242	0	0	0	(36)	36
2043	0.00%	0	2,523	104	2,595	34	2,353	(36)	242	0	0	0	(36)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2039
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(66)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	242
BOOK DEPR RATE - 10% USEFUL LIFE	4.89%



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

(1) YEAR	(2) TAX DEPRECIATION SCHEDULE	(3) TAX DEPRECIATION \$(000)	(4) DEFERRED TAX \$(000)	(5) END OF YEAR NET PLANT IN SERVICE \$(000)	(6)* ACCUMULATED DEPRECIATION \$(000)	(7)* ACCUMULATED DEF TAXES \$(000)	(8) BEGINNING YEAR RATE BASE \$(000)	(9) ENDING OF YEAR RATE BASE \$(000)	(10) MID-YEAR RATE BASE \$(000)
2019	3.75%	95	0	2,491	164	(60)	2,461	2,397	2,429
2020	7.22%	122	34	2,367	268	(33)	2,337	2,419	2,488
2021	6.88%	128	29	2,239	311	(3)	2,419	2,384	2,333
2022	4.18%	156	24	2,180	415	21	2,286	2,159	2,223
2023	5.71%	144	19	2,076	519	40	2,139	2,034	2,097
2024	5.29%	133	15	1,972	623	53	2,036	1,917	1,974
2025	4.89%	121	11	1,868	727	67	1,917	1,802	1,839
2026	4.52%	114	8	1,764	830	74	1,802	1,690	1,746
2027	4.40%	113	7	1,661	934	81	1,690	1,579	1,635
2028	4.40%	113	7	1,557	1,038	89	1,579	1,468	1,524
2029	4.40%	113	7	1,453	1,142	96	1,468	1,357	1,413
2030	4.40%	113	7	1,349	1,245	103	1,357	1,246	1,302
2031	4.40%	113	7	1,245	1,349	110	1,246	1,136	1,191
2032	4.40%	113	7	1,142	1,453	117	1,136	1,025	1,080
2033	4.40%	113	7	1,038	1,557	124	1,025	914	969
2034	4.40%	113	7	934	1,661	131	914	803	858
2035	4.40%	113	7	830	1,764	138	803	692	747
2036	4.40%	113	7	727	1,868	146	692	581	636
2037	4.40%	113	7	623	1,972	153	581	470	525
2038	4.40%	113	7	519	2,076	160	470	359	415
2039	2.23%	56	(15)	415	2,180	165	359	270	315
2040	0.00%	0	(30)	311	2,286	168	270	202	234
2041	0.00%	0	(30)	268	2,387	73	202	135	169
2042	0.00%	0	(30)	224	2,491	26	135	67	101
2043	0.00%	0	(30)	(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 (\$K/W)	(7) CUMULATIVE AVERAGE SPENDING (\$K/W)
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	0.19%	1.94	0.62
2014	-5	3.00%	1.159	1.90%	15.59	5.34
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.20%	351.37	221.77
2017	-2	3.00%	1.267	45.74%	428.27	394.34
2018	-1	3.00%	1.305	10.44%	38.79	858.38

100.00%      907.77

YEAR	NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$K/W)	(9a) DEBT AFUDC (\$K/W)	(9b) CUMULATIVE DEBT AFUDC (\$K/W)	(9) YEARLY TOTAL AFUDC (\$K/W)	(9a) CUMULATIVE TOTAL AFUDC (\$K/W)	(9b) CONSTRUCTION PERIOD INTEREST (\$K/W)	(9c) CUMULATIVE CFI (\$K/W)	(9d) DEFERRED TAXES (\$K/W)	(9e) CUMULATIVE DEFERRED TAXES (\$K/W)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$K/W)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$K/W)
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	0.62	0.62	0.85	0.62	0.04	0.04	(0.61)	(0.61)	1.29	1.29
2014	-5	5.29	0.29	0.36	0.79	0.94	0.63	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.96	2.65	3.35	(0.37)	(0.72)	42.43	60.50
2016	-3	236.84	7.87	8.56	19.29	23.36	15.90	19.25	(4.11)	(4.13)	351.16	412.66
2017	-2	622.20	19.46	20.01	51.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	881.63
2018	-1	934.23	29.46	27.47	80.29	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	725,389,065
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAC BASIS
CONSTRUCTION CASE	2,312	2,312	2,312
EQUITY AFUDC	942	140	
DEBT AFUDC	140	140	
CFI			311
TOTAL	2,393	2,393	2,923

\* Column not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business PhotoVolts (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 KVA EFFECTIVENESS FACTOR
2009	0	0	6.79	3.17	6.79	0.00	0.00	0.00
2010	143	143	6.41	16.51	6.41	0.00	0.00	0.00
2011	292	292	6.25	18.28	6.25	0.00	0.00	0.00
2012	1,062	1,062	6.43	9.01	6.28	0.00	1.00	1.00
2013	1,567	1,567	7.06	8.90	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	9.09	11.45	9.33	0.00	0.97	0.97
2017	2,128	2,128	9.75	12.59	10.06	0.00	0.97	0.97
2018	2,128	2,128	10.82	13.42	10.88	0.00	0.96	0.96
2019	2,128	2,128	11.58	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	16.26	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	13.85	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	11.26	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	16.32	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	17.81	11.88	0.88	0.88
2033	2,128	2,128	18.27	20.32	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	22.78	24.74	22.87	13.22	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	28.05	26.83	14.40	0.82	0.82
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.















**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 .....	2.66 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	1,394.83 KWH
(5) KW LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LOSS LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KW INCREASE AT METER .....	0.05 KVA

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 .....	1.7078
(5) K FACTOR FOR T & D .....	1.0254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON-RECURRING COST PER CUSTOMER .....	*** \$/CUSTOMER
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$/CUSTOMER
(3) UTILITY COST ESCALATION RATE .....	*** %
(4) CUSTOMER EQUIPMENT COST .....	*** \$/CUSTOMER
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %
(6) CUSTOMER O & M COST .....	*** \$/CUSTOMER
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %
(8) INCREASED SUPPLY COSTS .....	*** \$/CUSTOMER
(9) SUPPLY COSTS ESCALATION RATE .....	*** %
(10) UTILITY DISCOUNT RATE .....	8.89 %
(11) UTILITY APOD RATE .....	8.89 %
(12) UTILITY NON-RECURRING REBATE/INCENTIVE .....	*** \$/CUSTOMER
(13) UTILITY RECURRING REBATE/INCENTIVE .....	*** \$/CUSTOMER
(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 .....	2010
(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 .....	1.04 %
(8) GENERATOR FIXED O & M COST .....	37.66 \$/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 .....	0.156 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %
(15) GENERATOR CAPACITY FACTOR .....	054 % (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$23 CENTS PER KW-HR (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.78 %

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/D
(4) DEMAND CHARGE ESCALATION RATE .....	*** %



**CALCULATION OF GEN K-FACTOR**  
**PROGRAM/AGENCY SELECTED REV\_REQ**  
**PROGRAMNAME: Business Pk available for Schools**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	REQ-YEAR RATEBASE \$'(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 \$'(000)	CUMULATIVE PW FIXED CHARGES \$'(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$'(000)
2019	207	7	0	17	11	4	1	9	0	49	49	49	251
2020	208	7	0	16	7	4	1	9	3	48	44	93	257
2021	215	7	0	15	7	4	1	9	3	46	39	132	263
2022	205	6	0	14	7	3	2	9	2	44	34	167	269
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	171	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	(9)	3	9	(5)	13	2	394	418

IN SERVICE COST (\$000)	251
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
DEPR. FACRATES	18.575
DISCOUNT RATE	8.5%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE		
SOURCE	AMOUNT	COST
DEBT	44%	7.03
P/S	5%	0.80
C/S	50%	12.30

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

DEFERRED TAX AND MID-YEAR RATEBASE CALCULATION  
 PROGRAM: MATHMOD SELECTED: RBY\_88Q  
 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 LEASE	(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	7.22%	16	25	9	18	8	17	3	21	0	0	0	3	(3)
2021	4.82%	15	40	9	28	8	25	3	22	0	0	0	3	(3)
2022	6.18%	14	54	9	37	8	33	2	22	0	0	0	2	(2)
2023	5.71%	13	68	9	46	8	42	2	22	0	0	0	2	2
2024	5.29%	12	78	9	53	8	49	1	22	0	0	0	2	4
2025	4.89%	11	89	9	60	8	56	1	22	0	0	0	1	5
2026	4.52%	10	99	9	74	8	67	1	22	0	0	0	1	6
2027	4.40%	10	109	9	83	8	75	1	22	0	0	0	1	7
2028	4.40%	10	119	9	92	8	84	1	22	0	0	0	1	7
2029	4.40%	10	129	9	102	8	92	1	22	0	0	0	1	8
2030	4.40%	10	139	9	111	8	100	1	22	0	0	0	1	9
2031	4.40%	10	149	9	120	8	108	1	22	0	0	0	1	9
2032	4.40%	10	159	9	129	8	117	1	22	0	0	0	1	10
2033	4.40%	10	169	9	139	8	126	1	22	0	0	0	1	10
2034	4.40%	10	179	9	148	8	134	1	22	0	0	0	1	11
2035	4.40%	10	190	9	157	8	142	1	22	0	0	0	1	12
2036	4.40%	10	200	9	166	8	151	1	22	0	0	0	1	12
2037	4.40%	10	210	9	176	8	159	1	22	0	0	0	1	13
2038	4.40%	10	220	9	185	8	167	1	22	0	0	0	1	14
2039	2.25%	5	225	9	194	8	176	(1)	22	0	0	0	1	14
2040	0.00%	0	225	9	203	8	184	(3)	22	0	0	0	(1)	13
2041	0.00%	0	225	9	212	8	193	(3)	22	0	0	0	(3)	10
2042	0.00%	0	225	9	222	8	201	(3)	22	0	0	0	(3)	6
2043	0.00%	0	225	9	231	8	209	(3)	22	0	0	0	(3)	3
													(3)	0

SALVAGE / REMOVAL COST	0.00
LEASE 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	4.80%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Photocopies 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)	(6)* ACCUMULATED DEPRECIATION \$(000)	(7)* ACCUMULATED DEFERRED TAXES \$(000)	(8) REPAIRING YEAR RATE BASE \$(000)	(9) ENDING OF YEAR RATE BASE \$(000)	(10) MID-YEAR RATE BASE \$(000)
2019	3.75%	8	0	222	9	(6)	237	228	222
2020	7.22%	16	3	212	18	(5)	228	215	221
2021	6.82%	15	3	203	28	(0)	215	203	209
2022	6.32%	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	63	6	171	160	163
2026	4.52%	10	1	157	71	7	160	150	153
2027	4.16%	10	1	148	80	7	150	141	145
2028	4.46%	10	1	139	89	8	141	131	136
2029	4.46%	10	1	129	98	9	131	121	126
2030	4.46%	10	1	120	107	9	121	111	116
2031	4.46%	10	1	111	116	10	111	101	106
2032	4.46%	10	1	102	125	10	101	91	96
2033	4.46%	10	1	92	134	11	91	81	86
2034	4.46%	10	1	83	143	12	81	71	76
2035	4.46%	10	1	74	152	12	71	62	67
2036	4.46%	10	1	65	160	13	62	52	57
2037	4.46%	10	1	55	169	14	52	42	47
2038	4.46%	10	1	46	178	14	42	32	37
2039	2.23%	5	(1)	37	184	13	32	24	28
2040	0.00%	0	(2)	28	203	10	24	18	21
2041	0.00%	0	(3)	18	212	6	18	12	15
2042	0.00%	0	(3)	9	221	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 (\$/Y)	(7) CUMULATIVE AVERAGE SPENDING (\$/Y)
2009	-10	3.00%	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	57.30%	331.87	222.77
2017	-2	3.00%	1.267	45.54%	430.27	394.84
2018	-1	3.00%	1.305	10.44%	58.79	258.38

YEAR	NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/Y)	(9a) DEBT AFUDC (\$/Y)	(9b) CUMULATIVE DEBT AFUDC (\$/Y)	(7) YEARLY TOTAL AFUDC (\$/Y)	(9c) CUMULATIVE TOTAL AFUDC (\$/Y)	(9d) CONSTRUCTION PERIOD INTEREST (\$/Y)	(9e) CUMULATIVE CFY (\$/Y)	(9f) DEFERRED TAXES (\$/Y)	(9g) CUMULATIVE DEFERRED TAXES (\$/Y)	(10)	(11)
											INCREMENTAL YEAR-END BOOK VALUE (\$/Y)	CUMULATIVE YEAR-END BOOK VALUE (\$/Y)
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	0.62	0.62	0.65	0.65	0.64	0.64	(0.61)	(0.61)	1.29	1.29
2014	-5	9.29	6.29	6.29	6.79	6.84	6.65	6.70	(6.16)	(6.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	3.65	3.35	(3.57)	(3.79)	42.83	60.90
2016	-3	226.84	7.67	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.81	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	304.33	29.46	57.47	80.59	156.84	64.78	127.50	(23.63)	(27.82)	179.18	1,064.61

	37.47	154.84	127.50	(27.62)	1,044.61
IN SERVICE YEAR 2019					
PLANT COSTS 725,389,653					
AFUDC RATE 3.48%					
		BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS	
CONSTRUCTION CASE		197	197	197	
EQUITY AFUDC		12	12		
DEBT AFUDC				35	
CFY					
TOTAL		209	209	232	

\* Column not specified in workbook



INPUT DATA - PART 2  
PROGRAMMER/CO SELECTION: REV\_REQ  
PROGRAMNAME: Business Photovoltaics for Schools

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	COMPLAINTIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED COMPLAINTIVE 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/L94 EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	8.00	0.00	0.00
2010	2	2	6.41	8.81	6.74	8.00	1.00	1.00
2011	55	55	6.35	8.34	6.64	8.00	0.99	0.99
2012	105	105	6.43	8.30	6.69	8.00	0.99	0.99
2013	152	152	7.06	8.30	7.25	8.00	0.98	0.98
2014	189	189	7.53	8.62	7.69	8.00	0.97	0.97
2015	189	189	8.11	9.53	8.33	8.00	0.97	0.97
2016	189	189	9.00	11.45	9.33	8.00	0.96	0.96
2017	189	189	9.75	12.59	10.08	8.00	0.96	0.96
2018	189	189	10.92	13.62	10.88	8.00	0.95	0.95
2019	189	189	11.59	15.12	11.97	10.61	0.94	0.94
2020	189	189	12.08	15.69	12.57	10.50	0.94	0.94
2021	189	189	12.57	16.50	13.08	10.24	0.93	0.93
2022	189	189	13.06	17.14	13.59	10.81	0.92	0.92
2023	189	189	13.59	17.16	13.92	10.80	0.92	0.92
2024	189	189	13.95	17.82	14.67	10.84	0.91	0.91
2025	189	189	14.44	18.23	14.92	10.96	0.91	0.91
2026	189	189	14.79	18.33	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	15.69	19.12	16.04	11.56	0.89	0.89
2029	189	189	16.02	19.84	16.61	11.61	0.88	0.88
2030	189	189	16.32	19.64	16.98	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	18.79	20.17	18.85	12.24	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	25.90	27.05	25.57	14.10	0.81	0.81
2043	189	189	26.74	28.25	26.83	14.40	0.81	0.81
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.













**RESIDENTIAL AIR CONDITIONING**



INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: KBY\_RBQ  
PROGRAM NAME: Residential Ab-Con 4000watt

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.50 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.57 KW
(3) KW LINE LOSS PERCENTAGE .....	8.66 %
(4) GENERATOR KW/LINE REDUCTION PER CUSTOMER .....	1.12127 KW/L
(5) KW/L LINE LOSS PERCENTAGE .....	6.90 %
(6) GRID LOSS MULTIPLIER .....	1.50
(7) CUSTOMER KW INCREASE AT METER .....	0.00 KW/L

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) L&D ECONOMIC LIFE .....	33 YEARS
(4) K FACTOR FOR GENERATION .....	1.70738
(5) K FACTOR FOR T & D .....	1.62054

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECORING COST PER CUSTOMER .....	--- \$/CUST
(2) UTILITY RECORDING 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 RATE .....	--- %
(10) UTILITY DISCOUNT RATE .....	8.89 %
(11) UTILITY APFD C RATE .....	8.48 %
(12) UTILITY NON RECORING REBATE/INCENTIVE .....	--- \$/CUST
(13) UTILITY RECORDING 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 L&D COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2010
(3) IN-SERVICE YEAR FOR AVOIDED L&D .....	2015-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.50 \$/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 \$/CUST/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 .....	1.81 \$/KW
(12) L&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 .....	7% (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.23 CENTS PER KWHR** (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/MS
(4) DEMAND CHARGE ESCALATION RATE .....	--- %



CALCULATION OF GENTLE-FACTOR  
 PROGRAM METHOD SELECTED REV\_REQ  
 PROGRAM NAME: Residential Air-Conditioning

YEAR	(2) REG-YEAR RATEBASE \$(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) DEPR/HC \$(000)	(10) DEFERRED TAXES \$(000)	(11) TOTAL FIXED CHARGES \$(000)	(12) PRESENT WORKS FIXED CHARGES \$(000)	(13) COMPLIANT PW/FIXED CHARGES \$(000)	(14) REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	536,346	16,010	0	36,034	21,772	8,702	3,072	20,143	30	107,801	107,801	107,801	503,567
2020	496,164	15,413	0	34,626	16,354	8,339	3,149	20,143	4,892	104,395	94,169	203,829	516,156
2021	469,430	14,382	0	32,760	16,186	7,976	3,227	20,143	5,568	106,448	84,717	206,376	529,060
2022	443,719	13,784	0	30,966	15,998	7,614	3,306	20,143	6,229	96,442	74,703	203,280	542,286
2023	418,947	13,014	0	29,237	15,795	7,251	3,381	20,143	3,947	92,578	63,858	197,137	555,944
2024	395,457	12,272	0	27,570	15,556	6,889	3,475	20,143	2,938	88,844	58,043	187,180	569,740
2025	373,976	11,555	0	25,959	15,285	6,526	3,561	20,143	2,189	85,229	51,157	178,317	583,983
2026	354,645	10,861	0	24,401	15,007	6,164	3,651	20,143	1,497	81,794	43,002	169,349	598,383
2027	338,065	10,189	0	22,891	14,722	5,801	3,743	20,143	1,384	78,523	39,635	162,984	613,547
2028	324,479	9,521	0	21,388	14,431	5,439	3,836	20,143	1,382	74,939	34,828	157,512	628,886
2029	284,954	8,832	0	19,886	14,285	5,076	3,932	20,143	1,384	71,538	30,542	148,265	644,608
2030	263,427	8,153	0	18,384	14,144	4,713	4,030	20,143	1,382	68,179	26,785	141,080	658,723
2031	241,903	7,515	0	16,882	14,009	4,351	4,131	20,143	1,384	64,803	23,329	133,240	677,241
2032	220,376	6,846	0	15,380	13,877	3,988	4,234	20,143	1,382	61,430	20,389	128,718	694,172
2033	198,852	6,177	0	13,877	13,877	3,625	4,340	20,143	1,384	58,059	17,628	126,347	711,527
2034	177,325	5,508	0	12,375	13,757	3,263	4,449	20,143	1,382	54,694	15,280	121,597	728,515
2035	155,800	4,840	0	10,873	13,605	2,901	4,560	20,143	1,384	51,325	13,144	114,741	747,548
2036	134,274	4,171	0	9,371	13,454	2,538	4,674	20,143	1,382	47,962	11,280	110,021	766,256
2037	112,749	3,502	0	7,868	13,288	2,175	4,791	20,143	1,384	44,602	9,634	102,655	785,392
2038	91,223	2,834	0	6,366	13,125	1,813	4,911	20,143	1,382	41,245	8,182	93,836	805,027
2039	69,698	2,165	0	4,864	12,966	1,450	5,033	20,143	(2,830)	37,891	6,903	84,739	825,153
2040	48,172	1,497	0	3,362	12,811	1,088	5,159	20,143	(7,045)	35,149	5,881	84,620	845,782
2041	26,646	814	0	1,860	12,660	725	5,288	20,143	(7,045)	33,021	5,074	85,193	866,928
2042	5,120	147	0	314	12,513	363	5,428	20,143	(7,045)	30,896	4,360	85,653	888,599
2043	13,892	487	0	914	12,370	0	5,566	20,143	(7,045)	28,774	3,729	85,782	910,714

IN SERVICE COST (\$000)	503,567
IN SERVICE YEAR	2019
BOOK LIVES (YRS)	25
INSTR. TAX RATE	24.57%
DISCOUNT RATE	8.9%
PROPERTY TAX	1.88%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE		
SOURCE	PERCENT	COST
DEBT	40%	7.03%
P/E	0%	0.00%
CS	60%	12.50%

E-FACTOR = CP/WFC / IN-SVC COST = 1.70738

DEFERRED TAX AND MID-YEAR RATE-BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Ab-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 LIFE	(10)*(11) TAX RATE (\$000)	SALVAGE TAX RATE (\$000)	ANNUAL DEFERRED TAX (\$)-(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	39	(12,790)	
2020	7.22%	35,251	53,714	20,143	40,285	18,263	36,525	6,592	47,003	0	0	6,592	(6,148)	
2021	4.88%	32,097	86,411	20,143	60,428	18,263	54,788	1,568	47,003	0	0	1,568	(588)	
2022	4.18%	30,263	116,674	20,143	80,571	18,263	73,050	4,629	47,003	0	0	4,629	4,069	
2023	5.72%	27,976	144,650	20,143	100,713	18,263	91,313	3,747	47,003	0	0	3,747	7,796	
2024	5.29%	25,889	170,539	20,143	120,856	18,263	109,575	2,938	47,003	0	0	2,938	10,734	
2025	4.89%	23,836	194,446	20,143	140,999	18,263	127,838	2,189	47,003	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	1,497	14,420	
2027	4.48%	21,830	238,440	20,143	181,284	18,263	164,363	1,384	47,003	0	0	1,384	15,804	
2028	4.48%	21,845	260,285	20,143	201,427	18,263	182,626	1,382	47,003	0	0	1,382	17,186	
2029	4.48%	21,850	282,133	20,143	221,569	18,263	200,888	1,384	47,003	0	0	1,384	18,570	
2030	4.48%	21,845	304,000	20,143	241,712	18,263	219,151	1,382	47,003	0	0	1,382	19,952	
2031	4.48%	21,830	325,830	20,143	261,853	18,263	237,413	1,384	47,003	0	0	1,384	21,336	
2032	4.48%	21,845	347,675	20,143	281,997	18,263	255,675	1,382	47,003	0	0	1,382	22,718	
2033	4.48%	21,850	369,545	20,143	302,140	18,263	273,938	1,384	47,003	0	0	1,384	24,102	
2034	4.48%	21,845	391,390	20,143	322,283	18,263	292,201	1,382	47,003	0	0	1,382	25,484	
2035	4.48%	21,830	413,240	20,143	342,425	18,263	310,464	1,384	47,003	0	0	1,384	26,867	
2036	4.48%	21,845	435,085	20,143	362,568	18,263	328,726	1,382	47,003	0	0	1,382	28,249	
2037	4.48%	21,850	456,956	20,143	382,711	18,263	346,989	1,384	47,003	0	0	1,384	29,633	
2038	4.48%	21,845	478,781	20,143	402,853	18,263	365,251	1,382	47,003	0	0	1,382	31,015	
2039	2.25%	10,923	489,706	20,143	422,996	18,263	383,514	(2,830)	47,003	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	(7,045)	21,140	
2041	0.00%	0	489,706	20,143	463,281	18,263	420,039	(7,045)	47,003	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	(7,045)	7,050	
2043	0.00%	0	489,706	20,143	503,567	18,263	456,564	(7,045)	47,003	0	0	(7,045)	0	

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 - 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) END OF YEAR NET PLANT IN SERVICE	(6)* ACCUMULATED DEPRECIATION	(7)* ACCUMULATED DEF TAXES	(8) BEGINNING YEAR RATE BASE	(9) ENDING OF YEAR RATE BASE	(10) MID-YEAR RATE BASE
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2019	3.75%	18,363	39	483,424	20,143	(12,740)	516,344	496,164	506,253
2020	7.22%	35,351	6,392	443,281	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	422,896	80,571	4,949	443,719	418,947	431,333
2023	5.71%	27,976	3,747	402,833	100,713	7,796	418,947	395,057	407,082
2024	5.29%	25,880	2,938	382,711	120,856	18,734	395,057	371,974	383,517
2025	4.89%	23,936	2,189	362,568	140,999	12,923	371,974	349,645	360,811
2026	4.52%	22,144	1,497	342,425	161,141	14,420	349,645	328,005	338,825
2027	4.16%	21,330	1,094	322,283	181,284	15,804	328,005	306,479	317,242
2028	4.46%	21,945	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%	21,945	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%	21,945	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%	21,945	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%	21,945	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%	21,945	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	0.89%	0	(7,045)	60,428	443,139	21,140	52,386	39,288	45,837
2041	0.89%	0	(7,045)	40,285	463,281	14,095	39,288	26,190	32,739
2042	0.89%	0	(7,045)	20,143	483,424	7,040	26,190	13,092	19,641
2043	0.89%	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 (\$K/W)	(7) CUMULATIVE AVERAGE SPENDING (\$K/W)
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	0.22
2014	-5	3.00%	1.159	1.90%	15.59	9.24
2015	-4	3.00%	1.194	4.57%	36.61	37.03
2016	-3	3.00%	1.230	37.28%	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	858.33

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) CUMULATIVE SPENDING WITH AFUDC (\$K/W)	(4)* DEBT AFUDC (\$K/W)	100.00%		(6)* TOTAL AFUDC (\$K/W)	(7)* CONSTRUCTION PERIOD INTEREST (\$K/W)	(8)* CUMULATIVE CPI (\$K/W)	(9)* DEFERRED TAXES (\$K/W)	(10) CUMULATIVE DEFERRED TAXES (\$K/W)	(11) INCREMENTAL YEAR-END BOOK VALUE (\$K/W)	(12) CUMULATIVE YEAR-END BOOK VALUE (\$K/W)
				(5) DEBT AFUDC (\$K/W)	(6) YEARLY TOTAL AFUDC (\$K/W)							
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	0.29	0.79	0.84	0.85	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.13	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	37.47	80.39	156.84	64.78	127.50	(13.63)	(27.82)	179.18	1,064.61

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

	37.47	156.84	127.50	(27.02)	1,064.61
CONSTRUCTION CASH			429,382		
EQUITY AFUDC		47,003			
DEBT AFUDC	27,182		27,182		
CPI				61,209	
TOTAL	563,567	456,564	456,564	489,691	

\* Columns not specified in workbook

INPUT DATA - PART 2  
 PROGRAM METHOD SELECTED: REV\_BEQ  
 PROGRAM NAME: RestGenHl Air-CondWiring

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) 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	81,694	81,694	6.41	9.81	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	232,689	232,689	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	496,213	496,213	8.11	9.61	8.31	0.00	1.00	1.00
2016	578,557	578,557	9.00	11.35	9.31	0.00	1.00	1.00
2017	643,877	643,877	9.75	12.72	10.66	0.00	1.00	1.00
2018	702,497	702,497	10.32	13.53	10.86	0.00	1.00	1.00
2019	702,497	702,497	11.50	15.25	11.94	16.41	1.00	1.00
2020	702,497	702,497	12.88	15.88	12.57	16.58	1.00	1.00
2021	702,497	702,497	12.57	16.53	13.68	16.74	1.00	1.00
2022	702,497	702,497	13.86	17.14	13.59	16.81	1.00	1.00
2023	702,497	702,497	13.39	17.16	13.92	16.88	1.00	1.00
2024	702,497	702,497	13.95	17.82	14.47	16.94	1.00	1.00
2025	702,497	702,497	14.48	18.22	14.92	16.96	1.00	1.00
2026	702,497	702,497	14.70	18.32	15.19	17.05	1.00	1.00
2027	702,497	702,497	15.13	18.54	15.60	17.17	1.00	1.00
2028	702,497	702,497	15.60	18.91	16.05	17.36	1.00	1.00
2029	702,497	702,497	16.02	18.85	16.44	17.41	1.00	1.00
2030	702,497	702,497	16.52	19.26	16.92	17.59	1.00	1.00
2031	702,497	702,497	17.08	19.86	17.47	17.80	1.00	1.00
2032	702,497	702,497	17.50	19.62	17.84	17.88	1.00	1.00
2033	702,497	702,497	18.27	20.34	18.30	18.10	1.00	1.00
2034	702,497	702,497	18.73	20.08	18.66	18.14	1.00	1.00
2035	702,497	702,497	19.57	21.37	19.75	18.28	1.00	1.00
2036	702,497	702,497	20.46	22.39	20.54	18.55	1.00	1.00
2037	702,497	702,497	21.11	22.91	21.24	18.70	1.00	1.00
2038	702,497	702,497	22.02	23.86	22.16	18.04	1.00	1.00
2039	702,497	702,497	22.78	24.49	22.89	18.32	1.00	1.00
2040	702,497	702,497	23.59	25.04	23.68	18.44	1.00	1.00
2041	702,497	702,497	24.54	25.93	24.62	18.73	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	14.60	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.















**RESIDENTIAL DUCT SYSTEM TESTING & REPAIR**

INPUT DATA -- PART 1 CONTINUED  
PROGRAMMED METHOD SELECTED: KEY\_REQ  
PROGRAM NAME: Residential Dist System Testing and Repath

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 .....	2.64 %
(4) GENERATOR KW LOSS REDUCTION PER CUSTOMER .....	374.32 KWh
(5) KW LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIFLIER .....	1.09
(7) CUSTOMER KVA INCREASE AT METER .....	0.00 KVA

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 .....	33 YEARS
(4) K FACTOR FOR GENERATION .....	1.7078
(5) K FACTOR FOR T & D .....	1.6254

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 RATE .....	*** %**
(10) UTILITY DISCOUNT RATE .....	8.89 %
(11) UTILITY AFUDC RATE .....	8.68 %
(12) UTILITY NON-RECURRING REBATE INCENTIVE .....	*** \$CUST
(13) UTILITY RECURRING REBATE INCENTIVE .....	*** \$CUST
(14) UTILITY REBATE INCENTIVE ESCALATION RATE .....	*** %

\* SUPPLEMENTAL INFORMATION NOT SEARCHED IN WORKBOOK  
\*\* VALUES 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 .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2010
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2010-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	783.39 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	181.32 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	20.04 \$/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 .....	0.10¢ CENTS/KW
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (10-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER KW-HR** (10-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/KW
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGES IN CUSTOMER BILL .....	*** \$/KW&D
(4) DEMAND CHARGE ESCALATION RATE .....	*** %





**CALCULATION OF GENEX FACTOR  
PROGRAMMED SECURED MSV REQ  
PROGRAM NAME: Residential Duct System Testing and Repair**

(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 EDEDGED CHANGES \$'(000)	PRESENT WORKS FIDED CHANGES \$'(000)	CUMULATIVE PW FIDED CHANGES \$'(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$'(000)
2019	105,434	3,275	0	7,357	4,854	1,777	827	4,113	8	23,010	23,010	23,010	102,815
2020	101,303	2,147	0	7,970	3,335	1,783	648	4,113	1,346	21,356	19,613	41,623	185,385
2021	95,845	2,977	0	6,689	3,385	1,629	639	4,113	1,137	20,598	17,297	38,920	198,620
2022	90,594	2,814	0	4,322	2,266	1,533	675	4,113	945	19,491	15,282	74,172	118,729
2023	85,538	2,657	0	5,949	1,225	1,481	692	4,113	785	18,982	13,446	87,618	133,488
2024	80,660	2,506	0	5,829	3,176	1,467	710	4,113	690	18,140	11,851	99,469	116,206
2025	75,948	2,359	0	5,300	3,123	1,351	727	4,113	477	17,441	10,441	109,910	119,934
2026	71,388	2,218	0	4,982	3,064	1,258	746	4,113	386	16,686	9,134	119,104	122,215
2027	66,979	2,080	0	4,674	2,894	1,184	764	4,113	283	15,991	8,092	127,197	125,078
2028	62,723	1,944	0	4,367	2,701	1,110	783	4,113	282	15,301	7,111	134,308	128,402
2029	58,580	1,807	0	4,060	2,508	1,036	803	4,113	283	14,610	6,234	140,544	131,622
2030	54,545	1,671	0	3,754	2,316	962	823	4,113	282	13,920	5,457	146,000	134,942
2031	49,260	1,534	0	3,447	2,123	888	843	4,113	283	13,231	4,763	150,763	138,275
2032	44,995	1,398	0	3,140	1,931	814	863	4,113	282	12,542	4,147	154,910	141,731
2033	40,600	1,261	0	2,833	1,738	740	884	4,113	283	11,854	3,599	158,509	145,275
2034	36,265	1,125	0	2,527	1,546	666	904	4,113	282	11,166	3,114	161,623	148,907
2035	31,810	988	0	2,220	1,353	592	921	4,113	283	10,479	2,634	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	583	296	1,028	4,113	(575)	7,736	1,409	171,636	168,474
2040	10,036	306	0	746	398	222	1,053	4,113	(1,436)	7,177	1,091	172,857	172,686
2041	6,022	169	0	500	203	148	1,080	4,113	(1,438)	6,742	1,006	173,893	177,003
2042	3,347	164	0	373	1914	74	1,107	4,113	(1,438)	6,308	890	174,783	181,428
2043	2,673	85	0	187	1,797	0	1,134	4,113	(1,438)	5,875	761	175,544	185,961

IN SERVICE COST (\$000)	102,815
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
DEPRC TAX RATE	38.57%
DISCOUNT RATE	8.9%
PROPERTY TAX	1.89%
PROPERTY INSURANCE	0.61%

**CAPITAL STRUCTURE**

SOURCE	WEIGHT	COST
DEBT	44%	7.03%
PS	0%	8.00%
CS	56%	12.50%

X-FACTOR =  $\frac{CPWFC}{IN-SVC COST} = 1.79738$

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

(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) TAXRATE \$(000)	SALVAGE TAXRATE \$(000)	ANNUAL DEFERRED TAX \$(10)*(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	3,749	3,749	4,113	4,113	3,729	3,729	0	3,597	0	0	0	0	(2,691)
2020	7.25%	7,218	10,967	4,113	8,225	3,729	7,457	1,346	3,597	0	0	0	1,346	(1,345)
2021	6.69%	6,676	17,643	4,113	12,338	3,729	11,196	1,137	3,597	0	0	0	1,137	(218)
2022	6.15%	6,179	23,822	4,113	16,450	3,729	14,915	945	3,597	0	0	0	945	827
2023	5.71%	5,712	29,534	4,113	20,543	3,729	18,494	765	3,597	0	0	0	765	1,592
2024	5.29%	5,284	34,818	4,113	24,676	3,729	22,372	606	3,597	0	0	0	606	2,192
2025	4.89%	4,857	39,705	4,113	28,288	3,729	25,181	447	3,597	0	0	0	447	2,639
2026	4.52%	4,521	44,226	4,113	32,941	3,729	29,830	304	3,597	0	0	0	304	3,044
2027	4.18%	4,461	48,687	4,113	37,813	3,729	33,529	203	3,597	0	0	0	203	3,227
2028	4.48%	4,469	53,147	4,113	41,226	3,729	37,287	282	3,597	0	0	0	282	3,509
2029	4.48%	4,461	57,609	4,113	45,229	3,729	41,016	283	3,597	0	0	0	283	3,791
2030	4.48%	4,469	62,069	4,113	49,351	3,729	44,745	282	3,597	0	0	0	282	4,074
2031	4.48%	4,461	66,530	4,113	53,464	3,729	48,475	283	3,597	0	0	0	283	4,356
2032	4.48%	4,469	70,990	4,113	57,576	3,729	52,282	282	3,597	0	0	0	282	4,638
2033	4.48%	4,461	75,451	4,113	61,689	3,729	55,931	283	3,597	0	0	0	283	4,921
2034	4.48%	4,469	79,911	4,113	65,801	3,729	59,680	282	3,597	0	0	0	282	5,203
2035	4.48%	4,461	84,373	4,113	69,914	3,729	63,388	283	3,597	0	0	0	283	5,485
2036	4.48%	4,469	88,833	4,113	74,027	3,729	67,117	282	3,597	0	0	0	282	5,768
2037	4.48%	4,461	93,294	4,113	78,139	3,729	70,846	283	3,597	0	0	0	283	6,050
2038	4.48%	4,469	97,754	4,113	82,252	3,729	74,574	282	3,597	0	0	0	282	6,332
2039	2.23%	2,231	99,985	4,113	86,364	3,729	78,303	(578)	3,597	0	0	0	(578)	5,755
2040	0.00%	0	99,985	4,113	90,677	3,729	82,032	(1,438)	3,597	0	0	0	(1,438)	4,316
2041	0.00%	0	99,985	4,113	94,590	3,729	85,761	(1,438)	3,597	0	0	0	(1,438)	2,878
2042	0.00%	0	99,985	4,113	98,702	3,729	89,489	(1,438)	3,597	0	0	0	(1,438)	1,440
2043	0.00%	0	99,985	4,113	102,815	3,729	93,218	(1,438)	3,597	0	0	0	(1,438)	1

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2028
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(2,699)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	3,597
BOOK/DEPR RATE - 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)	(2)	(3)	(4)	(5) END OF YEAR NET	(6)*	(7)*	(8)	(9)	(10)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	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%	3,749	8	38,792	4,113	(2,601)	103,426	101,303	101,394
2020	7.22%	7,218	1,346	34,590	8,225	(1,253)	101,383	95,845	98,574
2021	6.68%	6,676	1,137	30,477	12,338	(318)	95,845	94,506	93,220
2022	6.18%	6,179	945	26,364	16,450	827	90,596	85,538	83,067
2023	5.71%	5,712	763	22,252	20,563	1,592	85,538	80,660	81,089
2024	5.29%	5,284	604	18,139	24,676	2,192	80,660	75,948	78,304
2025	4.89%	4,887	447	14,027	28,788	2,639	75,948	71,388	73,680
2026	4.52%	4,521	306	9,914	32,901	3,244	71,388	66,970	69,179
2027	4.16%	4,161	203	6,801	37,013	3,827	66,970	62,575	64,772
2028	4.46%	4,460	282	61,689	41,126	3,989	62,575	58,180	60,377
2029	4.46%	4,461	283	57,576	45,239	3,791	58,180	53,785	55,983
2030	4.46%	4,460	282	53,464	49,351	4,074	53,785	49,390	51,987
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	42,796
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	5,735	14,230	10,036	12,463
2040	0.00%	0	(1,438)	12,338	90,477	4,316	10,036	6,022	8,359
2041	0.00%	0	(1,438)	8,225	94,590	2,878	6,022	3,547	6,084
2042	0.00%	0	(1,438)	4,113	98,702	1,440	3,547	2,073	4,010
2043	0.00%	0	(1,438)	0	102,815	1	2,073	-1	1,396

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (\$K)	(6) ANNUAL SPENDING (\$K/W)	(7) CUMULATIVE AVERAGE SPENDING (\$K/W)
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	0.13%	1.34	0.62
2014	-5	3.00%	1.159	1.90%	14.99	9.24
2015	-4	3.00%	1.194	4.57%	39.41	37.63
2016	-3	3.00%	1.230	37.00%	331.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	96.79	838.38

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) CUMULATIVE SPENDING WITH AFUDC (\$K/W)	(4)* NET AFUDC (\$K/W)	(5)* CUMULATIVE DEBT AFUDC (\$K/W)	(6) YEARLY TOTAL AFUDC (\$K/W)	(7)* CUMULATIVE TOTAL AFUDC (\$K/W)	(8)* CONSTRUCTION PERIOD INTEREST (\$K/W)	(9)* CUMULATIVE CEI (\$K/W)	(10)* DEFERRED TAXES (\$K/W)	(11)* CUMULATIVE DEFERRED TAXES (\$K/W)	(12) INCREMENTAL YEAR-END BOOK VALUE (\$K/W)	(13) CUMULATIVE YEAR-END BOOK VALUE (\$K/W)
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	0.65	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	9.79	9.84	0.65	0.70	(0.14)	(0.15)	14.78	14.97
2015	-4	37.87	1.18	1.49	3.22	4.86	2.65	3.55	(0.57)	(0.78)	49.83	69.90
2016	-3	236.84	7.07	8.56	19.29	23.36	15.90	19.25	(3.41)	(4.15)	351.16	412.96
2017	-2	622.20	19.46	28.91	53.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	886.43
2018	-1	934.83	29.46	57.47	90.29	136.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,055
AFUDC RATE	3.48%

	57.47	154.84	227.50	(27.02)	1,064.61
	BOOK BASIS	BOOK BASIS	FOR DEF TAX	TAX BASIS	
CONSTRUCTION CASE	37,668	87,668		87,668	
EQUITY AFUDC	9,397				
DEBT AFUDC	5,550	5,550			
CEI				12,514	
TOTAL	102,615	93,218		99,982	

\* Column not specified in workbook

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

(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 KW 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	34,069	34,069	6.35	8.48	6.61	0.00	1.00	1.00
2012	49,930	49,930	6.43	8.45	6.66	0.00	1.00	1.00
2013	125,567	125,567	7.06	8.41	7.32	0.00	1.00	1.00
2014	185,139	185,139	7.53	8.57	7.68	0.00	1.00	1.00
2015	234,738	234,738	8.11	9.61	8.31	0.00	1.00	1.00
2016	291,283	291,283	9.09	11.85	9.31	0.00	1.00	1.00
2017	341,111	341,111	9.75	12.72	10.86	0.00	1.00	1.00
2018	387,839	387,839	10.32	13.29	10.96	0.00	1.00	1.00
2019	387,839	387,839	11.50	15.25	11.54	18.41	1.00	1.00
2020	387,839	387,839	12.88	15.88	12.57	18.50	1.00	1.00
2021	387,839	387,839	12.57	16.33	13.98	18.74	1.00	1.00
2022	387,839	387,839	13.06	17.14	13.29	18.81	1.00	1.00
2023	387,839	387,839	13.39	17.16	13.92	18.89	1.00	1.00
2024	387,839	387,839	13.35	17.82	14.47	18.84	1.00	1.00
2025	387,839	387,839	14.40	18.22	14.92	18.96	1.00	1.00
2026	387,839	387,839	14.70	18.32	15.19	11.05	1.00	1.00
2027	387,839	387,839	15.13	18.54	15.60	11.27	1.00	1.00
2028	387,839	387,839	15.60	18.91	16.05	11.26	1.00	1.00
2029	387,839	387,839	16.02	18.25	16.44	11.41	1.00	1.00
2030	387,839	387,839	16.32	19.26	16.92	11.39	1.00	1.00
2031	387,839	387,839	17.08	19.86	17.47	11.88	1.00	1.00
2032	387,839	387,839	17.50	19.62	17.84	11.88	1.00	1.00
2033	387,839	387,839	18.27	20.38	18.26	12.14	1.00	1.00
2034	387,839	387,839	18.73	20.08	18.75	12.29	1.00	1.00
2035	387,839	387,839	19.37	21.37	19.75	12.55	1.00	1.00
2036	387,839	387,839	20.40	22.39	20.54	12.70	1.00	1.00
2037	387,839	387,839	20.11	22.91	21.24	13.04	1.00	1.00
2038	387,839	387,839	22.02	23.36	22.16	13.04	1.00	1.00
2039	387,839	387,839	22.78	24.49	22.89	13.32	1.00	1.00
2040	387,839	387,839	23.39	25.04	23.68	13.44	1.00	1.00
2041	387,839	387,839	24.54	25.93	24.62	13.75	1.00	1.00
2042	387,839	387,839	25.30	26.84	25.39	14.10	1.00	1.00
2043	387,839	387,839	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

\* 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.















**RESIDENTIAL BUILDING ENVELOPE**

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 .....	867.70 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 .....	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 Building Envelope

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	298	7,627	0	7,925	658	0	16,537	0	16,537	
2011	1,082	10,551	0	11,634	2,367	0	22,173	0	22,173	
2012	1,346	13,217	0	14,563	4,888	0	28,834	0	28,834	
2013	1,632	16,377	0	18,009	8,250	0	37,219	0	37,219	
2014	1,898	18,851	0	20,749	12,675	0	44,274	0	44,274	
2015	2,136	20,486	0	22,623	17,886	0	49,457	0	49,457	
2016	1,974	21,435	0	23,409	23,562	0	53,489	0	53,489	
2017	2,037	22,299	0	24,336	29,902	0	57,461	0	57,461	
2018	2,022	21,757	0	23,780	36,459	0	58,512	0	58,512	
2019	0	0	0	0	40,753	0	0	0	0	
2020	131	5,172	0	5,304	40,880	0	16,611	0	16,611	
2021	813	6,043	0	6,856	41,770	0	19,635	0	19,635	
2022	1,019	7,881	0	8,900	42,982	0	26,276	0	26,276	
2023	1,247	10,266	0	11,513	44,284	0	35,124	0	35,124	
2024	1,452	12,095	0	13,547	46,251	0	42,440	0	42,440	
2025	1,623	13,219	0	14,842	47,911	0	47,544	0	47,544	
2026	1,325	14,042	0	15,366	49,836	0	51,939	0	51,939	
2027	1,317	14,896	0	16,213	52,442	0	56,492	0	56,492	
2028	1,341	15,394	0	16,736	54,573	0	59,865	0	59,865	
2029	0	0	0	0	57,016	0	0	0	0	
2030	463	7,584	0	8,048	59,805	0	26,944	0	26,944	
2031	1,554	10,137	0	11,691	62,529	0	35,019	0	35,019	
2032	1,923	12,693	0	14,616	66,223	0	45,550	0	45,550	
2033	2,316	15,728	0	18,044	72,145	0	58,835	0	58,835	
2034	2,665	18,063	0	20,727	73,498	0	69,875	0	69,875	
2035	2,954	19,541	0	22,495	76,389	0	77,761	0	77,761	
2036	2,591	20,347	0	22,938	81,855	0	83,787	0	83,787	
2037	2,580	21,046	0	23,626	86,236	0	89,613	0	89,613	
2038	2,461	20,378	0	22,839	89,989	0	90,762	0	90,762	
2039	0	0	0	0	94,111	0	0	0	0	
2040	248	5,215	0	5,463	98,496	0	27,417	0	27,417	
2041	1,613	6,458	0	8,070	103,702	0	33,857	0	33,857	
2042	2,032	8,405	0	10,437	109,260	0	45,230	0	45,230	
2043	2,502	10,915	0	13,417	115,194	0	60,311	0	60,311	
	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	
	0	0	0	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	50,597	428,117	0	478,713	1,844,777	0	1,468,843	0	1,468,843	
NPV	14,331	140,419	0	154,750	335,162	0	395,631	0	395,631	

\* 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 Building Envelope

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	164,698	5,116	0	11,494	7,582	2,776	980	6,425	12	34,385	34,385	34,385	160,622
2020	158,260	4,916	0	11,045	5,210	2,660	1,004	6,425	2,103	33,363	30,640	65,025	164,637
2021	149,733	4,651	0	10,449	5,163	2,544	1,029	6,425	1,776	32,038	27,022	92,047	168,753
2022	141,532	4,397	0	9,877	5,103	2,429	1,055	6,425	1,477	30,762	23,828	115,875	172,972
2023	133,631	4,151	0	9,326	5,038	2,313	1,082	6,425	1,195	29,529	21,006	136,881	177,296
2024	126,011	3,914	0	8,794	4,962	2,197	1,109	6,425	937	28,338	18,514	155,395	181,729
2025	118,649	3,686	0	8,280	4,878	2,082	1,136	6,425	698	27,185	16,311	171,706	186,272
2026	111,526	3,464	0	7,783	4,787	1,966	1,165	6,425	478	26,067	14,364	186,070	190,929
2027	104,623	3,250	0	7,301	4,520	1,850	1,194	6,425	441	24,982	12,642	198,712	195,702
2028	97,757	3,037	0	6,822	4,220	1,735	1,224	6,425	441	23,903	11,109	209,821	200,595
2029	90,891	2,823	0	6,343	3,919	1,619	1,254	6,425	441	22,825	9,742	219,563	205,609
2030	84,025	2,610	0	5,864	3,618	1,503	1,286	6,425	441	21,747	8,525	228,088	210,750
2031	77,159	2,397	0	5,385	3,317	1,388	1,318	6,425	441	20,670	7,441	235,529	216,018
2032	70,293	2,184	0	4,906	3,017	1,272	1,351	6,425	441	19,594	6,478	242,007	221,419
2033	63,427	1,970	0	4,426	2,715	1,156	1,384	6,425	441	18,519	5,623	247,630	226,954
2034	56,561	1,757	0	3,947	2,415	1,041	1,419	6,425	441	17,444	4,864	252,494	232,628
2035	49,695	1,544	0	3,468	2,113	925	1,455	6,425	441	16,371	4,192	256,687	238,444
2036	42,829	1,330	0	2,989	1,813	810	1,491	6,425	441	15,298	3,598	260,285	244,405
2037	35,963	1,117	0	2,510	1,511	694	1,528	6,425	441	14,227	3,073	263,357	250,515
2038	29,097	904	0	2,031	1,211	578	1,566	6,425	441	13,156	2,610	265,967	256,778
2039	22,231	691	0	1,551	2,254	463	1,606	6,425	(903)	12,086	2,202	268,169	263,197
2040	16,709	519	0	1,166	3,356	347	1,646	6,425	(2,247)	11,212	1,876	270,045	269,777
2041	12,532	389	0	875	3,173	231	1,687	6,425	(2,247)	10,533	1,618	271,663	276,522
2042	8,354	260	0	582	2,290	116	1,722	6,425	(2,247)	9,855	1,391	273,054	283,455
2043	4,176	130	0	291	2,807	(0)	1,772	6,425	(2,247)	9,178	1,189	274,243	290,521

IN SERVICE COST (\$000)	160,622
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 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%	5,857	5,857	6,425	6,425	5,825	5,825	12	14,992	0	0	0	12	(4,064)
2020	7.22%	11,276	17,133	6,425	12,850	5,825	11,650	2,103	14,992	0	0	0	2,103	(1,961)
2021	6.68%	10,429	27,562	6,425	19,275	5,825	17,476	1,776	14,992	0	0	0	1,776	(185)
2022	6.18%	9,653	37,215	6,425	25,699	5,825	23,301	1,477	14,992	0	0	0	1,477	1,292
2023	5.71%	8,923	46,139	6,425	32,124	5,825	29,126	1,195	14,992	0	0	0	1,195	2,487
2024	5.29%	8,255	54,394	6,425	38,549	5,825	34,951	937	14,992	0	0	0	937	3,424
2025	4.89%	7,635	62,028	6,425	44,974	5,825	40,776	698	14,992	0	0	0	698	4,122
2026	4.52%	7,063	69,092	6,425	51,399	5,825	46,601	478	14,992	0	0	0	478	4,600
2027	4.46%	6,969	76,061	6,425	57,824	5,825	52,427	441	14,992	0	0	0	441	5,041
2028	4.46%	6,968	83,029	6,425	64,249	5,825	58,252	441	14,992	0	0	0	441	5,482
2029	4.46%	6,969	89,998	6,425	70,674	5,825	64,077	441	14,992	0	0	0	441	5,923
2030	4.46%	6,968	96,966	6,425	77,098	5,825	69,902	441	14,992	0	0	0	441	6,364
2031	4.46%	6,969	103,936	6,425	83,523	5,825	75,727	441	14,992	0	0	0	441	6,805
2032	4.46%	6,968	110,904	6,425	89,948	5,825	81,552	441	14,992	0	0	0	441	7,246
2033	4.46%	6,969	117,873	6,425	96,373	5,825	87,378	441	14,992	0	0	0	441	7,688
2034	4.46%	6,968	124,841	6,425	102,798	5,825	93,203	441	14,992	0	0	0	441	8,128
2035	4.46%	6,969	131,810	6,425	109,223	5,825	99,028	441	14,992	0	0	0	441	8,570
2036	4.46%	6,968	138,778	6,425	115,648	5,825	104,853	441	14,992	0	0	0	441	9,011
2037	4.46%	6,969	145,748	6,425	122,072	5,825	110,678	441	14,992	0	0	0	441	9,452
2038	4.46%	6,968	152,716	6,425	128,497	5,825	116,503	441	14,992	0	0	0	441	9,893
2039	2.23%	3,485	156,200	6,425	134,922	5,825	122,329	(903)	14,992	0	0	0	(903)	8,990
2040	0.00%	0	156,200	6,425	141,347	5,825	128,154	(2,247)	14,992	0	0	0	(2,247)	6,743
2041	0.00%	0	156,200	6,425	147,772	5,825	133,979	(2,247)	14,992	0	0	0	(2,247)	4,496
2042	0.00%	0	156,200	6,425	154,197	5,825	139,804	(2,247)	14,992	0	0	0	(2,247)	2,249
2043	0.00%	0	156,200	6,425	160,622	5,825	145,629	(2,247)	14,992	0	0	0	(2,247)	2

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(4,076)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	14,992
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)	(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%	5,857	12	154,197	6,425	(4,064)	164,698	158,260	161,479
2020	7.22%	11,276	2,103	147,772	12,850	(1,961)	158,260	149,733	153,997
2021	6.68%	10,429	1,776	141,347	19,275	(185)	149,733	141,532	145,633
2022	6.18%	9,653	1,477	134,922	25,699	1,292	141,532	133,631	137,581
2023	5.71%	8,923	1,195	128,497	32,124	2,487	133,631	126,011	129,821
2024	5.29%	8,255	937	122,072	38,549	3,424	126,011	118,649	122,330
2025	4.89%	7,635	698	115,648	44,974	4,122	118,649	111,526	115,087
2026	4.52%	7,063	478	109,223	51,399	4,600	111,526	104,623	108,074
2027	4.46%	6,969	441	102,798	57,824	5,041	104,623	97,757	101,190
2028	4.46%	6,968	441	96,373	64,249	5,482	97,757	90,891	94,324
2029	4.46%	6,969	441	89,948	70,674	5,923	90,891	84,025	87,458
2030	4.46%	6,968	441	83,523	77,098	6,364	84,025	77,159	80,592
2031	4.46%	6,969	441	77,098	83,523	6,805	77,159	70,293	73,726
2032	4.46%	6,968	441	70,674	89,948	7,246	70,293	63,427	66,860
2033	4.46%	6,969	441	64,249	96,373	7,688	63,427	56,561	59,994
2034	4.46%	6,968	441	57,824	102,798	8,128	56,561	49,695	53,128
2035	4.46%	6,969	441	51,399	109,223	8,570	49,695	42,829	46,262
2036	4.46%	6,968	441	44,974	115,648	9,011	42,829	35,963	39,396
2037	4.46%	6,969	441	38,549	122,072	9,452	35,963	29,097	32,530
2038	4.46%	6,968	441	32,124	128,497	9,893	29,097	22,231	25,664
2039	2.23%	3,485	(903)	25,699	134,922	8,990	22,231	16,709	19,470
2040	0.00%	0	(2,247)	19,275	141,347	6,743	16,709	12,532	14,621
2041	0.00%	0	(2,247)	12,850	147,772	4,496	12,532	8,354	10,443
2042	0.00%	0	(2,247)	6,425	154,197	2,249	8,354	4,176	6,265
2043	0.00%	0	(2,247)	(0)	160,622	2	4,176	-2	2,087

\* 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	725,389,805.5
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	136,959	136,959	136,959
EQUITY AFUDC	14,992		
DEBT AFUDC	8,670	8,670	
CPI			19,237
<b>TOTAL</b>	<b>160,622</b>	<b>145,629</b>	<b>156,196</b>

\* Column not specified in workbook

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

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (C&Wh)	(5) AVOIDED MARGINAL FUEL COST (C&Wh)	(6)* INCREASED MARGINAL FUEL COST (C&Wh)	(7) REPLACEMENT FUEL COST (C&Wh)	(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	12,940	12,940	6.41	8.81	6.74	0.00	1.00	1.00
2011	39,895	39,895	6.35	8.34	6.64	0.00	1.00	1.00
2012	72,004	72,004	6.43	8.30	6.69	0.00	1.00	1.00
2013	109,109	109,109	7.06	8.30	7.25	0.00	1.00	1.00
2014	150,284	150,284	7.53	8.57	7.70	0.00	1.00	1.00
2015	194,523	194,523	8.11	9.46	8.34	0.00	1.00	1.00
2016	236,870	236,870	9.00	11.34	9.35	0.00	1.00	1.00
2017	278,661	278,661	9.75	12.46	10.10	0.00	1.00	1.00
2018	315,244	315,244	10.52	13.30	10.90	0.00	1.00	1.00
2019	315,244	315,244	11.50	14.97	11.99	10.41	1.00	1.00
2020	315,244	315,244	12.08	15.61	12.63	10.50	1.00	1.00
2021	315,244	315,244	12.57	16.19	13.15	10.74	1.00	1.00
2022	315,244	315,244	13.06	16.78	13.65	10.81	1.00	1.00
2023	315,244	315,244	13.39	16.78	13.96	10.80	1.00	1.00
2024	315,244	315,244	13.95	17.45	14.52	10.84	1.00	1.00
2025	315,244	315,244	14.40	17.87	14.97	10.96	1.00	1.00
2026	315,244	315,244	14.70	17.97	15.24	11.05	1.00	1.00
2027	315,244	315,244	15.13	18.18	15.65	11.17	1.00	1.00
2028	315,244	315,244	15.60	18.53	16.10	11.36	1.00	1.00
2029	315,244	315,244	16.02	18.53	16.48	11.41	1.00	1.00
2030	315,244	315,244	16.52	18.95	16.96	11.59	1.00	1.00
2031	315,244	315,244	17.06	19.56	17.52	11.80	1.00	1.00
2032	315,244	315,244	17.50	19.39	17.87	11.88	1.00	1.00
2033	315,244	315,244	18.27	20.13	18.53	12.10	1.00	1.00
2034	315,244	315,244	18.73	19.93	18.88	12.14	1.00	1.00
2035	315,244	315,244	19.57	21.15	19.77	12.29	1.00	1.00
2036	315,244	315,244	20.40	22.15	20.57	12.55	1.00	1.00
2037	315,244	315,244	21.11	22.71	21.27	12.70	1.00	1.00
2038	315,244	315,244	22.02	23.65	22.19	13.04	1.00	1.00
2039	315,244	315,244	22.78	24.29	22.92	13.32	1.00	1.00
2040	315,244	315,244	23.59	24.86	23.70	13.44	1.00	1.00
2041	315,244	315,244	24.54	25.76	24.64	13.75	1.00	1.00
2042	315,244	315,244	25.50	26.71	25.61	14.10	1.00	1.00
2043	315,244	315,244	26.74	28.43	26.88	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: Residential Building Envelope

(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	298	16,537	0	16,835	0	0	537	3	540	(16,295)	(14,965)
2011	0	1,082	22,173	0	23,256	0	274	2,055	8	2,337	(20,919)	(32,608)
2012	0	1,346	28,834	0	30,180	0	856	4,313	17	5,185	(24,995)	(51,969)
2013	0	1,632	37,219	0	38,851	0	1,610	6,832	572	9,013	(29,838)	(73,195)
2014	0	1,898	44,274	0	46,172	0	2,432	10,019	904	13,356	(32,816)	(94,634)
2015	0	2,136	49,457	0	51,593	0	3,352	14,784	1,335	19,472	(32,121)	(113,907)
2016	0	1,974	53,489	0	55,462	0	4,342	22,602	1,907	28,851	(26,611)	(128,571)
2017	0	2,037	57,461	0	59,498	0	5,290	29,771	2,512	37,573	(21,925)	(139,666)
2018	0	2,022	58,512	0	60,534	0	6,220	36,535	3,142	45,897	(14,637)	(146,468)
2019	0	0	0	0	0	41,306	6,961	43,926	1,846	94,039	94,039	(106,331)
2020	0	131	16,611	0	16,743	38,396	6,761	45,762	1,377	92,296	75,553	(76,715)
2021	0	813	19,635	0	20,448	36,847	6,564	47,426	1,363	92,200	71,752	(50,885)
2022	0	1,019	26,276	0	27,295	36,623	6,375	49,106	1,446	93,549	66,254	(28,980)
2023	0	1,247	35,124	0	36,371	37,280	6,191	48,842	1,385	93,699	57,328	(11,574)
2024	0	1,452	42,440	0	43,892	37,696	6,012	50,752	1,463	95,923	52,031	2,935
2025	0	1,623	47,544	0	49,167	37,626	5,837	51,868	1,438	96,769	47,601	15,125
2026	0	1,325	51,939	0	53,264	37,882	5,664	51,980	1,391	96,917	43,654	25,392
2027	0	1,317	56,492	0	57,809	38,187	5,492	52,380	1,334	97,392	39,583	33,942
2028	0	1,341	59,865	0	61,207	38,008	5,320	53,214	1,448	97,989	36,782	41,238
2029	0	0	0	0	0	39,005	5,149	52,866	1,558	98,578	98,578	59,197
2030	0	463	26,944	0	27,407	38,996	4,979	53,935	1,492	99,402	71,995	71,242
2031	0	1,554	35,019	0	36,573	38,703	4,810	55,631	1,633	100,778	64,205	81,107
2032	0	1,923	45,550	0	47,473	39,916	4,645	54,662	1,714	100,937	53,465	88,652
2033	0	2,316	58,835	0	61,151	39,819	4,488	56,659	1,133	102,098	40,947	93,958
2034	0	2,665	69,875	0	72,540	41,671	4,339	55,560	1,007	102,577	30,037	97,533
2035	0	2,954	77,761	0	80,715	42,300	4,202	59,213	1,039	106,754	26,039	100,379
2036	0	2,591	83,787	0	86,378	41,906	4,077	62,121	1,024	109,127	22,750	102,663
2037	0	2,580	89,613	0	92,193	42,801	3,965	63,507	1,074	111,347	19,154	104,429
2038	0	2,461	90,762	0	93,223	41,587	3,868	66,091	1,114	112,660	19,437	106,075
2039	0	0	0	0	0	40,864	3,783	67,737	1,060	113,444	113,444	114,896
2040	0	248	27,417	0	27,665	42,636	3,709	69,102	1,072	116,519	88,854	121,241
2041	0	1,613	33,857	0	35,470	42,220	3,638	71,537	1,123	118,519	83,049	126,687
2042	0	2,032	45,230	0	47,261	41,480	3,568	74,093	2,744	121,886	74,625	131,182
2043	0	2,502	60,311	0	62,813	41,606	3,499	79,217	4,500	128,822	66,009	134,833
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	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	50,597	1,468,843	0	1,519,440	995,360	148,274	1,564,638	48,176	2,756,448	1,237,009	
NPV	0	14,331	395,631	0	409,963	179,634	39,349	313,465	12,348	544,795	134,833	

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

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

(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	866	0	7,627	0	8,493	16,537	0	0	16,537	(8,044)	(7,388)
2011	3,114	0	10,551	0	13,666	22,173	0	0	22,173	(8,508)	(14,563)
2012	6,431	0	13,217	0	19,648	28,834	0	0	28,834	(9,186)	(21,679)
2013	10,855	0	16,377	0	27,232	37,219	0	0	37,219	(9,987)	(28,783)
2014	16,677	0	18,851	0	35,528	44,274	0	0	44,274	(8,746)	(34,497)
2015	23,535	0	20,486	0	44,021	49,457	0	0	49,457	(5,436)	(37,759)
2016	31,002	0	21,435	0	52,438	53,489	0	0	53,489	(1,051)	(38,338)
2017	39,345	0	22,299	0	61,644	57,461	0	0	57,461	4,182	(36,221)
2018	47,972	0	21,757	0	69,730	58,512	0	0	58,512	11,218	(31,008)
2019	53,622	0	0	0	53,622	0	0	0	0	53,622	(8,121)
2020	53,789	0	5,172	0	58,962	16,611	0	0	16,611	42,351	8,480
2021	54,961	0	6,043	0	61,004	19,635	0	0	19,635	41,369	23,372
2022	56,555	0	7,881	0	64,437	26,276	0	0	26,276	38,161	35,989
2023	58,269	0	10,266	0	68,535	35,124	0	0	35,124	33,410	46,133
2024	60,856	0	12,095	0	72,952	42,440	0	0	42,440	30,511	54,641
2025	63,041	0	13,219	0	76,260	47,544	0	0	47,544	28,716	61,995
2026	65,574	0	14,042	0	79,616	51,939	0	0	51,939	27,677	68,504
2027	69,003	0	14,896	0	83,899	56,492	0	0	56,492	27,406	74,424
2028	71,807	0	15,394	0	87,201	59,865	0	0	59,865	27,336	79,846
2029	75,021	0	0	0	75,021	0	0	0	0	75,021	93,513
2030	78,691	0	7,584	0	86,275	26,944	0	0	26,944	59,332	103,440
2031	82,375	0	10,137	0	92,512	35,019	0	0	35,019	57,393	112,258
2032	87,136	0	12,693	0	99,828	45,550	0	0	45,550	54,279	119,918
2033	94,928	0	15,728	0	110,655	58,835	0	0	58,835	51,820	126,634
2034	96,708	0	18,063	0	114,771	69,875	0	0	69,875	44,896	131,977
2035	100,512	0	19,541	0	120,053	77,761	0	0	77,761	42,292	136,600
2036	107,704	0	20,347	0	128,050	83,787	0	0	83,787	44,264	141,043
2037	113,468	0	21,046	0	134,514	89,613	0	0	89,613	44,901	145,182
2038	118,406	0	20,378	0	138,784	90,762	0	0	90,762	48,022	149,248
2039	123,830	0	0	0	123,830	0	0	0	0	123,830	158,877
2040	129,600	0	5,215	0	134,815	27,417	0	0	27,417	107,398	166,546
2041	136,450	0	6,458	0	142,908	33,857	0	0	33,857	109,051	173,698
2042	143,763	0	8,405	0	152,168	45,230	0	0	45,230	106,939	180,139
2043	151,571	0	10,915	0	162,486	60,311	0	0	60,311	102,174	185,790
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	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	2,427,339	0	428,117	0	2,855,456	1,468,843	0	0	1,468,843	1,386,613	
NPV	441,003	0	140,419	0	581,421	395,631	0	0	395,631	185,790	

In Service of Gen Unit: 2019  
 Discount Rate : 8.89 %  
 Benefit/Cost Ratio ( Col(6) / Col(10)) 1.47



RATE IMPACT TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Building Envelope

(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	298	7,627	658	0	8,583	537	0	0	3	540	(8,043)	(7,387)
2011	0	1,082	10,551	2,367	0	14,000	2,055	274	0	8	2,337	(11,663)	(17,224)
2012	0	1,346	13,217	4,888	0	19,451	4,313	856	0	17	5,185	(14,265)	(28,273)
2013	0	1,632	16,377	8,250	0	26,259	6,832	1,610	0	572	9,013	(17,246)	(40,542)
2014	0	1,898	18,851	12,675	0	33,424	10,019	2,432	0	904	13,356	(20,067)	(53,652)
2015	0	2,136	20,486	17,886	0	40,509	14,784	3,352	0	1,335	19,472	(21,037)	(66,274)
2016	0	1,974	21,435	23,562	0	46,971	22,602	4,342	0	1,907	28,851	(18,120)	(76,259)
2017	0	2,037	22,299	29,902	0	54,238	29,771	5,290	0	2,512	37,573	(16,665)	(84,692)
2018	0	2,022	21,757	36,459	0	60,239	36,535	6,220	0	3,142	45,897	(14,341)	(91,357)
2019	0	0	0	40,753	0	40,753	85,232	6,961	0	1,846	94,039	53,286	(68,613)
2020	0	131	5,172	40,880	0	46,184	84,158	6,761	0	1,377	92,296	46,112	(50,538)
2021	0	813	6,043	41,770	0	48,626	84,273	6,564	0	1,363	92,200	43,574	(34,852)
2022	0	1,019	7,881	42,982	0	51,882	85,728	6,375	0	1,446	93,549	41,667	(21,076)
2023	0	1,247	10,266	44,284	0	55,797	86,122	6,191	0	1,385	93,699	37,902	(9,568)
2024	0	1,452	12,095	46,251	0	59,798	88,448	6,012	0	1,463	95,923	36,125	505
2025	0	1,623	13,219	47,911	0	62,753	89,494	5,837	0	1,438	96,769	34,015	9,216
2026	0	1,325	14,042	49,836	0	65,203	89,863	5,664	0	1,391	96,917	31,715	16,675
2027	0	1,317	14,896	52,442	0	68,655	90,567	5,492	0	1,334	97,392	28,738	22,882
2028	0	1,341	15,394	54,573	0	71,309	91,222	5,320	0	1,448	97,989	26,680	28,175
2029	0	0	0	57,016	0	57,016	91,871	5,149	0	1,558	98,578	41,562	35,746
2030	0	463	7,584	59,805	0	67,853	92,931	4,979	0	1,492	99,402	31,549	41,025
2031	0	1,554	10,137	62,529	0	74,220	94,325	4,810	0	1,623	100,776	26,558	45,105
2032	0	1,923	12,693	66,223	0	80,839	94,578	4,645	0	1,714	100,937	20,098	47,942
2033	0	2,316	15,728	72,145	0	90,189	96,477	4,488	0	1,133	102,098	11,909	49,485
2034	0	2,665	18,063	73,498	0	94,226	97,231	4,339	0	1,007	102,577	8,352	50,479
2035	0	2,954	19,541	76,389	0	98,884	101,513	4,202	0	1,039	106,754	7,870	51,339
2036	0	2,591	20,347	81,855	0	104,792	104,027	4,077	0	1,024	109,127	4,335	51,774
2037	0	2,580	21,046	86,236	0	109,861	106,308	3,965	0	1,074	111,347	1,446	51,911
2038	0	2,461	20,378	89,989	0	112,828	107,678	3,868	0	1,114	112,660	(168)	51,897
2039	0	0	0	94,111	0	94,111	108,601	3,783	0	1,060	113,444	19,333	53,400
2040	0	248	5,215	98,496	0	103,959	111,738	3,709	0	1,072	116,519	12,560	54,297
2041	0	1,613	6,458	103,702	0	111,772	113,757	3,638	0	1,123	118,519	6,746	54,740
2042	0	2,032	8,405	109,260	0	119,697	115,574	3,568	0	2,744	121,886	2,189	54,871
2043	0	2,502	10,915	115,194	0	128,611	120,823	3,499	0	4,500	128,822	211	54,883
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	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	50,597	428,117	1,844,777	0	2,323,491	2,559,998	148,274	0	48,176	2,756,448	432,957	
NPV	0	14,331	140,419	335,162	0	489,912	493,099	39,349	0	12,348	544,795	54,883	

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

**RESIDENTIAL NEW CONSTRUCTION**

INPUT DATA - PART I CONTINUED  
PROGRAM/METHOD SELECTED: EBV\_REQ  
PROGRAM NAME: Residential New Construction - BulkSmart

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER	8.83 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER	1.11 KW
(3) KW LINE LOSS PERCENTAGE	8.66 %
(4) GENERATOR KW REDUCTION PER CUSTOMER	1.54521 KW
(5) KW LINE LOSS PERCENTAGE	6.90 %
(6) GROUP LINE LOSS MULTIPLIER	1.00
(7) CUSTOMER KVA INCREASE AT METER	3.20 KVA

II. ECONOMIC LIFE & X FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM	35 YEARS
(2) GENERATOR ECONOMIC LIFE	25 YEARS
(3) T&D ECONOMIC LIFE	33 YEARS
(4) X FACTOR FOR GENERATION	1.7878
(5) X FACTOR FOR T & D	1.6254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING 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	3.39 %
(11) UTILITY AFUDC RATE	2.63 %
(12) UTILITY NONRECURRING REBATE INCENTIVE	*** \$/CUST
(13) UTILITY RECURRING REBATE INCENTIVE	*** \$/CUST
(14) UTILITY REBATE INCENTIVE ESCALATION RATE	*** %

\* SUPPLEMENTAL INFORMATION NOT SERVICED 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	725.30 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST	185.52 \$/KW
(6) BASE YEAR DISTRIBUTION COST	26.64 \$/KW
(7) GEN, TRANS & DIST COST ESCALATION RATE	3.00 %
(8) GENERATOR FIXED O & M COST	77.66 \$/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	1.81 \$/KW
(12) T&D FIXED O&M ESCALATION RATE	2.50 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS	0.106 CENTS\$/KW
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE	2.50 %
(15) GENERATOR CAPACITY FACTOR	89% ** (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\$/KVA
(2) NON-FUEL COST ESCALATION RATE	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL	*** \$/KW&D
(4) DEMAND CHARGE ESCALATION RATE	*** %

\* INPUT DATA -- PART 1 CONTINUED  
 PROGRAM NAME: RESIDENTIAL NEW CONSTRUCTION - Baltimore  
 PROGRAM NAME: Residential New Construction - Baltimore

(1) YEAR	(2) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(3) UTILITY INCENTIVES \$(000)	(4) OTHER UTILITY COSTS \$(000)	(5) TOTAL UTILITY PROGRAM COSTS \$(000)	(6) ENERGY CHARGE REVENUE LOSSES \$(000)	(7) DEMAND CHARGE REVENUE LOSSES \$(000)	(8) PARTICIPANT EQUIPMENT COSTS \$(000)	(9) PARTICIPANT O&M COSTS \$(000)	(10) OTHER PARTICIPANT COSTS \$(000)	(11) TOTAL PARTICIPANT COSTS \$(000)
2009	0	0	0	0	0	0	0	0	0	0
2010	794	2,982	0	3,687	216	0	3,974	0	0	3,974
2011	1,395	5,764	0	7,160	878	0	7,873	0	0	7,873
2012	1,841	7,485	0	9,327	1,977	0	11,500	0	0	11,500
2013	2,267	9,690	0	11,957	3,468	0	13,065	0	0	13,065
2014	2,772	11,903	0	13,775	5,478	0	16,259	0	0	16,259
2015	2,694	12,612	0	15,306	7,776	0	16,399	0	0	16,399
2016	2,890	12,782	0	15,682	10,328	0	16,757	0	0	16,757
2017	2,901	12,878	0	15,780	12,639	0	17,341	0	0	17,341
2018	2,941	11,125	0	14,126	15,333	0	18,177	0	0	18,177
2019	0	0	0	0	17,096	0	0	0	0	17,096
2020	0	0	0	0	17,149	0	0	0	0	17,149
2021	0	0	0	0	17,923	0	0	0	0	17,923
2022	0	0	0	0	18,131	0	0	0	0	18,131
2023	0	0	0	0	18,577	0	0	0	0	18,577
2024	0	0	0	0	19,462	0	0	0	0	19,462
2025	0	0	0	0	20,039	0	0	0	0	20,039
2026	0	0	0	0	20,946	0	0	0	0	20,946
2027	0	0	0	0	21,999	0	0	0	0	21,999
2028	0	0	0	0	22,873	0	0	0	0	22,873
2029	0	0	0	0	23,918	0	0	0	0	23,918
2030	0	0	0	0	25,088	0	0	0	0	25,088
2031	0	0	0	0	26,231	0	0	0	0	26,231
2032	0	0	0	0	27,780	0	0	0	0	27,780
2033	0	0	0	0	30,265	0	0	0	0	30,265
2034	0	0	0	0	30,872	0	0	0	0	30,872
2035	0	0	0	0	32,045	0	0	0	0	32,045
2036	0	0	0	0	34,338	0	0	0	0	34,338
2037	0	0	0	0	36,176	0	0	0	0	36,176
2038	0	0	0	0	37,739	0	0	0	0	37,739
2039	0	0	0	0	39,480	0	0	0	0	39,480
2040	1,477	2,982	0	4,460	41,519	0	8,337	0	0	49,999
2041	2,927	5,764	0	8,691	43,503	0	16,513	0	0	64,807
2042	3,862	7,485	0	11,348	45,824	0	22,025	0	0	79,257
2043	4,734	9,690	0	13,845	48,204	0	27,447	0	0	91,296
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	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	31,438	165,624	0	198,462	774,501	0	194,366	0	0	194,366
NPV	13,598	51,571	0	65,679	140,890	0	78,982	0	0	78,982

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

**CALCULATION OF K-FACTOR**  
**PROGRAMMED SELECTED KEY REQ**  
**PROGRAMNAME: Residential New Construction - Bulkmarket**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	REG-YEAR RATEBASE \$'(000)	DEBT \$'(000)	DEFERRED 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	89,648	2,785	0	6,256	4,327	1,511	333	3,497	7	18,716	18,716	18,716	87,429
2020	86,144	2,676	0	6,012	2,826	1,448	347	3,497	1,144	18,160	16,678	35,394	89,615
2021	81,922	2,532	0	5,688	2,810	1,385	380	3,497	347	17,439	14,709	50,103	91,855
2022	77,038	2,393	0	5,376	2,778	1,322	374	3,497	304	16,744	12,970	63,073	94,152
2023	72,737	2,260	0	5,076	2,742	1,259	389	3,497	631	16,073	11,494	74,567	96,505
2024	68,590	2,131	0	4,787	2,701	1,196	403	3,497	510	15,425	10,077	84,584	98,918
2025	64,382	2,006	0	4,507	2,655	1,133	418	3,497	383	14,777	8,878	93,462	101,391
2026	60,705	1,886	0	4,236	2,606	1,070	434	3,497	268	14,189	7,818	101,281	103,926
2027	56,949	1,769	0	3,974	2,461	1,007	450	3,497	240	13,599	6,881	108,162	106,594
2028	53,211	1,653	0	3,713	2,297	944	466	3,497	240	13,011	6,047	114,209	109,127
2029	49,474	1,537	0	3,453	2,133	881	483	3,497	240	12,424	5,303	119,512	111,617
2030	45,736	1,421	0	3,192	1,970	818	500	3,497	240	11,837	4,640	124,152	114,115
2031	41,999	1,305	0	2,931	1,805	755	517	3,497	240	11,251	4,050	128,202	117,582
2032	38,262	1,189	0	2,670	1,641	692	535	3,497	240	10,665	3,526	131,728	120,922
2033	34,525	1,072	0	2,409	1,478	629	554	3,497	240	10,080	3,061	134,789	123,935
2034	30,787	956	0	2,149	1,314	567	572	3,497	240	9,495	2,648	137,437	126,623
2035	27,050	840	0	1,888	1,150	504	592	3,497	240	8,911	2,282	139,719	129,789
2036	23,313	724	0	1,627	987	441	612	3,497	240	8,327	1,958	141,677	132,694
2037	19,575	608	0	1,366	825	378	632	3,497	240	7,744	1,673	143,350	135,340
2038	15,838	492	0	1,105	659	315	653	3,497	240	7,161	1,420	144,770	137,789
2039	12,101	376	0	844	497	252	674	3,497	(491)	6,579	1,198	145,949	140,043
2040	9,095	260	0	583	337	189	696	3,497	(1,223)	6,003	1,021	146,990	142,044
2041	6,821	144	0	322	177	126	718	3,497	(1,223)	5,433	881	147,871	143,915
2042	4,547	28	0	61	12	63	741	3,497	(1,223)	4,864	757	148,628	145,678
2043	2,273	12	0	35	6	31	765	3,497	(1,223)	4,296	647	149,275	147,333

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

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	44%	7.82
E/S	0%	0.00
C/S	56%	12.50

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

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

(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%	3,188	3,188	3,497	3,497	3,171	3,171	7					7	
2020	7.25%	6,138	9,326	3,497	6,994	3,171	6,341	1,144					1,144	(1,047)
2021	6.68%	5,677	15,003	3,497	10,491	3,171	9,512	967					967	(101)
2022	6.18%	5,254	20,257	3,497	13,989	3,171	12,683	804					804	703
2023	5.71%	4,857	25,114	3,497	17,486	3,171	15,854	651					651	1,354
2024	5.29%	4,483	29,607	3,497	20,983	3,171	19,024	510					510	1,864
2025	4.89%	4,156	33,763	3,497	24,480	3,171	22,185	380					380	2,244
2026	4.53%	3,865	37,608	3,497	27,977	3,171	25,546	260					260	2,504
2027	4.48%	3,794	41,401	3,497	31,474	3,171	28,337	240					240	2,744
2028	4.48%	3,793	45,194	3,497	34,972	3,171	31,177	240					240	2,984
2029	4.48%	3,794	48,988	3,497	38,469	3,171	34,078	240					240	3,224
2030	4.48%	3,793	52,780	3,497	41,966	3,171	36,949	240					240	3,464
2031	4.48%	3,794	56,574	3,497	45,463	3,171	41,220	240					240	3,704
2032	4.48%	3,793	60,367	3,497	48,960	3,171	44,390	240					240	3,944
2033	4.48%	3,794	64,161	3,497	52,457	3,171	47,561	240					240	4,185
2034	4.48%	3,793	67,953	3,497	55,953	3,171	50,732	240					240	4,424
2035	4.48%	3,794	71,747	3,497	59,450	3,171	53,903	240					240	4,665
2036	4.48%	3,793	75,539	3,497	62,946	3,171	57,073	240					240	4,905
2037	4.48%	3,794	79,333	3,497	66,443	3,171	60,244	240					240	5,145
2038	4.48%	3,793	83,126	3,497	69,940	3,171	63,415	240					240	5,385
2039	2.25%	1,897	85,023	3,497	73,440	3,171	66,586	(491)					(491)	4,893
2040	0.00%	0	85,023	3,497	76,938	3,171	69,756	(1,223)					(1,223)	3,670
2041	0.00%	0	85,023	3,497	80,435	3,171	72,927	(1,223)					(1,223)	2,447
2042	0.00%	0	85,023	3,497	83,932	3,171	76,098	(1,223)					(1,223)	1,224
2043	0.00%	0	85,023	3,497	87,429	3,171	79,268	(1,223)					(1,223)	1

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE/ COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(2,219)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	3,161
BOOK DEPR RATE - USEFUL LIFE	4.80%

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

(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)
2819	3.75%	3,188	7	83,922	3,497	(2,212)	89,643	86,144	87,896
2820	7.22%	6,128	1,344	80,435	6,994	(1,047)	96,144	81,582	88,823
2821	6.88%	5,677	967	76,938	10,491	(191)	83,592	71,828	79,270
2822	6.18%	5,254	884	73,440	13,989	703	77,038	72,757	74,888
2823	5.71%	4,857	651	69,943	17,486	1,354	72,737	68,390	70,664
2824	5.28%	4,493	510	66,446	20,983	1,864	68,390	64,582	66,586
2825	4.89%	4,156	380	62,949	24,480	2,364	64,582	61,705	63,444
2826	4.52%	3,845	260	59,451	27,977	2,904	61,705	58,948	60,827
2827	4.18%	3,574	140	55,953	31,474	3,444	58,948	56,311	58,479
2828	4.48%	3,793	240	52,457	34,972	3,984	56,311	53,736	56,005
2829	4.48%	3,794	240	48,960	38,469	4,524	53,736	51,242	53,642
2830	4.48%	3,793	240	45,463	41,966	5,064	51,242	48,827	51,242
2831	4.48%	3,794	240	41,966	45,463	5,604	48,827	46,442	48,827
2832	4.48%	3,793	240	38,469	48,960	6,144	46,442	44,130	46,442
2833	4.48%	3,794	240	34,972	52,457	6,684	44,130	41,897	44,130
2834	4.48%	3,793	240	31,474	55,953	7,224	41,897	39,744	41,897
2835	4.48%	3,794	240	27,977	59,449	7,764	39,744	37,670	39,744
2836	4.48%	3,793	240	24,480	62,946	8,304	37,670	35,676	37,670
2837	4.48%	3,794	240	20,983	66,443	8,844	35,676	33,762	35,676
2838	4.48%	3,793	240	17,486	69,940	9,384	33,762	31,928	33,762
2839	2.23%	1,897	(491)	13,989	73,437	9,924	31,928	30,174	31,928
2840	0.00%	0	(1,223)	10,491	76,934	10,464	30,174	28,491	28,491
2841	0.00%	0	(1,223)	6,994	80,431	11,004	28,491	26,868	26,868
2842	0.00%	0	(1,223)	3,497	83,928	11,544	26,868	25,304	25,304
2843	0.00%	0	(1,223)	0	87,425	12,084	25,304	23,791	23,791

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (\$K)	(6) ANNUAL SPENDING (\$K/W)	(7) CUMULATIVE AVERAGE SPENDING (\$K/W)
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	0.12%	1.24	0.62
2014	-5	3.00%	1.159	1.99%	15.39	9.24
2015	-4	3.00%	1.194	4.57%	35.61	37.83
2016	-3	3.00%	1.230	37.28%	351.67	222.77
2017	-2	3.00%	1.267	45.74%	428.27	298.84
2018	-1	3.00%	1.305	10.44%	58.79	828.36

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) CUMULATIVE SPENDING W/PLANT ESCALATION (\$K/W)	(4) DEBT AFUDC (\$K/W)	(5) CUMULATIVE DEBT AFUDC (\$K/W)	(6) YEARLY TOTAL AFUDC (\$K/W)	(7) CUMULATIVE TOTAL AFUDC (\$K/W)	(8) CONSTRUCTION PERIOD INTEREST (\$K/W)	(9) CUMULATIVE CPI (\$K/W)	(10) DEFERRED TAXES (\$K/W)	(11) CUMULATIVE DEFERRED TAXES (\$K/W)	(12) INCREMENTAL YEAR-END BOOK VALUE (\$K/W)	(13) CUMULATIVE YEAR-END BOOK VALUE (\$K/W)
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	0.62	0.65	0.65	0.64	0.64	(0.01)	(0.01)	1.29	1.29
2014	-5	9.29	0.29	0.30	0.79	0.84	0.85	4.70	(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	15.98	39.25	(3.41)	(4.13)	351.16	432.06
2017	-2	622.00	19.46	28.81	53.10	76.45	43.67	62.22	(9.28)	(13.35)	473.37	885.43
2018	-1	534.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.43)	(27.02)	279.18	1,064.61

IN SERVICE YEAR	2019
PLANT COST	725,389,865
AFUDC RATE	8.48%

	37.47	156.84	127.50	(27.02)	1,064.61
	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS		
CONSTRUCTION CASE	74,549	74,549	74,549		
DEFERRED TAX	8,161				
DEBT AFUDC	4,719	4,719			
CPI			10,471		
TOTAL	57,429	79,268	85,020		

\* Column not specified in workbook



INPUT DATA - PART 2  
 PROGRAM-GENERATED SELECTED KEY FIGS  
 PROGRAM NAME: Residential New Construction - Boldsmart

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	VELOCITY AVERAGE SYSTEM FUEL COST (\$/KWH)	AVOIDED MARGINAL FUEL COST (\$/KWH)	INCREASED MARGINAL FUEL COST (\$/KWH)	REPLACEMENT FUEL COST (\$/KWH)	PROGRAM/AV EFFECTIVENESS FACTOR	PROGRAM/AV EFFECTIVENESS FACTOR
2009	0	0	6.29	9.37	6.57	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	7.63	0.00	1.00	1.00
2015	44,209	44,209	8.11	9.98	8.28	0.00	1.00	1.00
2016	54,980	54,980	9.00	12.06	9.25	0.00	1.00	1.00
2017	64,657	64,657	9.75	13.17	9.98	0.00	1.00	1.00
2018	74,261	74,261	10.30	13.94	10.77	0.00	1.00	1.00
2019	74,261	74,261	11.58	16.78	11.85	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	11.53	1.00	1.00
2031	74,261	74,261	17.00	20.08	17.40	11.80	1.00	1.00
2032	74,261	74,261	17.58	20.32	17.78	11.88	1.00	1.00
2033	74,261	74,261	18.27	21.06	18.45	12.10	1.00	1.00
2034	74,261	74,261	18.73	20.53	18.83	12.14	1.00	1.00
2035	74,261	74,261	19.57	21.39	19.70	12.29	1.00	1.00
2036	74,261	74,261	20.40	22.09	20.49	12.55	1.00	1.00
2037	74,261	74,261	21.11	23.25	21.20	12.70	1.00	1.00
2038	74,261	74,261	22.01	24.51	22.13	13.04	1.00	1.00
2039	74,261	74,261	22.78	25.06	22.86	13.22	1.00	1.00
2040	74,261	74,261	23.39	25.37	23.65	13.44	1.00	1.00
2041	74,261	74,261	24.54	26.44	24.38	13.75	1.00	1.00
2042	74,261	74,261	25.50	27.34	25.25	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	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 COST.











**RATE IMPACT TEST**  
PROGRAM METHOD SELECTED: NEW\_REQ  
PROGRAM NAME: Residential New Construction - Bulksmart

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	INCREASED SUPPLY COSTS \$('000)	UTILITY PROGRAM COSTS \$('000)	DISCOUNTS \$('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 UNDISCOUNTED 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	290	0	0	2	238	(3,671)	(3,371)
2011	0	1,395	5,764	878	0	8,037	840	141	0	4	985	(7,052)	(9,300)
2012	0	1,841	7,485	1,977	0	11,304	1,777	418	0	9	2,204	(9,100)	(14,340)
2013	0	2,267	9,890	3,463	0	14,820	2,819	809	0	225	3,853	(6,247)	(24,370)
2014	0	2,772	11,065	5,476	0	19,313	4,254	1,223	0	368	5,845	(4,399)	(20,913)
2015	0	3,694	16,613	7,778	0	28,085	6,434	1,783	0	545	8,764	(19,320)	(40,300)
2016	0	2,800	10,782	10,128	0	23,710	5,893	2,286	0	786	12,965	(10,745)	(46,210)
2017	0	2,901	10,878	12,689	0	26,469	16,948	3,321	0	1,042	18,947	(7,522)	(51,037)
2018	0	3,041	11,125	15,302	0	29,469	16,948	3,321	0	1,323	20,602	(8,867)	(59,904)
2019	0	0	0	17,896	0	17,896	42,144	3,818	0	611	46,574	28,678	(31,226)
2020	0	0	0	17,149	0	17,149	41,331	3,709	0	284	45,324	28,175	(2,851)
2021	0	0	0	17,523	0	17,523	41,345	3,681	0	262	45,288	27,687	(2,850)
2022	0	0	0	18,031	0	18,031	42,331	3,497	0	245	45,973	27,942	(2,354)
2023	0	0	0	18,577	0	18,577	42,435	3,296	0	165	46,016	27,439	(4,025)
2024	0	0	0	18,402	0	18,402	43,135	3,238	0	143	46,514	27,571	3,668
2025	0	0	0	20,099	0	20,099	44,014	3,202	0	67	47,283	27,134	10,827
2026	0	0	0	20,906	0	20,906	44,182	3,107	0	(17)	47,272	26,566	14,829
2027	0	0	0	21,999	0	21,999	44,694	3,010	0	(125)	47,462	25,482	22,334
2028	0	0	0	22,893	0	22,893	45,022	2,915	0	(145)	47,798	24,905	27,295
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	45,677	2,733	0	(303)	47,885	23,797	35,496
2031	0	0	0	26,201	0	26,201	46,110	2,640	0	(402)	48,149	23,178	38,674
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	29,849	0	29,849	46,972	2,463	0	(511)	48,244	18,249	44,892
2034	0	0	0	30,832	0	30,832	46,934	2,381	0	(607)	48,279	17,444	46,155
2035	0	0	0	31,845	0	31,845	49,127	2,305	0	(702)	50,229	18,247	48,150
2036	0	0	0	34,338	0	34,338	50,274	2,226	0	(796)	51,225	16,286	49,845
2037	0	0	0	36,176	0	36,176	51,198	2,174	0	(889)	51,982	15,786	51,346
2038	0	0	0	37,790	0	37,790	51,865	2,120	0	(983)	52,220	14,479	52,526
2039	0	0	0	39,480	0	39,480	51,834	2,073	0	(1,076)	52,133	12,674	53,172
2040	0	1,477	2,982	41,315	0	45,774	53,270	2,031	0	(1,164)	53,308	7,589	54,854
2041	0	2,927	3,794	43,903	0	50,624	54,065	1,993	0	(1,255)	53,912	1,708	56,166
2042	0	3,862	7,485	45,954	0	57,303	54,632	1,954	0	(1,345)	55,151	(2,031)	56,649
2043	0	4,754	9,890	48,304	0	62,169	57,259	1,917	0	(1,437)	56,488	(3,680)	53,840
2044	0	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	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	33,438	185,824	774,501	0	912,963	1,335,928	80,768	0	(12,618)	1,396,086	393,153	
NPV	0	11,588	51,571	148,850	0	202,909	237,132	21,251	0	1,425	239,808	23,846	

Discount Rate: 8.80 %  
Benefit/Cost Ratio (Col(12) / Col(7)): 1.26

## **RESIDENTIAL LOAD MANAGEMENT**



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 .....	52.32 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 .....	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

\*\*\*\* 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 GEN K-FACTOR  
PROGRAM METHOD SELECTED REV\_REQ  
PROGRAM NAME: Residential Load Management Program

(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	82,774	2,571	0	5,777	3,811	1,395	492	3,229	6	17,281	17,281	80,725
2020	79,538	2,471	0	5,551	2,618	1,337	505	3,229	1,057	16,767	15,399	82,743
2021	75,253	2,338	0	5,252	2,595	1,279	517	3,229	893	16,102	13,581	84,812
2022	71,131	2,210	0	4,964	2,565	1,221	530	3,229	742	15,460	11,975	86,932
2023	67,160	2,086	0	4,687	2,532	1,162	544	3,229	601	14,841	10,557	89,105
2024	63,330	1,967	0	4,420	2,494	1,104	557	3,229	471	14,242	9,305	91,333
2025	59,630	1,852	0	4,161	2,452	1,046	571	3,229	351	13,663	8,198	93,616
2026	56,050	1,741	0	3,912	2,406	988	585	3,229	240	13,101	7,219	95,957
2027	52,581	1,633	0	3,670	2,272	930	600	3,229	222	12,556	6,354	98,356
2028	49,131	1,526	0	3,429	2,121	872	615	3,229	222	12,013	5,583	100,815
2029	45,680	1,419	0	3,188	1,969	814	630	3,229	222	11,471	4,896	103,335
2030	42,229	1,312	0	2,947	1,818	756	646	3,229	222	10,930	4,284	105,918
2031	38,779	1,205	0	2,706	1,667	697	662	3,229	222	10,388	3,740	108,566
2032	35,328	1,097	0	2,465	1,516	639	679	3,229	222	9,848	3,256	111,280
2033	31,877	990	0	2,225	1,365	581	696	3,229	222	9,307	2,826	114,062
2034	28,426	883	0	1,984	1,214	523	713	3,229	222	8,767	2,445	116,914
2035	24,976	776	0	1,743	1,062	465	731	3,229	222	8,228	2,107	119,837
2036	21,525	669	0	1,502	911	407	749	3,229	222	7,689	1,808	122,833
2037	18,074	561	0	1,261	760	349	768	3,229	222	7,150	1,544	125,904
2038	14,624	454	0	1,021	609	291	787	3,229	222	6,612	1,312	129,051
2039	11,173	347	0	780	1,133	232	807	3,229	(454)	6,074	1,107	132,277
2040	8,398	261	0	586	1,687	174	827	3,229	(1,129)	5,635	943	135,584
2041	6,298	196	0	440	1,595	116	848	3,229	(1,129)	5,293	813	138,974
2042	4,198	130	0	293	1,503	58	869	3,229	(1,129)	4,953	699	142,448
2043	2,099	65	0	146	1,411	(0)	891	3,229	(1,129)	4,613	598	146,010

IN SERVICE COST (\$000)	80,725
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 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 (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	2,944	2,944	3,229	3,229	2,928	2,928	6	7,535	0	0	0	6	(2,042)
2020	7.22%	5,667	8,611	3,229	6,458	2,928	5,855	1,057	7,535	0	0	0	1,057	(986)
2021	6.68%	5,241	13,852	3,229	9,687	2,928	8,783	893	7,535	0	0	0	893	(93)
2022	6.18%	4,851	18,704	3,229	12,916	2,928	11,710	742	7,535	0	0	0	742	649
2023	5.71%	4,485	23,188	3,229	16,145	2,928	14,638	601	7,535	0	0	0	601	1,250
2024	5.29%	4,149	27,337	3,229	19,374	2,928	17,566	471	7,535	0	0	0	471	1,721
2025	4.89%	3,837	31,174	3,229	22,603	2,928	20,493	351	7,535	0	0	0	351	2,072
2026	4.52%	3,550	34,724	3,229	25,832	2,928	23,421	240	7,535	0	0	0	240	2,312
2027	4.46%	3,503	38,227	3,229	29,061	2,928	26,348	222	7,535	0	0	0	222	2,534
2028	4.46%	3,502	41,729	3,229	32,290	2,928	29,276	222	7,535	0	0	0	222	2,755
2029	4.46%	3,503	45,231	3,229	35,519	2,928	32,204	222	7,535	0	0	0	222	2,977
2030	4.46%	3,502	48,733	3,229	38,748	2,928	35,131	222	7,535	0	0	0	222	3,198
2031	4.46%	3,503	52,236	3,229	41,977	2,928	38,059	222	7,535	0	0	0	222	3,420
2032	4.46%	3,502	55,738	3,229	45,206	2,928	40,987	222	7,535	0	0	0	222	3,642
2033	4.46%	3,503	59,241	3,229	48,435	2,928	43,914	222	7,535	0	0	0	222	3,864
2034	4.46%	3,502	62,742	3,229	51,664	2,928	46,842	222	7,535	0	0	0	222	4,085
2035	4.46%	3,503	66,245	3,229	54,893	2,928	49,769	222	7,535	0	0	0	222	4,307
2036	4.46%	3,502	69,747	3,229	58,122	2,928	52,697	222	7,535	0	0	0	222	4,529
2037	4.46%	3,503	73,250	3,229	61,351	2,928	55,625	222	7,535	0	0	0	222	4,750
2038	4.46%	3,502	76,752	3,229	64,580	2,928	58,552	222	7,535	0	0	0	222	4,972
2039	2.23%	1,751	78,503	3,229	67,809	2,928	61,480	(454)	7,535	0	0	0	(454)	4,518
2040	0.00%	0	78,503	3,229	71,058	2,928	64,407	(1,129)	7,535	0	0	0	(1,129)	3,589
2041	0.00%	0	78,503	3,229	74,267	2,928	67,335	(1,129)	7,535	0	0	0	(1,129)	2,260
2042	0.00%	0	78,503	3,229	77,496	2,928	70,263	(1,129)	7,535	0	0	0	(1,129)	1,130
2043	0.00%	0	78,503	3,229	80,725	2,928	73,190	(1,129)	7,535	0	0	0	(1,129)	1

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(2,049)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	7,535
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)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2019	3.75%	2,944	6	77,496	3,229	(2,042)	82,774	79,538	81,156
2020	7.22%	5,667	1,057	74,267	6,458	(986)	79,538	75,253	77,395
2021	6.68%	5,241	893	71,038	9,687	(93)	75,253	71,131	73,192
2022	6.18%	4,851	742	67,809	12,916	649	71,131	67,160	69,146
2023	5.71%	4,485	601	64,580	16,145	1,250	67,160	63,330	65,245
2024	5.29%	4,149	471	61,351	19,374	1,721	63,330	59,630	61,480
2025	4.89%	3,837	351	58,122	22,603	2,072	59,630	56,050	57,840
2026	4.52%	3,550	240	54,893	25,832	2,312	56,050	52,581	54,316
2027	4.46%	3,503	222	51,664	29,061	2,534	52,581	49,131	50,856
2028	4.46%	3,502	222	48,435	32,290	2,755	49,131	45,680	47,405
2029	4.46%	3,503	222	45,206	35,519	2,977	45,680	42,229	43,955
2030	4.46%	3,502	222	41,977	38,748	3,198	42,229	38,779	40,504
2031	4.46%	3,503	222	38,748	41,977	3,420	38,779	35,328	37,053
2032	4.46%	3,502	222	35,519	45,206	3,642	35,328	31,877	33,602
2033	4.46%	3,503	222	32,290	48,435	3,864	31,877	28,426	30,152
2034	4.46%	3,502	222	29,061	51,664	4,085	28,426	24,976	26,701
2035	4.46%	3,503	222	25,832	54,893	4,307	24,976	21,525	23,250
2036	4.46%	3,502	222	22,603	58,122	4,529	21,525	18,074	19,800
2037	4.46%	3,503	222	19,374	61,351	4,750	18,074	14,624	16,349
2038	4.46%	3,502	222	16,145	64,580	4,972	14,624	11,173	12,898
2039	2.23%	1,751	(454)	12,916	67,809	4,518	11,173	8,398	9,785
2040	0.00%	0	(1,129)	9,687	71,038	3,589	8,398	6,298	7,348
2041	0.00%	0	(1,129)	6,458	74,267	2,260	6,298	4,198	5,248
2042	0.00%	0	(1,129)	3,229	77,496	1,130	4,198	2,099	3,149
2043	0.00%	0	(1,129)	(0)	80,725	1	2,099	-1	1,049

\* 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

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)	100.00%      907.77	
											(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

IN SERVICE YEAR	2019	57.47	156.84	127.50	(27.02)	1,064.61
PLANT COSTS	725,389,805.5	CONSTRUCTION CASH		68,833	68,833	68,833
AFUDC RATE	8.48%	EQUITY AFUDC		7,535	4,357	
		DEBT AFUDC		4,357		
		CPI				9,668
		TOTAL		80,725	73,190	78,501

\* 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 (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	9,615	9,615	6.41	16.51	6.41	0.00	1.00	1.00
2011	19,230	19,230	6.35	10.38	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	34,100	34,100	7.06	9.99	7.06	0.00	1.00	1.00
2014	38,460	38,460	7.53	10.61	7.53	0.00	1.00	1.00
2015	41,460	41,460	8.11	13.20	8.11	0.00	1.00	1.00
2016	44,460	44,460	9.00	13.90	9.00	0.00	1.00	1.00
2017	47,460	47,460	9.75	15.09	9.75	0.00	1.00	1.00
2018	50,460	50,460	10.52	15.46	10.52	0.00	1.00	1.00
2019	50,460	50,460	11.50	21.44	11.50	10.41	1.00	1.00
2020	50,460	50,460	12.08	20.17	12.08	10.50	1.00	1.00
2021	50,460	50,460	12.57	21.76	12.57	10.74	1.00	1.00
2022	50,460	50,460	13.06	23.66	13.06	10.81	1.00	1.00
2023	50,460	50,460	13.39	20.91	13.39	10.80	1.00	1.00
2024	50,460	50,460	13.95	22.19	13.95	10.84	1.00	1.00
2025	50,460	50,460	14.40	22.20	14.40	10.96	1.00	1.00
2026	50,460	50,460	14.70	22.41	14.70	11.05	1.00	1.00
2027	50,460	50,460	15.13	23.05	15.13	11.17	1.00	1.00
2028	50,460	50,460	15.60	23.70	15.60	11.36	1.00	1.00
2029	50,460	50,460	16.02	22.95	16.02	11.41	1.00	1.00
2030	50,460	50,460	16.52	23.78	16.52	11.59	1.00	1.00
2031	50,460	50,460	17.08	24.53	17.08	11.80	1.00	1.00
2032	50,460	50,460	17.50	24.55	17.50	11.88	1.00	1.00
2033	50,460	50,460	18.27	25.51	18.27	12.10	1.00	1.00
2034	50,460	50,460	18.73	25.89	18.73	12.14	1.00	1.00
2035	50,460	50,460	19.57	27.04	19.57	12.29	1.00	1.00
2036	50,460	50,460	20.40	28.26	20.40	12.55	1.00	1.00
2037	50,460	50,460	21.11	29.22	21.11	12.70	1.00	1.00
2038	50,460	50,460	22.02	30.23	22.02	13.04	1.00	1.00
2039	50,460	50,460	22.78	31.29	22.78	13.32	1.00	1.00
2040	50,460	50,460	23.59	32.02	23.59	13.44	1.00	1.00
2041	50,460	50,460	24.54	33.28	24.54	13.75	1.00	1.00
2042	50,460	50,460	25.50	34.66	25.50	14.10	1.00	1.00
2043	50,460	50,460	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: Residential Load Management 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	17,281	9,479	400	24,139	30,540	20,759
2020	16,767	9,716	577	35,565	43,328	19,297
2021	16,102	9,959	603	37,107	45,252	18,519
2022	15,460	10,208	641	39,274	47,177	18,406
2023	14,841	10,463	676	41,291	48,535	18,736
2024	14,242	10,725	717	43,618	50,356	18,945
2025	13,663	10,993	766	46,604	53,116	18,910
2026	13,101	11,267	820	49,803	55,953	19,039
2027	12,556	11,549	868	52,568	58,349	19,192
2028	12,013	11,838	893	53,963	59,606	19,102
2029	11,471	12,134	935	56,236	61,173	19,603
2030	10,930	12,437	982	58,868	63,619	19,598
2031	10,388	12,748	1006	60,081	64,772	19,452
2032	9,848	13,067	1045	62,204	66,103	20,061
2033	9,307	13,393	1150	68,444	72,283	20,012
2034	8,767	13,728	1204	71,240	73,997	20,943
2035	8,228	14,071	1237	72,862	75,139	21,259
2036	7,689	14,423	1279	75,037	77,367	21,061
2037	7,150	14,784	1314	76,743	78,480	21,511
2038	6,612	15,153	1352	78,658	80,874	20,901
2039	6,074	15,532	1387	80,275	82,731	20,537
2040	5,635	15,921	1425	82,124	83,677	21,428
2041	5,293	16,319	1464	83,926	85,783	21,219
2042	4,953	16,727	1504	85,837	88,175	20,847
2043	4,613	17,145	1549	88,045	90,441	20,910
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	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	262,983	323,778	25,795	1,524,511	1,636,821	500,247
NPV	58,828	53,755	3,895	233,327	259,525	90,280











RATE IMPACT TEST  
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	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	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)	(1,627)
2012	0	1,811	1,082	55	0	2,948	146	1,247	0	3	1,396	(1,552)	(2,829)
2013	0	2,192	1,416	75	0	3,683	109	1,896	0	11	2,016	(1,667)	(4,015)
2014	0	2,439	1,633	92	0	4,164	133	2,211	0	13	2,356	(1,808)	(5,196)
2015	0	2,400	1,798	106	0	4,304	206	2,458	0	19	2,682	(1,622)	(6,169)
2016	0	2,136	1,933	118	0	4,188	224	2,612	0	22	2,858	(1,330)	(6,902)
2017	0	1,890	2,068	131	0	4,090	260	2,769	0	27	3,057	(1,033)	(7,424)
2018	0	1,752	2,203	144	0	4,099	272	2,929	0	29	3,230	(869)	(7,828)
2019	0	1,546	2,271	153	0	3,970	21,223	3,076	0	(852)	23,447	19,477	485
2020	0	1,344	2,271	154	0	3,769	19,702	2,989	0	(1,258)	21,433	17,664	7,409
2021	0	1,184	2,271	157	0	3,612	18,967	2,904	0	(1,394)	20,477	16,865	13,480
2022	0	1,032	2,271	162	0	3,464	18,908	2,820	0	(1,612)	20,116	16,652	18,986
2023	0	888	2,271	167	0	3,325	19,135	2,738	0	(1,781)	20,092	16,767	24,077
2024	0	824	2,271	174	0	3,268	19,375	2,658	0	(2,030)	20,003	16,734	28,743
2025	0	844	2,271	180	0	3,295	19,329	2,578	0	(2,317)	19,590	16,295	32,916
2026	0	865	2,271	188	0	3,324	19,458	2,499	0	(2,507)	19,450	16,126	36,709
2027	0	887	2,271	197	0	3,355	19,623	2,420	0	(2,820)	19,223	15,868	40,136
2028	0	909	2,271	205	0	3,385	19,544	2,342	0	(3,070)	18,816	15,430	43,197
2029	0	932	2,271	215	0	3,417	20,009	2,263	0	(3,447)	18,826	15,409	46,004
2030	0	955	2,271	225	0	3,451	20,021	2,186	0	(3,813)	18,393	14,942	48,504
2031	0	979	2,271	235	0	3,485	19,886	2,110	0	(4,121)	17,865	14,380	50,710
2032	0	1,003	2,271	249	0	3,523	20,486	2,040	0	(4,509)	18,017	14,494	52,759
2033	0	1,029	2,271	272	0	3,571	20,452	1,978	0	(5,245)	17,185	13,614	54,523
2034	0	1,054	2,271	277	0	3,602	21,385	1,924	0	(5,793)	17,516	13,915	56,179
2035	0	1,081	2,271	288	0	3,639	21,720	1,875	0	(6,301)	17,294	13,655	57,672
2036	0	1,108	2,271	308	0	3,686	21,544	1,830	0	(6,873)	16,501	12,814	58,958
2037	0	1,135	2,271	325	0	3,731	22,010	1,789	0	(7,439)	16,359	12,628	60,122
2038	0	1,164	2,271	339	0	3,773	21,413	1,750	0	(8,063)	15,100	11,327	61,081
2039	0	1,193	2,271	354	0	3,818	21,067	1,715	0	(8,764)	14,018	10,200	61,874
2040	0	1,621	2,271	371	0	4,262	21,963	1,682	0	(9,484)	14,161	9,899	62,581
2041	0	1,661	2,271	390	0	4,322	21,775	1,651	0	(10,213)	13,213	8,891	63,164
2042	0	1,703	2,271	411	0	4,385	21,428	1,620	0	(10,204)	12,844	8,459	63,674
2043	0	1,551	2,271	434	0	4,255	21,525	1,589	0	(10,194)	12,920	8,665	64,153
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	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	44,794	69,766	7,193	0	121,753	513,396	71,769	0	(123,988)	461,177	339,424	
NPV	0	15,465	18,334	1,428	0	35,228	93,214	21,355	0	(15,189)	99,381	64,153	

Discount Rate 8.89 %  
Benefit/Cost Ratio (Col(12) / Col(7)) : 2.82

## **RESIDENTIAL AC TUNE-UP AND MAINTENANCE**

INPUT DATA - PART I CONTINUED  
PROGRAM(METHOD SELECTED): REV. MSQ  
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 .....	8.66 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	44.65 KWH
(5) KW LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.60
(7) CUSTOMER KVA INCREASE AT METER .....	0.60 KVA

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 .....	1.70728
(5) K FACTOR FOR T & D .....	1.62254

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 RATE .....	*** %**
- UTILITY DISCOUNT RATE .....	8.80 %
+ UTILITY AFDG RATE .....	8.48 %
+ UTILITY NON-RECURRING REBATE/INCENTIVE .....	*** \$CUST
+ UTILITY RECURRING REBATE/INCENTIVE .....	*** \$CUST
- 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 .....	185.22 \$/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 .....	1.81 \$/KW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN FUEL VARIABLE O & M COSTS .....	0.106 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	094 ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	8.23 CENTS PER KW-HR** (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&O
(4) DEMAND CHARGE ESCALATION RATE .....	*** %





**CALCULATION OF GENX-FACTOR  
PROGRAMMED SUBCATED REV. REQ  
PROGRAM NAME: Residential AC Two-up and Maintenance**

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	ISO-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPRECI- \$(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	23,391	727	0	1,632	1,077	394	139	912	2	4,394	4,394	4,394	22,812
2020	22,477	698	0	1,569	740	378	143	912	289	4,788	4,332	8,725	23,283
2021	21,564	661	0	1,484	733	361	146	912	332	4,539	3,839	12,563	23,947
2022	20,191	634	0	1,403	725	345	150	912	218	4,249	3,384	15,947	24,566
2023	18,979	590	0	1,324	716	328	154	912	179	4,134	2,983	19,441	25,181
2024	17,897	556	0	1,249	705	312	157	912	133	4,025	2,629	22,070	25,810
2025	16,851	523	0	1,176	693	295	161	912	99	3,961	2,317	24,387	26,455
2026	15,839	492	0	1,105	680	279	165	912	68	3,792	2,040	26,427	27,117
2027	14,830	462	0	1,037	642	263	170	912	43	3,548	1,796	28,222	27,795
2028	13,884	431	0	969	599	246	174	912	23	3,295	1,578	29,800	28,490
2029	12,909	401	0	901	557	230	178	912	13	3,202	1,384	31,184	29,202
2030	11,994	371	0	833	514	214	183	912	6	3,089	1,211	32,394	29,932
2031	10,839	340	0	765	471	197	187	912	1	2,936	1,057	33,451	30,680
2032	9,583	310	0	697	428	181	192	912	1	2,783	920	34,371	31,447
2033	8,088	280	0	629	385	164	197	912	1	2,630	799	35,170	32,230
2034	6,033	250	0	561	343	148	202	912	1	2,478	691	35,861	33,039
2035	4,033	220	0	493	300	131	207	912	1	2,325	595	36,456	33,865
2036	2,083	189	0	425	257	115	212	912	1	2,173	511	36,967	34,712
2037	1,106	159	0	356	215	99	217	912	1	2,021	436	37,404	35,580
2038	4,133	128	0	288	172	82	222	912	1	1,868	371	37,774	36,469
2039	3,157	98	0	220	130	66	228	912	(10)	1,717	313	38,087	37,381
2040	2,373	74	0	166	477	49	234	912	(319)	1,592	266	38,353	38,315
2041	1,780	55	0	124	451	33	240	912	(319)	1,496	220	38,593	39,273
2042	1,386	37	0	83	425	16	246	912	(319)	1,400	198	38,781	40,253
2043	393	18	0	41	389	(9)	252	912	(315)	1,303	169	38,939	41,261

IN SERVICE COST (\$000)	22,812
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	75
DEPR. RATE	38.57%
DISCOUNT RATE	8.5%
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 = CPWC / IN-SVC COST = 1.7978

DEFERRED TAX AND MID-YEAR RATE-BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_98Q  
 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 DEPRECIATION FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR. RATE MINUS LINES	(10)*(11) TAC GRADE \$(000)	SALVAGE TAC GRADE \$(000)	ANNUAL DEFERRED TAX (7)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	832	832	912	912	827	827	5	2,129	0	0	0	2	(377)
2020	7.25%	1,681	2,433	912	1,825	827	1,655	209	2,129	0	0	0	209	(229)
2021	6.85%	1,481	3,915	912	2,737	827	2,482	232	2,129	0	0	0	232	(26)
2022	6.15%	1,371	5,286	912	3,650	827	3,329	210	2,129	0	0	0	210	183
2023	5.75%	1,267	6,553	912	4,562	827	4,137	179	2,129	0	0	0	179	353
2024	5.25%	1,172	7,725	912	5,475	827	4,964	133	2,129	0	0	0	133	486
2025	4.85%	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%	425	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)	(379)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	2,129
BOOK DEPR. RATE - USEFUL LIFE	4.80%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: HYV\_MBO  
 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)
2013	3.75%	332	2	21,999	912	(577)	21,391	22,477	22,934
2020	7.22%	1,601	299	20,987	1,825	(529)	22,477	21,266	21,871
2021	6.88%	1,491	282	20,075	2,737	(26)	21,266	20,181	20,684
2022	6.18%	1,371	210	19,162	3,650	183	20,181	18,979	19,540
2023	5.75%	1,267	170	18,258	4,562	333	18,979	17,897	18,428
2024	5.29%	1,172	133	17,337	5,475	486	17,897	16,851	17,374
2025	4.83%	1,084	99	16,425	6,387	585	16,851	15,839	16,345
2026	4.52%	1,000	68	15,512	7,300	633	15,839	14,829	15,348
2027	4.40%	990	63	14,600	8,212	716	14,829	13,884	14,372
2028	4.40%	990	63	13,687	9,125	779	13,884	12,900	13,396
2029	4.40%	990	63	12,775	10,037	841	12,900	11,934	12,421
2030	4.40%	990	63	11,862	10,950	904	11,934	10,939	11,446
2031	4.40%	990	63	10,950	11,862	967	10,939	9,963	10,471
2032	4.40%	990	63	10,037	12,775	1,029	9,963	8,988	9,496
2033	4.40%	990	63	9,125	13,687	1,092	8,988	8,033	8,521
2034	4.40%	990	63	8,212	14,600	1,154	8,033	7,058	7,546
2035	4.40%	990	63	7,300	15,512	1,217	7,058	6,083	6,579
2036	4.40%	990	63	6,387	16,425	1,280	6,083	5,108	5,595
2037	4.40%	990	63	5,475	17,337	1,342	5,108	4,133	4,620
2038	4.40%	990	63	4,562	18,250	1,405	4,133	3,157	3,645
2039	3.22%	453	(128)	3,650	19,162	1,577	3,157	2,373	2,765
2040	0.00%	0	(319)	2,737	20,075	938	2,373	1,786	2,074
2041	0.00%	0	(319)	1,825	20,987	639	1,786	1,196	1,483
2042	0.00%	0	(319)	912	21,900	319	1,196	599	599
2043	0.00%	0	(319)	(0)	22,812	0	599	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 (\$K/W)	(7) CUMULATIVE AVERAGE SPENDING (\$K/W)
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	1.30%	15.09	5.24
2015	-4	3.00%	1.194	4.57%	39.61	37.63
2016	-3	3.00%	1.230	37.50%	331.57	222.77
2017	-2	3.00%	1.267	45.74%	438.27	394.84
2018	-1	3.00%	1.305	10.44%	98.79	833.38

YEAR	NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$K/W)	(9a) DEBT AFUDC (\$K/W)	(9b) CUMULATIVE DEBT AFUDC (\$K/W)	(9c) YEARLY TOTAL AFUDC (\$K/W)	(9d) CUMULATIVE TOTAL AFUDC (\$K/W)	(9e) CONSTRUCTION PERIOD INTEREST (\$K/W)	(9f) CUMULATIVE CFI (\$K/W)	(9g) DEFERRED TAXES (\$K/W)	(9h) CUMULATIVE DEFERRED TAXES (\$K/W)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$K/W)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$K/W)
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	0.62	0.62	0.85	0.65	0.04	0.64	(0.01)	(0.01)	1.29	1.29
2014	-5	5.29	0.29	0.30	0.79	0.84	0.65	0.79	(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)	(0.79)	42.83	60.90
2016	-3	226.84	7.87	8.56	19.29	23.56	15.98	19.25	(4.11)	(4.15)	251.16	412.06
2017	-2	622.20	19.16	28.01	59.10	76.45	43.47	62.72	(9.28)	(13.39)	473.37	885.43
2018	-1	934.83	29.16	57.47	88.39	156.84	64.78	127.50	(13.61)	(27.02)	179.15	1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,889,885
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEBT TAX	TAX BASIS
CONSTRUCTION CASH	19,432	19,432	19,432
EQUITY AFUDC	2,129		
DEBT AFUDC	1,231	1,231	
CFI			2,732
TOTAL	22,812	20,663	22,164

\* Columns not specified in workbook

INPUT DATA - PART 2  
 PROGRAM MODELED SELECTED: RESV REQ  
 PROGRAM NAME: Residential AC Turn-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 INEFFECTIVENESS FACTOR
2009	0	0	4.79	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	6.38	0.00	1.00	1.00
2012	14,185	14,185	6.43	8.62	6.43	0.00	1.00	1.00
2013	22,294	22,294	7.06	8.53	7.28	0.00	1.00	1.00
2014	31,334	31,334	7.59	8.80	7.67	0.00	1.00	1.00
2015	41,394	41,394	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	64,305	64,305	9.75	13.94	10.02	0.00	1.00	1.00
2018	77,635	77,635	10.82	15.73	10.81	0.00	1.00	1.00
2019	77,635	77,635	11.90	15.53	10.41	0.00	1.00	1.00
2020	77,635	77,635	12.08	16.18	12.51	0.00	1.00	1.00
2021	77,635	77,635	12.57	16.83	13.02	0.00	1.00	1.00
2022	77,635	77,635	13.06	17.52	13.54	0.00	1.00	1.00
2023	77,635	77,635	13.59	17.56	13.86	0.00	1.00	1.00
2024	77,635	77,635	13.95	18.19	14.42	0.00	1.00	1.00
2025	77,635	77,635	14.40	18.66	14.87	0.00	1.00	1.00
2026	77,635	77,635	14.70	18.69	15.15	0.00	1.00	1.00
2027	77,635	77,635	15.13	18.94	15.56	0.00	1.00	1.00
2028	77,635	77,635	15.60	19.24	16.02	0.00	1.00	1.00
2029	77,635	77,635	16.02	19.22	16.48	0.00	1.00	1.00
2030	77,635	77,635	16.52	19.69	16.88	0.00	1.00	1.00
2031	77,635	77,635	17.08	20.24	17.44	0.00	1.00	1.00
2032	77,635	77,635	17.50	19.82	17.81	0.00	1.00	1.00
2033	77,635	77,635	18.27	20.69	18.47	0.00	1.00	1.00
2034	77,635	77,635	18.73	20.28	18.84	0.00	1.00	1.00
2035	77,635	77,635	19.57	21.64	19.72	0.00	1.00	1.00
2036	77,635	77,635	20.40	22.69	20.51	0.00	1.00	1.00
2037	77,635	77,635	21.11	23.18	21.22	0.00	1.00	1.00
2038	77,635	77,635	22.02	24.15	22.14	0.00	1.00	1.00
2039	77,635	77,635	22.78	24.74	22.87	0.00	1.00	1.00
2040	77,635	77,635	23.59	25.27	23.66	0.00	1.00	1.00
2041	77,635	77,635	24.34	26.14	24.50	0.00	1.00	1.00
2042	77,635	77,635	25.50	27.05	25.37	0.00	1.00	1.00
2043	77,635	77,635	26.74	28.55	26.83	0.00	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.



AVOIDED FUEL AND PROGRAM FUEL SAVINGS  
PROGRAM METHOD SELECTED: KEY\_REQ  
PROGRAM NAME: Residential AC Tune-up and Maintenance

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)*
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	0	0
2011	0	0	0	0	0	0	140	0
2012	71	6	77	6	2	7	433	0
2013	150	19	169	13	3	16	731	0
2014	228	28	265	28	5	25	1,101	0
2015	335	37	372	28	8	35	1,678	0
2016	445	48	493	37	10	47	2,645	0
2017	563	61	624	47	13	60	3,629	0
2018	698	75	773	58	17	75	4,677	0
2019	848	77	925	71	21	91	5,827	0
2020	1,018	79	1,098	88	21	109	7,061	0
2021	1,209	81	1,290	106	22	128	8,381	0
2022	1,421	85	1,506	127	22	149	9,796	0
2023	1,654	89	1,743	151	23	174	11,306	0
2024	1,909	97	2,006	177	23	200	12,911	0
2025	2,186	90	2,276	204	24	228	14,611	0
2026	2,485	92	2,577	233	25	258	16,406	0
2027	2,806	94	2,900	264	25	289	18,296	0
2028	3,149	97	3,246	297	26	323	20,281	0
2029	3,514	99	3,613	332	26	358	22,361	0
2030	3,891	101	4,002	369	27	396	24,536	0
2031	4,280	104	4,384	408	28	436	26,806	0
2032	4,681	107	4,788	449	29	478	29,171	0
2033	5,094	109	5,203	492	29	521	31,631	0
2034	5,519	112	5,631	537	30	567	34,186	0
2035	5,956	115	6,071	584	31	615	36,836	0
2036	6,405	118	6,523	633	31	664	39,581	0
2037	6,866	121	6,987	684	32	716	42,421	0
2038	7,339	124	7,463	737	33	770	45,356	0
2039	7,824	127	7,951	792	34	826	48,386	0
2040	8,321	130	8,451	849	35	884	51,511	0
2041	8,830	133	8,963	908	36	944	54,731	0
2042	9,351	136	9,487	969	36	1,006	58,046	0
2043	9,884	140	10,024	1,032	37	1,069	61,456	0
2044	0	0	0	0	0	0	0	0
2045	0	0	0	0	0	0	0	0
2046	0	0	0	0	0	0	0	0
2047	0	0	0	0	0	0	0	0
2048	0	0	0	0	0	0	0	0
2049	0	0	0	0	0	0	0	0
2050	0	0	0	0	0	0	0	0
2051	0	0	0	0	0	0	0	0
2052	0	0	0	0	0	0	0	0
2053	0	0	0	0	0	0	0	0
2054	0	0	0	0	0	0	0	0
2055	0	0	0	0	0	0	0	0
2056	0	0	0	0	0	0	0	0
2057	0	0	0	0	0	0	0	0
2058	0	0	0	0	0	0	0	0
2059	0	0	0	0	0	0	0	0
2060	0	0	0	0	0	0	0	0
2061	0	0	0	0	0	0	0	0
2062	0	0	0	0	0	0	0	0
2063	0	0	0	0	0	0	0	0
2064	0	0	0	0	0	0	0	0
2065	0	0	0	0	0	0	0	0
2066	0	0	0	0	0	0	0	0
2067	0	0	0	0	0	0	0	0
2068	0	0	0	0	0	0	0	0
2069	0	0	0	0	0	0	0	0
2070	0	0	0	0	0	0	0	0
2071	0	0	0	0	0	0	0	0
2072	0	0	0	0	0	0	0	0
2073	0	0	0	0	0	0	0	0
2074	0	0	0	0	0	0	0	0
2075	0	0	0	0	0	0	0	0
2076	0	0	0	0	0	0	0	0
2077	0	0	0	0	0	0	0	0
2078	0	0	0	0	0	0	0	0
2079	0	0	0	0	0	0	0	0
2080	0	0	0	0	0	0	0	0
2081	0	0	0	0	0	0	0	0
2082	0	0	0	0	0	0	0	0
2083	0	0	0	0	0	0	0	0
2084	0	0	0	0	0	0	0	0
2085	0	0	0	0	0	0	0	0
2086	0	0	0	0	0	0	0	0
2087	0	0	0	0	0	0	0	0
2088	0	0	0	0	0	0	0	0
2089	0	0	0	0	0	0	0	0
2090	0	0	0	0	0	0	0	0
2091	0	0	0	0	0	0	0	0
2092	0	0	0	0	0	0	0	0
2093	0	0	0	0	0	0	0	0
2094	0	0	0	0	0	0	0	0
2095	0	0	0	0	0	0	0	0
2096	0	0	0	0	0	0	0	0
2097	0	0	0	0	0	0	0	0
2098	0	0	0	0	0	0	0	0
2099	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0
NOA	10,097	2,915	13,012	1,341	764	2,105	263,509	0
NPV	-4,329	589	-3,740	361	149	509	46,330	0

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











**RESIDENTIAL REFRIGERATOR REPLACEMENT**

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 .....	2.66 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	107.61 KWH
(5) KW LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIFLIER .....	1.00
(7) CUSTOMER KW INCREASE AT METER .....	0.00 KWH

II. ECONOMIC LIFE & X FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	25 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) X FACTOR FOR GENERATION .....	1.79708
(5) X FACTOR FOR T & D .....	1.63254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER .....	*** \$COST
(2) UTILITY RECURRING COST PER CUSTOMER .....	*** \$COST
(3) UTILITY COST ESCALATION RATE .....	*** %**
(4) CUSTOMER EQUIPMENT COST .....	*** \$COST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	*** %**
(6) CUSTOMER O & M COST .....	*** \$COST/YR
(7) CUSTOMER O & M COST ESCALATION RATE .....	*** %**
(8) INCREASED SUPPLY COSTS .....	*** \$COST/YR
(9) SUPPLY COSTS ESCALATION RATES .....	*** %**
(10) UTILITY DISCOUNT RATE .....	2.89 %
(11) UTILITY AFDG RATE .....	2.48 %
(12) UTILITY NON RECURRING REBATE INCENTIVE .....	*** \$COST
(13) UTILITY RECURRING REBATE INCENTIVE .....	*** \$COST
(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 .....	2010
(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 & T&D COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	97.05 \$/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/KVA
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	6% ** (in-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.25 CENTS PER KW/H** (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/KVA
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	*** %



**CALCULATION OF GENE-FACTOR**  
**PROGRAMMED SELECTED REV\_REQ**  
**PROGRAMNAME: Residential Refrigerator Replacement**

(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)	DEPRECI- \$(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	1,642	7,670
2020	7,557	233	0	327	249	127	48	307	106	1,893	1,463	3,105	7,962
2021	7,139	222	0	499	247	121	49	307	85	1,539	1,290	4,395	8,658
2022	6,758	210	0	472	244	116	50	307	71	1,463	1,118	5,513	8,260
2023	6,381	198	0	443	241	110	52	307	57	1,410	1,003	6,516	2,465
2024	6,017	187	0	428	237	105	53	307	45	1,353	884	7,420	1,678
2025	5,666	176	0	385	233	99	54	307	33	1,298	779	8,199	8,891
2026	5,326	165	0	372	229	94	56	307	23	1,245	698	8,885	9,117
2027	4,996	155	0	349	214	88	57	307	11	1,193	604	9,489	9,345
2028	4,668	145	0	324	202	83	58	307	21	1,141	530	10,019	9,579
2029	4,340	135	0	343	187	77	60	307	21	1,096	465	10,485	9,818
2030	4,012	125	0	280	173	72	61	307	21	1,058	407	10,892	10,064
2031	3,685	114	0	257	158	66	63	307	21	987	355	11,247	10,315
2032	3,357	104	0	234	144	61	64	307	21	936	309	11,554	10,573
2033	3,029	94	0	211	130	56	66	307	21	884	269	11,825	10,838
2034	2,701	84	0	188	115	50	68	307	21	833	232	12,057	11,109
2035	2,373	74	0	165	101	44	69	307	21	782	200	12,257	11,386
2036	2,045	64	0	143	87	39	71	307	21	731	172	12,429	11,671
2037	1,717	53	0	120	72	33	73	307	21	679	147	12,576	11,963
2038	1,389	43	0	97	58	28	75	307	21	628	125	12,701	12,262
2039	1,062	33	0	74	43	21	77	307	(43)	577	105	12,806	12,568
2040	798	23	0	56	26	17	79	307	(107)	535	90	12,893	12,882
2041	598	19	0	42	12	11	81	307	(107)	503	77	12,973	13,205
2042	399	12	0	28	6	6	83	307	(107)	471	66	13,049	13,535
2043	199	6	0	14	(34)	(0)	85	307	(107)	438	57	13,096	13,873

IN SERVICE COST (\$000)	7,670
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EXPR. TAX RATE	38.57%
DISCOUNT RATE	8.5%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

**CAPITAL STRUCTURE**

SOURCE	WEIGHT	COST	%
DEBT	44%	7.83	%
PS	0%	0.00	%
CS	56%	12.50	%

K-FACTOR =  $\frac{CFWFC}{IN-SVC COST} = 1.79738$

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

(2)	(3)	(5)	(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 DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	5.75%	280	280	307	307	278	278	1	716	0	0	0	1	(34)
2020	7.22%	338	618	307	614	278	556	100	716	0	0	0	100	(84)
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	82
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	4.87%	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	4.46%	333	3,632	307	2,761	278	2,503	21	716	0	0	0	21	241
2028	4.46%	333	3,965	307	3,068	278	2,782	21	716	0	0	0	21	262
2029	4.46%	333	4,298	307	3,375	278	3,060	21	716	0	0	0	21	283
2030	4.46%	333	4,630	307	3,682	278	3,338	21	716	0	0	0	21	304
2031	4.46%	333	4,963	307	3,988	278	3,616	21	716	0	0	0	21	325
2032	4.46%	333	5,296	307	4,295	278	3,894	21	716	0	0	0	21	346
2033	4.46%	333	5,629	307	4,602	278	4,172	21	716	0	0	0	21	367
2034	4.46%	333	5,961	307	4,909	278	4,451	21	716	0	0	0	21	388
2035	4.46%	333	6,294	307	5,216	278	4,729	21	716	0	0	0	21	409
2036	4.46%	333	6,627	307	5,522	278	5,007	21	716	0	0	0	21	430
2037	4.46%	333	6,960	307	5,829	278	5,285	21	716	0	0	0	21	451
2038	4.46%	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	(45)	716	0	0	0	(45)	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)	(195)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	716
BOOK DEPR RATE - USEFUL LIFE	4.80%



DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/PROJECT 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	2.75%	280	1	7,563	307	(394)	7,865	7,537	7,711
2020	7.25%	538	100	7,026	614	(94)	7,557	7,130	7,354
2021	6.88%	498	85	6,750	920	(9)	7,150	6,738	6,954
2022	6.18%	461	71	6,443	1,227	82	6,758	6,381	6,578
2023	5.75%	426	57	6,134	1,534	119	6,381	6,017	6,199
2024	5.25%	394	45	5,829	1,841	164	6,017	5,668	5,842
2025	4.89%	365	35	5,522	2,148	197	5,666	5,326	5,496
2026	4.52%	337	23	5,216	2,454	230	5,306	4,996	5,161
2027	4.40%	330	21	4,909	2,761	241	4,996	4,668	4,832
2028	4.40%	333	21	4,602	3,068	282	4,668	4,340	4,504
2029	4.40%	333	21	4,295	3,375	283	4,340	4,012	4,176
2030	4.40%	333	21	3,988	3,682	304	4,012	3,685	3,849
2031	4.40%	333	21	3,682	3,988	325	3,685	3,357	3,521
2032	4.40%	333	21	3,375	4,295	346	3,357	3,029	3,193
2033	4.40%	333	21	3,068	4,602	367	3,029	2,701	2,865
2034	4.40%	333	21	2,761	4,909	388	2,701	2,373	2,537
2035	4.40%	333	21	2,454	5,216	409	2,373	2,045	2,209
2036	4.40%	330	21	2,148	5,522	430	2,045	1,717	1,881
2037	4.40%	333	21	1,841	5,829	451	1,717	1,389	1,553
2038	4.40%	333	21	1,534	6,134	472	1,389	1,062	1,226
2039	2.25%	166	(45)	1,227	6,443	429	1,062	794	958
2040	0.00%	0	(107)	920	6,750	322	794	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	300

\* 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	0.00%	1.000	0.00%	0.00	0.00
2011	-8	0.00%	1.001	0.00%	0.00	0.00
2012	-7	0.00%	1.002	0.00%	0.00	0.00
2013	-6	0.00%	1.126	0.15%	1.24	0.62
2014	-5	0.00%	1.159	1.90%	15.99	5.24
2015	-4	0.00%	1.194	4.57%	39.61	37.03
2016	-3	0.00%	1.230	37.20%	372.0%	222.77
2017	-2	0.00%	1.267	45.74%	457.4%	598.84
2018	-1	0.00%	1.305	18.44%	184.4%	658.38

YEAR	NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/KW)	(9a)* DEBT AFUDC (\$/KW)	100.00%		(9b)* CUMULATIVE DEBT AFUDC (\$/KW)	(7) YEARLY TOTAL AFUDC (\$/KW)	(9c)* CUMULATIVE TOTAL AFUDC (\$/KW)	(9d)* CONSTRUCTION PERIOD INTEREST (\$/KW)	(9e)* CUMULATIVE CPI (\$/KW)	(9f)* DEFERRED TAXES (\$/KW)	(9g)* 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	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	0.65	0.65	0.65	0.04	0.04	0.00	0.00	(0.01)	1.29	1.29
2014	-5	5.29	0.20	0.20	6.79	6.79	6.79	0.63	0.70	(0.14)	(0.14)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.49	3.22	4.06	4.06	2.65	3.35	(0.57)	(0.72)	(0.72)	42.83	60.90
2016	-3	226.84	7.07	8.56	19.29	23.36	23.36	15.90	19.25	(3.41)	(4.13)	(4.13)	251.16	412.06
2017	-2	622.20	19.46	28.61	53.10	76.45	76.45	43.47	62.72	(9.26)	(13.39)	(13.39)	473.37	885.43
2018	-1	934.83	29.46	57.47	80.23	156.84	156.84	64.78	127.50	(15.83)	(27.62)	(27.62)	179.18	1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,805
AFUDC RATE	0.48%

	57.47	156.84	127.50	(27.62)	1,064.61
CONSTRUCTION CASE		6,540	6,540	6,540	
EQUITY AFUDC		716	414		
DEBT AFUDC				919	
TOTAL		7,256	6,954	7,459	

\* Column not specified in workbook

INPUT DATA - PART 1  
 PROGRAM NUMBER SELECTED : REV\_XBQ  
 PROGRAM NAME: Residential Refrigerator Replacement

(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/AV EFFECTIVENESS FACTOR	(9) PROGRAM/AV EFFECTIVENESS FACTOR
2009	0	0	6.77	9.37	6.78	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	81,696	81,696	7.06	7.54	7.38	0.00	1.00	1.00
2014	121,538	121,538	7.53	8.28	7.90	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	9.09	10.60	9.54	0.00	1.00	1.00
2017	166,636	166,636	9.75	11.38	10.34	0.00	1.00	1.00
2018	166,636	166,636	10.32	12.42	11.15	0.00	1.00	1.00
2019	166,636	166,636	11.50	13.91	12.98	10.41	1.00	1.00
2020	166,636	166,636	12.08	14.53	12.95	10.30	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	14.03	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	14.78	16.87	15.32	11.05	1.00	1.00
2027	166,636	166,636	15.13	17.12	15.00	11.17	1.00	1.00
2028	166,636	166,636	15.60	17.50	16.28	11.26	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	16.40	18.12	17.18	11.59	1.00	1.00
2031	166,636	166,636	17.08	18.72	17.74	11.50	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	18.75	19.33	19.01	12.14	1.00	1.00
2035	166,636	166,636	19.57	19.39	19.94	12.29	1.00	1.00
2036	166,636	166,636	20.40	21.33	20.75	12.53	1.00	1.00
2037	166,636	166,636	21.11	22.14	21.43	12.76	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	23.88	13.32	1.00	1.00
2040	166,636	166,636	23.39	24.42	23.85	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	27.87	14.48	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.















**BUSINESS HEATING, VENTILATING AND AIR CONDITIONING**

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 .....	4,985.18 kWh ****
(5) kWh LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	433.17 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 .....	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

\*\*\*\* 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 GEN K-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)
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	246,811	7,667	0	17,224	11,363	4,159	1,468	9,628	19	51,528	51,528	240,703
2020	237,165	7,367	0	16,551	7,808	3,986	1,505	9,628	3,151	49,996	45,916	246,721
2021	224,386	6,970	0	15,659	7,737	3,813	1,543	9,628	2,661	48,012	40,494	252,889
2022	212,096	6,589	0	14,802	7,647	3,639	1,581	9,628	2,213	46,099	35,708	259,211
2023	200,255	6,221	0	13,975	7,550	3,466	1,621	9,628	1,791	44,252	31,480	265,691
2024	188,836	5,866	0	13,178	7,436	3,293	1,661	9,628	1,405	42,467	27,744	272,333
2025	177,803	5,523	0	12,408	7,311	3,120	1,703	9,628	1,046	40,739	24,443	279,142
2026	167,129	5,192	0	11,664	7,173	2,946	1,745	9,628	716	39,064	21,525	286,120
2027	156,785	4,870	0	10,942	6,774	2,773	1,789	9,628	661	37,438	18,946	293,273
2028	146,496	4,551	0	10,224	6,324	2,600	1,834	9,628	661	35,821	16,648	300,605
2029	136,207	4,231	0	9,506	5,872	2,426	1,880	9,628	661	34,205	14,599	308,120
2030	125,917	3,912	0	8,787	5,422	2,253	1,927	9,628	661	32,590	12,775	315,823
2031	115,629	3,592	0	8,069	4,971	2,080	1,975	9,628	661	30,976	11,151	323,719
2032	105,339	3,272	0	7,351	4,520	1,906	2,024	9,628	661	29,363	9,708	331,812
2033	95,050	2,953	0	6,633	4,069	1,733	2,075	9,628	661	27,752	8,426	340,107
2034	84,761	2,633	0	5,915	3,619	1,560	2,127	9,628	661	26,142	7,290	348,610
2035	74,472	2,313	0	5,197	3,167	1,386	2,180	9,628	661	24,533	6,283	357,325
2036	64,182	1,994	0	4,479	2,717	1,213	2,234	9,628	661	22,926	5,392	366,258
2037	53,894	1,674	0	3,761	2,265	1,040	2,290	9,628	661	21,320	4,605	375,415
2038	43,604	1,355	0	3,043	1,815	867	2,347	9,628	661	19,715	3,911	384,800
2039	33,315	1,035	0	2,325	3,377	693	2,406	9,628	(1,353)	18,112	3,300	394,420
2040	25,040	778	0	1,747	5,029	520	2,466	9,628	(3,367)	16,801	2,811	404,281
2041	18,780	583	0	1,311	4,755	347	2,528	9,628	(3,367)	15,784	2,425	414,388
2042	12,515	389	0	874	4,480	173	2,591	9,628	(5,367)	14,768	2,084	424,747
2043	6,258	194	0	437	4,206	0	2,656	9,628	(3,367)	13,754	1,782	435,366

IN SERVICE COST (\$000)	240,703
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  
 PROGRAM NAME: Business Heating, Ventilating and Air-Cl

(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%	8,778	8,778	9,628	9,628	8,729	8,729	19	22,467	0	0	0	19	(6,090)
2020	7.22%	16,898	25,675	9,628	19,256	8,729	17,459	3,151	22,467	0	0	0	3,151	(2,939)
2021	6.68%	15,629	41,304	9,628	28,884	8,729	26,188	2,661	22,467	0	0	0	2,661	(277)
2022	6.18%	14,466	55,770	9,628	38,512	8,729	34,918	2,213	22,467	0	0	0	2,213	1,935
2023	5.71%	13,372	69,142	9,628	48,141	8,729	43,647	1,791	22,467	0	0	0	1,791	3,726
2024	5.29%	12,371	81,513	9,628	57,769	8,729	52,377	1,405	22,467	0	0	0	1,405	5,131
2025	4.89%	11,441	92,954	9,628	67,397	8,729	61,106	1,046	22,467	0	0	0	1,046	6,177
2026	4.52%	10,585	103,539	9,628	77,025	8,729	69,835	716	22,467	0	0	0	716	6,893
2027	4.46%	10,444	113,983	9,628	86,653	8,729	78,565	661	22,467	0	0	0	661	7,554
2028	4.46%	10,442	124,425	9,628	96,281	8,729	87,294	661	22,467	0	0	0	661	8,215
2029	4.46%	10,444	134,869	9,628	105,909	8,729	96,024	661	22,467	0	0	0	661	8,876
2030	4.46%	10,442	145,311	9,628	115,537	8,729	104,753	661	22,467	0	0	0	661	9,537
2031	4.46%	10,444	155,755	9,628	125,166	8,729	113,483	661	22,467	0	0	0	661	10,198
2032	4.46%	10,442	166,197	9,628	134,794	8,729	122,212	661	22,467	0	0	0	661	10,859
2033	4.46%	10,444	176,641	9,628	144,422	8,729	130,942	661	22,467	0	0	0	661	11,520
2034	4.46%	10,442	187,083	9,628	154,050	8,729	139,671	661	22,467	0	0	0	661	12,181
2035	4.46%	10,444	197,527	9,628	163,678	8,729	148,400	661	22,467	0	0	0	661	12,843
2036	4.46%	10,442	207,969	9,628	173,306	8,729	157,130	661	22,467	0	0	0	661	13,503
2037	4.46%	10,444	218,414	9,628	182,934	8,729	165,859	661	22,467	0	0	0	661	14,165
2038	4.46%	10,442	228,855	9,628	192,562	8,729	174,589	661	22,467	0	0	0	661	14,825
2039	2.23%	5,222	234,078	9,628	202,191	8,729	183,318	(1,353)	22,467	0	0	0	(1,353)	13,472
2040	0.00%	0	234,078	9,628	211,819	8,729	192,048	(3,367)	22,467	0	0	0	(3,367)	10,105
2041	0.00%	0	234,078	9,628	221,447	8,729	200,777	(3,367)	22,467	0	0	0	(3,367)	6,737
2042	0.00%	0	234,078	9,628	231,075	8,729	209,506	(3,367)	22,467	0	0	0	(3,367)	3,370
2043	0.00%	0	234,078	9,628	240,703	8,729	218,236	(3,367)	22,467	0	0	0	(3,367)	3

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(6,108)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	22,467
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) 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%	8,778	19	231,075	9,628	(6,090)	246,811	237,165	241,988
2020	7.22%	16,898	3,151	221,447	19,256	(2,939)	237,165	224,386	230,775
2021	6.68%	15,629	2,661	211,819	28,884	(277)	224,386	212,096	218,241
2022	6.18%	14,466	2,213	202,191	38,512	1,935	212,096	200,255	206,176
2023	5.71%	13,372	1,791	192,562	48,141	3,726	200,255	188,836	194,546
2024	5.29%	12,371	1,405	182,934	57,769	5,131	188,836	177,803	183,320
2025	4.89%	11,441	1,046	173,306	67,397	6,177	177,803	167,129	172,466
2026	4.52%	10,585	716	163,678	77,025	6,893	167,129	156,785	161,957
2027	4.46%	10,444	661	154,050	86,653	7,554	156,785	146,496	151,640
2028	4.46%	10,442	661	144,422	96,281	8,215	146,496	136,207	141,351
2029	4.46%	10,444	661	134,794	105,909	8,876	136,207	125,917	131,062
2030	4.46%	10,442	661	125,166	115,537	9,537	125,917	115,629	120,773
2031	4.46%	10,444	661	115,537	125,166	10,198	115,629	105,339	110,484
2032	4.46%	10,442	661	105,909	134,794	10,859	105,339	95,050	100,195
2033	4.46%	10,444	661	96,281	144,422	11,520	95,050	84,761	89,906
2034	4.46%	10,442	661	86,653	154,050	12,181	84,761	74,472	79,616
2035	4.46%	10,444	661	77,025	163,678	12,843	74,472	64,182	69,327
2036	4.46%	10,442	661	67,397	173,306	13,503	64,182	53,894	59,038
2037	4.46%	10,444	661	57,769	182,934	14,165	53,894	43,604	48,749
2038	4.46%	10,442	661	48,141	192,562	14,825	43,604	33,315	38,460
2039	2.23%	5,222	(1,353)	38,512	202,191	13,472	33,315	25,040	29,178
2040	0.00%	0	(3,367)	28,884	211,819	10,105	25,040	18,780	21,910
2041	0.00%	0	(3,367)	19,256	221,447	6,737	18,780	12,519	15,649
2042	0.00%	0	(3,367)	9,628	231,075	3,370	12,519	6,258	9,388
2043	0.00%	0	(3,367)	0	240,703	3	6,258	-3	3,128

\* 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

YEAR	(2) 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)
					100.00%	907.77						
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	205,243	205,243	205,243
EQUITY AFUDC	22,467		
DEBT AFUDC	12,993	12,993	
CPI			28,828
TOTAL	240,703	218,236	234,071

\* Column not specified in workbook



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

(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	12,321	12,321	6.41	7.27	7.52	0.00	1.00	1.00
2011	30,634	30,634	6.35	7.13	7.33	0.00	1.00	1.00
2012	55,396	55,396	6.43	7.14	7.34	0.00	1.00	1.00
2013	82,401	82,401	7.06	7.54	7.66	0.00	1.00	1.00
2014	108,463	108,463	7.53	7.94	8.04	0.00	1.00	1.00
2015	130,149	130,149	8.11	8.61	8.74	0.00	1.00	1.00
2016	149,229	149,229	9.00	9.84	10.09	0.00	1.00	1.00
2017	156,159	156,159	9.75	10.69	10.98	0.00	1.00	1.00
2018	161,547	161,547	10.52	11.51	11.80	0.00	1.00	1.00
2019	161,547	161,547	11.50	12.76	13.14	10.41	1.00	1.00
2020	161,547	161,547	12.08	13.39	13.74	10.50	1.00	1.00
2021	161,547	161,547	12.57	13.94	14.32	10.74	1.00	1.00
2022	161,547	161,547	13.06	14.39	14.75	10.81	1.00	1.00
2023	161,547	161,547	13.39	14.62	14.94	10.80	1.00	1.00
2024	161,547	161,547	13.95	15.19	15.51	10.84	1.00	1.00
2025	161,547	161,547	14.40	15.65	15.95	10.96	1.00	1.00
2026	161,547	161,547	14.70	15.90	16.18	11.05	1.00	1.00
2027	161,547	161,547	15.13	16.26	16.51	11.17	1.00	1.00
2028	161,547	161,547	15.60	16.68	16.92	11.36	1.00	1.00
2029	161,547	161,547	16.02	17.00	17.20	11.41	1.00	1.00
2030	161,547	161,547	16.52	17.47	17.66	11.59	1.00	1.00
2031	161,547	161,547	17.02	17.95	18.23	11.80	1.00	1.00
2032	161,547	161,547	17.50	18.30	18.44	11.88	1.00	1.00
2033	161,547	161,547	18.27	18.97	19.12	12.10	1.00	1.00
2034	161,547	161,547	18.73	19.22	19.31	12.14	1.00	1.00
2035	161,547	161,547	19.57	20.18	20.31	12.29	1.00	1.00
2036	161,547	161,547	20.40	21.02	21.17	12.55	1.00	1.00
2037	161,547	161,547	21.11	21.69	21.82	12.70	1.00	1.00
2038	161,547	161,547	22.02	22.61	22.74	13.04	1.00	1.00
2039	161,547	161,547	22.78	23.34	23.46	13.32	1.00	1.00
2040	161,547	161,547	23.59	24.09	24.19	13.44	1.00	1.00
2041	161,547	161,547	24.54	25.02	25.12	13.75	1.00	1.00
2042	161,547	161,547	25.50	25.98	26.07	14.10	1.00	1.00
2043	161,547	161,547	26.74	27.35	27.50	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

\* 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 Heating, Ventilating and 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	51,528	28,264	1192	71,977	91,062	61,900
2020	49,996	28,970	1720	106,046	129,193	57,539
2021	48,012	29,695	1799	110,644	134,932	55,218
2022	46,099	30,437	1911	117,107	140,672	54,882
2023	44,252	31,198	2017	123,119	144,719	55,867
2024	42,467	31,978	2137	130,057	150,149	56,490
2025	40,739	32,777	2284	138,963	158,379	56,385
2026	39,064	33,597	2446	148,500	166,837	56,770
2027	37,438	34,437	2587	156,745	173,982	57,225
2028	35,821	35,298	2664	160,906	177,730	56,957
2029	34,205	36,180	2789	167,681	182,403	58,453
2030	32,590	37,085	2928	175,531	189,696	58,438
2031	30,976	38,012	3000	179,148	193,136	58,000
2032	29,363	38,962	3117	183,478	197,104	59,816
2033	27,752	39,936	3430	204,084	215,531	59,671
2034	26,142	40,935	3589	212,422	220,640	62,448
2035	24,533	41,958	3688	217,256	224,046	63,390
2036	22,926	43,007	3814	223,744	230,691	62,799
2037	21,320	44,082	3919	228,829	234,010	64,140
2038	19,715	45,184	4031	234,539	241,148	62,321
2039	18,112	46,314	4136	239,361	246,685	61,238
2040	16,801	47,471	4250	244,874	249,504	63,893
2041	15,784	48,658	4365	250,247	255,784	63,270
2042	14,768	49,875	4484	255,945	262,911	62,161
2043	13,754	51,122	4619	262,529	269,673	62,350
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	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	784,154	965,431	76,916	4,545,733	4,880,615	1,491,618
NPV	175,411	160,286	11,614	695,725	773,842	269,194





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	813	31,820	0	32,633	0	0	2,103	9	2,112	(30,521)	(28,030)
2011	0	1,173	39,572	0	40,746	0	764	7,167	15	7,946	(32,799)	(55,694)
2012	0	1,671	52,754	0	54,425	0	1,914	14,332	35	16,281	(38,144)	(83,240)
2013	0	1,839	58,547	0	60,386	0	3,607	23,970	2,213	29,790	(30,597)	(107,906)
2014	0	1,783	58,758	0	60,542	0	5,335	34,827	3,398	43,560	(16,982)	(118,100)
2015	0	1,640	50,135	0	51,774	0	6,985	47,335	4,701	59,021	7,247	(113,752)
2016	0	1,530	42,820	0	44,350	0	8,333	63,886	6,168	78,388	34,037	(94,997)
2017	0	585	24,740	0	25,325	0	9,448	75,885	7,411	92,744	67,420	(60,879)
2018	0	441	21,907	0	22,348	0	9,697	84,956	8,381	103,034	80,686	(23,380)
2019	0	0	0	0	0	61,900	9,812	96,177	6,610	174,499	174,499	51,100
2020	0	0	0	0	0	57,539	9,530	100,895	6,144	174,109	174,109	119,348
2021	0	0	0	0	0	55,218	9,257	105,132	6,536	176,142	176,142	182,758
2022	0	0	0	0	0	54,882	8,992	108,228	7,209	179,310	179,310	242,040
2023	0	0	0	0	0	55,867	8,733	109,664	7,521	181,785	181,785	297,235
2024	0	0	0	0	0	56,490	8,479	113,858	8,204	187,031	187,031	349,388
2025	0	464	20,123	0	20,587	56,385	8,227	117,236	8,880	196,728	170,141	392,960
2026	0	723	30,889	0	31,612	56,770	7,977	118,999	9,220	192,966	161,353	430,908
2027	0	687	31,812	0	32,500	57,225	7,728	121,398	9,891	196,243	163,743	466,276
2028	0	746	34,785	0	35,530	56,957	7,480	124,392	10,802	199,631	164,101	498,828
2029	0	726	34,016	0	34,742	58,453	7,232	126,430	11,979	204,094	169,352	529,679
2030	0	1,249	50,644	0	51,893	58,438	6,986	129,883	12,696	208,004	156,110	555,798
2031	0	1,521	50,401	0	51,982	58,000	6,743	134,095	13,843	212,663	160,701	580,490
2032	0	2,266	66,099	0	68,365	59,816	6,508	135,576	14,936	216,837	148,472	601,441
2033	0	2,481	72,537	0	75,018	59,671	6,289	140,186	15,172	221,318	146,300	620,401
2034	0	2,100	57,797	0	59,897	62,448	6,090	141,541	16,129	226,207	166,310	640,194
2035	0	2,187	58,087	0	60,273	63,390	5,913	148,820	17,411	235,534	175,261	659,351
2036	0	2,036	46,898	0	48,934	62,799	5,758	155,020	18,700	242,276	193,342	678,760
2037	0	613	22,834	0	23,446	64,140	5,624	159,757	20,179	249,700	226,254	699,618
2038	0	370	17,844	0	18,214	62,321	5,505	166,535	21,720	256,080	237,867	719,757
2039	0	0	0	0	0	61,238	5,396	171,742	23,276	261,651	261,651	740,102
2040	0	673	29,144	0	29,817	63,893	5,292	177,101	25,038	271,323	241,507	757,348
2041	0	1,048	44,737	0	45,784	63,270	5,190	183,842	26,888	279,190	233,406	772,655
2042	0	996	46,074	0	47,069	62,161	5,090	190,822	31,209	289,283	242,213	787,244
2043	0	1,080	50,379	0	51,459	62,350	4,991	201,225	35,891	304,457	252,998	801,238
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	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	33,443	1,146,210	0	1,179,653	1,491,618	220,903	3,833,018	418,419	5,963,958	4,784,305	
NPV	0	10,652	359,344	0	369,996	269,194	62,539	769,401	70,099	1,171,234	801,238	

Discount Rate: 8.89 %  
 Benefit/Cost Ratio (Col(11) / Col(6)) : 3.17



RATE IMPACT 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)	(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	813	21,800	2,183	0	24,796	2,103	0	0	9	2,112	(22,684)	(20,832)
2011	0	1,173	23,443	7,935	0	32,552	7,167	764	0	15	7,946	(24,605)	(41,585)
2012	0	1,671	27,751	17,358	0	46,780	14,332	1,914	0	35	16,281	(30,499)	(65,209)
2013	0	1,839	29,470	30,515	0	61,824	23,970	3,607	0	2,213	29,790	(32,035)	(87,998)
2014	0	1,783	28,499	46,186	0	76,469	34,827	5,335	0	3,398	43,560	(32,909)	(109,498)
2015	0	1,640	23,949	61,728	0	87,317	47,335	6,985	0	4,701	59,021	(28,296)	(126,475)
2016	0	1,530	22,475	74,632	0	98,637	63,886	8,333	0	6,168	78,388	(20,249)	(137,633)
2017	0	585	13,876	84,288	0	98,749	75,885	9,448	0	7,411	92,744	(6,005)	(140,672)
2018	0	441	12,890	90,358	0	103,689	84,956	9,697	0	8,381	103,034	(655)	(140,976)
2019	0	0	0	95,613	0	95,613	158,076	9,812	0	6,610	174,499	78,885	(107,306)
2020	0	0	0	95,751	0	95,751	158,434	9,530	0	6,144	174,109	78,358	(76,591)
2021	0	0	0	98,089	0	98,089	160,350	9,257	0	6,536	176,142	78,053	(48,493)
2022	0	0	0	101,669	0	101,669	163,109	8,992	0	7,209	179,310	77,642	(22,823)
2023	0	0	0	105,253	0	105,253	165,531	8,733	0	7,521	181,785	76,532	414
2024	0	0	0	110,653	0	110,653	170,348	8,479	0	8,204	187,031	76,378	21,712
2025	0	464	9,978	115,355	0	125,797	173,621	8,227	0	8,880	190,728	64,931	38,340
2026	0	723	13,767	120,566	0	135,056	175,769	7,977	0	9,220	192,966	57,910	51,960
2027	0	687	14,249	127,793	0	142,730	178,624	7,728	0	9,891	196,243	53,513	63,518
2028	0	746	15,085	133,636	0	149,467	181,349	7,480	0	10,802	199,631	50,165	73,469
2029	0	726	14,509	140,441	0	155,676	184,883	7,232	0	11,979	204,094	48,418	82,289
2030	0	1,249	21,770	148,171	0	171,191	188,321	6,986	0	12,696	208,004	36,813	88,448
2031	0	1,521	19,262	155,779	0	176,561	192,025	6,743	0	13,845	212,682	36,121	93,999
2032	0	2,266	21,215	165,887	0	189,368	195,392	6,508	0	14,936	216,837	27,469	97,875
2033	0	2,481	22,070	182,027	0	206,578	199,857	6,289	0	15,172	221,318	14,740	99,785
2034	0	2,100	13,990	185,565	0	201,655	203,989	6,090	0	16,129	226,207	24,552	102,707
2035	0	2,187	14,001	194,138	0	210,325	212,210	5,913	0	17,411	235,534	25,209	105,463
2036	0	2,036	12,889	209,353	0	224,279	217,819	5,758	0	18,700	242,276	17,998	107,269
2037	0	613	6,163	221,281	0	228,057	223,897	5,624	0	20,179	249,700	21,643	109,265
2038	0	370	5,205	231,848	0	237,423	228,855	5,505	0	21,720	256,080	18,658	110,844
2039	0	0	0	243,435	0	243,435	232,979	5,396	0	23,276	261,651	18,216	112,261
2040	0	673	9,978	255,785	0	266,436	240,994	5,292	0	25,038	271,323	4,887	112,610
2041	0	1,048	13,767	270,435	0	285,250	247,112	5,190	0	26,888	279,190	(6,059)	112,212
2042	0	996	14,249	286,077	0	301,322	252,983	5,090	0	31,209	289,283	(12,040)	111,487
2043	0	1,080	15,085	302,780	0	318,945	263,575	4,991	0	35,891	304,457	(14,488)	110,686
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	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	33,443	461,385	4,712,563	0	5,207,391	5,324,636	220,903	0	418,419	5,963,958	756,567	
NPV	0	10,652	176,406	873,490	0	1,060,548	1,038,595	62,539	0	70,099	1,171,234	110,686	

Discount Rate 8.89 %  
 Benefit/Cost Ratio (Col(12) / Col(7)) : 1.10

## **BUSINESS LIGHTING**



INPUT DATA - PART 1 CONTINUED  
PROGRAMMECS00 SELECTED: KEV\_000  
PROGRAMNAME: 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 KW REDUCTION PER CUSTOMER .....	3.31640 KW
(5) KW LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KVA INCREASE AT METER .....	0.00 KVA

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 .....	1.79738
(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 RATE .....	*** %
(10) UTILITY DISCOUNT RATE .....	3.29 %
(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 .....	*** %

\* 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 .....	185.24 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	28.64 \$/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 .....	3.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.106 CENTS/KVA
(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 KW-HR** (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/KVA
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/KW/HR
(4) DEMAND CHARGE ESCALATION RATE .....	*** %



CALCULATION OF GENK-FACTOR  
PROGRAM/METHOD SELECTED KEY\_REQ  
PROGRAMNAME: Business Lighting

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	REG-YEAR RATEBASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPRECI- \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	EXCESS FIXED CHARGES \$(000)	CUMULATIVE FWFIXED CHARGES \$(000)	REPLACEMENT COSTBASE FOR PROPERTY INSURANCE \$(000)
2019	55,694	2,891	0	6,494	4,284	1,568	554	3,630	7	19,427	19,427	19,427	90,751
2020	59,417	2,778	0	6,240	2,944	1,503	567	3,630	1,183	18,850	17,211	36,739	93,019
2021	64,209	2,628	0	5,904	2,917	1,407	582	3,630	1,003	18,102	15,267	52,006	95,245
2022	70,905	2,484	0	5,581	2,883	1,372	596	3,630	834	17,380	13,443	65,449	97,729
2023	75,901	2,345	0	5,269	2,846	1,307	611	3,630	675	16,694	11,849	77,337	100,172
2024	71,196	2,212	0	4,969	2,803	1,261	626	3,630	530	16,011	10,449	87,799	102,676
2025	67,094	2,082	0	4,678	2,758	1,176	642	3,630	394	15,290	9,216	97,013	105,249
2026	63,012	1,957	0	4,397	2,715	1,111	658	3,630	270	14,728	8,116	105,329	107,794
2027	59,112	1,836	0	4,125	2,654	1,045	674	3,630	169	14,115	7,143	112,272	110,371
2028	55,321	1,716	0	3,853	2,584	980	691	3,630	99	13,545	6,277	118,548	113,335
2029	51,853	1,595	0	3,584	2,514	915	709	3,630	209	12,916	5,504	124,692	116,169
2030	47,474	1,475	0	3,313	2,444	849	725	3,630	349	12,287	4,816	129,849	118,973
2031	43,395	1,354	0	3,042	2,374	784	745	3,630	509	11,679	4,204	133,073	121,850
2032	39,715	1,234	0	2,772	2,304	719	763	3,630	649	11,071	3,650	136,333	125,181
2033	35,836	1,113	0	2,501	2,234	653	782	3,630	769	10,463	3,177	139,311	128,228
2034	31,957	993	0	2,230	2,164	588	802	3,630	869	9,856	2,748	142,438	131,434
2035	28,078	872	0	1,959	2,094	523	822	3,630	949	9,250	2,349	145,027	134,720
2036	24,198	752	0	1,689	2,024	457	842	3,630	1049	8,644	2,033	147,069	138,088
2037	20,319	631	0	1,418	1,954	392	863	3,630	1149	8,038	1,734	148,294	141,540
2038	16,440	511	0	1,147	1,884	327	885	3,630	1249	7,433	1,474	150,270	145,479
2039	12,561	390	0	877	1,814	261	907	3,630	(300)	6,829	1,244	152,514	149,796
2040	8,641	269	0	609	1,744	196	930	3,630	(1,270)	6,234	1,040	152,574	150,423
2041	7,086	220	0	494	1,700	131	953	3,630	(1,270)	5,651	914	153,489	154,224
2042	4,720	147	0	329	1,620	65	977	3,630	(1,270)	5,068	786	154,234	160,140
2043	2,359	73	0	165	1,586	(9)	1,001	3,630	(1,270)	5,185	672	154,946	164,143

IN SERVICE COST (\$000)	90,751
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
DEPR. RATE	38.57%
DISCOUNT RATE	8.5%
PROPERTY TAX	1.89%
PROPERTY INSURANCE	0.51%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	44%	7.83%
PS	0%	0.00%
CS	56%	12.50%

K-FACTOR = CPWFC / IN-SVC COST = 1.70736

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 DEDUCTION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK/DEPR RATE MONTHS LIVES	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(5)-(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	0	7	(2,295)
2020	7.52%	6,371	9,680	3,630	7,260	3,291	6,582	1,188	8,471	0	0	0	1,188	(1,100)
2021	6.68%	5,892	15,573	3,630	10,890	3,291	9,874	1,043	8,471	0	0	0	1,043	(700)
2022	6.18%	5,454	21,028	3,630	14,520	3,291	13,165	834	8,471	0	0	0	834	79
2023	5.71%	5,042	26,468	3,630	18,150	3,291	16,456	675	8,471	0	0	0	675	1,465
2024	5.26%	4,664	30,732	3,630	21,780	3,291	19,747	530	8,471	0	0	0	530	1,995
2025	4.83%	4,324	35,046	3,630	25,410	3,291	23,038	394	8,471	0	0	0	394	2,389
2026	4.42%	3,991	39,037	3,630	29,040	3,291	26,330	270	8,471	0	0	0	270	2,659
2027	4.04%	3,698	42,974	3,630	32,670	3,291	29,621	169	8,471	0	0	0	169	2,828
2028	4.46%	3,937	46,911	3,630	36,300	3,291	32,912	249	8,471	0	0	0	249	3,077
2029	4.46%	3,938	50,849	3,630	39,930	3,291	36,203	249	8,471	0	0	0	249	3,327
2030	4.46%	3,937	54,786	3,630	43,560	3,291	39,494	249	8,471	0	0	0	249	3,576
2031	4.46%	3,938	58,723	3,630	47,190	3,291	42,786	249	8,471	0	0	0	249	3,825
2032	4.46%	3,937	62,660	3,630	50,820	3,291	46,077	249	8,471	0	0	0	249	4,074
2033	4.46%	3,938	66,598	3,630	54,450	3,291	49,368	249	8,471	0	0	0	249	4,323
2034	4.46%	3,937	70,535	3,630	58,080	3,291	52,659	249	8,471	0	0	0	249	4,572
2035	4.46%	3,938	74,472	3,630	61,710	3,291	55,950	249	8,471	0	0	0	249	4,821
2036	4.46%	3,937	78,409	3,630	65,340	3,291	59,241	249	8,471	0	0	0	249	5,070
2037	4.46%	3,938	82,347	3,630	68,970	3,291	62,532	249	8,471	0	0	0	249	5,319
2038	4.46%	3,937	86,284	3,630	72,600	3,291	65,823	249	8,471	0	0	0	249	5,568
2039	2.23%	1,969	88,253	3,630	76,230	3,291	69,114	(510)	8,471	0	0	0	(510)	5,059
2040	0.00%	0	88,253	3,630	79,860	3,291	72,406	(1,270)	8,471	0	0	0	(1,270)	3,789
2041	0.00%	0	88,253	3,630	83,490	3,291	75,698	(1,270)	8,471	0	0	0	(1,270)	2,519
2042	0.00%	0	88,253	3,630	87,120	3,291	78,989	(1,270)	8,471	0	0	0	(1,270)	1,249
2043	0.00%	0	88,253	3,630	90,750	3,291	82,280	(1,270)	8,471	0	0	0	(1,270)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(2,295)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	8,471
BOOK/DEPR RATE - USEFUL LIFE	4.68%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/PROJECT SELECTED: REV\_99Q  
 PROGRAM NAME: Business Lighting

(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	3.25%	3,300	7	37,121	3,630	(3,286)	33,454	39,427	31,235
2020	7.22%	6,371	1,198	33,461	7,260	(1,388)	33,417	34,399	37,068
2021	6.69%	5,892	1,003	79,861	10,859	(305)	34,329	79,905	32,282
2022	6.18%	5,454	834	76,231	14,329	730	79,905	73,361	77,733
2023	5.71%	5,042	675	72,601	18,139	1,485	75,501	71,136	75,348
2024	5.29%	4,664	530	68,971	21,789	1,935	71,136	67,036	69,116
2025	4.89%	4,314	394	65,341	25,419	2,329	67,036	63,012	63,024
2026	4.52%	3,991	270	61,711	29,049	2,699	63,012	59,113	61,942
2027	4.16%	3,698	249	58,081	32,679	2,948	59,112	55,232	57,172
2028	4.46%	3,937	249	54,451	36,309	3,097	55,232	51,333	53,293
2029	4.46%	3,938	249	50,821	39,939	3,247	51,333	47,474	49,414
2030	4.46%	3,937	249	47,191	43,569	3,396	47,474	43,595	45,534
2031	4.46%	3,938	249	43,561	47,199	3,545	43,595	39,715	41,685
2032	4.46%	3,937	249	39,931	50,829	4,694	39,715	35,836	37,776
2033	4.46%	3,938	249	36,301	54,459	4,843	35,836	31,957	33,897
2034	4.46%	3,937	249	32,671	58,089	4,993	31,957	28,078	30,017
2035	4.46%	3,938	249	29,041	61,719	4,842	28,078	24,198	26,138
2036	4.46%	3,937	249	25,411	65,349	5,091	24,198	20,319	22,259
2037	4.46%	3,938	249	21,781	68,979	5,340	20,319	16,440	18,379
2038	4.46%	3,937	249	18,151	72,609	5,589	16,440	12,561	14,500
2039	2.23%	1,969	(510)	14,520	76,239	5,739	12,561	9,441	11,001
2040	0.00%	0	(1,270)	10,890	79,869	3,810	9,441	7,060	8,261
2041	0.00%	0	(1,270)	7,260	83,499	2,540	7,060	4,720	5,900
2042	0.00%	0	(1,270)	3,630	87,129	1,270	4,720	3,450	4,400
2043	0.00%	0	(1,270)	(0)	90,759	1	3,450	-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 (\$K/W)	(7) CUMULATIVE AVERAGE SPENDING (\$K/W)
2009	-10	3.00%	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%	1.54	0.62
2014	-5	3.00%	1.161	1.30%	15.39	9.34
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%	428.27	398.84
2018	-1	3.00%	1.305	18.44%	98.79	358.38

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) CUMULATIVE SPENDING WITH AFUDC (\$K/W)	(3a) DEBT AFUDC (\$K/W)	104.00%		(7) TOTAL AFUDC (\$K/W)	(7a) CUMULATIVE AFUDC (\$K/W)	(7b) CONSTRUCTION PERIOD INTEREST (\$K/W)	(7c) CUMULATIVE CPI (\$K/W)	(7d) DEFERRED TAXES (\$K/W)	(7e) CUMULATIVE DEFERRED TAXES (\$K/W)	(8) INCREMENTAL YEAR-END BOOK VALUE (\$K/W)	(9) CUMULATIVE YEAR-END BOOK VALUE (\$K/W)
				(3b) DEBT AFUDC (\$K/W)	(7) TOTAL AFUDC (\$K/W)								
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
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
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
2012	-7	2.22	2.22	2.22	2.22	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00
2013	-6	0.62	0.62	0.62	0.65	0.65	0.04	0.04	(0.01)	(0.01)	1.29	1.29	1.29
2014	-5	9.29	0.29	0.24	0.79	0.54	4.65	0.70	(0.14)	(0.15)	16.78	18.07	18.07
2015	-4	37.37	1.18	1.49	3.22	4.66	2.65	3.35	(0.57)	(0.52)	42.83	61.90	61.90
2016	-3	226.84	7.07	2.56	19.29	23.95	15.90	19.25	(3.41)	(4.13)	251.16	412.06	412.06
2017	-2	622.90	19.46	28.01	33.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43	885.43
2018	-1	934.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.65)	(27.02)	179.18	1,064.61	1,064.61

57.47	156.84	127.50	(27.02)	1,064.61																								
IN SERVICE YEAR: 2019 PLANT COSTS: 725,389,845 AFUDC RATE: 3.48%	<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>TAC BASIS</th> </tr> </thead> <tbody> <tr> <td>CONSTRUCTION CASE</td> <td style="text-align: right;">77,381</td> <td style="text-align: right;">77,381</td> <td style="text-align: right;">77,381</td> </tr> <tr> <td>EQUITY AFUDC</td> <td style="text-align: right;">8,471</td> <td style="text-align: right;">4,899</td> <td style="text-align: right;">10,969</td> </tr> <tr> <td>DEBT AFUDC</td> <td style="text-align: right;">4,899</td> <td style="text-align: right;">4,899</td> <td style="text-align: right;">10,969</td> </tr> <tr> <td>CPI</td> <td style="text-align: right;">10,969</td> <td style="text-align: right;">10,969</td> <td style="text-align: right;">10,969</td> </tr> <tr> <td>TOTAL</td> <td style="text-align: right;">91,720</td> <td style="text-align: right;">98,148</td> <td style="text-align: right;">110,298</td> </tr> </tbody> </table>		BOOK BASIS	BOOK BASIS FOR DEF TAX	TAC BASIS	CONSTRUCTION CASE	77,381	77,381	77,381	EQUITY AFUDC	8,471	4,899	10,969	DEBT AFUDC	4,899	4,899	10,969	CPI	10,969	10,969	10,969	TOTAL	91,720	98,148	110,298			
	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAC BASIS																									
CONSTRUCTION CASE	77,381	77,381	77,381																									
EQUITY AFUDC	8,471	4,899	10,969																									
DEBT AFUDC	4,899	4,899	10,969																									
CPI	10,969	10,969	10,969																									
TOTAL	91,720	98,148	110,298																									

\* Columns not specified in workbook

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 (\$/KW)	(5) AVOIDED MARGINAL FUEL COST (\$/KW)	(6)* INCREASED MARGINAL FUEL COST (\$/KW)	(7) REPLACEMENT FUEL COST (\$/KW)	(8) PROGRAM KW EFFECTIVENESS FACTOR	(9) PROGRAM KW EFFECTIVENESS FACTOR
2009	0	0	6.29	9.17	6.29	0.00	1.00	1.00
2010	4,372	4,353	6.41	7.78	7.09	0.00	1.00	1.00
2011	12,340	12,240	6.55	7.54	6.97	0.00	1.00	1.00
2012	20,394	20,394	6.43	7.33	7.00	0.00	1.00	1.00
2013	28,784	28,784	7.06	7.29	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	9.49	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	11.30	13.49	12.72	0.00	1.00	1.00
2020	67,258	67,258	12.08	14.09	13.15	0.00	1.00	1.00
2021	67,258	67,258	12.57	14.76	13.69	0.00	1.00	1.00
2022	67,258	67,258	13.06	15.11	14.34	0.00	1.00	1.00
2023	67,258	67,258	13.39	15.26	14.41	0.00	1.00	1.00
2024	67,258	67,258	13.95	15.82	14.99	0.00	1.00	1.00
2025	67,258	67,258	14.40	16.26	15.44	0.00	1.00	1.00
2026	67,258	67,258	14.74	16.47	15.79	0.00	1.00	1.00
2027	67,258	67,258	15.13	16.76	16.07	0.00	1.00	1.00
2028	67,258	67,258	15.60	17.17	16.51	0.00	1.00	1.00
2029	67,258	67,258	16.02	17.59	16.84	0.00	1.00	1.00
2030	67,258	67,258	16.32	17.85	17.33	0.00	1.00	1.00
2031	67,258	67,258	17.08	18.43	17.89	0.00	1.00	1.00
2032	67,258	67,258	17.22	18.22	17.88	0.00	1.00	1.00
2033	67,258	67,258	18.27	19.27	18.34	0.00	1.00	1.00
2034	67,258	67,258	18.73	19.40	19.13	0.00	1.00	1.00
2035	67,258	67,258	19.57	20.42	20.06	0.00	1.00	1.00
2036	67,258	67,258	20.40	21.31	20.89	0.00	1.00	1.00
2037	67,258	67,258	21.11	21.95	21.56	0.00	1.00	1.00
2038	67,258	67,258	22.02	22.82	22.49	0.00	1.00	1.00
2039	67,258	67,258	22.78	23.59	23.22	0.00	1.00	1.00
2040	67,258	67,258	23.59	24.29	23.90	0.00	1.00	1.00
2041	67,258	67,258	24.34	25.00	24.91	0.00	1.00	1.00
2042	67,258	67,258	25.50	26.16	25.87	0.00	1.00	1.00
2043	67,258	67,258	26.34	27.04	27.22	0.00	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.















## **BUSINESS REFRIGERATION**

INPUT DATA -- PART 1 CONTINUED  
PROGRAM METHOD SELECTED: KBY\_JOB  
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 .....	1.51 KW
(3) KW LINE LOSS PERCENTAGE .....	8.65 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	9,588.68 KWH
(5) KW LINE LOSS PERCENTAGE .....	6.99 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KVA INCREASE AT METER .....	3.00 KVA

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 .....	1.83254

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 RATE .....	*** %**
(10) UTILITY DISCOUNT RATE .....	8.29 %
(11) UTILITY AFUDC RATE .....	8.48 %
(12) UTILITY NON-RECORDING REBATE/INCENTIVE .....	*** \$/CUST
(13) UTILITY RECORDING 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 .....	2019-2019
(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 .....	1.00 %**
(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 .....	0.186 CENTS/KVA
(14) GENERATOR VARIABLE O & M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	8% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	2.25 CENTS PER KW-HR** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.78 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	*** CENTS/KVA
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/KW-HR
(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







DEFERRED TAX AND MID-REAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_180  
 PROGRAM NAME: Business Reintegration

(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 ADJUST 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	7.25%	729	1,123	433	865	392	784	162	1,009	0	0	0	142	(132)
2021	6.58%	702	1,825	433	1,298	392	1,176	120	1,009	0	0	0	120	(12)
2022	6.18%	630	2,455	433	1,730	392	1,569	55	1,009	0	0	0	59	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	3,692	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	7,058	30	1,009	0	0	0	30	607
2037	4.46%	469	9,812	433	8,218	392	7,450	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	(21)	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: F5V\_1BQ  
 PROGRAM NAME: Business Refrigeration

(1)	(2)	(3)	(4)	(5)	(5)*	(5)*	(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%	394	1	10,390	435	(24)	11,067	10,654	10,871
2020	7.22%	759	142	9,648	865	(132)	10,654	10,089	10,367
2021	6.68%	792	126	8,856	1,298	(22)	10,089	9,528	9,884
2022	6.18%	650	99	8,183	1,730	87	9,528	8,996	9,262
2023	5.71%	601	80	7,580	2,163	167	8,996	8,483	8,739
2024	5.29%	556	63	6,928	2,595	230	8,483	7,987	8,235
2025	4.89%	514	47	6,385	3,028	277	7,987	7,508	7,747
2026	4.52%	475	32	5,890	3,459	310	7,508	7,043	7,275
2027	4.18%	440	20	5,420	3,883	338	7,043	6,591	6,812
2028	4.46%	469	30	4,989	4,305	369	6,591	6,119	6,350
2029	4.46%	469	30	4,525	4,738	399	6,119	5,656	5,888
2030	4.46%	469	30	4,023	5,190	428	5,656	5,194	5,425
2031	4.46%	469	30	3,496	5,623	458	5,194	4,722	4,943
2032	4.46%	469	30	2,958	6,035	488	4,722	4,270	4,501
2033	4.46%	469	30	2,405	6,438	518	4,270	3,808	4,009
2034	4.46%	469	30	1,833	6,820	547	3,808	3,345	3,577
2035	4.46%	469	30	1,249	7,183	577	3,345	2,883	3,114
2036	4.46%	469	30	662	7,528	607	2,883	2,421	2,632
2037	4.46%	469	30	75	7,855	636	2,421	1,959	2,150
2038	4.46%	469	30	2,163	8,168	666	1,959	1,497	1,728
2039	2.23%	215	(61)	1,739	8,468	695	1,497	1,125	1,311
2040	0.00%	0	(151)	1,298	8,755	724	1,125	844	984
2041	0.00%	0	(151)	865	9,048	763	844	562	703
2042	0.00%	0	(151)	435	9,330	801	562	281	422
2043	0.00%	0	(151)	0	9,613	840	281	0	141

\* Column not specified in worksheet

(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	3.00%	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	1.30%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	39.61	37.03
2016	-3	3.00%	1.230	37.28%	331.87	221.77
2017	-2	3.00%	1.267	45.74%	420.27	598.34
2018	-1	3.00%	1.305	18.44%	98.79	858.38

100.00%      907.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(9) CUMULATIVE SPENDING WITH AFUDC (\$/KW)	(10)* DEBT AFUDC (\$/KW)	(11)* CUMULATIVE DEBT AFUDC (\$/KW)	(12) YEARLY TOTAL AFUDC (\$/KW)	(13)* CUMULATIVE TOTAL AFUDC (\$/KW)	(14)** CONSTRUCTION PERIOD INTEREST (\$/KW)	(15)* CUMULATIVE CPI (\$/KW)	(16)* DEFERRED TAXES (\$/KW)	(17)** CUMULATIVE DEFERRED TAXES (\$/KW)	(18) INCREMENTAL YEAR-END BOOK VALUE (\$/KW)	(19) 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	0.62	0.62	0.65	0.65	0.04	0.04	(0.01)	0.03	1.29	1.29
2014	-5	3.29	0.29	0.34	0.29	0.94	0.65	0.70	(0.16)	(0.15)	14.78	16.07
2015	-4	37.87	1.18	1.49	3.22	4.96	3.65	3.35	(0.57)	(0.52)	48.83	61.90
2016	-3	226.84	7.07	8.56	19.29	23.36	13.90	29.25	(4.41)	(4.15)	351.16	412.06
2017	-2	622.20	19.46	28.01	33.10	76.45	48.47	87.72	(9.04)	(8.39)	473.57	885.63
2018	-1	934.83	29.46	57.47	82.39	156.84	64.78	127.50	(31.63)	(27.02)	179.18	1,064.61

57.47

156.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COST	725,389,815
AFUDC RATE	8.63%

	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

















**BUSINESS BUILDING ENVELOPE PROGRAM**

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	0.85 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER	1.15 KW
(3) KW LINE LOSS PERCENTAGE	8.65 %
(4) GENERATOR KW/LINE REDUCTION PER CUSTOMER	2,135.08 KWH
(5) KW/LINE LOSS PERCENTAGE	6.90 %
(6) GROUP LINE LOSS MULTIPLIER	1.00
(7) CUSTOMER KVA INCREASE AT METER	0.00 KVA

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	1.70788
(5) K FACTOR FOR T & D	1.62254

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 RATE	*** %**
(10) UTILITY DISCOUNT RATE	8.89 %
(11) UTILITY AFDISC RATE	8.43 %
(12) UTILITY NON RECURRING KEBATE INCENTIVE	*** \$/CUST
(13) UTILITY RECURRING KEBATE INCENTIVE	*** \$/CUST
(14) UTILITY KEBATE 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	185.32 \$/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	1.81 \$/KW
(12) T&D FIXED O&M ESCALATION RATE	2.58 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS	0.106 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE	2.58 %**
(15) GENERATOR CAPACITY FACTOR	0% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST	2.23 CENTS PER KW-HR (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/KVA
(2) NON-FUEL COST ESCALATION RATE	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL	*** \$/KW&D
(4) DEMAND CHARGE ESCALATION RATE	*** %



CALCULATION OF DEBT FACTOR  
 PROGRAM (METHOD SPECIFIED REV REQ)  
 PROGRAM NAME: Business Building Develops Program

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	REG-YEAR RATE-BASE \$(000)	DEBT \$(000)	DEFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPRECC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST-BASES FOR PROPERTY INSURANCE \$(000)
2019	156,044	4,847	0	10,390	7,184	2,630	928	6,087	12	32,578	32,578	32,578	132,182
2020	149,945	4,638	0	10,464	4,936	2,280	832	6,087	1,992	31,610	29,000	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	21,576	108,786	163,884
2023	126,609	3,923	0	8,836	4,775	2,191	1,025	6,087	1,132	27,978	19,503	128,689	167,981
2024	119,390	3,709	0	8,332	4,701	2,082	1,039	6,087	888	26,840	17,541	147,230	172,180
2025	112,414	3,492	0	7,845	4,622	1,972	1,077	6,087	661	25,737	15,454	163,684	176,485
2026	105,686	3,282	0	7,374	4,535	1,863	1,109	6,087	452	24,696	13,609	178,293	180,897
2027	99,126	3,079	0	6,918	4,439	1,753	1,151	6,087	418	23,670	11,978	188,271	185,419
2028	92,820	2,877	0	6,464	4,358	1,644	1,189	6,087	418	22,667	10,525	198,796	190,005
2029	86,116	2,675	0	6,010	4,275	1,534	1,188	6,087	418	21,625	9,230	208,627	194,696
2030	79,610	2,473	0	5,556	4,188	1,424	1,208	6,087	418	20,684	8,077	216,105	199,676
2031	73,105	2,271	0	5,102	4,103	1,315	1,248	6,087	418	19,784	7,030	223,133	204,688
2032	66,600	2,069	0	4,648	4,028	1,205	1,289	6,087	418	18,965	6,138	229,291	209,785
2033	60,095	1,867	0	4,194	3,952	1,094	1,332	6,087	418	17,546	5,397	234,619	215,029
2034	53,589	1,665	0	3,740	3,888	986	1,344	6,087	418	16,328	4,689	239,227	220,485
2035	47,084	1,463	0	3,286	3,822	877	1,378	6,087	418	15,511	3,972	243,199	225,915
2036	40,579	1,261	0	2,832	3,758	767	1,413	6,087	418	14,495	3,409	246,608	231,563
2037	34,074	1,058	0	2,378	3,692	657	1,448	6,087	418	13,479	2,911	249,520	237,332
2038	27,568	856	0	1,924	3,627	548	1,484	6,087	418	12,465	2,473	251,992	243,286
2039	21,063	654	0	1,470	3,559	438	1,521	6,087	(825)	11,451	2,086	254,078	249,568
2040	15,851	492	0	1,105	3,490	329	1,559	6,087	(2,129)	10,622	1,777	255,856	255,692
2041	11,873	369	0	829	3,426	219	1,598	6,087	(2,129)	9,979	1,533	257,389	261,992
2042	7,915	246	0	531	3,363	110	1,638	6,087	(2,129)	9,337	1,318	258,707	268,542
2043	3,957	123	0	276	3,299	0	1,679	6,087	(2,129)	8,696	1,127	259,833	275,256

IN SERVICE COST (\$000)	132,182
IN SERVICE YEAR	2019
BOOKING (YRS)	25
DEFEC. FAC RATE	38.575
DISCOUNT RATE	8.9%
PROPERTY TAX	1.89%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	40%	7.03
P/S	0%	0.00
C/S	60%	12.50

$L\text{-FACTOR} = \frac{CPWFC}{IN\text{-SVC COST}} = 1.7078$

DEFERRED TAX AND MID-YEAR RATE-BASE CALCULATION  
 PROGRAM/METHOD SELECTED: REV\_XBQ  
 PROGRAM/NAME: Business Building 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 DEPRECIATION FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK/DEPR RATE MINUS 14.6%	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(10)*(12) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	5,530	5,530	6,087	6,087	5,519	5,519	12	14,205	0	0	0	12	(3,850)
2020	7.22%	10,683	16,213	6,087	12,175	5,519	11,038	1,992	14,205	0	0	0	1,992	(1,830)
2021	6.89%	9,881	26,114	6,087	18,262	5,519	16,557	1,683	14,205	0	0	0	1,683	(1,75)
2022	6.18%	9,144	35,259	6,087	24,349	5,519	22,076	1,392	14,205	0	0	0	1,392	1,224
2023	5.71%	8,455	43,714	6,087	30,436	5,519	27,596	1,133	14,205	0	0	0	1,133	2,356
2024	5.29%	7,821	51,536	6,087	36,524	5,519	33,115	868	14,205	0	0	0	868	3,224
2025	4.89%	7,234	58,769	6,087	42,611	5,519	38,634	601	14,205	0	0	0	601	3,825
2026	4.52%	6,692	65,461	6,087	48,698	5,519	44,153	432	14,205	0	0	0	432	4,258
2027	4.19%	6,193	72,065	6,087	54,786	5,519	49,672	418	14,205	0	0	0	418	4,676
2028	4.46%	6,492	78,466	6,087	60,873	5,519	55,191	418	14,205	0	0	0	418	5,094
2029	4.46%	6,493	85,270	6,087	66,940	5,519	60,710	418	14,205	0	0	0	418	5,512
2030	4.46%	6,492	91,871	6,087	73,047	5,519	66,229	418	14,205	0	0	0	418	6,030
2031	4.46%	6,493	98,475	6,087	79,135	5,519	71,748	418	14,205	0	0	0	418	6,448
2032	4.46%	6,492	105,076	6,087	85,222	5,519	77,267	418	14,205	0	0	0	418	6,865
2033	4.46%	6,493	111,680	6,087	91,309	5,519	82,787	418	14,205	0	0	0	418	7,284
2034	4.46%	6,492	118,281	6,087	97,397	5,519	88,306	418	14,205	0	0	0	418	7,701
2035	4.46%	6,493	124,885	6,087	103,484	5,519	93,825	418	14,205	0	0	0	418	8,120
2036	4.46%	6,492	131,487	6,087	109,571	5,519	99,344	418	14,205	0	0	0	418	8,537
2037	4.46%	6,493	138,090	6,087	115,658	5,519	104,863	418	14,205	0	0	0	418	8,955
2038	4.46%	6,492	144,692	6,087	121,746	5,519	110,382	418	14,205	0	0	0	418	9,373
2039	2.23%	3,382	147,593	6,087	127,833	5,519	115,901	(835)	14,205	0	0	0	(835)	8,538
2040	0.00%	0	147,593	6,087	133,920	5,519	121,420	(2,129)	14,205	0	0	0	(2,129)	6,389
2041	0.00%	0	147,593	6,087	140,008	5,519	126,939	(2,129)	14,205	0	0	0	(2,129)	4,260
2042	0.00%	0	147,593	6,087	146,095	5,519	132,458	(2,129)	14,205	0	0	0	(2,129)	2,131
2043	0.00%	0	147,593	6,087	152,182	5,519	137,977	(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)	(1,862)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	14,205
BOOK/DEPR RATE - USEFUL LIFE	4.85%



DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/METHOD SELECTED: REV X8Q  
 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) <sup>a</sup> ACCUMULATED DEPRECIATION (\$'000)	(5b) <sup>a</sup> 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%	5,590	12	144,095	6,487	(3,850)	156,044	149,945	152,994
2020	7.28%	10,683	1,982	140,908	12,125	(7,838)	149,945	141,866	145,905
2021	6.68%	9,881	1,825	133,920	18,282	(179)	141,866	134,694	137,981
2022	6.18%	9,144	1,789	127,833	24,349	1,324	134,694	126,609	130,532
2023	5.71%	8,455	1,732	121,746	30,436	2,385	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	3,985	112,414	105,666	109,040
2026	4.52%	6,692	432	103,484	48,698	4,538	105,666	99,126	102,286
2027	4.18%	6,103	418	97,397	54,786	4,726	99,126	92,820	95,873
2028	4.48%	6,602	418	91,309	60,873	5,194	92,820	86,116	89,248
2029	4.48%	6,603	418	85,222	66,960	5,612	86,116	79,610	82,863
2030	4.48%	6,602	418	79,135	73,047	6,030	79,610	73,185	76,538
2031	4.48%	6,603	418	73,047	79,135	6,448	73,185	66,800	69,832
2032	4.48%	6,602	418	66,960	85,222	6,865	66,800	60,895	63,347
2033	4.48%	6,603	418	60,873	91,309	7,284	60,895	54,889	56,846
2034	4.48%	6,602	418	54,786	97,397	7,701	54,889	47,084	49,337
2035	4.48%	6,603	418	48,698	103,484	8,128	47,084	40,579	43,831
2036	4.48%	6,602	418	42,611	109,571	8,537	40,579	34,074	37,226
2037	4.48%	6,603	418	36,524	115,658	8,925	34,074	27,568	30,822
2038	4.48%	6,602	418	30,436	121,746	9,303	27,568	21,063	24,316
2039	2.23%	3,302	(835)	24,349	127,833	9,518	21,063	15,851	18,447
2040	0.00%	0	(2,129)	18,262	133,920	9,389	15,851	11,873	13,823
2041	0.00%	0	(2,129)	12,175	140,008	4,380	11,873	7,915	9,894
2042	0.00%	0	(2,129)	6,087	146,095	2,121	7,915	3,957	5,936
2043	0.00%	0	(2,129)	0	152,182	2	3,957	-2	1,977

<sup>a</sup> 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%	1.00	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	0.22
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%	331.27	222.77
2017	-2	3.00%	1.267	45.74%	420.27	394.84
2018	-1	3.00%	1.305	10.44%	98.79	258.38

100.00% 507.77

YEAR	(8) NO. YEARS BEFORE IN-SERVICE	(9) CUMULATIVE SPENDING WITH AFUDC (\$/KW)	(9a)* DEBT AFUDC (\$/KW)	(9b)* CUMULATIVE DEBT AFUDC (\$/KW)	(9) YEARLY TOTAL AFUDC (\$/KW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/KW)	(9b)* CONSTRUCTION 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	0.22	0.22	0.22	0.25	0.25	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	9.28	0.29	0.30	0.79	0.84	0.65	0.70	(0.14)	(0.15)	16.78	18.07
2015	-4	37.47	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)	(4.15)	351.15	412.06
2017	-2	622.28	19.46	28.81	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

136.84

127.50

(27.02)

1,064.61

IN SERVICE YEAR	2019
PLANT COSTS	725,389,855
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAXBASIS
CONSTRUCTION CASE	129,763	129,763	129,763
EQUALIFY AFUDC	14,285		
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: KEV\_REQ  
PROGRAMNAME: Business Building Envelope Program

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	WELLEY AVERAGE SYSTEM FUEL COST (\$/KWH)	AVOIDED MARGINAL FUEL COST (\$/KWH)	INCREASED MARGINAL FUEL COST (\$/KWH)	REPLACEMENT FUEL COST (\$/KWH)	PROGRAMM'W EFFECTIVENESS FACTOR	PROGRAMM'W EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	5,719	5,719	6.41	9.01	6.70	0.00	1.00	1.00
2011	20,793	20,793	6.26	8.88	6.61	0.00	1.00	1.00
2012	38,918	38,918	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	73,849	73,849	7.53	8.67	7.48	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	11.53	9.31	0.00	1.00	1.00
2017	118,265	118,265	9.75	12.72	10.66	0.00	1.00	1.00
2018	124,282	124,282	10.22	13.23	10.86	0.00	1.00	1.00
2019	124,282	124,282	11.39	13.23	11.94	1.00	1.00	1.00
2020	124,282	124,282	12.08	15.83	12.57	10.30	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	17.34	13.59	10.81	1.00	1.00
2023	124,282	124,282	13.28	17.16	13.92	10.80	1.00	1.00
2024	124,282	124,282	13.85	17.82	14.47	10.84	1.00	1.00
2025	124,282	124,282	14.48	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	18.91	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	16.32	19.26	16.82	11.59	1.00	1.00
2031	124,282	124,282	17.08	19.84	17.47	11.80	1.00	1.00
2032	124,282	124,282	17.50	19.62	17.94	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	20.88	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	12.35	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	23.88	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	25.58	26.84	25.39	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	8.00	8.00	8.00	0.00	0.00	0.00
	0	0	8.00	8.00	8.00	0.00	0.00	0.00
	0	0	8.00	8.00	8.00	0.00	0.00	0.00
	0	0	8.00	8.00	8.00	0.00	0.00	0.00
	0	0	8.00	8.00	8.00	0.00	0.00	0.00
	0	0	8.00	8.00	8.00	0.00	0.00	0.00
	0	0	8.00	8.00	8.00	0.00	0.00	0.00
	0	0	8.00	8.00	8.00	0.00	0.00	0.00
	0	0	8.00	8.00	8.00	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 Building Envelope 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 GENERAL BENEFITS \$(000)	(8) AVOIDED FUEL 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	258	13,923	0	14,181	0	0	581	5	586	(13,595)	(13,595)
2011	0	608	38,370	0	39,008	0	291	2,921	10	2,931	(36,046)	(49,657)
2012	0	831	46,268	0	47,099	0	1,075	5,395	22	6,492	(40,407)	(74,256)
2013	0	925	52,195	0	53,130	0	2,061	8,874	743	11,678	(41,330)	(119,774)
2014	0	922	52,477	0	53,399	0	3,063	12,463	1,343	16,869	(34,530)	(172,638)
2015	0	922	53,288	0	54,210	0	4,037	17,960	1,617	23,615	(34,395)	(146,325)
2016	0	649	37,869	0	38,518	0	4,908	25,803	2,178	30,948	(5,370)	(140,044)
2017	0	639	37,397	0	38,036	0	5,578	31,999	2,692	39,208	2,172	(147,965)
2018	0	334	19,216	0	19,550	0	6,139	36,634	3,157	45,930	26,380	(121,765)
2019	0	0	0	0	0	39,135	4,339	43,510	1,877	49,882	29,852	(97,594)
2020	0	21	980	0	1,001	34,379	6,147	44,199	1,394	48,119	37,118	(60,485)
2021	0	37	1,494	0	1,530	34,911	5,970	46,015	1,432	49,329	36,798	(24,690)
2022	0	38	1,544	0	1,582	34,698	5,799	47,697	1,477	50,472	36,090	(12,600)
2023	0	42	1,856	0	1,898	35,261	5,623	47,549	1,466	49,988	35,514	18,812
2024	0	17	701	0	718	35,715	5,449	49,577	1,513	52,073	31,255	49,866
2025	0	303	18,000	0	18,304	35,649	5,307	50,434	1,582	52,911	29,578	68,445
2026	0	803	51,596	0	52,399	35,892	5,147	50,578	1,501	53,116	40,747	78,068
2027	0	1,048	62,736	0	63,784	36,136	4,988	51,692	1,454	53,674	28,895	84,525
2028	0	1,181	70,940	0	72,121	36,011	4,829	51,971	1,372	54,385	22,965	88,301
2029	0	1,210	72,807	0	74,017	36,556	4,671	51,548	1,609	54,816	20,819	92,754
2030	0	1,326	77,611	0	78,937	36,947	4,514	52,591	1,631	56,583	16,746	95,535
2031	0	1,046	58,548	0	59,594	36,670	4,357	54,222	1,783	57,031	9,739	101,342
2032	0	1,064	58,949	0	59,913	37,818	4,206	53,210	1,870	57,104	37,791	106,635
2033	0	922	52,477	0	53,399	37,726	4,061	55,225	1,945	58,141	65,719	115,100
2034	0	142	3,616	0	3,757	38,482	3,993	54,016	1,941	58,672	34,915	126,296
2035	0	181	2,941	0	3,122	40,078	3,816	57,668	1,992	60,863	100,321	137,383
2036	0	49	993	0	1,042	38,706	3,711	60,509	1,921	60,239	104,397	147,893
2037	0	42	853	0	895	40,552	3,639	61,774	1,993	60,239	106,444	157,636
2038	0	37	737	0	773	38,482	3,539	64,320	1,455	60,717	107,943	166,795
2039	0	0	0	0	0	38,717	3,467	65,941	1,434	60,519	108,519	175,511
2040	0	474	27,719	0	28,193	40,396	3,408	67,236	1,472	61,503	84,310	181,332
2041	0	1,210	72,807	0	74,017	40,002	3,335	69,566	1,535	61,438	36,104	185,099
2042	0	1,581	93,282	0	94,863	39,301	3,270	71,935	3,127	62,623	22,690	185,006
2043	0	1,779	104,638	0	107,418	39,620	3,207	77,046	4,839	64,573	17,106	186,012
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
2071	0	0	0	0	0	0	0	0	0	0	0	0
2072	0	0	0	0	0	0	0	0	0	0	0	0
2073	0	0	0	0	0	0	0	0	0	0	0	0
2074	0	0	0	0	0	0	0	0	0	0	0	0
2075	0	0	0	0	0	0	0	0	0	0	0	0
2076	0	0	0	0	0	0	0	0	0	0	0	0
2077	0	0	0	0	0	0	0	0	0	0	0	0
2078	0	0	0	0	0	0	0	0	0	0	0	0
2079	0	0	0	0	0	0	0	0	0	0	0	0
2080	0	0	0	0	0	0	0	0	0	0	0	0
2081	0	0	0	0	0	0	0	0	0	0	0	0
2082	0	0	0	0	0	0	0	0	0	0	0	0
2083	0	0	0	0	0	0	0	0	0	0	0	0
2084	0	0	0	0	0	0	0	0	0	0	0	0
2085	0	0	0	0	0	0	0	0	0	0	0	0
2086	0	0	0	0	0	0	0	0	0	0	0	0
2087	0	0	0	0	0	0	0	0	0	0	0	0
2088	0	0	0	0	0	0	0	0	0	0	0	0
2089	0	0	0	0	0	0	0	0	0	0	0	0
2090	0	0	0	0	0	0	0	0	0	0	0	0
2091	0	0	0	0	0	0	0	0	0	0	0	0
2092	0	0	0	0	0	0	0	0	0	0	0	0
2093	0	0	0	0	0	0	0	0	0	0	0	0
2094	0	0	0	0	0	0	0	0	0	0	0	0
2095	0	0	0	0	0	0	0	0	0	0	0	0
2096	0	0	0	0	0	0	0	0	0	0	0	0
2097	0	0	0	0	0	0	0	0	0	0	0	0
2098	0	0	0	0	0	0	0	0	0	0	0	0
2099	0	0	0	0	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0	0	0	0	0
NOM	0	20,541	1,172,468	0	1,193,001	943,061	138,940	1,549,762	54,282	2,677,965	1,484,964	
NET	0	6,194	346,648	0	352,844	170,195	38,791	316,140	13,629	538,756	185,912	

Discount Rate: 8.00 %  
 Benefit/Cost Ratio (Col(11) / Col(6)) : 1.53







## **BUSINESS WATER HEATING**

INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: KEV\_NBO  
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 KW REDUCTION PER CUSTOMER .....	7.09549 KVA
(5) KW LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KVA INCREASE AT METER .....	0.00 KVA

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 .....	1.6254

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 RATE .....	--- %**
~ (10) UTILITY DISCOUNT RATE .....	2.89 %
~ (11) UTILITY AFUDC RATE .....	2.48 %
* (12) UTILITY NON RECURRING KEBATE INCENTIVE .....	--- \$/CUST
* (13) UTILITY RECURRING KEBATE INCENTIVE .....	--- \$/CUST
* (14) UTILITY KEBATE INCENTIVE ESCALATION RATE .....	--- %

- SUPPLEMENTAL INFORMATION NOT RECEIVED 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 .....	2013
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	723.59 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	185.02 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	20.64 \$/KW
(7) GEN. TRANS & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	57.66 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	--- %**
(10) TRANSMISSION FIXED O & M COST .....	2.92 \$/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/KVA
(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 KW-HR -- (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/KVA
(2) NON-FUEL COST ESCALATION RATE .....	--- %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	--- \$/KW/HR
(4) DEMAND CHARGE ESCALATION RATE .....	--- %

\* INPUT DATA - PART 1 CONTINUED  
PROGRAM(METHOD SELECTED): REV\_FBO  
PROGRAMNAME: 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 OPER. COSTS \$(000)	OTHER PARTICIPANT COSTS \$(000)	TOTAL PARTICIPANT COSTS \$(000)
2000	0	0	0	0	0	0	0	0	0
2010	71	302	0	374	39	20	1,420	0	1,420
2011	84	746	0	830	344	71	1,424	0	1,494
2012	94	819	0	913	665	140	1,851	0	1,991
2013	126	2,268	0	2,494	1,134	242	3,706	0	3,946
2014	118	979	0	1,097	1,681	366	2,103	0	2,469
2015	75	604	0	679	2,154	458	1,332	0	1,790
2016	46	367	0	413	2,506	506	850	0	1,356
2017	48	367	0	414	2,803	543	850	0	1,357
2018	49	367	0	416	3,097	600	372	0	1,389
2019	0	0	0	0	3,373	608	0	0	1,391
2020	0	0	0	0	3,388	595	0	0	1,392
2021	0	0	0	0	3,517	584	0	0	1,393
2022	0	0	0	0	3,685	578	0	0	1,394
2023	0	0	0	0	3,839	583	0	0	1,395
2024	0	0	0	0	4,071	588	0	0	1,396
2025	43	394	0	447	4,304	571	1,130	0	1,397
2026	143	1,283	0	1,428	4,533	573	3,112	0	1,398
2027	136	819	0	955	4,847	578	2,434	0	1,399
2028	153	897	0	1,050	5,094	585	2,732	0	1,400
2029	201	2,346	0	2,547	5,335	589	3,732	0	1,401
2030	104	604	0	712	5,731	594	1,930	0	1,402
2031	67	367	0	434	6,064	598	1,981	0	1,403
2032	69	367	0	436	6,497	610	1,232	0	1,404
2033	71	367	0	437	7,135	631	1,262	0	1,405
2034	0	0	0	0	7,222	610	0	0	1,406
2035	0	0	0	0	7,228	625	0	0	1,407
2036	0	0	0	0	8,392	637	0	0	1,408
2037	0	0	0	0	8,960	632	0	0	1,409
2038	0	0	0	0	9,367	655	0	0	1,410
2039	0	0	0	0	9,878	637	0	0	1,411
2040	91	394	0	475	10,404	660	1,637	0	1,412
2041	175	746	0	922	11,071	663	3,134	0	1,413
2042	260	1,397	0	1,657	11,762	667	4,534	0	1,414
2043	221	897	0	1,118	12,401	670	3,538	0	1,415
2044	0	0	0	0	0	0	0	0	1,416
2045	0	0	0	0	0	0	0	0	1,417
2046	0	0	0	0	0	0	0	0	1,418
2047	0	0	0	0	0	0	0	0	1,419
2048	0	0	0	0	0	0	0	0	1,420
2049	0	0	0	0	0	0	0	0	1,421
2050	0	0	0	0	0	0	0	0	1,422
2051	0	0	0	0	0	0	0	0	1,423
2052	0	0	0	0	0	0	0	0	1,424
2053	0	0	0	0	0	0	0	0	1,425
2054	0	0	0	0	0	0	0	0	1,426
2055	0	0	0	0	0	0	0	0	1,427
2056	0	0	0	0	0	0	0	0	1,428
2057	0	0	0	0	0	0	0	0	1,429
2058	0	0	0	0	0	0	0	0	1,430
2059	0	0	0	0	0	0	0	0	1,431
2060	0	0	0	0	0	0	0	0	1,432
2061	0	0	0	0	0	0	0	0	1,433
2062	0	0	0	0	0	0	0	0	1,434
2063	0	0	0	0	0	0	0	0	1,435
2064	0	0	0	0	0	0	0	0	1,436
2065	0	0	0	0	0	0	0	0	1,437
2066	0	0	0	0	0	0	0	0	1,438
2067	0	0	0	0	0	0	0	0	1,439
2068	0	0	0	0	0	0	0	0	1,440
2069	0	0	0	0	0	0	0	0	1,441
2070	0	0	0	0	0	0	0	0	1,442
2071	0	0	0	0	0	0	0	0	1,443
2072	0	0	0	0	0	0	0	0	1,444
2073	0	0	0	0	0	0	0	0	1,445
2074	0	0	0	0	0	0	0	0	1,446
2075	0	0	0	0	0	0	0	0	1,447
2076	0	0	0	0	0	0	0	0	1,448
2077	0	0	0	0	0	0	0	0	1,449
2078	0	0	0	0	0	0	0	0	1,450
2079	0	0	0	0	0	0	0	0	1,451
2080	0	0	0	0	0	0	0	0	1,452
2081	0	0	0	0	0	0	0	0	1,453
2082	0	0	0	0	0	0	0	0	1,454
2083	0	0	0	0	0	0	0	0	1,455
2084	0	0	0	0	0	0	0	0	1,456
2085	0	0	0	0	0	0	0	0	1,457
2086	0	0	0	0	0	0	0	0	1,458
2087	0	0	0	0	0	0	0	0	1,459
2088	0	0	0	0	0	0	0	0	1,460
2089	0	0	0	0	0	0	0	0	1,461
2090	0	0	0	0	0	0	0	0	1,462
2091	0	0	0	0	0	0	0	0	1,463
2092	0	0	0	0	0	0	0	0	1,464
2093	0	0	0	0	0	0	0	0	1,465
2094	0	0	0	0	0	0	0	0	1,466
2095	0	0	0	0	0	0	0	0	1,467
2096	0	0	0	0	0	0	0	0	1,468
2097	0	0	0	0	0	0	0	0	1,469
2098	0	0	0	0	0	0	0	0	1,470
2099	0	0	0	0	0	0	0	0	1,471
2100	0	0	0	0	0	0	0	0	1,472
2101	0	0	0	0	0	0	0	0	1,473
2102	0	0	0	0	0	0	0	0	1,474
2103	0	0	0	0	0	0	0	0	1,475
2104	0	0	0	0	0	0	0	0	1,476
2105	0	0	0	0	0	0	0	0	1,477
2106	0	0	0	0	0	0	0	0	1,478
2107	0	0	0	0	0	0	0	0	1,479
2108	0	0	0	0	0	0	0	0	1,480
2109	0	0	0	0	0	0	0	0	1,481
2110	0	0	0	0	0	0	0	0	1,482
2111	0	0	0	0	0	0	0	0	1,483
2112	0	0	0	0	0	0	0	0	1,484
2113	0	0	0	0	0	0	0	0	1,485
2114	0	0	0	0	0	0	0	0	1,486
2115	0	0	0	0	0	0	0	0	1,487
2116	0	0	0	0	0	0	0	0	1,488
2117	0	0	0	0	0	0	0	0	1,489
2118	0	0	0	0	0	0	0	0	1,490
2119	0	0	0	0	0	0	0	0	1,491
2120	0	0	0	0	0	0	0	0	1,492
2121	0	0	0	0	0	0	0	0	1,493
2122	0	0	0	0	0	0	0	0	1,494
2123	0	0	0	0	0	0	0	0	1,495
2124	0	0	0	0	0	0	0	0	1,496
2125	0	0	0	0	0	0	0	0	1,497
2126	0	0	0	0	0	0	0	0	1,498
2127	0	0	0	0	0	0	0	0	1,499
2128	0	0	0	0	0	0	0	0	1,500
2129	0	0	0	0	0	0	0	0	1,501
2130	0	0	0	0	0	0	0	0	1,502
2131	0	0	0	0	0	0	0	0	1,503
2132	0	0	0	0	0	0	0	0	1,504
2133	0	0	0	0	0	0	0	0	1,505
2134	0	0	0	0	0	0	0	0	1,506
2135	0	0	0	0	0	0	0	0	1,507
2136	0	0	0	0	0	0	0	0	1,508
2137	0	0	0	0	0	0	0	0	1,509
2138	0	0	0	0	0	0	0	0	1,510
2139	0	0	0	0	0	0	0	0	1,511
2140	0	0	0	0	0	0	0	0	1,512
2141	0	0	0	0	0	0	0	0	1,513
2142	0	0	0	0	0	0	0	0	1,514
2143	0	0	0	0	0	0	0	0	1,515
2144	0	0	0	0	0	0	0	0	1,516
2145	0	0	0	0	0	0	0	0	1,517
2146	0	0	0	0	0	0	0	0	1,518
2147	0	0	0	0	0	0	0	0	1,519
2148	0	0	0	0	0	0	0	0	1,520
2149	0	0	0	0	0	0	0	0	1,521
2150	0	0	0	0	0	0	0	0	1,522
2151	0	0	0	0	0	0	0	0	1,523
2152	0	0	0	0	0	0	0	0	1,524
2153	0	0	0	0	0	0	0	0	1,525
2154	0	0	0	0	0	0	0	0	1,526
2155	0	0	0	0	0	0	0	0	1,527
2156	0	0	0	0	0	0	0	0	1,528
2157	0	0	0	0	0	0	0	0	1,529
2158	0	0	0	0	0	0	0	0	1,530
2159	0	0	0	0	0	0	0	0	1,531
2160	0	0	0	0	0	0	0	0	1,532
2161	0	0	0	0	0	0	0	0	1,533
2162	0	0	0	0	0	0	0	0	1,534
2163	0	0	0	0	0	0	0	0	1,535
2164	0	0	0	0	0	0	0	0	1,536
2165	0	0	0	0	0	0	0	0	1,537
2166	0	0	0	0	0	0	0	0	1,538
2167	0	0	0	0	0	0	0	0	1,539
2168	0	0	0	0	0	0	0	0	1,540
2169	0	0	0	0					

CALCULATION OF GENERATOR  
PROGRAM(M)STED SELECTED KEY REQ  
PROGRAMNAME: Business Water Heating

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	REQ-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPRCC. \$(000)	DEPRCCD TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST/REAS FOR PROPERTY INSURANCE \$(000)
2019	6,579	196	0	440	290	106	37	246	0	1,315	1,315	1,315	6,144
2020	6,953	188	0	422	199	102	38	246	80	1,376	1,172	2,487	6,297
2021	5,722	178	0	400	197	97	39	246	68	1,225	1,094	3,521	6,456
2022	5,413	163	0	378	195	93	40	246	56	1,177	911	4,432	6,616
2023	5,111	149	0	357	193	88	41	246	46	1,129	803	5,236	6,781
2024	4,828	136	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	626	6,563	7,125
2026	4,266	123	0	298	183	75	43	246	18	997	549	7,117	7,303
2027	4,002	124	0	279	179	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	7,678
2029	3,476	108	0	243	158	62	48	246	17	873	373	8,398	7,864
2030	3,214	100	0	224	138	58	49	246	17	832	326	8,728	8,051
2031	2,951	92	0	206	127	53	50	246	17	791	285	9,009	8,242
2032	2,689	84	0	188	115	49	52	246	17	750	248	9,256	8,429
2033	2,426	75	0	169	104	44	53	246	17	708	215	9,472	8,601
2034	2,163	67	0	151	92	40	54	246	17	667	186	9,658	8,776
2035	1,901	59	0	133	81	35	56	246	17	626	160	9,818	8,951
2036	1,638	51	0	114	69	31	57	246	17	585	138	9,956	9,129
2037	1,376	43	0	96	58	27	58	246	17	544	118	10,073	9,302
2038	1,113	35	0	78	46	22	60	246	17	503	100	10,173	9,472
2039	851	26	0	59	34	18	61	246	(25)	462	84	10,257	9,641
2040	639	28	0	41	22	13	63	246	(86)	429	72	10,329	9,819
2041	479	15	0	23	12	9	65	246	(86)	403	62	10,391	10,000
2042	320	10	0	22	11	4	66	246	(86)	377	53	10,444	10,181
2043	160	5	0	11	10	(0)	68	246	(86)	351	45	10,489	11,132

IN SERVICE COST (\$000)	6,144
IN SERVICE YEAR	2019
BOOKING (YRS)	25
DEPRCC. TAX RATE	38.57%
DISCOUNT RATE	8.9%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.62%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	44%	7.05%
P/E	0%	0.00%
C/S	56%	12.50%

K-FACTOR = GP/SPC / IN-SVC COST = 1.79238

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 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	(156)
2020	7.22%	431	655	246	491	223	446	88	573	0	0	0	80	(75)
2021	6.89%	399	1,054	246	737	223	669	68	573	0	0	0	68	(7)
2022	6.18%	368	1,423	246	983	223	891	58	573	0	0	0	58	49
2023	5.75%	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	(83)	573	0	0	0	(83)	344
2040	0.00%	0	5,974	246	5,406	223	4,902	(80)	573	0	0	0	(80)	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	5,897	223	5,347	(72)	573	0	0	0	(72)	86
2043	0.00%	0	5,974	246	6,144	223	5,570	(80)	573	0	0	0	(80)	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 - USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: MDV\_03Q  
 PROGRAM NAME: Business Water Heating

(1)	(2)	(3)	(4)	(5) END OF YEAR NET PLANT IN SERVICE	(6)* ACCUMULATED DEPRECIATION	(6)* ACCUMULATED DEFERRED 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)
2010	3.23%	224	0	3,898	266	(133)	6,399	6,933	6,176
2020	7.22%	431	88	5,632	491	(75)	6,093	5,727	5,806
2021	6.69%	399	68	5,406	737	(7)	5,727	5,413	5,579
2022	6.18%	369	36	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	1,674	131	4,820	4,538	4,673
2025	4.89%	292	27	4,423	1,720	158	4,538	4,266	4,442
2026	4.52%	270	18	4,178	1,966	176	4,266	4,002	4,134
2027	4.18%	267	17	3,932	2,212	193	4,002	3,739	3,879
2028	4.46%	267	17	3,686	2,457	210	3,739	3,476	3,698
2029	4.46%	267	17	3,440	2,703	227	3,476	3,214	3,345
2030	4.46%	267	17	3,194	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	(15)	983	5,161	344	850	639	745
2040	0.00%	0	(86)	737	5,406	298	639	479	569
2041	0.00%	0	(54)	491	5,632	172	479	300	399
2042	0.00%	0	(84)	246	5,878	96	300	160	246
2043	0.00%	0	(80)	(7)	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 (\$K/W)	(7) CUMULATIVE AVERAGE SPENDING (\$K/W)
2009	-10	3.00%	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	1.00%	15.09	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%	428.27	598.94
2018	-1	3.00%	1.305	18.44%	98.79	833.33

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) CUMULATIVE SPENDING WITH AFUDC (\$K/W)	(3a)* DEBT AFUDC (\$K/W)	(3b)* CUMULATIVE DEBT AFUDC (\$K/W)	(4) YEARLY TOTAL AFUDC (\$K/W)	(5a)* TOTAL AFUDC (\$K/W)	(5b)* CONSTRUCTION PERIOD INTEREST (\$K/W)	(6c)* CUMULATIVE CRF (\$K/W)	(6d)* DEBTED TAXES (\$K/W)	(7a)* CUMULATIVE DEBTED TAXES (\$K/W)	(8) INCREMENTAL YEAR-END BOOK VALUE (\$K/W)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$K/W)
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	0.02	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	3.29	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	(0.72)	(0.72)	42.83	60.90
2016	-3	226.84	7.57	8.56	19.29	23.56	15.90	19.23	(3.41)	(4.15)	351.16	412.06
2017	-2	622.20	19.46	28.01	53.18	76.45	43.47	62.72	(9.26)	(13.29)	473.27	885.43
2018	-1	934.53	29.46	37.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

IN SERVICE YEAR	2019	37.49		154.84		127.50		(27.02)		1,064.61	
		CONSTRUCTION CASH	BOOK BASIS	BOOK BASIS	FOR DEBT TAX	TAXBASIS					
CONSTRUCTION CASH		529		529		529					
EQUITY AFUDC	725,389,865	573									
DEBT AFUDC	8.48%	182		332							
CRF						736					
TOTAL		6,144		5,570		5,974					

\* Columns not specified in worksheet



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

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (\$/GAL)	AVOIDED MARGINAL FUEL COST (\$/GAL)	INCREASED MARGINAL FUEL COST (\$/GAL)	REPLACEMENT FUEL COST (\$/GAL)	PROGRAMMIV EFFECTIVENESS FACTOR	PROGRAMMIV EFFECTIVENESS FACTOR
2009	0	0	6.79	9.17	6.79	0.00	1.00	1.00
2010	465	465	6.41	6.72	6.91	0.00	1.00	1.00
2011	592	592	6.35	6.62	6.49	0.00	1.00	1.00
2012	1,570	1,570	6.43	6.68	6.37	0.00	1.00	1.00
2013	2,686	2,686	7.96	7.24	8.35	0.00	1.00	1.00
2014	3,377	3,377	7.53	7.69	8.02	0.00	1.00	1.00
2015	3,803	3,803	8.11	8.32	9.53	0.00	1.00	1.00
2016	4,602	4,602	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	10.32	10.86	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	12.88	12.60	15.76	18.28	1.00	1.00
2021	4,579	4,579	12.57	13.12	16.56	16.74	1.00	1.00
2022	4,579	4,579	13.06	13.62	16.96	16.81	1.00	1.00
2023	4,579	4,579	13.29	13.84	16.96	16.30	1.00	1.00
2024	4,579	4,579	13.95	14.49	17.62	18.84	1.00	1.00
2025	4,579	4,579	14.40	14.95	18.05	18.94	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	16.32	16.94	19.10	11.39	1.00	1.00
2031	4,579	4,579	17.68	17.90	19.71	11.80	1.00	1.00
2032	4,579	4,579	17.50	17.86	19.59	11.88	1.00	1.00
2033	4,579	4,579	18.27	18.22	20.10	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	20.55	22.27	12.25	1.00	1.00
2037	4,579	4,579	21.13	21.25	23.81	12.78	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	23.29	23.49	24.94	13.44	1.00	1.00
2041	4,579	4,579	24.54	24.43	25.85	13.75	1.00	1.00
2042	4,579	4,579	25.50	25.60	26.77	14.19	1.00	1.00
2043	4,579	4,579	26.74	26.86	28.22	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.







TOTAL RESOURCE COST TEST  
PROGRAM METHOD SELECTED: RRV\_REQ  
PROGRAM NAME: Washen 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 GROSS UNIT BENEFITS (\$000)	AVOIDED T&D BENEFITS (\$000)	PROGRAM FUEL SAVINGS (\$000)	OTHER BENEFITS (\$000)	TOTAL BENEFITS (\$000)	NET BENEFITS (\$000)	CUMULATIVE UNDISCOUNTED NET BENEFITS (\$000)
2009	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	72	1,428	0	1,492	0	0	112	0	112	(1,379)	(1,379)
2011	0	84	1,494	0	1,578	0	26	345	1	372	(1,205)	(2,583)
2012	0	94	1,691	0	1,775	0	56	612	2	669	(1,109)	(3,692)
2013	0	186	3,786	0	3,892	0	93	1,088	108	1,222	(2,923)	(6,614)
2014	0	138	2,388	0	2,526	0	157	1,682	171	1,890	(825)	(7,439)
2015	0	75	1,532	0	1,497	0	195	2,131	294	2,520	1,343	(6,096)
2016	0	46	898	0	876	0	316	2,482	275	3,111	2,225	(3,871)
2017	0	48	830	0	898	0	227	3,019	328	3,563	2,667	(1,204)
2018	0	49	872	0	920	0	238	3,438	349	4,065	3,145	1,041
2019	0	0	0	0	0	1,330	293	3,920	347	4,694	4,694	2,151
2020	0	0	0	0	0	1,409	241	4,129	349	4,188	4,188	4,627
2021	0	0	0	0	0	1,409	234	4,296	375	4,316	4,316	6,891
2022	0	0	0	0	0	1,401	228	4,449	418	4,510	4,510	9,045
2023	0	0	0	0	0	1,426	221	4,555	442	4,654	4,654	11,064
2024	0	0	0	0	0	1,442	215	4,744	490	4,890	4,890	12,985
2025	0	63	1,150	0	1,194	1,439	208	4,875	535	7,075	5,881	14,491
2026	0	163	3,112	0	3,276	1,449	202	4,979	569	7,189	3,914	15,412
2027	0	154	2,434	0	2,570	1,461	185	5,110	608	7,394	4,804	16,449
2028	0	153	2,733	0	2,885	1,454	189	5,257	682	7,562	4,677	17,377
2029	0	291	5,732	0	6,043	1,492	183	5,377	737	7,789	1,746	17,695
2030	0	108	1,930	0	2,038	1,492	177	5,511	791	7,991	4,923	18,491
2031	0	67	1,591	0	1,669	1,490	170	5,710	861	8,224	6,928	19,739
2032	0	69	1,232	0	1,361	1,527	165	5,825	931	8,467	7,167	20,798
2033	0	71	1,362	0	1,533	1,520	159	6,032	981	8,697	7,294	21,728
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	9,542	9,542	23,808
2036	0	0	0	0	0	1,603	146	6,491	1,230	9,692	9,692	24,779
2037	0	0	0	0	0	1,627	143	6,915	1,321	10,026	10,026	25,703
2038	0	0	0	0	0	1,621	140	7,215	1,426	10,381	10,381	26,982
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	1,685	11,134	9,465	28,985
2041	0	175	3,134	0	3,309	1,615	132	8,018	1,789	11,546	8,236	29,625
2042	0	260	4,934	0	5,193	1,587	129	8,304	1,982	12,021	6,238	29,037
2043	0	221	3,958	0	4,179	1,591	126	8,737	2,139	12,646	2,467	29,595
2044	0	0	0	0	0	0	0	0	0	0	0	29,595
2045	0	0	0	0	0	0	0	0	0	0	0	29,595
2046	0	0	0	0	0	0	0	0	0	0	0	29,595
2047	0	0	0	0	0	0	0	0	0	0	0	29,595
2048	0	0	0	0	0	0	0	0	0	0	0	29,595
2049	0	0	0	0	0	0	0	0	0	0	0	29,595
2050	0	0	0	0	0	0	0	0	0	0	0	29,595
2051	0	0	0	0	0	0	0	0	0	0	0	29,595
2052	0	0	0	0	0	0	0	0	0	0	0	29,595
2053	0	0	0	0	0	0	0	0	0	0	0	29,595
2054	0	0	0	0	0	0	0	0	0	0	0	29,595
2055	0	0	0	0	0	0	0	0	0	0	0	29,595
2056	0	0	0	0	0	0	0	0	0	0	0	29,595
2057	0	0	0	0	0	0	0	0	0	0	0	29,595
2058	0	0	0	0	0	0	0	0	0	0	0	29,595
2059	0	0	0	0	0	0	0	0	0	0	0	29,595
2060	0	0	0	0	0	0	0	0	0	0	0	29,595
2061	0	0	0	0	0	0	0	0	0	0	0	29,595
2062	0	0	0	0	0	0	0	0	0	0	0	29,595
2063	0	0	0	0	0	0	0	0	0	0	0	29,595
2064	0	0	0	0	0	0	0	0	0	0	0	29,595
2065	0	0	0	0	0	0	0	0	0	0	0	29,595
2066	0	0	0	0	0	0	0	0	0	0	0	29,595
2067	0	0	0	0	0	0	0	0	0	0	0	29,595
2068	0	0	0	0	0	0	0	0	0	0	0	29,595
2069	0	0	0	0	0	0	0	0	0	0	0	29,595
2070	0	0	0	0	0	0	0	0	0	0	0	29,595
2071	0	0	0	0	0	0	0	0	0	0	0	29,595
2072	0	0	0	0	0	0	0	0	0	0	0	29,595
2073	0	0	0	0	0	0	0	0	0	0	0	29,595
2074	0	0	0	0	0	0	0	0	0	0	0	29,595
2075	0	0	0	0	0	0	0	0	0	0	0	29,595
2076	0	0	0	0	0	0	0	0	0	0	0	29,595
2077	0	0	0	0	0	0	0	0	0	0	0	29,595
2078	0	0	0	0	0	0	0	0	0	0	0	29,595
2079	0	0	0	0	0	0	0	0	0	0	0	29,595
2080	0	0	0	0	0	0	0	0	0	0	0	29,595
2081	0	0	0	0	0	0	0	0	0	0	0	29,595
2082	0	0	0	0	0	0	0	0	0	0	0	29,595
2083	0	0	0	0	0	0	0	0	0	0	0	29,595
2084	0	0	0	0	0	0	0	0	0	0	0	29,595
2085	0	0	0	0	0	0	0	0	0	0	0	29,595
2086	0	0	0	0	0	0	0	0	0	0	0	29,595
2087	0	0	0	0	0	0	0	0	0	0	0	29,595
2088	0	0	0	0	0	0	0	0	0	0	0	29,595
2089	0	0	0	0	0	0	0	0	0	0	0	29,595
2090	0	0	0	0	0	0	0	0	0	0	0	29,595
2091	0	0	0	0	0	0	0	0	0	0	0	29,595
2092	0	0	0	0	0	0	0	0	0	0	0	29,595
2093	0	0	0	0	0	0	0	0	0	0	0	29,595
2094	0	0	0	0	0	0	0	0	0	0	0	29,595
2095	0	0	0	0	0	0	0	0	0	0	0	29,595
2096	0	0	0	0	0	0	0	0	0	0	0	29,595
2097	0	0	0	0	0	0	0	0	0	0	0	29,595
2098	0	0	0	0	0	0	0	0	0	0	0	29,595
2099	0	0	0	0	0	0	0	0	0	0	0	29,595
2100	0	0	0	0	0	0	0	0	0	0	0	29,595
NCDM	0	2,642	48,240	0	51,383	38,071	5,831	163,519	25,928	223,143	181,761	181,761
NPV	0	797	14,791	0	15,588	6,971	1,613	32,567	4,943	45,023	29,525	29,525

Discount Rate:  $\frac{0.03}{1.03} \%$   
Base/Net Cost Ratio (Col(11) / Col(12)):  $\frac{2.89}{1.03}$





**BUSINESS ON CALL**



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 KVA REDUCTION PER CUSTOMER .....	2.65 KVA ****
(5) KVA LINE LOSS PERCENTAGE .....	4.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KVA INCREASE AT METER .....	1.46 KVA ****

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 .....	1.7078
(5) K FACTOR FOR T & D .....	1.6324

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECORDING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECORDING 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 RATE .....	*** %**
** UTILITY DISCOUNT RATE .....	8.89 %
** UTILITY AFDG RATE .....	8.88 %
** UTILITY NONRECORDING REBATE INCENTIVE .....	*** \$/CUST
** UTILITY RECORDING 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 .....	724.29 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	184.21 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	12.38 \$/KW
(7) GEN. TRAN & DIST COST ESCALATION RATE .....	1.08 %**
(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/KVA
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	6% ** (in-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	2.23 CENTS PER KW-HR ** (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/KVA
(2) NON-FUEL COST ESCALATION RATE .....	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL .....	*** \$/KW&M
(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 KW\$/CUST SHIFTED AWAY FROM PEAKERS. VALUE SHOWN IN ITEM (7) IS ANNUAL KW\$/CUST THAT IS PAID BACK DURING OFF-PEAK.



CALCULATION OF GENE-FACTOR  
 PROGRAM(METHOD SELECTED REV\_REQ)  
 PROGRAMNAME: Business On Call

(1)	(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	44,790	1,267	0	2,947	1,872	687	243	1,591	3	8,516	8,516	8,516	39,781
2020	38,196	1,228	0	2,725	1,290	659	949	1,591	321	8,263	7,982	16,104	48,775
2021	37,084	1,152	0	2,588	1,229	630	235	1,591	440	7,933	6,892	22,797	41,284
2022	34,043	1,039	0	2,446	1,264	601	261	1,591	366	7,619	5,901	28,698	42,839
2023	33,696	1,023	0	2,310	1,248	573	268	1,591	286	7,313	5,229	33,901	43,910
2024	31,209	909	0	2,178	1,229	544	275	1,591	222	7,018	4,585	38,485	45,008
2025	29,385	913	0	2,051	1,206	516	281	1,591	133	6,721	4,040	42,526	46,133
2026	27,621	858	0	1,928	1,186	487	288	1,591	118	6,426	3,557	46,083	47,287
2027	25,912	805	0	1,806	1,120	458	296	1,591	109	6,137	3,231	49,214	48,469
2028	24,211	752	0	1,690	1,045	430	303	1,591	109	5,920	2,731	51,966	49,681
2029	22,511	699	0	1,571	971	401	311	1,591	109	5,633	2,413	54,378	50,923
2030	20,810	646	0	1,452	896	372	318	1,591	109	5,396	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	333	1,591	109	4,853	1,604	59,937	54,828
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	4,300	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	65,223	62,044
2038	7,206	224	0	503	300	143	388	1,591	109	3,258	646	65,871	63,593
2039	5,506	171	0	384	225	115	398	1,591	(224)	2,993	549	66,416	65,185
2040	4,158	129	0	269	151	86	408	1,591	(337)	2,777	465	66,881	66,815
2041	3,104	96	0	217	78	57	418	1,591	(337)	2,600	401	67,282	68,485
2042	2,049	64	0	144	70	29	428	1,591	(337)	2,441	344	67,626	70,197
2043	1,034	32	0	72	69	(9)	439	1,591	(337)	2,273	295	67,921	71,952

IN SERVICE COST (2000)	39,781
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
DEPR. RATE	38.57%
DISCOUNT RATE	8.5%
PROPERTY TAX	1.89%
PROPERTY INSURANCE	0.412%

SOURCE	WEIGHT	COST
DEBT	40%	7.0%
PS	0%	0.0%
CE	60%	12.5%

K-FACTOR =  $\frac{C^*WFC}{IN-SVC COST} = 1.7078$

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 (7)-(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	(1,005)
2020	7.22%	2,793	4,243	1,591	3,182	1,443	2,985	231	3,713	0	0	0	231	(486)
2021	6.68%	2,583	6,826	1,591	4,774	1,443	4,328	446	3,713	0	0	0	446	(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	10,199	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	4.18%	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	22,289	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	1,794
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	(267)	3,713	0	0	0	(267)	1,670
2041	0.00%	0	38,686	1,591	36,598	1,443	33,182	(337)	3,713	0	0	0	(337)	1,113
2042	0.00%	0	38,686	1,591	38,189	1,443	34,625	(367)	3,713	0	0	0	(367)	557
2043	0.00%	0	38,686	1,591	39,781	1,443	36,067	(337)	3,713	0	0	0	(337)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(1,005)
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\_RRQ  
 PROGRAM(NAME): Business On Call

(1)	(2)	(3)	(4)	(5) END OF YEAR NET PLANT IN SERVICE	(6)* ACCUMULATED DEPRECIATION	(6)* ACCUMULATED DEF TAGES	(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%	1,451	3	38,189	1,591	(1,006)	48,790	38,194	38,393
2020	7.22%	2,793	521	34,528	3,182	(886)	38,196	37,084	38,140
2021	6.08%	2,383	440	33,607	4,774	(44)	37,884	35,053	36,068
2022	6.18%	2,391	366	33,416	6,365	329	35,623	33,096	34,074
2023	5.71%	2,210	296	31,824	7,956	616	33,696	31,269	32,152
2024	5.29%	2,044	232	30,233	9,547	948	31,269	29,285	30,097
2025	4.89%	1,891	173	28,642	11,139	1,021	29,285	27,621	28,503
2026	4.52%	1,749	118	27,051	12,730	1,139	27,621	25,913	26,766
2027	4.16%	1,726	109	25,460	14,321	1,248	25,913	24,211	25,061
2028	4.16%	1,726	109	23,868	15,912	1,358	24,211	22,511	23,361
2029	4.16%	1,726	109	22,277	17,503	1,467	22,511	20,810	21,660
2030	4.16%	1,726	109	20,686	19,095	1,576	20,810	19,110	19,960
2031	4.16%	1,726	109	19,095	20,686	1,685	19,110	17,409	18,260
2032	4.16%	1,726	109	17,503	22,277	1,795	17,409	15,709	16,560
2033	4.16%	1,726	109	15,912	23,868	1,904	15,709	14,008	14,860
2034	4.16%	1,726	109	14,321	25,460	2,013	14,008	12,308	13,160
2035	4.16%	1,726	109	12,730	27,051	2,122	12,308	10,607	11,460
2036	4.16%	1,726	109	11,139	28,642	2,232	10,607	8,907	9,760
2037	4.16%	1,726	109	9,547	30,233	2,341	8,907	7,206	8,060
2038	4.16%	1,726	109	7,956	31,824	2,450	7,206	5,506	6,360
2039	2.25%	803	(234)	6,365	33,416	2,557	5,506	4,128	4,822
2040	0.00%	0	(537)	4,774	35,007	1,670	4,128	3,104	3,621
2041	0.00%	0	(537)	3,182	36,598	1,113	3,104	2,509	2,896
2042	0.00%	0	(537)	1,591	38,189	577	2,009	1,934	1,984
2043	0.00%	0	(537)	(0)	39,780	0	1,054	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%	1.34	0.62
2014	-5	3.00%	1.159	1.90%	15.99	9.24
2015	-4	3.00%	1.194	4.57%	20.61	37.03
2016	-3	3.00%	1.230	37.20%	231.87	222.77
2017	-2	3.00%	1.267	45.74%	420.27	598.84
2018	-1	3.00%	1.305	10.44%	79.79	638.28

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) CUMULATIVE SPENDING WITH AFUDC (\$/KW)	(4)* DEBT AFUDC (\$/KW)	(5)* CUMULATIVE DEBT AFUDC (\$/KW)	(6) YEARLY TOTAL AFUDC (\$/KW)	(7)* CUMULATIVE TOTAL AFUDC (\$/KW)	(8)* CONSTRUCTION PERIOD INTEREST (\$/KW)	(9)* CUMULATIVE CFI (\$/KW)	(10)* DEFERRED TAXES (\$/KW)	(11)* DEFERRED TAXES (\$/KW)	(12) INCREMENTAL YEAR-END BOOK VALUE (\$/KW)	(13) 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	0.62	0.62	0.65	0.65	0.04	0.04	(0.01)	(0.11)	1.29	1.29
2014	-5	9.29	0.29	0.29	0.79	0.84	0.45	0.70	(0.16)	(0.15)	14.78	16.07
2015	-4	37.87	1.18	1.49	3.22	4.06	2.85	3.35	(0.57)	(0.72)	42.85	61.90
2016	-3	226.84	7.07	2.54	19.29	25.36	15.96	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.28	19.46	28.61	53.10	76.45	43.47	62.72	(9.39)	(13.29)	473.37	885.43
2018	-1	734.83	29.46	57.47	90.39	156.84	64.78	127.50	(13.03)	(27.82)	179.13	1,064.51

IN SERVICE YEAR	2019
PLANT COSTS	725,349,805
AFUDC RATE	4.48%

	57.47	156.84	127.50	(27.82)	1,064.51
	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS		
CONSTRUCTION CASE	33,920	33,920	33,920		
EQUITY AFUDC	3,715	2,147			
DEBT AFUDC	2,147		4,764		
CFI					
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)	(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 W EFFECTIVENESS FACTOR	PROGRAM W 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	9.90	13.90	9.90	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	11.90	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	18.07	25.51	18.07	12.10	1.00	1.00
2034	32,911	32,911	18.78	25.89	18.78	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	12.53	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	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.













RATE IMPACT TEST  
 PROGRAM/MS/MSD 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	84	0	0	148	1	0	0	0	1	(148)	(148)
2011	0	249	192	1	0	442	1	179	0	0	180	(262)	(410)
2012	0	422	328	1	0	753	3	358	0	0	361	(392)	(802)
2013	0	572	448	2	0	1,022	2	551	0	0	553	(469)	(1,271)
2014	0	729	576	2	0	1,307	3	731	0	0	734	(573)	(1,844)
2015	0	837	704	3	0	1,544	5	912	0	0	917	(627)	(2,471)
2016	0	894	832	3	0	1,729	6	1,059	0	1	1,100	(629)	(3,100)
2017	0	983	960	4	0	1,917	8	1,294	0	1	1,294	(633)	(3,733)
2018	0	1,016	1,088	5	0	2,107	8	1,459	0	1	1,460	(638)	(4,371)
2019	0	973	1,182	4	0	2,159	10,245	1,829	0	(436)	11,638	9,308	(503)
2020	0	835	1,182	5	0	1,990	9,322	1,583	0	(638)	10,447	8,477	1,034
2021	0	639	1,182	5	0	1,854	9,140	1,537	0	(706)	9,971	8,115	2,149
2022	0	571	1,182	5	0	1,728	9,986	1,493	0	(816)	9,763	8,025	3,174
2023	0	450	1,182	5	0	1,607	9,246	1,438	0	(948)	9,797	8,191	4,265
2024	0	392	1,182	5	0	1,549	9,350	1,408	0	(1,023)	9,725	8,185	5,350
2025	0	402	1,182	5	0	1,539	9,392	1,367	0	(1,100)	9,533	7,974	6,446
2026	0	412	1,182	6	0	1,578	9,396	1,326	0	(1,208)	9,463	7,894	7,540
2027	0	422	1,182	6	0	1,589	9,471	1,286	0	(1,316)	9,343	7,763	8,634
2028	0	435	1,182	6	0	1,592	9,427	1,245	0	(1,389)	9,134	7,543	9,728
2029	0	444	1,182	6	0	1,602	9,673	1,205	0	(1,479)	9,149	7,312	10,820
2030	0	455	1,182	7	0	1,613	9,671	1,165	0	(1,581)	8,925	7,022	11,912
2031	0	466	1,182	7	0	1,625	9,599	1,126	0	(1,687)	8,684	6,689	13,004
2032	0	478	1,182	7	0	1,637	9,469	1,088	0	(1,800)	8,730	6,392	14,104
2033	0	494	1,182	8	0	1,650	9,276	1,053	0	(1,919)	8,365	6,055	15,209
2034	0	502	1,182	8	0	1,662	10,205	1,020	0	(2,043)	8,462	6,004	16,313
2035	0	515	1,182	9	0	1,675	10,491	990	0	(2,173)	8,332	6,057	17,426
2036	0	528	1,182	9	0	1,689	10,294	962	0	(2,308)	7,923	6,234	18,540
2037	0	541	1,182	10	0	1,702	10,516	937	0	(2,449)	7,897	6,135	19,655
2038	0	554	1,182	10	0	1,716	10,138	896	0	(2,595)	7,885	5,989	20,770
2039	0	568	1,182	11	0	1,731	10,577	878	0	(2,745)	6,730	4,984	21,884
2040	0	582	1,182	12	0	1,746	10,474	862	0	(2,898)	6,248	4,488	23,000
2041	0	597	1,182	12	0	1,761	10,292	846	0	(3,055)	6,050	4,294	24,114
2042	0	612	1,182	13	0	1,776	10,304	830	0	(3,217)	6,067	4,274	25,228
2043	0	627	1,182	13	0	1,792	0	0	0	0	0	0	26,342
2044	0	0	0	0	0	0	0	0	0	0	0	0	27,456
2045	0	0	0	0	0	0	0	0	0	0	0	0	28,570
2046	0	0	0	0	0	0	0	0	0	0	0	0	29,684
2047	0	0	0	0	0	0	0	0	0	0	0	0	30,798
2048	0	0	0	0	0	0	0	0	0	0	0	0	31,912
2049	0	0	0	0	0	0	0	0	0	0	0	0	33,026
2050	0	0	0	0	0	0	0	0	0	0	0	0	34,140
2051	0	0	0	0	0	0	0	0	0	0	0	0	35,254
2052	0	0	0	0	0	0	0	0	0	0	0	0	36,368
2053	0	0	0	0	0	0	0	0	0	0	0	0	37,482
2054	0	0	0	0	0	0	0	0	0	0	0	0	38,596
2055	0	0	0	0	0	0	0	0	0	0	0	0	39,710
2056	0	0	0	0	0	0	0	0	0	0	0	0	40,824
2057	0	0	0	0	0	0	0	0	0	0	0	0	41,938
2058	0	0	0	0	0	0	0	0	0	0	0	0	43,052
2059	0	0	0	0	0	0	0	0	0	0	0	0	44,166
2060	0	0	0	0	0	0	0	0	0	0	0	0	45,280
2061	0	0	0	0	0	0	0	0	0	0	0	0	46,394
2062	0	0	0	0	0	0	0	0	0	0	0	0	47,508
2063	0	0	0	0	0	0	0	0	0	0	0	0	48,622
2064	0	0	0	0	0	0	0	0	0	0	0	0	49,736
2065	0	0	0	0	0	0	0	0	0	0	0	0	50,850
2066	0	0	0	0	0	0	0	0	0	0	0	0	51,964
2067	0	0	0	0	0	0	0	0	0	0	0	0	53,078
2068	0	0	0	0	0	0	0	0	0	0	0	0	54,192
2069	0	0	0	0	0	0	0	0	0	0	0	0	55,306
2070	0	0	0	0	0	0	0	0	0	0	0	0	56,420
2071	0	0	0	0	0	0	0	0	0	0	0	0	57,534
2072	0	0	0	0	0	0	0	0	0	0	0	0	58,648
2073	0	0	0	0	0	0	0	0	0	0	0	0	59,762
2074	0	0	0	0	0	0	0	0	0	0	0	0	60,876
2075	0	0	0	0	0	0	0	0	0	0	0	0	61,990
2076	0	0	0	0	0	0	0	0	0	0	0	0	63,104
2077	0	0	0	0	0	0	0	0	0	0	0	0	64,218
2078	0	0	0	0	0	0	0	0	0	0	0	0	65,332
2079	0	0	0	0	0	0	0	0	0	0	0	0	66,446
2080	0	0	0	0	0	0	0	0	0	0	0	0	67,560
2081	0	0	0	0	0	0	0	0	0	0	0	0	68,674
2082	0	0	0	0	0	0	0	0	0	0	0	0	69,788
2083	0	0	0	0	0	0	0	0	0	0	0	0	70,902
2084	0	0	0	0	0	0	0	0	0	0	0	0	72,016
2085	0	0	0	0	0	0	0	0	0	0	0	0	73,130
2086	0	0	0	0	0	0	0	0	0	0	0	0	74,244
2087	0	0	0	0	0	0	0	0	0	0	0	0	75,358
2088	0	0	0	0	0	0	0	0	0	0	0	0	76,472
2089	0	0	0	0	0	0	0	0	0	0	0	0	77,586
2090	0	0	0	0	0	0	0	0	0	0	0	0	78,700
2091	0	0	0	0	0	0	0	0	0	0	0	0	79,814
2092	0	0	0	0	0	0	0	0	0	0	0	0	80,928
2093	0	0	0	0	0	0	0	0	0	0	0	0	82,042
2094	0	0	0	0	0	0	0	0	0	0	0	0	83,156
2095	0	0	0	0	0	0	0	0	0	0	0	0	84,270
2096	0	0	0	0	0	0	0	0	0	0	0	0	85,384
2097	0	0	0	0	0	0	0	0	0	0	0	0	86,498
2098	0	0	0	0	0	0	0	0	0	0	0	0	87,612
2099	0	0	0	0	0	0	0	0	0	0	0	0	88,726
2100	0	0	0	0	0	0	0	0	0	0	0	0	89,840
NOM	0	19,291	33,981	212	0	53,484	246,929	35,657	0	(62,966)	220,590	167,035	
NPV	0	6,966	8,363	49	0	14,648	44,876	9,206	0	(7,649)	44,794	32,285	

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

8.89 %  
 3.23

**COMMERCIAL / INDUSTRIAL DEMAND REDUCTION**

INPUT DATA - PART 1 CONTINUED  
PROGRAM/METHOD SELECTOR: ENY\_NRG  
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 .....	1.79738
(5) K FACTOR FOR T & D .....	1.62254

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECORDING COST PER CUSTOMER .....	*** \$/CUST
(2) UTILITY RECORDING 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 .....	2.80 %
^ (11) UTILITY AFUDC RATE .....	2.40 %
* (12) UTILITY NON RECORDING REBATE INCENTIVE .....	*** \$/CUST
* (13) UTILITY RECORDING 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 .....	2010
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2012-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	725.99 \$/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 .....	97.06 \$/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 \$/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	3.70 %**
(15) GENERATOR CAPACITY FACTOR .....	84 % (in-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	\$ 23 CENTS PER KW-HR** (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&D
(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 SHEDDING PROGRAM. VALUE SHOWN IN ITEM (4) IS ANNUAL KWH/COST SHEDD AWAY FROM PEAK HRS. VALUE SHOWN IN ITEM (7) IS ANNUAL KWH/COST THAT IS PAID BACK DURING OFF-PEAK.





**CALCULATION OF GENX-FACTOR**  
**PROGRAM/EMERGENCY SELECTED REV REQ**  
**PROGRAM/NAME: Commercial/Industrial Demand Reduction**

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	REG-YEAR RATEBASE (\$000)	DEBT (\$000)	PREFERRED STOCK (\$000)	COMMON EQUITY (\$000)	INCOME TAXES (\$000)	PROPERTY TAX (\$000)	PROPERTY INSURANCE (\$000)	DEPRECIATION (\$000)	DEPRECIATION TAXES (\$000)	TOTAL FIXED CHARGES (\$000)	PRESENT WORTH FIXED CHARGES (\$000)	CUMULATIVE PW FIXED CHARGES (\$000)	REPLACEMENT COSTS FOR PROPERTY INSURANCE (\$000)
2019	170,978	5,311	0	11,922	7,871	2,881	1,017	6,670	13	35,696	35,696	35,696	166,797
2020	164,295	5,104	0	11,466	5,409	2,762	1,043	6,670	2,193	34,635	31,806	67,504	170,915
2021	155,443	4,829	0	10,848	5,360	2,641	1,049	6,670	1,844	33,260	28,692	95,537	173,188
2022	146,929	4,594	0	10,254	5,298	2,521	1,095	6,670	1,533	31,915	24,737	120,393	179,568
2023	138,727	4,369	0	9,681	5,230	2,401	1,123	6,670	1,241	30,685	21,908	142,101	184,257
2024	130,816	4,164	0	9,129	5,151	2,281	1,151	6,670	973	29,419	19,220	161,381	188,639
2025	123,173	3,926	0	8,596	5,065	2,161	1,180	6,670	725	28,222	16,933	178,254	193,375
2026	115,778	3,697	0	8,080	4,969	2,041	1,209	6,670	496	27,062	14,912	193,165	198,210
2027	108,613	3,574	0	7,580	4,870	1,921	1,239	6,670	458	25,935	13,124	206,390	203,165
2028	101,685	3,153	0	7,082	4,781	1,801	1,270	6,670	458	24,815	11,573	217,822	208,244
2029	94,937	2,931	0	6,585	4,688	1,681	1,302	6,670	458	23,695	10,114	227,936	213,430
2030	87,229	2,710	0	6,088	4,588	1,561	1,333	6,670	458	22,576	8,850	236,785	218,786
2031	80,102	2,488	0	5,590	4,483	1,441	1,363	6,670	458	21,458	7,725	244,510	224,256
2032	72,974	2,267	0	5,093	4,372	1,321	1,402	6,670	458	20,341	6,725	251,235	229,862
2033	65,846	2,045	0	4,595	4,259	1,201	1,437	6,670	458	19,225	5,837	257,073	235,610
2034	58,718	1,824	0	4,098	4,147	1,081	1,473	6,670	458	18,110	5,038	262,123	241,499
2035	51,590	1,603	0	3,600	4,034	961	1,510	6,670	458	16,995	4,322	266,475	247,337
2036	44,462	1,381	0	3,103	3,922	841	1,548	6,670	458	15,882	3,785	270,210	253,225
2037	37,335	1,160	0	2,606	3,809	721	1,586	6,670	458	14,769	3,190	273,490	260,068
2038	30,207	938	0	2,108	3,697	601	1,625	6,670	458	13,657	2,769	276,189	266,970
2039	23,079	717	0	1,611	3,584	481	1,667	6,670	(937)	12,547	2,286	278,395	273,294
2040	17,347	520	0	1,111	3,474	360	1,708	6,670	(2,333)	11,439	1,947	280,342	280,065
2041	13,009	404	0	908	3,364	240	1,751	6,670	(2,333)	10,334	1,680	282,022	287,067
2042	8,672	269	0	605	3,104	120	1,795	6,670	(2,333)	9,230	1,444	283,466	294,283
2043	4,335	135	0	303	2,974	0	1,840	6,670	(2,333)	8,128	1,225	284,701	301,239

IN SERVICE COST (\$000)	166,797
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
EMERGENCY TAX RATE	38.57%
DISCOUNT RATE	8.5%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.61%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	40%	7.03%
P/S	0%	0.00%
C/S	50%	12.50%

K-FACTOR = CFWFC / IN-SVC COST = 1.78728

DEFERRED TAX AND MID-YEAR RATE-BASE CALCULATION  
 PROGRAM(METHOD) SELECTED: REV\_REQ  
 PROGRAMNAME: 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 LADDE	(10)*(11) TAXRATE \$(000)	SALVAGE TAXCRANE \$(000)	ANNUAL DEFERRED TAX (7)-(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	13	(4,207)	
2020	7.22%	11,706	17,786	6,670	13,349	6,047	12,095	2,183	15,564	0	0	2,183	(2,036)	
2021	6.88%	10,827	28,613	6,670	20,019	6,047	18,342	1,944	15,564	0	0	1,944	(192)	
2022	6.18%	10,021	38,634	6,670	26,679	6,047	24,189	1,535	15,564	0	0	1,535	1,341	
2023	5.71%	9,264	47,898	6,670	33,349	6,047	30,237	1,261	15,564	0	0	1,261	2,582	
2024	5.25%	8,578	56,486	6,670	40,019	6,047	36,284	973	15,564	0	0	973	3,555	
2025	4.87%	7,926	64,394	6,670	46,689	6,047	42,331	725	15,564	0	0	725	4,279	
2026	4.52%	7,320	71,726	6,670	53,359	6,047	48,378	496	15,564	0	0	496	4,775	
2027	4.26%	6,753	78,562	6,670	60,029	6,047	54,425	438	15,564	0	0	438	5,233	
2028	4.06%	6,224	84,195	6,670	66,699	6,047	60,473	438	15,564	0	0	438	5,671	
2029	4.06%	6,225	90,430	6,670	73,369	6,047	66,520	438	15,564	0	0	438	6,109	
2030	4.06%	6,224	96,664	6,670	80,038	6,047	72,568	438	15,564	0	0	438	6,547	
2031	4.06%	6,225	102,899	6,670	86,708	6,047	78,615	438	15,564	0	0	438	7,005	
2032	4.06%	6,224	109,133	6,670	93,378	6,047	84,662	438	15,564	0	0	438	7,453	
2033	4.06%	6,225	122,368	6,670	100,048	6,047	90,710	438	15,564	0	0	438	7,911	
2034	4.06%	6,224	128,602	6,670	106,718	6,047	96,757	438	15,564	0	0	438	8,368	
2035	4.06%	6,225	134,837	6,670	113,388	6,047	102,804	438	15,564	0	0	438	8,827	
2036	4.06%	6,224	141,071	6,670	120,058	6,047	108,852	438	15,564	0	0	438	9,284	
2037	4.06%	6,225	151,306	6,670	126,728	6,047	114,899	438	15,564	0	0	438	9,813	
2038	4.06%	6,224	158,539	6,670	133,397	6,047	120,946	438	15,564	0	0	438	10,270	
2039	2.23%	3,618	162,157	6,670	140,067	6,047	126,993	(937)	15,564	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	(2,333)	7,000	
2041	0.00%	0	162,157	6,670	153,407	6,047	139,088	(2,333)	15,564	0	0	(2,333)	4,667	
2042	0.00%	0	162,157	6,670	159,977	6,047	145,135	(2,333)	15,564	0	0	(2,333)	2,333	
2043	0.00%	0	162,157	6,670	166,747	6,047	151,183	(2,333)	15,564	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 - USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/METHOD SELECTED: REV\_KBO  
 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)	(5)* ACCUMULATED DEPRECIATION \$(000)	(5)** 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%	6,061	13	184,077	6,670	(4,219)	178,978	164,285	167,637
2020	7.22%	11,706	2,180	183,447	13,340	(2,016)	164,285	155,440	159,869
2021	6.69%	10,827	1,944	146,737	20,610	(192)	155,443	146,929	151,186
2022	6.18%	10,021	1,733	140,967	26,679	1,341	146,929	138,727	142,828
2023	5.70%	9,264	1,541	133,297	33,349	2,582	138,727	130,816	134,771
2024	5.29%	8,570	973	126,728	40,619	3,455	130,816	123,173	126,994
2025	4.89%	7,926	725	120,658	46,689	4,229	123,173	115,778	119,476
2026	4.52%	7,333	496	113,388	53,359	4,775	115,778	108,613	112,194
2027	4.16%	7,235	458	106,018	60,629	5,220	108,613	101,485	105,040
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	6,140	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%	3,613	(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	153,447	4,667	13,009	8,672	10,841
2042	0.00%	0	(2,333)	6,670	160,077	2,335	8,672	4,335	5,354
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 (\$K/W)	(7) CUMULATIVE AVERAGE SPENDING (\$K/W)
2009	-10	3.00%	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%	1.34	0.62
2014	-5	3.00%	1.159	1.90%	15.39	5.34
2015	-4	3.00%	1.194	4.57%	39.61	37.83
2016	-3	3.00%	1.230	37.39%	331.87	222.77
2017	-2	3.00%	1.267	45.78%	420.27	398.84
2018	-1	3.00%	1.305	18.44%	94.79	358.38

100.00% 507.77

YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) CUMULATIVE SPENDING WITH AFUDC (\$K/W)	(3a)* DEBT AFUDC (\$K/W)	(3b)* CUMULATIVE DEBT AFUDC (\$K/W)	(4) YEARLY TOTAL AFUDC (\$K/W)	(4a)* TOTAL AFUDC (\$K/W)	(4b)* CONSTRUCTION PERIOD INTEREST (\$K/W)	(4c)* CUMULATIVE CFI (\$K/W)	(4d)* DEFERRED TAXES (\$K/W)	(4e)* CUMULATIVE TAXES (\$K/W)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$K/W)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$K/W)
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	0.02	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	0.63	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	3.56	19.29	23.36	15.90	19.25	(2.41)	(4.13)	351.16	412.06
2017	-2	622.20	19.46	28.01	51.10	76.45	43.47	62.72	(9.26)	(13.39)	473.37	885.43
2018	-1	594.83	29.46	57.47	80.29	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	725,389,801.5
AFUDC RATE	8.48%

	BOOK BASIS	BOOK BASIS FOR DEBT TAX	TAX BASIS
CONSTRUCTION CASE	142,182	142,182	142,182
EQUITY AFUDC	15,564		
DEBT AFUDC	9,061	9,061	
CFI			19,970
TOTAL	166,747	151,183	162,152

\* Column not specified in workbook

















**BUSINESS MOTORS**

INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: NEW\_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 .....	2.66 %
(4) GENERATOR KVA REDUCTION PER CUSTOMER .....	1.39341 KVA
(5) KVA LINE LOSS PERCENTAGE .....	6.90 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KVA INCREASE AT METER .....	0.00 KVA

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 .....	1.7738
(5) K FACTOR FOR T & D .....	1.6324

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING 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 .....	2.89 %
(11) UTILITY AFD/CRAZE .....	5.48 %
(12) UTILITY NONRECURRING 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 .....	725.89 \$/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 .....	3.80 %**
(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 .....	0.06 CENTS/KVA
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	0% ** (Re-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	2.21 CENTS PER KW-HR** (Re-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/KVA
(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 KEY\_REQ)  
 PROGRAMNAME: Business Motors

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	REG-YEAR RATEBASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPRECI- TATION \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASE FOR PROPERTY INSURANCE \$(000)
2019	892	28	0	82	41	15	5	35	0	186	156	156	879
2020	858	27	0	80	38	14	5	35	11	181	156	312	892
2021	811	25	0	57	38	14	6	35	10	174	146	459	914
2022	767	24	0	54	28	13	6	35	8	167	129	628	937
2023	724	23	0	51	27	13	6	35	6	160	114	782	961
2024	683	21	0	48	27	12	6	35	5	154	100	943	985
2025	643	20	0	45	26	11	6	35	4	147	88	1,069	1,009
2026	604	19	0	42	26	11	6	35	3	141	78	1,208	1,035
2027	567	18	0	40	24	10	6	35	2	135	69	1,377	1,060
2028	530	16	0	37	23	9	7	35	2	129	60	1,577	1,087
2029	492	15	0	34	21	9	7	35	2	124	53	1,814	1,114
2030	455	14	0	32	20	8	7	35	2	118	46	2,086	1,142
2031	418	13	0	29	18	8	7	35	2	112	40	2,396	1,170
2032	381	12	0	27	16	7	7	35	2	106	35	2,741	1,200
2033	344	11	0	24	15	6	8	35	2	100	30	3,121	1,230
2034	306	10	0	21	13	6	8	35	2	95	26	3,546	1,260
2035	269	9	0	19	11	5	8	35	2	89	23	4,016	1,292
2036	232	7	0	16	10	4	8	35	2	83	19	4,531	1,324
2037	195	6	0	14	8	4	8	35	2	77	17	5,091	1,357
2038	158	5	0	11	7	3	8	35	1	71	14	5,696	1,391
2039	120	4	0	8	5	3	9	35	(5)	65	12	6,346	1,426
2040	81	3	0	6	3	2	9	35	(12)	61	10	7,041	1,462
2041	48	2	0	5	2	1	9	35	(20)	57	9	7,781	1,498
2042	15	1	0	3	1	1	9	35	(27)	53	8	8,576	1,536
2043	2	1	0	2	1	0	10	35	(34)	50	6	9,426	1,574

IN SERVICE COST (\$000)	879
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	25
DEPRECIATION RATE	38.57%
DISCOUNT RATE	8.5%
PROPERTY TAX	1.80%
PROPERTY INSURANCE	0.613%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	44%	7.03%
CFE	56%	12.50%

K-FACTOR = GPWFC / IN-SVC COST = 1.7738

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: KEY\_REQ  
 PROGRAM NAME: Boston 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 LLIFE	(10)*(11) TAXRATE \$(000)	SALVAGE TAXRATE \$(000)	ANNUAL DEFERRED TAX (7)-(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	16	81	0	0	0	16	(5)
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	19
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	4.18%	35	412	35	313	32	284	2	81	0	0	0	2	27
2028	4.48%	38	450	35	348	32	315	2	81	0	0	0	2	30
2029	4.48%	38	488	35	383	32	347	2	81	0	0	0	2	32
2030	4.48%	38	525	35	418	32	379	2	81	0	0	0	2	34
2031	4.48%	38	563	35	453	32	410	2	81	0	0	0	2	37
2032	4.48%	38	601	35	487	32	442	2	81	0	0	0	2	39
2033	4.48%	38	639	35	522	32	473	2	81	0	0	0	2	42
2034	4.48%	38	678	35	557	32	505	2	81	0	0	0	2	44
2035	4.48%	38	714	35	592	32	537	2	81	0	0	0	2	46
2036	4.48%	38	752	35	627	32	568	2	81	0	0	0	2	49
2037	4.48%	38	790	35	662	32	599	2	81	0	0	0	2	51
2038	4.48%	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	725	(23)	81	0	0	0	(13)	24
2042	0.00%	0	846	35	834	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)	(12)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	81
BOOK DEPR. RATE - USEFUL LIFE	4.00%



DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM/MSLREQ SUBJECT: REV\_REQ  
 PROGRAM NAME: Business Motors

(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	3.73%	32	0	835	35	(22)	892	898	875
2020	7.22%	61	11	801	70	(11)	858	811	834
2021	6.68%	57	10	765	184	(1)	811	767	789
2022	6.18%	52	8	731	139	7	767	724	745
2023	5.71%	48	5	696	174	13	724	683	703
2024	5.28%	45	5	661	209	19	683	645	663
2025	4.87%	41	4	627	244	22	645	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	138
2039	2.23%	19	(5)	139	731	49	120	91	105
2040	0.00%	0	(12)	104	765	37	91	68	79
2041	0.00%	0	(12)	70	801	24	68	45	57
2042	0.00%	0	(12)	35	835	12	45	25	34
2043	0.00%	0	(12)	(5)	870	0	25	0	11

\* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT RESCALATION RATE	(4) CUMULATIVE RESCALATION FACTOR	(5) YEARLY EXPENDITURE (C)	(6) ANNUAL SPENDING (B*W)	(7) CUMULATIVE AVERAGE SPENDING (B*W)
2009	-10	3.00%	1.000	0.00%	0.00	0.00
2010	-9	3.00%	1.004	0.00%	0.00	0.00
2011	-8	3.00%	1.007	0.00%	0.00	0.00
2012	-7	3.00%	1.013	0.00%	0.00	0.00
2013	-6	3.00%	1.020	0.19%	1.24	0.20
2014	-5	3.00%	1.029	1.98%	15.99	3.24
2015	-4	3.00%	1.039	4.57%	39.61	37.03
2016	-3	3.00%	1.050	37.20%	331.87	222.77
2017	-2	3.00%	1.062	45.74%	400.27	358.84
2018	-1	3.00%	1.075	10.44%	58.79	858.38

YEAR	NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (B*W)	(9A) DEBT AFUDC (B*W)	(9B) CUMULATIVE DEBT AFUDC (B*W)	(7) YEARLY TOTAL AFUDC (B*W)	(9C) CUMULATIVE TOTAL AFUDC (B*W)	(10) CONSTRUCTION INTEREST (B*W)	(9D) CUMULATIVE CPI (B*W)	(9E) DEFERRED TAXES (B*W)	(9F) CUMULATIVE DEFERRED TAXES (B*W)	(11)	(12)
											INCREMENTAL YEAR-END BOOK VALUE (B*W)	CUMULATIVE YEAR-END BOOK VALUE (B*W)
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	0.02	0.02	0.02	0.05	0.05	0.04	0.04	(0.01)	(0.01)	1.29	1.29
2014	-5	3.29	0.29	0.30	0.79	0.94	0.65	0.78	(0.34)	(0.15)	16.78	18.07
2015	-4	37.87	1.18	1.69	3.22	4.04	2.65	3.35	(0.77)	(0.72)	42.83	60.90
2016	-3	226.84	7.97	8.56	19.29	93.36	15.90	19.25	(3.41)	(4.13)	351.16	412.06
2017	-2	622.26	19.46	28.01	53.10	76.45	43.47	62.73	(9.06)	(13.39)	473.37	885.43
2018	-1	594.83	29.46	57.47	80.39	156.84	64.78	127.50	(13.63)	(27.02)	179.18	1,064.61

	39.49	156.84	127.50	(27.02)	1,064.61
IN SERVICE YEAR	2019				
PLANT COSTS	725,388,805				
AFUDC RATE	3.68%				
		BOOK BASIS	BOOK BASIS FOR THE TAX	TAC BASIS	
CONSTRUCTION CASH		742	742	742	
EQUITY AFUDC		81			
DEBT AFUDC		47	47		
CPI				194	
TOTAL		870	789	936	

\* Column not specified in workbook











**PARTICIPANT COSTS AND BENEFITS**  
**PROGRAM/METHOD SELECTED: REV\_1BQ**  
**PROGRAMNAME: Business Motors**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
YEAR	SAVINGS IN PARTICIPANT 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	22	0	5	0	27	84	0	0	84	(57)	(48)
2012	70	0	5	0	75	90	0	0	90	(15)	(63)
2013	126	0	6	0	131	96	0	0	96	35	(28)
2014	192	0	6	0	197	102	0	0	102	95	28
2015	265	0	6	0	271	106	0	0	106	163	121
2016	340	0	6	0	346	110	0	0	110	254	254
2017	429	0	6	0	435	118	0	0	118	317	416
2018	514	0	6	0	522	122	0	0	122	400	622
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	1,483
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	2,055
2026	738	0	5	0	743	121	0	0	121	621	2,282
2027	784	0	5	0	789	130	0	0	130	639	2,544
2028	820	0	6	0	826	139	0	0	139	637	2,480
2029	864	0	6	0	869	148	0	0	148	722	2,632
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	3,736
2039	1,517	0	0	0	1,517	0	0	0	0	1,517	3,824
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	1,686	4,184
2043	1,894	0	6	0	1,900	201	0	0	201	1,694	4,278
2044	0	0	0	0	0	0	0	0	0	0	0
2045	0	0	0	0	0	0	0	0	0	0	0
2046	0	0	0	0	0	0	0	0	0	0	0
2047	0	0	0	0	0	0	0	0	0	0	0
2048	0	0	0	0	0	0	0	0	0	0	0
2049	0	0	0	0	0	0	0	0	0	0	0
2050	0	0	0	0	0	0	0	0	0	0	0
2051	0	0	0	0	0	0	0	0	0	0	0
2052	0	0	0	0	0	0	0	0	0	0	0
2053	0	0	0	0	0	0	0	0	0	0	0
2054	0	0	0	0	0	0	0	0	0	0	0
2055	0	0	0	0	0	0	0	0	0	0	0
2056	0	0	0	0	0	0	0	0	0	0	0
2057	0	0	0	0	0	0	0	0	0	0	0
2058	0	0	0	0	0	0	0	0	0	0	0
2059	0	0	0	0	0	0	0	0	0	0	0
2060	0	0	0	0	0	0	0	0	0	0	0
2061	0	0	0	0	0	0	0	0	0	0	0
2062	0	0	0	0	0	0	0	0	0	0	0
2063	0	0	0	0	0	0	0	0	0	0	0
2064	0	0	0	0	0	0	0	0	0	0	0
2065	0	0	0	0	0	0	0	0	0	0	0
2066	0	0	0	0	0	0	0	0	0	0	0
2067	0	0	0	0	0	0	0	0	0	0	0
2068	0	0	0	0	0	0	0	0	0	0	0
2069	0	0	0	0	0	0	0	0	0	0	0
2070	0	0	0	0	0	0	0	0	0	0	0
2071	0	0	0	0	0	0	0	0	0	0	0
2072	0	0	0	0	0	0	0	0	0	0	0
2073	0	0	0	0	0	0	0	0	0	0	0
2074	0	0	0	0	0	0	0	0	0	0	0
2075	0	0	0	0	0	0	0	0	0	0	0
2076	0	0	0	0	0	0	0	0	0	0	0
2077	0	0	0	0	0	0	0	0	0	0	0
2078	0	0	0	0	0	0	0	0	0	0	0
2079	0	0	0	0	0	0	0	0	0	0	0
2080	0	0	0	0	0	0	0	0	0	0	0
2081	0	0	0	0	0	0	0	0	0	0	0
2082	0	0	0	0	0	0	0	0	0	0	0
2083	0	0	0	0	0	0	0	0	0	0	0
2084	0	0	0	0	0	0	0	0	0	0	0
2085	0	0	0	0	0	0	0	0	0	0	0
2086	0	0	0	0	0	0	0	0	0	0	0
2087	0	0	0	0	0	0	0	0	0	0	0
2088	0	0	0	0	0	0	0	0	0	0	0
2089	0	0	0	0	0	0	0	0	0	0	0
2090	0	0	0	0	0	0	0	0	0	0	0
2091	0	0	0	0	0	0	0	0	0	0	0
2092	0	0	0	0	0	0	0	0	0	0	0
2093	0	0	0	0	0	0	0	0	0	0	0
2094	0	0	0	0	0	0	0	0	0	0	0
2095	0	0	0	0	0	0	0	0	0	0	0
2096	0	0	0	0	0	0	0	0	0	0	0
2097	0	0	0	0	0	0	0	0	0	0	0
2098	0	0	0	0	0	0	0	0	0	0	0
2099	0	0	0	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0	0	0	0
MOB4	28,532	0	108	0	28,639	2,625	0	0	2,625	26,034	
TRV	5,002	0	38	0	5,040	782	0	0	782	4,278	

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

2019  
 3.89 %  
 4.61



