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March 16, 2015

**-VIA ELECTRONIC FILING-**

Carlotta Stauffer, Director  
Division of Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Blvd.  
Tallahassee, FL 32399-0850

**Re: Docket No. \_\_\_\_\_; Petition for Approval of Florida Power & Light Company's Demand-Side Management Plan**

Dear Ms. Stauffer:

Please find enclosed for filing the Petition for Approval of Florida Power & Light Company's ("FPL's") Demand-Side Management ("DSM") Plan, including Attachment 1 (FPL's proposed DSM Plan with Appendix A and Appendix B) and Attachment 2 (tariff sheets proposed for cancellation in both legislative and final format).

Consistent with direction received from FPSC staff, FPL will also be submitting 5 hard copies and 3 compact discs containing FPL's filing in electronic format.

If there are any questions regarding this filing, please contact me at 561-304-5226.

Sincerely,

*s/ Jessica A. Cano*  
\_\_\_\_\_  
Jessica A. Cano  
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Enclosures  
cc: Theresa Tan, Esq., Division of Legal Services  
Florida Power & Light Company

700 Universe Boulevard, Juno Beach, FL 33408

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

In re: Petition for Approval of \_\_\_\_\_ )  
Florida Power & Light Company's \_\_\_\_\_ )  
Demand-Side Management Plan \_\_\_\_\_ )

Docket No. \_\_\_\_\_

Filed: March 16, 2015

**PETITION FOR APPROVAL OF FLORIDA POWER & LIGHT COMPANY'S  
DEMAND-SIDE MANAGEMENT PLAN AND  
REQUEST TO CANCEL CLOSED ON CALL TARIFF SHEETS**

Florida Power & Light Company ("FPL" or "the Company"), pursuant to Section 366.82, Florida Statutes; Rules 25-9.001(3), 25-17.0021, and 28-106.201, Florida Administrative Code; and Order No. PSC-14-0696-FOF-EU (issued Dec. 16, 2014), petitions the Florida Public Service Commission ("Commission") to approve FPL's Demand-Side Management ("DSM") Plan ("DSM Plan" or "Plan") filed herewith, including the cancellation of the closed On Call tariff sheets and consolidation of customers into the open Residential Load Control tariff, and to authorize FPL to recover through the Energy Conservation Cost Recovery ("ECCR") clause the reasonable and prudent expenditures associated with the implementation of this DSM Plan. In support of this petition FPL states as follows:

1. FPL is a corporation with headquarters at 700 Universe Boulevard, Juno Beach, Florida 33408. FPL is an investor-owned utility operating under the jurisdiction of this Commission pursuant to the provisions of Chapter 366, Florida Statutes. Any pleading, motion, notice, order or other document required to be served upon FPL or filed by any party to this proceeding should be served upon the following individuals:

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2. This Petition is being filed consistent with Rule 28-106.201, Fla. Admin. Code. The agency affected is the Florida Public Service Commission, located at 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399. This case does not involve reversal or modification of an agency decision or an agency's proposed action. Therefore, subparagraph (c) and portions of subparagraphs (e), (f) and (g) of Rule 28-106.201(2) are not applicable to this Petition. In compliance with subparagraph (d), FPL states that it is not known which, if any, of the issues of material fact set forth in the body of this Petition, or the DSM Plan and attachments filed herewith, may be disputed by others.

3. FPL is subject to the Florida Energy Efficiency and Conservation Act ("FEECA"), Sections 366.80-366.85 and 403.519, Florida Statutes. Pursuant to FEECA and the Commission rules implementing FEECA, FPL is required to file a DSM Plan for Commission approval to meet the new DSM Goals established for FPL by Order No. PSC-14-0696-FOF-EU. *See* §366.82(7), Fla. Stat. (2014); Rule 25-17.0021(4), Fla. Admin. Code. FPL also is entitled to seek recovery of associated expenditures through the ECCR clause. *See* §366.82(11), Fla. Stat. (2014); Rule 25-17.015, Fla. Admin. Code. FPL has a substantial interest in whether the Commission approves its DSM Plan and authorizes cost recovery for Plan implementation expenditures and customer incentives.

## **FPL's Proposed DSM Plan**

4. FPL's proposed DSM Plan consists of six residential programs (including one specifically targeted at low income residential customers), seven business programs, a Conservation Research and Development ("CRD") program for evaluating new technologies, a Cogeneration and Small Power Production program, and seven Solar Pilots that expire at the end of 2015.<sup>1</sup> FPL's low income program, while itself not cost-effective, will enhance low income customer awareness of and access to (i) energy efficiency education, (ii) low-cost and quick-payback measures, and (iii) other DSM programs that are cost-effective, consistent with the direction provided by the Commission in Order No. PSC-14-0696-FOF-EU.

5. FPL's proposed DSM Plan is included as Attachment 1, which is incorporated herein by reference. The subparts of Rule 25-17.0021(4), Fla. Admin. Code, setting forth the required information for each proposed program, are satisfied therein. FPL's DSM Plan includes Appendix A, which shows the individual program cost-effectiveness screening test results, using the Commission's approved cost-effectiveness methodology. FPL's DSM Plan also includes Appendix B, which shows the specific changes to FPL's existing DSM programs that are reflected in its proposed Plan. The development of FPL's proposed Plan relied upon the same cost-effectiveness-related inputs and assumptions that were utilized and accepted by the Commission in FPL's recent DSM Goals docket (Docket No. 130199-EI). The resulting Plan reflects related impacts to the number of measures and levels of rebates that can be offered cost-effectively at this time.

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<sup>1</sup> FPL's Solar Pilots were approved by Order No. PSC-11-0079-PAA-EG. None of the Solar Pilots is currently cost-effective. Pursuant to stipulation approved by Order No. PSC-14-0632-FOF-EG, these pilots will expire at the end of 2015. FPL is not proposing any changes to its Solar Pilots and does not intend to seek any changes to the pilots' Program Standards previously approved by Commission Staff.

## **Cancellation of FPL's Closed Residential On Call Tariff Sheets**

6. For almost three decades, FPL's DSM Plan has included some form of residential load management. Within FPL's current Residential Load Management DSM program there are customers participating under two different tariffs: the "Residential On Call" tariff ("On Call Tariff") which has been closed to new participants since 2003, and the "Residential Load Control" tariff ("Load Control Tariff"), which was approved as a pilot in 2003 and as a permanent program in 2007. Both the On Call Tariff and the Load Control Tariff provide residential customers who volunteer to participate in the program a monthly bill credit in exchange for permitting FPL to interrupt the power to certain appliances (i.e., central electric air conditioning, electric space heating, electric water heaters, and swimming pool pumps.) Credits vary depending upon the type and control cycle of appliances selected by the customer. The only difference between the closed and open tariffs is the bill credit amount for two of the appliance control options: central electric air conditioning cycling and electric water heating. These load management tariffs enable the Company to reduce demand at times of system emergencies, allowing the Company to defer or avoid capacity additions that would otherwise be needed.

7. As a result of normal program attrition, participation in the closed On Call Tariff has been declining since its closure. Today, only about 30% of the total participants in the overall Residential Load Management program remain on the closed On Call Tariff. As part of this DSM Plan, FPL is proposing to transfer the remaining customers participating under the closed On Call Tariff to the open Load Control Tariff and cancel all tariff sheets associated with the closed On Call Tariff. Specifically, FPL requests cancellation of FPL's Third Revised Tariff Sheet No. 8.207, Fourth Revised Tariff Sheet No. 8.208, and Second Revised Tariff Sheet No.

8.209. Those tariff sheets, in both legislative and proposed final format, are attached to this petition as Attachment 2. Customers transferred from the closed to the open tariff would be notified after issuance of the consummating order in this docket, and would begin seeing the new bill credits consistent with the currently-approved Load Control Tariff thereafter, consistent with each customer's billing cycle.<sup>2</sup>

8. After cancellation of the closed On Call Tariff sheets and transfer of remaining customers to the Load Control Tariff, all participating residential customers will receive the same bill credits for the same type of participation. This addresses a price disparity that currently exists between the two groups of participating customers, who provide identical benefits to the general body of customers. As demonstrated in Attachment A to the DSM Plan, the open tariff (that will continue for all participants) is highly beneficial from a participant's perspective.<sup>3</sup> Moreover, this consolidation will lower both administrative and incentive ECCR costs to the general body of customers, while maintaining more than sufficient program participation for FPL to meet its new DSM Goals.

### **Conclusion**

9. FPL's DSM Plan is designed to achieve the annual DSM Goals established by the Commission in Order No. PSC-14-0696-FOF-EU. FPL's DSM Plan will reduce the growth rate of weather-sensitive peak demand, reduce and control the growth rate of energy consumption, increase the conservation of expensive resources, and increase the efficiency of the electrical system, as demonstrated by the data included in Attachment 1. Additionally, FPL's DSM Plan

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<sup>2</sup> Regardless of the fact that the program remains cost-effective for participants, customers who are transferred from the closed On Call Tariff to the open Load Control Tariff would be free to terminate their participation in the program at any time with seven days' notice (including prior to the transfer), consistent with the current tariffs.

<sup>3</sup> Consistent with Attachment A, the program will continue to be referred to as the "Residential Load Management (On Call) Program."

can be reasonably monitored. FPL's monitoring efforts for each of its DSM programs and research projects are set forth in the program summaries in FPL's DSM Plan. For all the foregoing reasons, FPL's DSM Plan, including the transfer of customers from the closed to the open Residential Load Control Tariff and cancellation of associated tariff sheets, should be approved.

**WHEREFORE**, FPL respectfully requests that the Commission: (i) approve FPL's DSM Plan, as provided in Attachment 1; (ii) approve the cancellation of FPL's Residential On Call Tariff, the transfer of remaining customers on that tariff to the open Residential Load Control Tariff, and the revised tariff sheets provided in Attachment 2; (iii) authorize FPL to recover reasonable and prudent expenditures associated with the implementation of this DSM Plan through the ECCR clause; and (iv) grant such other relief as may be appropriate.

Respectfully submitted,

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By: s/ Jessica A. Cano  
Jessica A. Cano  
Florida Bar No. 37372

# ATTACHMENT 1



**FLORIDA POWER & LIGHT COMPANY  
2015-2024 DEMAND-SIDE MANAGEMENT PLAN**

**BEFORE THE FLORIDA PUBLIC SERVICE  
COMMISSION**

**MARCH 16, 2015**

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## **INTRODUCTION**

Florida Power & Light Company (“FPL”) has been implementing cost-effective Demand-Side Management (“DSM”) programs since the 1970s. These programs include both load management and energy efficiency initiatives. FPL’s DSM efforts through 2014 have resulted in a cumulative Summer peak reduction of approximately 4,800 Megawatts (“MW”) at the generator and estimated cumulative energy savings of approximately 71,000 Gigawatt Hours (“GWh”) at the generator. Accounting for reserve margin requirements, FPL’s DSM efforts through 2014 have eliminated the need to construct the equivalent of approximately 14 new 400 MW generating units. Over the years, FPL has built one of the largest and most successful DSM programs in the nation and remains committed to continuing to provide a variety of cost-effective DSM programs to FPL’s customers.

Pursuant to Florida Administrative Code (“F.A.C.”) Rule 25-17.0021, FPL is submitting a DSM Plan (“2015 DSM Plan” or “Plan”) designed to meet the annual Summer MW, Winter MW and GWh goals for the Residential and Business sectors established by the Florida Public Service Commission (“PSC” or “Commission”) in Order No. PSC-14-0696-FOF-EU. The Commission established FPL’s DSM goals based on FPL’s full Achievable Potential projection (i.e., not limited by FPL’s actual resource needs) comprised of measures that are cost-effective pursuant to the Rate Impact Measure (“RIM”) and Participant cost-effectiveness screening tests. FPL’s 2015 DSM Plan to meet these goals represents a comprehensive portfolio of 22 DSM programs. It includes six Residential programs, seven Business programs, a Conservation Research and Development (“CRD”) program for evaluating new technologies, a Cogeneration and Small Power Production program, and seven Solar Pilots that expire at the end of 2015 (approved by

Order No. PSC-11-0079-PAA-EG). All these programs are included in FPL's current DSM Plan<sup>1</sup>, but in some cases have been modified as described further in this document. The 2015 DSM Plan offers a wide variety of programs and measures for FPL's customers. It is a comprehensive plan that recognizes the importance of keeping electric rates low for FPL's customers.

The DSM Plan contains three Sections and two Appendices.

- **Section I** – Overview of FPL's DSM Plan summarizing how the Plan seeks to achieve FPL's Goals, the programs and measures, and program cost-effectiveness.
- **Section II** – Detailed description of the DSM Programs.
- **Section III** – Projections for the ten-year Goals period of customers, participation, penetration, and kW and kWh savings at the meter and the generator.
- **Appendix A** – Program-level cost-effectiveness analyses
- **Appendix B** – Comparison of 2015 DSM Plan to the Current Plan

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<sup>1</sup> FPL's current DSM Plan, approved by Order No. PSC-11-0346-PAA-EG (consummated by Order No. PSC-11-0590-FOF-EG), consists of the DSM programs approved by the Commission in 2004 with subsequent modifications approved by the Commission in 2006 and adjustments for (i) 2012 Florida Building Code changes and (ii) 2015 federal equipment manufacturing standards.

## SECTION I – OVERVIEW

### A. Composition of DSM Plan

Table 1 shows the annual Residential and Business Goals for Summer MW, Winter MW and GWh established by Order No. PSC-14-0696-FOF-EU.

**Table 1 – Annual Residential and Business Goals (at the Generator)**

Year	Summer MW			Winter MW			GWh		
	Residential	Business	Total	Residential	Business	Total	Residential	Business	Total
2015	25.3	22.8	48.1	15.6	13.6	29.2	21.6	19.6	41.1
2016	25.6	24.0	49.6	15.8	14.3	30.0	22.2	23.4	45.6
2017	25.9	24.9	50.8	16.0	14.9	30.9	22.8	24.7	47.5
2018	26.2	25.3	51.6	16.2	15.3	31.5	23.5	26.0	49.5
2019	26.5	25.8	52.3	16.4	15.7	32.1	24.2	27.3	51.5
2020	26.9	26.2	53.1	16.7	16.1	32.7	25.0	28.7	53.6
2021	27.3	26.6	53.9	16.9	16.5	33.4	25.7	30.1	55.8
2022	27.6	27.1	54.7	17.2	16.9	34.1	26.5	31.6	58.1
2023	28.0	27.5	55.6	17.5	17.3	34.8	27.4	33.1	60.5
2024	28.5	28.0	56.5	17.8	17.7	35.5	28.3	34.7	62.9
<b>Total</b>	<b>267.8</b>	<b>258.3</b>	<b>526.1</b>	<b>166.0</b>	<b>158.2</b>	<b>324.2</b>	<b>247.2</b>	<b>279.1</b>	<b>526.3</b>

FPL has developed a comprehensive portfolio of DSM programs to achieve the annual Residential and Business DSM Goals. The 2015 DSM Plan’s programs, Solar Pilots and associated measures are shown in Table 2 with detailed descriptions of each provided in Section II. All these programs are included in FPL’s current DSM Plan, but in some cases include modifications for items such as rebate amounts. As with prior Plans, FPL anticipates that the Plan could change over time due to: changes in market conditions or FPL system needs; program experience; measurement and evaluation; customer research; or new technology options which may become available. In regard to how its DSM Plan meets the DSM Goals in Table 1 above, FPL does not count kW or kWh savings for the educational programs (Residential Energy Survey and Business Energy Evaluation), the CRD program, the Cogeneration and Small Power Production program, or the Renewable Research & Demonstration (“RRD”) pilot.

**Table 2 – Residential and Business Programs & Measures<sup>2</sup>**

<b>Programs</b>	<b>Measures (if multiple per Program)</b>
<b>Residential Energy Survey</b>	Home Energy Survey (HES)
	Online Home Energy Survey (OHES)
	Phone Energy Survey (PES)
<b>Residential Load Management (On Call<sup>®</sup>)</b>	
<b>Residential Air Conditioning</b>	
<b>Residential New Construction (BuildSmart<sup>®</sup>)</b>	
<b>Residential Ceiling Insulation</b>	
<b>Residential Low Income</b>	Energy Survey
	Weatherization (Caulking/Stripping/Door Sweeps)
	Duct Testing & Repair
	Air Conditioning Unit Maintenance
	Air Conditioning Outdoor Coil Cleaning
	Faucet Aerators
	Low-Flow Showerhead
	Water Heater Pipe Wrap
<b>Business Energy Evaluation (BEE)</b>	Field BEE
	Online BEE
<b>Business On Call</b>	
<b>Commercial/Industrial Demand Reduction</b>	
<b>Commercial/Industrial Load Control (Closed)</b>	
<b>Business Heating, Ventilating, &amp; Air Conditioning (HVAC)</b>	Chillers
	Thermal Energy Storage (TES)
	Split/Packaged Direct Expansion (DX)
	Demand Control Ventilation (DCV)
	Energy Recovery Ventilation (ERV)
<b>Business Lighting</b>	Compact Fluorescent Lamps (CFL)
	Pulse Start Metal Halide (PSMH) Lighting
	Premium Linear Fluorescent Lamps with High Efficiency Electronic Ballasts
	High Bay Light Emitting Diodes (LED)
<b>Business Custom Incentive (BCI)</b>	
<b>Conservation Research &amp; Development (CRD)</b>	
<b>Cogeneration &amp; Small Power Production</b>	
<b>Solar Pilots</b>	
<b>Residential Photovoltaic</b>	
<b>Business Photovoltaic</b>	
<b>Business Photovoltaic for Schools</b>	
<b>Residential Solar Water Heating</b>	
<b>Residential Solar Water Heating (Low Income New Construction)</b>	
<b>Business Solar Water Heating</b>	
<b>Renewable Research &amp; Demonstration</b>	

<sup>2</sup> Measures listed only when there are multiple measures associated with a program.

## **B. Cost-Effectiveness Screening Analysis**

The Commission-established cost-effectiveness methodology required by Rule 25-17.008, F.A.C., to determine the cost-effectiveness of DSM programs includes the following three screening tests: (1) the RIM test; (2) the Total Resource Cost (“TRC”) test; and (3) the Participant test. The results for each program under the three preliminary screening tests are summarized in Table 3. The individual program cost-effectiveness screening analyses can be found in Appendix A. FPL used the same assumptions in these cost-effectiveness screening tests as were used for the analyses in the DSM Goals proceeding (Docket 130199-EI). In developing the DSM Plan, a cost-effectiveness screening was not performed for the previously-mentioned education and R&D programs, RRD pilot, and Cogeneration & Small Power Production program for which FPL does not count kW or kWh savings, or the Commercial/Industrial Load Control program which is closed to new participants and the Business Custom Incentive program.

**Table 3 – Cost-Effectiveness Screening Test Results<sup>3</sup>**

<b>Program/Pilot</b>	<b>RIM</b>	<b>TRC</b>	<b>Participant</b>
<b>Residential Sector Programs</b>			
Residential Load Management (On Call®)	2.34	5.62	Infinite
Residential Air Conditioning	1.01	0.83	1.01
Residential New Construction (BuildSmart®)	1.03	1.70	2.13
Residential Ceiling Insulation	1.02	2.19	2.83
Residential Low Income	0.86	2.78	Infinite
<b>Business Sector Programs</b>			
Business On Call	2.72	8.16	Infinite
Commercial/Industrial Demand Reduction	1.62	88.30	Infinite
Business Heating, Ventilating, & Air Conditioning (HVAC)	1.03	1.69	1.80
Business Lighting	1.02	3.54	4.06
<b>Solar Pilots</b>			
Residential Photovoltaic	0.51	0.39	0.98
Business Photovoltaic	0.83	0.54	0.88
Business Photovoltaic for Schools	0.19	0.20	2.72
Residential Solar Water Heating	0.51	0.17	0.63
Residential Solar Water Heating (Low IncomeNew Construction)	0.21	0.28	Infinite
Business Solar Water Heating	0.34	0.17	0.73

<sup>3</sup> “Infinite” means that the participant has no out-of-pocket costs.

### **C. Program Standards**

FPL will file Program Standards for all programs within the timeframe specified by the Commission in the Final Order approving FPL's DSM Plan. The Program Standards will contain the specifics regarding each program's operations. These will be subject to periodic review and may change over time based on factors such as, but not limited to: federal equipment manufacturing standards; Florida Building Code changes; technological advances; operational needs; program results; and technology application assumptions. All program participants and contractors must comply with the requirements specified in the Program Standards.



## **SECTION II – DSM PROGRAM DESCRIPTIONS**

FPL's DSM Plan incorporates a wide array of programs. It is comprised of 22 DSM programs; six Residential programs, seven Business programs, a Conservation Research and Development ("CRD") program for evaluating new technologies, a Cogeneration and Small Power Production program, and seven Solar Pilots that expire at the end of 2015 (approved by Order No. PSC-11-0079-PAA-EG). All these programs are included in FPL's current DSM Plan but in some cases have been modified to remove measures that are no longer cost-effective or to revise maximum rebate amounts to ensure the program remains cost-effective (please see Appendix B for a summary of the changes from the current DSM Plan).<sup>4</sup> FPL's comprehensive DSM portfolio recognizes the importance of keeping electric rates low for all of FPL's customers while still meeting the established Goals.

This section includes summaries for each of the programs and provides a general description of the individual programs' objectives, features and administration. Additional specifics on each program and its operations will be provided in FPL's Program Standards to be filed after the DSM Plan is approved. All of the programs included in FPL's portfolio have as a primary objective to reduce growth of coincident peak demand and energy consumption. The portfolio addresses the major drivers of a customer's energy consumption and its program mix is designed

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<sup>4</sup> As discussed at length in Docket No. 130199-EI leading to the adoption of FPL's current DSM Goals, several factors have significantly affected the cost-effectiveness of DSM measures. For example, current forecasted fuel costs are lower, current projected carbon dioxide emission compliance costs are lower and FPL's generating system is more fuel-efficient. Additionally, the amount of energy efficiency projected to be delivered by federal and state energy efficiency codes and standards over the 10-year goals period has increased. Each of these factors greatly benefits customers, but at the same time reduces the availability and cost-effectiveness of DSM options offered by utilities.

to address the diversity of FPL's customer types and their needs through providing financial rebates and investing in customer awareness through education.

**Low Income** – FPL assists low income customers by keeping electric rates low for all customers through the implementation of DSM programs that pass the RIM cost-effectiveness test, and by other approaches outside of DSM. In its Order, the Commission recognized the importance of supporting these customers. Consistent with this, FPL will continue using its multi-prong approach with this DSM Plan to assist low income customers and has expanded its Low Income program. The first prong is to continue to keep electric rates low for all customers by focusing DSM efforts on cost-effective DSM programs (i.e., programs that pass the RIM screening test). The second prong is energy efficiency education. FPL's Residential Energy Survey, offered through multiple channels, provides education on actions customers can take to reduce their electric cost by participating in FPL's DSM programs and also by taking actions and implementing measures, many at low or no cost, which are not offered as part of FPL's DSM programs. The third prong is offering participation in FPL's Residential programs, such as Residential Load Management, etc. Over the years, participation rates for low income customers in FPL's DSM programs have been in approximately the same proportion as FPL's customer base as a whole. The final prong is participation in FPL's Low Income program which is targeted specifically at low income customers. This program now includes: (i) expanded delivery channels; (ii) several measures that have customer payback periods of less than two years, based on a simple payback evaluation; and (iii) several measures that do not pass the RIM cost-effectiveness screening test. FPL is proposing to include these types of measures to assist

low income customers, in response to the emphasis placed by the Commission on this customer segment in Order No. PSC-14-0696-FOF-EU.

**Solar Pilots** – The DSM Plan also reflects the stipulation approved by Order PSC-14-0632-FOF-EG that extended the seven Solar Pilots to the end of 2015, after which point the Pilots will expire. There are no modifications to the Solar Pilots being made in this Plan; however, their descriptions have been simplified consistent with the manner the other programs in this Plan are presented. The Solar Pilots do not pass the RIM or TRC cost-effectiveness screening tests, and in most cases are not even cost-effective to the participant (i.e., do not pass the Participant test). Participation in these pilots will be monitored and managed to ensure FPL does not exceed its aggregate annual spending cap for the seven Solar Pilots established in Order PSC-09-0855-FOF-EG.

**Post-Installation Verification** – Verification will be conducted for all programs where FPL provides a financial incentive. In order to ensure compliance with Program Standards, FPL will, at a minimum, perform verifications of the installations as required by Rule 25-17.003(10), F.A.C. For certain programs/pilots FPL will verify 100% of the installations (e.g., Commercial/Industrial Demand Reduction, Business Photovoltaic for Schools, etc.) Participating customers are required to provide FPL access to perform the verifications.

**Definitions** – Below are definitions of certain terms used throughout the program summaries.

– **Last Modified** – refers to the month and year of the last Commission-approved modification to a program.

- **Existing Customers** – refers to FPL customers of record who have a certificate of occupancy.
- **New Construction Customers** – refers to FPL customers of record who do not have a certificate of occupancy.
- **All Customers** – refers to both Existing and New Construction customers.
- **Maximum Financial Incentive** – Applies to FPL’s energy efficiency programs. Unless otherwise indicated, the maximum incentives reflect the maximum that can be paid while still passing both the RIM and Participant tests, including having a payback not less than two years of the participant’s incremental cost. For programs/measures where there are multiple incentive levels depending on one or more parameters (e.g., rate classes, building type, etc.), the value shown represents the weighted average of the various incentive maximums.
- **“Customer” (for Demand/Energy Savings and Financial Incentives values only)** – for all residential programs, the Solar Pilots, and the Business Energy Evaluation, a “customer” represents a single premise. For the other business programs, the term “customer” represents one Summer kW of demand reduction. This method has been used for many years to account for and normalize the wide diversity in sizes, types and energy usages of businesses.

**RESIDENTIAL SECTOR PROGRAM PORTFOLIO**

## **Residential Energy Survey**

**Start Date** – January, 1981

**Last Modified** – January, 2006

This program educates customers on energy efficiency and encourages them to participate in applicable FPL DSM programs and/or implement other recommended actions not included as part of FPL's Residential programs. Surveys are delivered through three channels: (1) Home Energy Survey ("HES"), which is a walk-through performed by an FPL representative in the customer's home; (2) Online Home Energy Survey ("OHES"), which is performed by the customer using FPL's online application; and (3) Phone Energy Survey ("PES"), which is performed by an FPL representative with information provided by the customer over the phone.

**Eligibility** – All FPL residential customers.

**Participant Financial Incentive** – Free to the participant. Residential Energy Surveys can identify opportunities for customers to receive financial incentives through other FPL Residential programs.

**Marketing Channels** – Television, radio, online, and print media.

**Demand/Energy Savings Measurement & Evaluation** – Not applicable. Savings are not attributed to this program.

## **Residential Load Management (On Call®)**

**Start Date** – July, 1986

**Last Modified** – September, 2007

This program allows FPL to turn off customers' appliances for varying time periods during system emergencies, consistent with the applicable tariff. FPL-installed equipment is connected to eligible customer-selected end-use equipment (i.e., central air conditioning, central electric heating, electric water heaters, and pool pumps), allowing FPL to control these loads.

**Eligibility** – FPL residential customers who have eligible end-use equipment. Participation may be limited based on system load shape analysis.

**Participant Financial Incentive** – Monthly credit on the electric bill as specified in Tariff Sheet No. 8.217. The credit amount is dependent on the end-use equipment and control cycle selected by the customer.

**Marketing Channels** – The Residential Energy Survey, online and print media. These channels will also be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Engineering modeling analyses calibrated with metered data from periodic system tests of participants' appliances.

## **Residential Air Conditioning**

**Start Date** – October, 1990

**Last Modified** – July, 2006

This program encourages customers to install high-efficiency central air conditioning systems.

**Eligibility** – Existing FPL residential customers occupying single-family detached homes who install a replacement straight cool system.

**Participant Financial Incentive** – Rebate provided as a credit towards the installation cost on a customer's invoice from a Participating Independent Contractor ("PIC"). The maximum is \$208 per participant.

**Marketing Channels** – The Residential Energy Survey, PICs, online, and print media. These channels will also be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Engineering modeling analyses calibrated using both end-use metering data and statistical billing analysis.



## **Residential New Construction (BuildSmart®)**

**Start Date** – February, 1996

**Last Modified** – January, 2006

This program encourages builders and developers to design and construct new homes in a manner that moves towards ENERGY STAR® qualifications.

**Eligibility** – All builders, developers and owner-builders of a new home in FPL’s service territory. Homes must be single-family detached or single-family attached where each housing unit is separated from its neighbors by a ground-to-roof wall with no housing units above or below. The energy code compliance score for the home must be better than that required by the Florida Building Code as specified in FPL’s Program Standards. Florida Building Commission-approved energy code compliance software will be used for certification.

**Participant Financial Incentives** – Promotional incentive paid to builders, developers, owner-builders or their designees. The maximum is \$894 per participant.

**Marketing Channels** – FPL personnel, builders, online, and print media. These channels will be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Engineering modeling analyses calibrated using both end-use metering data and statistical billing analysis.

## **Residential Ceiling Insulation**

**Start Date** – October, 1981

**Last Modified** – September, 2006

This program encourages customers to improve the building envelope's thermal efficiency.

**Eligibility** – Existing FPL residential customers whose homes: (1) were constructed before 1982; (2) have verified sub-code insulation; and (3) have whole house central electric air conditioning/heating.

**Participant Financial Incentives** – Rebate provided as a credit towards the installation cost on a customer's invoice from a PIC. The maximum is \$220 per participant.

**Marketing Channels** – The Residential Energy Survey, PICs, online, and print media. These channels will be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Engineering modeling analyses calibrated using both end-use metering data and statistical billing analysis.

## **Residential Low Income**

**Start Date** – March, 2005

**Last Modified** – September, 2006

This program is targeted to assist low income customers. Delivery will be provided through two channels. First, is through state Weatherization Assistance Provider (“WAP”) agencies to which FPL will provide rebates for certain energy measures as part of the total assistance they provide to their selected low income customers. Second, is through FPL conducting Energy Retrofits in selected neighborhoods. FPL Energy Retrofits will include promotional events followed by concentrated installations of DSM measures. FPL will conduct an Energy Survey for each customer and install, as appropriate, measures which address the main areas of energy use: weatherization (caulking, weather stripping and door sweeps); air conditioning (duct testing and repair, air conditioning unit maintenance and outdoor unit coil cleaning); and water heating (low flow showerheads, faucet aerators and pipe wrap). Several of these measures do not pass the RIM cost-effectiveness screening test and/or the two-year participant payback criterion. FPL is proposing to include these types of measures to assist low income customers, in response to the emphasis placed by the Commission on this customer segment in Order No. PSC-14-0696-FOF-EU.

**Eligibility** – Existing FPL residential customers who meet certain low income criteria. WAP-delivered: customers who are eligible for financial assistance from federally-funded programs as verified by federal grantees or their designees. FPL Energy Retrofit: conducted in areas with a large proportion of customers whose incomes are consistent with WAP qualification requirements; however, all FPL customers in these areas may participate.

**Participant Financial Incentives** – Participants will receive the measures for free whether provided through a WAP agency or an FPL Energy Retrofit. Rebates will be paid to the WAP agency or its designee for measures which they install. The maximum rebates per customer are:

- Weatherization – \$90
- Air Conditioning: Duct testing & repair – \$60; Unit maintenance – \$80; Outdoor coil cleaning – \$60
- Water Heating: Low flow showerhead – \$30; Faucet aerator – \$10; Pipe wrap – \$40

**Marketing Channels** – The WAP agencies, FPL personnel, community-based organizations, faith-based organizations, online, and print media. These channels will be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Engineering modeling analyses calibrated with statistical billing analysis.

**BUSINESS SECTOR PROGRAM PORTFOLIO**

## **Business Energy Evaluation (“BEE”)**

**Start Date** – October, 1990

**Last Modified** – March, 2005

This program educates customers on energy efficiency and encourages them to participate in applicable FPL DSM programs and/or implement other recommended actions not included as part of FPL’s Business programs. There are two delivery channels for the BEE: (1) the Field BEE, which is performed by an FPL representative at the customer’s facility; and (2) the Online BEE, which is performed by the customer using FPL’s online application.

**Eligibility** – All FPL business customers.

**Participant Financial Incentives** – Free to the participant. The BEE helps to determine which practices are most appropriate for a particular facility and how to qualify for financial incentives through other FPL Business programs.

**Marketing Channels** – FPL personnel, television, radio, online, and print media. These channels will also be supported, as appropriate, by promotional activities.

**Demand/Energy Savings Measurement & Evaluation** – Not applicable. Savings are not attributed to this program.

## **Business On Call**

**Start Date** – June, 1995

**Last Modified** – September, 2006

This program allows FPL to turn off customers' direct expansion ("DX") central electric air conditioning units for varying time periods during system emergencies, consistent with the applicable tariff. FPL-installed equipment is connected to the customer's DX units allowing FPL to control this load.

**Eligibility** – FPL business customers who meet the requirements of Tariff Sheet No. 8.109. Participation may be limited based on system load shape analysis.

**Participant Financial Incentive** – Monthly credit on the electric bill as specified in Tariff Sheet No. 8.109. The credit amount is dependent on the tonnage of the customer-selected air conditioning connected to FPL's load control equipment.

**Marketing Channels** – The BEE, FPL personnel, online, and print media. These channels will also be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Engineering modeling analyses calibrated with metered data from periodic system tests of participants' appliances.

## **Commercial/Industrial Demand Reduction (“CDR”)**

**Start Date** – May, 2000

**Last Modified** – January, 2013

This program allows FPL to control customer-established loads of 200 kW or greater during system emergencies, consistent with the applicable tariff. Load control equipment is installed at the customer’s facility to allow FPL to control customer loads.

**Eligibility** – FPL business customers who meet the requirements of the CDR Rider (Tariff Sheet Nos. 8.680 – 8.685). Participation may be limited based on system load shape analysis.

**Participant Financial Incentives** – Monthly credit on the electric bill calculated as specified in CDR Rider.

**Marketing Channels** – The BEE, FPL personnel, online, and print media. These channels will also be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Metered performance of participants during events and system tests.



## **Commercial/Industrial Load Control (“CILC”)**

(Closed to New Participants)

**Start Date** – October, 1990

**Last Modified** – January, 2013

This program allows FPL to control customer-established loads of 200 kW or greater during system emergencies, consistent with the applicable tariff. Load control equipment is installed at the customer’s facility to allow FPL to control customer loads.

**Eligibility** – This program was closed to new participants as of December 31, 2000. It remains available only to existing CILC customers who entered into a CILC agreement as of March 19, 1996 and continue to meet the requirements of the CILC Tariff (Tariff Sheet Nos. 8.650 – 8.659).

**Participant Financial Incentives** – Lower rate for electric service than the otherwise applicable rate as specified in the CILC Tariff.

**Marketing Channels** – Not applicable. This program is closed to new participants.

**Demand/Energy Savings Measurement & Evaluation** – Metered performance of participants during events and system tests.

## **Business Heating, Ventilating & Air Conditioning (“HVAC”)**

**Start Date** – February, 1990

**Last Modified** – July, 2006

This program encourages customers to install high-efficiency HVAC systems. The primary types of eligible HVAC systems include: chillers; thermal energy storage (“TES”); split/package DX; demand control ventilation (“DCV”); and energy recovery ventilation (“ERV”).

**Eligibility** – All FPL business customers.

**Participant Financial Incentive** – Rebates paid to customers, their designees or designers. The maximum per customer (i.e., per Summer kW saved) is:

- Chillers – \$210
- TES – \$600
- DX – \$180
- DCV – \$2,010
- ERV – \$1,270

**Marketing Channels** – The BEE, FPL personnel, online, print media, architectural and engineering firms, contractors, and energy services companies. These channels will also be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Engineering modeling analyses calibrated using both end-use metering data and statistical billing analysis.

## **Business Lighting**

**Start Date** – June, 1984

**Last Modified** – September, 2006

This program encourages customers to install high-efficiency lighting systems. The primary types of eligible lighting systems include: compact fluorescent lights (“CFL”); pulse-start metal halides (“PSMH”); premium linear fluorescents with high-efficiency electronic ballasts; and high bay light-emitting diodes (“LED”).

**Eligibility** – All FPL business customers.

**Participant Financial Incentives** – Rebates paid to customers, their designees or designers.

The maximum per customer (i.e., per Summer kW saved) is:

- CFL – \$70
- PSMH – \$185
- Premium Linear Fluorescents – \$65
- High Bay LED – \$95

**Marketing Channels** – The BEE, FPL personnel, online, and print media, architectural and engineering firms, contractors, and energy services companies. These channels will also be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Engineering modeling analyses calibrated using both end-use metering data and statistical billing analysis.

## **Business Custom Incentive (“BCI”)**

**Start Date** – April, 1993

**Last Modified** – March, 2005

This program encourages customers to install unique high-efficiency technologies not covered by other FPL DSM programs. The primary types of customized technologies include, but are not limited to, process controls, efficient machinery, and other measures unique to particular industrial processes or business applications.

**Eligibility** – All FPL business customers. Projects must demonstrate at least the minimum Summer kW savings specified in the Program Standards. Projects that represent operational or maintenance improvements that are not permanent, fuel switching, power generation technology, or wheeling of any type are not eligible.

**Participant Financial Incentive** – Project-specific rebate calculated by FPL based on passing both the RIM and Participant tests, including having a payback not less than two years of the participant’s incremental cost.

**Marketing Channels** – The BEE and FPL personnel. These channels will also be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Evaluated using one or more of the following methods: engineering modeling analysis; end-use metering; statistical billing analysis; a feasibility study performed by an independent registered professional engineer; and/or lab testing.

## **OTHER PROGRAMS**

## **Conservation Research and Development (“CRD”)**

**Start Date** – November, 1990

**Last Modified** – March, 2005

This program identifies and scientifically evaluates the energy and demand savings and customer economic performance under FPL’s climate conditions of emerging energy efficiency and demand response technologies and practices. FPL-specific analysis is essential to provide accurate assessments of cost-effectiveness and applicability for possible inclusion in a future DSM Plan. Since CRD’s inception, FPL has evaluated a wide variety of residential and business technologies, such as: programmable and smart thermostats; variable-speed pool pumps; occupancy sensors; and smart air conditioning controls which optimize compressor run time. The studies have resulted in several measures being incorporated into FPL’s DSM portfolio and served as an authoritative source for providing FPL’s customers with accurate information and responses to their energy technology questions.

FPL typically collaborates with Florida-based universities, utilities, the U.S. Department of Energy, and other independent research organizations to conduct joint studies to maximize the use of research funds. CRD projects are conducted in laboratory and field settings. For weather-sensitive technologies, testing incorporates the climate conditions unique to FPL’s service area to obtain accurate savings estimates. All results are weather normalized and weighted for FPL’s regional population distribution.

FPL plans to continue the CRD program through December 31, 2020 which coincides with the year in which the next DSM Plan is expected to be approved. Expenditures for the six-year period of 2015 – 2020 will not exceed \$1,500,000.

## **Cogeneration & Small Power Production**

**Start Date** – March, 1981

**Last Modified** – March, 2005

This program was established to recover the administrative costs through the Energy Conservation Cost Recovery (“ECCR”) clause for executing FPL’s obligations to facilities defined as Qualifying Facilities (“QF”) under the Public Utility Regulatory Policies Act of 1978 (“PURPA”) and PSC rules. Such costs are associated with interconnection; installation, inspection, calibration and maintenance of meters; administration of power billing and accounting processes; PSC reporting; contract negotiation; contract administration, including legal expenses resulting from litigation; facility verifications and audits; communications; operating coordination; and problem resolution.

This program’s objectives are to: (i) comply with all regulatory requirements and applicable law relating to the purchase of energy and capacity from QFs; (ii) interconnect as necessary to accomplish purchases, sales, and operation in parallel; (iii) transmit energy and capacity to another utility for purchase by that utility; and (iv) assist customers in the evaluation of potential cogeneration applications, including self-generation, while minimizing costs.

This program does not include the costs associated with FPL payments for firm capacity and energy and for as-available energy made to QFs pursuant to FPL’s tariff which are recoverable by FPL through the PSC’s periodic review of its fuel and purchased power costs.

**SOLAR PILOTS**



## **Residential Photovoltaic Pilot**

**Start Date** – June, 2011

**End Date** – December, 2015

**Last Modified** – N/A

This pilot encourages residential customers to install photovoltaic (“PV”) systems. The primary components of eligible PV systems are: panels; mounting hardware; electric inverter; cabling; a disconnect device for systems greater than 10 kW<sub>DC</sub>; and optional backup battery systems.

**Eligibility** – Existing FPL residential customers.

**Participant Financial Incentives** – Rebate calculated as specified in FPL’s previously-approved Programs Standards. Rebate will be paid to the customer or their designee.

**Marketing Channels** – FPL’s company and solar web sites, and solar contractors. These channels will be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Because this pilot is scheduled for termination at the end of 2015, no further Measurement & Evaluation is contemplated.

## **Business Photovoltaic Pilot**

**Start Date** – June, 2011

**End Date** – December, 2015

**Last Modified** – N/A

This pilot encourages business customers to install PV systems. The primary components of eligible PV systems are: panels; mounting hardware; electric inverter; cabling; a disconnect device for systems greater than 10 kW<sub>DC</sub>; and optional backup battery systems.

**Eligibility** – Existing FPL business customers.

**Participant Financial Incentives** – Rebate calculated as specified in FPL's previously-approved Programs Standards. Rebate will be paid to the customer or their designee.

**Marketing Channels** – FPL's company and solar web sites and solar contractors. These channels will be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Because this pilot is scheduled for termination at the end of 2015, no further Measurement & Evaluation is contemplated.

## **Business Photovoltaic for Schools Pilot**

**Start Date** – June, 2011

**End Date** – December, 2015

**Last Modified** – N/A

This pilot installs PV systems at public schools with accompanying educational materials for children to demonstrate the practical application of PV. The primary components of these systems are: panels; mounting hardware; electric inverter; cabling; controls; and sensors. FPL will also provide: classroom educational materials; system monitoring and comparison tools; and training for teachers and facility personnel.

**Eligibility** – Existing public schools in FPL’s service territory.

**Participant Financial Incentives** – No upfront costs for systems. FPL will install, own and maintain the PV systems for a period of five years from the in-service date after which FPL will transfer ownership to the applicable school districts.

**Marketing Channels** – FPL personnel in conjunction with the public school districts. These channels will be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Because this pilot is scheduled for termination at the end of 2015, no further Measurement & Evaluation is contemplated.

## **Residential Solar Water Heating Pilot**

**Start Date** – June, 2011

**End Date** – December, 2015

**Last Modified** – N/A

This pilot encourages residential customers to install solar water heating systems. The primary components of an eligible solar water heating system are: a solar collector, mounting hardware, a water retention tank, associated plumbing, controls, and sensors.

**Eligibility** – Existing FPL residential customers.

**Participant Financial Incentives** – Rebate as specified in FPL’s previously-approved Programs Standards. Rebate will be paid to the customer or their designee.

**Marketing Channels** – FPL’s company and solar web sites, and solar contractors. These channels will be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Because this pilot is scheduled for termination at the end of 2015, no further Measurement & Evaluation is contemplated.

## **Residential Solar Water Heating (Low Income New Construction) Pilot**

**Start Date** – June, 2011

**End Date** – December, 2015

**Last Modified** – N/A

This pilot encourages installation of solar water heating systems in low income housing. The primary components of an eligible solar water heating system are: a solar collector, mounting hardware, a water retention tank, associated plumbing, controls, and sensors.

**Eligibility** – New or existing residential houses being constructed or refurbished specifically for low income customers that are identified and selected by non-profit low income housing organizations.

**Participant Financial Incentives** – Free to the low housing organization.

**Marketing Channels** – FPL personnel to low income housing organizations.

**Demand/Energy Savings Measurement & Evaluation** – Because this pilot is scheduled for termination at the end of 2015, no further Measurement & Evaluation is contemplated.

## **Business Solar Water Heating Pilot**

**Start Date** – June, 2011

**End Date** – December, 2015

**Last Modified** – N/A

This pilot encourages business customers to install solar water heating systems. The primary components of an eligible solar water heating system are: a solar collector, mounting hardware, a water retention tank, associated plumbing, controls, and sensors.

**Eligibility** – Existing FPL business customers.

**Participant Financial Incentives** – Rebate calculated as specified in FPL’s previously-approved Programs Standards. Rebate will be paid to the customer or their designee.

**Marketing Channels** – FPL personnel, FPL’s company and solar web sites, and solar contractors. These channels will be supported, as appropriate, by promotional activities and other marketing approaches.

**Demand/Energy Savings Measurement & Evaluation** – Because this pilot is scheduled for termination at the end of 2015, no further Measurement & Evaluation is contemplated.

## **Renewable Research and Demonstration Pilot**

**Start Date** – June, 2011

**End Date** – December, 2015

**Last Modified** – N/A

This pilot involves three activities: (1) conducting demonstration projects at public non-profit and government facilities to increase public, governmental and contractor awareness of renewables; (2) evaluating emerging renewable technologies (e.g., PV-power pool pumps) to understand and quantify the effectiveness and their applications; and (3) educational grants for universities and technical centers to host contractor training classes and seminars. For 2015, FPL's focus will be on demonstration projects.

FPL identifies appropriate public non-profit or governmental facilities which can host the installation of PV systems with accompanying instructional displays and educational materials. Examples of installations FPL has completed are the Museum of Discovery and Science in Fort Lauderdale, the Kennedy Space Center Visitor Center in Cape Canaveral, and the Imaginarium Science Museum in Fort Myers. The placement of these systems, along with associated monitoring equipment to encourage interaction, serves as a working demonstration for those visiting the host facility.

## **SECTION III – PROJECTED PROGRAM ESTIMATES**

### **Notes for the following tables:**

- **“Customers”** – for all residential programs, the Solar Pilots and the Business Energy Evaluation, a “customer” represents a single refers to one customer premise. For the other business programs, the term “customer” represents one Summer kW of demand reduction. This method has been used for many years to account for and normalize the wide diversity in sizes, types and energy usages of businesses.
- **Cumulative Penetration Levels** – represents penetration starting in 2015 only.
- **Solar Pilots** – includes values for 2015 only due to expiration.



Table 4 - Total Customers										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential (Premises) - applies to all programs</b>	4,228,484	4,289,564	4,350,874	4,411,411	4,470,700	4,527,847	4,581,557	4,635,494	4,690,133	4,745,553
<b>Business (Premises) - applies to BEE &amp; Solar Pilots</b>	549,662	558,880	567,607	575,757	583,702	591,470	599,138	606,879	614,519	622,036
<b>Business (Summer kW) - applies to all other programs</b>	8,238,975	8,377,160	8,507,971	8,630,118	8,749,222	8,865,658	8,980,595	9,096,626	9,211,144	9,323,821

Table 5 - Eligible Customers										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Energy Survey	4,228,484	4,289,564	4,350,874	4,411,411	4,470,700	4,527,847	4,581,557	4,635,494	4,690,133	4,745,553
Residential Load Management (On Call®)	3,418,006	3,479,086	3,540,396	3,600,933	3,660,222	3,717,369	3,771,079	3,825,016	3,879,655	3,935,075
Residential Air Conditioning	2,200,756	2,215,785	2,247,102	2,257,195	2,286,386	2,306,455	2,323,925	2,319,715	2,351,899	2,384,533
Residential New Construction (BuildSmart®)	80,224	85,647	86,246	86,310	86,461	86,260	85,119	84,269	83,932	84,994
Residential Ceiling Insulation	1,257,387	1,253,639	1,248,786	1,243,713	1,238,414	1,232,881	1,227,099	1,221,074	1,214,782	1,208,231
Residential Low Income	837,884	850,100	862,362	874,469	886,327	897,756	908,498	919,286	930,214	941,298
<b>Business Portfolio</b>										
Business Energy Evaluation (BEE)	549,662	558,880	567,607	575,757	583,702	591,470	599,138	606,879	614,519	622,036
Business On Call	1,362,434	1,384,939	1,406,204	1,426,011	1,445,305	1,464,151	1,482,744	1,501,521	1,520,044	1,538,256
Commercial/Industrial Demand Reduction	2,914,414	2,955,795	2,994,451	3,029,441	3,063,250	3,096,017	3,128,154	3,160,571	3,192,359	3,240,739
Business Heating, Ventilating, & Air Conditioning (HVAC)	3,062,593	3,113,463	3,159,595	3,201,943	3,242,852	3,282,474	3,328,373	3,378,291	3,432,086	3,486,564
Business Lighting	1,731,118	1,764,214	1,793,756	1,821,101	1,846,534	1,872,615	1,896,621	1,919,617	1,943,381	1,968,007
Business Custom Incentive (BCI)	411,949	418,858	425,399	431,506	437,461	443,283	449,030	454,831	460,557	466,191
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	4,227,454									
Business Photovoltaic	549,458									
Business Photovoltaic for Schools	1,243									
Residential Solar Water Heating	4,224,641									
Residential Solar Water Heating (LINC)	404									
Business Solar Water Heating	549,621									

Table 6 - Annual Participants										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Energy Survey	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Residential Load Management (On Call®)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Residential Air Conditioning	23,398	29,694	30,339	30,929	31,491	32,222	32,826	33,075	33,447	34,027
Residential New Construction (BuildSmart®)	1,463	1,559	1,677	1,897	2,124	2,359	2,564	2,998	3,458	3,827
Residential Ceiling Insulation	3,748	4,853	5,073	5,300	5,533	5,782	6,025	6,292	6,551	6,853
Residential Low Income	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
<b>Business Portfolio</b>										
Business Energy Evaluation (BEE)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Business On Call	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Commercial/Industrial Demand Reduction	7,500	7,500	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
Business Heating, Ventilating, & Air Conditioning (HVAC)	6,999	8,648	8,804	8,968	9,139	9,317	9,503	9,695	9,895	10,101
Business Lighting	2,104	2,569	2,748	2,933	3,126	3,326	3,535	3,752	3,978	4,215
Business Custom Incentive (BCI)	451	550	551	573	673	665	642	696	641	663
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	389									
Business Photovoltaic	76									
Business Photovoltaic for Schools	28									
Residential Solar Water Heating	900									
Residential Solar Water Heating (LINC)	120									
Business Solar Water Heating	87									

Table 7 - Cumulative Penetration Levels										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Energy Survey	2%	5%	7%	9%	11%	13%	15%	17%	19%	21%
Residential Load Management (On Call®)	0%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Residential Air Conditioning	1%	2%	4%	5%	6%	8%	9%	11%	12%	13%
Residential New Construction (BuildSmart®)	2%	2%	2%	2%	2%	3%	3%	4%	4%	5%
Residential Ceiling Insulation	0%	1%	1%	2%	2%	2%	3%	3%	4%	5%
Residential Low Income	0%	0%	1%	1%	1%	1%	2%	2%	2%	2%
<b>Business Portfolio</b>										
Business Energy Evaluation (BEE)	2%	4%	6%	8%	10%	12%	14%	16%	18%	19%
Business On Call	0%	0%	1%	1%	1%	1%	1%	2%	2%	2%
Commercial/Industrial Demand Reduction	0%	1%	1%	1%	1%	2%	2%	2%	2%	2%
Business Heating, Ventilating, & Air Conditioning (HVAC)	0%	1%	1%	1%	1%	2%	2%	2%	2%	3%
Business Lighting	0%	0%	0%	1%	1%	1%	1%	1%	1%	2%
Business Custom Incentive (BCI)	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	0%									
Business Photovoltaic	0%									
Business Photovoltaic for Schools	2%									
Residential Solar Water Heating	0%									
Residential Solar Water Heating (LINC)	30%									
Business Solar Water Heating	0%									

Table 8 - Total Summer kW Savings (at the Generator)										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Load Management (On Call®)	14,817	14,817	14,817	14,817	14,817	14,817	14,817	14,817	14,817	14,817
Residential Air Conditioning	6,305	8,001	8,175	8,334	8,485	8,682	8,845	8,912	9,012	9,169
Residential New Construction (BuildSmart®)	1,210	1,290	1,387	1,569	1,757	1,952	2,121	2,480	2,861	3,166
Residential Ceiling Insulation	795	1,023	1,069	1,117	1,166	1,219	1,270	1,327	1,381	1,447
Residential Low Income	800	800	800	800	800	800	800	800	800	800
<b>Business Portfolio</b>										
Business On Call	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233	3,233
Commercial/Industrial Demand Reduction	8,084	8,084	8,623	8,623	8,623	8,623	8,623	8,623	8,623	8,623
Business Heating, Ventilating, & Air Conditioning (HVAC)	7,543	9,321	9,489	9,666	9,850	10,042	10,242	10,450	10,665	10,887
Business Lighting	2,268	2,769	2,961	3,161	3,369	3,585	3,810	4,044	4,288	4,543
Business Custom Incentive (BCI)	486	593	594	617	725	717	692	750	691	715
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	1,325									
Business Photovoltaic	980									
Business Photovoltaic for Schools	118									
Residential Solar Water Heating	147									
Residential Solar Water Heating (LINC)	20									
Business Solar Water Heating	87									
<b>Residential Subtotal</b>	<b>25,418</b>	<b>25,931</b>	<b>26,248</b>	<b>26,637</b>	<b>27,026</b>	<b>27,470</b>	<b>27,853</b>	<b>28,336</b>	<b>28,871</b>	<b>29,398</b>
<b>Business Subtotal</b>	<b>22,800</b>	<b>24,000</b>	<b>24,900</b>	<b>25,300</b>	<b>25,800</b>	<b>26,200</b>	<b>26,600</b>	<b>27,100</b>	<b>27,500</b>	<b>28,000</b>
<b>Grand Total</b>	<b>48,218</b>	<b>49,931</b>	<b>51,148</b>	<b>51,937</b>	<b>52,826</b>	<b>53,670</b>	<b>54,453</b>	<b>55,436</b>	<b>56,371</b>	<b>57,398</b>

Table 9 - Total Winter kW Savings (at the Generator)										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Load Management (On Call®)	12,285	12,285	12,285	12,285	12,285	12,285	12,285	12,285	12,285	12,285
Residential Air Conditioning	0	0	0	0	0	0	0	0	0	0
Residential New Construction (BuildSmart®)	540	576	619	701	785	872	947	1,107	1,277	1,414
Residential Ceiling Insulation	1,958	2,501	2,615	2,731	2,852	2,981	3,106	3,246	3,379	3,540
Residential Low Income	563	563	563	563	563	563	563	563	563	563
<b>Business Portfolio</b>										
Business On Call	0	0	0	0	0	0	0	0	0	0
Commercial/Industrial Demand Reduction	5,070	5,070	5,408	5,408	5,408	5,408	5,408	5,408	5,408	5,408
Business Heating, Ventilating, & Air Conditioning (HVAC)	6,816	7,050	7,268	7,496	7,734	7,982	8,238	8,503	8,777	9,057
Business Lighting	1,443	1,763	1,886	2,013	2,146	2,284	2,427	2,577	2,732	2,894
Business Custom Incentive (BCI)	145	417	338	382	412	426	426	412	383	340
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	50									
Business Photovoltaic	93									
Business Photovoltaic for Schools	11									
Residential Solar Water Heating	185									
Residential Solar Water Heating (LINC)	25									
Business Solar Water Heating	22									
<b>Residential Subtotal</b>	<b>15,606</b>	<b>15,925</b>	<b>16,082</b>	<b>16,280</b>	<b>16,484</b>	<b>16,700</b>	<b>16,901</b>	<b>17,201</b>	<b>17,504</b>	<b>17,801</b>
<b>Business Subtotal</b>	<b>13,600</b>	<b>14,300</b>	<b>14,900</b>	<b>15,300</b>	<b>15,700</b>	<b>16,100</b>	<b>16,500</b>	<b>16,900</b>	<b>17,300</b>	<b>17,700</b>
<b>Grand Total</b>	<b>29,206</b>	<b>30,225</b>	<b>30,982</b>	<b>31,580</b>	<b>32,184</b>	<b>32,800</b>	<b>33,401</b>	<b>34,101</b>	<b>34,804</b>	<b>35,501</b>

Table 10 - Total Annual kWh Savings (at the Generator)										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Load Management (On Call®)	21,010	21,010	21,010	21,010	21,010	21,010	21,010	21,010	21,010	21,010
Residential Air Conditioning	12,190,095	15,470,247	15,806,182	16,113,485	16,406,426	16,787,325	17,101,838	17,231,522	17,425,395	17,727,481
Residential New Construction (BuildSmart®)	1,792,682	1,911,264	2,055,216	2,325,159	2,603,812	2,891,848	3,142,607	3,674,529	4,238,598	4,690,793
Residential Ceiling Insulation	2,063,114	2,649,628	2,769,742	2,893,496	3,020,902	3,157,894	3,290,403	3,437,971	3,578,953	3,749,173
Residential Low Income	2,147,850	2,147,850	2,147,850	2,147,850	2,147,850	2,147,850	2,147,850	2,147,850	2,147,850	2,147,850
<b>Business Portfolio</b>										
Business On Call	19,290	19,290	19,290	19,290	19,290	19,290	19,290	19,290	19,290	19,290
Commercial/Industrial Demand Reduction	86,162	86,162	91,906	91,906	91,906	91,906	91,906	91,906	91,906	91,906
Business Heating, Ventilating, & Air Conditioning (HVAC)	6,012,418	12,611,457	13,114,481	13,638,729	14,184,353	14,751,382	15,339,703	15,949,035	16,578,903	17,228,610
Business Lighting	7,392,646	9,026,698	9,652,652	10,304,139	10,981,688	11,686,204	12,419,009	13,181,861	13,976,928	14,806,734
Business Custom Incentive (BCI)	2,240,665	1,656,505	1,821,783	1,946,048	2,022,875	2,151,329	2,230,203	2,358,020	2,433,085	2,553,572
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	4,283,163									
Business Photovoltaic	3,155,811									
Business Photovoltaic for Schools	379,871									
Residential Solar Water Heating	1,154,548									
Residential Solar Water Heating (LINC)	153,940									
Business Solar Water Heating	314,749									
<b>Residential Subtotal</b>	<b>23,806,401</b>	<b>22,200,000</b>	<b>22,800,000</b>	<b>23,501,000</b>	<b>24,200,000</b>	<b>25,005,927</b>	<b>25,703,708</b>	<b>26,512,882</b>	<b>27,411,806</b>	<b>28,336,308</b>
<b>Business Subtotal</b>	<b>19,601,612</b>	<b>23,400,112</b>	<b>24,700,112</b>	<b>26,000,112</b>	<b>27,300,112</b>	<b>28,700,112</b>	<b>30,100,112</b>	<b>31,600,112</b>	<b>33,100,112</b>	<b>34,700,112</b>
<b>Grand Total</b>	<b>43,408,013</b>	<b>45,600,112</b>	<b>47,500,112</b>	<b>49,501,112</b>	<b>51,500,112</b>	<b>53,706,039</b>	<b>55,803,820</b>	<b>58,112,994</b>	<b>60,511,918</b>	<b>63,036,419</b>

Table 11 - Summer kW Savings (at the Meter)										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Load Management (On Call®)	13,747	13,747	13,747	13,747	13,747	13,747	13,747	13,747	13,747	13,747
Residential Air Conditioning	5,850	7,424	7,585	7,732	7,873	8,056	8,207	8,269	8,362	8,507
Residential New Construction (BuildSmart®)	1,122	1,197	1,287	1,456	1,630	1,811	1,968	2,301	2,654	2,937
Residential Ceiling Insulation	737	949	992	1,036	1,082	1,131	1,178	1,231	1,282	1,342
Residential Low Income	742	742	742	742	742	742	742	742	742	742
<b>Business Portfolio</b>										
Business On Call	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Commercial/Industrial Demand Reduction	7,500	7,500	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
Business Heating, Ventilating, & Air Conditioning (HVAC)	6,999	8,648	8,804	8,968	9,139	9,317	9,503	9,695	9,895	10,101
Business Lighting	2,104	2,569	2,748	2,933	3,126	3,326	3,535	3,752	3,978	4,215
Business Custom Incentive (BCI)	451	550	551	573	673	665	642	696	641	663
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	1,229									
Business Photovoltaic	909									
Business Photovoltaic for Schools	109									
Residential Solar Water Heating	137									
Residential Solar Water Heating (LINC)	18									
Business Solar Water Heating	81									
<b>Residential Subtotal</b>	<b>23,583</b>	<b>24,059</b>	<b>24,353</b>	<b>24,714</b>	<b>25,075</b>	<b>25,487</b>	<b>25,842</b>	<b>26,290</b>	<b>26,787</b>	<b>27,276</b>
<b>Business Subtotal</b>	<b>21,154</b>	<b>22,267</b>	<b>23,102</b>	<b>23,473</b>	<b>23,937</b>	<b>24,308</b>	<b>24,679</b>	<b>25,143</b>	<b>25,514</b>	<b>25,978</b>
<b>Grand Total</b>	<b>44,737</b>	<b>46,326</b>	<b>47,455</b>	<b>48,187</b>	<b>49,012</b>	<b>49,795</b>	<b>50,522</b>	<b>51,434</b>	<b>52,301</b>	<b>53,254</b>

Table 12 - Winter kW Savings (at the Meter)										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Load Management (On Call®)	11,398	11,398	11,398	11,398	11,398	11,398	11,398	11,398	11,398	11,398
Residential Air Conditioning	0	0	0	0	0	0	0	0	0	0
Residential New Construction (BuildSmart®)	501	534	575	650	728	809	879	1,027	1,185	1,312
Residential Ceiling Insulation	1,817	2,321	2,426	2,534	2,646	2,766	2,882	3,011	3,135	3,284
Residential Low Income	522	522	522	522	522	522	522	522	522	522
<b>Business Portfolio</b>										
Business On Call	0	0	0	0	0	0	0	0	0	0
Commercial/Industrial Demand Reduction	4,704	4,704	5,018	5,018	5,018	5,018	5,018	5,018	5,018	5,018
Business Heating, Ventilating, & Air Conditioning (HVAC)	6,324	6,541	6,744	6,955	7,176	7,406	7,644	7,889	8,143	8,403
Business Lighting	1,339	1,636	1,750	1,868	1,991	2,119	2,252	2,391	2,535	2,685
Business Custom Incentive (BCI)	134	387	314	355	382	395	395	382	355	316
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	47									
Business Photovoltaic	87									
Business Photovoltaic for Schools	10									
Residential Solar Water Heating	172									
Residential Solar Water Heating (LINC)	23									
Business Solar Water Heating	20									
<b>Residential Subtotal</b>	<b>14,479</b>	<b>14,775</b>	<b>14,920</b>	<b>15,104</b>	<b>15,294</b>	<b>15,494</b>	<b>15,681</b>	<b>15,959</b>	<b>16,240</b>	<b>16,516</b>
<b>Business Subtotal</b>	<b>12,618</b>	<b>13,268</b>	<b>13,824</b>	<b>14,195</b>	<b>14,566</b>	<b>14,938</b>	<b>15,309</b>	<b>15,680</b>	<b>16,051</b>	<b>16,422</b>
<b>Grand Total</b>	<b>27,098</b>	<b>28,043</b>	<b>28,745</b>	<b>29,300</b>	<b>29,860</b>	<b>30,432</b>	<b>30,989</b>	<b>31,639</b>	<b>32,291</b>	<b>32,938</b>

Table 13 - Annual kWh Savings (at the Meter)										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Load Management (On Call®)	19,801	19,801	19,801	19,801	19,801	19,801	19,801	19,801	19,801	19,801
Residential Air Conditioning	11,488,517	14,579,885	14,896,486	15,186,103	15,462,184	15,821,161	16,117,573	16,239,793	16,422,509	16,707,208
Residential New Construction (BuildSmart®)	1,689,507	1,801,265	1,936,931	2,191,338	2,453,954	2,725,413	2,961,740	3,463,048	3,994,653	4,420,823
Residential Ceiling Insulation	1,944,375	2,497,134	2,610,334	2,726,966	2,847,039	2,976,147	3,101,030	3,240,104	3,372,973	3,533,396
Residential Low Income	2,024,235	2,024,235	2,024,235	2,024,235	2,024,235	2,024,235	2,024,235	2,024,235	2,024,235	2,024,235
<b>Business Portfolio</b>										
Business On Call	18,180	18,180	18,180	18,180	18,180	18,180	18,180	18,180	18,180	18,180
Commercial/Industrial Demand Reduction	81,203	81,203	86,616	86,616	86,616	86,616	86,616	86,616	86,616	86,616
Business Heating, Ventilating, & Air Conditioning (HVAC)	5,666,384	11,885,627	12,359,701	12,853,777	13,367,999	13,902,393	14,456,855	15,031,117	15,624,735	16,237,049
Business Lighting	6,967,176	8,507,183	9,097,111	9,711,103	10,349,657	11,013,626	11,704,256	12,423,203	13,172,512	13,954,560
Business Custom Incentive (BCI)	2,111,708	1,561,168	1,716,933	1,834,047	1,906,452	2,027,514	2,101,848	2,222,309	2,293,053	2,406,606
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	4,036,653									
Business Photovoltaic	2,974,184									
Business Photovoltaic for Schools	358,008									
Residential Solar Water Heating	1,088,100									
Residential Solar Water Heating (LINC)	145,080									
Business Solar Water Heating	296,634									
<b>Residential Subtotal</b>	<b>22,436,268</b>	<b>20,922,320</b>	<b>21,487,788</b>	<b>22,148,443</b>	<b>22,807,213</b>	<b>23,566,757</b>	<b>24,224,379</b>	<b>24,986,982</b>	<b>25,834,170</b>	<b>26,705,463</b>
<b>Business Subtotal</b>	<b>18,473,477</b>	<b>22,053,361</b>	<b>23,278,542</b>	<b>24,503,723</b>	<b>25,728,904</b>	<b>27,048,329</b>	<b>28,367,755</b>	<b>29,781,425</b>	<b>31,195,095</b>	<b>32,703,010</b>
<b>Grand Total</b>	<b>40,909,745</b>	<b>42,975,681</b>	<b>44,766,330</b>	<b>46,652,166</b>	<b>48,536,117</b>	<b>50,615,086</b>	<b>52,592,134</b>	<b>54,768,407</b>	<b>57,029,266</b>	<b>59,408,474</b>

Table 14- Summer kW Savings - per Customer (at the Generator)										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Load Management (On Call®)	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Residential Air Conditioning	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Residential New Construction (BuildSmart®)	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Residential Ceiling Insulation	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Residential Low Income	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
<b>Business Portfolio</b>										
Business On Call	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Commercial/Industrial Demand Reduction	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Business Heating, Ventilating, & Air Conditioning (HVAC)	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Business Lighting	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Business Custom Incentive (BCI)	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	3.41									
Business Photovoltaic	12.89									
Business Photovoltaic for Schools	4.21									
Residential Solar Water Heating	0.16									
Residential Solar Water Heating (LINC)	0.16									
Business Solar Water Heating	1.01									

Table 15 - Winter kW Savings - per Customer (at the Generator)										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Load Management (On Call®)	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Residential Air Conditioning	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residential New Construction (BuildSmart®)	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
Residential Ceiling Insulation	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Residential Low Income	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
<b>Business Portfolio</b>										
Business On Call	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial/Industrial Demand Reduction	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Business Heating, Ventilating, & Air Conditioning (HVAC)	0.97	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
Business Lighting	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Business Custom Incentive (BCI)	0.32	0.76	0.61	0.67	0.61	0.64	0.66	0.59	0.60	0.51
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	0.13									
Business Photovoltaic	1.23									
Business Photovoltaic for Schools	0.40									
Residential Solar Water Heating	0.21									
Residential Solar Water Heating (LINC)	0.21									
Business Solar Water Heating	0.25									

Table 16 - Annual kWh Savings - per Customer (at the Generator)										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Load Management (On Call®)	2	2	2	2	2	2	2	2	2	2
Residential Air Conditioning	521	521	521	521	521	521	521	521	521	521
Residential New Construction (BuildSmart®)	1,226	1,226	1,226	1,226	1,226	1,226	1,226	1,226	1,226	1,226
Residential Ceiling Insulation	550	546	546	546	546	546	546	546	546	547
Residential Low Income	1,074	1,074	1,074	1,074	1,074	1,074	1,074	1,074	1,074	1,074
<b>Business Portfolio</b>										
Business On Call	6	6	6	6	6	6	6	6	6	6
Commercial/Industrial Demand Reduction	11	11	11	11	11	11	11	11	11	11
Business Heating, Ventilating, & Air Conditioning (HVAC)	859	1,458	1,490	1,521	1,552	1,583	1,614	1,645	1,676	1,706
Business Lighting	3,513	3,513	3,513	3,513	3,513	3,513	3,513	3,513	3,513	3,513
Business Custom Incentive (BCI)	4,965	3,011	3,308	3,398	3,007	3,236	3,475	3,388	3,793	3,850
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	11,011									
Business Photovoltaic	41,524									
Business Photovoltaic for Schools	13,567									
Residential Solar Water Heating	1,283									
Residential Solar Water Heating (LINC)	1,283									
Business Solar Water Heating	3,618									

Table 17 - Summer kW Savings - per Customer (at the Meter)										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Load Management (On Call®)	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Residential Air Conditioning	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Residential New Construction (BuildSmart®)	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Residential Ceiling Insulation	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Residential Low Income	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
<b>Business Portfolio</b>										
Business On Call	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Commercial/Industrial Demand Reduction	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Business Heating, Ventilating, & Air Conditioning (HVAC)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Business Lighting	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Business Custom Incentive (BCI)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	3.16									
Business Photovoltaic	11.96									
Business Photovoltaic for Schools	3.91									
Residential Solar Water Heating	0.15									
Residential Solar Water Heating (LINC)	0.15									
Business Solar Water Heating	0.93									

Table 18 - Winter kW Savings - per Customer (at the Meter)										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Load Management (On Call®)	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Residential Air Conditioning	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residential New Construction (BuildSmart®)	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Residential Ceiling Insulation	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
Residential Low Income	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
<b>Business Portfolio</b>										
Business On Call	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial/Industrial Demand Reduction	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Business Heating, Ventilating, & Air Conditioning (HVAC)	0.90	0.76	0.77	0.78	0.79	0.79	0.80	0.81	0.82	0.83
Business Lighting	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Business Custom Incentive (BCI)	0.30	0.70	0.57	0.62	0.57	0.59	0.62	0.55	0.55	0.48
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	0.12									
Business Photovoltaic	1.14									
Business Photovoltaic for Schools	0.37									
Residential Solar Water Heating	0.19									
Residential Solar Water Heating (LINC)	0.19									
Business Solar Water Heating	0.23									

Table 19 - Annual kWh Savings - per Customer (at the Meter)										
Programs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Residential Portfolio</b>										
Residential Load Management (On Call®)	2	2	2	2	2	2	2	2	2	2
Residential Air Conditioning	491	491	491	491	491	491	491	491	491	491
Residential New Construction (BuildSmart®)	1,155	1,155	1,155	1,155	1,155	1,155	1,155	1,155	1,155	1,155
Residential Ceiling Insulation	519	515	515	515	515	515	515	515	515	516
Residential Low Income	1,012	1,012	1,012	1,012	1,012	1,012	1,012	1,012	1,012	1,012
<b>Business Portfolio</b>										
Business On Call	6	6	6	6	6	6	6	6	6	6
Commercial/Industrial Demand Reduction	11	11	11	11	11	11	11	11	11	11
Business Heating, Ventilating, & Air Conditioning (HVAC)	810	1,374	1,404	1,433	1,463	1,492	1,521	1,550	1,579	1,608
Business Lighting	3,311	3,311	3,311	3,311	3,311	3,311	3,311	3,311	3,311	3,311
Business Custom Incentive (BCI)	4,679	2,837	3,118	3,203	2,834	3,050	3,275	3,193	3,575	3,628
<b>Solar Pilot Portfolio</b>										
Residential Photovoltaic	10,377									
Business Photovoltaic	39,134									
Business Photovoltaic for Schools	12,786									
Residential Solar Water Heating	1,209									
Residential Solar Water Heating (LINC)	1,209									
Business Solar Water Heating	3,410									

**APPENDIX A – Program-Level Cost-Effectiveness Analyses**

INPUT DATA -- PART I CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Load Management (On Call)

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	1.12 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.46778 KW
(3) KW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	1.75 kWh ****
(5) KW/LINE LOSS PERCENTAGE .....	5.76 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KW/h INCREASE AT METER .....	0.86 kWh ****

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

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 .....	7.54 %
(11) UTILITY AFUDC RATE .....	6.50 %
(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  
 \*\*\*\*\* 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.

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/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 .....	58.35 \$/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 .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

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





INPUT DATA - PART I CONTINUED  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Load Management (On Call)

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Charge (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	9.81	0.00
2015	2.50	2.50	2.50	0.00	0.00%	3.00	9.48	0.00
2016	2.50	2.50	2.50	0.00	0.00%	3.00	9.64	0.00
2017	2.50	2.50	2.50	0.00	0.00%	3.00	9.96	0.00
2018	2.50	2.50	2.50	0.00	0.00%	3.00	10.53	0.00
2019	2.50	2.50	2.50	3.85	55.85%	3.00	11.24	0.00
2020	2.50	2.50	2.50	4.03	95.39%	3.00	11.46	0.00
2021	2.50	2.50	2.50	4.10	95.40%	3.00	11.75	0.00
2022	2.50	2.50	2.50	4.23	95.37%	3.00	12.28	0.00
2023	2.50	2.50	2.50	4.42	94.99%	3.00	12.12	0.00
2024	2.50	2.50	2.50	4.69	94.40%	3.00	12.26	0.00
2025	2.50	2.50	2.50	4.88	93.42%	3.00	12.23	0.00
2026	2.50	2.50	2.50	5.08	88.94%	3.00	12.31	0.00
2027	2.50	2.50	2.50	5.31	87.68%	3.00	12.47	0.00
2028	2.50	2.50	2.50	5.59	87.36%	3.00	12.63	0.00
2029	2.50	2.50	2.50	5.79	87.30%	3.00	12.82	0.00
2030	2.50	2.50	2.50	5.88	88.13%	3.00	12.98	0.00
2031	2.50	2.50	2.50	6.13	88.44%	3.00	13.17	0.00
2032	2.50	2.50	2.50	6.32	89.14%	3.00	13.58	0.00
2033	2.50	2.50	2.50	6.59	89.64%	3.00	14.25	0.00
2034	2.50	2.50	2.50	6.84	89.85%	3.00	14.60	0.00
2035	2.50	2.50	2.50	7.09	89.65%	3.00	14.85	0.00
2036	2.50	2.50	2.50	7.31	90.14%	3.00	15.45	0.00
2037	2.50	2.50	2.50	7.63	89.91%	3.00	15.76	0.00
2038	2.50	2.50	2.50	7.92	89.91%	3.00	16.09	0.00
2039	2.50	2.50	2.50	8.22	89.91%	3.00	16.40	0.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	16.68	0.00
2041	2.50	2.50	2.50	8.79	89.82%	3.00	17.05	0.00
2042	2.50	2.50	2.50	9.18	89.85%	3.00	17.40	0.00
2043	2.50	2.50	2.50	9.48	89.84%	3.00	17.98	0.00
2044	2.50	2.50	2.50	9.88	89.93%	3.00	18.43	0.00
2045	2.50	2.50	2.50	10.25	89.91%	3.00	18.90	0.00
2046	2.50	2.50	2.50	10.63	89.91%	3.00	19.39	0.00
2047	2.50	2.50	2.50	10.97	89.83%	3.00	19.90	0.00
2048	2.50	2.50	2.50	11.44	89.92%	3.00	20.42	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	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	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	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	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
	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%	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	0.00	0.00	0.00%	0.00	0.00	0.00

Column (1) used for:  
 Utility Cost  
 Customer Equipment  
 Supply Costs

Column (6) used for:  
 Gen, Tran, & Dist Cost

Column (3) used for:  
 Customer O&M Cost  
 Generator Fixed O&M  
 T&D Fixed O&M  
 Generator Variable O&M

CALCULATION OF GEN K-FACTOR  
PROGRAM METHOD SELECTED REV\_REQ  
PROGRAM NAME: Residential Load Management (On Call)

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) WORTH FIXED CHARGES \$(000)	(13) CUMULATIVE PW FIXED CHARGES \$(000)	(14) REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	66,070	1,372	0	4,136	2,536	1,146	35	2,172	134	11,530	11,530	11,530	65,155
2020	63,764	1,324	0	3,992	1,587	1,107	35	2,172	991	11,208	10,423	21,953	66,784
2021	60,601	1,258	0	3,794	1,597	1,067	36	2,172	887	10,782	9,324	31,276	68,454
2022	57,572	1,195	0	3,604	1,601	1,028	37	2,172	784	10,371	8,340	39,617	70,165
2023	54,666	1,135	0	3,422	1,602	988	38	2,172	619	9,976	7,460	47,077	71,919
2024	51,875	1,077	0	3,247	1,598	949	39	2,172	513	9,595	6,673	53,750	73,717
2025	49,190	1,021	0	3,079	1,591	909	40	2,172	415	9,227	5,967	59,717	75,560
2026	46,604	968	0	2,917	1,580	870	41	2,172	324	8,872	5,335	65,052	77,449
2027	44,108	916	0	2,761	1,496	830	42	2,172	310	8,527	4,768	69,821	79,385
2028	41,626	864	0	2,606	1,399	791	43	2,172	309	8,184	4,256	74,077	81,370
2029	39,145	813	0	2,451	1,301	751	44	2,172	310	7,841	3,792	77,869	83,404
2030	36,664	761	0	2,295	1,204	711	45	2,172	309	7,498	3,372	81,241	85,489
2031	34,182	710	0	2,140	1,106	672	46	2,172	310	7,156	2,992	84,234	87,627
2032	31,701	658	0	1,985	1,009	632	48	2,172	309	6,813	2,649	86,883	89,817
2033	29,220	607	0	1,829	911	593	49	2,172	310	6,470	2,340	89,223	92,063
2034	26,739	555	0	1,674	814	553	50	2,172	309	6,127	2,061	91,284	94,364
2035	24,257	504	0	1,519	716	514	51	2,172	310	5,785	1,809	93,093	96,723
2036	21,776	452	0	1,363	619	474	53	2,172	309	5,442	1,583	94,675	99,142
2037	19,295	401	0	1,208	521	435	54	2,172	310	5,099	1,379	96,054	101,620
2038	16,813	349	0	1,053	423	395	55	2,172	309	4,757	1,196	97,251	104,161
2039	14,332	298	0	897	325	356	57	2,172	(242)	4,414	1,032	98,283	106,765
2040	12,403	258	0	776	230	316	58	2,172	(794)	4,139	900	99,183	109,434
2041	11,024	229	0	690	1,299	277	59	2,172	(794)	3,932	795	99,979	112,170
2042	9,646	200	0	604	1,245	237	61	2,172	(794)	3,725	701	100,679	114,974
2043	8,268	172	0	518	1,191	198	62	2,172	(794)	3,518	615	101,295	117,848
2044	6,890	143	0	431	1,136	158	64	2,172	(794)	3,311	539	101,833	120,794
2045	5,512	114	0	345	1,082	119	66	2,172	(794)	3,104	469	102,303	123,814
2046	4,134	86	0	259	1,028	79	67	2,172	(794)	2,897	407	102,710	126,910
2047	2,756	57	0	172	974	40	69	2,172	(794)	2,690	352	103,062	130,082
2048	1,377	29	0	86	920	(0)	71	2,172	(794)	2,483	302	103,364	133,334

**CAPITAL STRUCTURE**

SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

IN SERVICE COST (\$000)	65,155
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECT. TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Load Management (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 DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED DEPRECIATION \$(000)	DEFERRED TAX DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	2,404	2,404	2,172	2,172	2,058	2,058	134	3,429	0	0	0	134	(781)
2020	7.22%	4,627	7,031	2,172	4,344	2,058	4,344	991	3,429	0	0	0	991	210
2021	6.68%	4,280	11,311	2,172	6,516	2,058	6,173	857	3,429	0	0	0	857	1,068
2022	6.18%	3,961	15,272	2,172	8,687	2,058	8,230	734	3,429	0	0	0	734	1,802
2023	5.71%	3,662	18,934	2,172	10,859	2,058	10,288	619	3,429	0	0	0	619	2,421
2024	5.29%	3,388	22,321	2,172	13,031	2,058	12,345	513	3,429	0	0	0	513	2,934
2025	4.89%	3,133	25,454	2,172	15,203	2,058	14,403	415	3,429	0	0	0	415	3,349
2026	4.52%	2,898	28,353	2,172	17,375	2,058	16,460	324	3,429	0	0	0	324	3,673
2027	4.46%	2,860	31,213	2,172	19,547	2,058	18,518	310	3,429	0	0	0	310	3,983
2028	4.46%	2,859	34,072	2,172	21,718	2,058	20,576	309	3,429	0	0	0	309	4,292
2029	4.46%	2,860	36,932	2,172	23,890	2,058	22,633	310	3,429	0	0	0	310	4,601
2030	4.46%	2,859	39,791	2,172	26,062	2,058	24,691	309	3,429	0	0	0	309	4,911
2031	4.46%	2,860	42,651	2,172	28,234	2,058	26,748	310	3,429	0	0	0	310	5,220
2032	4.46%	2,859	45,511	2,172	30,406	2,058	28,806	309	3,429	0	0	0	309	5,530
2033	4.46%	2,860	48,371	2,172	32,578	2,058	30,863	310	3,429	0	0	0	310	5,839
2034	4.46%	2,859	51,230	2,172	34,750	2,058	32,921	309	3,429	0	0	0	309	6,148
2035	4.46%	2,860	54,090	2,172	36,921	2,058	34,978	310	3,429	0	0	0	310	6,458
2036	4.46%	2,859	56,950	2,172	39,093	2,058	37,036	309	3,429	0	0	0	309	6,767
2037	4.46%	2,860	59,810	2,172	41,265	2,058	39,093	310	3,429	0	0	0	310	7,077
2038	4.46%	2,859	62,669	2,172	43,437	2,058	41,151	309	3,429	0	0	0	309	7,386
2039	2.23%	1,430	64,099	2,172	45,609	2,058	43,209	(242)	3,429	0	0	0	(242)	7,144
2040	0.00%	0	64,099	2,172	47,781	2,058	45,266	(794)	3,429	0	0	0	(794)	6,350
2041	0.00%	0	64,099	2,172	49,952	2,058	47,324	(794)	3,429	0	0	0	(794)	5,557
2042	0.00%	0	64,099	2,172	52,124	2,058	49,381	(794)	3,429	0	0	0	(794)	4,763
2043	0.00%	0	64,099	2,172	54,296	2,058	51,439	(794)	3,429	0	0	0	(794)	3,969
2044	0.00%	0	64,099	2,172	56,468	2,058	53,496	(794)	3,429	0	0	0	(794)	3,176
2045	0.00%	0	64,099	2,172	58,640	2,058	55,554	(794)	3,429	0	0	0	(794)	2,382
2046	0.00%	0	64,099	2,172	60,812	2,058	57,611	(794)	3,429	0	0	0	(794)	1,588
2047	0.00%	0	64,099	2,172	62,983	2,058	59,669	(794)	3,429	0	0	0	(794)	794
2048	0.00%	0	64,099	2,172	65,155	2,058	61,727	(794)	3,429	0	0	0	(794)	1

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(914)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	3,429
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

page 4b DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Load Management (On Call®)

(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%	2,404	134	62,983	2,172	(781)	66,070	63,764	64,917
2020	7.22%	4,627	991	60,812	4,344	210	63,764	60,601	62,183
2021	6.68%	4,280	857	58,640	6,516	1,068	60,601	57,572	59,087
2022	6.18%	3,961	734	56,468	8,687	1,802	57,572	54,666	56,119
2023	5.71%	3,662	619	54,296	10,859	2,421	54,666	51,875	53,271
2024	5.29%	3,388	513	52,124	13,031	2,934	51,875	49,190	50,533
2025	4.89%	3,133	415	49,952	15,203	3,349	49,190	46,604	47,897
2026	4.52%	2,898	324	47,781	17,375	3,673	46,604	44,108	45,356
2027	4.46%	2,860	310	45,609	19,547	3,983	44,108	41,626	42,867
2028	4.46%	2,859	309	43,437	21,718	4,292	41,626	39,145	40,386
2029	4.46%	2,860	310	41,265	23,890	4,601	39,145	36,664	37,904
2030	4.46%	2,859	309	39,093	26,062	4,911	36,664	34,182	35,423
2031	4.46%	2,860	310	36,921	28,234	5,220	34,182	31,701	32,942
2032	4.46%	2,859	309	34,750	30,406	5,530	31,701	29,220	30,460
2033	4.46%	2,860	310	32,578	32,578	5,839	29,220	26,739	27,979
2034	4.46%	2,859	309	30,406	34,750	6,148	26,739	24,257	25,498
2035	4.46%	2,860	310	28,234	36,921	6,458	24,257	21,776	23,017
2036	4.46%	2,859	309	26,062	39,093	6,767	21,776	19,295	20,535
2037	4.46%	2,860	310	23,890	41,265	7,077	19,295	16,813	18,054
2038	4.46%	2,859	309	21,718	43,437	7,386	16,813	14,332	15,573
2039	2.23%	1,430	(242)	19,547	45,609	7,144	14,332	12,403	13,367
2040	0.00%	0	(794)	17,375	47,781	6,350	12,403	11,024	11,713
2041	0.00%	0	(794)	15,203	49,952	5,557	11,024	9,646	10,335
2042	0.00%	0	(794)	13,031	52,124	4,763	9,646	8,268	8,957
2043	0.00%	0	(794)	10,859	54,296	3,969	8,268	6,890	7,579
2044	0.00%	0	(794)	8,687	56,468	3,176	6,890	5,512	6,201
2045	0.00%	0	(794)	6,516	58,640	2,382	5,512	4,134	4,823
2046	0.00%	0	(794)	4,344	60,812	1,588	4,134	2,756	3,445
2047	0.00%	0	(794)	2,172	62,983	794	2,756	1,377	2,066
2048	0.00%	0	(794)	(0)	65,155	1	1,377	-1	688

\* 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)	(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)	
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.41	0.01	0.01	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86	
2015	-4	3.00%	1.030	0.28%	2.26	1.96	1.96	0.05	0.16	0.13	0.16	0.10	0.12	(0.02)	(0.03)	2.39	3.24	
2016	-3	3.00%	1.061	8.69%	38.88	38.88	8.69	0.81	2.54	2.54	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36	
2017	-2	3.00%	1.093	53.83%	456.61	302.97	6.76	6.76	19.90	19.90	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87	
2018	-1	3.00%	1.126	37.09%	324.11	693.33	20.74	20.74	46.81	69.41	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80	
100.00%											855.39							

	20.74	69.41	54.39	(12.98)	924.80
	BOOK BASIS	BOOK BASIS	BOOK BASIS	BOOK BASIS	TAX BASIS
	CONSTRUCTION CASH	FOR DEF. TAX	FOR DEF. TAX	FOR DEF. TAX	FOR DEF. TAX
	EQUITY AFUDC	EQUITY AFUDC	EQUITY AFUDC	EQUITY AFUDC	EQUITY AFUDC
	DEBT AFUDC	DEBT AFUDC	DEBT AFUDC	DEBT AFUDC	DEBT AFUDC
	CPI	CPI	CPI	CPI	CPI
	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
	65.155	61.727	3.832	64.097	64.097

\* Column not specified in workbook

INPUT DATA -- PART 2  
PROGRAM METHOD/SELECTED: REV\_REQ  
PROGRAM NAME: Residential Load Management (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 (C/KWh)	AVOIDED MARGINAL FUEL COST (C/KWh)	INCREASED MARGINAL FUEL COST (C/KWh)	REPLACEMENT FUEL COST (C/KWh)	PROGRAM KW EFFECTIVENESS FACTOR	PROGRAM kWh EFFECTIVENESS FACTOR
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	12,000	12,000	4.45	8.42	4.45	0.00	1.00	1.00
2016	24,000	24,000	4.92	12.24	4.92	0.00	1.00	1.00
2017	36,000	36,000	4.27	10.29	4.27	0.00	1.00	1.00
2018	48,000	48,000	5.27	11.75	5.27	0.00	1.00	1.00
2019	48,000	48,000	5.38	16.61	5.38	5.05	1.00	1.00
2020	48,000	48,000	5.65	18.15	5.65	5.04	1.00	1.00
2021	48,000	48,000	5.60	15.84	5.60	5.09	1.00	1.00
2022	48,000	48,000	5.60	14.15	5.60	5.20	1.00	1.00
2023	48,000	48,000	5.81	14.12	5.81	5.51	1.00	1.00
2024	48,000	48,000	5.98	17.69	5.98	5.65	1.00	1.00
2025	48,000	48,000	5.73	19.09	5.73	5.77	1.00	1.00
2026	48,000	48,000	6.01	16.85	6.01	6.08	1.00	1.00
2027	48,000	48,000	6.07	17.17	6.07	6.19	1.00	1.00
2028	48,000	48,000	6.28	13.07	6.28	6.49	1.00	1.00
2029	48,000	48,000	6.34	14.76	6.34	6.45	1.00	1.00
2030	48,000	48,000	6.57	17.01	6.57	6.72	1.00	1.00
2031	48,000	48,000	6.62	15.42	6.62	6.76	1.00	1.00
2032	48,000	48,000	6.97	16.02	6.97	7.11	1.00	1.00
2033	48,000	48,000	7.05	13.20	7.05	7.29	1.00	1.00
2034	48,000	48,000	7.19	11.99	7.19	7.50	1.00	1.00
2035	48,000	48,000	7.47	17.33	7.47	7.70	1.00	1.00
2036	48,000	48,000	7.68	17.92	7.68	8.02	1.00	1.00
2037	48,000	48,000	7.94	16.32	7.94	8.33	1.00	1.00
2038	48,000	48,000	8.12	13.64	8.12	8.53	1.00	1.00
2039	48,000	48,000	8.35	14.31	8.35	8.87	1.00	1.00
2040	48,000	48,000	8.67	15.52	8.67	9.13	1.00	1.00
2041	48,000	48,000	8.99	18.22	8.99	9.47	1.00	1.00
2042	48,000	48,000	9.27	16.85	9.27	9.80	1.00	1.00
2043	48,000	48,000	9.60	18.50	9.60	10.25	1.00	1.00
2044	48,000	48,000	9.94	16.83	9.94	10.58	1.00	1.00
2045	48,000	48,000	10.25	13.72	10.25	10.92	1.00	1.00
2046	48,000	48,000	10.57	14.20	10.57	11.29	1.00	1.00
2047	48,000	48,000	11.00	18.99	11.00	11.78	1.00	1.00
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.



page 8  
 AVOIDED T&D AND PROGRAM FUEL SAVINGS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Load Management (On Call®)

(1) YEAR	(2) AVOIDED TRANSMISSION CAP COST \$(000)	(3) AVOIDED TRANSMISSION O&M COST \$(000)	(4) TOTAL AVOIDED TRANSMISSION CAP COST \$(000)	(5) AVOIDED DISTRIBUTION CAP COST \$(000)	(6) AVOIDED DISTRIBUTION O&M COST \$(000)	(7) TOTAL AVOIDED DISTRIBUTION CAP COST \$(000)	(8) PROGRAM FUEL SAVINGS \$(000)	(8a)* PROGRAM OFF-PEAK PAYBACK \$(000)
2014	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	1	0
2016	0	0	0	0	0	0	5	1
2017	0	0	0	0	0	0	6	1
2018	0	0	0	0	0	0	10	2
2019	0	0	0	0	0	0	17	2
2020	0	0	0	0	0	0	20	2
2021	0	0	0	0	0	0	19	2
2022	0	0	0	0	0	0	16	2
2023	0	0	0	0	0	0	14	2
2024	0	0	0	0	0	0	14	3
2025	0	0	0	0	0	0	18	3
2026	0	0	0	0	0	0	20	3
2027	0	0	0	0	0	0	17	3
2028	0	0	0	0	0	0	17	3
2029	0	0	0	0	0	0	13	3
2030	0	0	0	0	0	0	15	3
2031	0	0	0	0	0	0	17	3
2032	0	0	0	0	0	0	15	3
2033	0	0	0	0	0	0	16	3
2034	0	0	0	0	0	0	13	3
2035	0	0	0	0	0	0	11	3
2036	0	0	0	0	0	0	17	3
2037	0	0	0	0	0	0	18	3
2038	0	0	0	0	0	0	16	3
2039	0	0	0	0	0	0	13	4
2040	0	0	0	0	0	0	14	4
2041	0	0	0	0	0	0	15	4
2042	0	0	0	0	0	0	18	4
2043	0	0	0	0	0	0	16	4
2044	0	0	0	0	0	0	18	4
2045	0	0	0	0	0	0	16	4
2046	0	0	0	0	0	0	12	4
2047	0	0	0	0	0	0	13	5
2048	0	0	0	0	0	0	18	5
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
NOM.	0	0	0	0	0	0	497	101
NPV	0	0	0	0	0	0	161	28

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











I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.21 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.27942 kW
(3) KW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	520.98 kWh
(5) kWh LINE LOSS PERCENTAGE .....	5.76 %
(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 .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

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 .....	7.54 %
(11) UTILITY AFDUC RATE .....	6.50 %
(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 .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	146.90 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	24.85 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	58.35 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	5.53 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	2.34 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

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

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

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2014	0	0	0	0	0	0	0	0	0	
2015	600	4,864	0	5,464	544	17,388	0	0	17,388	
2016	780	6,173	0	6,953	1,811	22,618	0	0	22,618	
2017	817	6,307	0	7,124	3,337	23,687	0	0	23,687	
2018	853	6,430	0	7,283	5,116	24,751	0	0	24,751	
2019	0	0	0	0	6,310	0	0	0	0	
2020	0	0	0	0	6,456	0	0	0	0	
2021	0	0	0	0	6,599	0	0	0	0	
2022	0	0	0	0	6,897	0	0	0	0	
2023	0	0	0	0	6,803	0	0	0	0	
2024	0	0	0	0	6,886	0	0	0	0	
2025	0	0	0	0	6,865	0	0	0	0	
2026	0	0	0	0	6,911	0	0	0	0	
2027	0	0	0	0	7,003	0	0	0	0	
2028	0	0	0	0	7,091	0	0	0	0	
2029	0	0	0	0	7,198	0	0	0	0	
2030	868	4,864	0	5,733	7,286	25,183	0	0	25,183	
2031	1,130	6,173	0	7,303	7,397	32,758	0	0	32,758	
2032	1,183	6,307	0	7,490	7,626	34,306	0	0	34,306	
2033	1,236	6,430	0	7,666	8,001	35,847	0	0	35,847	
2034	0	0	0	0	8,198	0	0	0	0	
2035	0	0	0	0	8,336	0	0	0	0	
2036	0	0	0	0	8,674	0	0	0	0	
2037	0	0	0	0	8,847	0	0	0	0	
2038	0	0	0	0	9,033	0	0	0	0	
2039	0	0	0	0	9,211	0	0	0	0	
2040	0	0	0	0	9,368	0	0	0	0	
2041	0	0	0	0	9,575	0	0	0	0	
2042	0	0	0	0	9,768	0	0	0	0	
2043	0	0	0	0	10,095	0	0	0	0	
2044	0	0	0	0	10,349	0	0	0	0	
2045	1,258	4,864	0	6,122	10,613	36,472	0	0	36,472	
2046	1,636	6,173	0	7,809	10,888	47,443	0	0	47,443	
2047	1,713	6,307	0	8,021	11,172	49,685	0	0	49,685	
2048	1,790	6,430	0	8,220	11,468	51,918	0	0	51,918	
2049	0	0	0	0	0	0	0	0	0	
2050	0	0	0	0	0	0	0	0	0	
2051	0	0	0	0	0	0	0	0	0	
2052	0	0	0	0	0	0	0	0	0	
2053	0	0	0	0	0	0	0	0	0	
2054	0	0	0	0	0	0	0	0	0	
2055	0	0	0	0	0	0	0	0	0	
2056	0	0	0	0	0	0	0	0	0	
2057	0	0	0	0	0	0	0	0	0	
2058	0	0	0	0	0	0	0	0	0	
2059	0	0	0	0	0	0	0	0	0	
2060	0	0	0	0	0	0	0	0	0	
NOM	13,864	71,325	0	85,189	261,711	402,056	0	0	402,056	
NPV	4,358	28,615	0	32,973	74,849	126,370	0	0	126,370	

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

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

ESCALATION RATES

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Charge (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	9.81	0.00
2015	2.50	2.50	2.50	0.00	0.00%	3.00	9.48	0.00
2016	2.50	2.50	2.50	0.00	0.00%	3.00	9.64	0.00
2017	2.50	2.50	2.50	0.00	0.00%	3.00	9.96	0.00
2018	2.50	2.50	2.50	0.00	0.00%	3.00	10.53	0.00
2019	2.50	2.50	2.50	3.85	55.85%	3.00	11.24	0.00
2020	2.50	2.50	2.50	4.03	95.39%	3.00	11.46	0.00
2021	2.50	2.50	2.50	4.10	95.40%	3.00	11.75	0.00
2022	2.50	2.50	2.50	4.23	95.37%	3.00	12.28	0.00
2023	2.50	2.50	2.50	4.42	94.99%	3.00	12.12	0.00
2024	2.50	2.50	2.50	4.69	94.40%	3.00	12.26	0.00
2025	2.50	2.50	2.50	4.88	93.42%	3.00	12.23	0.00
2026	2.50	2.50	2.50	5.08	88.94%	3.00	12.31	0.00
2027	2.50	2.50	2.50	5.31	87.68%	3.00	12.47	0.00
2028	2.50	2.50	2.50	5.59	87.36%	3.00	12.63	0.00
2029	2.50	2.50	2.50	5.79	87.30%	3.00	12.82	0.00
2030	2.50	2.50	2.50	5.88	88.13%	3.00	12.98	0.00
2031	2.50	2.50	2.50	6.13	88.44%	3.00	13.17	0.00
2032	2.50	2.50	2.50	6.32	89.14%	3.00	13.58	0.00
2033	2.50	2.50	2.50	6.59	89.64%	3.00	14.25	0.00
2034	2.50	2.50	2.50	6.84	89.85%	3.00	14.60	0.00
2035	2.50	2.50	2.50	7.09	89.65%	3.00	14.85	0.00
2036	2.50	2.50	2.50	7.31	90.14%	3.00	15.45	0.00
2037	2.50	2.50	2.50	7.63	89.91%	3.00	15.76	0.00
2038	2.50	2.50	2.50	7.92	89.91%	3.00	16.09	0.00
2039	2.50	2.50	2.50	8.22	89.91%	3.00	16.40	0.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	16.68	0.00
2041	2.50	2.50	2.50	8.79	89.82%	3.00	17.05	0.00
2042	2.50	2.50	2.50	9.18	89.85%	3.00	17.40	0.00
2043	2.50	2.50	2.50	9.48	89.84%	3.00	17.98	0.00
2044	2.50	2.50	2.50	9.88	89.93%	3.00	18.43	0.00
2045	2.50	2.50	2.50	10.25	89.91%	3.00	18.90	0.00
2046	2.50	2.50	2.50	10.63	89.91%	3.00	19.39	0.00
2047	2.50	2.50	2.50	10.97	89.83%	3.00	19.90	0.00
2048	2.50	2.50	2.50	11.44	89.92%	3.00	20.42	0.00

Column (1) used for:

- Utility Cost
- Customer Equipment
- Supply Costs

Column (6) used for:

- Gen. Tran. & Dist Cost

Column (3) used for:

- Customer O&M Cost
- Generator Fixed O&M
- T&D Fixed O&M
- Generator Variable O&M

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

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	29,967	622	0	1,876	1,150	520	16	985	61	5,230	5,230	5,230	29,552
2020	28,921	601	0	1,810	720	502	16	985	480	5,084	4,727	9,957	30,291
2021	27,487	571	0	1,721	724	484	16	985	389	4,890	4,229	14,186	31,048
2022	26,113	542	0	1,635	726	466	17	985	332	4,704	3,783	17,969	31,824
2023	24,795	515	0	1,552	727	448	17	985	281	4,525	3,384	21,353	32,620
2024	23,529	489	0	1,473	725	430	18	985	233	4,352	3,027	24,379	33,436
2025	22,311	463	0	1,397	722	412	18	985	188	4,185	2,707	27,086	34,271
2026	21,138	439	0	1,323	716	394	19	985	147	4,024	2,420	29,505	35,128
2027	20,006	415	0	1,252	679	376	19	985	109	3,867	2,163	31,668	36,006
2028	18,880	392	0	1,182	635	359	20	985	74	3,712	1,930	33,599	36,907
2029	17,755	369	0	1,111	590	341	20	985	40	3,556	1,720	35,319	37,829
2030	16,629	345	0	1,041	546	323	21	985	10	3,401	1,529	36,848	38,775
2031	15,504	322	0	971	502	305	21	985	10	3,245	1,357	38,205	39,744
2032	14,378	299	0	900	458	287	22	985	10	3,090	1,202	39,407	40,738
2033	13,253	275	0	830	413	269	22	985	10	2,935	1,061	40,468	41,756
2034	12,128	252	0	759	369	251	23	985	10	2,779	935	41,403	42,800
2035	11,002	228	0	689	325	233	23	985	10	2,624	821	42,223	43,870
2036	9,877	205	0	618	281	215	24	985	10	2,468	718	42,941	44,967
2037	8,751	182	0	548	236	197	24	985	10	2,313	626	43,567	46,091
2038	7,626	158	0	477	192	179	25	985	10	2,157	543	44,109	47,244
2039	6,501	135	0	407	148	161	26	985	(110)	2,002	468	44,578	48,425
2040	5,375	112	0	335	104	143	26	985	(360)	1,877	408	44,986	49,635
2041	4,250	90	0	264	61	125	27	985	(600)	1,784	361	45,347	50,876
2042	3,125	68	0	193	20	108	28	985	(840)	1,690	318	45,665	52,148
2043	2,000	46	0	122	0	90	28	985	(960)	1,596	279	45,944	53,452
2044	1,875	24	0	51	0	72	29	985	(960)	1,502	244	46,188	54,788
2045	1,750	12	0	0	0	54	30	985	(960)	1,408	213	46,401	56,158
2046	1,625	6	0	0	0	36	31	985	(960)	1,314	185	46,586	57,562
2047	1,500	3	0	0	0	18	31	985	(960)	1,220	160	46,745	59,001
2048	625	1	0	0	0	0	32	985	(960)	1,126	137	46,882	60,476

**CAPITAL STRUCTURE**

SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

IN SERVICE COST (\$000)	29,552
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECT. TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642



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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED DEPRECIATION \$(000)	BOOK FOR DEPRECIATION \$(000)	ACCUMULATED BOOK DEPR FOR DEPR \$(000)	DEFERRED TAX 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%	1,090	1,090	985	985	933	933	61	1,555	0	0	0	61	(354)
2020	7.22%	2,099	3,189	985	1,970	933	1,866	450	1,555	0	0	0	450	95
2021	6.68%	1,941	5,130	985	2,955	933	2,800	389	1,555	0	0	0	389	484
2022	6.18%	1,797	6,927	985	3,940	933	3,733	333	1,555	0	0	0	333	817
2023	5.71%	1,661	8,588	985	4,925	933	4,666	281	1,555	0	0	0	281	1,098
2024	5.29%	1,536	10,124	985	5,910	933	5,599	233	1,555	0	0	0	233	1,331
2025	4.89%	1,421	11,545	985	6,895	933	6,533	188	1,555	0	0	0	188	1,519
2026	4.52%	1,315	12,860	985	7,881	933	7,466	147	1,555	0	0	0	147	1,666
2027	4.46%	1,297	14,157	985	8,866	933	8,399	140	1,555	0	0	0	140	1,806
2028	4.46%	1,297	15,454	985	9,851	933	9,332	140	1,555	0	0	0	140	1,947
2029	4.46%	1,297	16,751	985	10,836	933	10,266	140	1,555	0	0	0	140	2,087
2030	4.46%	1,297	18,048	985	11,821	933	11,199	140	1,555	0	0	0	140	2,227
2031	4.46%	1,297	19,345	985	12,806	933	12,132	140	1,555	0	0	0	140	2,368
2032	4.46%	1,297	20,642	985	13,791	933	13,065	140	1,555	0	0	0	140	2,508
2033	4.46%	1,297	21,939	985	14,776	933	13,998	140	1,555	0	0	0	140	2,648
2034	4.46%	1,297	23,236	985	15,761	933	14,932	140	1,555	0	0	0	140	2,789
2035	4.46%	1,297	24,533	985	16,746	933	15,865	140	1,555	0	0	0	140	2,929
2036	4.46%	1,297	25,830	985	17,731	933	16,798	140	1,555	0	0	0	140	3,069
2037	4.46%	1,297	27,127	985	18,716	933	17,731	140	1,555	0	0	0	140	3,210
2038	4.46%	1,297	28,424	985	19,701	933	18,665	140	1,555	0	0	0	140	3,350
2039	2.23%	649	29,073	985	20,686	933	19,598	(110)	1,555	0	0	0	(110)	3,240
2040	0.00%	0	29,073	985	21,672	933	20,531	(360)	1,555	0	0	0	(360)	2,880
2041	0.00%	0	29,073	985	22,657	933	21,464	(360)	1,555	0	0	0	(360)	2,520
2042	0.00%	0	29,073	985	23,642	933	22,398	(360)	1,555	0	0	0	(360)	2,160
2043	0.00%	0	29,073	985	24,627	933	23,331	(360)	1,555	0	0	0	(360)	1,800
2044	0.00%	0	29,073	985	25,612	933	24,264	(360)	1,555	0	0	0	(360)	1,440
2045	0.00%	0	29,073	985	26,597	933	25,197	(360)	1,555	0	0	0	(360)	1,080
2046	0.00%	0	29,073	985	27,582	933	26,130	(360)	1,555	0	0	0	(360)	720
2047	0.00%	0	29,073	985	28,567	933	27,064	(360)	1,555	0	0	0	(360)	360
2048	0.00%	0	29,073	985	29,552	933	27,997	(360)	1,555	0	0	0	(360)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(415)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	1,555
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

page 4b DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Air Conditioning

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	END OF YEAR NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2019	3.75%	1,090	61	28,367	985	(354)	29,967	28,921	29,444
2020	7.22%	2,099	450	27,582	1,970	95	28,921	27,487	28,204
2021	6.68%	1,941	389	26,597	2,955	484	27,487	26,113	26,800
2022	6.18%	1,797	333	25,612	3,940	817	26,113	24,795	25,454
2023	5.71%	1,661	281	24,627	4,925	1,098	24,795	23,529	24,162
2024	5.29%	1,536	233	23,642	5,910	1,331	23,529	22,311	22,920
2025	4.89%	1,421	188	22,657	6,895	1,519	22,311	21,138	21,724
2026	4.52%	1,315	147	21,672	7,881	1,666	21,138	20,006	20,572
2027	4.46%	1,297	140	20,686	8,866	1,806	20,006	18,880	19,443
2028	4.46%	1,297	140	19,701	9,851	1,947	18,880	17,755	18,317
2029	4.46%	1,297	140	18,716	10,836	2,087	17,755	16,629	17,192
2030	4.46%	1,297	140	17,731	11,821	2,227	16,629	15,504	16,067
2031	4.46%	1,297	140	16,746	12,806	2,368	15,504	14,378	14,941
2032	4.46%	1,297	140	15,761	13,791	2,508	14,378	13,253	13,816
2033	4.46%	1,297	140	14,776	14,776	2,648	13,253	12,128	12,690
2034	4.46%	1,297	140	13,791	15,761	2,789	12,128	11,002	11,565
2035	4.46%	1,297	140	12,806	16,746	2,929	11,002	9,877	10,440
2036	4.46%	1,297	140	11,821	17,731	3,069	9,877	8,751	9,314
2037	4.46%	1,297	140	10,836	18,716	3,210	8,751	7,626	8,189
2038	4.46%	1,297	140	9,851	19,701	3,350	7,626	6,501	7,063
2039	2.23%	649	(110)	8,866	20,686	3,240	6,501	5,625	6,063
2040	0.00%	0	(360)	7,881	21,672	2,880	5,625	5,000	5,313
2041	0.00%	0	(360)	6,895	22,657	2,520	5,000	4,375	4,688
2042	0.00%	0	(360)	5,910	23,642	2,160	4,375	3,750	4,063
2043	0.00%	0	(360)	4,925	24,627	1,800	3,750	3,125	3,438
2044	0.00%	0	(360)	3,940	25,612	1,440	3,125	2,500	2,813
2045	0.00%	0	(360)	2,955	26,597	1,080	2,500	1,875	2,187
2046	0.00%	0	(360)	1,970	27,582	720	1,875	1,250	1,562
2047	0.00%	0	(360)	985	28,567	360	1,250	625	937
2048	0.00%	0	(360)	0	29,552	0	625	0	312

\* 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)	(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)	
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.41	0.01	0.01	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86	
2015	-4	3.00%	1.030	0.28%	2.26	1.96	1.96	0.05	0.05	0.13	0.16	0.10	0.12	(0.02)	(0.02)	2.39	3.24	
2016	-3	3.00%	1.061	8.69%	38.88	38.88	0.81	0.81	2.54	2.70	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36	
2017	-2	3.00%	1.093	53.83%	456.61	302.97	6.76	6.76	19.90	22.60	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87	
2018	-1	3.00%	1.126	37.09%	324.11	693.33	20.74	20.74	46.81	69.41	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80	
100.00%											855.39							

20.74	69.41	54.39	(12.98)	924.80
CONSTRUCTION CASH	BOOK BASIS FOR DEF TAX	BOOK BASIS FOR DEF TAX	TAX BASIS	
EQUITY AFUDC	27,334	27,334	27,334	
DEBT AFUDC	1,555	663	1,738	
CPI	663	27,997	29,072	
TOTAL	29,552	27,997	1,738	29,072

\* Column not specified in workbook

IN SERVICE YEAR	2019
PLANT COSTS	776,326,845
AFUDC RATE	6.50%

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

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (C/KWh)	AVOIDED MARGINAL FUEL COST (C/KWh)	INCREASED MARGINAL FUEL COST (C/KWh)	REPLACEMENT FUEL COST (C/KWh)	PROGRAM KW EFFECTIVENESS FACTOR	PROGRAM kWh EFFECTIVENESS FACTOR
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	23,398	23,398	4.45	6.49	4.88	0.00	1.00	1.00
2016	53,092	53,092	4.92	9.38	5.45	0.00	1.00	1.00
2017	83,432	83,432	4.27	6.17	4.55	0.00	1.00	1.00
2018	114,360	114,360	5.27	8.19	5.66	0.00	1.00	1.00
2019	114,360	114,360	5.38	8.31	5.77	5.05	1.00	1.00
2020	114,360	114,360	5.65	9.00	6.07	5.04	1.00	1.00
2021	114,360	114,360	5.65	8.73	6.06	5.12	1.00	1.00
2022	114,360	114,360	5.60	8.18	5.97	5.09	1.00	1.00
2023	114,360	114,360	5.60	7.64	5.94	5.20	1.00	1.00
2024	114,360	114,360	5.81	7.77	6.15	5.51	1.00	1.00
2025	114,360	114,360	5.98	8.02	6.33	5.65	1.00	1.00
2026	114,360	114,360	5.73	7.35	6.02	5.77	1.00	1.00
2027	114,360	114,360	6.01	8.04	6.35	6.08	1.00	1.00
2028	114,360	114,360	6.07	7.61	6.40	6.19	1.00	1.00
2029	114,360	114,360	6.28	7.95	6.63	6.49	1.00	1.00
2030	114,360	114,360	6.34	7.80	6.64	6.45	1.00	1.00
2031	114,360	114,360	6.57	8.13	6.84	6.72	1.00	1.00
2032	114,360	114,360	6.62	7.79	6.84	6.76	1.00	1.00
2033	114,360	114,360	6.97	8.50	7.20	7.11	1.00	1.00
2034	114,360	114,360	7.05	8.23	7.26	7.29	1.00	1.00
2035	114,360	114,360	7.19	8.31	7.39	7.50	1.00	1.00
2036	114,360	114,360	7.47	8.71	7.67	7.70	1.00	1.00
2037	114,360	114,360	7.68	9.05	7.89	8.02	1.00	1.00
2038	114,360	114,360	7.94	9.30	8.15	8.33	1.00	1.00
2039	114,360	114,360	8.12	9.43	8.32	8.53	1.00	1.00
2040	114,360	114,360	8.35	9.71	8.54	8.87	1.00	1.00
2041	114,360	114,360	8.67	10.09	8.87	9.13	1.00	1.00
2042	114,360	114,360	8.99	10.60	9.21	9.47	1.00	1.00
2043	114,360	114,360	9.27	10.84	9.49	9.80	1.00	1.00
2044	114,360	114,360	9.60	11.28	9.83	10.25	1.00	1.00
2045	114,360	114,360	9.94	11.60	10.17	10.58	1.00	1.00
2046	114,360	114,360	10.25	11.82	10.46	10.92	1.00	1.00
2047	114,360	114,360	10.57	12.22	10.80	11.29	1.00	1.00
2048	114,360	114,360	11.00	12.87	11.24	11.78	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.





A VOIDED GENERATING EMISSION IMPACT  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Air Conditioning

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2014	0	0	0	0	0
2015	0	0	1	0	1
2016	0	0	1	0	1
2017	0	0	1	0	1
2018	0	0	2	0	2
2019	3	5	2	0	0
2020	5	8	2	0	(0)
2021	5	8	2	0	(0)
2022	5	8	2	0	(0)
2023	6	8	2	0	(0)
2024	6	8	2	0	(0)
2025	6	8	2	0	(0)
2026	6	8	2	0	(0)
2027	6	8	2	0	(0)
2028	6	8	2	0	0
2029	6	8	2	0	(0)
2030	6	8	2	0	0
2031	7	9	2	0	(0)
2032	7	9	2	0	(0)
2033	7	9	2	0	(0)
2034	7	9	2	0	(0)
2035	7	9	2	0	(0)
2036	7	10	2	0	(0)
2037	7	10	2	0	(0)
2038	8	10	2	0	(0)
2039	8	10	2	0	(0)
2040	8	11	3	0	0
2041	8	11	3	0	0
2042	8	11	3	0	(0)
2043	9	11	3	0	(0)
2044	9	12	3	0	(0)
2045	9	12	3	0	(0)
2046	9	12	3	0	(0)
2047	10	13	3	0	(0)
2048	10	13	3	0	(0)
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	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	209	281	75	0	3
NPV	54	74	23	0	3





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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
YEAR	SAVINGS IN PARTICIPANTS BILLS \$(000)	TAX CREDITS \$(000)	UTILITY REBATES \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	CUSTOMER EQUIPMENT COSTS \$(000)	CUSTOMER O&M COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2014	0	0	0	0	0	0	0	0	0	0	0
2015	716	0	4,864	0	5,581	17,388	0	0	17,388	(11,807)	(10,980)
2016	2,382	0	6,173	0	8,556	22,618	0	0	22,618	(4,062)	(14,040)
2017	4,391	0	6,307	0	10,699	23,687	0	0	23,687	(2,988)	(33,585)
2018	6,731	0	6,430	0	13,161	24,751	0	0	24,751	(1,590)	(42,253)
2019	8,303	0	0	0	8,303	0	0	0	0	8,303	(36,479)
2020	8,468	0	0	0	8,468	0	0	0	0	8,468	(31,003)
2021	8,683	0	0	0	8,683	0	0	0	0	8,683	(25,781)
2022	9,075	0	0	0	9,075	0	0	0	0	9,075	(20,706)
2023	8,951	0	0	0	8,951	0	0	0	0	8,951	(16,051)
2024	9,061	0	0	0	9,061	0	0	0	0	9,061	(11,669)
2025	9,032	0	0	0	9,032	0	0	0	0	9,032	(7,607)
2026	9,094	0	0	0	9,094	0	0	0	0	9,094	(3,804)
2027	9,214	0	0	0	9,214	0	0	0	0	9,214	(221)
2028	9,330	0	0	0	9,330	0	0	0	0	9,330	3,154
2029	9,471	0	0	0	9,471	0	0	0	0	9,471	6,339
2030	9,587	0	4,864	0	14,451	25,183	0	0	25,183	(10,731)	2,983
2031	9,733	0	6,173	0	15,906	32,758	0	0	32,758	(16,851)	(1,918)
2032	10,034	0	6,307	0	16,341	34,306	0	0	34,306	(17,965)	(6,777)
2033	10,528	0	6,430	0	16,958	35,847	0	0	35,847	(18,889)	(11,527)
2034	10,786	0	0	0	10,786	0	0	0	0	10,786	(9,005)
2035	10,968	0	0	0	10,968	0	0	0	0	10,968	(6,619)
2036	11,413	0	0	0	11,413	0	0	0	0	11,413	(4,311)
2037	11,641	0	0	0	11,641	0	0	0	0	11,641	(2,122)
2038	11,886	0	0	0	11,886	0	0	0	0	11,886	(43)
2039	12,120	0	0	0	12,120	0	0	0	0	12,120	1,928
2040	12,326	0	0	0	12,326	0	0	0	0	12,326	3,793
2041	12,598	0	0	0	12,598	0	0	0	0	12,598	5,565
2042	12,853	0	0	0	12,853	0	0	0	0	12,853	7,246
2043	13,283	0	0	0	13,283	0	0	0	0	13,283	8,861
2044	13,617	0	0	0	13,617	0	0	0	0	13,617	10,401
2045	13,965	0	4,864	0	18,829	36,472	0	0	36,472	(17,643)	8,546
2046	14,326	0	6,173	0	20,499	47,443	0	0	47,443	(26,944)	5,910
2047	14,700	0	6,307	0	21,008	49,685	0	0	49,685	(28,677)	3,302
2048	15,089	0	6,430	0	21,519	51,918	0	0	51,918	(30,398)	731
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
NOM	344,357	0	71,325	0	415,682	402,056	0	0	402,056	13,625	731
NPV	98,485	0	28,615	0	127,100	126,370	0	0	126,370	731	0

In Service of Gen Unit:  
Discount Rate: 7.54 %  
Benefit/Cost Ratio ( Col(6) / Col(10))

PROGRAM NAME: Residential Air Conditioning

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(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)
2014	0	0	0	0	0	0	435	0	0	0	0	0	0
2015	0	600	4,864	544	0	6,008	435	0	0	1	435	(5,573)	(5,183)
2016	0	780	6,173	8,764	0	8,764	2,150	232	0	1	2,383	(6,381)	(10,701)
2017	0	817	6,307	3,337	0	10,462	2,408	529	0	1	2,938	(7,524)	(16,751)
2018	0	853	6,430	5,116	0	12,399	4,601	867	0	2	5,560	(6,839)	(21,866)
2019	0	0	0	6,310	0	6,310	11,085	1,145	0	0	12,230	5,920	(17,749)
2020	0	0	0	6,436	0	6,436	10,758	1,113	0	(0)	11,870	5,435	(14,234)
2021	0	0	0	6,599	0	6,599	10,372	1,082	0	(0)	11,453	4,854	(11,315)
2022	0	0	0	6,897	0	6,897	10,240	1,052	0	(0)	11,292	4,395	(8,857)
2023	0	0	0	6,803	0	6,803	9,939	1,025	0	(0)	10,964	4,161	(6,693)
2024	0	0	0	6,886	0	6,886	9,774	999	0	(0)	10,773	3,887	(4,813)
2025	0	0	0	6,865	0	6,865	10,021	973	0	(0)	10,994	4,129	(2,956)
2026	0	0	0	6,911	0	6,911	9,695	948	0	(0)	10,642	3,731	(1,396)
2027	0	0	0	7,003	0	7,003	9,940	923	0	(0)	10,863	3,860	105
2028	0	0	0	7,091	0	7,091	9,912	898	0	(0)	10,810	3,719	1,450
2029	0	0	0	7,198	0	7,198	9,838	873	0	(0)	10,711	3,513	2,632
2030	0	868	4,864	7,286	0	13,019	9,931	848	0	(0)	10,780	(2,239)	1,932
2031	0	1,130	6,173	7,397	0	14,700	10,005	825	0	(0)	10,830	(3,870)	806
2032	0	1,183	6,307	7,626	0	15,116	10,006	803	0	(0)	10,810	(4,306)	(359)
2033	0	1,236	6,430	8,001	0	15,667	10,224	786	0	(0)	11,010	(4,658)	(1,530)
2034	0	0	0	8,198	0	8,198	10,081	772	0	(0)	10,853	2,656	(909)
2035	0	0	0	8,336	0	8,336	10,154	762	0	(0)	10,916	2,580	(348)
2036	0	0	0	8,674	0	8,674	10,404	753	0	(0)	11,158	2,484	154
2037	0	0	0	8,847	0	8,847	10,541	745	0	(0)	11,286	2,439	613
2038	0	0	0	9,033	0	9,033	10,584	737	0	(0)	11,321	2,288	1,013
2039	0	0	0	9,211	0	9,211	10,842	729	0	(0)	11,572	2,560	1,597
2040	0	0	0	9,368	0	9,368	10,907	722	0	(0)	11,629	2,261	1,739
2041	0	0	0	9,575	0	9,575	11,145	716	0	(0)	11,861	2,286	2,061
2042	0	0	0	9,768	0	9,768	11,599	710	0	(0)	12,308	2,540	2,393
2043	0	0	0	10,095	0	10,095	11,695	704	0	(0)	12,398	2,304	2,673
2044	0	0	0	10,349	0	10,349	11,850	698	0	(0)	12,549	2,200	2,922
2045	0	1,258	4,864	10,613	0	16,735	12,160	693	0	(0)	12,853	(3,883)	2,513
2046	0	1,636	6,173	10,888	0	18,697	12,393	683	0	(0)	13,076	(5,621)	1,964
2047	0	1,713	6,307	11,172	0	19,193	12,579	672	0	(0)	13,251	(5,942)	1,423
2048	0	1,790	6,430	11,468	0	19,688	12,973	661	0	(0)	13,633	(6,055)	911
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
2061	0	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	0
2063	0	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	0
2065	0	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	0
2067	0	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	0
2069	0	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	0
2071	0	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	0
2073	0	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	0
2075	0	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	0
2077	0	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	0
2079	0	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	0
2081	0	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	0
2083	0	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	0
2085	0	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	0
2087	0	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	0
2089	0	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	0
2091	0	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	0
2093	0	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	0
2095	0	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	0
2097	0	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	0
2099	0	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	0
NOM	0	13,864	71,325	261,711	0	346,900	331,332	26,676	0	3	358,011	11,111	911
NPV	0	4,358	28,615	74,849	0	107,821	99,343	9,386	0	3	108,733	911	911

Discount Rate Benefit/Cost Ratio (Col(12)/ Col(7)): 7.54 % 1.01

**I. PROGRAM DEMAND SAVINGS & LINE LOSSES**

(1) CUSTOMER kW REDUCTION AT METER .....	0.70 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	0.92542 kW
(3) kW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	1,225.74 kWh
(5) kWh LINE LOSS PERCENTAGE .....	5.76 %
(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 .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

**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 .....	7.54 %
(11) UTILITY AFDUC RATE .....	6.50 %
(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 .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	146.90 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	24.85 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	58.35 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	5.53 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	2.34 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

**V. NON-FUEL ENERGY AND DEMAND CHARGES**

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

\* INPUT DATA - PART I CONTINUED  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential New Construction (BuildSmart®)

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)
2014	0	0	0	0	0	0	0	0	0	0
2015	330	1,308	0	1,637	80	0	1,741	0	0	1,741
2016	360	1,394	0	1,754	250	0	1,902	0	0	1,902
2017	397	1,499	0	1,896	444	0	2,097	0	0	2,097
2018	461	1,696	0	2,157	687	0	2,431	0	0	2,431
2019	0	0	0	0	856	0	0	0	0	0
2020	0	0	0	0	873	0	0	0	0	0
2021	0	0	0	0	895	0	0	0	0	0
2022	0	0	0	0	936	0	0	0	0	0
2023	0	0	0	0	923	0	0	0	0	0
2024	0	0	0	0	934	0	0	0	0	0
2025	0	0	0	0	931	0	0	0	0	0
2026	0	0	0	0	938	0	0	0	0	0
2027	0	0	0	0	950	0	0	0	0	0
2028	0	0	0	0	962	0	0	0	0	0
2029	0	0	0	0	977	0	0	0	0	0
2030	0	0	0	0	989	0	0	0	0	0
2031	0	0	0	0	1,004	0	0	0	0	0
2032	0	0	0	0	1,035	0	0	0	0	0
2033	0	0	0	0	1,086	0	0	0	0	0
2034	0	0	0	0	1,112	0	0	0	0	0
2035	0	0	0	0	1,151	0	0	0	0	0
2036	0	0	0	0	1,177	0	0	0	0	0
2037	0	0	0	0	1,200	0	0	0	0	0
2038	582	1,308	0	1,890	1,226	0	3,072	0	0	3,072
2039	636	1,394	0	2,030	1,250	0	3,357	0	0	3,357
2040	701	1,499	0	2,200	1,271	0	3,700	0	0	3,700
2041	813	1,696	0	2,509	1,299	0	4,290	0	0	4,290
2042	0	0	0	0	1,325	0	0	0	0	0
2043	0	0	0	0	1,370	0	0	0	0	0
2044	0	0	0	0	1,404	0	0	0	0	0
2045	0	0	0	0	1,440	0	0	0	0	0
2046	0	0	0	0	1,477	0	0	0	0	0
2047	0	0	0	0	1,516	0	0	0	0	0
2048	0	0	0	0	1,556	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
NOM	4,280	11,793	0	16,073	35,506	0	22,589	0	0	22,589
NPV	1,708	5,816	0	7,524	10,153	0	9,014	0	0	9,014

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

INPUT DATA - PART 1 CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential New Construction (BuildSmart®)

ESCALATION RATES

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Charge (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	9.81	0.00
2015	2.50	2.50	2.50	0.00	0.00%	3.00	9.48	0.00
2016	2.50	2.50	2.50	0.00	0.00%	3.00	9.64	0.00
2017	2.50	2.50	2.50	0.00	0.00%	3.00	9.96	0.00
2018	2.50	2.50	2.50	0.00	0.00%	3.00	10.53	0.00
2019	2.50	2.50	2.50	3.85	55.85%	3.00	11.24	0.00
2020	2.50	2.50	2.50	4.03	95.39%	3.00	11.46	0.00
2021	2.50	2.50	2.50	4.10	95.40%	3.00	11.75	0.00
2022	2.50	2.50	2.50	4.23	95.37%	3.00	12.28	0.00
2023	2.50	2.50	2.50	4.42	94.99%	3.00	12.12	0.00
2024	2.50	2.50	2.50	4.69	94.40%	3.00	12.26	0.00
2025	2.50	2.50	2.50	4.88	93.42%	3.00	12.23	0.00
2026	2.50	2.50	2.50	5.08	88.94%	3.00	12.31	0.00
2027	2.50	2.50	2.50	5.31	87.68%	3.00	12.47	0.00
2028	2.50	2.50	2.50	5.59	87.36%	3.00	12.63	0.00
2029	2.50	2.50	2.50	5.79	87.30%	3.00	12.82	0.00
2030	2.50	2.50	2.50	5.88	88.13%	3.00	12.98	0.00
2031	2.50	2.50	2.50	6.13	88.44%	3.00	13.17	0.00
2032	2.50	2.50	2.50	6.32	89.14%	3.00	13.58	0.00
2033	2.50	2.50	2.50	6.59	89.64%	3.00	14.25	0.00
2034	2.50	2.50	2.50	6.84	89.85%	3.00	14.60	0.00
2035	2.50	2.50	2.50	7.09	89.65%	3.00	14.85	0.00
2036	2.50	2.50	2.50	7.31	90.14%	3.00	15.45	0.00
2037	2.50	2.50	2.50	7.63	89.91%	3.00	15.76	0.00
2038	2.50	2.50	2.50	7.92	89.91%	3.00	16.09	0.00
2039	2.50	2.50	2.50	8.22	89.91%	3.00	16.40	0.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	16.68	0.00
2041	2.50	2.50	2.50	8.79	89.82%	3.00	17.05	0.00
2042	2.50	2.50	2.50	9.18	89.85%	3.00	17.40	0.00
2043	2.50	2.50	2.50	9.48	89.84%	3.00	17.98	0.00
2044	2.50	2.50	2.50	9.88	89.93%	3.00	18.43	0.00
2045	2.50	2.50	2.50	10.25	89.91%	3.00	18.90	0.00
2046	2.50	2.50	2.50	10.63	89.91%	3.00	19.39	0.00
2047	2.50	2.50	2.50	10.97	89.83%	3.00	19.90	0.00
2048	2.50	2.50	2.50	11.44	89.92%	3.00	20.42	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	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	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	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	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
	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%	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	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	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	0.00%	0.00	0.00	0.00

Column (1) used for:

- Utility Cost
- Customer Equipment
- Supply Costs

Column (6) used for:

Gen. Train. & Dist Cost

Column (3) used for:

- Customer O&M Cost
- Generator Fixed O&M
- T&D Fixed O&M
- Generator Variable O&M

CALCULATION OF GEN K-FACTOR  
PROGRAM METHOD SELECTED REV\_REQ  
PROGRAM NAME: Residential New Construction (BuildSmart@)

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	5,724	119	0	358	220	99	3	188	12	999	999	999	5,645
2020	5,524	115	0	346	138	96	3	188	86	971	903	1,902	5,786
2021	5,250	109	0	329	138	92	3	188	74	888	808	2,710	5,930
2022	4,988	104	0	312	139	89	3	188	64	899	723	3,432	6,079
2023	4,736	98	0	296	139	86	3	188	54	864	646	4,078	6,231
2024	4,494	93	0	281	138	82	3	188	44	831	578	4,657	6,386
2025	4,262	88	0	267	138	79	3	188	36	799	517	5,174	6,546
2026	4,037	84	0	253	137	75	4	188	28	769	462	5,636	6,710
2027	3,821	79	0	239	130	72	4	188	27	739	413	6,049	6,877
2028	3,606	75	0	226	121	68	4	188	27	709	369	6,418	7,049
2029	3,391	70	0	212	113	65	4	188	27	679	329	6,746	7,226
2030	3,176	66	0	199	104	62	4	188	27	650	292	7,038	7,406
2031	2,961	61	0	185	96	58	4	188	27	620	259	7,297	7,591
2032	2,746	57	0	172	87	55	4	188	27	590	230	7,527	7,781
2033	2,531	53	0	158	79	51	4	188	27	561	203	7,730	7,976
2034	2,316	48	0	145	70	48	4	188	27	531	179	7,908	8,175
2035	2,101	44	0	132	62	45	4	188	27	501	157	8,065	8,379
2036	1,887	39	0	118	54	41	5	188	27	471	137	8,202	8,589
2037	1,672	35	0	105	45	38	5	188	27	442	119	8,322	8,804
2038	1,457	30	0	91	37	34	5	188	27	412	104	8,425	9,024
2039	1,242	26	0	78	26	31	5	188	(21)	382	89	8,515	9,249
2040	1,074	22	0	67	17	27	5	188	(69)	359	78	8,593	9,481
2041	955	20	0	60	113	24	5	188	(69)	341	69	8,661	9,718
2042	836	17	0	52	108	21	5	188	(69)	323	61	8,722	9,961
2043	716	15	0	45	103	17	5	188	(69)	305	53	8,775	10,210
2044	597	12	0	37	98	14	6	188	(69)	287	47	8,822	10,465
2045	478	10	0	30	94	10	6	188	(69)	269	41	8,863	10,726
2046	358	7	0	22	89	7	6	188	(69)	251	35	8,898	10,995
2047	239	5	0	15	84	3	6	188	(69)	233	30	8,929	11,269
2048	119	2	0	7	80	0	6	188	(69)	215	26	8,955	11,551

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

IN SERVICE COST (\$000)	5,645
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECT. TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential New Construction (Build/Sma)

(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 FOR DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION FOR DEPRECIATION TAX \$(000)	DEFERRED TAX 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%	208	208	188	188	178	178	12	297	0	0	0	12	(68)
2020	7.22%	401	609	188	376	178	376	86	297	0	0	0	86	18
2021	6.68%	371	980	188	564	178	535	74	297	0	0	0	74	92
2022	6.18%	343	1,323	188	753	178	713	64	297	0	0	0	64	156
2023	5.71%	317	1,640	188	941	178	891	54	297	0	0	0	54	210
2024	5.29%	293	1,934	188	1,129	178	1,070	44	297	0	0	0	44	254
2025	4.89%	271	2,205	188	1,317	178	1,248	36	297	0	0	0	36	290
2026	4.52%	251	2,456	188	1,505	178	1,426	28	297	0	0	0	28	318
2027	4.46%	248	2,704	188	1,693	178	1,604	27	297	0	0	0	27	345
2028	4.46%	248	2,952	188	1,882	178	1,783	27	297	0	0	0	27	372
2029	4.46%	248	3,200	188	2,070	178	1,961	27	297	0	0	0	27	399
2030	4.46%	248	3,447	188	2,258	178	2,139	27	297	0	0	0	27	425
2031	4.46%	248	3,695	188	2,446	178	2,317	27	297	0	0	0	27	452
2032	4.46%	248	3,943	188	2,634	178	2,496	27	297	0	0	0	27	479
2033	4.46%	248	4,191	188	2,822	178	2,674	27	297	0	0	0	27	506
2034	4.46%	248	4,438	188	3,010	178	2,852	27	297	0	0	0	27	533
2035	4.46%	248	4,686	188	3,199	178	3,030	27	297	0	0	0	27	559
2036	4.46%	248	4,934	188	3,387	178	3,209	27	297	0	0	0	27	586
2037	4.46%	248	5,181	188	3,575	178	3,387	27	297	0	0	0	27	613
2038	4.46%	248	5,429	188	3,763	178	3,565	27	297	0	0	0	27	640
2039	2.23%	124	5,553	188	3,951	178	3,743	(21)	297	0	0	0	(21)	619
2040	0.00%	0	5,553	188	4,139	178	3,922	(69)	297	0	0	0	(69)	550
2041	0.00%	0	5,553	188	4,328	178	4,100	(69)	297	0	0	0	(69)	481
2042	0.00%	0	5,553	188	4,516	178	4,278	(69)	297	0	0	0	(69)	413
2043	0.00%	0	5,553	188	4,704	178	4,456	(69)	297	0	0	0	(69)	344
2044	0.00%	0	5,553	188	4,892	178	4,635	(69)	297	0	0	0	(69)	275
2045	0.00%	0	5,553	188	5,080	178	4,813	(69)	297	0	0	0	(69)	206
2046	0.00%	0	5,553	188	5,268	178	4,991	(69)	297	0	0	0	(69)	138
2047	0.00%	0	5,553	188	5,456	178	5,169	(69)	297	0	0	0	(69)	69
2048	0.00%	0	5,553	188	5,645	178	5,348	(69)	297	0	0	0	(69)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(79)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	297
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

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

page 4b

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	END OF YEAR NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEFERRED TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2019	3.75%	208	12	5,456	188	(68)	5,724	5,524	5,624
2020	7.22%	401	86	5,268	376	18	5,524	5,250	5,387
2021	6.68%	371	74	5,080	564	92	5,250	4,988	5,119
2022	6.18%	343	64	4,892	753	156	4,988	4,736	4,862
2023	5.71%	317	54	4,704	941	210	4,736	4,494	4,615
2024	5.29%	293	44	4,516	1,129	254	4,494	4,262	4,378
2025	4.89%	271	36	4,328	1,317	290	4,262	4,037	4,149
2026	4.52%	251	28	4,139	1,505	318	4,037	3,821	3,929
2027	4.46%	248	27	3,951	1,693	345	3,821	3,606	3,714
2028	4.46%	248	27	3,763	1,882	372	3,606	3,391	3,499
2029	4.46%	248	27	3,575	2,070	399	3,391	3,176	3,284
2030	4.46%	248	27	3,387	2,258	425	3,176	2,961	3,069
2031	4.46%	248	27	3,199	2,446	452	2,961	2,746	2,854
2032	4.46%	248	27	3,010	2,634	479	2,746	2,531	2,639
2033	4.46%	248	27	2,822	2,822	506	2,531	2,316	2,424
2034	4.46%	248	27	2,634	3,010	533	2,316	2,101	2,209
2035	4.46%	248	27	2,446	3,199	559	2,101	1,887	1,994
2036	4.46%	248	27	2,258	3,387	586	1,887	1,672	1,779
2037	4.46%	248	27	2,070	3,575	613	1,672	1,457	1,564
2038	4.46%	248	27	1,882	3,763	640	1,457	1,242	1,349
2039	2.23%	124	(21)	1,693	3,951	619	1,242	1,074	1,158
2040	0.00%	0	(69)	1,505	4,139	550	1,074	955	1,015
2041	0.00%	0	(69)	1,317	4,328	481	955	836	895
2042	0.00%	0	(69)	1,129	4,516	413	836	716	776
2043	0.00%	0	(69)	941	4,704	344	716	597	657
2044	0.00%	0	(69)	753	4,892	275	597	478	537
2045	0.00%	0	(69)	564	5,080	206	478	358	418
2046	0.00%	0	(69)	376	5,268	138	358	239	298
2047	0.00%	0	(69)	188	5,456	69	239	119	179
2048	0.00%	0	(69)	0	5,645	0	119	0	60

\* 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)	(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)
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.41	0.01	0.01	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86
2015	-4	3.00%	1.030	0.28%	2.26	1.96	1.96	0.05	0.16	0.13	0.16	0.10	0.12	(0.02)	(0.03)	2.39	3.24
2016	-3	3.00%	1.061	8.69%	38.88	71.58	71.58	0.81	2.54	2.54	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36
2017	-2	3.00%	1.093	53.83%	456.61	302.97	302.97	6.76	19.90	19.90	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87
2018	-1	3.00%	1.126	37.09%	324.11	693.33	693.33	20.74	46.81	46.81	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80
										100.00%	855.39						

20.74	69.41	54.39	(12.98)	924.80
CONSTRUCTION CASH	BOOK BASIS FOR DEF TAX	TAX BASIS		
EQUITY AFUDC	5,221	5,221		
DEBT AFUDC	127	127		
CPI	332	332		
TOTAL	5,645	5,348	5,353	

IN SERVICE YEAR	2019
PLANT COSTS	776,326,284.5
AFUDC RATE	6.50%

\* Column not specified in workbook

INPUT DATA -- PART 2  
PROGRAM METHOD/SELECTED: REV\_REQ  
PROGRAM NAME: Residential New Construction (BuildSmart®)

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (C/KWh)	AVOIDED MARGINAL FUEL COST (C/KWh)	INCREASED MARGINAL FUEL COST (C/KWh)	REPLACEMENT FUEL COST (C/KWh)	PROGRAM KW EFFECTIVENESS FACTOR	PROGRAM kWh EFFECTIVENESS FACTOR
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	1,463	1,463	4.45	6.70	4.78	0.00	1.00	1.00
2016	3,022	3,022	4.92	10.12	5.33	0.00	1.00	1.00
2017	4,699	4,699	4.27	6.58	4.49	0.00	1.00	1.00
2018	6,595	6,595	5.27	8.94	5.57	0.00	1.00	1.00
2019	6,595	6,595	5.38	9.10	5.68	5.05	1.00	1.00
2020	6,595	6,595	5.65	9.94	5.97	5.04	1.00	1.00
2021	6,595	6,595	5.65	9.57	5.12	5.00	1.00	1.00
2022	6,595	6,595	5.60	8.87	5.88	5.09	1.00	1.00
2023	6,595	6,595	5.60	8.15	5.86	5.20	1.00	1.00
2024	6,595	6,595	5.81	8.24	6.07	5.51	1.00	1.00
2025	6,595	6,595	5.98	8.54	6.25	5.65	1.00	1.00
2026	6,595	6,595	5.73	7.71	5.96	5.77	1.00	1.00
2027	6,595	6,595	6.01	8.52	6.28	6.08	1.00	1.00
2028	6,595	6,595	6.07	7.94	6.33	6.19	1.00	1.00
2029	6,595	6,595	6.28	8.29	6.55	6.49	1.00	1.00
2030	6,595	6,595	6.34	8.09	6.58	6.45	1.00	1.00
2031	6,595	6,595	6.57	8.45	6.79	6.72	1.00	1.00
2032	6,595	6,595	6.62	7.92	6.62	6.76	1.00	1.00
2033	6,595	6,595	6.97	8.79	7.15	7.11	1.00	1.00
2034	6,595	6,595	7.05	8.41	7.21	7.29	1.00	1.00
2035	6,595	6,595	7.19	8.44	7.34	7.50	1.00	1.00
2036	6,595	6,595	7.47	8.87	7.62	7.70	1.00	1.00
2037	6,595	6,595	7.68	9.24	7.85	8.02	1.00	1.00
2038	6,595	6,595	7.94	9.47	8.10	8.33	1.00	1.00
2039	6,595	6,595	8.12	9.56	8.28	8.53	1.00	1.00
2040	6,595	6,595	8.35	9.86	8.50	8.87	1.00	1.00
2041	6,595	6,595	8.67	10.25	8.82	9.13	1.00	1.00
2042	6,595	6,595	8.99	10.79	9.16	9.47	1.00	1.00
2043	6,595	6,595	9.27	11.04	9.44	9.80	1.00	1.00
2044	6,595	6,595	9.60	11.51	9.78	10.25	1.00	1.00
2045	6,595	6,595	9.94	11.79	10.12	10.58	1.00	1.00
2046	6,595	6,595	10.25	11.95	10.42	10.92	1.00	1.00
2047	6,595	6,595	10.57	12.41	10.75	11.29	1.00	1.00
2048	6,595	6,595	11.00	13.14	11.19	11.78	1.00	1.00
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.















I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER .....	0.24 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.31337 KW
(3) KW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	546.87 KW/h
(5) KW LINE LOSS PERCENTAGE .....	5.76 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KW/h INCREASE AT METER .....	0.00 KW/h

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

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 .....	7.54 %
(11) UTILITY AFDUC RATE .....	6.50 %
(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 .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	146.90 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	24.85 \$/KW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	58.35 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	5.53 \$/KW
(11) DISTRIBUTION FIXED O & M COST .....	2.34 \$/KW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

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 Ceiling Insulation

ESCALATION RATES

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Charge (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	9.81	0.00
2015	2.50	2.50	2.50	0.00	0.00%	3.00	9.48	0.00
2016	2.50	2.50	2.50	0.00	0.00%	3.00	9.64	0.00
2017	2.50	2.50	2.50	0.00	0.00%	3.00	9.96	0.00
2018	2.50	2.50	2.50	0.00	0.00%	3.00	10.53	0.00
2019	2.50	2.50	2.50	3.85	55.85%	3.00	11.24	0.00
2020	2.50	2.50	2.50	4.03	95.39%	3.00	11.46	0.00
2021	2.50	2.50	2.50	4.10	95.40%	3.00	11.75	0.00
2022	2.50	2.50	2.50	4.23	95.37%	3.00	12.28	0.00
2023	2.50	2.50	2.50	4.42	94.99%	3.00	12.12	0.00
2024	2.50	2.50	2.50	4.69	94.40%	3.00	12.26	0.00
2025	2.50	2.50	2.50	4.88	93.42%	3.00	12.23	0.00
2026	2.50	2.50	2.50	5.08	88.94%	3.00	12.31	0.00
2027	2.50	2.50	2.50	5.31	87.68%	3.00	12.47	0.00
2028	2.50	2.50	2.50	5.59	87.36%	3.00	12.63	0.00
2029	2.50	2.50	2.50	5.79	87.30%	3.00	12.82	0.00
2030	2.50	2.50	2.50	5.88	88.13%	3.00	12.98	0.00
2031	2.50	2.50	2.50	6.13	88.44%	3.00	13.17	0.00
2032	2.50	2.50	2.50	6.32	89.14%	3.00	13.58	0.00
2033	2.50	2.50	2.50	6.59	89.64%	3.00	14.25	0.00
2034	2.50	2.50	2.50	6.84	89.85%	3.00	14.60	0.00
2035	2.50	2.50	2.50	7.09	89.65%	3.00	14.85	0.00
2036	2.50	2.50	2.50	7.31	90.14%	3.00	15.45	0.00
2037	2.50	2.50	2.50	7.63	89.91%	3.00	15.76	0.00
2038	2.50	2.50	2.50	7.92	89.91%	3.00	16.09	0.00
2039	2.50	2.50	2.50	8.22	89.91%	3.00	16.40	0.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	16.68	0.00
2041	2.50	2.50	2.50	8.79	89.82%	3.00	17.05	0.00
2042	2.50	2.50	2.50	9.18	89.85%	3.00	17.40	0.00
2043	2.50	2.50	2.50	9.48	89.84%	3.00	17.98	0.00
2044	2.50	2.50	2.50	9.88	89.93%	3.00	18.43	0.00
2045	2.50	2.50	2.50	10.25	89.91%	3.00	18.90	0.00
2046	2.50	2.50	2.50	10.63	89.91%	3.00	19.39	0.00
2047	2.50	2.50	2.50	10.97	89.83%	3.00	19.90	0.00
2048	2.50	2.50	2.50	11.44	89.92%	3.00	20.42	0.00
2049	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00
2050	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00
2051	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00
2052	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00
2053	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00
2054	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00
2055	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00
2056	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00
2057	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00
2058	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00
2059	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00
2060	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00

Column (1) used for:  
 Utility Cost  
 Customer Equipment  
 Supply Costs

Column (6) used for:  
 Gen. Train. & Dist Cost

Column (3) used for:  
 Customer O&M Cost  
 Generator Fixed O&M  
 T&D Fixed O&M  
 Generator Variable O&M

CALCULATION OF GEN K-FACTOR  
PROGRAM METHOD SELECTED REV\_REQ  
PROGRAM NAME: Residential Ceiling Insulation

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	5,576	116	0	349	214	97	3	183	11	973	973	973	5,499
2020	5,581	112	0	337	134	93	3	183	84	946	880	1,853	5,656
2021	5,114	106	0	320	135	90	3	183	72	910	787	2,639	5,777
2022	4,859	101	0	304	135	87	3	183	62	875	704	3,343	5,921
2023	4,613	96	0	289	135	83	3	183	52	842	630	3,973	6,069
2024	4,378	91	0	274	135	80	3	183	43	810	563	4,536	6,221
2025	4,151	86	0	260	134	77	3	183	35	779	504	5,040	6,377
2026	3,933	82	0	246	133	73	3	183	27	749	450	5,490	6,536
2027	3,722	77	0	233	126	70	4	183	26	720	402	5,892	6,700
2028	3,513	73	0	220	118	67	4	183	26	691	359	6,252	6,867
2029	3,304	69	0	207	110	63	4	183	26	662	320	6,572	7,039
2030	3,094	64	0	194	102	60	4	183	26	633	285	6,856	7,215
2031	2,885	60	0	181	93	57	4	183	26	604	253	7,109	7,395
2032	2,675	56	0	167	85	53	4	183	26	575	224	7,332	7,580
2033	2,466	51	0	154	77	50	4	183	26	546	197	7,530	7,769
2034	2,257	47	0	141	69	47	4	183	26	517	174	7,704	7,964
2035	2,047	43	0	128	60	43	4	183	26	488	153	7,856	8,163
2036	1,838	38	0	115	52	40	4	183	26	459	134	7,990	8,367
2037	1,628	34	0	102	44	37	5	183	26	430	116	8,106	8,576
2038	1,419	29	0	89	36	33	5	183	26	401	101	8,207	8,790
2039	1,210	25	0	76	28	30	5	183	(20)	373	87	8,294	9,010
2040	1,047	22	0	66	21	27	5	183	(67)	349	76	8,370	9,235
2041	930	19	0	58	15	23	5	183	(67)	332	67	8,437	9,466
2042	814	17	0	51	105	20	5	183	(67)	314	59	8,497	9,703
2043	698	14	0	44	100	17	5	183	(67)	297	52	8,549	9,946
2044	581	12	0	36	96	13	5	183	(67)	279	45	8,594	10,194
2045	465	10	0	29	91	10	6	183	(67)	262	40	8,634	10,449
2046	349	7	0	22	87	7	6	183	(67)	244	34	8,668	10,710
2047	233	5	0	15	82	3	6	183	(67)	227	30	8,698	10,978
2048	116	2	0	7	78	0	6	183	(67)	210	25	8,723	11,252

K-FACTOR = CPWFC / IN-SVC COST = 1.58642

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

IN SERVICE COST (\$000)	5,499
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECT. TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

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

(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 DEPRECIATION \$(000)	BOOK FOR DEPRECIATION \$(000)	ACCUMULATED DEPRECIATION 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%	203	203	183	183	174	174	11	289	0	0	0	11	(66)
2020	7.22%	390	593	183	390	174	367	84	289	0	0	0	84	18
2021	6.68%	361	955	183	550	174	521	72	289	0	0	0	72	90
2022	6.18%	334	1,289	183	733	174	695	62	289	0	0	0	62	152
2023	5.71%	309	1,598	183	916	174	868	52	289	0	0	0	52	204
2024	5.29%	286	1,884	183	1,100	174	1,042	43	289	0	0	0	43	248
2025	4.89%	264	2,148	183	1,283	174	1,215	35	289	0	0	0	35	283
2026	4.52%	245	2,393	183	1,466	174	1,389	27	289	0	0	0	27	310
2027	4.46%	241	2,634	183	1,650	174	1,563	26	289	0	0	0	26	336
2028	4.46%	241	2,875	183	1,833	174	1,736	26	289	0	0	0	26	362
2029	4.46%	241	3,117	183	2,016	174	1,910	26	289	0	0	0	26	388
2030	4.46%	241	3,358	183	2,199	174	2,084	26	289	0	0	0	26	414
2031	4.46%	241	3,599	183	2,383	174	2,257	26	289	0	0	0	26	441
2032	4.46%	241	3,841	183	2,566	174	2,431	26	289	0	0	0	26	467
2033	4.46%	241	4,082	183	2,749	174	2,605	26	289	0	0	0	26	493
2034	4.46%	241	4,323	183	2,933	174	2,778	26	289	0	0	0	26	519
2035	4.46%	241	4,565	183	3,116	174	2,952	26	289	0	0	0	26	545
2036	4.46%	241	4,806	183	3,299	174	3,126	26	289	0	0	0	26	571
2037	4.46%	241	5,047	183	3,482	174	3,299	26	289	0	0	0	26	597
2038	4.46%	241	5,289	183	3,666	174	3,473	26	289	0	0	0	26	623
2039	2.23%	121	5,409	183	3,849	174	3,646	(20)	289	0	0	(20)	(20)	603
2040	0.00%	0	5,409	183	4,032	174	3,820	(67)	289	0	0	(67)	(67)	536
2041	0.00%	0	5,409	183	4,216	174	3,994	(67)	289	0	0	(67)	(67)	469
2042	0.00%	0	5,409	183	4,399	174	4,167	(67)	289	0	0	(67)	(67)	402
2043	0.00%	0	5,409	183	4,582	174	4,341	(67)	289	0	0	(67)	(67)	335
2044	0.00%	0	5,409	183	4,765	174	4,515	(67)	289	0	0	(67)	(67)	268
2045	0.00%	0	5,409	183	4,949	174	4,688	(67)	289	0	0	(67)	(67)	201
2046	0.00%	0	5,409	183	5,132	174	4,862	(67)	289	0	0	(67)	(67)	134
2047	0.00%	0	5,409	183	5,315	174	5,036	(67)	289	0	0	(67)	(67)	67
2048	0.00%	0	5,409	183	5,499	174	5,209	(67)	289	0	0	(67)	(67)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(77)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	289
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

page 4b DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Ceiling Insulation

(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%	203	11	5,315	183	(66)	5,576	5,381	5,479
2020	7.22%	390	84	5,132	367	18	5,381	5,114	5,248
2021	6.68%	361	72	4,949	550	90	5,114	4,859	4,986
2022	6.18%	334	62	4,765	733	152	4,859	4,613	4,736
2023	5.71%	309	52	4,582	916	204	4,613	4,378	4,496
2024	5.29%	286	43	4,399	1,100	248	4,378	4,151	4,265
2025	4.89%	264	35	4,216	1,283	283	4,151	3,933	4,042
2026	4.52%	245	27	4,032	1,466	310	3,933	3,722	3,828
2027	4.46%	241	26	3,849	1,650	336	3,722	3,513	3,618
2028	4.46%	241	26	3,666	1,833	362	3,513	3,304	3,408
2029	4.46%	241	26	3,482	2,016	388	3,304	3,094	3,199
2030	4.46%	241	26	3,299	2,199	414	3,094	2,885	2,989
2031	4.46%	241	26	3,116	2,383	441	2,885	2,675	2,780
2032	4.46%	241	26	2,933	2,566	467	2,675	2,466	2,571
2033	4.46%	241	26	2,749	2,749	493	2,466	2,257	2,361
2034	4.46%	241	26	2,566	2,933	519	2,257	2,047	2,152
2035	4.46%	241	26	2,383	3,116	545	2,047	1,838	1,942
2036	4.46%	241	26	2,199	3,299	571	1,838	1,628	1,733
2037	4.46%	241	26	2,016	3,482	597	1,628	1,419	1,524
2038	4.46%	241	26	1,833	3,666	623	1,419	1,210	1,314
2039	2.23%	121	(20)	1,650	3,849	603	1,210	1,047	1,128
2040	0.00%	0	(67)	1,466	4,032	556	1,047	930	989
2041	0.00%	0	(67)	1,283	4,216	469	930	814	872
2042	0.00%	0	(67)	1,100	4,399	402	814	698	756
2043	0.00%	0	(67)	916	4,582	335	698	581	640
2044	0.00%	0	(67)	733	4,765	268	581	465	523
2045	0.00%	0	(67)	550	4,949	201	465	349	407
2046	0.00%	0	(67)	367	5,132	134	349	233	291
2047	0.00%	0	(67)	183	5,315	67	233	116	174
2048	0.00%	0	(67)	0	5,499	0	116	0	58

\* 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)	(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)	
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.41	0.01	0.01	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86	
2015	-4	3.00%	1.030	0.28%	2.26	1.96	1.96	0.05	0.05	0.13	0.16	0.10	0.12	(0.02)	(0.02)	2.39	3.24	
2016	-3	3.00%	1.061	8.69%	71.58	38.88	71.58	0.81	0.81	2.54	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36	
2017	-2	3.00%	1.093	53.83%	456.61	302.97	456.61	6.76	6.76	19.90	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87	
2018	-1	3.00%	1.126	37.09%	324.11	693.33	324.11	20.74	20.74	46.81	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80	
100.00%											855.39							

	20.74	
69.41	54.39	(12.98)
924.80		

IN SERVICE YEAR	2019
PLANT COSTS	776,326,284.5
AFUDC RATE	6.50%

CONSTRUCTION CASH	BOOK BASIS	BOOK BASIS	TAX BASIS
EQUITY AFUDC	5,086	5,086	5,086
DEBT AFUDC	289	123	
CPI	123		323
TOTAL	5,499	5,209	5,409

\* Column not specified in workbook

INPUT DATA -- PART 2  
PROGRAM METHOD/SELECTED: REV\_REQ  
PROGRAM NAME: Residential Ceiling Insulation

(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
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	3,748	3,748	4.45	6.15	5.06	0.00	1.00	1.00
2016	8,601	8,601	4.92	8.18	5.69	0.00	1.00	1.00
2017	13,674	13,674	4.27	5.63	4.66	0.00	1.00	1.00
2018	18,973	18,973	5.27	7.30	5.82	0.00	1.00	1.00
2019	18,973	18,973	5.38	7.44	5.93	5.05	1.00	1.00
2020	18,973	18,973	5.65	8.01	6.25	5.04	1.00	1.00
2021	18,973	18,973	7.83	7.83	6.24	5.12	1.00	1.00
2022	18,973	18,973	5.60	7.45	6.12	5.09	1.00	1.00
2023	18,973	18,973	5.60	7.08	6.06	5.20	1.00	1.00
2024	18,973	18,973	5.81	7.23	6.27	5.51	1.00	1.00
2025	18,973	18,973	5.98	7.47	6.46	5.65	1.00	1.00
2026	18,973	18,973	5.73	6.93	6.13	5.77	1.00	1.00
2027	18,973	18,973	6.01	7.51	6.48	6.08	1.00	1.00
2028	18,973	18,973	6.07	7.26	6.51	6.19	1.00	1.00
2029	18,973	18,973	6.28	7.63	6.75	6.49	1.00	1.00
2030	18,973	18,973	6.34	7.48	6.74	6.45	1.00	1.00
2031	18,973	18,973	6.57	7.76	6.94	6.72	1.00	1.00
2032	18,973	18,973	6.62	7.56	6.93	6.76	1.00	1.00
2033	18,973	18,973	6.97	8.15	7.30	7.11	1.00	1.00
2034	18,973	18,973	7.05	8.04	7.35	7.29	1.00	1.00
2035	18,973	18,973	7.19	8.11	7.48	7.50	1.00	1.00
2036	18,973	18,973	7.47	8.48	7.76	7.70	1.00	1.00
2037	18,973	18,973	7.68	8.81	7.99	8.02	1.00	1.00
2038	18,973	18,973	7.94	9.04	8.25	8.33	1.00	1.00
2039	18,973	18,973	8.12	9.18	8.41	8.53	1.00	1.00
2040	18,973	18,973	8.35	9.43	8.63	8.87	1.00	1.00
2041	18,973	18,973	8.67	9.80	8.97	9.13	1.00	1.00
2042	18,973	18,973	8.99	10.26	9.32	9.47	1.00	1.00
2043	18,973	18,973	9.27	10.51	9.60	9.80	1.00	1.00
2044	18,973	18,973	9.60	10.90	9.93	10.25	1.00	1.00
2045	18,973	18,973	9.94	11.24	10.27	10.58	1.00	1.00
2046	18,973	18,973	10.25	11.47	10.56	10.92	1.00	1.00
2047	18,973	18,973	10.57	11.85	10.90	11.29	1.00	1.00
2048	18,973	18,973	11.00	12.41	11.35	11.78	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.













RATE IMPACT TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Ceiling Insulation

(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)
2014	0	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	165	839	92	0	1,097	68	0	0	0	69	(1,028)	(956)
2016	0	219	1,080	308	0	1,607	311	42	0	0	353	(1,254)	(2,041)
2017	0	235	1,129	572	0	1,936	369	96	0	0	465	(1,470)	(3,223)
2018	0	252	1,179	887	0	2,317	709	160	0	0	869	(1,448)	(4,306)
2019	0	0	0	1,099	0	1,099	1,879	213	0	0	2,093	994	(3,615)
2020	0	0	0	1,121	0	1,121	1,795	207	0	0	2,002	881	(3,045)
2021	0	0	0	1,149	0	1,149	1,738	202	0	0	1,940	790	(2,569)
2022	0	0	0	1,201	0	1,201	1,742	196	0	0	1,938	737	(2,157)
2023	0	0	0	1,185	0	1,185	1,714	191	0	0	1,905	720	(1,783)
2024	0	0	0	1,199	0	1,199	1,686	186	0	0	1,872	673	(1,457)
2025	0	0	0	1,195	0	1,195	1,728	181	0	0	1,909	714	(1,136)
2026	0	0	0	1,204	0	1,204	1,692	177	0	0	1,869	665	(858)
2027	0	0	0	1,220	0	1,220	1,716	172	0	0	1,888	668	(598)
2028	0	0	0	1,235	0	1,235	1,739	167	0	0	1,907	672	(355)
2029	0	0	0	1,254	0	1,254	1,727	163	0	0	1,890	656	(141)
2030	0	0	0	1,269	0	1,269	1,745	158	0	0	1,903	635	57
2031	0	0	0	1,288	0	1,288	1,750	154	0	0	1,904	616	236
2032	0	0	0	1,328	0	1,328	1,774	150	0	0	1,923	595	397
2033	0	0	0	1,393	0	1,393	1,791	146	0	0	1,938	544	534
2034	0	0	0	1,428	0	1,428	1,789	144	0	0	1,932	505	652
2035	0	271	839	1,452	0	2,562	1,800	142	0	0	1,942	(620)	518
2036	0	359	1,080	1,511	0	2,949	1,839	140	0	0	1,979	(970)	321
2037	0	385	1,129	1,541	0	3,054	1,861	139	0	0	2,000	(1,054)	123
2038	0	412	1,179	1,573	0	3,164	1,865	137	0	0	2,002	(1,162)	(80)
2039	0	0	0	1,604	0	1,604	1,913	136	0	0	2,049	445	(8)
2040	0	0	0	1,631	0	1,631	1,919	135	0	0	2,054	422	56
2041	0	0	0	1,667	0	1,667	1,960	133	0	0	2,093	425	116
2042	0	0	0	1,701	0	1,701	2,033	132	0	0	2,165	464	177
2043	0	0	0	1,758	0	1,758	2,050	131	0	0	2,181	423	228
2044	0	0	0	1,802	0	1,802	2,069	130	0	0	2,199	396	273
2045	0	0	0	1,848	0	1,848	2,127	129	0	0	2,256	408	316
2046	0	0	0	1,896	0	1,896	2,171	127	0	0	2,298	402	355
2047	0	0	0	1,946	0	1,946	2,199	125	0	0	2,324	378	390
2048	0	0	0	1,997	0	1,997	2,256	123	0	0	2,379	382	422
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
2061	0	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	0
2063	0	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	0
2065	0	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	0
2067	0	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	0
2069	0	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	0
NOM.	0	2,298	8,453	45,554	0	56,305	57,527	4,964	0	(1)	62,490	6,185	6,185
NPV	0	996	4,323	13,016	0	18,335	17,012	1,744	0	0	18,756	422	422

Discount Rate Benefit/Cost Ratio (Col(12) / Col(7)) : 7.54 %  
1.02

**I. PROGRAM DEMAND SAVINGS & LINE LOSSES**

(1) CUSTOMER KW REDUCTION AT METER .....	0.35 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.46632 KW
(3) KW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	1,073.93 kWh
(5) KW LINE LOSS PERCENTAGE .....	5.76 %
(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 .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

**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 .....	7.54 %
(11) UTILITY AFUDC RATE .....	6.50 %
(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 .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	146.90 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	24.85 \$/KW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	58.35 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	5.53 \$/KW
(11) DISTRIBUTION FIXED O & M COST .....	2.34 \$/KW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

**V. NON-FUEL ENERGY AND DEMAND CHARGES**

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





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

ESCALATION RATES

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Charge (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	9.81	0.00
2015	2.50	2.50	2.50	0.00	0.00%	3.00	9.48	0.00
2016	2.50	2.50	2.50	0.00	0.00%	3.00	9.64	0.00
2017	2.50	2.50	2.50	0.00	0.00%	3.00	9.96	0.00
2018	2.50	2.50	2.50	0.00	0.00%	3.00	10.53	0.00
2019	2.50	2.50	2.50	3.85	55.85%	3.00	11.24	0.00
2020	2.50	2.50	2.50	4.03	95.39%	3.00	11.46	0.00
2021	2.50	2.50	2.50	4.10	95.40%	3.00	11.75	0.00
2022	2.50	2.50	2.50	4.23	95.37%	3.00	12.28	0.00
2023	2.50	2.50	2.50	4.42	94.99%	3.00	12.12	0.00
2024	2.50	2.50	2.50	4.69	94.40%	3.00	12.26	0.00
2025	2.50	2.50	2.50	4.88	93.42%	3.00	12.23	0.00
2026	2.50	2.50	2.50	5.08	88.94%	3.00	12.31	0.00
2027	2.50	2.50	2.50	5.31	87.68%	3.00	12.47	0.00
2028	2.50	2.50	2.50	5.59	87.36%	3.00	12.63	0.00
2029	2.50	2.50	2.50	5.79	87.30%	3.00	12.82	0.00
2030	2.50	2.50	2.50	5.88	88.13%	3.00	12.98	0.00
2031	2.50	2.50	2.50	6.13	88.44%	3.00	13.17	0.00
2032	2.50	2.50	2.50	6.32	89.14%	3.00	13.58	0.00
2033	2.50	2.50	2.50	6.59	89.64%	3.00	14.25	0.00
2034	2.50	2.50	2.50	6.84	89.85%	3.00	14.60	0.00
2035	2.50	2.50	2.50	7.09	89.65%	3.00	14.85	0.00
2036	2.50	2.50	2.50	7.31	90.14%	3.00	15.45	0.00
2037	2.50	2.50	2.50	7.63	89.91%	3.00	15.76	0.00
2038	2.50	2.50	2.50	7.92	89.91%	3.00	16.09	0.00
2039	2.50	2.50	2.50	8.22	89.91%	3.00	16.40	0.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	16.68	0.00
2041	2.50	2.50	2.50	8.79	89.82%	3.00	17.05	0.00
2042	2.50	2.50	2.50	9.18	89.85%	3.00	17.40	0.00
2043	2.50	2.50	2.50	9.48	89.84%	3.00	17.98	0.00
2044	2.50	2.50	2.50	9.88	89.93%	3.00	18.43	0.00
2045	2.50	2.50	2.50	10.25	89.91%	3.00	18.90	0.00
2046	2.50	2.50	2.50	10.63	89.91%	3.00	19.39	0.00
2047	2.50	2.50	2.50	10.97	89.83%	3.00	19.90	0.00
2048	2.50	2.50	2.50	11.44	89.92%	3.00	20.42	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	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	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	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	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
	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%	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	0.00	0.00	0.00%	0.00	0.00	0.00

Column (1) used for:

Utility Cost  
 Customer Equipment  
 Supply Costs

Column (6) used for:

Gen. Train. & Dist Cost

Column (3) used for:

Customer O&M Cost  
 Generator Fixed O&M  
 T&D Fixed O&M  
 Generator Variable O&M

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

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	3,498	73	0	219	134	61	2	115	7	611	611	611	3,450
2020	3,576	70	0	211	85	59	2	115	52	593	552	1,162	3,536
2021	3,209	67	0	201	84	57	2	115	45	571	494	1,656	3,625
2022	3,049	63	0	191	85	54	2	115	39	549	442	2,098	3,715
2023	2,895	60	0	181	85	52	2	115	33	528	395	2,493	3,808
2024	2,747	57	0	172	85	50	2	115	27	508	353	2,846	3,903
2025	2,605	54	0	163	84	48	2	115	22	489	316	3,162	4,001
2026	2,468	51	0	154	84	46	2	115	17	470	283	3,445	4,101
2027	2,336	48	0	146	79	44	2	115	16	452	252	3,697	4,204
2028	2,204	46	0	138	74	42	2	115	16	433	225	3,922	4,309
2029	2,073	43	0	130	69	40	2	115	16	415	201	4,123	4,416
2030	1,941	40	0	122	64	38	2	115	16	397	179	4,502	4,527
2031	1,810	38	0	113	59	36	2	115	16	379	158	4,460	4,640
2032	1,679	35	0	105	53	33	3	115	16	361	140	4,601	4,756
2033	1,547	32	0	97	48	31	3	115	16	343	124	4,724	4,875
2034	1,416	29	0	89	43	29	3	115	16	324	109	4,834	4,997
2035	1,284	27	0	80	38	27	3	115	16	306	96	4,929	5,122
2036	1,153	24	0	72	33	25	3	115	16	288	84	5,013	5,250
2037	1,022	21	0	64	28	23	3	115	16	270	73	5,086	5,381
2038	890	18	0	56	22	21	3	115	16	252	63	5,150	5,515
2039	759	16	0	48	16	19	3	115	(13)	234	55	5,204	5,653
2040	627	14	0	41	11	17	3	115	(42)	219	48	5,252	5,795
2041	495	12	0	34	6	15	3	115	(42)	208	42	5,294	5,940
2042	363	11	0	27	1	13	3	115	(42)	197	37	5,331	6,088
2043	231	9	0	20	0	10	3	115	(42)	186	33	5,364	6,240
2044	99	8	0	13	0	8	3	115	(42)	175	29	5,392	6,396
2045	0	6	0	6	0	6	3	115	(42)	164	25	5,417	6,556
2046	0	5	0	0	0	4	4	115	(42)	153	22	5,439	6,720
2047	0	3	0	0	0	2	4	115	(42)	142	19	5,457	6,888
2048	0	2	0	0	0	(0)	4	115	(42)	131	16	5,473	7,060

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642

IN SERVICE COST (\$000)	3,450
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECTIVE TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX SCHEDULE DEPRECIATION	TAX DEPRECIATION	ACCUMULATED TAX DEPRECIATION	BOOK DEPRECIATION	ACCUMULATED BOOK DEPRECIATION	BOOK DEPRECIATION FOR DEFERRED TAX	ACCUMULATED BOOK DEPRECIATION FOR DEFERRED TAX	DEFERRED TAX DUE TO DEPRECIATION	TOTAL EQUITY AFUDC	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE	SALVAGE TAX RATE	ANNUAL DEFERRED TAX (9)-(12)+(13)	ACCUMULATED DEFERRED TAX
	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)		\$(000)	\$(000)	\$(000)	\$(000)
2019	3.75%	127	127	115	115	109	109	7	182	0	0	0	7	(41)
2020	7.22%	245	372	115	245	109	109	52	182	0	0	0	52	11
2021	6.68%	227	599	115	345	109	109	45	182	0	0	0	45	57
2022	6.18%	210	809	115	460	109	109	39	182	0	0	0	39	95
2023	5.71%	194	1,003	115	575	109	109	33	182	0	0	0	33	128
2024	5.29%	179	1,182	115	690	109	109	27	182	0	0	0	27	155
2025	4.89%	166	1,348	115	805	109	109	22	182	0	0	0	22	177
2026	4.52%	153	1,501	115	920	109	109	17	182	0	0	0	17	194
2027	4.46%	151	1,653	115	1,035	109	109	16	182	0	0	0	16	211
2028	4.46%	151	1,804	115	1,150	109	1,089	16	182	0	0	0	16	227
2029	4.46%	151	1,956	115	1,265	109	1,198	16	182	0	0	0	16	244
2030	4.46%	151	2,107	115	1,380	109	1,307	16	182	0	0	0	16	260
2031	4.46%	151	2,258	115	1,495	109	1,416	16	182	0	0	0	16	276
2032	4.46%	151	2,410	115	1,610	109	1,525	16	182	0	0	0	16	293
2033	4.46%	151	2,561	115	1,725	109	1,634	16	182	0	0	0	16	309
2034	4.46%	151	2,713	115	1,840	109	1,743	16	182	0	0	0	16	326
2035	4.46%	151	2,864	115	1,955	109	1,852	16	182	0	0	0	16	342
2036	4.46%	151	3,016	115	2,070	109	1,961	16	182	0	0	0	16	358
2037	4.46%	151	3,167	115	2,185	109	2,070	16	182	0	0	0	16	375
2038	4.46%	151	3,318	115	2,300	109	2,179	16	182	0	0	0	16	391
2039	2.23%	76	3,394	115	2,415	109	2,288	(13)	182	0	0	(13)	(13)	378
2040	0.00%	0	3,394	115	2,530	109	2,397	(42)	182	0	0	(42)	(42)	336
2041	0.00%	0	3,394	115	2,645	109	2,506	(42)	182	0	0	(42)	(42)	294
2042	0.00%	0	3,394	115	2,760	109	2,615	(42)	182	0	0	(42)	(42)	252
2043	0.00%	0	3,394	115	2,875	109	2,724	(42)	182	0	0	(42)	(42)	210
2044	0.00%	0	3,394	115	2,990	109	2,833	(42)	182	0	0	(42)	(42)	168
2045	0.00%	0	3,394	115	3,105	109	2,942	(42)	182	0	0	(42)	(42)	126
2046	0.00%	0	3,394	115	3,220	109	3,051	(42)	182	0	0	(42)	(42)	84
2047	0.00%	0	3,394	115	3,335	109	3,160	(42)	182	0	0	(42)	(42)	42
2048	0.00%	0	3,394	115	3,450	109	3,268	(42)	182	0	0	(42)	(42)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(48)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	182
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

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

(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%	127	7	3,335	115	(41)	3,498	3,376	3,437
2020	7.22%	245	52	3,220	230	11	3,376	3,209	3,293
2021	6.68%	227	45	3,105	345	57	3,209	3,049	3,129
2022	6.18%	210	39	2,990	460	95	3,049	2,895	2,972
2023	5.71%	194	33	2,875	575	128	2,895	2,747	2,821
2024	5.29%	179	27	2,760	690	155	2,747	2,605	2,676
2025	4.89%	166	22	2,645	805	177	2,605	2,468	2,536
2026	4.52%	153	17	2,530	920	194	2,468	2,336	2,402
2027	4.46%	151	16	2,415	1,035	211	2,336	2,204	2,270
2028	4.46%	151	16	2,300	1,150	227	2,204	2,073	2,138
2029	4.46%	151	16	2,185	1,265	244	2,073	1,941	2,007
2030	4.46%	151	16	2,070	1,380	260	1,941	1,810	1,876
2031	4.46%	151	16	1,955	1,495	276	1,810	1,679	1,744
2032	4.46%	151	16	1,840	1,610	293	1,679	1,547	1,613
2033	4.46%	151	16	1,725	1,725	309	1,547	1,416	1,482
2034	4.46%	151	16	1,610	1,840	326	1,416	1,284	1,350
2035	4.46%	151	16	1,495	1,955	342	1,284	1,153	1,219
2036	4.46%	151	16	1,380	2,070	358	1,153	1,022	1,087
2037	4.46%	151	16	1,265	2,185	375	1,022	890	956
2038	4.46%	151	16	1,150	2,300	391	890	759	825
2039	2.23%	76	(13)	1,035	2,415	378	759	657	708
2040	0.00%	0	(42)	920	2,530	336	657	584	620
2041	0.00%	0	(42)	805	2,645	294	584	511	547
2042	0.00%	0	(42)	690	2,760	252	511	438	474
2043	0.00%	0	(42)	575	2,875	210	438	365	401
2044	0.00%	0	(42)	460	2,990	168	365	292	328
2045	0.00%	0	(42)	345	3,105	126	292	219	255
2046	0.00%	0	(42)	230	3,220	84	219	146	182
2047	0.00%	0	(42)	115	3,335	42	146	73	109
2048	0.00%	0	(42)	(0)	3,450	0	73	0	36

\* 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)	(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)
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.41	0.01	0.01	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86
2015	-4	3.00%	1.030	0.28%	2.26	1.96	1.99	0.04	0.05	0.13	0.16	0.10	0.12	(0.02)	(0.03)	2.39	3.24
2016	-3	3.00%	1.061	8.69%	38.88	71.58	39.03	0.76	0.81	2.54	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36
2017	-2	3.00%	1.093	53.83%	456.61	302.97	305.67	5.95	6.76	19.90	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87
2018	-1	3.00%	1.126	37.09%	324.11	693.33	715.93	13.99	20.74	46.81	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80
										100.00%	855.39			(12.98)			924.80

20.74	69.41	54.39	(12.98)	924.80
CONSTRUCTION CASH	BOOK BASIS FOR DEF. TAX	BOOK BASIS FOR DEF. TAX	TAX BASIS	
EQUITY AFUDC	3,191	3,191	3,191	
DEBT AFUDC	182	77	203	
CPI	77	3,268	3,394	
TOTAL	3,450			

\* Column not specified in workbook

IN SERVICE YEAR	2019
PLANT COSTS	776,326,284.5
AFUDC RATE	6.50%

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

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (C/KWh)	AVOIDED MARGINAL FUEL COST (C/KWh)	INCREASED MARGINAL FUEL COST (C/KWh)	REPLACEMENT FUEL COST (C/KWh)	PROGRAM KW EFFECTIVENESS FACTOR	PROGRAM kWh EFFECTIVENESS FACTOR
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	2,000	2,000	4.45	6.11	5.08	0.00	1.00	1.00
2016	4,000	4,000	4.92	8.03	5.73	0.00	1.00	1.00
2017	6,000	6,000	4.27	5.58	4.67	0.00	1.00	1.00
2018	8,000	8,000	5.27	7.20	5.84	0.00	1.00	1.00
2019	8,000	8,000	5.38	7.35	5.95	5.05	1.00	1.00
2020	8,000	8,000	5.65	7.91	6.28	5.04	1.00	1.00
2021	8,000	8,000	7.73	7.73	6.26	5.12	1.00	1.00
2022	8,000	8,000	5.60	7.37	6.14	5.09	1.00	1.00
2023	8,000	8,000	5.60	7.03	6.09	5.20	1.00	1.00
2024	8,000	8,000	5.81	7.19	6.29	5.51	1.00	1.00
2025	8,000	8,000	5.98	7.41	6.48	5.65	1.00	1.00
2026	8,000	8,000	5.73	6.89	6.14	5.77	1.00	1.00
2027	8,000	8,000	6.01	7.45	6.50	6.08	1.00	1.00
2028	8,000	8,000	6.07	7.22	6.53	6.19	1.00	1.00
2029	8,000	8,000	6.28	7.59	6.77	6.49	1.00	1.00
2030	8,000	8,000	6.34	7.45	6.75	6.45	1.00	1.00
2031	8,000	8,000	6.57	7.72	6.96	6.72	1.00	1.00
2032	8,000	8,000	6.62	7.54	6.94	6.76	1.00	1.00
2033	8,000	8,000	6.97	8.11	7.32	7.11	1.00	1.00
2034	8,000	8,000	7.05	8.02	7.37	7.29	1.00	1.00
2035	8,000	8,000	7.19	8.08	7.49	7.50	1.00	1.00
2036	8,000	8,000	7.47	8.45	7.78	7.70	1.00	1.00
2037	8,000	8,000	7.68	8.78	8.01	8.02	1.00	1.00
2038	8,000	8,000	7.94	9.01	8.26	8.33	1.00	1.00
2039	8,000	8,000	8.12	9.15	8.43	8.53	1.00	1.00
2040	8,000	8,000	8.35	9.40	8.65	8.87	1.00	1.00
2041	8,000	8,000	8.67	9.77	8.99	9.13	1.00	1.00
2042	8,000	8,000	8.99	10.21	9.33	9.47	1.00	1.00
2043	8,000	8,000	9.27	10.47	9.61	9.80	1.00	1.00
2044	8,000	8,000	9.60	10.85	9.95	10.25	1.00	1.00
2045	8,000	8,000	9.94	11.20	10.29	10.58	1.00	1.00
2046	8,000	8,000	10.25	11.43	10.57	10.92	1.00	1.00
2047	8,000	8,000	10.57	11.80	10.92	11.29	1.00	1.00
2048	8,000	8,000	11.00	12.36	11.37	11.78	1.00	1.00
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.

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

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)
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	611	246	13	703	921	652
2020	593	252	23	1,257	1,570	556
2021	571	259	24	1,277	1,595	536
2022	549	265	25	1,317	1,586	570
2023	528	272	25	1,373	1,615	584
2024	508	279	26	1,446	1,700	558
2025	489	286	26	1,491	1,724	567
2026	470	293	25	1,476	1,678	585
2027	452	300	26	1,522	1,742	557
2028	433	308	26	1,595	1,768	594
2029	415	315	27	1,652	1,850	559
2030	397	323	28	1,693	1,857	584
2031	379	331	28	1,773	1,942	569
2032	361	340	29	1,841	1,970	601
2033	343	348	30	1,931	2,083	569
2034	324	357	31	2,007	2,141	578
2035	306	366	32	2,078	2,199	583
2036	288	375	33	2,153	2,268	581
2037	270	384	33	2,240	2,357	571
2038	252	394	34	2,327	2,448	559
2039	234	404	35	2,414	2,505	581
2040	219	414	36	2,503	2,604	568
2041	208	424	37	2,580	2,681	568
2042	197	435	38	2,694	2,782	582
2043	186	445	39	2,784	2,878	577
2044	175	457	40	2,903	3,014	562
2045	164	468	41	3,011	3,108	576
2046	153	480	42	3,125	3,209	590
2047	142	492	43	3,219	3,314	582
2048	131	504	44	3,361	3,462	578
2049	0	0	0	0	0	0
2050	0	0	0	0	0	0
2051	0	0	0	0	0	0
2052	0	0	0	0	0	0
2053	0	0	0	0	0	0
2054	0	0	0	0	0	0
2055	0	0	0	0	0	0
2056	0	0	0	0	0	0
2057	0	0	0	0	0	0
2058	0	0	0	0	0	0
2059	0	0	0	0	0	0
2060	0	0	0	0	0	0
2061	0	0	0	0	0	0
2062	0	0	0	0	0	0
2063	0	0	0	0	0	0
2064	0	0	0	0	0	0
2065	0	0	0	0	0	0
2066	0	0	0	0	0	0
2067	0	0	0	0	0	0
2068	0	0	0	0	0	0
2069	0	0	0	0	0	0
2070	0	0	0	0	0	0
2071	0	0	0	0	0	0
2072	0	0	0	0	0	0
2073	0	0	0	0	0	0
2074	0	0	0	0	0	0
2075	0	0	0	0	0	0
2076	0	0	0	0	0	0
2077	0	0	0	0	0	0
2078	0	0	0	0	0	0
2079	0	0	0	0	0	0
2080	0	0	0	0	0	0
2081	0	0	0	0	0	0
2082	0	0	0	0	0	0
2083	0	0	0	0	0	0
2084	0	0	0	0	0	0
2085	0	0	0	0	0	0
2086	0	0	0	0	0	0
2087	0	0	0	0	0	0
2088	0	0	0	0	0	0
2089	0	0	0	0	0	0
2090	0	0	0	0	0	0
2091	0	0	0	0	0	0
2092	0	0	0	0	0	0
2093	0	0	0	0	0	0
2094	0	0	0	0	0	0
2095	0	0	0	0	0	0
2096	0	0	0	0	0	0
2097	0	0	0	0	0	0
2098	0	0	0	0	0	0
2099	0	0	0	0	0	0
2100	0	0	0	0	0	0
NOM	10,351	10,813	938	61,748	66,573	17,277
NPV	3,806	2,790	240	14,799	16,560	5,075









PARTICIPANT COSTS AND BENEFITS  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Low-Income

(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)
2014	0	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	126	0	0	0	0	126	117
2016	385	0	0	0	385	0	0	0	0	385	451
2017	663	0	0	0	663	0	0	0	0	663	984
2018	982	0	0	0	982	0	0	0	0	982	1,718
2019	1,197	0	0	0	1,197	0	0	0	0	1,197	2,551
2020	1,221	0	0	0	1,221	0	0	0	0	1,221	3,340
2021	1,252	0	0	0	1,252	0	0	0	0	1,252	4,093
2022	1,309	0	0	0	1,309	0	0	0	0	1,309	4,825
2023	1,291	0	0	0	1,291	0	0	0	0	1,291	5,496
2024	1,307	0	0	0	1,307	0	0	0	0	1,307	6,128
2025	1,302	0	0	0	1,302	0	0	0	0	1,302	6,714
2026	1,311	0	0	0	1,311	0	0	0	0	1,311	7,262
2027	1,329	0	0	0	1,329	0	0	0	0	1,329	7,779
2028	1,345	0	0	0	1,345	0	0	0	0	1,345	8,266
2029	1,366	0	0	0	1,366	0	0	0	0	1,366	8,725
2030	1,382	0	0	0	1,382	0	0	0	0	1,382	9,157
2031	1,404	0	0	0	1,404	0	0	0	0	1,404	9,566
2032	1,447	0	0	0	1,447	0	0	0	0	1,447	9,957
2033	1,518	0	0	0	1,518	0	0	0	0	1,518	10,339
2034	1,555	0	0	0	1,555	0	0	0	0	1,555	10,702
2035	1,582	0	0	0	1,582	0	0	0	0	1,582	11,046
2036	1,646	0	0	0	1,646	0	0	0	0	1,646	11,379
2037	1,679	0	0	0	1,679	0	0	0	0	1,679	11,695
2038	1,714	0	0	0	1,714	0	0	0	0	1,714	11,995
2039	1,748	0	0	0	1,748	0	0	0	0	1,748	12,279
2040	1,777	0	0	0	1,777	0	0	0	0	1,777	12,548
2041	1,817	0	0	0	1,817	0	0	0	0	1,817	12,803
2042	1,853	0	0	0	1,853	0	0	0	0	1,853	13,046
2043	1,915	0	0	0	1,915	0	0	0	0	1,915	13,279
2044	1,964	0	0	0	1,964	0	0	0	0	1,964	13,501
2045	2,014	0	0	0	2,014	0	0	0	0	2,014	13,713
2046	2,066	0	0	0	2,066	0	0	0	0	2,066	13,915
2047	2,120	0	0	0	2,120	0	0	0	0	2,120	14,107
2048	2,176	0	0	0	2,176	0	0	0	0	2,176	14,291
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	49,762	0	0	0	49,762	0	0	0	0	49,762	49,762
NPV	14,291	0	0	0	14,291	0	0	0	0	14,291	14,291

In Service of Gen Unit:  
Discount Rate : 2019 7.54 %  
Benefit/Cost Ratio ( Col(6) / Col(10)) : Infinite

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

(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)
2014	0	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	77	659	96	0	832	71	0	0	0	71	(761)	(707)
2016	0	79	659	293	0	1,031	290	33	0	0	324	(707)	(1,319)
2017	0	81	659	504	0	1,244	322	66	0	0	389	(855)	(2,006)
2018	0	83	659	746	0	1,488	587	103	0	0	691	(797)	(2,603)
2019	0	0	0	910	0	910	1,337	133	0	0	1,469	568	(2,213)
2020	0	0	0	928	0	928	1,256	129	0	0	1,426	490	(1,891)
2021	0	0	0	952	0	952	1,252	122	0	0	1,374	430	(1,632)
2022	0	0	0	995	0	995	1,227	119	0	0	1,346	379	(1,420)
2023	0	0	0	981	0	981	1,213	116	0	0	1,329	365	(1,231)
2024	0	96	659	993	0	1,748	1,243	113	0	0	1,356	(391)	(1,433)
2025	0	98	659	990	0	1,747	1,208	110	0	0	1,319	(438)	(1,609)
2026	0	101	659	997	0	1,756	1,236	107	0	0	1,343	(429)	(1,792)
2027	0	103	659	1,010	0	1,772	1,245	104	0	0	1,350	(429)	(1,959)
2028	0	0	0	1,023	0	1,023	1,246	101	0	0	1,348	(429)	(1,841)
2029	0	0	0	1,038	0	1,038	1,254	98	0	0	1,353	(429)	(1,737)
2030	0	0	0	1,051	0	1,051	1,263	96	0	0	1,359	(429)	(1,642)
2031	0	0	0	1,067	0	1,067	1,273	93	0	0	1,367	(429)	(1,558)
2032	0	0	0	1,100	0	1,100	1,287	91	0	0	1,388	(429)	(1,485)
2033	0	120	659	1,154	0	1,933	1,295	90	0	0	1,383	(429)	(1,422)
2034	0	123	659	1,182	0	1,964	1,302	89	0	0	1,390	(429)	(1,368)
2035	0	126	659	1,202	0	1,987	1,334	88	0	0	1,421	(429)	(1,314)
2036	0	129	659	1,251	0	2,039	1,355	87	0	0	1,441	(429)	(1,260)
2037	0	0	0	1,276	0	1,276	1,361	86	0	0	1,447	(429)	(1,206)
2038	0	0	0	1,303	0	1,303	1,395	85	0	0	1,480	(429)	(1,152)
2039	0	0	0	1,328	0	1,328	1,404	84	0	0	1,488	(429)	(1,098)
2040	0	0	0	1,351	0	1,351	1,437	83	0	0	1,520	(429)	(1,044)
2041	0	0	0	1,381	0	1,381	1,492	83	0	0	1,575	(429)	(990)
2042	0	150	659	1,409	0	2,217	1,509	82	0	0	1,591	(429)	(936)
2043	0	153	659	1,456	0	2,268	1,528	81	0	0	1,609	(429)	(882)
2044	0	157	659	1,492	0	2,309	1,572	81	0	0	1,653	(429)	(828)
2045	0	161	659	1,530	0	2,351	1,604	79	0	0	1,684	(429)	(774)
2046	0	0	0	1,570	0	1,570	1,629	78	0	0	1,707	(429)	(720)
2047	0	0	0	1,611	0	1,611	1,676	77	0	0	1,753	(429)	(666)
2048	0	0	0	1,654	0	1,654	0	0	0	0	0	0	(612)
NOM	0	1,838	10,544	37,819	0	50,201	42,010	3,113	0	2	45,125	(5,076)	(5,076)
NPV	0	625	4,259	10,861	0	15,746	12,462	1,101	0	1	13,564	(2,182)	(2,182)

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

7.54 %  
0.86

**I. PROGRAM DEMAND SAVINGS & LINE LOSSES**

(1) CUSTOMER KW REDUCTION AT METER .....	0.85 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.11770 KW
(3) KW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	6.43 KW/h
(5) KW/h LINE LOSS PERCENTAGE .....	5.76 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KW/h INCREASE AT METER .....	0.00 KW/h

**II. ECONOMIC LIFE & K FACTORS**

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

**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 .....	7.54 %
(11) UTILITY AFUDC RATE .....	6.50 %
(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 .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/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 .....	58.35 \$/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 .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

**V. NON-FUEL ENERGY AND DEMAND CHARGES**

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



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

ESCALATION RATES

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Charge (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	5.43	11.21
2015	2.50	2.50	2.50	0.00	0.00%	3.00	5.07	11.15
2016	2.50	2.50	2.50	0.00	0.00%	3.00	5.21	11.17
2017	2.50	2.50	2.50	0.00	0.00%	3.00	5.35	11.70
2018	2.50	2.50	2.50	0.00	0.00%	3.00	5.91	11.85
2019	2.50	2.50	2.50	3.85	55.85%	3.00	6.41	12.59
2020	2.50	2.50	2.50	4.03	95.39%	3.00	6.46	13.25
2021	2.50	2.50	2.50	4.10	95.40%	3.00	6.54	13.90
2022	2.50	2.50	2.50	4.23	95.37%	3.00	6.78	14.46
2023	2.50	2.50	2.50	4.42	94.99%	3.00	6.96	13.13
2024	2.50	2.50	2.50	4.69	94.40%	3.00	7.10	13.17
2025	2.50	2.50	2.50	4.88	93.42%	3.00	7.24	12.68
2026	2.50	2.50	2.50	5.08	88.94%	3.00	7.42	12.45
2027	2.50	2.50	2.50	5.31	87.68%	3.00	7.57	12.50
2028	2.50	2.50	2.50	5.59	87.36%	3.00	7.74	12.51
2029	2.50	2.50	2.50	5.79	87.30%	3.00	7.91	12.60
2030	2.50	2.50	2.50	5.88	88.13%	3.00	8.08	12.62
2031	2.50	2.50	2.50	6.13	88.44%	3.00	8.25	12.71
2032	2.50	2.50	2.50	6.32	89.14%	3.00	8.59	12.95
2033	2.50	2.50	2.50	6.59	89.64%	3.00	9.19	13.24
2034	2.50	2.50	2.50	6.84	89.85%	3.00	9.48	13.44
2035	2.50	2.50	2.50	7.09	89.65%	3.00	9.73	13.48
2036	2.50	2.50	2.50	7.31	90.14%	3.00	10.31	13.67
2037	2.50	2.50	2.50	7.63	89.91%	3.00	10.59	13.80
2038	2.50	2.50	2.50	7.92	89.91%	3.00	10.90	13.91
2039	2.50	2.50	2.50	8.22	89.91%	3.00	11.21	14.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	11.47	14.12
2041	2.50	2.50	2.50	8.79	89.82%	3.00	11.82	14.24
2042	2.50	2.50	2.50	9.18	89.85%	3.00	12.19	14.27
2043	2.50	2.50	2.50	9.48	89.84%	3.00	12.75	14.44
2044	2.50	2.50	2.50	9.88	89.93%	3.00	13.19	14.57
2045	2.50	2.50	2.50	10.25	89.91%	3.00	13.65	14.70
2046	2.50	2.50	2.50	10.63	89.91%	3.00	14.13	14.83
2047	2.50	2.50	2.50	10.97	89.83%	3.00	14.63	14.96
2048	2.50	2.50	2.50	11.44	89.92%	3.00	15.16	15.09

Column (1) used for:

Utility Cost  
Customer Equipment  
Supply Costs

Column (6) used for:

Gen. Train. & Dist Cost

Column (3) used for:

Customer O&M Cost  
Generator Fixed O&M  
T&D Fixed O&M  
Generator Variable O&M

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

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	12,578	261	0	787	483	218	7	413	25	2,195	2,195	2,195	12,404
2020	12,139	252	0	760	302	211	7	413	189	2,134	1,984	4,179	12,714
2021	11,537	240	0	722	304	203	7	413	163	2,053	1,773	5,954	13,032
2022	10,960	228	0	686	305	196	7	413	140	1,974	1,588	7,542	13,358
2023	10,407	216	0	651	305	188	7	413	118	1,899	1,420	8,962	13,691
2024	9,876	205	0	618	304	181	7	413	98	1,827	1,270	10,233	14,034
2025	9,365	194	0	586	303	173	8	413	79	1,757	1,136	11,369	14,385
2026	8,872	184	0	555	301	166	8	413	62	1,689	1,016	12,384	14,744
2027	8,397	174	0	526	285	158	8	413	59	1,623	908	13,292	15,113
2028	7,924	165	0	496	266	150	8	413	59	1,558	810	14,102	15,491
2029	7,452	155	0	467	248	143	8	413	59	1,493	722	14,824	15,878
2030	6,980	145	0	437	229	135	9	413	59	1,427	642	15,466	16,275
2031	6,507	135	0	407	211	128	9	413	59	1,362	570	16,036	16,682
2032	6,035	125	0	378	192	120	9	413	59	1,297	504	16,540	17,099
2033	5,563	116	0	348	173	113	9	413	59	1,232	445	16,986	17,526
2034	5,090	106	0	319	155	105	10	413	59	1,166	392	17,378	17,964
2035	4,618	96	0	289	136	98	10	413	59	1,101	344	17,722	18,413
2036	4,146	86	0	260	118	90	10	413	59	1,036	301	18,024	18,874
2037	3,673	76	0	230	99	83	10	413	59	971	263	18,286	19,346
2038	3,201	66	0	200	81	75	11	413	59	906	228	18,514	19,829
2039	2,728	57	0	171	67	68	11	413	(46)	840	197	18,710	20,325
2040	2,261	49	0	148	58	60	11	413	(151)	788	171	18,882	20,833
2041	2,099	44	0	131	53	53	11	413	(151)	749	151	19,033	21,354
2042	1,836	38	0	115	237	45	12	413	(151)	709	133	19,167	21,888
2043	1,574	33	0	99	227	38	12	413	(151)	670	117	19,284	22,435
2044	1,312	27	0	82	216	30	12	413	(151)	630	103	19,386	22,996
2045	1,049	22	0	66	206	23	12	413	(151)	591	89	19,476	23,571
2046	787	16	0	49	196	15	13	413	(151)	552	78	19,553	24,160
2047	525	11	0	33	185	8	13	413	(151)	512	67	19,620	24,764
2048	262	5	0	16	175	(0)	13	413	(151)	473	57	19,678	25,383

**CAPITAL STRUCTURE**

SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

IN SERVICE COST (\$000)	12,404
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECT. TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642



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 SCHEDULE DEPRECIATION	TAX DEPRECIATION	ACCUMULATED TAX DEPRECIATION	BOOK DEPRECIATION	ACCUMULATED BOOK DEPRECIATION	BOOK FOR DEPRECIATION	ACCUMULATED BOOK DEPRECIATION FOR DEPRECIATION	DEFERRED TAX DEPRECIATION	TOTAL EQUITY AFUDC	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE	SALVAGE TAX RATE	ANNUAL DEFERRED TAX (9)-(12)+(13)	ACCUMULATED DEFERRED TAX
	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)		\$(000)	\$(000)	\$(000)	\$(000)
2019	3.75%	458	458	413	413	392	392	25	653	0	0	0	25	(149)
2020	7.22%	881	1,338	413	881	392	827	189	653	0	0	0	189	40
2021	6.68%	815	2,153	413	1,240	392	1,175	163	653	0	0	0	163	203
2022	6.18%	754	2,907	413	1,654	392	1,567	140	653	0	0	0	140	343
2023	5.71%	697	3,604	413	2,067	392	1,959	118	653	0	0	0	118	461
2024	5.29%	645	4,249	413	2,481	392	2,350	98	653	0	0	0	98	559
2025	4.89%	596	4,846	413	2,894	392	2,742	79	653	0	0	0	79	637
2026	4.52%	552	5,398	413	3,308	392	3,134	62	653	0	0	0	62	699
2027	4.46%	544	5,942	413	3,721	392	3,525	59	653	0	0	0	59	758
2028	4.46%	544	6,486	413	4,135	392	3,917	59	653	0	0	0	59	817
2029	4.46%	544	7,031	413	4,548	392	4,309	59	653	0	0	0	59	876
2030	4.46%	544	7,575	413	4,962	392	4,700	59	653	0	0	0	59	935
2031	4.46%	544	8,120	413	5,375	392	5,092	59	653	0	0	0	59	994
2032	4.46%	544	8,664	413	5,788	392	5,484	59	653	0	0	0	59	1,053
2033	4.46%	544	9,208	413	6,202	392	5,876	59	653	0	0	0	59	1,112
2034	4.46%	544	9,753	413	6,615	392	6,269	59	653	0	0	0	59	1,170
2035	4.46%	544	10,297	413	7,029	392	6,659	59	653	0	0	0	59	1,229
2036	4.46%	544	10,842	413	7,442	392	7,051	59	653	0	0	0	59	1,288
2037	4.46%	544	11,386	413	7,856	392	7,442	59	653	0	0	0	59	1,347
2038	4.46%	544	11,930	413	8,269	392	7,834	59	653	0	0	0	59	1,406
2039	2.23%	272	12,203	413	8,683	392	8,226	(46)	653	0	0	0	(46)	1,360
2040	0.00%	0	12,203	413	9,096	392	8,617	(151)	653	0	0	0	(151)	1,209
2041	0.00%	0	12,203	413	9,510	392	9,009	(151)	653	0	0	0	(151)	1,058
2042	0.00%	0	12,203	413	9,923	392	9,401	(151)	653	0	0	0	(151)	907
2043	0.00%	0	12,203	413	10,336	392	9,793	(151)	653	0	0	0	(151)	756
2044	0.00%	0	12,203	413	10,750	392	10,184	(151)	653	0	0	0	(151)	605
2045	0.00%	0	12,203	413	11,163	392	10,576	(151)	653	0	0	0	(151)	453
2046	0.00%	0	12,203	413	11,577	392	10,968	(151)	653	0	0	0	(151)	302
2047	0.00%	0	12,203	413	11,990	392	11,359	(151)	653	0	0	0	(151)	151
2048	0.00%	0	12,203	413	12,404	392	11,751	(151)	653	0	0	0	(151)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(174)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	653
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

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

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX 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%	438	25	11,990	413	(149)	12,578	12,139	12,358
2020	7.22%	881	189	11,577	827	40	12,139	11,537	11,838
2021	6.68%	815	163	11,163	1,240	203	11,537	10,960	11,248
2022	6.18%	754	140	10,750	1,654	343	10,960	10,407	10,684
2023	5.71%	697	118	10,336	2,067	461	10,407	9,876	10,141
2024	5.29%	645	98	9,923	2,481	559	9,876	9,365	9,620
2025	4.89%	596	79	9,510	2,894	637	9,365	8,872	9,118
2026	4.52%	552	62	9,096	3,308	699	8,872	8,397	8,634
2027	4.46%	544	59	8,683	3,721	758	8,397	7,924	8,161
2028	4.46%	544	59	8,269	4,135	817	7,924	7,452	7,688
2029	4.46%	544	59	7,856	4,548	876	7,452	6,980	7,216
2030	4.46%	544	59	7,442	4,962	935	6,980	6,507	6,744
2031	4.46%	544	59	7,029	5,375	994	6,507	6,035	6,271
2032	4.46%	544	59	6,615	5,788	1,053	6,035	5,563	5,799
2033	4.46%	544	59	6,202	6,202	1,112	5,563	5,090	5,326
2034	4.46%	544	59	5,788	6,615	1,170	5,090	4,618	4,854
2035	4.46%	544	59	5,375	7,029	1,229	4,618	4,146	4,382
2036	4.46%	544	59	4,962	7,442	1,288	4,146	3,673	3,909
2037	4.46%	544	59	4,548	7,856	1,347	3,673	3,201	3,437
2038	4.46%	544	59	4,135	8,269	1,406	3,201	2,728	2,965
2039	2.23%	272	(46)	3,721	8,683	1,360	2,728	2,361	2,545
2040	0.00%	0	(151)	3,308	9,096	1,209	2,361	2,099	2,230
2041	0.00%	0	(151)	2,894	9,510	1,058	2,099	1,836	1,968
2042	0.00%	0	(151)	2,481	9,923	907	1,836	1,574	1,705
2043	0.00%	0	(151)	2,067	10,336	756	1,574	1,312	1,443
2044	0.00%	0	(151)	1,654	10,750	605	1,312	1,049	1,180
2045	0.00%	0	(151)	1,240	11,163	453	1,049	787	918
2046	0.00%	0	(151)	827	11,577	302	787	525	656
2047	0.00%	0	(151)	413	11,990	151	525	262	393
2048	0.00%	0	(151)	(0)	12,404	0	262	0	131

\* 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)	(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)	
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.41	0.01	0.01	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86	
2015	-4	3.00%	1.030	0.28%	2.26	1.96	1.96	0.05	0.05	0.13	0.16	0.10	0.12	(0.02)	(0.02)	2.39	3.24	
2016	-3	3.00%	1.061	8.69%	71.58	38.88	71.58	0.81	2.54	2.54	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36	
2017	-2	3.00%	1.093	53.83%	456.61	302.97	456.61	6.76	19.90	19.90	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87	
2018	-1	3.00%	1.126	37.09%	324.11	693.33	324.11	20.74	46.81	46.81	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80	
							100.00%			855.39								

20.74	69.41	54.39	(12.98)	924.80
CONSTRUCTION CASH	BOOK BASIS FOR DEF. TAX	TAX BASIS		
EQUITY AFUDC	11,473	11,473		
DEBT AFUDC	653	278		
CPI	278	729		
TOTAL	12,404	12,202		

\* 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 (C/KWh)	AVOIDED MARGINAL FUEL COST (C/KWh)	INCREASED MARGINAL FUEL COST (C/KWh)	REPLACEMENT FUEL COST (C/KWh)	PROGRAM KW EFFECTIVENESS FACTOR	PROGRAM kWh EFFECTIVENESS FACTOR
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	3,000	3,000	4.45	8.42	4.45	0.00	1.00	1.00
2016	6,000	4,920	4.92	12.24	4.92	0.00	1.00	1.00
2017	9,000	9,000	4.27	10.29	4.27	0.00	1.00	1.00
2018	12,000	12,000	5.27	11.75	5.27	0.00	1.00	1.00
2019	12,000	12,000	5.38	16.61	5.38	5.05	1.00	1.00
2020	12,000	12,000	5.65	19.65	5.65	5.04	1.00	1.00
2021	12,000	12,000	5.65	18.15	5.65	5.12	1.00	1.00
2022	12,000	12,000	5.60	15.84	5.60	5.09	1.00	1.00
2023	12,000	12,000	5.60	14.15	5.60	5.20	1.00	1.00
2024	12,000	12,000	5.81	14.12	5.81	5.51	1.00	1.00
2025	12,000	12,000	5.98	17.69	5.98	5.65	1.00	1.00
2026	12,000	12,000	5.73	19.09	5.73	5.77	1.00	1.00
2027	12,000	12,000	6.01	16.85	6.01	6.08	1.00	1.00
2028	12,000	12,000	6.07	17.17	6.07	6.19	1.00	1.00
2029	12,000	12,000	6.28	13.07	6.28	6.49	1.00	1.00
2030	12,000	12,000	6.34	14.76	6.34	6.45	1.00	1.00
2031	12,000	12,000	6.57	17.01	6.57	6.72	1.00	1.00
2032	12,000	12,000	6.62	15.42	6.62	6.76	1.00	1.00
2033	12,000	12,000	6.97	16.02	6.97	7.11	1.00	1.00
2034	12,000	12,000	7.05	13.20	7.05	7.29	1.00	1.00
2035	12,000	12,000	7.19	11.99	7.19	7.50	1.00	1.00
2036	12,000	12,000	7.47	17.33	7.47	7.70	1.00	1.00
2037	12,000	12,000	7.68	17.92	7.68	8.02	1.00	1.00
2038	12,000	12,000	7.94	16.32	7.94	8.33	1.00	1.00
2039	12,000	12,000	8.12	13.64	8.12	8.53	1.00	1.00
2040	12,000	12,000	8.35	14.31	8.35	8.87	1.00	1.00
2041	12,000	12,000	8.67	15.52	8.67	9.13	1.00	1.00
2042	12,000	12,000	8.99	18.22	8.99	9.47	1.00	1.00
2043	12,000	12,000	9.27	16.85	9.27	9.80	1.00	1.00
2044	12,000	12,000	9.60	18.50	9.60	10.25	1.00	1.00
2045	12,000	12,000	9.94	16.83	9.94	10.58	1.00	1.00
2046	12,000	12,000	10.25	13.72	10.25	10.92	1.00	1.00
2047	12,000	12,000	10.57	14.20	10.57	11.29	1.00	1.00
2048	12,000	12,000	11.00	18.99	11.00	11.78	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.

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)
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	2,195	885	48	2,528	3,311	2,345
2020	2,134	908	84	4,518	5,645	1,999
2021	2,053	930	86	4,591	5,734	1,926
2022	1,974	954	88	4,736	5,704	2,049
2023	1,899	977	90	4,937	5,805	2,100
2024	1,827	1,002	92	5,198	6,112	2,006
2025	1,757	1,027	93	5,361	6,198	2,039
2026	1,689	1,053	91	5,306	6,034	2,105
2027	1,623	1,079	92	5,472	6,264	2,002
2028	1,558	1,106	94	5,734	6,356	2,135
2029	1,493	1,134	96	5,941	6,653	2,010
2030	1,427	1,162	99	6,087	6,675	2,101
2031	1,362	1,191	102	6,373	6,983	2,045
2032	1,297	1,221	105	6,619	7,081	2,161
2033	1,232	1,251	109	6,943	7,488	2,046
2034	1,166	1,282	112	7,217	7,698	2,079
2035	1,101	1,315	114	7,470	7,905	2,096
2036	1,036	1,347	118	7,742	8,153	2,090
2037	971	1,381	120	8,055	8,475	2,053
2038	906	1,416	123	8,366	8,802	2,009
2039	840	1,451	126	8,678	9,007	2,089
2040	788	1,487	130	9,000	9,362	2,042
2041	749	1,524	133	9,276	9,639	2,043
2042	709	1,563	136	9,686	10,002	2,092
2043	670	1,602	139	10,009	10,347	2,073
2044	630	1,642	143	10,438	10,834	2,019
2045	591	1,683	147	10,827	11,176	2,071
2046	552	1,725	150	11,233	11,539	2,121
2047	512	1,768	154	11,574	11,915	2,093
2048	473	1,812	158	12,084	12,448	2,079
2049	0	0	0	0	0	0
2050	0	0	0	0	0	0
2051	0	0	0	0	0	0
2052	0	0	0	0	0	0
2053	0	0	0	0	0	0
2054	0	0	0	0	0	0
2055	0	0	0	0	0	0
2056	0	0	0	0	0	0
2057	0	0	0	0	0	0
2058	0	0	0	0	0	0
2059	0	0	0	0	0	0
2060	0	0	0	0	0	0
NOM	37,213	38,875	3,372	222,000	239,346	62,114
NPV	13,684	10,031	864	53,204	59,537	18,247

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

(1) YEAR	(2) AVOIDED TRANSMISSION CAP COST \$(000)	(3) AVOIDED TRANSMISSION O&M COST \$(000)	(4) TOTAL AVOIDED TRANSMISSION COST \$(000)	(5) AVOIDED DISTRIBUTION CAP COST \$(000)	(6) AVOIDED DISTRIBUTION O&M COST \$(000)	(7) TOTAL AVOIDED DISTRIBUTION COST \$(000)	(8) PROGRAM FUEL SAVINGS \$(000)	(8a)* PROGRAM OFF-PEAK PAYBACK \$(000)
2014	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	1	0
2016	0	0	0	0	0	0	4	0
2017	0	0	0	0	0	0	6	0
2018	0	0	0	0	0	0	9	0
2019	0	0	0	0	0	0	15	0
2020	0	0	0	0	0	0	17	0
2021	0	0	0	0	0	0	16	0
2022	0	0	0	0	0	0	14	0
2023	0	0	0	0	0	0	12	0
2024	0	0	0	0	0	0	12	0
2025	0	0	0	0	0	0	15	0
2026	0	0	0	0	0	0	17	0
2027	0	0	0	0	0	0	15	0
2028	0	0	0	0	0	0	15	0
2029	0	0	0	0	0	0	11	0
2030	0	0	0	0	0	0	13	0
2031	0	0	0	0	0	0	15	0
2032	0	0	0	0	0	0	13	0
2033	0	0	0	0	0	0	14	0
2034	0	0	0	0	0	0	11	0
2035	0	0	0	0	0	0	10	0
2036	0	0	0	0	0	0	15	0
2037	0	0	0	0	0	0	15	0
2038	0	0	0	0	0	0	14	0
2039	0	0	0	0	0	0	11	0
2040	0	0	0	0	0	0	12	0
2041	0	0	0	0	0	0	13	0
2042	0	0	0	0	0	0	16	0
2043	0	0	0	0	0	0	14	0
2044	0	0	0	0	0	0	16	0
2045	0	0	0	0	0	0	14	0
2046	0	0	0	0	0	0	11	0
2047	0	0	0	0	0	0	12	0
2048	0	0	0	0	0	0	16	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	433	0
	0	0	0	0	0	0	140	0
NOM	0	0	0	0	0	0		
NPV	0	0	0	0	0	0		

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

A VOIDED GENERATING EMISSION IMPACT  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business On-Call

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2014	0	0	0	0	0
2015	0	0	0	0	0
2016	0	0	0	0	0
2017	0	0	0	0	0
2018	0	0	0	0	0
2019	1	2	0	0	(1)
2020	2	3	0	0	(1)
2021	2	3	0	0	(1)
2022	2	3	0	0	(1)
2023	2	3	0	0	(1)
2024	2	3	0	0	(1)
2025	2	3	0	0	(1)
2026	2	3	0	0	(1)
2027	2	3	0	0	(1)
2028	2	3	0	0	(1)
2029	2	3	0	0	(1)
2030	3	3	0	0	(0)
2031	3	4	0	0	(1)
2032	3	4	0	0	(1)
2033	3	4	0	0	(1)
2034	3	4	0	0	(1)
2035	3	4	0	0	(1)
2036	3	4	0	0	(1)
2037	3	4	0	0	(1)
2038	3	4	0	0	(1)
2039	3	4	0	0	(1)
2040	3	4	0	0	(1)
2041	3	5	0	0	(2)
2042	4	5	0	0	(1)
2043	4	5	0	0	(1)
2044	4	5	0	0	(1)
2045	4	5	0	0	(1)
2046	4	5	0	0	(1)
2047	4	5	0	0	(1)
2048	4	5	0	0	(1)
2049	0	0	0	0	0
2050	0	0	0	0	0
2051	0	0	0	0	0
2052	0	0	0	0	0
2053	0	0	0	0	0
2054	0	0	0	0	0
2055	0	0	0	0	0
2056	0	0	0	0	0
2057	0	0	0	0	0
2058	0	0	0	0	0
2059	0	0	0	0	0
2060	0	0	0	0	0
2061	0	0	0	0	0
2062	0	0	0	0	0
2063	0	0	0	0	0
2064	0	0	0	0	0
2065	0	0	0	0	0
2066	0	0	0	0	0
2067	0	0	0	0	0
2068	0	0	0	0	0
2069	0	0	0	0	0
2070	0	0	0	0	0
2071	0	0	0	0	0
2072	0	0	0	0	0
2073	0	0	0	0	0
2074	0	0	0	0	0
2075	0	0	0	0	0
2076	0	0	0	0	0
2077	0	0	0	0	0
2078	0	0	0	0	0
2079	0	0	0	0	0
2080	0	0	0	0	0
2081	0	0	0	0	0
2082	0	0	0	0	0
2083	0	0	0	0	0
2084	0	0	0	0	0
2085	0	0	0	0	0
2086	0	0	0	0	0
2087	0	0	0	0	0
2088	0	0	0	0	0
2089	0	0	0	0	0
2090	0	0	0	0	0
2091	0	0	0	0	0
2092	0	0	0	0	0
2093	0	0	0	0	0
2094	0	0	0	0	0
2095	0	0	0	0	0
2096	0	0	0	0	0
2097	0	0	0	0	0
2098	0	0	0	0	0
2099	0	0	0	0	0
2100	0	0	0	0	0
NOM	88	118	0	0	(30)
NPV	22	31	0	0	(8)







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

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) INCENTIVES \$(000)	(5) REVENUE LOSSES \$(000)	(6) OTHER COSTS \$(000)	(7) TOTAL COSTS \$(000)	(8) AVOIDED GEN UNIT & FUEL BENEFITS \$(000)	(9) AVOIDED T&D BENEFITS \$(000)	(10) REVENUE GAINS \$(000)	(11) OTHER BENEFITS \$(000)	(12) TOTAL BENEFITS \$(000)	(13) NET BENEFITS \$(000)	(14) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2014	0	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	140	53	1	0	194	1	0	0	0	1	0	(179)
2016	0	241	160	2	0	402	4	0	0	0	4	0	(398)
2017	0	339	267	3	0	608	6	0	0	0	6	0	(524)
2018	0	433	374	5	0	812	9	0	0	0	9	0	(1,009)
2019	0	371	427	6	0	804	2,359	0	0	0	2,359	0	(1,609)
2020	0	314	427	6	0	746	2,016	0	0	0	2,015	0	(527)
2021	0	224	427	6	0	657	1,942	0	0	0	2,015	0	293
2022	0	139	427	6	0	572	2,063	0	0	0	2,062	0	1,065
2023	0	57	427	6	0	490	2,112	0	0	0	2,111	0	1,269
2024	0	19	427	6	0	452	2,019	0	0	0	2,018	0	1,284
2025	0	19	427	6	0	452	2,055	0	0	0	2,054	0	1,490
2026	0	20	427	6	0	453	2,122	0	0	0	2,121	0	1,621
2027	0	20	427	7	0	453	2,017	0	0	0	2,016	0	1,668
2028	0	21	427	7	0	454	2,150	0	0	0	2,149	0	1,898
2029	0	21	427	7	0	455	2,021	0	0	0	2,020	0	1,898
2030	0	22	427	7	0	455	2,114	0	0	0	2,113	0	2,741
2031	0	22	427	7	0	456	2,060	0	0	0	2,059	0	3,498
2032	0	23	427	7	0	457	2,174	0	0	0	2,174	0	4,218
2033	0	23	427	8	0	458	2,060	0	0	0	2,059	0	4,916
2034	0	24	427	8	0	459	2,090	0	0	0	2,089	0	5,524
2035	0	105	427	9	0	541	2,106	0	0	0	2,105	0	6,137
2036	0	261	427	10	0	697	2,105	0	0	0	2,104	0	6,663
2037	0	411	427	10	0	848	2,068	0	0	0	2,067	0	7,182
2038	0	557	427	10	0	994	2,023	0	0	0	2,022	0	7,648
2039	0	608	427	9	0	1,044	2,100	0	0	0	2,099	0	8,112
2040	0	514	427	10	0	950	2,054	0	0	0	2,053	0	8,515
2041	0	367	427	10	0	804	2,056	0	0	0	2,055	0	8,896
2042	0	227	427	10	0	664	2,107	0	0	0	2,106	0	9,236
2043	0	94	427	11	0	531	2,087	0	0	0	2,086	0	9,520
2044	0	30	427	11	0	468	2,035	0	0	0	2,033	0	9,750
2045	0	31	427	11	0	469	2,086	0	0	0	2,084	0	10,001
2046	0	32	427	12	0	470	2,132	0	0	0	2,131	0	10,268
2047	0	33	427	12	0	472	2,104	0	0	0	2,103	0	10,444
2048	0	34	427	12	0	473	2,095	0	0	0	2,093	0	10,632
	0	0	0	0	0	0	0	0	0	0	0	0	10,821
	0	0	0	0	0	0	0	0	0	0	0	0	10,998
	0	0	0	0	0	0	0	0	0	0	0	0	11,168
	0	0	0	0	0	0	0	0	0	0	0	0	11,331
	0	0	0	0	0	0	0	0	0	0	0	0	11,479
	0	0	0	0	0	0	0	0	0	0	0	0	11,616
NOM.	0	5,794	13,660	262	0	19,716	62,548	0	0	(30)	62,518	42,802	
NPV	0	2,252	4,439	72	0	6,763	18,387	0	0	(8)	18,379	11,616	

Discount Rate

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

7.54

2.72

%

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

**I. PROGRAM DEMAND SAVINGS & LINE LOSSES**

(1) CUSTOMER KW REDUCTION AT METER .....	0.94 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.24141 KW
(3) KW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	11.49 kWh ****
(5) KW LINE LOSS PERCENTAGE .....	5.76 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kWh INCREASE AT METER .....	0.17 kWh ****

**II. ECONOMIC LIFE & K FACTORS**

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

**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 .....	7.54 %
(11) UTILITY AFUDC RATE .....	6.50 %
(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  
\*\*\*\* 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.

**IV. AVOIDED GENERATOR AND T&D COSTS**

(1) BASE YEAR .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/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 .....	58.35 \$/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 .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

**V. NON-FUEL ENERGY AND DEMAND CHARGES**

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



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

ESCALATION RATES

Year	(1) CPI%	(2) PPI_CAPI%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Charge (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	4.94	12.73
2015	2.50	2.50	2.50	0.00	0.00%	3.00	4.57	12.66
2016	2.50	2.50	2.50	0.00	0.00%	3.00	4.70	12.69
2017	2.50	2.50	2.50	0.00	0.00%	3.00	4.83	13.29
2018	2.50	2.50	2.50	0.00	0.00%	3.00	5.38	13.46
2019	2.50	2.50	2.50	3.85	55.85%	3.00	5.88	14.29
2020	2.50	2.50	2.50	4.03	95.39%	3.00	5.93	15.03
2021	2.50	2.50	2.50	4.10	95.40%	3.00	6.00	15.75
2022	2.50	2.50	2.50	4.23	95.37%	3.00	6.17	16.42
2023	2.50	2.50	2.50	4.42	94.99%	3.00	6.26	14.98
2024	2.50	2.50	2.50	4.69	94.40%	3.00	6.40	15.03
2025	2.50	2.50	2.50	4.88	93.42%	3.00	6.53	14.48
2026	2.50	2.50	2.50	5.08	88.94%	3.00	6.71	14.22
2027	2.50	2.50	2.50	5.31	87.68%	3.00	6.87	14.28
2028	2.50	2.50	2.50	5.59	87.36%	3.00	7.03	14.29
2029	2.50	2.50	2.50	5.79	87.30%	3.00	7.20	14.39
2030	2.50	2.50	2.50	5.88	88.13%	3.00	7.36	14.41
2031	2.50	2.50	2.50	6.13	88.44%	3.00	7.53	14.51
2032	2.50	2.50	2.50	6.32	89.14%	3.00	7.86	14.78
2033	2.50	2.50	2.50	6.59	89.64%	3.00	8.43	15.11
2034	2.50	2.50	2.50	6.84	89.85%	3.00	8.71	15.34
2035	2.50	2.50	2.50	7.09	89.65%	3.00	8.96	15.38
2036	2.50	2.50	2.50	7.31	90.14%	3.00	9.52	15.60
2037	2.50	2.50	2.50	7.63	89.91%	3.00	9.80	15.75
2038	2.50	2.50	2.50	7.92	89.91%	3.00	10.10	15.88
2039	2.50	2.50	2.50	8.22	89.91%	3.00	10.40	15.98
2040	2.50	2.50	2.50	8.52	89.86%	3.00	10.65	16.12
2041	2.50	2.50	2.50	8.79	89.82%	3.00	10.99	16.25
2042	2.50	2.50	2.50	9.18	89.85%	3.00	11.36	16.28
2043	2.50	2.50	2.50	9.48	89.84%	3.00	11.91	16.47
2044	2.50	2.50	2.50	9.88	89.93%	3.00	12.35	16.62
2045	2.50	2.50	2.50	10.25	89.91%	3.00	12.80	16.77
2046	2.50	2.50	2.50	10.63	89.91%	3.00	13.27	16.92
2047	2.50	2.50	2.50	10.97	89.83%	3.00	13.76	17.07
2048	2.50	2.50	2.50	11.44	89.92%	3.00	14.28	17.22
	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%	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	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	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	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	0.00	0.00	0.00	0.00%	0.00	0.00	0.00

Column (1) used for:

- Utility Cost
- Customer Equipment
- Supply Costs

Column (6) used for:

- Gen. Train. & Dist Cost

Column (3) used for:

- Customer O&M Cost
- Generator Fixed O&M
- T&D Fixed O&M
- Generator Variable O&M

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

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	36,089	749	0	2,259	1,385	626	19	1,186	73	6,298	6,298	6,298	35,590
2020	34,830	725	0	2,180	867	605	19	1,186	541	6,122	5,693	11,991	36,479
2021	33,102	687	0	2,072	872	583	20	1,186	468	5,889	5,093	17,084	37,391
2022	31,448	653	0	1,969	874	561	20	1,186	401	5,665	4,556	21,640	38,326
2023	29,860	620	0	1,869	875	540	21	1,186	338	5,449	4,075	25,715	39,284
2024	28,336	588	0	1,774	873	518	21	1,186	280	5,241	3,645	29,360	40,266
2025	26,869	558	0	1,682	869	497	22	1,186	227	5,040	3,259	32,619	41,273
2026	25,456	529	0	1,594	863	475	22	1,186	177	4,846	2,914	35,533	42,305
2027	24,093	500	0	1,508	817	453	23	1,186	132	4,658	2,605	38,138	43,363
2028	22,737	472	0	1,423	764	432	24	1,186	169	4,470	2,325	40,463	44,447
2029	21,382	444	0	1,339	711	410	24	1,186	169	4,283	2,071	42,534	45,558
2030	20,027	416	0	1,254	658	389	25	1,186	169	4,096	1,842	44,376	46,697
2031	18,671	388	0	1,169	604	367	25	1,186	169	3,909	1,633	46,011	47,864
2032	17,316	360	0	1,084	551	345	26	1,186	169	3,721	1,447	47,458	49,061
2033	15,961	331	0	999	498	324	27	1,186	169	3,534	1,278	48,736	50,287
2034	14,605	303	0	914	444	302	27	1,186	169	3,347	1,126	49,862	51,544
2035	13,250	275	0	829	391	281	28	1,186	169	3,160	988	50,850	52,833
2036	11,895	247	0	745	338	259	29	1,186	169	2,973	864	51,714	54,154
2037	10,539	219	0	660	284	238	29	1,186	169	2,785	753	52,468	55,508
2038	9,184	191	0	575	231	216	30	1,186	169	2,598	653	53,121	56,895
2039	7,829	163	0	490	163	194	31	1,186	(132)	2,411	564	53,685	58,318
2040	6,474	141	0	424	739	173	32	1,186	(434)	2,261	492	54,177	59,776
2041	5,119	125	0	377	709	151	32	1,186	(434)	2,148	434	54,611	61,270
2042	3,764	109	0	330	680	130	33	1,186	(434)	2,035	383	54,994	62,802
2043	2,409	94	0	283	650	108	34	1,186	(434)	1,922	336	55,330	64,372
2044	1,054	78	0	236	621	86	35	1,186	(434)	1,809	294	55,624	65,981
2045	0	63	0	188	591	65	36	1,186	(434)	1,695	256	55,881	67,631
2046	0	47	0	141	562	43	37	1,186	(434)	1,582	223	56,103	69,322
2047	0	31	0	94	532	22	38	1,186	(434)	1,469	192	56,295	71,055
2048	0	16	0	47	502	(0)	39	1,186	(434)	1,356	165	56,460	72,831

**CAPITAL STRUCTURE**

SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

IN SERVICE COST (\$000)	35,590
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECT. TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED DEPRECIATION \$(000)	DEFERRED TAX DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2019	3.75%	1,313	1,313	1,186	1,186	1,124	1,124	73	1,873	0	0	0	73	(427)
2020	7.22%	2,527	3,840	1,186	2,527	1,186	2,373	541	1,873	0	0	0	541	115
2021	6.68%	2,338	6,178	1,186	3,599	1,124	3,372	468	1,873	0	0	0	468	583
2022	6.18%	2,164	8,342	1,186	4,745	1,124	4,496	401	1,873	0	0	0	401	984
2023	5.71%	2,000	10,342	1,186	5,932	1,124	5,619	338	1,873	0	0	0	338	1,322
2024	5.29%	1,850	12,192	1,186	7,118	1,124	6,743	280	1,873	0	0	0	280	1,603
2025	4.89%	1,711	13,904	1,186	8,304	1,124	7,867	227	1,873	0	0	0	227	1,829
2026	4.52%	1,583	15,487	1,186	9,491	1,124	8,991	177	1,873	0	0	0	177	2,006
2027	4.46%	1,562	17,049	1,186	10,677	1,124	10,115	169	1,873	0	0	0	169	2,175
2028	4.46%	1,562	18,611	1,186	11,863	1,124	11,239	169	1,873	0	0	0	169	2,344
2029	4.46%	1,562	20,173	1,186	13,050	1,124	12,363	169	1,873	0	0	0	169	2,513
2030	4.46%	1,562	21,735	1,186	14,236	1,124	13,487	169	1,873	0	0	0	169	2,682
2031	4.46%	1,562	23,297	1,186	15,422	1,124	14,611	169	1,873	0	0	0	169	2,851
2032	4.46%	1,562	24,859	1,186	16,609	1,124	15,735	169	1,873	0	0	0	169	3,020
2033	4.46%	1,562	26,421	1,186	17,795	1,124	16,858	169	1,873	0	0	0	169	3,190
2034	4.46%	1,562	27,983	1,186	18,981	1,124	17,982	169	1,873	0	0	0	169	3,358
2035	4.46%	1,562	29,546	1,186	20,167	1,124	19,106	169	1,873	0	0	0	169	3,528
2036	4.46%	1,562	31,107	1,186	21,354	1,124	20,230	169	1,873	0	0	0	169	3,696
2037	4.46%	1,562	32,670	1,186	22,540	1,124	21,354	169	1,873	0	0	0	169	3,866
2038	4.46%	1,562	34,232	1,186	23,726	1,124	22,478	169	1,873	0	0	0	169	4,035
2039	2.23%	781	35,013	1,186	24,913	1,124	23,602	(132)	1,873	0	0	0	(132)	3,902
2040	0.00%	0	35,013	1,186	26,099	1,124	24,726	(434)	1,873	0	0	0	(434)	3,469
2041	0.00%	0	35,013	1,186	27,285	1,124	25,850	(434)	1,873	0	0	0	(434)	3,035
2042	0.00%	0	35,013	1,186	28,472	1,124	26,973	(434)	1,873	0	0	0	(434)	2,602
2043	0.00%	0	35,013	1,186	29,658	1,124	28,097	(434)	1,873	0	0	0	(434)	2,168
2044	0.00%	0	35,013	1,186	30,844	1,124	29,221	(434)	1,873	0	0	0	(434)	1,735
2045	0.00%	0	35,013	1,186	32,031	1,124	30,345	(434)	1,873	0	0	0	(434)	1,301
2046	0.00%	0	35,013	1,186	33,217	1,124	31,469	(434)	1,873	0	0	0	(434)	867
2047	0.00%	0	35,013	1,186	34,403	1,124	32,593	(434)	1,873	0	0	0	(434)	434
2048	0.00%	0	35,013	1,186	35,590	1,124	33,717	(434)	1,873	0	0	0	(434)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(499)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	1,873
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

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

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$ (000)	DEFERRED TAX \$ (000)	END OF YEAR NET PLANT IN SERVICE \$ (000)	ACCUMULATED DEPRECIATION \$ (000)	ACCUMULATED DEF TAXES \$ (000)	BEGINNING YEAR RATE BASE \$ (000)	ENDING OF YEAR RATE BASE \$ (000)	MID-YEAR RATE BASE \$ (000)
2019	3.75%	1,313	73	34,403	1,186	(427)	36,089	34,830	35,460
2020	7.22%	2,527	541	33,217	2,373	115	34,830	33,102	33,966
2021	6.68%	2,338	468	32,031	3,559	583	33,102	31,448	32,275
2022	6.18%	2,164	401	30,844	4,745	984	31,448	29,860	30,654
2023	5.71%	2,000	338	29,658	5,932	1,322	29,860	28,336	29,098
2024	5.29%	1,850	280	28,472	7,118	1,603	28,336	26,869	27,603
2025	4.89%	1,711	227	27,285	8,304	1,829	26,869	25,456	26,163
2026	4.52%	1,583	177	26,099	9,491	2,006	25,456	24,093	24,775
2027	4.46%	1,562	169	24,913	10,677	2,175	24,093	22,737	23,415
2028	4.46%	1,562	169	23,726	11,863	2,344	22,737	21,382	22,060
2029	4.46%	1,562	169	22,540	13,050	2,513	21,382	20,027	20,704
2030	4.46%	1,562	169	21,354	14,236	2,682	20,027	18,671	19,349
2031	4.46%	1,562	169	20,167	15,422	2,851	18,671	17,316	17,994
2032	4.46%	1,562	169	18,981	16,609	3,020	17,316	15,961	16,638
2033	4.46%	1,562	169	17,795	17,795	3,190	15,961	14,605	15,283
2034	4.46%	1,562	169	16,609	18,981	3,358	14,605	13,250	13,928
2035	4.46%	1,562	169	15,422	20,167	3,528	13,250	11,895	12,572
2036	4.46%	1,562	169	14,236	21,354	3,696	11,895	10,539	11,217
2037	4.46%	1,562	169	13,050	22,540	3,866	10,539	9,184	9,862
2038	4.46%	1,562	169	11,863	23,726	4,035	9,184	7,829	8,506
2039	2.23%	781	(132)	10,677	24,913	3,902	7,829	6,775	7,302
2040	0.00%	0	(434)	9,491	26,099	3,469	6,775	6,022	6,398
2041	0.00%	0	(434)	8,304	27,285	3,035	6,022	5,269	5,645
2042	0.00%	0	(434)	7,118	28,472	2,602	5,269	4,516	4,893
2043	0.00%	0	(434)	5,932	29,658	2,168	4,516	3,764	4,140
2044	0.00%	0	(434)	4,745	30,844	1,735	3,764	3,011	3,387
2045	0.00%	0	(434)	3,559	32,031	1,301	3,011	2,258	2,634
2046	0.00%	0	(434)	2,373	33,217	867	2,258	1,505	1,882
2047	0.00%	0	(434)	1,186	34,403	434	1,505	752	1,129
2048	0.00%	0	(434)	(0)	35,590	0	752	0	376

\* 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)	(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)
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.01	0.01	0.03	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86
2015	-4	3.00%	1.030	0.28%	2.26	1.96	0.04	0.05	0.16	0.13	0.16	0.10	0.12	(0.02)	(0.03)	2.39	3.24
2016	-3	3.00%	1.061	8.69%	71.58	38.88	0.76	0.81	2.54	2.54	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36
2017	-2	3.00%	1.093	53.83%	456.61	302.97	5.95	6.76	19.90	19.90	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87
2018	-1	3.00%	1.126	37.09%	324.11	693.33	13.99	20.74	46.81	69.41	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80
					100.00%	855.39											

20.74	69.41	54.39	(12.98)	924.80
IN SERVICE YEAR	2019	BOOK BASIS	BOOK BASIS	TAX BASIS
PLANT COSTS	776,326,284.5	CONSTRUCTION CASH	FOR DEF. TAX	32,919
AFUDC RATE	6.50%	EQUITY AFUDC	32,919	32,919
		DEBT AFUDC	798	798
		CPI	33,717	2,093
		TOTAL	35,590	35,012

\* Column not specified in workbook

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

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (C/KWh)	AVOIDED MARGINAL FUEL COST (C/KWh)	INCREASED MARGINAL FUEL COST (C/KWh)	REPLACEMENT FUEL COST (C/KWh)	PROGRAM KW EFFECTIVENESS FACTOR	PROGRAM kWh EFFECTIVENESS FACTOR
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	7,500	7,500	4.45	8.42	4.45	0.00	1.00	1.00
2016	15,000	15,000	4.92	12.24	4.92	0.00	1.00	1.00
2017	23,000	23,000	4.27	10.29	4.27	0.00	1.00	1.00
2018	31,000	31,000	5.27	11.75	5.27	0.00	1.00	1.00
2019	31,000	31,000	5.38	16.61	5.38	5.05	1.00	1.00
2020	31,000	31,000	5.65	18.15	5.65	5.04	1.00	1.00
2021	31,000	31,000	5.60	15.84	5.60	5.09	1.00	1.00
2022	31,000	31,000	5.60	14.15	5.60	5.20	1.00	1.00
2023	31,000	31,000	5.81	14.12	5.81	5.51	1.00	1.00
2024	31,000	31,000	5.98	17.69	5.98	5.65	1.00	1.00
2025	31,000	31,000	5.73	19.09	5.73	5.77	1.00	1.00
2026	31,000	31,000	6.01	16.85	6.01	6.08	1.00	1.00
2027	31,000	31,000	6.07	17.17	6.07	6.19	1.00	1.00
2028	31,000	31,000	6.28	13.07	6.28	6.49	1.00	1.00
2029	31,000	31,000	6.34	14.76	6.34	6.45	1.00	1.00
2030	31,000	31,000	6.57	17.01	6.57	6.72	1.00	1.00
2031	31,000	31,000	6.62	15.42	6.62	6.76	1.00	1.00
2032	31,000	31,000	6.97	16.02	6.97	7.11	1.00	1.00
2033	31,000	31,000	7.05	13.20	7.05	7.29	1.00	1.00
2034	31,000	31,000	7.19	11.99	7.19	7.50	1.00	1.00
2035	31,000	31,000	7.47	17.33	7.47	7.70	1.00	1.00
2036	31,000	31,000	7.68	17.92	7.68	8.02	1.00	1.00
2037	31,000	31,000	7.94	16.32	7.94	8.33	1.00	1.00
2038	31,000	31,000	8.12	13.64	8.12	8.53	1.00	1.00
2039	31,000	31,000	8.35	14.31	8.35	8.87	1.00	1.00
2040	31,000	31,000	8.67	15.52	8.67	9.13	1.00	1.00
2041	31,000	31,000	8.99	18.22	8.99	9.47	1.00	1.00
2042	31,000	31,000	9.27	16.85	9.27	9.80	1.00	1.00
2043	31,000	31,000	9.60	18.50	9.60	10.25	1.00	1.00
2044	31,000	31,000	9.94	16.83	9.94	10.58	1.00	1.00
2045	31,000	31,000	10.25	13.72	10.25	10.92	1.00	1.00
2046	31,000	31,000	10.57	14.20	10.57	11.29	1.00	1.00
2047	31,000	31,000	11.00	18.99	11.00	11.78	1.00	1.00
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.



page 8  
AVOIDED T&D AND PROGRAM FUEL SAVINGS  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Commercial/Industrial Demand Reduction

(1) YEAR	(2) AVOIDED TRANSMISSION CAP COST \$(000)	(3) AVOIDED TRANSMISSION O&M COST \$(000)	(4) TOTAL AVOIDED TRANSMISSION CAP COST \$(000)	(5) AVOIDED DISTRIBUTION CAP COST \$(000)	(6) AVOIDED DISTRIBUTION O&M COST \$(000)	(7) TOTAL AVOIDED DISTRIBUTION CAP COST \$(000)	(8) PROGRAM FUEL SAVINGS \$(000)	(8a)* PROGRAM OFF-PEAK PAYBACK \$(000)
2014	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	4	0
2016	0	0	0	0	0	0	18	0
2017	0	0	0	0	0	0	25	0
2018	0	0	0	0	0	0	41	0
2019	0	0	0	0	0	0	67	0
2020	0	0	0	0	0	0	80	0
2021	0	0	0	0	0	0	74	0
2022	0	0	0	0	0	0	64	0
2023	0	0	0	0	0	0	57	0
2024	0	0	0	0	0	0	56	0
2025	0	0	0	0	0	0	72	0
2026	0	0	0	0	0	0	78	0
2027	0	0	0	0	0	0	68	0
2028	0	0	0	0	0	0	69	0
2029	0	0	0	0	0	0	52	0
2030	0	0	0	0	0	0	59	0
2031	0	0	0	0	0	0	68	0
2032	0	0	0	0	0	0	61	0
2033	0	0	0	0	0	0	64	0
2034	0	0	0	0	0	0	52	0
2035	0	0	0	0	0	0	46	0
2036	0	0	0	0	0	0	69	0
2037	0	0	0	0	0	0	71	0
2038	0	0	0	0	0	0	64	0
2039	0	0	0	0	0	0	53	0
2040	0	0	0	0	0	0	55	0
2041	0	0	0	0	0	0	60	0
2042	0	0	0	0	0	0	72	1
2043	0	0	0	0	0	0	66	1
2044	0	0	0	0	0	0	72	1
2045	0	0	0	0	0	0	65	1
2046	0	0	0	0	0	0	51	1
2047	0	0	0	0	0	0	53	1
2048	0	0	0	0	0	0	73	1
NOM.	0	0	0	0	0	0	0	0
NPV	0	0	0	0	0	0	1,988	13
							644	4

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











**I. PROGRAM DEMAND SAVINGS & LINE LOSSES**

(1) CUSTOMER KW REDUCTION AT METER .....	0.97 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.27448 KW
(3) KW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	1.35786 KW/h
(5) KW/h LINE LOSS PERCENTAGE .....	5.76 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER KW/h INCREASE AT METER .....	0.00 KW/h

**II. ECONOMIC LIFE & K FACTORS**

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

**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 .....	7.54 %
(11) UTILITY AFUDC RATE .....	6.50 %
(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 .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	146.90 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	24.85 \$/KW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	58.35 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	5.53 \$/KW
(11) DISTRIBUTION FIXED O & M COST .....	2.34 \$/KW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) A VOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

**V. NON-FUEL ENERGY AND DEMAND CHARGES**

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



INPUT DATA - PART I CONTINUED  
PROGRAM METHOD SELECTED: REV\_REQ

PROGRAM NAME: Business Heating, Ventilating, & Air Conditioning

ESCALATION RATES

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Change (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	5.43	11.21
2015	2.50	2.50	2.50	0.00	0.00%	3.00	5.07	11.15
2016	2.50	2.50	2.50	0.00	0.00%	3.00	5.21	11.17
2017	2.50	2.50	2.50	0.00	0.00%	3.00	5.55	11.70
2018	2.50	2.50	2.50	0.00	0.00%	3.00	5.91	11.85
2019	2.50	2.50	2.50	3.85	55.85%	3.00	6.41	12.59
2020	2.50	2.50	2.50	4.03	95.39%	3.00	6.46	13.25
2021	2.50	2.50	2.50	4.10	95.40%	3.00	6.54	13.90
2022	2.50	2.50	2.50	4.23	95.37%	3.00	6.78	14.46
2023	2.50	2.50	2.50	4.42	94.99%	3.00	6.96	13.13
2024	2.50	2.50	2.50	4.69	94.40%	3.00	7.10	13.17
2025	2.50	2.50	2.50	4.88	93.42%	3.00	7.24	12.68
2026	2.50	2.50	2.50	5.08	88.94%	3.00	7.42	12.45
2027	2.50	2.50	2.50	5.31	87.68%	3.00	7.57	12.50
2028	2.50	2.50	2.50	5.59	87.36%	3.00	7.74	12.51
2029	2.50	2.50	2.50	5.79	87.30%	3.00	7.91	12.60
2030	2.50	2.50	2.50	5.88	88.13%	3.00	8.08	12.62
2031	2.50	2.50	2.50	6.13	88.44%	3.00	8.25	12.71
2032	2.50	2.50	2.50	6.32	89.14%	3.00	8.59	12.95
2033	2.50	2.50	2.50	6.59	89.64%	3.00	9.19	13.24
2034	2.50	2.50	2.50	6.84	89.85%	3.00	9.48	13.44
2035	2.50	2.50	2.50	7.09	89.65%	3.00	9.73	13.48
2036	2.50	2.50	2.50	7.31	90.14%	3.00	10.31	13.67
2037	2.50	2.50	2.50	7.63	89.91%	3.00	10.59	13.80
2038	2.50	2.50	2.50	7.92	89.91%	3.00	10.90	13.91
2039	2.50	2.50	2.50	8.22	89.91%	3.00	11.21	14.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	11.47	14.12
2041	2.50	2.50	2.50	8.79	89.82%	3.00	11.82	14.24
2042	2.50	2.50	2.50	9.18	89.85%	3.00	12.19	14.27
2043	2.50	2.50	2.50	9.48	89.84%	3.00	12.75	14.44
2044	2.50	2.50	2.50	9.88	89.93%	3.00	13.19	14.57
2045	2.50	2.50	2.50	10.25	89.91%	3.00	13.65	14.70
2046	2.50	2.50	2.50	10.63	89.91%	3.00	14.13	14.83
2047	2.50	2.50	2.50	10.97	89.83%	3.00	14.63	14.96
2048	2.50	2.50	2.50	11.44	89.92%	3.00	15.16	15.09
	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%	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	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	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	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	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	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	0.00	0.00%	0.00	0.00	0.00

Column (1) used for:  
Utility Cost  
Customer Equipment  
Supply Costs

Column (6) used for:  
Gen. Train. & Dist Cost

Column (3) used for:  
Customer O&M Cost  
Generator Fixed O&M  
T&D Fixed O&M  
Generator Variable O&M

CALCULATION OF GEN K-FACTOR  
PROGRAM METHOD SELECTED REV\_REQ  
PROGRAM NAME: Business Heating, Ventilating, & Air Conditioning

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	39,941	829	0	2,500	1,533	693	21	1,313	81	6,970	6,970	6,970	39,388
2020	38,547	800	0	2,413	960	669	21	1,313	599	6,301	6,301	13,271	40,373
2021	36,635	761	0	2,293	965	645	22	1,313	518	6,518	6,518	18,907	41,382
2022	34,804	723	0	2,179	968	621	22	1,313	444	6,270	6,270	23,949	42,417
2023	33,047	686	0	2,069	968	597	23	1,313	374	6,031	4,510	28,459	43,477
2024	31,360	651	0	1,963	966	573	24	1,313	310	5,801	4,034	32,493	44,564
2025	29,737	617	0	1,862	962	550	24	1,313	251	5,578	3,607	36,101	45,678
2026	28,173	585	0	1,764	955	526	25	1,313	196	5,325	3,225	39,326	46,820
2027	26,664	554	0	1,669	905	502	25	1,313	187	5,155	2,883	42,208	47,990
2028	25,164	523	0	1,575	846	478	26	1,313	187	4,947	2,573	44,781	49,190
2029	23,664	491	0	1,481	787	454	27	1,313	187	4,740	2,292	47,074	50,420
2030	22,164	460	0	1,387	728	430	27	1,313	187	4,533	2,039	49,112	51,680
2031	20,664	429	0	1,294	669	406	28	1,313	187	4,326	1,809	50,921	52,972
2032	19,164	398	0	1,200	610	382	29	1,313	187	4,118	1,602	52,523	54,297
2033	17,664	367	0	1,106	551	358	29	1,313	187	3,911	1,415	53,937	55,654
2034	16,164	336	0	1,012	492	335	30	1,313	187	3,704	1,246	55,183	57,045
2035	14,664	304	0	918	433	311	31	1,313	187	3,497	1,094	56,277	58,472
2036	13,164	273	0	824	374	287	32	1,313	187	3,290	957	57,233	59,933
2037	11,664	242	0	730	315	263	33	1,313	187	3,083	834	58,067	61,432
2038	10,164	211	0	636	256	239	33	1,313	187	2,876	723	58,790	62,968
2039	8,664	180	0	542	197	215	34	1,313	187	2,669	624	59,414	64,542
2040	7,164	156	0	469	138	191	35	1,313	187	2,502	544	59,959	66,155
2041	6,665	138	0	417	785	167	36	1,313	187	2,377	481	60,439	67,809
2042	5,831	121	0	365	752	143	37	1,313	187	2,252	424	60,863	69,504
2043	4,998	104	0	313	720	119	38	1,313	187	2,127	372	61,235	71,242
2044	4,165	86	0	261	687	96	39	1,313	187	2,002	326	61,560	73,023
2045	3,332	69	0	209	654	72	40	1,313	187	1,876	284	61,844	74,849
2046	2,499	52	0	156	621	48	41	1,313	187	1,751	246	62,091	76,720
2047	1,666	35	0	104	589	24	42	1,313	187	1,626	213	62,303	78,638
2048	833	17	0	52	556	0	43	1,313	187	1,501	183	62,486	80,604

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642

IN SERVICE COST (\$000)	39,388
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFEC. TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

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

(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 DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED DEPRECIATION \$(000)	DEFERRED TAX 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 \$(472) \$(000)
2019	3.75%	1,453	1,453	1,313	1,313	1,244	1,244	81	2,073	0	0	0	81	(472)
2020	7.22%	2,797	4,250	1,313	2,797	1,244	2,626	599	2,073	0	0	0	599	127
2021	6.68%	2,587	6,837	1,313	3,939	1,244	3,732	518	2,073	0	0	0	518	645
2022	6.18%	2,395	9,232	1,313	5,252	1,244	4,975	444	2,073	0	0	0	444	1,089
2023	5.71%	2,214	11,446	1,313	6,565	1,244	6,219	374	2,073	0	0	0	374	1,463
2024	5.29%	2,048	13,494	1,313	7,878	1,244	7,463	310	2,073	0	0	0	310	1,774
2025	4.89%	1,894	15,388	1,313	9,191	1,244	8,707	251	2,073	0	0	0	251	2,024
2026	4.52%	1,752	17,140	1,313	10,503	1,244	9,951	196	2,073	0	0	0	196	2,220
2027	4.46%	1,729	18,869	1,313	11,816	1,244	11,195	187	2,073	0	0	0	187	2,408
2028	4.46%	1,729	20,597	1,313	13,129	1,244	12,438	187	2,073	0	0	0	187	2,595
2029	4.46%	1,729	22,326	1,313	14,442	1,244	13,682	187	2,073	0	0	0	187	2,782
2030	4.46%	1,729	24,055	1,313	15,755	1,244	14,926	187	2,073	0	0	0	187	2,969
2031	4.46%	1,729	25,784	1,313	17,068	1,244	16,170	187	2,073	0	0	0	187	3,156
2032	4.46%	1,729	27,512	1,313	18,381	1,244	17,414	187	2,073	0	0	0	187	3,343
2033	4.46%	1,729	29,241	1,313	19,694	1,244	18,658	187	2,073	0	0	0	187	3,530
2034	4.46%	1,729	30,970	1,313	21,007	1,244	19,901	187	2,073	0	0	0	187	3,717
2035	4.46%	1,729	32,699	1,313	22,320	1,244	21,145	187	2,073	0	0	0	187	3,904
2036	4.46%	1,729	34,427	1,313	23,633	1,244	22,389	187	2,073	0	0	0	187	4,091
2037	4.46%	1,729	36,156	1,313	24,946	1,244	23,633	187	2,073	0	0	0	187	4,278
2038	4.46%	1,729	37,885	1,313	26,259	1,244	24,877	187	2,073	0	0	0	187	4,465
2039	2.23%	864	38,749	1,313	27,572	1,244	26,121	(146)	2,073	0	0	0	(146)	4,319
2040	0.00%	0	38,749	1,313	28,884	1,244	27,364	(480)	2,073	0	0	0	(480)	3,839
2041	0.00%	0	38,749	1,313	30,197	1,244	28,608	(480)	2,073	0	0	0	(480)	3,359
2042	0.00%	0	38,749	1,313	31,510	1,244	29,852	(480)	2,073	0	0	0	(480)	2,879
2043	0.00%	0	38,749	1,313	32,823	1,244	31,096	(480)	2,073	0	0	0	(480)	2,400
2044	0.00%	0	38,749	1,313	34,136	1,244	32,340	(480)	2,073	0	0	0	(480)	1,920
2045	0.00%	0	38,749	1,313	35,449	1,244	33,584	(480)	2,073	0	0	0	(480)	1,440
2046	0.00%	0	38,749	1,313	36,762	1,244	34,827	(480)	2,073	0	0	0	(480)	960
2047	0.00%	0	38,749	1,313	38,075	1,244	36,071	(480)	2,073	0	0	0	(480)	480
2048	0.00%	0	38,749	1,313	39,388	1,244	37,315	(480)	2,073	0	0	0	(480)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(553)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	2,073
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

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

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION	DEFERRED TAX	END OF YEAR NET PLANT IN SERVICE	ACCUMULATED DEPRECIATION	ACCUMULATED DEF TAXES	BEGINNING YEAR RATE BASE	ENDING OF YEAR RATE BASE	MID-YEAR RATE BASE
YEAR	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
2019	3.75%	1,453	81	38,075	1,313	(472)	39,941	38,547	39,244
2020	7.22%	2,797	599	36,762	2,626	127	38,547	36,635	37,591
2021	6.68%	2,587	518	35,449	3,939	645	36,635	34,804	35,719
2022	6.18%	2,395	444	34,136	5,252	1,089	34,804	33,047	33,925
2023	5.71%	2,214	374	32,823	6,565	1,463	33,047	31,360	32,203
2024	5.29%	2,048	310	31,510	7,878	1,774	31,360	29,737	30,548
2025	4.89%	1,894	251	30,197	9,191	2,024	29,737	28,173	28,955
2026	4.52%	1,752	196	28,884	10,503	2,220	28,173	26,664	27,419
2027	4.46%	1,729	187	27,572	11,816	2,408	26,664	25,164	25,914
2028	4.46%	1,729	187	26,259	13,129	2,595	25,164	23,664	24,414
2029	4.46%	1,729	187	24,946	14,442	2,782	23,664	22,164	22,914
2030	4.46%	1,729	187	23,633	15,755	2,969	22,164	20,664	21,414
2031	4.46%	1,729	187	22,320	17,068	3,156	20,664	19,164	19,914
2032	4.46%	1,729	187	21,007	18,381	3,343	19,164	17,664	18,414
2033	4.46%	1,729	187	19,694	19,694	3,530	17,664	16,164	16,914
2034	4.46%	1,729	187	18,381	21,007	3,717	16,164	14,664	15,414
2035	4.46%	1,729	187	17,068	22,320	3,904	14,664	13,164	13,914
2036	4.46%	1,729	187	15,755	23,633	4,091	13,164	11,664	12,414
2037	4.46%	1,729	187	14,442	24,946	4,278	11,664	10,164	10,914
2038	4.46%	1,729	187	13,129	26,259	4,465	10,164	8,664	9,414
2039	2.23%	864	(146)	11,816	27,572	4,319	8,664	7,498	8,081
2040	0.00%	0	(480)	10,503	28,884	3,839	7,498	6,665	7,081
2041	0.00%	0	(480)	9,191	30,197	3,359	6,665	5,831	6,248
2042	0.00%	0	(480)	7,878	31,510	2,879	5,831	4,998	5,415
2043	0.00%	0	(480)	6,565	32,823	2,400	4,998	4,165	4,582
2044	0.00%	0	(480)	5,252	34,136	1,920	4,165	3,332	3,749
2045	0.00%	0	(480)	3,939	35,449	1,440	3,332	2,499	2,915
2046	0.00%	0	(480)	2,626	36,762	960	2,499	1,666	2,082
2047	0.00%	0	(480)	1,313	38,075	480	1,666	833	1,249
2048	0.00%	0	(480)	0	39,388	0	833	0	416

\* 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)	(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)	
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.41	0.01	0.01	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86	
2015	-4	3.00%	1.030	0.28%	2.26	1.96	1.96	0.05	0.16	0.13	0.16	0.10	0.12	(0.02)	(0.03)	2.39	3.24	
2016	-3	3.00%	1.061	8.69%	71.58	38.88	71.58	0.81	2.70	2.54	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36	
2017	-2	3.00%	1.093	53.83%	456.61	302.97	302.97	6.76	22.60	19.90	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87	
2018	-1	3.00%	1.126	37.09%	324.11	693.33	693.33	20.74	69.41	46.81	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80	
100.00%											855.39							

20.74	69.41	54.39	(12.98)	924.80
CONSTRUCTION CASH	BOOK BASIS FOR DEF. TAX	TAX BASIS		
EQUITY AFUDC	36,432	36,432		
DEBT AFUDC	2,073	883		
CPI	883	2,316		
TOTAL	39,388	37,315	38,748	

\* Column not specified in workbook

IN SERVICE YEAR	2019
PLANT COSTS	776,326,284.5
AFUDC RATE	6.50%

INPUT DATA -- PART 2  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Heating, Ventilating, & 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
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	6,999	6,999	4.45	6.75	4.71	0.00	1.00	1.00
2016	15,646	15,646	4.92	6.62	5.24	0.00	1.00	1.00
2017	24,450	24,450	4.27	7.06	4.44	0.00	1.00	1.00
2018	33,418	33,418	5.27	9.84	5.50	0.00	1.00	1.00
2019	33,418	33,418	5.38	9.97	5.61	5.05	1.00	1.00
2020	33,418	33,418	5.65	10.93	5.90	5.04	1.00	1.00
2021	33,418	33,418	5.65	10.45	5.90	5.12	1.00	1.00
2022	33,418	33,418	5.60	9.63	5.82	5.09	1.00	1.00
2023	33,418	33,418	5.60	8.72	5.81	5.20	1.00	1.00
2024	33,418	33,418	5.81	8.75	6.01	5.51	1.00	1.00
2025	33,418	33,418	5.98	9.12	6.19	5.65	1.00	1.00
2026	33,418	33,418	5.73	8.13	5.91	5.77	1.00	1.00
2027	33,418	33,418	6.01	9.06	6.23	6.08	1.00	1.00
2028	33,418	33,418	6.07	8.32	6.28	6.19	1.00	1.00
2029	33,418	33,418	6.28	8.68	6.50	6.49	1.00	1.00
2030	33,418	33,418	6.34	8.42	6.53	6.45	1.00	1.00
2031	33,418	33,418	6.57	8.80	6.75	6.72	1.00	1.00
2032	33,418	33,418	6.62	8.10	6.76	6.76	1.00	1.00
2033	33,418	33,418	6.97	9.11	7.11	7.11	1.00	1.00
2034	33,418	33,418	7.05	8.59	7.17	7.29	1.00	1.00
2035	33,418	33,418	7.19	8.57	7.31	7.50	1.00	1.00
2036	33,418	33,418	7.47	9.05	7.58	7.70	1.00	1.00
2037	33,418	33,418	7.68	9.43	7.81	8.02	1.00	1.00
2038	33,418	33,418	7.94	9.64	8.06	8.33	1.00	1.00
2039	33,418	33,418	8.12	9.71	8.24	8.53	1.00	1.00
2040	33,418	33,418	8.35	10.00	8.47	8.87	1.00	1.00
2041	33,418	33,418	8.67	10.42	8.79	9.13	1.00	1.00
2042	33,418	33,418	8.99	10.99	9.12	9.47	1.00	1.00
2043	33,418	33,418	9.27	11.21	9.40	9.80	1.00	1.00
2044	33,418	33,418	9.60	11.71	9.74	10.25	1.00	1.00
2045	33,418	33,418	9.94	11.97	10.08	10.58	1.00	1.00
2046	33,418	33,418	10.25	12.08	10.38	10.92	1.00	1.00
2047	33,418	33,418	10.57	12.57	10.71	11.29	1.00	1.00
2048	33,418	33,418	11.00	13.37	11.15	11.78	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

\* 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 T&D AND PROGRAM FUEL SAVINGS  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Heating, Ventilating, & Air Conditioning

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(8a)*
YEAR	AVOIDED TRANSMISSION CAP COST \$(000)	AVOIDED TRANSMISSION O&M COST \$(000)	TOTAL AVOIDED TRANSMISSION COST \$(000)	AVOIDED DISTRIBUTION CAP COST \$(000)	AVOIDED DISTRIBUTION O&M COST \$(000)	TOTAL AVOIDED DISTRIBUTION COST \$(000)	PROGRAM FUEL SAVINGS \$(000)	PROGRAM OFF-PEAK PAYBACK \$(000)
2014	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	343	0
2016	235	33	268	17	17	48	1,812	0
2017	526	76	602	71	38	109	2,076	0
2018	820	166	986	111	61	172	4,234	0
2019	1,117	170	1,287	152	86	237	4,950	0
2020	1,074	174	1,248	146	88	234	5,451	0
2021	1,031	179	1,210	141	90	231	5,186	0
2022	991	183	1,174	135	92	228	4,745	0
2023	953	188	1,140	130	95	225	4,249	0
2024	916	192	1,108	125	97	222	4,246	0
2025	879	197	1,077	120	100	220	4,430	0
2026	843	202	1,045	115	102	217	3,910	0
2027	807	207	1,014	111	105	215	4,395	0
2028	770	212	983	106	107	213	3,984	0
2029	734	218	952	101	110	211	4,160	0
2030	698	223	921	96	113	209	4,012	0
2031	663	229	891	91	115	207	4,202	0
2032	631	234	865	87	118	205	3,811	0
2033	603	240	844	82	121	203	4,335	0
2034	581	246	827	77	124	201	4,042	0
2035	563	253	816	72	127	200	4,019	0
2036	546	259	805	68	131	198	4,252	0
2037	530	265	795	63	134	197	4,440	0
2038	513	272	785	59	137	197	4,535	0
2039	496	279	775	56	141	197	4,553	0
2040	480	286	765	53	144	197	4,691	0
2041	463	293	756	50	148	198	4,892	0
2042	446	300	746	48	151	199	5,173	0
2043	429	308	737	45	155	200	5,270	0
2044	413	315	728	43	159	202	5,309	0
2045	396	323	719	41	163	204	5,619	0
2046	379	331	711	31	167	199	5,655	0
2047	363	340	702	21	171	192	5,891	0
2048	346	348	694	10	176	186	6,284	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
NOM	21,234	3,743	28,977	2,690	3,885	6,575	149,355	0
NPV	8,218	2,141	10,359	1,095	1,063	2,159	47,096	0

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







PROGRAM NAME: Business Heating, Ventilating, & Air Conditioning

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(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) INCENTIVES \$(000)	(5) REVENUE LOSSES \$(000)	(6) OTHER COSTS \$(000)	(7) TOTAL COSTS \$(000)	(8) AVOIDED GEN		(9) T&D BENEFITS \$(000)	(10) REVENUE GAINS \$(000)	(11) OTHER BENEFITS \$(000)	(12) TOTAL BENEFITS \$(000)	(13) NET BENEFITS \$(000)	(14) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
							UNIT & FUEL BENEFITS \$(000)	AVOIDED BENEFITS \$(000)						
2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	948	4,948	587	0	6,482	343	0	0	0	1	344	(6,139)	(5,708)
2016	0	1,113	5,297	8,461	0	8,461	2,051	316	0	0	1	2,129	(6,332)	(5,708)
2017	0	1,158	5,391	3,964	0	10,513	2,076	711	0	0	1	2,788	(7,325)	(11,884)
2018	0	1,206	5,489	6,093	0	12,787	4,234	1,158	0	0	1	5,393	(7,394)	(17,396)
2019	0	0	0	7,985	0	7,985	12,396	1,525	0	0	(0)	13,921	6,536	(22,925)
2020	0	0	0	7,860	0	7,860	11,798	1,482	0	0	(0)	13,279	5,419	(18,519)
2021	0	0	0	8,141	0	8,141	11,301	1,441	0	0	(0)	12,740	4,599	(15,015)
2022	0	0	0	8,464	0	8,464	11,251	1,402	0	0	(0)	12,651	4,188	(12,250)
2023	0	0	0	8,031	0	8,031	10,916	1,365	0	0	(0)	12,280	4,249	(9,908)
2024	0	0	0	8,108	0	8,108	10,617	1,330	0	0	(0)	11,946	3,838	(7,698)
2025	0	10	4	7,976	0	7,990	10,905	1,296	0	0	(0)	12,200	4,210	(5,842)
2026	0	78	44	7,965	0	8,087	10,594	1,263	0	0	(0)	11,855	3,768	(3,949)
2027	0	87	49	8,051	0	8,187	10,753	1,229	0	0	(0)	11,981	3,794	(2,373)
2028	0	98	53	8,127	0	8,278	10,764	1,196	0	0	(0)	11,959	3,681	(898)
2029	0	69	549	8,233	0	8,850	10,544	1,163	0	0	(0)	11,705	2,855	433
2030	0	299	2,069	8,310	0	10,677	10,684	1,130	0	0	(0)	11,812	1,135	1,393
2031	0	393	2,254	8,420	0	11,067	10,673	1,098	0	0	(0)	11,792	725	1,749
2032	0	418	2,341	8,656	0	11,415	10,673	1,070	0	0	(0)	11,742	327	1,959
2033	0	338	1,662	9,023	0	11,023	10,832	1,047	0	0	(0)	11,878	855	2,048
2034	0	0	0	9,223	0	9,223	10,643	1,029	0	0	(0)	11,671	2,448	2,263
2035	0	13	4	9,346	0	9,363	10,673	1,015	0	0	(0)	11,687	2,325	2,835
2036	0	100	44	9,666	0	9,811	10,888	1,003	0	0	(0)	11,890	2,079	3,341
2037	0	112	49	9,837	0	9,997	10,958	992	0	0	(0)	11,948	1,951	3,761
2038	0	125	53	10,014	0	10,192	10,913	982	0	0	(0)	11,894	1,701	4,128
2039	0	0	0	10,180	0	10,180	11,187	972	0	0	(0)	12,157	1,978	4,426
2040	0	54	129	10,334	0	10,518	11,175	962	0	0	(0)	12,136	1,618	4,748
2041	0	110	255	10,529	0	10,894	11,378	954	0	0	(0)	12,330	1,436	4,992
2042	0	115	260	10,697	0	11,073	11,815	945	0	0	(0)	12,759	1,686	5,195
2043	0	218	814	11,003	0	12,035	11,852	938	0	0	(0)	12,788	753	5,415
2044	0	109	599	11,242	0	11,950	11,920	930	0	0	(0)	12,848	898	5,507
2045	0	1,946	4,923	11,490	0	18,359	12,196	923	0	0	(0)	13,118	5,057	5,608
2046	0	2,232	5,153	11,745	0	19,130	12,391	909	0	0	(0)	13,298	5,832	5,087
2047	0	2,172	4,477	12,010	0	18,658	12,537	895	0	0	(0)	13,430	(5,228)	4,487
2048	0	2,250	4,513	12,283	0	19,046	12,885	880	0	0	(0)	13,764	(5,282)	4,011
NOM	0	15,773	51,423	295,241	0	362,437	346,598	35,552	0	0	(0)	382,115	0	19,679
NPV	0	5,168	22,313	86,905	0	113,986	105,040	12,517	0	0	(0)	117,550	0	3,564

Discount Rate  
Benefit/Cost Ratio (Col(12) / Col(7)) : 7.54  
1.03

**I. PROGRAM DEMAND SAVINGS & LINE LOSSES**

(1) CUSTOMER KW REDUCTION AT METER .....	0.95 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.24327 KW
(3) KW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	3.51320 KWh
(5) KW LINE LOSS PERCENTAGE .....	5.76 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.00
(7) CUSTOMER kw/h INCREASE AT METER .....	0.00 KW/h

**II. ECONOMIC LIFE & K FACTORS**

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM .....	35 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

**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 .....	7.54 %
(11) UTILITY AFDUC RATE .....	6.50 %
(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 .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	146.90 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	24.85 \$/KW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	58.35 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	5.53 \$/KW
(11) DISTRIBUTION FIXED O & M COST .....	2.34 \$/KW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

**V. NON-FUEL ENERGY AND DEMAND CHARGES**

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

\* INPUT DATA - PART I CONTINUED  
 PROGRAM METHOD SELECTED: REV\_REQ

PROGRAM NAME: Business Lighting

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) 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)
2014	0	0	0	0	0	0	0	0	0	0
2015	120	171	0	291	201	1,928	0	0	0	1,928
2016	147	219	0	367	552	0	0	0	0	2,356
2017	162	236	0	399	1,218	0	0	0	0	2,591
2018	179	254	0	433	1,959	0	0	0	0	2,845
2019	0	0	0	0	2,470	0	0	0	0	0
2020	0	0	0	0	2,498	0	0	0	0	0
2021	0	0	0	0	1,815	0	0	0	0	0
2022	0	0	0	0	2,538	0	0	0	0	0
2023	0	0	0	0	2,635	0	0	0	0	0
2024	0	0	0	0	1,981	0	0	0	0	0
2025	0	0	0	0	2,672	0	0	0	0	0
2026	0	0	0	0	1,809	0	0	0	0	0
2027	0	0	0	0	2,722	0	0	0	0	0
2028	0	0	0	0	2,758	0	0	0	0	0
2029	11	12	0	23	1,711	0	0	0	0	201
2030	12	13	0	26	2,815	0	0	0	0	228
2031	14	15	0	29	2,869	0	0	0	0	258
2032	177	176	0	353	2,928	0	0	0	0	2,867
2033	200	206	0	406	1,731	0	0	0	0	3,166
2034	220	221	0	442	3,044	0	0	0	0	3,475
2035	242	238	0	480	1,746	0	0	0	0	3,806
2036	0	0	0	0	3,428	0	0	0	0	0
2037	0	0	0	0	1,819	0	0	0	0	0
2038	0	0	0	0	1,846	0	0	0	0	0
2039	14	12	0	27	3,631	0	0	0	0	271
2040	16	13	0	30	1,851	0	0	0	0	307
2041	19	15	0	33	1,878	0	0	0	0	347
2042	21	16	0	37	3,833	0	0	0	0	392
2043	0	0	0	0	1,896	0	0	0	0	0
2044	0	0	0	0	3,932	0	0	0	0	0
2045	234	159	0	393	1,911	0	0	0	0	0
2046	290	206	0	496	4,150	0	0	0	0	0
2047	319	221	0	541	1,923	0	0	0	0	0
2048	350	238	0	588	1,940	0	0	0	0	0
NOM	2,748	2,644	0	5,392	11,357	5,075	43,900	0	0	43,900
NPV	872	1,064	0	1,936	30,893	18,457	13,959	0	0	13,959

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



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

ESCALATION RATES

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Charge (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	5.43	11.21
2015	2.50	2.50	2.50	0.00	0.00%	3.00	5.07	11.15
2016	2.50	2.50	2.50	0.00	0.00%	3.00	5.21	11.17
2017	2.50	2.50	2.50	0.00	0.00%	3.00	5.55	11.70
2018	2.50	2.50	2.50	0.00	0.00%	3.00	5.91	11.85
2019	2.50	2.50	2.50	3.85	55.85%	3.00	6.41	12.59
2020	2.50	2.50	2.50	4.03	95.39%	3.00	6.46	13.25
2021	2.50	2.50	2.50	4.10	95.40%	3.00	6.54	13.90
2022	2.50	2.50	2.50	4.23	95.37%	3.00	6.78	14.46
2023	2.50	2.50	2.50	4.42	94.99%	3.00	6.96	13.13
2024	2.50	2.50	2.50	4.69	94.40%	3.00	7.10	13.17
2025	2.50	2.50	2.50	4.88	93.42%	3.00	7.24	12.68
2026	2.50	2.50	2.50	5.08	88.94%	3.00	7.42	12.45
2027	2.50	2.50	2.50	5.31	87.68%	3.00	7.57	12.50
2028	2.50	2.50	2.50	5.59	87.36%	3.00	7.74	12.51
2029	2.50	2.50	2.50	5.79	87.30%	3.00	7.91	12.60
2030	2.50	2.50	2.50	5.88	88.13%	3.00	8.08	12.62
2031	2.50	2.50	2.50	6.13	88.44%	3.00	8.25	12.71
2032	2.50	2.50	2.50	6.32	89.14%	3.00	8.59	12.95
2033	2.50	2.50	2.50	6.59	89.64%	3.00	9.19	13.24
2034	2.50	2.50	2.50	6.84	89.85%	3.00	9.48	13.44
2035	2.50	2.50	2.50	7.09	89.65%	3.00	9.73	13.48
2036	2.50	2.50	2.50	7.31	90.14%	3.00	10.31	13.67
2037	2.50	2.50	2.50	7.63	89.91%	3.00	10.59	13.80
2038	2.50	2.50	2.50	7.92	89.91%	3.00	10.90	13.91
2039	2.50	2.50	2.50	8.22	89.91%	3.00	11.21	14.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	11.47	14.12
2041	2.50	2.50	2.50	8.79	89.82%	3.00	11.82	14.24
2042	2.50	2.50	2.50	9.18	89.85%	3.00	12.19	14.27
2043	2.50	2.50	2.50	9.48	89.84%	3.00	12.75	14.44
2044	2.50	2.50	2.50	9.88	89.93%	3.00	13.19	14.57
2045	2.50	2.50	2.50	10.25	89.91%	3.00	13.65	14.70
2046	2.50	2.50	2.50	10.63	89.91%	3.00	14.13	14.83
2047	2.50	2.50	2.50	10.97	89.83%	3.00	14.63	14.96
2048	2.50	2.50	2.50	11.44	89.92%	3.00	15.16	15.09

Column (1) used for:

Utility Cost  
 Customer Equipment  
 Supply Costs

Column (6) used for:

Gen. Train. & Dist Cost

Column (3) used for:

Customer O&M Cost  
 Generator Fixed O&M  
 T&D Fixed O&M  
 Generator Variable O&M

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

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	12,072	251	0	756	463	209	6	397	24	2,107	2,107	2,107	11,905
2020	11,651	242	0	729	290	202	6	397	181	2,048	1,904	4,011	12,203
2021	11,073	230	0	693	292	195	7	397	157	1,970	1,704	5,715	12,508
2022	10,519	218	0	659	292	188	7	397	134	1,895	1,524	7,239	12,820
2023	9,988	207	0	625	293	181	7	397	113	1,823	1,363	8,602	13,141
2024	9,479	197	0	593	292	173	7	397	94	1,753	1,219	9,821	13,469
2025	8,988	187	0	563	291	166	7	397	76	1,686	1,090	10,911	13,806
2026	8,515	177	0	533	289	159	8	397	59	1,621	975	11,886	14,151
2027	8,059	167	0	505	273	152	8	397	44	1,558	871	12,757	14,505
2028	7,606	158	0	476	256	144	8	397	29	1,495	778	13,535	14,868
2029	7,152	149	0	448	238	137	8	397	15	1,433	693	14,228	15,239
2030	6,699	139	0	419	220	130	8	397	7	1,370	616	14,844	15,620
2031	6,246	130	0	391	202	123	8	397	1	1,307	547	15,391	16,011
2032	5,792	120	0	363	184	116	9	397	1	1,245	484	15,875	16,411
2033	5,339	111	0	334	166	108	9	397	1	1,182	428	16,303	16,821
2034	4,886	101	0	306	149	101	9	397	1	1,120	377	16,679	17,242
2035	4,432	92	0	277	131	94	9	397	1	1,057	331	17,010	17,673
2036	3,979	83	0	249	113	87	10	397	1	994	289	17,299	18,115
2037	3,525	73	0	221	95	79	10	397	1	932	252	17,551	18,568
2038	3,072	64	0	192	77	72	10	397	1	869	219	17,769	19,032
2039	2,619	54	0	164	60	65	10	397	1	807	189	17,958	19,508
2040	2,266	47	0	142	47	58	11	397	1	756	164	18,122	19,995
2041	2,014	42	0	126	37	51	11	397	1	718	145	18,268	20,495
2042	1,763	37	0	110	27	43	11	397	1	681	128	18,396	21,008
2043	1,511	31	0	95	21	36	11	397	1	643	112	18,508	21,533
2044	1,259	26	0	79	20	29	12	397	1	605	98	18,607	22,071
2045	1,007	21	0	63	19	22	12	397	1	567	86	18,692	22,623
2046	755	16	0	47	18	14	12	397	1	529	74	18,767	23,189
2047	503	10	0	32	17	7	13	397	1	492	64	18,831	23,768
2048	252	5	0	16	16	(0)	13	397	1	454	55	18,886	24,362

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642

IN SERVICE COST (\$000)	11,905
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECT. TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

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 SCHEDULE DEPRECIATION	TAX DEPRECIATION	ACCUMULATED TAX DEPRECIATION	BOOK DEPRECIATION	ACCUMULATED DEPRECIATION	BOOK FOR DEPRECIATION	ACCUMULATED BOOK DEPR FOR DEPRECIATION	DEFERRED TAX DEPRECIATION	TOTAL EQUITY AFUDC	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE	SALVAGE TAX RATE	ANNUAL DEFERRED TAX (9)-(12)+(13)	ACCUMULATED DEFERRED TAX
	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)		\$(000)	\$(000)	\$(000)	\$(000)
2019	3.75%	439	439	397	397	376	376	376	626	0	0	0	24	(143)
2020	7.22%	845	1,285	397	794	376	752	794	626	0	0	0	181	38
2021	6.68%	782	2,067	397	1,190	376	1,128	1,128	626	0	0	0	157	195
2022	6.18%	724	2,790	397	1,587	376	1,504	1,504	626	0	0	0	134	329
2023	5.71%	669	3,459	397	1,984	376	1,880	1,880	626	0	0	0	113	442
2024	5.29%	619	4,078	397	2,381	376	2,256	2,256	626	0	0	0	94	536
2025	4.89%	572	4,651	397	2,778	376	2,632	2,632	626	0	0	0	76	612
2026	4.52%	530	5,181	397	3,175	376	3,008	3,008	626	0	0	0	59	671
2027	4.46%	523	5,703	397	3,571	376	3,384	3,384	626	0	0	0	57	728
2028	4.46%	522	6,226	397	3,968	376	3,759	3,759	626	0	0	0	57	784
2029	4.46%	523	6,748	397	4,365	376	4,135	4,135	626	0	0	0	57	841
2030	4.46%	522	7,271	397	4,762	376	4,511	4,511	626	0	0	0	57	897
2031	4.46%	523	7,793	397	5,159	376	4,887	4,887	626	0	0	0	57	954
2032	4.46%	522	8,316	397	5,556	376	5,263	5,263	626	0	0	0	57	1,010
2033	4.46%	523	8,838	397	5,952	376	5,639	5,639	626	0	0	0	57	1,067
2034	4.46%	522	9,361	397	6,349	376	6,015	6,015	626	0	0	0	57	1,123
2035	4.46%	523	9,883	397	6,746	376	6,391	6,391	626	0	0	0	57	1,180
2036	4.46%	522	10,406	397	7,143	376	6,767	6,767	626	0	0	0	57	1,236
2037	4.46%	523	10,928	397	7,540	376	7,143	7,143	626	0	0	0	57	1,293
2038	4.46%	522	11,451	397	7,937	376	7,519	7,519	626	0	0	0	57	1,350
2039	2.23%	261	11,712	397	8,333	376	7,895	7,895	626	0	0	0	(44)	1,305
2040	0.00%	0	11,712	397	8,730	376	8,271	8,271	626	0	0	0	(145)	1,160
2041	0.00%	0	11,712	397	9,127	376	8,647	8,647	626	0	0	0	(145)	1,015
2042	0.00%	0	11,712	397	9,524	376	9,023	9,023	626	0	0	0	(145)	870
2043	0.00%	0	11,712	397	9,921	376	9,399	9,399	626	0	0	0	(145)	725
2044	0.00%	0	11,712	397	10,318	376	9,775	9,775	626	0	0	0	(145)	580
2045	0.00%	0	11,712	397	10,714	376	10,151	10,151	626	0	0	0	(145)	435
2046	0.00%	0	11,712	397	11,111	376	10,527	10,527	626	0	0	0	(145)	290
2047	0.00%	0	11,712	397	11,508	376	10,903	10,903	626	0	0	0	(145)	145
2048	0.00%	0	11,712	397	11,905	376	11,278	11,278	626	0	0	0	(145)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(167)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	626
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

page 4b DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Lighting

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX 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%	439	24	11,308	397	(143)	12,072	11,651	11,861
2020	7.22%	845	181	11,111	794	38	11,651	11,073	11,362
2021	6.68%	782	157	10,714	1,900	195	11,073	10,519	10,796
2022	6.18%	724	134	10,318	1,587	329	10,519	9,988	10,254
2023	5.71%	669	113	9,921	1,984	442	9,988	9,479	9,733
2024	5.29%	619	94	9,524	2,381	536	9,479	8,988	9,233
2025	4.89%	572	76	9,127	2,778	612	8,988	8,515	8,752
2026	4.52%	530	59	8,730	3,175	671	8,515	8,059	8,287
2027	4.46%	523	57	8,333	3,571	728	8,059	7,606	7,832
2028	4.46%	522	57	7,937	3,968	784	7,606	7,152	7,379
2029	4.46%	523	57	7,540	4,365	841	7,152	6,699	6,926
2030	4.46%	522	57	7,143	4,762	897	6,699	6,246	6,472
2031	4.46%	523	57	6,746	5,159	954	6,246	5,792	6,019
2032	4.46%	522	57	6,349	5,556	1,010	5,792	5,339	5,566
2033	4.46%	523	57	5,952	5,952	1,067	5,339	4,886	5,112
2034	4.46%	522	57	5,556	6,349	1,123	4,886	4,432	4,659
2035	4.46%	523	57	5,159	6,746	1,180	4,432	3,979	4,206
2036	4.46%	522	57	4,762	7,143	1,236	3,979	3,525	3,752
2037	4.46%	523	57	4,365	7,540	1,293	3,525	3,072	3,299
2038	4.46%	522	57	3,968	7,937	1,350	3,072	2,619	2,845
2039	2.23%	261	(44)	3,571	8,333	1,305	2,619	2,266	2,442
2040	0.00%	0	(145)	3,175	8,730	1,160	2,266	2,014	2,140
2041	0.00%	0	(145)	2,778	9,127	1,015	2,014	1,763	1,888
2042	0.00%	0	(145)	2,381	9,524	870	1,763	1,511	1,637
2043	0.00%	0	(145)	1,984	9,921	725	1,511	1,259	1,385
2044	0.00%	0	(145)	1,587	10,318	580	1,259	1,007	1,133
2045	0.00%	0	(145)	1,190	10,714	435	1,007	755	881
2046	0.00%	0	(145)	794	11,111	290	755	503	629
2047	0.00%	0	(145)	397	11,508	145	503	252	378
2048	0.00%	0	(145)	(0)	11,905	0	252	0	126

\* 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)	(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)
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.41	0.01	0.01	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86
2015	-4	3.00%	1.030	0.28%	2.26	1.96	1.99	0.05	0.05	0.13	0.16	0.10	0.12	(0.02)	(0.03)	2.39	3.24
2016	-3	3.00%	1.061	8.69%	71.58	38.88	39.03	0.81	0.81	2.54	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36
2017	-2	3.00%	1.093	53.83%	456.61	302.97	305.67	6.76	6.76	19.90	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87
2018	-1	3.00%	1.126	37.09%	324.11	693.33	715.93	20.74	20.74	46.81	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80
							100.00%			855.39							

20.74	69.41	54.39	(12.98)	924.80
BOOK BASIS	BOOK BASIS	BOOK BASIS	TAX BASIS	
CONSTRUCTION CASH	FOR DEF. TAX	FOR DEF. TAX	TAX BASIS	
EQUITY AFUDC	11,011	11,011	11,011	
DEBT AFUDC	626	267	700	
CPI	267	267	700	
TOTAL	11,905	11,278	11,712	

\* Column not specified in workbook

IN SERVICE YEAR	2019
PLANT COSTS	776,326,284.5
AFUDC RATE	6.50%

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 (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
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	2,104	2,104	4.45	6.24	5.00	0.00	1.00	1.00
2016	4,674	4,674	4.92	8.49	5.62	0.00	1.00	1.00
2017	7,421	7,421	4.27	5.76	4.62	0.00	1.00	1.00
2018	10,354	10,354	5.27	7.51	5.77	0.00	1.00	1.00
2019	10,354	10,354	5.38	7.64	5.88	5.05	1.00	1.00
2020	10,354	10,354	5.65	8.24	6.20	5.04	1.00	1.00
2021	10,354	10,354	5.65	8.04	6.19	5.12	1.00	1.00
2022	10,354	10,354	5.60	7.61	6.07	5.09	1.00	1.00
2023	10,354	10,354	5.60	7.22	6.03	5.20	1.00	1.00
2024	10,354	10,354	5.81	7.36	6.23	5.51	1.00	1.00
2025	10,354	10,354	5.98	7.61	6.43	5.65	1.00	1.00
2026	10,354	10,354	5.73	7.03	6.10	5.77	1.00	1.00
2027	10,354	10,354	6.01	7.63	6.44	6.08	1.00	1.00
2028	10,354	10,354	6.07	7.34	6.48	6.19	1.00	1.00
2029	10,354	10,354	6.28	7.73	6.71	6.49	1.00	1.00
2030	10,354	10,354	6.34	7.56	6.71	6.45	1.00	1.00
2031	10,354	10,354	6.57	7.85	6.91	6.72	1.00	1.00
2032	10,354	10,354	6.62	7.62	6.90	6.76	1.00	1.00
2033	10,354	10,354	6.97	8.23	7.27	7.11	1.00	1.00
2034	10,354	10,354	7.05	8.11	7.32	7.29	1.00	1.00
2035	10,354	10,354	7.19	8.17	7.45	7.50	1.00	1.00
2036	10,354	10,354	7.47	8.54	7.73	7.70	1.00	1.00
2037	10,354	10,354	7.68	8.86	7.96	8.02	1.00	1.00
2038	10,354	10,354	7.94	9.12	8.22	8.33	1.00	1.00
2039	10,354	10,354	8.12	9.25	8.39	8.53	1.00	1.00
2040	10,354	10,354	8.35	9.51	8.61	8.87	1.00	1.00
2041	10,354	10,354	8.67	9.88	8.94	9.13	1.00	1.00
2042	10,354	10,354	8.99	10.35	9.28	9.47	1.00	1.00
2043	10,354	10,354	9.27	10.61	9.57	9.80	1.00	1.00
2044	10,354	10,354	9.60	11.01	9.89	10.25	1.00	1.00
2045	10,354	10,354	9.94	11.34	10.24	10.58	1.00	1.00
2046	10,354	10,354	10.25	11.58	10.53	10.92	1.00	1.00
2047	10,354	10,354	10.57	11.95	10.87	11.29	1.00	1.00
2048	10,354	10,354	11.00	12.55	11.52	11.78	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.

page 7  
 AVOIDED GENERATING BENEFITS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Lighting

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0
2019	2,107	850	46	2,426	3,178	2,251
2020	2,048	871	81	4,336	5,418	1,918
2021	1,970	893	83	4,406	5,504	1,848
2022	1,895	915	85	4,546	5,474	1,966
2023	1,823	938	86	4,739	5,571	2,015
2024	1,753	962	88	4,989	5,867	1,926
2025	1,686	986	89	5,145	5,949	1,957
2026	1,621	1,010	87	5,093	5,791	2,020
2027	1,558	1,035	88	5,252	6,012	1,922
2028	1,495	1,061	90	5,503	6,100	2,049
2029	1,433	1,088	92	5,702	6,385	1,929
2030	1,370	1,115	95	5,843	6,407	2,017
2031	1,307	1,143	98	6,117	6,702	1,963
2032	1,245	1,172	101	6,353	6,796	2,074
2033	1,182	1,201	104	6,664	7,187	1,964
2034	1,120	1,231	107	6,926	7,389	1,995
2035	1,057	1,262	110	7,170	7,587	2,011
2036	994	1,293	113	7,431	7,825	2,006
2037	932	1,326	116	7,731	8,134	1,970
2038	869	1,359	118	8,030	8,448	1,928
2039	807	1,393	121	8,329	8,645	2,005
2040	756	1,427	124	8,638	8,986	1,960
2041	718	1,463	127	8,903	9,252	1,960
2042	681	1,500	131	9,296	9,600	2,007
2043	643	1,537	134	9,606	9,931	1,990
2044	605	1,576	137	10,018	10,309	1,938
2045	567	1,615	141	10,391	10,726	1,988
2046	529	1,655	144	10,782	11,075	2,036
2047	492	1,697	148	11,108	11,436	2,009
2048	454	1,739	152	11,598	11,948	1,995
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	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	35,717	37,312	3,237	213,072	229,721	59,617
NPV	13,134	9,628	830	51,065	57,143	17,513











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

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) INCENTIVES \$(000)	(5) REVENUE LOSSES \$(000)	(6) OTHER COSTS \$(000)	(7) TOTAL COSTS \$(000)	(8) AVOIDED GEN UNIT & FUEL BENEFITS \$(000)	(9) AVOIDED T&D BENEFITS \$(000)	(10) REVENUE GAINS \$(000)	(11) OTHER BENEFITS \$(000)	(12) TOTAL BENEFITS \$(000)	(13) NET BENEFITS \$(000)	(14) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2014	0	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	120	171	356	0	647	244	0	0	0	0	(403)	(374)
2016	0	147	219	1,165	0	1,532	1,098	93	0	1	1,191	(341)	(669)
2017	0	162	236	2,156	0	2,555	1,289	207	0	1	1,496	(1,059)	(1,520)
2018	0	179	254	3,354	0	3,787	2,486	344	0	1	2,832	(956)	(2,235)
2019	0	0	0	4,194	0	4,194	5,159	462	0	1	5,662	1,467	(1,215)
2020	0	0	0	4,313	0	4,313	5,110	449	0	0	5,560	1,247	(408)
2021	0	0	0	4,440	0	4,440	4,950	446	0	0	5,387	947	161
2022	0	0	0	4,616	0	4,616	4,885	425	0	0	5,310	693	549
2023	0	0	0	4,475	0	4,475	4,761	414	0	0	5,174	699	912
2024	0	0	0	4,531	0	4,531	4,717	403	0	0	5,120	590	1,197
2025	0	0	0	4,500	0	4,500	4,845	393	0	0	5,238	738	1,529
2026	0	0	0	4,526	0	4,526	4,675	382	0	0	5,058	532	1,752
2027	0	11	12	4,587	0	4,610	4,818	372	0	0	5,191	581	1,978
2028	0	12	13	4,647	0	4,673	4,815	362	0	0	5,177	505	2,160
2029	0	14	15	4,719	0	4,747	4,847	352	0	0	5,200	453	2,513
2030	0	177	176	4,778	0	4,955	4,857	342	0	0	5,200	69	2,334
2031	0	200	206	4,853	0	5,053	4,914	333	0	0	5,247	(12)	2,331
2032	0	220	221	5,007	0	5,227	4,922	324	0	0	5,246	(203)	2,276
2033	0	242	238	5,258	0	5,490	5,051	317	0	0	5,368	(370)	2,183
2034	0	0	0	5,390	0	5,390	5,023	311	0	0	5,335	(55)	2,170
2035	0	0	0	5,482	0	5,482	5,054	307	0	0	5,362	(121)	2,144
2036	0	0	0	5,711	0	5,711	5,193	304	0	0	5,498	(213)	2,101
2037	0	0	0	5,828	0	5,828	5,280	300	0	0	5,581	(247)	2,054
2038	0	0	0	5,953	0	5,953	5,333	297	0	0	5,631	(322)	1,998
2039	0	14	12	6,073	0	6,099	5,453	294	0	0	5,748	(351)	1,941
2040	0	16	13	6,179	0	6,209	5,453	291	0	1	5,748	(411)	1,879
2041	0	19	15	6,318	0	6,351	5,506	289	0	1	5,936	(415)	1,820
2042	0	21	16	6,449	0	6,486	5,874	286	0	1	6,161	(325)	1,778
2043	0	0	0	6,669	0	6,669	5,947	284	0	1	6,232	(437)	1,725
2044	0	0	0	6,841	0	6,841	6,047	282	0	1	6,329	(512)	1,667
2045	0	234	159	7,020	0	7,413	6,218	279	0	1	6,498	(916)	1,570
2046	0	290	206	7,205	0	7,701	6,346	275	0	1	6,622	(1,080)	1,465
2047	0	319	221	7,398	0	7,938	6,460	271	0	1	6,731	(1,207)	1,355
2048	0	350	238	7,597	0	8,185	6,676	267	0	1	6,943	(1,242)	1,250
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
NOM	0	2,748	2,644	172,588	0	177,980	164,540	10,748	0	16	175,304	(2,676)	
NPV	0	872	1,064	49,350	0	51,286	48,753	3,777	0	5	52,535	1,250	

Discount Rate 7.54 %  
Benefit/Cost Ratio (Col(12) / Col(7)) : 1.02

**I. PROGRAM DEMAND SAVINGS & LINE LOSSES**

(1) CUSTOMER KW REDUCTION AT METER .....	2.70 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	3.55614 KW
(3) KW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	11,010.24 kWh
(5) KW LINE LOSS PERCENTAGE .....	5.76 %
(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 .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

**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 .....	7.54 %
(11) UTILITY AFDUC RATE .....	6.50 %
(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 .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	146.90 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	24.85 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	58.35 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	5.53 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	2.34 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

**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 Photovoltaic

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)
2014	0	0	0	0	0	0	0	0	0	
2015	198	7,060	0	7,258	191	14,121	0	0	14,121	
2016	0	0	0	0	387	0	0	0	0	
2017	0	0	0	0	398	0	0	0	0	
2018	0	0	0	0	419	0	0	0	0	
2019	0	0	0	0	444	0	0	0	0	
2020	0	0	0	0	451	0	0	0	0	
2021	0	0	0	0	460	0	0	0	0	
2022	0	0	0	0	478	0	0	0	0	
2023	0	0	0	0	469	0	0	0	0	
2024	0	0	0	0	473	0	0	0	0	
2025	0	0	0	0	469	0	3,014	0	3,014	
2026	0	0	0	0	470	0	0	0	0	
2027	0	0	0	0	474	0	0	0	0	
2028	0	0	0	0	477	0	0	0	0	
2029	0	0	0	0	482	0	0	0	0	
2030	0	0	0	0	485	0	0	0	0	
2031	0	0	0	0	490	0	0	0	0	
2032	0	0	0	0	503	0	0	0	0	
2033	0	0	0	0	525	0	0	0	0	
2034	0	0	0	0	535	0	0	0	0	
2035	0	0	0	0	542	0	3,858	0	3,858	
2036	0	0	0	0	561	0	0	0	0	
2037	0	0	0	0	569	0	0	0	0	
2038	0	0	0	0	578	0	0	0	0	
2039	0	0	0	0	587	0	0	0	0	
2040	0	0	0	0	0	0	0	0	0	
2041	0	0	0	0	0	0	0	0	0	
2042	0	0	0	0	0	0	0	0	0	
2043	0	0	0	0	0	0	0	0	0	
2044	0	0	0	0	0	0	0	0	0	
2045	0	0	0	0	0	0	0	0	0	
2046	0	0	0	0	0	0	0	0	0	
2047	0	0	0	0	0	0	0	0	0	
2048	0	0	0	0	0	0	0	0	0	
NOM	198	7,060	0	7,258	11,917	14,121	6,871	0	20,992	
NPV	184	6,565	0	6,749	4,911	13,132	2,194	0	15,326	

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

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

ESCALATION RATES

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Charge (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	9.81	0.00
2015	2.50	2.50	2.50	0.00	0.00%	3.00	9.48	0.00
2016	2.50	2.50	2.50	0.00	0.00%	3.00	9.64	0.00
2017	2.50	2.50	2.50	0.00	0.00%	3.00	9.96	0.00
2018	2.50	2.50	2.50	0.00	0.00%	3.00	10.53	0.00
2019	2.50	2.50	2.50	3.85	55.85%	3.00	11.24	0.00
2020	2.50	2.50	2.50	4.03	95.39%	3.00	11.46	0.00
2021	2.50	2.50	2.50	4.10	95.40%	3.00	11.75	0.00
2022	2.50	2.50	2.50	4.23	95.37%	3.00	12.28	0.00
2023	2.50	2.50	2.50	4.42	94.99%	3.00	12.12	0.00
2024	2.50	2.50	2.50	4.69	94.40%	3.00	12.26	0.00
2025	2.50	2.50	2.50	4.88	93.42%	3.00	12.23	0.00
2026	2.50	2.50	2.50	5.08	88.94%	3.00	12.31	0.00
2027	2.50	2.50	2.50	5.31	87.68%	3.00	12.47	0.00
2028	2.50	2.50	2.50	5.59	87.36%	3.00	12.63	0.00
2029	2.50	2.50	2.50	5.79	87.30%	3.00	12.82	0.00
2030	2.50	2.50	2.50	5.88	88.13%	3.00	12.98	0.00
2031	2.50	2.50	2.50	6.13	88.44%	3.00	13.17	0.00
2032	2.50	2.50	2.50	6.32	89.14%	3.00	13.58	0.00
2033	2.50	2.50	2.50	6.59	89.64%	3.00	14.25	0.00
2034	2.50	2.50	2.50	6.84	89.85%	3.00	14.60	0.00
2035	2.50	2.50	2.50	7.09	89.65%	3.00	14.85	0.00
2036	2.50	2.50	2.50	7.31	90.14%	3.00	15.45	0.00
2037	2.50	2.50	2.50	7.63	89.91%	3.00	15.76	0.00
2038	2.50	2.50	2.50	7.92	89.91%	3.00	16.09	0.00
2039	2.50	2.50	2.50	8.22	89.91%	3.00	16.40	0.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	16.68	0.00
2041	2.50	2.50	2.50	8.79	89.82%	3.00	17.05	0.00
2042	2.50	2.50	2.50	9.18	89.85%	3.00	17.40	0.00
2043	2.50	2.50	2.50	9.48	89.84%	3.00	17.98	0.00
2044	2.50	2.50	2.50	9.88	89.93%	3.00	18.43	0.00
2045	2.50	2.50	2.50	10.25	89.91%	3.00	18.90	0.00
2046	2.50	2.50	2.50	10.63	89.91%	3.00	19.39	0.00
2047	2.50	2.50	2.50	10.97	89.83%	3.00	19.90	0.00
2048	2.50	2.50	2.50	11.44	89.92%	3.00	20.42	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	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	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	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	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
	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%	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00

Column (1) used for:

- Utility Cost
- Customer Equipment
- Supply Costs

Column (6) used for:

Gen, Train, & Dist Cost

Column (3) used for:

- Customer O&M Cost
- Generator Fixed O&M
- T&D Fixed O&M
- Generator Variable O&M

CALCULATION OF GEN K-FACTOR  
PROGRAM METHOD SELECTED REV\_REQ  
PROGRAM NAME: Residential Photovoltaic

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	1,296	27	0	81	50	22	1	43	3	226	226	226	1,278
2020	1,251	26	0	78	31	22	1	43	19	220	204	431	1,310
2021	1,189	25	0	74	31	21	1	43	17	183	183	614	1,343
2022	1,130	23	0	71	31	20	1	43	14	203	164	777	1,377
2023	1,073	22	0	67	31	19	1	43	12	196	146	924	1,411
2024	1,018	21	0	64	31	19	1	43	10	188	131	1,055	1,446
2025	965	20	0	60	31	18	1	43	8	181	117	1,172	1,482
2026	914	19	0	57	31	17	1	43	6	174	105	1,276	1,520
2027	865	18	0	54	29	16	1	43	6	167	94	1,370	1,557
2028	817	17	0	51	27	16	1	43	6	161	84	1,453	1,596
2029	768	16	0	48	26	15	1	43	6	154	74	1,528	1,636
2030	719	15	0	45	24	14	1	43	6	147	66	1,594	1,677
2031	671	14	0	42	22	13	1	43	6	140	59	1,653	1,719
2032	622	13	0	39	20	12	1	43	6	134	52	1,705	1,762
2033	573	12	0	36	18	12	1	43	6	127	46	1,750	1,806
2034	525	11	0	33	16	11	1	43	6	120	40	1,791	1,851
2035	476	10	0	30	14	10	1	43	6	113	35	1,826	1,898
2036	427	9	0	27	12	9	1	43	6	107	31	1,857	1,945
2037	379	8	0	24	10	8	1	43	6	100	27	1,885	1,994
2038	330	7	0	21	8	8	1	43	6	93	23	1,908	2,044
2039	281	6	0	18	17	7	1	43	(5)	87	20	1,928	2,095
2040	243	5	0	15	27	6	1	43	(16)	81	18	1,946	2,147
2041	216	4	0	14	25	5	1	43	(16)	77	16	1,962	2,201
2042	189	4	0	12	24	5	1	43	(16)	73	14	1,975	2,256
2043	162	3	0	10	23	4	1	43	(16)	69	12	1,987	2,312
2044	135	3	0	8	22	3	1	43	(16)	65	11	1,998	2,370
2045	108	2	0	7	21	2	1	43	(16)	61	9	2,007	2,429
2046	81	2	0	5	20	2	1	43	(16)	57	8	2,015	2,490
2047	54	1	0	3	19	1	1	43	(16)	53	7	2,022	2,552
2048	27	1	0	2	18	(0)	1	43	(16)	49	6	2,028	2,616

IN SERVICE COST (\$000)	1,278
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECT. TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642



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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
YEAR	TAX SCHEDULE	DEPRECIATION	TAX DEPRECIATION	ACCUMULATED DEPRECIATION	BOOK DEPRECIATION	ACCUMULATED DEPRECIATION	BOOK DEPRECIATION	DEFERRED TAX DEPRECIATION	DEFERRED TAX DUE TO DEPRECIATION	TOTAL EQUITY AFUDC	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE	SALVAGE TAX RATE	ANNUAL DEFERRED TAX (9)-(12)+(13)	ACCUMULATED DEFERRED TAX
		\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)		\$(000)	\$(000)	\$(000)	\$(000)
2019	3.75%	47	47	43	43	40	40	3	67	0	0	0	3	(15)	
2020	7.22%	91	138	85	85	40	40	19	67	0	0	0	19	4	
2021	6.68%	84	222	128	128	40	40	17	67	0	0	0	17	21	
2022	6.18%	78	300	170	170	40	40	14	67	0	0	0	14	35	
2023	5.71%	72	371	213	213	40	40	12	67	0	0	0	12	47	
2024	5.29%	66	438	256	256	40	40	10	67	0	0	0	10	58	
2025	4.89%	61	499	298	298	40	40	8	67	0	0	0	8	66	
2026	4.52%	57	556	341	341	40	40	6	67	0	0	0	6	72	
2027	4.46%	56	612	383	383	40	40	6	67	0	0	0	6	78	
2028	4.46%	56	668	426	426	40	40	6	67	0	0	0	6	84	
2029	4.46%	56	725	469	469	40	40	6	67	0	0	0	6	90	
2030	4.46%	56	781	511	511	40	40	6	67	0	0	0	6	96	
2031	4.46%	56	837	554	554	40	40	6	67	0	0	0	6	102	
2032	4.46%	56	893	597	597	40	40	6	67	0	0	0	6	108	
2033	4.46%	56	949	639	639	40	40	6	67	0	0	0	6	115	
2034	4.46%	56	1,005	682	682	40	40	6	67	0	0	0	6	121	
2035	4.46%	56	1,061	724	724	40	40	6	67	0	0	0	6	127	
2036	4.46%	56	1,117	767	767	40	40	6	67	0	0	0	6	133	
2037	4.46%	56	1,173	810	810	40	40	6	67	0	0	0	6	139	
2038	4.46%	56	1,230	852	852	40	40	6	67	0	0	0	6	145	
2039	2.23%	28	1,258	895	895	40	40	6	67	0	0	0	6	151	
2040	0.00%	0	1,258	937	937	40	40	6	67	0	0	0	6	157	
2041	0.00%	0	1,258	980	980	40	40	6	67	0	0	0	6	163	
2042	0.00%	0	1,258	1,023	1,023	40	40	6	67	0	0	0	6	169	
2043	0.00%	0	1,258	1,065	1,065	40	40	6	67	0	0	0	6	175	
2044	0.00%	0	1,258	1,108	1,108	40	40	6	67	0	0	0	6	181	
2045	0.00%	0	1,258	1,150	1,150	40	40	6	67	0	0	0	6	187	
2046	0.00%	0	1,258	1,193	1,193	40	40	6	67	0	0	0	6	193	
2047	0.00%	0	1,258	1,236	1,236	40	40	6	67	0	0	0	6	199	
2048	0.00%	0	1,258	1,278	1,278	40	40	6	67	0	0	0	6	205	

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(18)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	67
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

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

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX 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%	47	3	1,236	43	(15)	1,296	1,251	1,274
2020	7.22%	91	19	1,193	85	4	1,251	1,189	1,220
2021	6.68%	84	17	1,150	128	21	1,189	1,130	1,159
2022	6.18%	78	14	1,108	170	35	1,130	1,073	1,101
2023	5.71%	72	12	1,065	213	47	1,073	1,018	1,045
2024	5.29%	66	10	1,023	258	58	1,018	965	991
2025	4.89%	61	8	980	298	66	965	914	940
2026	4.52%	57	6	937	341	72	914	865	890
2027	4.46%	56	6	895	383	78	865	817	841
2028	4.46%	56	6	852	426	84	817	768	792
2029	4.46%	56	6	810	469	90	768	719	744
2030	4.46%	56	6	767	511	96	719	671	695
2031	4.46%	56	6	724	554	102	671	622	646
2032	4.46%	56	6	682	597	108	622	573	598
2033	4.46%	56	6	639	639	115	573	525	549
2034	4.46%	56	6	597	682	121	525	476	500
2035	4.46%	56	6	554	724	127	476	427	452
2036	4.46%	56	6	511	767	133	427	379	403
2037	4.46%	56	6	469	810	139	379	330	354
2038	4.46%	56	6	426	852	145	330	281	306
2039	2.23%	28	(5)	383	895	140	281	243	262
2040	0.00%	0	(16)	341	937	125	243	216	230
2041	0.00%	0	(16)	298	980	109	216	189	203
2042	0.00%	0	(16)	256	1,023	93	189	162	176
2043	0.00%	0	(16)	213	1,065	78	162	135	149
2044	0.00%	0	(16)	170	1,108	62	135	108	122
2045	0.00%	0	(16)	128	1,150	47	108	81	95
2046	0.00%	0	(16)	85	1,193	31	81	54	68
2047	0.00%	0	(16)	43	1,236	16	54	27	41
2048	0.00%	0	(16)	(0)	1,278	0	27	0	14

\* 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)	(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)	
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.41	0.01	0.01	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86	
2015	-4	3.00%	1.030	0.28%	2.26	1.96	1.96	0.05	0.16	0.13	0.16	0.10	0.12	(0.02)	(0.03)	2.39	3.24	
2016	-3	3.00%	1.061	8.69%	71.58	38.88	8.69%	0.81	2.54	2.54	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36	
2017	-2	3.00%	1.093	53.83%	456.61	302.97	6.76	6.76	19.90	19.90	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87	
2018	-1	3.00%	1.126	37.09%	324.11	693.33	20.74	20.74	46.81	46.81	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80	
100.00%											855.39							

20.74	69.41	54.39	(12.98)	924.80																					
<table border="1"> <tr> <td>IN SERVICE YEAR</td> <td>2019</td> </tr> <tr> <td>PLANT COSTS</td> <td>776,326,284.5</td> </tr> <tr> <td>AFUDC RATE</td> <td>6.50%</td> </tr> </table>		IN SERVICE YEAR	2019	PLANT COSTS	776,326,284.5	AFUDC RATE	6.50%	<table border="1"> <tr> <td>CONSTRUCTION CASH</td> <td>BOOK BASIS</td> <td>TAX BASIS</td> </tr> <tr> <td>EQUITY AFUDC</td> <td>1,182</td> <td>1,182</td> </tr> <tr> <td>DEBT AFUDC</td> <td>67</td> <td></td> </tr> <tr> <td>CPI</td> <td>29</td> <td>75</td> </tr> <tr> <td>TOTAL</td> <td>1,278</td> <td>1,258</td> </tr> </table>			CONSTRUCTION CASH	BOOK BASIS	TAX BASIS	EQUITY AFUDC	1,182	1,182	DEBT AFUDC	67		CPI	29	75	TOTAL	1,278	1,258
IN SERVICE YEAR	2019																								
PLANT COSTS	776,326,284.5																								
AFUDC RATE	6.50%																								
CONSTRUCTION CASH	BOOK BASIS	TAX BASIS																							
EQUITY AFUDC	1,182	1,182																							
DEBT AFUDC	67																								
CPI	29	75																							
TOTAL	1,278	1,258																							

\* Column not specified in workbook

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (C/KWh)	AVOIDED MARGINAL FUEL COST (C/KWh)	INCREASED MARGINAL FUEL COST (C/KWh)	REPLACEMENT FUEL COST (C/KWh)	PROGRAM KW EFFECTIVENESS FACTOR	PROGRAM kWh EFFECTIVENESS FACTOR
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	389	389	4.45	5.91	5.21	0.00	1.00	1.00
2016	389	389	4.92	7.41	5.94	0.00	1.00	1.00
2017	389	389	4.27	5.35	4.76	0.00	0.99	0.99
2018	389	389	5.27	6.88	5.98	0.00	0.99	0.99
2019	389	389	5.38	6.98	6.09	5.05	0.98	0.98
2020	389	389	5.65	7.48	6.44	5.04	0.98	0.98
2021	389	389	5.65	7.40	6.38	5.12	0.97	0.97
2022	389	389	5.60	7.10	6.24	5.09	0.97	0.97
2023	389	389	5.60	6.82	6.16	5.20	0.96	0.96
2024	389	389	5.81	7.00	6.36	5.51	0.96	0.96
2025	389	389	5.98	7.22	6.56	5.65	0.95	0.95
2026	389	389	5.73	6.74	6.21	5.77	0.95	0.95
2027	389	389	6.01	7.29	6.55	6.08	0.94	0.94
2028	389	389	6.07	7.10	6.58	6.19	0.94	0.94
2029	389	389	6.28	7.46	6.82	6.49	0.93	0.93
2030	389	389	6.34	7.34	6.79	6.45	0.93	0.93
2031	389	389	6.57	7.61	7.01	6.72	0.92	0.92
2032	389	389	6.62	7.46	6.98	6.76	0.92	0.92
2033	389	389	6.97	7.99	7.37	7.11	0.91	0.91
2034	389	389	7.05	7.96	7.40	7.29	0.91	0.91
2035	389	389	7.19	8.03	7.52	7.50	0.90	0.90
2036	389	389	7.47	8.39	7.81	7.70	0.90	0.90
2037	389	389	7.68	8.70	8.04	8.02	0.90	0.90
2038	389	389	7.94	8.94	8.29	8.33	0.89	0.89
2039	389	389	8.12	9.08	8.46	8.53	0.89	0.89
2040	389	389	8.35	9.29	8.70	8.87	1.00	1.00
2041	389	389	8.67	9.59	9.07	9.13	1.00	1.00
2042	389	389	8.99	10.01	9.42	9.47	1.00	1.00
2043	389	389	9.27	10.27	9.71	9.80	1.00	1.00
2044	389	389	9.60	10.63	10.03	10.25	1.00	1.00
2045	389	389	9.94	10.97	10.38	10.58	1.00	1.00
2046	389	389	10.25	11.22	10.66	10.92	1.00	1.00
2047	389	389	10.57	11.58	11.01	11.29	1.00	1.00
2048	389	389	11.00	12.11	11.47	11.78	1.00	1.00
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.



page 8  
 AVOIDED T&D AND PROGRAM FUEL SAVINGS  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Photovoltaic

(1) YEAR	(2) AVOIDED TRANSMISSION CAP COST \$(000)	(3) AVOIDED TRANSMISSION O&M COST \$(000)	(4) TOTAL AVOIDED TRANSMISSION CAP COST \$(000)	(5) AVOIDED DISTRIBUTION CAP COST \$(000)	(6) AVOIDED DISTRIBUTION O&M COST \$(000)	(7) TOTAL AVOIDED DISTRIBUTION CAP COST \$(000)	(8) PROGRAM FUEL SAVINGS \$(000)	(8a)* PROGRAM OFF-PEAK PAYBACK \$(000)
2014	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	136	0
2016	36	5	41	5	3	46	349	0
2017	35	5	40	5	3	45	241	0
2018	34	5	39	5	3	44	311	0
2019	32	5	38	4	3	42	314	0
2020	31	6	37	4	3	41	337	0
2021	30	6	36	4	3	40	331	0
2022	29	6	35	4	3	39	313	0
2023	27	6	33	4	3	37	296	0
2024	26	6	32	4	3	36	301	0
2025	25	6	31	3	3	34	310	0
2026	24	6	30	3	3	33	286	0
2027	23	6	29	3	3	32	310	0
2028	22	6	28	3	3	31	298	0
2029	21	7	27	3	3	30	312	0
2030	20	7	26	3	3	29	304	0
2031	19	7	26	3	3	29	313	0
2032	18	7	25	2	4	29	303	0
2033	18	7	25	2	4	29	325	0
2034	17	7	24	2	4	28	321	0
2035	16	7	23	2	4	27	321	0
2036	16	8	24	2	4	28	334	0
2037	15	8	23	2	4	27	346	0
2038	15	8	23	2	4	27	353	0
2039	14	8	22	2	4	26	356	0
2040	14	9	23	1	4	27	411	0
2041	13	10	23	1	5	27	423	0
2042	13	10	23	1	5	28	442	0
2043	12	10	22	1	5	27	453	0
2044	12	10	22	1	5	27	469	0
2045	11	10	21	1	5	26	483	0
2046	11	11	22	0	5	27	493	0
2047	10	11	21	0	6	26	509	0
2048	10	11	21	0	6	26	533	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
NOM.	670	247	918	83	125	207	11,940	0
NPV	285	72	357	38	36	74	3,783	0

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

A VOIDED GENERATING EMISSION IMPACT  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Photovoltaic

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2014	0	0	0	0	0
2015	0	0	0	0	0
2016	0	0	0	0	0
2017	0	0	0	0	0
2018	0	0	0	0	0
2019	0	0	0	0	0
2020	0	0	0	0	0
2021	0	0	0	0	0
2022	0	0	0	0	0
2023	0	0	0	0	0
2024	0	0	0	0	0
2025	0	0	0	0	0
2026	0	0	0	0	0
2027	0	0	0	0	0
2028	0	0	0	0	0
2029	0	0	0	0	0
2030	0	0	0	0	0
2031	0	0	0	0	0
2032	0	0	0	0	0
2033	0	0	0	0	0
2034	0	0	0	0	0
2035	0	0	0	0	0
2036	0	0	0	0	0
2037	0	0	0	0	0
2038	0	0	0	0	0
2039	0	0	0	0	0
2040	0	0	0	0	0
2041	0	0	0	0	0
2042	0	0	0	0	0
2043	0	0	0	0	0
2044	0	1	0	0	0
2045	0	1	0	0	0
2046	0	1	0	0	0
2047	0	1	0	0	0
2048	0	1	0	0	0
2049	0	0	0	0	0
2050	0	0	0	0	0
2051	0	0	0	0	0
2052	0	0	0	0	0
2053	0	0	0	0	0
2054	0	0	0	0	0
2055	0	0	0	0	0
2056	0	0	0	0	0
2057	0	0	0	0	0
2058	0	0	0	0	0
2059	0	0	0	0	0
2060	0	0	0	0	0
2061	0	0	0	0	0
2062	0	0	0	0	0
2063	0	0	0	0	0
2064	0	0	0	0	0
2065	0	0	0	0	0
2066	0	0	0	0	0
2067	0	0	0	0	0
2068	0	0	0	0	0
2069	0	0	0	0	0
2070	0	0	0	0	0
2071	0	0	0	0	0
2072	0	0	0	0	0
2073	0	0	0	0	0
2074	0	0	0	0	0
2075	0	0	0	0	0
2076	0	0	0	0	0
2077	0	0	0	0	0
2078	0	0	0	0	0
2079	0	0	0	0	0
2080	0	0	0	0	0
2081	0	0	0	0	0
2082	0	0	0	0	0
2083	0	0	0	0	0
2084	0	0	0	0	0
2085	0	0	0	0	0
2086	0	0	0	0	0
2087	0	0	0	0	0
2088	0	0	0	0	0
2089	0	0	0	0	0
2090	0	0	0	0	0
2091	0	0	0	0	0
2092	0	0	0	0	0
2093	0	0	0	0	0
2094	0	0	0	0	0
2095	0	0	0	0	0
2096	0	0	0	0	0
2097	0	0	0	0	0
2098	0	0	0	0	0
2099	0	0	0	0	0
2100	0	0	0	0	0
NOM	9	12	5	0	2
NPV	2	3	2	0	1

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

(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)
2014	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	198	14,121	0	14,319	0	0	136	0	137	(14,183)	(13,189)
2016	0	0	0	0	0	0	49	349	0	398	349	(12,845)
2017	0	0	0	0	0	0	48	241	0	289	289	(12,613)
2018	0	0	0	0	0	0	46	311	0	357	357	(12,345)
2019	0	0	0	0	0	235	45	314	0	594	594	(11,952)
2020	0	0	0	0	0	198	43	337	0	578	578	(11,558)
2021	0	0	0	0	0	189	42	331	0	562	562	(11,220)
2022	0	0	0	0	0	200	41	313	0	555	555	(10,910)
2023	0	0	0	0	0	204	40	296	0	541	541	(10,629)
2024	0	0	0	0	0	193	39	301	0	534	534	(10,371)
2025	0	0	3,014	0	3,014	196	38	310	0	544	(2,470)	(11,482)
2026	0	0	0	0	0	201	37	286	0	524	524	(11,262)
2027	0	0	0	0	0	190	36	310	0	535	535	(11,054)
2028	0	0	0	0	0	202	35	298	0	535	535	(10,861)
2029	0	0	0	0	0	188	34	312	0	534	534	(10,681)
2030	0	0	0	0	0	196	33	304	0	533	533	(10,514)
2031	0	0	0	0	0	190	32	313	0	535	535	(10,359)
2032	0	0	0	0	0	201	31	303	0	535	535	(10,214)
2033	0	0	0	0	0	188	31	325	0	543	543	(10,077)
2034	0	0	0	0	0	190	30	321	0	541	541	(9,951)
2035	0	0	3,858	0	3,858	191	30	321	0	542	(3,315)	(10,672)
2036	0	0	0	0	0	190	29	334	0	553	553	(10,560)
2037	0	0	0	0	0	185	29	346	0	560	560	(10,455)
2038	0	0	0	0	0	180	28	353	0	561	561	(10,357)
2039	0	0	0	0	0	187	28	356	0	571	571	(10,264)
2040	0	0	0	0	0	210	29	411	0	650	650	(10,165)
2041	0	0	0	0	0	210	29	423	0	663	663	(10,072)
2042	0	0	0	0	0	216	29	442	0	687	687	(9,982)
2043	0	0	0	0	0	214	29	453	0	695	695	(9,898)
2044	0	0	0	0	0	208	28	469	0	705	705	(9,818)
2045	0	0	0	0	0	213	28	483	0	725	725	(9,742)
2046	0	0	0	0	0	219	27	493	0	739	739	(9,670)
2047	0	0	0	0	0	216	27	509	0	752	752	(9,601)
2048	0	0	0	0	0	214	27	533	0	774	774	(9,536)
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
2101	0	0	0	0	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	0	0	0	0	0	0
2103	0	0	0	0	0	0	0	0	0	0	0	0
2104	0	0	0	0	0	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0	0	0	0	0	0
2109	0	0	0	0	0	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0	0	0	0	0	0
2111	0	0	0	0	0	0	0	0	0	0	0	0
2112	0	0	0	0	0	0	0	0	0	0	0	0
2113	0	0	0	0	0	0	0	0	0	0	0	0
2114	0	0	0	0	0	0	0	0	0	0	0	0
2115	0	0	0	0	0	0	0	0	0	0	0	0
2116	0	0	0	0	0	0	0	0	0	0	0	0
2117	0	0	0	0	0	0	0	0	0	0	0	0
2118	0	0	0	0	0	0	0	0	0	0	0	0
2119	0	0	0	0	0	0	0	0	0	0	0	0
2120	0	0	0	0	0	0	0	0	0	0	0	0
2121	0	0	0	0	0	0	0	0	0	0	0	0
2122	0	0	0	0	0	0	0	0	0	0	0	0
2123	0	0	0	0	0	0	0	0	0	0	0	0
2124	0	0	0	0	0	0	0	0	0	0	0	0
2125	0	0	0	0	0	0	0	0	0	0	0	0
2126	0	0	0	0	0	0	0	0	0	0	0	0
2127	0	0	0	0	0	0	0	0	0	0	0	0
2128	0	0	0	0	0	0	0	0	0	0	0	0
2129	0	0	0	0	0	0	0	0	0	0	0	0
2130	0	0	0	0	0	0	0	0	0	0	0	0
2131	0	0	0	0	0	0	0	0	0	0	0	0
2132	0	0	0	0	0	0	0	0	0	0	0	0
2133	0	0	0	0	0	0	0	0	0	0	0	0
2134	0	0	0	0	0	0	0	0	0	0	0	0
2135	0	0	0	0	0	0	0	0	0	0	0	0
2136	0	0	0	0	0	0	0	0	0	0	0	0
2137	0	0	0	0	0	0	0	0	0	0	0	0
2138	0	0	0	0	0	0	0	0	0	0	0	0
2139	0	0	0	0	0	0	0	0	0	0	0	0
2140	0	0	0	0	0	0	0	0	0	0	0	0
2141	0	0	0	0	0	0	0	0	0	0	0	0
2142	0	0	0	0	0	0	0	0	0	0	0	0
2143	0	0	0	0	0	0	0	0	0	0	0	0
2144	0	0	0	0	0	0	0	0	0	0	0	0
2145	0	0	0	0	0	0	0	0	0	0	0	0
2146	0	0	0									



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

(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)
2014	0	0	0	0	0	0	0	0	0	0	0
2015	252	2,065	7,060	0	9,377	14,121	0	0	14,121	(4,744)	(4,412)
2016	509	0	0	0	509	0	0	0	0	509	(3,972)
2017	523	0	0	0	523	0	0	0	0	523	(3,551)
2018	551	0	0	0	551	0	0	0	0	551	(3,139)
2019	585	0	0	0	585	0	0	0	0	585	(2,752)
2020	593	0	0	0	593	0	0	0	0	593	(2,349)
2021	605	0	0	0	605	0	0	0	0	605	(1,985)
2022	629	0	0	0	629	0	0	0	0	629	(1,633)
2023	618	0	0	0	618	0	0	0	0	618	(1,312)
2024	622	0	0	0	622	0	0	0	0	622	(1,011)
2025	617	0	0	0	617	0	3,014	0	3,014	(2,396)	(2,089)
2026	618	0	0	0	618	0	0	0	0	618	(1,830)
2027	623	0	0	0	623	0	0	0	0	623	(1,588)
2028	628	0	0	0	628	0	0	0	0	628	(1,361)
2029	634	0	0	0	634	0	0	0	0	634	(1,147)
2030	639	0	0	0	639	0	0	0	0	639	(948)
2031	645	0	0	0	645	0	0	0	0	645	(760)
2032	662	0	0	0	662	0	0	0	0	662	(581)
2033	691	0	0	0	691	0	0	0	0	691	(407)
2034	704	0	0	0	704	0	0	0	0	704	(242)
2035	713	0	0	0	713	0	3,858	0	3,858	(777)	(926)
2036	738	0	0	0	738	0	0	0	0	738	(777)
2037	749	0	0	0	749	0	0	0	0	749	(636)
2038	761	0	0	0	761	0	0	0	0	761	(503)
2039	772	0	0	0	772	0	0	0	0	772	(378)
2040	0	0	0	0	0	0	0	0	0	0	(378)
2041	0	0	0	0	0	0	0	0	0	0	(378)
2042	0	0	0	0	0	0	0	0	0	0	(378)
2043	0	0	0	0	0	0	0	0	0	0	(378)
2044	0	0	0	0	0	0	0	0	0	0	(378)
2045	0	0	0	0	0	0	0	0	0	0	(378)
2046	0	0	0	0	0	0	0	0	0	0	(378)
2047	0	0	0	0	0	0	0	0	0	0	(378)
2048	0	0	0	0	0	0	0	0	0	0	(378)
NOM	15,681	2,065	7,060	0	24,806	14,121	6,871	0	20,992	3,814	
NPV	6,462	1,921	6,565	0	14,948	13,132	2,194	0	15,326	(378)	

In Service of Gen Unit:  
Discount Rate: 2019 7.54 %  
Benefit/Cost Ratio ( Col(6) / Col(10) ): 0.98

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

(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)
2014	0	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	198	7,060	191	0	7,449	136	0	0	0	137	(7,313)	(6,800)
2016	0	0	0	387	0	387	349	49	0	0	398	11	(6,791)
2017	0	0	0	398	0	398	241	48	0	0	289	(109)	(6,878)
2018	0	0	0	419	0	419	311	46	0	0	357	(61)	(6,924)
2019	0	0	0	444	0	444	549	45	0	0	594	150	(6,820)
2020	0	0	0	451	0	451	535	42	0	0	578	127	(6,738)
2021	0	0	0	460	0	460	520	42	0	0	562	102	(6,676)
2022	0	0	0	478	0	478	514	41	0	0	555	76	(6,634)
2023	0	0	0	469	0	469	501	40	0	0	541	71	(6,596)
2024	0	0	0	473	0	473	495	39	0	0	534	61	(6,567)
2025	0	0	0	469	0	469	506	38	0	0	544	73	(6,533)
2026	0	0	0	470	0	470	487	37	0	0	524	54	(6,511)
2027	0	0	0	474	0	474	500	36	0	0	535	62	(6,487)
2028	0	0	0	477	0	477	500	35	0	0	535	58	(6,466)
2029	0	0	0	482	0	482	501	34	0	0	534	52	(6,448)
2030	0	0	0	485	0	485	500	33	0	0	533	48	(6,433)
2031	0	0	0	490	0	490	503	32	0	0	535	44	(6,420)
2032	0	0	0	503	0	503	504	31	0	0	535	32	(6,412)
2033	0	0	0	525	0	525	513	31	0	0	543	18	(6,407)
2034	0	0	0	535	0	535	511	30	0	0	541	6	(6,406)
2035	0	0	0	542	0	542	512	30	0	0	542	0	(6,406)
2036	0	0	0	561	0	561	524	29	0	0	553	(8)	(6,407)
2037	0	0	0	569	0	569	531	29	0	0	560	(9)	(6,409)
2038	0	0	0	578	0	578	532	28	0	0	561	(17)	(6,412)
2039	0	0	0	587	0	587	543	28	0	0	571	(15)	(6,414)
2040	0	0	7,060	0	0	0	621	29	0	0	650	650	(6,316)
2041	0	0	6,565	0	0	0	633	29	0	0	663	663	(6,223)
2042	0	0	0	0	0	0	658	29	0	0	687	687	(6,133)
2043	0	0	0	0	0	0	667	29	0	0	695	695	(6,049)
2044	0	0	0	0	0	0	677	28	0	0	705	705	(5,969)
2045	0	0	0	0	0	0	697	28	0	0	725	725	(5,893)
2046	0	0	0	0	0	0	712	27	0	0	739	739	(5,820)
2047	0	0	0	0	0	0	725	27	0	0	752	752	(5,752)
2048	0	0	0	0	0	0	747	27	0	0	774	774	(5,686)
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
2061	0	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	0
2063	0	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	0
2065	0	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	0
2067	0	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	0
2069	0	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	0
2071	0	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	0
2073	0	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	0
2075	0	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	0
2077	0	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	0
2079	0	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	0
2081	0	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	0
2083	0	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	0
2085	0	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	0
2087	0	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	0
2089	0	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	0
2091	0	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	0
2093	0	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	0
2095	0	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	0
2097	0	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	0
2099	0	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	0
NOM.	0	198	7,060	11,917	0	19,175	17,954	1,125	0	2	19,081	(94)	(94)
NPV	0	184	6,565	4,911	0	11,661	5,542	432	0	1	5,974	(5,686)	(5,686)

Discount Rate  
Benefit/Cost Ratio (Col(12) / Col(7)) : 0.51 %

**I. PROGRAM DEMAND SAVINGS & LINE LOSSES**

(1) CUSTOMER KW REDUCTION AT METER .....	10.34 KW
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	13.59198 KW
(3) KW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR KW REDUCTION PER CUSTOMER .....	41,524.19 kWh
(5) KW LINE LOSS PERCENTAGE .....	5.76 %
(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 .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

**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 .....	7.54 %
(11) UTILITY AFDUC RATE .....	6.50 %
(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 .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	146.90 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	24.85 \$/KW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	58.35 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	5.53 \$/KW
(11) DISTRIBUTION FIXED O & M COST .....	2.34 \$/KW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

**V. NON-FUEL ENERGY AND DEMAND CHARGES**

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

\* INPUT DATA - PART I CONTINUED  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Photovoltaic

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)
2014	0	0	0	0	0	0	0	0	0	0
2015	82	2,800	0	2,882	105	4	8,001	0	0	8,001
2016	0	0	0	0	215	8	0	0	0	0
2017	0	0	0	0	220	8	0	0	0	0
2018	0	0	0	0	236	8	0	0	0	0
2019	0	0	0	0	253	9	0	0	0	0
2020	0	0	0	0	255	9	0	0	0	0
2021	0	0	0	0	259	10	0	0	0	0
2022	0	0	0	0	269	10	0	0	0	0
2023	0	0	0	0	270	9	0	0	0	0
2024	0	0	0	0	273	9	0	0	0	0
2025	0	0	0	0	273	9	0	1,558	0	1,558
2026	0	0	0	0	276	8	0	0	0	0
2027	0	0	0	0	279	8	0	0	0	0
2028	0	0	0	0	283	8	0	0	0	0
2029	0	0	0	0	287	8	0	0	0	0
2030	0	0	0	0	290	8	0	0	0	0
2031	0	0	0	0	294	8	0	0	0	0
2032	0	0	0	0	303	8	0	0	0	0
2033	0	0	0	0	319	9	0	0	0	0
2034	0	0	0	0	326	9	0	0	0	0
2035	0	0	0	0	332	9	0	0	0	0
2036	0	0	0	0	347	9	0	2,044	0	2,044
2037	0	0	0	0	353	9	0	0	0	0
2038	0	0	0	0	360	9	0	0	0	0
2039	0	0	0	0	367	9	0	0	0	0
2040	0	0	0	0	0	0	0	0	0	0
2041	0	0	0	0	0	0	0	0	0	0
2042	0	0	0	0	0	0	0	0	0	0
2043	0	0	0	0	0	0	0	0	0	0
2044	0	0	0	0	0	0	0	0	0	0
2045	0	0	0	0	0	0	0	0	0	0
2046	0	0	0	0	0	0	0	0	0	0
2047	0	0	0	0	0	0	0	0	0	0
2048	0	0	0	0	0	0	0	0	0	0
NOM	82	2,800	0	2,882	7,042	213	8,001	3,601	0	11,602
NPV	76	2,604	0	2,680	2,847	92	7,440	1,114	0	8,554

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

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

ESCALATION RATES

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Charge (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	5.43	11.21
2015	2.50	2.50	2.50	0.00	0.00%	3.00	5.07	11.15
2016	2.50	2.50	2.50	0.00	0.00%	3.00	5.21	11.17
2017	2.50	2.50	2.50	0.00	0.00%	3.00	5.35	11.70
2018	2.50	2.50	2.50	0.00	0.00%	3.00	5.91	11.85
2019	2.50	2.50	2.50	3.85	55.85%	3.00	6.41	12.59
2020	2.50	2.50	2.50	4.03	95.39%	3.00	6.46	13.25
2021	2.50	2.50	2.50	4.10	95.40%	3.00	6.54	13.90
2022	2.50	2.50	2.50	4.23	95.37%	3.00	6.78	14.46
2023	2.50	2.50	2.50	4.42	94.99%	3.00	6.96	13.13
2024	2.50	2.50	2.50	4.69	94.40%	3.00	7.10	13.17
2025	2.50	2.50	2.50	4.88	93.42%	3.00	7.24	12.68
2026	2.50	2.50	2.50	5.08	88.94%	3.00	7.42	12.45
2027	2.50	2.50	2.50	5.31	87.68%	3.00	7.57	12.50
2028	2.50	2.50	2.50	5.59	87.36%	3.00	7.74	12.51
2029	2.50	2.50	2.50	5.79	87.30%	3.00	7.91	12.60
2030	2.50	2.50	2.50	5.88	88.13%	3.00	8.08	12.62
2031	2.50	2.50	2.50	6.13	88.44%	3.00	8.25	12.71
2032	2.50	2.50	2.50	6.32	89.14%	3.00	8.59	12.95
2033	2.50	2.50	2.50	6.59	89.64%	3.00	9.19	13.24
2034	2.50	2.50	2.50	6.84	89.85%	3.00	9.48	13.44
2035	2.50	2.50	2.50	7.09	89.65%	3.00	9.73	13.48
2036	2.50	2.50	2.50	7.31	90.14%	3.00	10.31	13.67
2037	2.50	2.50	2.50	7.63	89.91%	3.00	10.59	13.80
2038	2.50	2.50	2.50	7.92	89.91%	3.00	10.90	13.91
2039	2.50	2.50	2.50	8.22	89.91%	3.00	11.21	14.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	11.47	14.12
2041	2.50	2.50	2.50	8.79	89.82%	3.00	11.82	14.24
2042	2.50	2.50	2.50	9.18	89.85%	3.00	12.19	14.27
2043	2.50	2.50	2.50	9.48	89.84%	3.00	12.75	14.44
2044	2.50	2.50	2.50	9.88	89.93%	3.00	13.19	14.57
2045	2.50	2.50	2.50	10.25	89.91%	3.00	13.65	14.70
2046	2.50	2.50	2.50	10.63	89.91%	3.00	14.13	14.83
2047	2.50	2.50	2.50	10.97	89.83%	3.00	14.63	14.96
2048	2.50	2.50	2.50	11.44	89.92%	3.00	15.16	15.09

Column (1) used for:

Utility Cost  
 Customer Equipment  
 Supply Costs

Column (6) used for:

Gen. Train. & Dist Cost

Column (3) used for:

Customer O&M Cost  
 Generator Fixed O&M  
 T&D Fixed O&M  
 Generator Variable O&M

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

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	969	20	0	61	37	17	1	32	2	169	169	169	955
2020	955	19	0	59	23	16	1	32	15	164	153	322	979
2021	889	18	0	56	23	16	1	32	13	158	137	459	1,004
2022	844	18	0	53	23	15	1	32	11	152	122	581	1,029
2023	802	17	0	50	23	14	1	32	9	146	109	690	1,054
2024	761	16	0	48	23	14	1	32	8	141	98	788	1,081
2025	721	15	0	45	23	13	1	32	6	135	87	876	1,108
2026	683	14	0	43	23	13	1	32	5	130	78	954	1,136
2027	647	13	0	40	22	12	1	32	5	125	70	1,024	1,164
2028	610	13	0	38	21	12	1	32	5	120	62	1,086	1,193
2029	574	12	0	36	19	11	1	32	5	115	56	1,142	1,223
2030	538	11	0	34	18	10	1	32	5	110	49	1,191	1,253
2031	501	10	0	31	16	10	1	32	5	105	44	1,235	1,285
2032	465	10	0	29	15	9	1	32	5	100	39	1,274	1,317
2033	428	9	0	27	13	9	1	32	5	95	34	1,308	1,350
2034	392	8	0	25	12	8	1	32	5	90	30	1,338	1,384
2035	356	7	0	22	10	8	1	32	5	85	27	1,365	1,418
2036	319	7	0	20	9	7	1	32	5	80	23	1,388	1,454
2037	283	6	0	18	8	6	1	32	5	75	20	1,408	1,490
2038	247	5	0	15	6	6	1	32	5	70	18	1,426	1,527
2039	210	4	0	13	13	5	1	32	(4)	65	15	1,441	1,565
2040	182	4	0	11	20	5	1	32	(12)	61	13	1,454	1,605
2041	162	3	0	10	19	4	1	32	(12)	58	12	1,466	1,645
2042	141	3	0	9	18	3	1	32	(12)	55	10	1,476	1,686
2043	121	3	0	8	17	3	1	32	(12)	52	9	1,485	1,728
2044	101	2	0	6	17	2	1	32	(12)	49	8	1,493	1,771
2045	81	2	0	5	16	2	1	32	(12)	46	7	1,500	1,815
2046	61	1	0	4	15	1	1	32	(12)	42	6	1,506	1,861
2047	40	1	0	3	14	1	1	32	(12)	39	5	1,511	1,907
2048	20	0	0	1	13	0	1	32	(12)	36	4	1,516	1,955

CAPITAL STRUCTURE

SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

IN SERVICE COST (\$000)	955
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECTIVE TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX SCHEDULE DEPRECIATION	TAX DEPRECIATION	ACCUMULATED TAX DEPRECIATION	BOOK DEPRECIATION	ACCUMULATED BOOK DEPRECIATION	BOOK FOR DEPRECIATION	ACCUMULATED BOOK DEPRECIATION FOR DEPRECIATION	DEFERRED TAX DEPRECIATION	TOTAL EQUITY AFUDC	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE	SALVAGE TAX RATE	ANNUAL DEFERRED TAX (9)-(12)+(13)	ACCUMULATED DEFERRED TAX (11)
	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)		\$(000)	\$(000)	\$(000)	\$(000)
2019	37.5%	35	35	32	32	30	30	2	50	0	0	0	2	0
2020	7.22%	68	103	68	64	30	60	15	50	0	0	0	15	3
2021	6.68%	63	166	32	96	30	91	13	50	0	0	0	13	16
2022	6.18%	58	224	32	127	30	121	11	50	0	0	0	11	26
2023	5.71%	54	278	32	159	30	151	9	50	0	0	0	9	35
2024	5.29%	50	327	32	191	30	181	8	50	0	0	0	8	43
2025	4.89%	46	373	32	223	30	211	6	50	0	0	0	6	49
2026	4.52%	42	416	32	255	30	241	5	50	0	0	0	5	54
2027	4.46%	42	458	32	287	30	272	5	50	0	0	0	5	58
2028	4.46%	42	500	32	318	30	302	5	50	0	0	0	5	63
2029	4.46%	42	541	32	350	30	332	5	50	0	0	0	5	67
2030	4.46%	42	583	32	382	30	362	5	50	0	0	0	5	72
2031	4.46%	42	625	32	414	30	392	5	50	0	0	0	5	77
2032	4.46%	42	667	32	446	30	422	5	50	0	0	0	5	81
2033	4.46%	42	709	32	478	30	453	5	50	0	0	0	5	86
2034	4.46%	42	751	32	509	30	483	5	50	0	0	0	5	90
2035	4.46%	42	793	32	541	30	513	5	50	0	0	0	5	95
2036	4.46%	42	835	32	573	30	543	5	50	0	0	0	5	99
2037	4.46%	42	877	32	605	30	573	5	50	0	0	0	5	104
2038	4.46%	42	919	32	637	30	603	5	50	0	0	0	5	108
2039	2.23%	21	940	32	669	30	634	(4)	50	0	0	0	(4)	105
2040	0.00%	0	940	32	701	30	664	(12)	50	0	0	0	(12)	93
2041	0.00%	0	940	32	732	30	694	(12)	50	0	0	0	(12)	81
2042	0.00%	0	940	32	764	30	724	(12)	50	0	0	0	(12)	70
2043	0.00%	0	940	32	796	30	754	(12)	50	0	0	0	(12)	58
2044	0.00%	0	940	32	828	30	784	(12)	50	0	0	0	(12)	47
2045	0.00%	0	940	32	860	30	815	(12)	50	0	0	0	(12)	35
2046	0.00%	0	940	32	892	30	845	(12)	50	0	0	0	(12)	23
2047	0.00%	0	940	32	923	30	875	(12)	50	0	0	0	(12)	12
2048	0.00%	0	940	32	955	30	905	(12)	50	0	0	0	(12)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(13)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	50
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

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

(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%	35	2	923	32	(11)	969	935	952
2020	7.22%	68	15	892	64	3	935	889	912
2021	6.68%	63	13	860	96	16	889	844	866
2022	6.18%	58	11	828	127	26	844	802	823
2023	5.71%	54	9	796	159	35	802	761	781
2024	5.29%	50	8	764	191	43	761	721	741
2025	4.89%	46	6	732	223	49	721	683	702
2026	4.52%	42	5	701	255	54	683	647	665
2027	4.46%	42	5	669	287	58	647	610	629
2028	4.46%	42	5	637	318	63	610	574	592
2029	4.46%	42	5	605	350	67	574	538	556
2030	4.46%	42	5	573	382	72	538	501	519
2031	4.46%	42	5	541	414	77	501	465	483
2032	4.46%	42	5	509	446	81	465	428	447
2033	4.46%	42	5	478	478	86	428	392	410
2034	4.46%	42	5	446	509	90	392	356	374
2035	4.46%	42	5	414	541	95	356	319	337
2036	4.46%	42	5	382	573	99	319	283	301
2037	4.46%	42	5	350	605	104	283	247	265
2038	4.46%	42	5	318	637	108	247	210	228
2039	2.23%	21	(4)	287	669	105	210	182	196
2040	0.00%	0	(12)	255	701	93	182	162	172
2041	0.00%	0	(12)	223	732	81	162	141	152
2042	0.00%	0	(12)	191	764	70	141	121	131
2043	0.00%	0	(12)	159	796	58	121	101	111
2044	0.00%	0	(12)	127	828	47	101	81	91
2045	0.00%	0	(12)	96	860	35	81	61	71
2046	0.00%	0	(12)	64	892	23	61	40	51
2047	0.00%	0	(12)	32	923	12	40	20	30
2048	0.00%	0	(12)	0	955	0	20	0	10

\* 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)	(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)
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.41	0.01	0.01	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86
2015	-4	3.00%	1.030	0.28%	2.26	1.96	1.96	0.05	0.05	0.13	0.16	0.10	0.12	(0.02)	(0.03)	2.39	3.24
2016	-3	3.00%	1.061	8.69%	71.58	38.88	71.58	0.81	0.81	2.54	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36
2017	-2	3.00%	1.093	53.83%	456.61	302.97	302.97	6.76	6.76	19.90	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87
2018	-1	3.00%	1.126	37.09%	324.11	693.33	693.33	20.74	20.74	46.81	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80
										100.00%	855.39			(12.98)	924.80		

IN SERVICE YEAR	2019																
PLANT COSTS	776,326,284.5																
AFUDC RATE	6.50%																
CONSTRUCTION CASH																	
EQUITY AFUDC	884	BOOK BASIS	884	FOR DEF TAX	884	TAX BASIS	884										
DEBT AFUDC	21	BOOK BASIS	50	FOR DEF TAX	21	TAX BASIS	56										
CPI	21	BOOK BASIS	21	FOR DEF TAX	21	TAX BASIS	56										
TOTAL	955	BOOK BASIS	955	FOR DEF TAX	905	TAX BASIS	940										
TOTAL		69.41	54.39	(12.98)	924.80												

\* Column not specified in workbook

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

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (C/KWh)	AVOIDED MARGINAL FUEL COST (C/KWh)	INCREASED MARGINAL FUEL COST (C/KWh)	REPLACEMENT FUEL COST (C/KWh)	PROGRAM KW EFFECTIVENESS FACTOR	PROGRAM kWh EFFECTIVENESS FACTOR
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	76	76	4.45	6.37	4.95	0.00	1.00	1.00
2016	76	76	4.92	9.02	5.52	0.00	1.00	1.00
2017	76	76	4.27	5.99	4.58	0.00	0.99	0.99
2018	76	76	5.27	7.87	5.70	0.00	0.99	0.99
2019	76	76	5.38	8.00	5.81	5.05	0.98	0.98
2020	76	76	5.65	8.67	6.12	5.04	0.98	0.98
2021	76	76	5.65	8.43	6.11	5.12	0.97	0.97
2022	76	76	5.60	7.93	6.02	5.09	0.97	0.97
2023	76	76	5.60	7.47	5.98	5.20	0.96	0.96
2024	76	76	5.81	7.58	6.18	5.51	0.96	0.96
2025	76	76	5.98	7.93	6.35	5.65	0.95	0.95
2026	76	76	5.73	7.27	6.04	5.77	0.95	0.95
2027	76	76	6.01	7.94	6.37	6.08	0.94	0.94
2028	76	76	6.07	7.55	6.41	6.19	0.94	0.94
2029	76	76	6.28	7.88	6.65	6.49	0.93	0.93
2030	76	76	6.34	7.74	6.65	6.45	0.93	0.93
2031	76	76	6.57	8.06	6.86	6.72	0.92	0.92
2032	76	76	6.62	7.75	6.85	6.76	0.92	0.92
2033	76	76	6.97	8.43	7.21	7.11	0.91	0.91
2034	76	76	7.05	8.19	7.27	7.29	0.91	0.91
2035	76	76	7.19	8.31	7.39	7.50	0.90	0.90
2036	76	76	7.47	8.71	7.67	7.70	0.90	0.90
2037	76	76	7.68	9.05	7.89	8.02	0.90	0.90
2038	76	76	7.94	9.30	8.15	8.33	0.89	0.89
2039	76	76	8.12	9.43	8.32	8.53	0.89	0.89
2040	76	76	8.35	9.68	8.56	8.87	1.00	1.00
2041	76	76	8.67	9.97	8.91	9.13	1.00	1.00
2042	76	76	8.99	10.45	9.25	9.47	1.00	1.00
2043	76	76	9.27	10.70	9.54	9.80	1.00	1.00
2044	76	76	9.60	11.12	9.87	10.25	1.00	1.00
2045	76	76	9.94	11.45	10.21	10.58	1.00	1.00
2046	76	76	10.25	11.68	10.50	10.92	1.00	1.00
2047	76	76	10.57	12.06	10.84	11.29	1.00	1.00
2048	76	76	11.00	12.68	11.29	11.78	1.00	1.00
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.

A VOIDED GENERATING BENEFITS

PROGRAM METHOD SELECTED: REV\_REQ

PROGRAM NAME: Business Photovoltaic

YEAR	(2) A VOIDED GEN UNIT CAPACITY COST \$(000)	(3) A VOIDED GEN UNIT FIXED O&M \$(000)	(4) A VOIDED GEN UNIT VARIABLE O&M \$(000)	(5) A VOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) A VOIDED GEN UNIT BENEFITS \$(000)
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	166	67	4	195	255	176
2020	160	68	6	348	435	148
2021	153	70	6	354	442	141
2022	147	71	7	365	439	150
2023	141	72	7	380	447	153
2024	134	74	7	400	471	145
2025	129	75	7	413	477	146
2026	123	77	7	409	465	150
2027	118	78	7	421	482	142
2028	112	80	7	442	490	151
2029	107	81	7	458	512	141
2030	102	83	7	469	514	147
2031	97	85	7	491	538	142
2032	92	86	7	510	545	150
2033	87	88	8	535	577	140
2034	82	90	8	556	593	142
2035	77	92	8	575	609	143
2036	72	93	8	596	628	142
2037	67	95	8	620	653	138
2038	62	97	8	644	678	134
2039	57	99	9	668	694	140
2040	61	115	10	693	721	157
2041	58	117	10	714	742	157
2042	55	120	10	746	770	161
2043	52	123	11	771	797	160
2044	49	126	11	804	834	155
2045	46	130	11	834	861	160
2046	42	133	12	865	889	163
2047	39	136	12	891	918	161
2048	36	140	12	931	959	160
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	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	2,721	2,861	248	17,098	18,434	4,495
NPV	1,005	734	63	4,098	4,585	1,315



A VOIDED GENERATING EMISSION IMPACT  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Photovoltaic

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2014	0	0	0	0	0
2015	0	0	0	0	0
2016	0	0	0	0	0
2017	0	0	0	0	0
2018	0	0	0	0	0
2019	0	0	0	0	0
2020	0	0	0	0	0
2021	0	0	0	0	0
2022	0	0	0	0	0
2023	0	0	0	0	0
2024	0	0	0	0	0
2025	0	0	0	0	0
2026	0	0	0	0	0
2027	0	0	0	0	0
2028	0	0	0	0	0
2029	0	0	0	0	0
2030	0	0	0	0	0
2031	0	0	0	0	0
2032	0	0	0	0	0
2033	0	0	0	0	0
2034	0	0	0	0	0
2035	0	0	0	0	0
2036	0	0	0	0	0
2037	0	0	0	0	0
2038	0	0	0	0	0
2039	0	0	0	0	0
2040	0	0	0	0	0
2041	0	0	0	0	0
2042	0	0	0	0	0
2043	0	0	0	0	0
2044	0	0	0	0	0
2045	0	0	0	0	0
2046	0	0	0	0	0
2047	0	0	0	0	0
2048	0	0	0	0	0
NOM	7	9	4	0	2
NPV	2	2	1	0	1

(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)
2014	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	82	8,001	0	8,082	0	0	107	0	107	(7,976)	(7,417)
2016	0	0	0	0	0	0	36	310	0	346	346	(7,117)
2017	0	0	0	0	0	0	36	198	0	234	198	(6,929)
2018	0	0	0	0	0	0	34	261	0	296	296	(6,708)
2019	0	0	0	0	0	176	33	264	0	474	474	(6,579)
2020	0	0	0	0	0	148	32	286	0	466	466	(6,077)
2021	0	0	0	0	0	141	32	275	0	448	448	(5,808)
2022	0	0	0	0	0	150	31	256	0	437	437	(5,563)
2023	0	0	0	0	0	153	30	238	0	421	421	(5,345)
2024	0	0	0	0	0	145	29	240	0	413	413	(5,145)
2025	0	0	1,558	0	1,558	146	28	250	0	424	(1,133)	(5,654)
2026	0	0	0	0	0	150	28	227	0	404	404	(5,485)
2027	0	0	0	0	0	142	27	248	0	416	416	(5,323)
2028	0	0	0	0	0	151	26	232	0	409	409	(5,175)
2029	0	0	0	0	0	141	25	242	0	407	407	(5,038)
2030	0	0	0	0	0	147	24	235	0	406	406	(4,911)
2031	0	0	0	0	0	142	24	244	0	409	409	(4,792)
2032	0	0	0	0	0	150	23	231	0	404	404	(4,683)
2033	0	0	0	0	0	140	23	252	0	415	415	(4,579)
2034	0	0	0	0	0	142	22	242	0	407	407	(4,484)
2035	0	0	0	0	0	143	22	244	0	409	409	(4,395)
2036	0	0	2,044	0	2,044	142	22	255	0	418	(1,625)	(4,723)
2037	0	0	0	0	0	138	22	264	0	424	424	(4,644)
2038	0	0	0	0	0	134	21	269	0	425	425	(4,569)
2039	0	0	0	0	0	140	21	271	0	432	432	(4,499)
2040	0	0	0	0	0	157	22	314	0	493	493	(4,425)
2041	0	0	0	0	0	157	22	323	0	502	502	(4,354)
2042	0	0	0	0	0	161	22	339	0	522	522	(4,286)
2043	0	0	0	0	0	160	21	347	0	528	528	(4,221)
2044	0	0	0	0	0	155	21	361	0	538	538	(4,161)
2045	0	0	0	0	0	160	21	371	0	552	552	(4,103)
2046	0	0	0	0	0	163	20	378	0	561	561	(4,048)
2047	0	0	0	0	0	161	20	390	0	572	572	(3,996)
2048	0	0	0	0	0	160	20	411	0	591	591	(3,946)
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	82	11,602	0	11,684	4,495	841	9,374	2	14,711	3,028	
NPV	0	76	8,554	0	8,630	1,315	323	3,046	1	4,684	(3,946)	

Discount Rate: 7.54 %

Benefit/Cost Ratio (Col(11) / Col(6)) : **0.54**







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

**I. PROGRAM DEMAND SAVINGS & LINE LOSSES**

(1) CUSTOMER kW REDUCTION AT METER .....	3.38 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	4.44093 kW
(3) kW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	13,567.27 kWh
(5) kWh LINE LOSS PERCENTAGE .....	5.76 %
(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 .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

**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 .....	7.54 %
(11) UTILITY AFUDC RATE .....	6.50 %
(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 .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	146.90 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	24.85 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	58.35 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	5.53 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	2.34 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

**V. NON-FUEL ENERGY AND DEMAND CHARGES**

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

\* INPUT DATA - PART I CONTINUED  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Photovoltaic for Schools

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)
2014	0	0	0	0	0	0	0	0	0	
2015	168	369	0	537	9	3	369	0	369	
2016	0	706	0	706	18	6	706	0	706	
2017	0	664	0	664	18	6	664	0	664	
2018	0	622	0	622	20	6	622	0	622	
2019	0	581	0	581	22	7	581	0	581	
2020	0	274	0	274	22	7	274	0	274	
2021	0	0	0	0	22	7	0	0	0	
2022	0	0	0	0	22	7	0	0	0	
2023	0	0	0	0	23	7	0	0	0	
2024	0	0	0	0	23	7	0	0	0	
2025	0	0	0	0	23	6	0	0	0	
2026	0	0	0	0	23	6	187	0	187	
2027	0	0	0	0	24	6	0	0	0	
2028	0	0	0	0	24	6	0	0	0	
2029	0	0	0	0	25	6	0	0	0	
2030	0	0	0	0	25	6	0	0	0	
2031	0	0	0	0	26	6	0	0	0	
2032	0	0	0	0	27	6	0	0	0	
2033	0	0	0	0	29	6	0	0	0	
2034	0	0	0	0	30	7	0	0	0	
2035	0	0	0	0	30	7	0	0	0	
2036	0	0	0	0	32	7	0	0	0	
2037	0	0	0	0	33	7	0	0	0	
2038	0	0	0	0	34	7	0	0	0	
2039	0	0	0	0	34	7	0	0	0	
2040	0	0	0	0	0	0	0	0	0	
2041	0	0	0	0	0	0	0	0	0	
2042	0	0	0	0	0	0	0	0	0	
2043	0	0	0	0	0	0	0	0	0	
2044	0	0	0	0	0	0	0	0	0	
2045	0	0	0	0	0	0	0	0	0	
2046	0	0	0	0	0	0	0	0	0	
2047	0	0	0	0	0	0	0	0	0	
2048	0	0	0	0	0	0	0	0	0	
NOM	168	3,216	0	3,385	620	159	3,216	434	3,650	
NPV	156	2,534	0	2,691	246	69	2,534	134	2,668	

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

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

ESCALATION RATES

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Charge (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	5.43	11.21
2015	2.50	2.50	2.50	0.00	0.00%	3.00	5.07	11.15
2016	2.50	2.50	2.50	0.00	0.00%	3.00	5.21	11.17
2017	2.50	2.50	2.50	0.00	0.00%	3.00	5.55	11.70
2018	2.50	2.50	2.50	0.00	0.00%	3.00	5.91	11.85
2019	2.50	2.50	2.50	3.85	55.85%	3.00	6.41	12.59
2020	2.50	2.50	2.50	4.03	95.39%	3.00	6.46	13.25
2021	2.50	2.50	2.50	4.10	95.40%	3.00	6.54	13.90
2022	2.50	2.50	2.50	4.23	95.37%	3.00	6.78	14.46
2023	2.50	2.50	2.50	4.42	94.99%	3.00	6.96	13.13
2024	2.50	2.50	2.50	4.69	94.40%	3.00	7.10	13.17
2025	2.50	2.50	2.50	4.88	93.42%	3.00	7.24	12.68
2026	2.50	2.50	2.50	5.08	88.94%	3.00	7.42	12.45
2027	2.50	2.50	2.50	5.31	87.68%	3.00	7.57	12.50
2028	2.50	2.50	2.50	5.59	87.36%	3.00	7.74	12.51
2029	2.50	2.50	2.50	5.79	87.30%	3.00	7.91	12.60
2030	2.50	2.50	2.50	5.88	88.13%	3.00	8.08	12.62
2031	2.50	2.50	2.50	6.13	88.44%	3.00	8.25	12.71
2032	2.50	2.50	2.50	6.32	89.14%	3.00	8.59	12.95
2033	2.50	2.50	2.50	6.59	89.64%	3.00	9.19	13.24
2034	2.50	2.50	2.50	6.84	89.85%	3.00	9.48	13.44
2035	2.50	2.50	2.50	7.09	89.65%	3.00	9.73	13.48
2036	2.50	2.50	2.50	7.31	90.14%	3.00	10.31	13.67
2037	2.50	2.50	2.50	7.63	89.91%	3.00	10.59	13.80
2038	2.50	2.50	2.50	7.92	89.91%	3.00	10.90	13.91
2039	2.50	2.50	2.50	8.22	89.91%	3.00	11.21	14.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	11.47	14.12
2041	2.50	2.50	2.50	8.79	89.82%	3.00	11.82	14.24
2042	2.50	2.50	2.50	9.18	89.85%	3.00	12.19	14.27
2043	2.50	2.50	2.50	9.48	89.84%	3.00	12.75	14.44
2044	2.50	2.50	2.50	9.88	89.93%	3.00	13.19	14.57
2045	2.50	2.50	2.50	10.25	89.91%	3.00	13.65	14.70
2046	2.50	2.50	2.50	10.63	89.91%	3.00	14.13	14.83
2047	2.50	2.50	2.50	10.97	89.83%	3.00	14.63	14.96
2048	2.50	2.50	2.50	11.44	89.92%	3.00	15.16	15.09
	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%	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	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	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	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	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	0.00	0.00

Column (1) used for:

- Utility Cost
- Customer Equipment
- Supply Costs

Column (6) used for:

- Gen. Train. & Dist Cost

Column (3) used for:

- Customer O&M Cost
- Generator Fixed O&M
- T&D Fixed O&M
- Generator Variable O&M

CALCULATION OF GEN K-FACTOR  
PROGRAM METHOD SELECTED REV\_REQ  
PROGRAM NAME: Business Photovoltaic for Schools

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	117	2	0	7	4	2	0	4	0	20	20	20	115
2020	113	2	0	7	3	2	0	4	2	20	18	39	118
2021	107	2	0	7	3	2	0	4	2	19	16	55	121
2022	102	2	0	6	3	2	0	4	1	18	15	70	124
2023	96	2	0	6	3	2	0	4	1	18	13	83	127
2024	92	2	0	6	3	2	0	4	1	17	12	95	130
2025	87	2	0	5	3	2	0	4	1	16	11	105	133
2026	82	2	0	5	3	2	0	4	1	16	9	115	137
2027	78	2	0	5	3	1	0	4	1	15	8	123	140
2028	73	2	0	5	2	1	0	4	1	14	8	131	144
2029	69	1	0	4	2	1	0	4	1	14	7	137	147
2030	65	1	0	4	2	1	0	4	1	13	6	143	151
2031	60	1	0	4	2	1	0	4	1	13	5	149	155
2032	56	1	0	4	2	1	0	4	1	12	5	153	159
2033	52	1	0	3	2	1	0	4	1	11	4	157	162
2034	47	1	0	3	1	1	0	4	1	11	4	161	167
2035	43	1	0	3	1	1	0	4	1	10	3	164	171
2036	38	1	0	2	1	1	0	4	1	10	3	167	175
2037	34	1	0	2	1	1	0	4	1	9	2	170	179
2038	30	1	0	2	1	1	0	4	1	8	2	172	184
2039	25	1	0	2	2	1	0	4	(0)	8	2	173	188
2040	22	0	0	1	2	1	0	4	(1)	7	2	175	193
2041	19	0	0	1	2	0	0	4	(1)	7	1	176	198
2042	17	0	0	1	2	0	0	4	(1)	7	1	178	203
2043	15	0	0	1	2	0	0	4	(1)	6	1	179	208
2044	12	0	0	1	2	0	0	4	(1)	6	1	180	213
2045	10	0	0	1	2	0	0	4	(1)	5	1	181	219
2046	7	0	0	0	2	0	0	4	(1)	5	1	181	224
2047	5	0	0	0	2	0	0	4	(1)	5	1	182	230
2048	2	0	0	0	2	0	0	4	(1)	4	1	182	235

IN SERVICE COST (\$000)	115
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECT. TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Photovoltaic 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 DEPRECIATION 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%	4	4	4	4	4	4	0	6	0	0	0	0	(1)
2020	7.22%	8	12	4	8	4	7	2	6	0	0	0	2	0
2021	6.68%	8	20	4	11	4	11	2	6	0	0	0	2	2
2022	6.18%	7	27	4	15	4	15	1	6	0	0	0	1	3
2023	5.71%	6	33	4	19	4	18	1	6	0	0	0	1	4
2024	5.29%	6	39	4	23	4	22	1	6	0	0	0	1	5
2025	4.89%	6	45	4	27	4	25	1	6	0	0	0	1	6
2026	4.52%	5	50	4	31	4	29	1	6	0	0	0	1	7
2027	4.46%	5	55	4	34	4	33	1	6	0	0	0	1	8
2028	4.46%	5	60	4	38	4	36	1	6	0	0	0	1	9
2029	4.46%	5	65	4	42	4	40	1	6	0	0	0	1	10
2030	4.46%	5	70	4	46	4	44	1	6	0	0	0	1	11
2031	4.46%	5	75	4	50	4	47	1	6	0	0	0	1	12
2032	4.46%	5	80	4	54	4	51	1	6	0	0	0	1	13
2033	4.46%	5	85	4	57	4	54	1	6	0	0	0	1	14
2034	4.46%	5	90	4	61	4	58	1	6	0	0	0	1	15
2035	4.46%	5	95	4	65	4	62	1	6	0	0	0	1	16
2036	4.46%	5	101	4	69	4	65	1	6	0	0	0	1	17
2037	4.46%	5	106	4	73	4	69	1	6	0	0	0	1	18
2038	4.46%	5	111	4	77	4	73	1	6	0	0	0	1	19
2039	2.23%	3	113	4	80	4	76	(0)	6	0	0	0	(0)	20
2040	0.00%	0	113	4	84	4	80	(1)	6	0	0	0	(1)	21
2041	0.00%	0	113	4	88	4	84	(1)	6	0	0	0	(1)	22
2042	0.00%	0	113	4	92	4	87	(1)	6	0	0	0	(1)	23
2043	0.00%	0	113	4	96	4	91	(1)	6	0	0	0	(1)	24
2044	0.00%	0	113	4	100	4	94	(1)	6	0	0	0	(1)	25
2045	0.00%	0	113	4	103	4	98	(1)	6	0	0	0	(1)	26
2046	0.00%	0	113	4	107	4	102	(1)	6	0	0	0	(1)	27
2047	0.00%	0	113	4	111	4	105	(1)	6	0	0	0	(1)	28
2048	0.00%	0	113	4	115	4	109	(1)	6	0	0	0	(1)	29

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(2)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	6
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

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

(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%	4	0	111	4	(1)	117	113	115
2020	7.22%	8	2	107	8	0	113	107	110
2021	6.68%	8	2	103	11	2	107	102	104
2022	6.18%	7	1	100	15	3	102	96	99
2023	5.71%	6	1	96	19	4	96	92	94
2024	5.29%	6	1	92	23	5	92	87	89
2025	4.89%	6	1	88	27	6	87	82	85
2026	4.52%	5	1	84	31	6	82	78	80
2027	4.46%	5	1	80	34	7	78	73	76
2028	4.46%	5	1	77	38	8	73	69	71
2029	4.46%	5	1	73	42	8	69	65	67
2030	4.46%	5	1	69	46	9	65	60	63
2031	4.46%	5	1	65	50	9	60	56	58
2032	4.46%	5	1	61	54	10	56	52	54
2033	4.46%	5	1	57	57	10	52	47	49
2034	4.46%	5	1	54	61	11	47	43	45
2035	4.46%	5	1	50	65	11	43	38	41
2036	4.46%	5	1	46	69	12	38	34	36
2037	4.46%	5	1	42	73	12	34	30	32
2038	4.46%	5	1	38	77	13	30	25	27
2039	2.23%	3	(0)	34	80	13	25	22	24
2040	0.00%	0	(1)	31	84	11	22	19	21
2041	0.00%	0	(1)	27	88	10	19	17	18
2042	0.00%	0	(1)	23	92	8	17	15	16
2043	0.00%	0	(1)	19	96	7	15	12	13
2044	0.00%	0	(1)	15	100	6	12	10	11
2045	0.00%	0	(1)	11	103	4	10	7	9
2046	0.00%	0	(1)	8	107	3	7	5	6
2047	0.00%	0	(1)	4	111	1	5	2	4
2048	0.00%	0	(1)	0	115	0	2	0	1

\* 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)	(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)
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.41	0.01	0.01	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86
2015	-4	3.00%	1.030	0.28%	2.26	1.96	1.96	0.05	0.05	0.13	0.16	0.10	0.12	(0.02)	(0.03)	2.39	3.24
2016	-3	3.00%	1.061	8.69%	71.58	38.88	39.03	0.81	0.81	2.54	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36
2017	-2	3.00%	1.093	53.83%	456.61	302.97	305.67	6.76	6.76	19.90	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87
2018	-1	3.00%	1.126	37.09%	324.11	693.33	715.93	20.74	20.74	46.81	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80
100.00%											855.39			(12.98)			924.80

IN SERVICE YEAR	2019
PLANT COSTS	776,326,284.5
AFUDC RATE	6.50%

CONSTRUCTION CASH	BOOK BASIS	TAX BASIS
EQUITY AFUDC	106	106
DEBT AFUDC	6	3
CPI	3	7
TOTAL	115	113

\* Column not specified in workbook

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

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (C/KWh)	(5) AVOIDED MARGINAL FUEL COST (C/KWh)	(6)* INCREASED MARGINAL FUEL COST (C/KWh)	(7) REPLACEMENT FUEL COST (C/KWh)	(8) PROGRAM kW EFFECTIVENESS FACTOR	(9) PROGRAM kWh EFFECTIVENESS FACTOR
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	28	28	4.45	6.37	4.95	0.00	1.00	1.00
2016	28	28	4.92	9.02	5.52	0.00	1.00	1.00
2017	28	28	4.27	5.99	4.58	0.00	0.99	0.99
2018	28	28	5.27	7.87	5.70	0.00	0.99	0.99
2019	28	28	5.38	8.00	5.81	5.05	0.98	0.98
2020	28	28	5.65	8.67	6.12	5.04	0.98	0.98
2021	28	28	5.65	8.43	6.11	5.12	0.97	0.97
2022	28	28	5.60	7.93	6.02	5.09	0.97	0.97
2023	28	28	5.60	7.47	5.98	5.20	0.96	0.96
2024	28	28	5.81	7.58	6.18	5.51	0.96	0.96
2025	28	28	5.98	7.93	6.35	5.65	0.95	0.95
2026	28	28	5.73	7.27	6.04	5.77	0.95	0.95
2027	28	28	6.01	7.94	6.37	6.08	0.94	0.94
2028	28	28	6.07	7.55	6.41	6.19	0.94	0.94
2029	28	28	6.28	7.88	6.65	6.49	0.93	0.93
2030	28	28	6.34	7.74	6.65	6.45	0.93	0.93
2031	28	28	6.57	8.06	6.86	6.72	0.92	0.92
2032	28	28	6.62	7.75	6.85	6.76	0.92	0.92
2033	28	28	6.97	8.43	7.21	7.11	0.91	0.91
2034	28	28	7.05	8.19	7.27	7.29	0.91	0.91
2035	28	28	7.19	8.31	7.39	7.50	0.90	0.90
2036	28	28	7.47	8.71	7.67	7.70	0.90	0.90
2037	28	28	7.68	9.05	7.89	8.02	0.90	0.90
2038	28	28	7.94	9.30	8.15	8.33	0.89	0.89
2039	28	28	8.12	9.43	8.32	8.53	0.89	0.89
2040	28	28	8.35	9.68	8.56	8.87	1.00	1.00
2041	28	28	8.67	9.97	8.91	9.13	1.00	1.00
2042	28	28	8.99	10.45	9.25	9.47	1.00	1.00
2043	28	28	9.27	10.70	9.54	9.80	1.00	1.00
2044	28	28	9.60	11.12	9.87	10.25	1.00	1.00
2045	28	28	9.94	11.45	10.21	10.58	1.00	1.00
2046	28	28	10.25	11.68	10.50	10.92	1.00	1.00
2047	28	28	10.57	12.06	10.84	11.29	1.00	1.00
2048	28	28	11.00	12.68	11.29	11.78	1.00	1.00
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.







A VOIDED GENERATING EMISSION IMPACT  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Photovoltaic for Schools

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2014	0	0	0	0	0
2015	0	0	0	0	0
2016	0	0	0	0	0
2017	0	0	0	0	0
2018	0	0	0	0	0
2019	0	0	0	0	0
2020	0	0	0	0	0
2021	0	0	0	0	0
2022	0	0	0	0	0
2023	0	0	0	0	0
2024	0	0	0	0	0
2025	0	0	0	0	0
2026	0	0	0	0	0
2027	0	0	0	0	0
2028	0	0	0	0	0
2029	0	0	0	0	0
2030	0	0	0	0	0
2031	0	0	0	0	0
2032	0	0	0	0	0
2033	0	0	0	0	0
2034	0	0	0	0	0
2035	0	0	0	0	0
2036	0	0	0	0	0
2037	0	0	0	0	0
2038	0	0	0	0	0
2039	0	0	0	0	0
2040	0	0	0	0	0
2041	0	0	0	0	0
2042	0	0	0	0	0
2043	0	0	0	0	0
2044	0	0	0	0	0
2045	0	0	0	0	0
2046	0	0	0	0	0
2047	0	0	0	0	0
2048	0	0	0	0	0
NOM	1	1	0	0	0
NPV	0	0	0	0	0





RATE IMPACT TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Photovoltaic for Schools

(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)
2014	0	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	168	369	12	0	549	13	0	0	0	13	(536)	(499)
2016	0	0	706	24	0	730	37	4	0	0	42	(688)	(1,094)
2017	0	0	664	24	0	688	24	4	0	0	28	(660)	(1,624)
2018	0	0	622	26	0	648	31	4	0	0	36	(613)	(2,082)
2019	0	0	581	28	0	609	53	4	0	0	57	(552)	(2,466)
2020	0	0	274	29	0	303	52	4	0	0	56	(247)	(2,626)
2021	0	0	0	29	0	29	50	4	0	0	54	25	(2,611)
2022	0	0	0	30	0	30	49	4	0	0	53	23	(2,598)
2023	0	0	0	30	0	30	47	4	0	0	51	21	(2,587)
2024	0	0	0	30	0	30	46	4	0	0	50	20	(2,577)
2025	0	0	0	30	0	30	48	3	0	0	51	21	(2,568)
2026	0	0	0	30	0	30	45	3	0	0	49	18	(2,560)
2027	0	0	0	31	0	31	47	3	0	0	50	19	(2,553)
2028	0	0	0	31	0	31	46	3	0	0	49	18	(2,546)
2029	0	0	0	32	0	32	46	3	0	0	49	18	(2,540)
2030	0	0	0	32	0	32	46	3	0	0	49	17	(2,535)
2031	0	0	0	32	0	32	46	3	0	0	49	17	(2,530)
2032	0	0	0	33	0	33	46	3	0	0	49	15	(2,526)
2033	0	0	0	35	0	35	47	3	0	0	50	15	(2,522)
2034	0	0	0	36	0	36	46	3	0	0	49	13	(2,519)
2035	0	0	0	37	0	37	47	3	0	0	49	12	(2,517)
2036	0	0	0	39	0	39	48	3	0	0	50	12	(2,514)
2037	0	0	0	39	0	39	48	3	0	0	51	12	(2,512)
2038	0	0	0	40	0	40	49	3	0	0	51	11	(2,510)
2039	0	0	0	41	0	41	49	3	0	0	52	11	(2,508)
2040	0	0	3,216	0	0	0	57	3	0	0	59	59	(2,499)
2041	0	0	2,534	0	0	0	58	3	0	0	60	60	(2,491)
2042	0	0	0	0	0	0	60	3	0	0	63	63	(2,483)
2043	0	0	0	0	0	0	61	3	0	0	64	64	(2,475)
2044	0	0	0	0	0	0	62	3	0	0	65	65	(2,467)
2045	0	0	0	0	0	0	64	3	0	0	66	66	(2,461)
2046	0	0	0	0	0	0	65	2	0	0	68	68	(2,454)
2047	0	0	0	0	0	0	66	2	0	0	69	69	(2,448)
2048	0	0	0	0	0	0	69	2	0	0	71	71	(2,442)
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
2061	0	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	0
2063	0	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	0
2065	0	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	0
2067	0	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	0
2069	0	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	0
2071	0	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	0
2073	0	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	0
2075	0	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	0
2077	0	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	0
2079	0	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	0
2081	0	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	0
2083	0	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	0
2085	0	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	0
2087	0	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	0
2089	0	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	0
2091	0	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	0
2093	0	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	0
2095	0	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	0
2097	0	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	0
2099	0	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	0
NOM.	0	168	3,216	779	0	4,164	1,669	101	0	0	1,771	(2,393)	(2,393)
NPV	0	156	2,534	315	0	3,005	525	39	0	0	564	(2,442)	(2,442)

Discount Rate  
Benefit/Cost Ratio (Col(12) / Col(7)) : 7.54  
0.19 %

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER kW REDUCTION AT METER .....	0.16 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	0.20756 kW
(3) kW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	1,282.83 kWh
(5) kWh LINE LOSS PERCENTAGE .....	5.76 %
(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 .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

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 .....	7.54 %
(11) UTILITY AFDUC RATE .....	6.50 %
(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 .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	146.90 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	24.85 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	58.35 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	5.53 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	2.34 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

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

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

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)
2014	0	0	0	0	0	0	0	0	0	0
2015	220	900	0	1,120	52	0	7,057	0	0	7,057
2016	0	0	0	0	105	0	0	0	0	0
2017	0	0	0	0	108	0	0	0	0	0
2018	0	0	0	0	115	0	0	0	0	0
2019	0	0	0	0	122	0	0	0	0	0
2020	0	0	0	0	125	0	0	0	0	0
2021	0	0	0	0	128	0	0	0	0	0
2022	0	0	0	0	134	0	0	0	0	0
2023	0	0	0	0	132	0	0	0	0	0
2024	0	0	0	0	133	0	0	0	0	0
2025	0	0	0	0	133	0	0	0	0	0
2026	0	0	0	0	134	0	0	0	0	0
2027	0	0	0	0	136	0	0	0	0	0
2028	0	0	0	0	137	0	0	0	0	0
2029	0	0	0	0	139	0	0	0	0	0
2030	0	0	0	0	141	0	0	0	0	0
2031	0	0	0	0	143	0	0	0	0	0
2032	0	0	0	0	148	0	0	0	0	0
2033	0	0	0	0	155	0	0	0	0	0
2034	0	0	0	0	159	0	0	0	0	0
2035	0	0	0	0	0	0	0	0	0	0
2036	0	0	0	0	0	0	0	0	0	0
2037	0	0	0	0	0	0	0	0	0	0
2038	0	0	0	0	0	0	0	0	0	0
2039	0	0	0	0	0	0	0	0	0	0
2040	0	0	0	0	0	0	0	0	0	0
2041	0	0	0	0	0	0	0	0	0	0
2042	0	0	0	0	0	0	0	0	0	0
2043	0	0	0	0	0	0	0	0	0	0
2044	0	0	0	0	0	0	0	0	0	0
2045	0	0	0	0	0	0	0	0	0	0
2046	0	0	0	0	0	0	0	0	0	0
2047	0	0	0	0	0	0	0	0	0	0
2048	0	0	0	0	0	0	0	0	0	0
NOM	220	900	0	1,120	2,579	0	7,057	0	0	7,057
NPV	205	837	0	1,042	1,229	0	6,563	0	0	6,563

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



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

ESCALATION RATES

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Charge (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	9.81	0.00
2015	2.50	2.50	2.50	0.00	0.00%	3.00	9.48	0.00
2016	2.50	2.50	2.50	0.00	0.00%	3.00	9.64	0.00
2017	2.50	2.50	2.50	0.00	0.00%	3.00	9.96	0.00
2018	2.50	2.50	2.50	0.00	0.00%	3.00	10.53	0.00
2019	2.50	2.50	2.50	3.85	55.85%	3.00	11.24	0.00
2020	2.50	2.50	2.50	4.03	95.39%	3.00	11.46	0.00
2021	2.50	2.50	2.50	4.10	95.40%	3.00	11.75	0.00
2022	2.50	2.50	2.50	4.23	95.37%	3.00	12.28	0.00
2023	2.50	2.50	2.50	4.42	94.99%	3.00	12.12	0.00
2024	2.50	2.50	2.50	4.69	94.40%	3.00	12.26	0.00
2025	2.50	2.50	2.50	4.88	93.42%	3.00	12.23	0.00
2026	2.50	2.50	2.50	5.08	88.94%	3.00	12.31	0.00
2027	2.50	2.50	2.50	5.31	87.68%	3.00	12.47	0.00
2028	2.50	2.50	2.50	5.59	87.36%	3.00	12.63	0.00
2029	2.50	2.50	2.50	5.79	87.30%	3.00	12.82	0.00
2030	2.50	2.50	2.50	5.88	88.13%	3.00	12.98	0.00
2031	2.50	2.50	2.50	6.13	88.44%	3.00	13.17	0.00
2032	2.50	2.50	2.50	6.32	89.14%	3.00	13.58	0.00
2033	2.50	2.50	2.50	6.59	89.64%	3.00	14.25	0.00
2034	2.50	2.50	2.50	6.84	89.85%	3.00	14.60	0.00
2035	2.50	2.50	2.50	7.09	89.65%	3.00	14.85	0.00
2036	2.50	2.50	2.50	7.31	90.14%	3.00	15.45	0.00
2037	2.50	2.50	2.50	7.63	89.91%	3.00	15.76	0.00
2038	2.50	2.50	2.50	7.92	89.91%	3.00	16.09	0.00
2039	2.50	2.50	2.50	8.22	89.91%	3.00	16.40	0.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	16.68	0.00
2041	2.50	2.50	2.50	8.79	89.82%	3.00	17.05	0.00
2042	2.50	2.50	2.50	9.18	89.85%	3.00	17.40	0.00
2043	2.50	2.50	2.50	9.48	89.84%	3.00	17.98	0.00
2044	2.50	2.50	2.50	9.88	89.93%	3.00	18.43	0.00
2045	2.50	2.50	2.50	10.25	89.91%	3.00	18.90	0.00
2046	2.50	2.50	2.50	10.63	89.91%	3.00	19.39	0.00
2047	2.50	2.50	2.50	10.97	89.83%	3.00	19.90	0.00
2048	2.50	2.50	2.50	11.44	89.92%	3.00	20.42	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	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	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	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	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
	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%	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00

Column (1) used for:  
Utility Cost  
Customer Equipment  
Supply Costs

Column (6) used for:  
Gen. Train. & Dist Cost

Column (3) used for:  
Customer O&M Cost  
Generator Fixed O&M  
T&D Fixed O&M  
Generator Variable O&M

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

YEAR	(2) BEG-YEAR RATE BASE \$(000)	(3) DEBT \$(000)	(4) PREFERRED STOCK \$(000)	(5) COMMON EQUITY \$(000)	(6) INCOME TAXES \$(000)	(7) PROPERTY TAX \$(000)	(8) PROPERTY INSURANCE \$(000)	(9) DEPREC. \$(000)	(10) DEFERRED TAXES \$(000)	(11) TOTAL FIXED CHARGES \$(000)	(12) PRESENT WORTH FIXED CHARGES \$(000)	(13) CUMULATIVE PW FIXED CHARGES \$(000)	(14) REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	175	4	0	11	7	3	0	6	0	31	31	31	173
2020	169	4	0	11	4	3	0	6	3	30	28	58	177
2021	161	3	0	10	4	3	0	6	2	29	25	83	182
2022	153	3	0	10	4	3	0	6	2	27	22	105	186
2023	145	3	0	9	4	3	0	6	2	26	20	125	191
2024	138	3	0	9	4	3	0	6	1	25	18	143	195
2025	130	3	0	8	4	2	0	6	1	24	16	158	200
2026	124	3	0	8	4	2	0	6	1	24	14	172	205
2027	117	2	0	7	4	2	0	6	1	23	13	185	210
2028	110	2	0	7	4	2	0	6	1	22	11	196	216
2029	104	2	0	6	3	2	0	6	1	21	10	206	221
2030	97	2	0	6	3	2	0	6	1	20	9	215	227
2031	91	2	0	6	3	2	0	6	1	19	8	223	232
2032	84	2	0	5	3	2	0	6	1	18	7	230	238
2033	77	2	0	5	2	2	0	6	1	17	6	237	244
2034	71	1	0	4	2	1	0	6	1	16	5	242	250
2035	64	1	0	4	2	1	0	6	1	15	5	247	256
2036	58	1	0	4	2	1	0	6	1	14	4	251	263
2037	51	1	0	3	1	1	0	6	1	14	4	255	269
2038	45	1	0	3	1	1	0	6	1	13	3	258	276
2039	38	1	0	2	2	1	0	6	(1)	12	3	261	283
2040	33	1	0	2	4	1	0	6	(2)	11	2	263	290
2041	29	1	0	2	3	1	0	6	(2)	10	2	265	297
2042	26	1	0	2	3	1	0	6	(2)	10	2	267	305
2043	22	0	0	1	3	1	0	6	(2)	9	2	269	312
2044	18	0	0	1	3	0	0	6	(2)	9	1	270	320
2045	15	0	0	1	3	0	0	6	(2)	8	1	271	328
2046	11	0	0	1	3	0	0	6	(2)	8	1	272	337
2047	7	0	0	0	3	0	0	6	(2)	7	1	273	345
2048	4	0	0	0	2	0	0	6	(2)	7	1	274	354

IN SERVICE COST (\$000)	173
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECT. TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642

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 SCHEDULE	DEPRECIATION	TAX DEPRECIATION	ACCUMULATED DEPRECIATION	BOOK DEPRECIATION	ACCUMULATED DEPRECIATION	BOOK DEPRECIATION	DEFERRED TAX DEPRECIATION	TOTAL EQUITY AFUDC	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE	SALVAGE TAX RATE	ANNUAL DEFERRED TAX (9)-(12)+(13)	ACCUMULATED DEFERRED TAX \$ (000)
2019	3.75%	6	6	6	6	5	5	0	9	0	0	0	0	(2)
2020	7.22%	12	19	6	12	5	11	3	9	0	0	0	3	1
2021	6.68%	11	30	6	17	5	16	2	9	0	0	0	2	3
2022	6.18%	11	40	6	23	5	22	2	9	0	0	0	2	5
2023	5.71%	10	50	6	29	5	27	2	9	0	0	0	2	8
2024	5.29%	9	59	6	35	5	33	1	9	0	0	0	1	9
2025	4.89%	8	67	6	40	5	38	1	9	0	0	0	1	10
2026	4.52%	8	75	6	46	5	44	1	9	0	0	0	1	11
2027	4.46%	8	83	6	52	5	49	1	9	0	0	0	1	11
2028	4.46%	8	90	6	58	5	55	1	9	0	0	0	1	11
2029	4.46%	8	98	6	63	5	60	1	9	0	0	0	1	12
2030	4.46%	8	106	6	69	5	65	1	9	0	0	0	1	13
2031	4.46%	8	113	6	75	5	71	1	9	0	0	0	1	14
2032	4.46%	8	121	6	81	5	76	1	9	0	0	0	1	15
2033	4.46%	8	128	6	86	5	82	1	9	0	0	0	1	15
2034	4.46%	8	136	6	92	5	87	1	9	0	0	0	1	16
2035	4.46%	8	143	6	98	5	93	1	9	0	0	0	1	17
2036	4.46%	8	151	6	104	5	98	1	9	0	0	0	1	18
2037	4.46%	8	159	6	109	5	104	1	9	0	0	0	1	19
2038	4.46%	8	166	6	115	5	109	1	9	0	0	0	1	20
2039	2.23%	4	170	6	121	5	115	(1)	9	0	0	0	(1)	19
2040	0.00%	0	170	6	127	5	120	(2)	9	0	0	0	(2)	17
2041	0.00%	0	170	6	132	5	125	(2)	9	0	0	0	(2)	15
2042	0.00%	0	170	6	138	5	131	(2)	9	0	0	0	(2)	13
2043	0.00%	0	170	6	144	5	136	(2)	9	0	0	0	(2)	11
2044	0.00%	0	170	6	150	5	142	(2)	9	0	0	0	(2)	8
2045	0.00%	0	170	6	155	5	147	(2)	9	0	0	0	(2)	6
2046	0.00%	0	170	6	161	5	153	(2)	9	0	0	0	(2)	4
2047	0.00%	0	170	6	167	5	158	(2)	9	0	0	0	(2)	2
2048	0.00%	0	170	6	173	5	164	(2)	9	0	0	0	(2)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(2)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	9
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION  
PROGRAM METHOD SELECTED: REV\_REQ  
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)	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%	6	0	167	6	(2)	175	169	172
2020	7.22%	12	3	161	12	1	169	161	165
2021	6.68%	11	2	155	17	3	161	153	157
2022	6.18%	11	2	150	23	5	153	145	149
2023	5.71%	10	2	144	29	6	145	138	141
2024	5.29%	9	1	138	35	8	138	130	134
2025	4.89%	8	1	132	40	9	130	124	127
2026	4.52%	8	1	127	46	10	124	117	120
2027	4.46%	8	1	121	52	11	117	110	114
2028	4.46%	8	1	115	58	11	110	104	107
2029	4.46%	8	1	109	63	12	104	97	101
2030	4.46%	8	1	104	69	13	97	91	94
2031	4.46%	8	1	98	75	14	91	84	87
2032	4.46%	8	1	92	81	15	84	77	81
2033	4.46%	8	1	86	86	15	77	71	74
2034	4.46%	8	1	81	92	16	71	64	68
2035	4.46%	8	1	75	98	17	64	58	61
2036	4.46%	8	1	69	104	18	58	51	54
2037	4.46%	8	1	63	109	19	51	45	48
2038	4.46%	8	1	58	115	20	45	38	41
2039	2.23%	4	(1)	52	121	19	38	33	35
2040	0.00%	0	(2)	46	127	17	33	29	31
2041	0.00%	0	(2)	40	132	15	29	26	27
2042	0.00%	0	(2)	35	138	13	26	22	24
2043	0.00%	0	(2)	29	144	11	22	18	20
2044	0.00%	0	(2)	23	150	8	18	15	16
2045	0.00%	0	(2)	17	155	6	15	11	13
2046	0.00%	0	(2)	12	161	4	11	7	9
2047	0.00%	0	(2)	6	167	2	7	4	5
2048	0.00%	0	(2)	0	173	0	4	0	2

\* 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)	(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)	
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.41	0.01	0.01	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86	
2015	-4	3.00%	1.030	0.28%	2.26	1.96	1.96	0.05	0.05	0.13	0.16	0.10	0.12	(0.02)	(0.03)	2.39	3.24	
2016	-3	3.00%	1.061	8.69%	71.58	38.88	71.58	0.81	0.81	2.54	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36	
2017	-2	3.00%	1.093	53.83%	456.61	302.97	302.97	6.76	6.76	19.90	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87	
2018	-1	3.00%	1.126	37.09%	324.11	693.33	693.33	20.74	20.74	46.81	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80	
100.00%											855.39							

	20.74	69.41	54.39	(12.98)	924.80
IN SERVICE YEAR PLANT COSTS AFUDC RATE	2019 776.3262845 6.50%	CONSTRUCTION CASH EQUITY AFUDC DEBT AFUDC CPI	BOOK BASIS FOR DEF TAX 160 4 173	BOOK BASIS FOR DEF TAX 160 4 164	TAX BASIS 160 10 170

\* Column not specified in workbook

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

(1) YEAR	(2) CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	(3) ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	(4) UTILITY AVERAGE SYSTEM FUEL COST (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
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	900	900	4.45	4.60	6.89	0.00	1.00	1.00
2016	900	900	4.92	5.10	11.39	0.00	1.00	1.00
2017	900	900	4.27	4.37	8.14	0.00	1.00	1.00
2018	900	900	5.27	5.40	12.01	0.00	1.00	1.00
2019	900	900	5.38	5.51	12.35	5.05	1.00	1.00
2020	900	900	5.65	5.79	13.46	5.04	1.00	1.00
2021	900	900	5.65	5.79	12.71	5.12	1.00	1.00
2022	900	900	5.60	5.73	11.70	5.09	1.00	1.00
2023	900	900	5.60	5.72	10.37	5.20	1.00	1.00
2024	900	900	5.81	5.93	10.21	5.51	1.00	1.00
2025	900	900	5.98	6.10	10.79	5.65	1.00	1.00
2026	900	900	5.73	5.84	9.44	5.77	1.00	1.00
2027	900	900	6.01	6.14	10.63	6.08	1.00	1.00
2028	900	900	6.07	6.19	9.46	6.19	1.00	1.00
2029	900	900	6.28	6.41	9.58	6.49	1.00	1.00
2030	900	900	6.34	6.46	9.44	6.45	1.00	1.00
2031	900	900	6.57	6.67	9.82	6.72	1.00	1.00
2032	900	900	6.62	6.70	8.66	6.76	1.00	1.00
2033	900	900	6.97	7.05	10.12	7.11	1.00	1.00
2034	900	900	7.05	7.12	9.13	7.29	1.00	1.00
2035	900	900	7.19	7.26	8.94	7.50	1.00	1.00
2036	900	900	7.47	7.53	9.57	7.70	1.00	1.00
2037	900	900	7.68	7.76	10.00	8.02	1.00	1.00
2038	900	900	7.94	8.01	10.12	8.33	1.00	1.00
2039	900	900	8.12	8.19	10.07	8.53	1.00	1.00
2040	900	900	8.35	8.41	10.38	8.87	1.00	1.00
2041	900	900	8.67	8.73	10.81	9.13	1.00	1.00
2042	900	900	8.99	9.06	11.49	9.47	1.00	1.00
2043	900	900	9.27	9.34	11.64	9.80	1.00	1.00
2044	900	900	9.60	9.68	12.21	10.25	1.00	1.00
2045	900	900	9.94	10.02	12.36	10.58	1.00	1.00
2046	900	900	10.25	10.32	12.32	10.92	1.00	1.00
2047	900	900	10.57	10.65	12.88	11.29	1.00	1.00
2048	900	900	11.00	11.08	13.83	11.78	1.00	1.00
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.







A VOIDED GENERATING EMISSION IMPACT  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Residential Solar Water Heating

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2014	0	0	0	0	0
2015	0	0	0	0	0
2016	0	0	0	0	0
2017	0	0	0	0	0
2018	0	0	0	0	0
2019	0	0	0	0	0
2020	0	0	0	0	0
2021	0	0	0	0	0
2022	0	0	0	0	0
2023	0	0	0	0	0
2024	0	0	0	0	0
2025	0	0	0	0	0
2026	0	0	0	0	0
2027	0	0	0	0	0
2028	0	0	0	0	0
2029	0	0	0	0	0
2030	0	0	0	0	0
2031	0	0	0	0	0
2032	0	0	0	0	0
2033	0	0	0	0	0
2034	0	0	0	0	0
2035	0	0	0	0	0
2036	0	0	0	0	0
2037	0	0	0	0	0
2038	0	0	0	0	0
2039	0	0	0	0	0
2040	0	0	0	0	0
2041	0	0	0	0	0
2042	0	0	0	0	0
2043	0	0	0	0	0
2044	0	0	0	0	0
2045	0	0	0	0	0
2046	0	0	0	0	0
2047	0	0	0	0	0
2048	0	0	0	0	0
NOM	1	2	1	0	1
NPV	0	0	0	0	0



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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
YEAR	SAVINGS IN PARTICIPANTS BILLS \$(000)	TAX CREDITS \$(000)	UTILITY REBATES \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	CUSTOMER EQUIPMENT COSTS \$(000)	CUSTOMER O&M COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2014	0	0	0	0	0	0	0	0	0	0	0
2015	68	1,840	900	0	2,808	7,057	0	0	7,057	(4,249)	(3,951)
2016	0	0	0	0	138	0	0	0	0	138	(3,832)
2017	143	0	0	0	143	0	0	0	0	143	(3,717)
2018	151	0	0	0	151	0	0	0	0	151	(3,604)
2019	161	0	0	0	161	0	0	0	0	161	(3,492)
2020	164	0	0	0	164	0	0	0	0	164	(3,386)
2021	168	0	0	0	168	0	0	0	0	168	(3,285)
2022	176	0	0	0	176	0	0	0	0	176	(3,187)
2023	173	0	0	0	173	0	0	0	0	173	(3,097)
2024	176	0	0	0	176	0	0	0	0	176	(3,012)
2025	175	0	0	0	175	0	0	0	0	175	(2,933)
2026	176	0	0	0	176	0	0	0	0	176	(2,859)
2027	179	0	0	0	179	0	0	0	0	179	(2,790)
2028	181	0	0	0	181	0	0	0	0	181	(2,724)
2029	184	0	0	0	184	0	0	0	0	184	(2,665)
2030	186	0	0	0	186	0	0	0	0	186	(2,605)
2031	189	0	0	0	189	0	0	0	0	189	(2,550)
2032	194	0	0	0	194	0	0	0	0	194	(2,497)
2033	204	0	0	0	204	0	0	0	0	204	(2,446)
2034	209	0	0	0	209	0	0	0	0	209	(2,397)
2035	0	0	0	0	0	0	0	0	0	0	(2,397)
2036	0	0	0	0	0	0	0	0	0	0	(2,397)
2037	0	0	0	0	0	0	0	0	0	0	(2,397)
2038	0	0	0	0	0	0	0	0	0	0	(2,397)
2039	0	0	0	0	0	0	0	0	0	0	(2,397)
2040	0	0	0	0	0	0	0	0	0	0	(2,397)
2041	0	0	0	0	0	0	0	0	0	0	(2,397)
2042	0	0	0	0	0	0	0	0	0	0	(2,397)
2043	0	0	0	0	0	0	0	0	0	0	(2,397)
2044	0	0	0	0	0	0	0	0	0	0	(2,397)
2045	0	0	0	0	0	0	0	0	0	0	(2,397)
2046	0	0	0	0	0	0	0	0	0	0	(2,397)
2047	0	0	0	0	0	0	0	0	0	0	(2,397)
2048	0	0	0	0	0	0	0	0	0	0	(2,397)
NOM	3,393	1,840	900	0	6,134	7,057	0	0	7,057	(923)	
NPV	1,617	1,711	837	0	4,166	6,563	0	0	6,563	(2,397)	

In Service of Gen Unit:  
Discount Rate: 2019 7.54 %  
Benefit/Cost Ratio ( Col(6) / Col(10) ) 0.63 %

RATE IMPACT TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Solar Water Heating

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(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)
2014	0	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	220	900	52	0	1,172	27	0	0	0	27	(1,145)	(1,065)
2016	0	0	0	105	0	105	60	7	0	0	66	(39)	(1,098)
2017	0	0	0	108	0	108	51	6	0	0	57	(51)	(1,139)
2018	0	0	0	115	0	115	63	6	0	0	69	(45)	(1,173)
2019	0	0	0	122	0	122	97	6	0	0	103	(19)	(1,187)
2020	0	0	0	125	0	125	95	6	0	0	101	(24)	(1,202)
2021	0	0	0	128	0	128	94	6	0	0	100	(28)	(1,219)
2022	0	0	0	134	0	134	95	6	0	0	101	(33)	(1,237)
2023	0	0	0	132	0	132	96	5	0	0	101	(31)	(1,253)
2024	0	0	0	133	0	133	97	5	0	0	102	(31)	(1,268)
2025	0	0	0	133	0	133	99	5	0	0	104	(29)	(1,281)
2026	0	0	0	134	0	134	97	5	0	0	102	(32)	(1,294)
2027	0	0	0	136	0	136	99	5	0	0	104	(32)	(1,307)
2028	0	0	0	137	0	137	102	5	0	0	106	(31)	(1,318)
2029	0	0	0	139	0	139	102	5	0	0	107	(32)	(1,329)
2030	0	0	0	141	0	141	104	5	0	0	109	(32)	(1,339)
2031	0	0	0	143	0	143	106	4	0	0	110	(33)	(1,348)
2032	0	0	0	148	0	148	108	4	0	0	112	(36)	(1,358)
2033	0	0	0	155	0	155	110	4	0	0	114	(41)	(1,368)
2034	0	0	0	159	0	159	111	4	0	0	116	(43)	(1,378)
2035	0	0	0	0	0	0	113	4	0	0	117	(43)	(1,378)
2036	0	0	0	0	0	0	116	4	0	0	120	(43)	(1,353)
2037	0	0	0	0	0	0	118	4	0	0	123	(43)	(1,328)
2038	0	0	0	0	0	0	121	4	0	0	125	(43)	(1,305)
2039	0	0	0	0	0	0	124	4	0	0	128	(43)	(1,283)
2040	0	0	0	0	0	0	126	4	0	0	130	(43)	(1,263)
2041	0	0	0	0	0	0	130	4	0	0	134	(43)	(1,243)
2042	0	0	0	0	0	0	134	4	0	0	138	(43)	(1,224)
2043	0	0	0	0	0	0	137	4	0	0	141	(43)	(1,206)
2044	0	0	0	0	0	0	140	4	0	0	144	(43)	(1,189)
2045	0	0	0	0	0	0	145	4	0	0	149	(43)	(1,173)
2046	0	0	0	0	0	0	149	4	0	0	153	(43)	(1,157)
2047	0	0	0	0	0	0	152	4	0	0	156	(43)	(1,142)
2048	0	0	0	0	0	0	157	4	0	0	161	(43)	(1,128)
NOM	0	220	900	2,579	0	3,699	3,675	155	0	1	3,831	132	0
NPV	0	205	837	1,229	0	2,271	1,097	59	0	0	1,156	(1,114)	(1,114)

Discount Rate Benefit/Cost Ratio (Col(12) / Col(7)) : 7.54 % 0.51

**I. PROGRAM DEMAND SAVINGS & LINE LOSSES**

(1) CUSTOMER kW REDUCTION AT METER .....	0.16 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	0.20756 kW
(3) kW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	1,282.83 kWh
(5) kWh LINE LOSS PERCENTAGE .....	5.76 %
(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 .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

**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 .....	7.54 %
(11) UTILITY AFUDC RATE .....	6.50 %
(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 .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	146.90 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	24.85 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	58.35 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	5.53 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	2.34 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

**V. NON-FUEL ENERGY AND DEMAND CHARGES**

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

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

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)
2014	0	0	0	0	0	0	0	0	0	0
2015	78	523	0	601	7	0	523	0	0	523
2016	0	0	0	0	14	0	0	0	0	0
2017	0	0	0	0	14	0	0	0	0	0
2018	0	0	0	0	15	0	0	0	0	0
2019	0	0	0	0	16	0	0	0	0	0
2020	0	0	0	0	17	0	0	0	0	0
2021	0	0	0	0	18	0	0	0	0	0
2022	0	0	0	0	18	0	0	0	0	0
2023	0	0	0	0	18	0	0	0	0	0
2024	0	0	0	0	18	0	0	0	0	0
2025	0	0	0	0	18	0	0	0	0	0
2026	0	0	0	0	18	0	0	0	0	0
2027	0	0	0	0	18	0	0	0	0	0
2028	0	0	0	0	18	0	0	0	0	0
2029	0	0	0	0	19	0	0	0	0	0
2030	0	0	0	0	19	0	0	0	0	0
2031	0	0	0	0	19	0	0	0	0	0
2032	0	0	0	0	20	0	0	0	0	0
2033	0	0	0	0	21	0	0	0	0	0
2034	0	0	0	0	21	0	0	0	0	0
2035	0	0	0	0	0	0	0	0	0	0
2036	0	0	0	0	0	0	0	0	0	0
2037	0	0	0	0	0	0	0	0	0	0
2038	0	0	0	0	0	0	0	0	0	0
2039	0	0	0	0	0	0	0	0	0	0
2040	0	0	0	0	0	0	0	0	0	0
2041	0	0	0	0	0	0	0	0	0	0
2042	0	0	0	0	0	0	0	0	0	0
2043	0	0	0	0	0	0	0	0	0	0
2044	0	0	0	0	0	0	0	0	0	0
2045	0	0	0	0	0	0	0	0	0	0
2046	0	0	0	0	0	0	0	0	0	0
2047	0	0	0	0	0	0	0	0	0	0
2048	0	0	0	0	0	0	0	0	0	0
NOM	78	523	0	601	344	0	523	0	0	523
NPV	73	486	0	559	164	0	486	0	0	486

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

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

ESCALATION RATES

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Charge (cents/kwh)	(8) Demand Charge (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	9.81	0.00
2015	2.50	2.50	2.50	0.00	0.00%	3.00	9.48	0.00
2016	2.50	2.50	2.50	0.00	0.00%	3.00	9.64	0.00
2017	2.50	2.50	2.50	0.00	0.00%	3.00	9.96	0.00
2018	2.50	2.50	2.50	0.00	0.00%	3.00	10.53	0.00
2019	2.50	2.50	2.50	3.85	55.85%	3.00	11.24	0.00
2020	2.50	2.50	2.50	4.03	95.39%	3.00	11.46	0.00
2021	2.50	2.50	2.50	4.10	95.40%	3.00	11.75	0.00
2022	2.50	2.50	2.50	4.23	95.37%	3.00	12.28	0.00
2023	2.50	2.50	2.50	4.42	94.99%	3.00	12.12	0.00
2024	2.50	2.50	2.50	4.69	94.40%	3.00	12.26	0.00
2025	2.50	2.50	2.50	4.88	93.42%	3.00	12.23	0.00
2026	2.50	2.50	2.50	5.08	88.94%	3.00	12.31	0.00
2027	2.50	2.50	2.50	5.31	87.68%	3.00	12.47	0.00
2028	2.50	2.50	2.50	5.59	87.36%	3.00	12.63	0.00
2029	2.50	2.50	2.50	5.79	87.30%	3.00	12.82	0.00
2030	2.50	2.50	2.50	5.88	88.13%	3.00	12.98	0.00
2031	2.50	2.50	2.50	6.13	88.44%	3.00	13.17	0.00
2032	2.50	2.50	2.50	6.32	89.14%	3.00	13.58	0.00
2033	2.50	2.50	2.50	6.59	89.64%	3.00	14.25	0.00
2034	2.50	2.50	2.50	6.84	89.85%	3.00	14.60	0.00
2035	2.50	2.50	2.50	7.09	89.65%	3.00	14.85	0.00
2036	2.50	2.50	2.50	7.31	90.14%	3.00	15.45	0.00
2037	2.50	2.50	2.50	7.63	89.91%	3.00	15.76	0.00
2038	2.50	2.50	2.50	7.92	89.91%	3.00	16.09	0.00
2039	2.50	2.50	2.50	8.22	89.91%	3.00	16.40	0.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	16.68	0.00
2041	2.50	2.50	2.50	8.79	89.82%	3.00	17.05	0.00
2042	2.50	2.50	2.50	9.18	89.85%	3.00	17.40	0.00
2043	2.50	2.50	2.50	9.48	89.84%	3.00	17.98	0.00
2044	2.50	2.50	2.50	9.88	89.93%	3.00	18.43	0.00
2045	2.50	2.50	2.50	10.25	89.91%	3.00	18.90	0.00
2046	2.50	2.50	2.50	10.63	89.91%	3.00	19.39	0.00
2047	2.50	2.50	2.50	10.97	89.83%	3.00	19.90	0.00
2048	2.50	2.50	2.50	11.44	89.92%	3.00	20.42	0.00

Column (1) used for:

Utility Cost  
Customer Equipment  
Supply Costs

Column (6) used for:

Gen. Train. & Dist Cost

Column (3) used for:

Customer O&M Cost  
Generator Fixed O&M  
T&D Fixed O&M  
Generator Variable O&M

CALCULATION OF GEN K-FACTOR  
PROGRAM METHOD: SELECTED REV\_REQ  
PROGRAM NAME: Residential Solar Water Heating (LINC)

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. TAX \$(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	23	0	0	1	1	0	0	1	0	4	4	4	23
2020	23	0	0	1	1	0	0	1	0	4	4	8	24
2021	21	0	0	1	1	0	0	1	0	4	3	11	24
2022	20	0	0	1	1	0	0	1	0	4	3	14	25
2023	19	0	0	1	1	0	0	1	0	4	3	17	25
2024	18	0	0	1	1	0	0	1	0	3	2	19	26
2025	17	0	0	1	1	0	0	1	0	3	2	21	27
2026	16	0	0	1	1	0	0	1	0	3	2	23	27
2027	16	0	0	1	1	0	0	1	0	3	2	25	28
2028	15	0	0	1	1	0	0	1	0	3	2	26	29
2029	14	0	0	1	1	0	0	1	0	3	1	28	29
2030	13	0	0	1	1	0	0	1	0	3	1	29	30
2031	12	0	0	1	1	0	0	1	0	3	1	30	31
2032	11	0	0	1	1	0	0	1	0	2	1	31	32
2033	10	0	0	1	1	0	0	1	0	2	1	32	33
2034	9	0	0	1	1	0	0	1	0	2	1	32	33
2035	9	0	0	1	1	0	0	1	0	2	1	33	34
2036	8	0	0	1	1	0	0	1	0	2	1	33	35
2037	7	0	0	1	1	0	0	1	0	2	1	34	36
2038	6	0	0	1	1	0	0	1	0	2	0	34	37
2039	5	0	0	1	1	0	0	1	0	2	0	35	38
2040	4	0	0	1	1	0	0	1	0	1	0	35	39
2041	4	0	0	1	1	0	0	1	0	1	0	35	40
2042	3	0	0	1	1	0	0	1	0	1	0	36	41
2043	3	0	0	1	1	0	0	1	0	1	0	36	42
2044	2	0	0	1	1	0	0	1	0	1	0	36	43
2045	2	0	0	1	1	0	0	1	0	1	0	36	44
2046	1	0	0	1	1	0	0	1	0	1	0	36	45
2047	1	0	0	1	1	0	0	1	0	1	0	36	46
2048	0	0	0	1	1	0	0	1	0	1	0	37	47

**CAPITAL STRUCTURE**

SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642

IN SERVICE COST (\$000)	23
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECT. TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%



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

(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	1	1	1	1	1	0	1	0	0	0	0	(0)
2020	7.22%	2	2	1	2	1	1	0	1	0	0	0	0	0
2021	6.68%	2	4	1	2	1	2	0	1	0	0	0	0	0
2022	6.18%	1	5	1	3	1	3	0	1	0	0	0	0	1
2023	5.71%	1	7	1	4	1	4	0	1	0	0	0	0	1
2024	5.29%	1	8	1	5	1	5	0	1	0	0	0	0	1
2025	4.89%	1	9	1	5	1	5	0	1	0	0	0	0	1
2026	4.52%	1	10	1	6	1	6	0	1	0	0	0	0	1
2027	4.46%	1	11	1	7	1	7	0	1	0	0	0	0	1
2028	4.46%	1	12	1	8	1	8	0	1	0	0	0	0	2
2029	4.46%	1	13	1	9	1	9	0	1	0	0	0	0	2
2030	4.46%	1	14	1	10	1	10	0	1	0	0	0	0	2
2031	4.46%	1	15	1	11	1	11	0	1	0	0	0	0	2
2032	4.46%	1	16	1	11	1	11	0	1	0	0	0	0	2
2033	4.46%	1	17	1	12	1	12	0	1	0	0	0	0	2
2034	4.46%	1	18	1	13	1	13	0	1	0	0	0	0	3
2035	4.46%	1	19	1	14	1	14	0	1	0	0	0	0	3
2036	4.46%	1	20	1	15	1	15	0	1	0	0	0	0	3
2037	4.46%	1	21	1	15	1	15	0	1	0	0	0	0	3
2038	4.46%	1	22	1	15	1	15	0	1	0	0	0	0	3
2039	2.23%	1	23	1	16	1	16	0	1	0	0	0	0	3
2040	0.00%	0	23	1	17	1	17	0	1	0	0	0	0	2
2041	0.00%	0	23	1	18	1	18	0	1	0	0	0	0	2
2042	0.00%	0	23	1	18	1	18	0	1	0	0	0	0	2
2043	0.00%	0	23	1	19	1	19	0	1	0	0	0	0	1
2044	0.00%	0	23	1	20	1	20	0	1	0	0	0	0	1
2045	0.00%	0	23	1	21	1	21	0	1	0	0	0	0	1
2046	0.00%	0	23	1	22	1	22	0	1	0	0	0	0	0
2047	0.00%	0	23	1	22	1	22	0	1	0	0	0	0	0
2048	0.00%	0	23	1	23	1	23	0	1	0	0	0	0	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(0)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	1
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

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

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	END OF YEAR NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF. TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2019	3.75%	1	0	22	1	(0)	23	23	23
2020	7.22%	2	0	22	2	0	23	21	22
2021	6.68%	2	0	21	2	0	21	20	21
2022	6.18%	1	0	20	3	1	20	19	20
2023	5.71%	1	0	19	4	1	19	18	19
2024	5.29%	1	0	18	5	1	18	17	18
2025	4.89%	1	0	18	5	1	17	16	17
2026	4.52%	1	0	17	6	1	16	16	16
2027	4.46%	1	0	16	7	1	16	15	15
2028	4.46%	1	0	15	8	2	15	14	14
2029	4.46%	1	0	15	8	2	14	13	13
2030	4.46%	1	0	14	9	2	13	12	13
2031	4.46%	1	0	13	10	2	12	11	12
2032	4.46%	1	0	12	11	2	11	10	11
2033	4.46%	1	0	12	12	2	10	9	10
2034	4.46%	1	0	11	12	2	9	9	9
2035	4.46%	1	0	10	13	2	9	8	8
2036	4.46%	1	0	9	14	2	8	7	7
2037	4.46%	1	0	8	15	3	7	6	6
2038	4.46%	1	0	8	15	3	6	5	6
2039	2.23%	1	(0)	7	16	3	5	4	5
2040	0.00%	0	(0)	6	17	2	4	4	4
2041	0.00%	0	(0)	5	18	2	4	3	4
2042	0.00%	0	(0)	5	18	2	3	3	3
2043	0.00%	0	(0)	4	19	1	3	2	3
2044	0.00%	0	(0)	3	20	1	2	2	2
2045	0.00%	0	(0)	2	21	1	2	1	2
2046	0.00%	0	(0)	2	22	1	1	1	1
2047	0.00%	0	(0)	1	22	0	1	0	1
2048	0.00%	0	(0)	0	23	0	0	0	0

\* 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)	(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)	
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.01	0.01	0.03	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86	
2015	-4	3.00%	1.030	0.28%	2.26	1.96	0.04	0.05	0.13	0.13	0.16	0.10	0.12	(0.02)	(0.03)	2.39	3.24	
2016	-3	3.00%	1.061	8.69%	71.58	38.88	0.76	0.81	2.54	2.70	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36	
2017	-2	3.00%	1.093	53.83%	456.61	302.97	5.95	6.76	19.90	22.60	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87	
2018	-1	3.00%	1.126	37.09%	324.11	693.33	13.99	20.74	46.81	69.41	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80	
100.00%											855.39							

IN SERVICE YEAR	2019																	
PLANT COSTS	776,326,284.5																	
AFUDC RATE	6.50%																	
		20.74	69.41	54.39	(12.98)	924.80												
		BOOK BASIS	BOOK BASIS	BOOK BASIS	TAX BASIS													
		CONSTRUCTION CASH	FOR DEF. TAX	FOR DEF. TAX	TAX BASIS													
		EQUITY AFUDC																
		DEBT AFUDC																
		CPI																
		TOTAL	23	22	23													

\* Column not specified in workbook





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

(1) YEAR	(2) AVOIDED TRANSMISSION CAP COST \$(000)	(3) AVOIDED TRANSMISSION O&M COST \$(000)	(4) TOTAL AVOIDED TRANSMISSION CAP COST \$(000)	(5) AVOIDED DISTRIBUTION CAP COST \$(000)	(6) AVOIDED DISTRIBUTION O&M COST \$(000)	(7) TOTAL AVOIDED DISTRIBUTION CAP COST \$(000)	(8) PROGRAM FUEL SAVINGS \$(000)	(8a)* PROGRAM OFF-PEAK PAYBACK \$(000)
2014	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	4	0
2016	1	0	1	0	0	0	8	0
2017	1	0	1	0	0	0	7	0
2018	1	0	1	0	0	0	8	0
2019	1	0	1	0	0	0	9	0
2020	1	0	1	0	0	0	9	0
2021	1	0	1	0	0	0	9	0
2022	1	0	1	0	0	0	9	0
2023	0	0	0	0	0	0	9	0
2024	0	0	0	0	0	0	9	0
2025	0	0	0	0	0	0	9	0
2026	0	0	0	0	0	0	9	0
2027	0	0	0	0	0	0	10	0
2028	0	0	0	0	0	0	10	0
2029	0	0	0	0	0	0	10	0
2030	0	0	0	0	0	0	10	0
2031	0	0	0	0	0	0	10	0
2032	0	0	0	0	0	0	10	0
2033	0	0	0	0	0	0	11	0
2034	0	0	0	0	0	0	11	0
2035	0	0	0	0	0	0	11	0
2036	0	0	0	0	0	0	12	0
2037	0	0	0	0	0	0	12	0
2038	0	0	0	0	0	0	12	0
2039	0	0	0	0	0	0	13	0
2040	0	0	0	0	0	0	13	0
2041	0	0	0	0	0	0	13	0
2042	0	0	0	0	0	0	14	0
2043	0	0	0	0	0	0	14	0
2044	0	0	0	0	0	0	15	0
2045	0	0	0	0	0	0	15	0
2046	0	0	0	0	0	0	16	0
2047	0	0	0	0	0	0	16	0
2048	0	0	0	0	0	0	17	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
NOM	12	5	17	2	2	4	375	0
NPV	5	1	7	1	1	1	112	0

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

A VOIDED GENERATING EMISSION IMPACT  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Solar Water Heating (LINC)

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2014	0	0	0	0	0
2015	0	0	0	0	0
2016	0	0	0	0	0
2017	0	0	0	0	0
2018	0	0	0	0	0
2019	0	0	0	0	0
2020	0	0	0	0	0
2021	0	0	0	0	0
2022	0	0	0	0	0
2023	0	0	0	0	0
2024	0	0	0	0	0
2025	0	0	0	0	0
2026	0	0	0	0	0
2027	0	0	0	0	0
2028	0	0	0	0	0
2029	0	0	0	0	0
2030	0	0	0	0	0
2031	0	0	0	0	0
2032	0	0	0	0	0
2033	0	0	0	0	0
2034	0	0	0	0	0
2035	0	0	0	0	0
2036	0	0	0	0	0
2037	0	0	0	0	0
2038	0	0	0	0	0
2039	0	0	0	0	0
2040	0	0	0	0	0
2041	0	0	0	0	0
2042	0	0	0	0	0
2043	0	0	0	0	0
2044	0	0	0	0	0
2045	0	0	0	0	0
2046	0	0	0	0	0
2047	0	0	0	0	0
2048	0	0	0	0	0
NOM	0	0	0	0	0
NPV	0	0	0	0	0

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

(1) YEAR	(2) INCREASED SUPPLY COSTS \$(000)	(3) UTILITY PROGRAM COSTS \$(000)	(4) PARTICIPANT PROGRAM COSTS \$(000)	(5) OTHER PROGRAM COSTS \$(000)	(6) TOTAL COSTS \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)	(8) AVOIDED T&D BENEFITS \$(000)	(9) PROGRAM FUEL SAVINGS \$(000)	(10) OTHER BENEFITS \$(000)	(11) TOTAL BENEFITS \$(000)	(12) NET BENEFITS \$(000)	(13) CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2014	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	78	523	0	601	0	0	4	0	4	(598)	(556)
2016	0	0	0	0	0	0	1	8	0	9	9	(548)
2017	0	0	0	0	0	0	1	7	0	8	8	(542)
2018	0	0	0	0	0	0	1	8	0	9	9	(535)
2019	0	0	0	0	0	4	1	9	0	14	14	(526)
2020	0	0	0	0	0	4	1	9	0	13	13	(517)
2021	0	0	0	0	0	4	1	9	0	13	13	(509)
2022	0	0	0	0	0	4	1	9	0	13	13	(501)
2023	0	0	0	0	0	4	1	9	0	13	13	(494)
2024	0	0	0	0	0	4	1	9	0	14	14	(488)
2025	0	0	0	0	0	4	1	9	0	14	14	(481)
2026	0	0	0	0	0	4	1	9	0	14	14	(476)
2027	0	0	0	0	0	4	1	10	0	14	14	(470)
2028	0	0	0	0	0	4	1	10	0	14	14	(465)
2029	0	0	0	0	0	4	1	10	0	14	14	(460)
2030	0	0	0	0	0	4	1	10	0	15	15	(456)
2031	0	0	0	0	0	4	1	10	0	15	15	(452)
2032	0	0	0	0	0	4	1	10	0	15	15	(448)
2033	0	0	0	0	0	4	1	11	0	15	15	(444)
2034	0	0	0	0	0	4	1	11	0	15	15	(440)
2035	0	0	0	0	0	4	1	11	0	16	16	(437)
2036	0	0	0	0	0	4	1	12	0	16	16	(433)
2037	0	0	0	0	0	4	1	12	0	16	16	(430)
2038	0	0	0	0	0	4	1	12	0	17	17	(427)
2039	0	0	0	0	0	4	1	13	0	17	17	(425)
2040	0	0	0	0	0	4	1	13	0	17	17	(422)
2041	0	0	0	0	0	4	1	13	0	18	18	(420)
2042	0	0	0	0	0	4	1	14	0	18	18	(417)
2043	0	0	0	0	0	4	1	14	0	19	19	(415)
2044	0	0	0	0	0	4	1	15	0	19	19	(413)
2045	0	0	0	0	0	4	1	15	0	20	20	(411)
2046	0	0	0	0	0	4	0	16	0	20	20	(409)
2047	0	0	0	0	0	4	0	16	0	21	21	(407)
2048	0	0	0	0	0	4	0	17	0	21	21	(405)
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	78	523	0	601	115	21	375	0	511	(90)	(90)
NPV	0	73	486	0	559	34	8	112	0	154	(405)	(405)

Discount Rate: %  
Benefit/Cost Ratio (Col(11) / Col(6)) : 7.54  
**0.28**



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

(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)
2014	0	0	0	0	0	0	0	0	0	0	0
2015	9	0	0	0	9	0	0	0	0	9	8
2016	18	0	0	0	18	0	0	0	0	18	24
2017	19	0	0	0	19	0	0	0	0	19	40
2018	20	0	0	0	20	0	0	0	0	20	55
2019	21	0	0	0	21	0	0	0	0	21	70
2020	22	0	0	0	22	0	0	0	0	22	84
2021	22	0	0	0	22	0	0	0	0	22	97
2022	23	0	0	0	23	0	0	0	0	23	110
2023	23	0	0	0	23	0	0	0	0	23	122
2024	23	0	0	0	23	0	0	0	0	23	134
2025	23	0	0	0	23	0	0	0	0	23	144
2026	23	0	0	0	23	0	0	0	0	23	154
2027	24	0	0	0	24	0	0	0	0	24	163
2028	24	0	0	0	24	0	0	0	0	24	172
2029	24	0	0	0	24	0	0	0	0	24	180
2030	25	0	0	0	25	0	0	0	0	25	188
2031	25	0	0	0	25	0	0	0	0	25	195
2032	26	0	0	0	26	0	0	0	0	26	202
2033	27	0	0	0	27	0	0	0	0	27	209
2034	28	0	0	0	28	0	0	0	0	28	216
2035	0	0	0	0	0	0	0	0	0	0	216
2036	0	0	0	0	0	0	0	0	0	0	216
2037	0	0	0	0	0	0	0	0	0	0	216
2038	0	0	0	0	0	0	0	0	0	0	216
2039	0	0	0	0	0	0	0	0	0	0	216
2040	0	0	0	0	0	0	0	0	0	0	216
2041	0	0	0	0	0	0	0	0	0	0	216
2042	0	0	0	0	0	0	0	0	0	0	216
2043	0	0	0	0	0	0	0	0	0	0	216
2044	0	0	0	0	0	0	0	0	0	0	216
2045	0	0	0	0	0	0	0	0	0	0	216
2046	0	0	0	0	0	0	0	0	0	0	216
2047	0	0	0	0	0	0	0	0	0	0	216
2048	0	0	0	0	0	0	0	0	0	0	216
NOM	452	0	0	0	452	0	0	0	0	452	0
NPV	216	0	0	0	216	0	0	0	0	216	0

In Service of Gen Unit:  
Discount Rate : 2019 7.54 %  
Benefit/Cost Ratio ( Col(6) / Col(10)) Infinite

RATE IMPACT TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Residential Solar Water Heating (LINC)

(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)
2014	0	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	78	523	7	0	608	4	0	0	0	4	4	(562)
2016	0	0	0	14	0	14	8	1	0	0	9	(5)	(567)
2017	0	0	0	14	0	14	7	1	0	0	8	(7)	(572)
2018	0	0	0	15	0	15	8	1	0	0	9	(6)	(577)
2019	0	0	0	16	0	16	13	1	0	0	14	(3)	(578)
2020	0	0	0	17	0	17	13	1	0	0	13	(3)	(580)
2021	0	0	0	17	0	17	13	1	0	0	13	(4)	(583)
2022	0	0	0	18	0	18	13	1	0	0	13	(4)	(585)
2023	0	0	0	18	0	18	13	1	0	0	13	(4)	(587)
2024	0	0	0	18	0	18	13	1	0	0	14	(4)	(589)
2025	0	0	0	18	0	18	13	1	0	0	14	(4)	(591)
2026	0	0	0	18	0	18	13	1	0	0	14	(4)	(593)
2027	0	0	0	18	0	18	13	1	0	0	14	(4)	(594)
2028	0	0	0	18	0	18	14	1	0	0	14	(4)	(596)
2029	0	0	0	19	0	19	14	1	0	0	14	(4)	(597)
2030	0	0	0	19	0	19	14	1	0	0	15	(4)	(599)
2031	0	0	0	19	0	19	14	1	0	0	15	(4)	(600)
2032	0	0	486	20	0	20	14	1	0	0	15	(5)	(601)
2033	0	0	0	21	0	21	15	1	0	0	15	(5)	(603)
2034	0	0	0	21	0	21	15	1	0	0	15	(6)	(604)
2035	0	0	0	0	0	0	15	1	0	0	16	16	(601)
2036	0	0	0	0	0	0	16	1	0	0	16	16	(597)
2037	0	0	0	0	0	0	16	1	0	0	16	16	(594)
2038	0	0	0	0	0	0	16	1	0	0	17	17	(591)
2039	0	0	0	0	0	0	17	1	0	0	17	17	(589)
2040	0	0	0	0	0	0	17	1	0	0	17	17	(586)
2041	0	0	523	344	0	945	490	21	0	0	511	(434)	(569)
2042	0	0	486	164	0	723	146	8	0	0	154	(569)	(569)
2043	0	0	0	0	0	0	0	0	0	0	0	0	0
2044	0	0	0	0	0	0	0	0	0	0	0	0	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
NOM.	0	78	523	344	0	945	490	21	0	0	511	(434)	(569)
NPV	0	73	486	164	0	723	146	8	0	0	154	(569)	(569)

7.54 %

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

0.21

**I. PROGRAM DEMAND SAVINGS & LINE LOSSES**

(1) CUSTOMER kW REDUCTION AT METER .....	0.83 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER .....	1.08844 kW
(3) kW LINE LOSS PERCENTAGE .....	7.22 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER .....	3,617.80 kWh
(5) kWh LINE LOSS PERCENTAGE .....	5.76 %
(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 .....	30 YEARS
(3) T&D ECONOMIC LIFE .....	35 YEARS
(4) K FACTOR FOR GENERATION .....	1.58642
(5) K FACTOR FOR T & D .....	1.55920

**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 .....	7.54 %
(11) UTILITY AFUDC RATE .....	6.50 %
(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 .....	2014
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2019
(3) IN-SERVICE YEAR FOR AVOIDED T&D .....	2017-2019
(4) BASE YEAR AVOIDED GENERATING COST .....	776.33 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	146.90 \$/kW
(6) BASE YEAR DISTRIBUTION COST .....	24.85 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE .....	3.00 %**
(8) GENERATOR FIXED O & M COST .....	58.35 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.50 %**
(10) TRANSMISSION FIXED O & M COST .....	5.53 \$/kW
(11) DISTRIBUTION FIXED O & M COST .....	2.34 \$/kW
(12) T&D FIXED O&M ESCALATION RATE .....	2.50 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.065 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE .....	2.50 %**
(15) GENERATOR CAPACITY FACTOR .....	56% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.85 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE .....	4.65 %**

**V. NON-FUEL ENERGY AND DEMAND CHARGES**

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

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

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)
2014	0	0	0	0	0	0	0	0	0	
2015	37	912	0	950	9	2,882	0	0	2,882	
2016	0	0	0	0	18	14	0	0	0	
2017	0	0	0	0	18	15	0	0	0	
2018	0	0	0	0	20	15	0	0	0	
2019	0	0	0	0	22	16	0	0	0	
2020	0	0	0	0	22	17	0	0	0	
2021	0	0	0	0	22	17	0	0	0	
2022	0	0	0	0	23	18	0	0	0	
2023	0	0	0	0	24	17	0	0	0	
2024	0	0	0	0	24	17	0	0	0	
2025	0	0	0	0	24	16	0	0	0	
2026	0	0	0	0	25	16	0	0	0	
2027	0	0	0	0	25	16	0	0	0	
2028	0	0	0	0	26	16	0	0	0	
2029	0	0	0	0	26	16	0	0	0	
2030	0	0	0	0	27	16	0	0	0	
2031	0	0	0	0	29	16	0	0	0	
2032	0	0	0	0	30	17	0	0	0	
2033	0	0	0	0	31	17	0	0	0	
2034	0	0	0	0	32	17	0	0	0	
2035	0	0	0	0	34	17	0	0	0	
2036	0	0	0	0	35	17	0	0	0	
2037	0	0	0	0	36	18	0	0	0	
2038	0	0	0	0	37	18	0	0	0	
2039	0	0	0	0	37	18	0	0	0	
2040	0	0	0	0	38	18	0	0	0	
2041	0	0	0	0	38	18	0	0	0	
2042	0	0	0	0	39	18	0	0	0	
2043	0	0	0	0	41	18	0	0	0	
2044	0	0	0	0	43	18	0	0	0	
2045	0	0	0	0	44	19	0	0	0	
2046	0	0	0	0	45	19	0	0	0	
2047	0	0	0	0	47	19	0	0	0	
2048	0	0	0	0	48	19	0	0	0	
NOM	37	912	0	950	1,031	565	2,882	0	2,882	
NPV	35	848	0	883	298	189	2,680	0	2,680	

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

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

Year	(1) CPI%	(2) PPI-CAP%	(3) O&M%	(4) Fuel (cents/kwh)	(5) Capacity Factor	(6) Blended Cap. Rate	(7) Energy Change (cents/kwh)	(8) Demand Change (\$/kw)
2014	2.50	2.50	2.50	0.00	0.00%	3.00	5.43	11.21
2015	2.50	2.50	2.50	0.00	0.00%	3.00	5.07	11.15
2016	2.50	2.50	2.50	0.00	0.00%	3.00	5.21	11.17
2017	2.50	2.50	2.50	0.00	0.00%	3.00	5.55	11.70
2018	2.50	2.50	2.50	0.00	0.00%	3.00	5.91	11.85
2019	2.50	2.50	2.50	3.85	55.85%	3.00	6.41	12.59
2020	2.50	2.50	2.50	4.03	95.39%	3.00	6.46	13.25
2021	2.50	2.50	2.50	4.10	95.40%	3.00	6.54	13.90
2022	2.50	2.50	2.50	4.23	95.37%	3.00	6.78	14.46
2023	2.50	2.50	2.50	4.42	94.99%	3.00	6.96	13.13
2024	2.50	2.50	2.50	4.69	94.40%	3.00	7.10	13.17
2025	2.50	2.50	2.50	4.88	93.42%	3.00	7.24	12.68
2026	2.50	2.50	2.50	5.08	88.94%	3.00	7.42	12.45
2027	2.50	2.50	2.50	5.31	87.68%	3.00	7.57	12.50
2028	2.50	2.50	2.50	5.59	87.36%	3.00	7.74	12.51
2029	2.50	2.50	2.50	5.79	87.30%	3.00	7.91	12.60
2030	2.50	2.50	2.50	5.88	88.13%	3.00	8.08	12.62
2031	2.50	2.50	2.50	6.13	88.44%	3.00	8.25	12.71
2032	2.50	2.50	2.50	6.32	89.14%	3.00	8.59	12.95
2033	2.50	2.50	2.50	6.59	89.64%	3.00	9.19	13.24
2034	2.50	2.50	2.50	6.84	89.85%	3.00	9.48	13.44
2035	2.50	2.50	2.50	7.09	89.65%	3.00	9.73	13.48
2036	2.50	2.50	2.50	7.31	90.14%	3.00	10.31	13.67
2037	2.50	2.50	2.50	7.63	89.91%	3.00	10.59	13.80
2038	2.50	2.50	2.50	7.92	89.91%	3.00	10.90	13.91
2039	2.50	2.50	2.50	8.22	89.91%	3.00	11.21	14.00
2040	2.50	2.50	2.50	8.52	89.86%	3.00	11.47	14.12
2041	2.50	2.50	2.50	8.79	89.82%	3.00	11.82	14.24
2042	2.50	2.50	2.50	9.18	89.85%	3.00	12.19	14.27
2043	2.50	2.50	2.50	9.48	89.84%	3.00	12.75	14.44
2044	2.50	2.50	2.50	9.88	89.93%	3.00	13.19	14.57
2045	2.50	2.50	2.50	10.25	89.91%	3.00	13.65	14.70
2046	2.50	2.50	2.50	10.63	89.91%	3.00	14.13	14.83
2047	2.50	2.50	2.50	10.97	89.83%	3.00	14.63	14.96
2048	2.50	2.50	2.50	11.44	89.92%	3.00	15.16	15.09

Column (1) used for:

- Utility Cost
- Customer Equipment
- Supply Costs

Column (6) used for:

- Gen. Train. & Dist Cost

Column (3) used for:

- Customer O&M Cost
- Generator Fixed O&M
- T&D Fixed O&M
- Generator Variable O&M

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

YEAR	(2) BEG-YEAR RATE BASE \$(000)	(3) DEBT \$(000)	(4) PREFERRED STOCK \$(000)	(5) COMMON EQUITY \$(000)	(6) INCOME TAXES \$(000)	(7) PROPERTY TAX \$(000)	(8) PROPERTY INSURANCE \$(000)	(9) DEPREC. \$(000)	(10) DEFERRED TAXES \$(000)	(11) TOTAL FIXED CHARGES \$(000)	(12) PRESENT WORTH FIXED CHARGES \$(000)	(13) CUMULATIVE PW FIXED CHARGES \$(000)	(14) REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2019	89	2	0	6	3	2	0	3	0	15	15	15	88
2020	86	2	0	5	2	1	0	3	1	14	14	30	90
2021	81	2	0	5	2	1	0	3	1	14	13	42	92
2022	77	2	0	5	2	1	0	3	1	14	11	53	94
2023	73	2	0	5	2	1	0	3	1	13	10	63	97
2024	70	1	0	4	2	1	0	3	1	13	9	72	99
2025	66	1	0	4	2	1	0	3	1	12	8	80	102
2026	63	1	0	4	2	1	0	3	0	12	7	87	104
2027	59	1	0	4	2	1	0	3	0	11	6	94	107
2028	56	1	0	4	2	1	0	3	0	11	6	100	109
2029	53	1	0	3	2	1	0	3	0	11	5	105	112
2030	49	1	0	3	2	1	0	3	0	10	5	109	115
2031	46	1	0	3	1	1	0	3	0	10	4	113	118
2032	43	1	0	3	1	1	0	3	0	9	4	117	121
2033	39	1	0	2	1	1	0	3	0	9	3	120	124
2034	36	1	0	2	1	1	0	3	0	8	3	123	127
2035	33	1	0	2	1	1	0	3	0	8	2	125	130
2036	29	1	0	2	1	1	0	3	0	7	2	127	133
2037	26	1	0	2	1	1	0	3	0	7	2	129	137
2038	23	0	0	1	1	1	0	3	0	6	2	131	140
2039	19	0	0	1	1	0	0	3	0	6	1	132	143
2040	17	0	0	1	2	0	0	3	0	6	1	133	147
2041	15	0	0	1	2	0	0	3	0	5	1	134	151
2042	13	0	0	1	2	0	0	3	0	5	1	135	155
2043	11	0	0	1	2	0	0	3	0	5	1	136	158
2044	9	0	0	1	2	0	0	3	0	4	1	137	162
2045	7	0	0	0	1	0	0	3	0	4	1	138	166
2046	6	0	0	0	1	0	0	3	0	4	1	138	171
2047	4	0	0	0	1	0	0	3	0	4	0	139	175
2048	2	0	0	0	1	0	0	3	0	3	0	139	179

IN SERVICE COST (\$000)	88
IN SERVICE YEAR	2019
BOOK LIFE (YRS)	30
EFFECT. TAX RATE	38.575%
DISCOUNT RATE	7.5%
PROPERTY TAX	1.82%
PROPERTY INSURANCE	0.05%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	40%	5.14%
P/S	0%	0.00%
C/S	60%	10.50%

K-FACTOR = CPWFC / IN-SVC COST = 1.58642

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK FOR DEPRECIATION \$(000)	ACCUMULATED BOOK DEPR FOR DEPR \$(000)	DEFERRED TAX 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%	3	3	3	3	3	3	0	5	0	0	0	0	(1)
2020	7.22%	6	9	3	6	3	6	1	5	0	0	0	1	0
2021	6.68%	6	15	3	9	3	8	1	5	0	0	0	1	1
2022	6.18%	5	21	3	12	3	11	1	5	0	0	0	1	2
2023	5.71%	5	25	3	15	3	14	1	5	0	0	0	1	3
2024	5.29%	5	30	3	18	3	17	1	5	0	0	0	1	4
2025	4.89%	4	34	3	20	3	19	1	5	0	0	0	1	5
2026	4.52%	4	38	3	23	3	22	0	5	0	0	0	0	5
2027	4.46%	4	42	3	26	3	25	0	5	0	0	0	0	5
2028	4.46%	4	46	3	29	3	28	0	5	0	0	0	0	6
2029	4.46%	4	50	3	32	3	30	0	5	0	0	0	0	6
2030	4.46%	4	53	3	35	3	33	0	5	0	0	0	0	7
2031	4.46%	4	57	3	38	3	36	0	5	0	0	0	0	7
2032	4.46%	4	61	3	41	3	39	0	5	0	0	0	0	7
2033	4.46%	4	65	3	44	3	41	0	5	0	0	0	0	8
2034	4.46%	4	69	3	47	3	44	0	5	0	0	0	0	8
2035	4.46%	4	73	3	50	3	47	0	5	0	0	0	0	9
2036	4.46%	4	77	3	53	3	50	0	5	0	0	0	0	9
2037	4.46%	4	80	3	55	3	53	0	5	0	0	0	0	10
2038	4.46%	4	84	3	58	3	55	0	5	0	0	0	0	10
2039	2.23%	2	86	3	61	3	58	(0)	5	0	0	0	(0)	10
2040	0.00%	0	86	3	64	3	61	(1)	5	0	0	0	(1)	9
2041	0.00%	0	86	3	67	3	64	(1)	5	0	0	0	(1)	7
2042	0.00%	0	86	3	70	3	66	(1)	5	0	0	0	(1)	6
2043	0.00%	0	86	3	73	3	69	(1)	5	0	0	0	(1)	5
2044	0.00%	0	86	3	76	3	72	(1)	5	0	0	0	(1)	4
2045	0.00%	0	86	3	79	3	75	(1)	5	0	0	0	(1)	3
2046	0.00%	0	86	3	82	3	77	(1)	5	0	0	0	(1)	2
2047	0.00%	0	86	3	85	3	80	(1)	5	0	0	0	(1)	1
2048	0.00%	0	86	3	88	3	83	(1)	5	0	0	0	(1)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2048
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(1)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	5
BOOK DEPR RATE - 1/USEFUL LIFE	3.33%

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

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	END OF YEAR NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2019	3.75%	3	0	85	3	(1)	89	86	87
2020	7.22%	6	1	82	6	0	86	81	84
2021	6.68%	6	1	79	9	1	81	77	79
2022	6.18%	5	1	76	12	2	77	73	75
2023	5.71%	5	1	73	15	3	73	70	72
2024	5.29%	5	1	70	18	4	70	66	68
2025	4.89%	4	1	67	20	5	66	63	64
2026	4.52%	4	0	64	23	5	63	59	61
2027	4.46%	4	0	61	26	5	59	56	58
2028	4.46%	4	0	58	29	6	56	53	54
2029	4.46%	4	0	55	32	6	53	49	51
2030	4.46%	4	0	53	35	7	49	46	48
2031	4.46%	4	0	50	38	7	46	43	44
2032	4.46%	4	0	47	41	7	43	39	41
2033	4.46%	4	0	44	44	8	39	36	38
2034	4.46%	4	0	41	47	8	36	33	34
2035	4.46%	4	0	38	50	9	33	29	31
2036	4.46%	4	0	35	53	9	29	26	28
2037	4.46%	4	0	32	55	10	26	23	24
2038	4.46%	4	0	29	58	10	23	19	21
2039	2.23%	2	(0)	26	61	10	19	17	18
2040	0.00%	0	(1)	23	64	9	17	15	16
2041	0.00%	0	(1)	20	67	7	15	13	14
2042	0.00%	0	(1)	18	70	6	13	11	12
2043	0.00%	0	(1)	15	73	5	11	9	10
2044	0.00%	0	(1)	12	76	4	9	7	8
2045	0.00%	0	(1)	9	79	3	7	6	6
2046	0.00%	0	(1)	6	82	2	6	4	5
2047	0.00%	0	(1)	3	85	1	4	2	3
2048	0.00%	0	(1)	(0)	88	0	2	0	1

\* 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)	(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)	
2014	-5	0.00%	1.000	0.11%	0.83	0.41	0.41	0.01	0.01	0.03	0.03	0.02	0.02	(0.00)	(0.00)	0.86	0.86	
2015	-4	3.00%	1.030	0.28%	2.26	1.96	1.96	0.05	0.16	0.13	0.16	0.10	0.12	(0.02)	(0.03)	2.39	3.24	
2016	-3	3.00%	1.061	8.69%	38.88	38.88	8.81	0.81	2.54	2.54	2.70	2.01	2.13	(0.48)	(0.51)	74.12	77.36	
2017	-2	3.00%	1.093	53.83%	456.61	302.97	305.67	6.76	19.90	19.90	22.60	15.69	17.82	(3.76)	(4.27)	476.51	553.87	
2018	-1	3.00%	1.126	37.09%	324.11	693.33	715.93	20.74	46.81	46.81	69.41	36.57	54.39	(8.71)	(12.98)	370.93	924.80	
100.00%											855.39							

	20.74	69.41	54.39	(12.98)	924.80
IN SERVICE YEAR PLANT COSTS AFUDC RATE	2019 776.3262845 6.50%	CONSTRUCTION CASH EQUITY AFUDC DEBT AFUDC CPI	BOOK BASIS FOR DEF TAX 81 5 2 88	BOOK BASIS FOR DEF TAX 81 2 83	TAX BASIS 81 5 5 86

\* Column not specified in workbook

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

(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
2014	0	0	3.60	7.12	3.60	0.00	1.00	1.00
2015	87	87	4.45	6.24	5.00	0.00	1.00	1.00
2016	87	87	4.92	8.49	5.62	0.00	1.00	1.00
2017	87	87	4.27	5.76	4.62	0.00	1.00	1.00
2018	87	87	5.27	7.51	5.77	0.00	1.00	1.00
2019	87	87	5.38	7.64	5.88	5.05	1.00	1.00
2020	87	87	5.65	8.24	6.20	5.04	1.00	1.00
2021	87	87	5.65	8.04	6.19	5.12	1.00	1.00
2022	87	87	5.60	7.61	6.07	5.09	1.00	1.00
2023	87	87	5.60	7.22	6.03	5.20	1.00	1.00
2024	87	87	5.81	7.36	6.23	5.51	1.00	1.00
2025	87	87	5.98	7.61	6.43	5.65	1.00	1.00
2026	87	87	5.73	7.03	6.10	5.77	1.00	1.00
2027	87	87	6.01	7.63	6.44	6.08	1.00	1.00
2028	87	87	6.07	7.34	6.48	6.19	1.00	1.00
2029	87	87	6.28	7.73	6.71	6.49	1.00	1.00
2030	87	87	6.34	7.56	6.71	6.45	1.00	1.00
2031	87	87	6.57	7.85	6.91	6.72	1.00	1.00
2032	87	87	6.62	7.62	6.90	6.76	1.00	1.00
2033	87	87	6.97	8.23	7.27	7.11	1.00	1.00
2034	87	87	7.05	8.11	7.32	7.29	1.00	1.00
2035	87	87	7.19	8.17	7.45	7.50	1.00	1.00
2036	87	87	7.47	8.54	7.73	7.70	1.00	1.00
2037	87	87	7.68	8.86	7.96	8.02	1.00	1.00
2038	87	87	7.94	9.12	8.22	8.33	1.00	1.00
2039	87	87	8.12	9.25	8.39	8.53	1.00	1.00
2040	87	87	8.35	9.51	8.61	8.87	1.00	1.00
2041	87	87	8.67	9.88	8.94	9.13	1.00	1.00
2042	87	87	8.99	10.35	9.28	9.47	1.00	1.00
2043	87	87	9.27	10.61	9.57	9.80	1.00	1.00
2044	87	87	9.60	11.01	9.89	10.25	1.00	1.00
2045	87	87	9.94	11.34	10.24	10.58	1.00	1.00
2046	87	87	10.25	11.58	10.53	10.92	1.00	1.00
2047	87	87	10.57	11.95	10.87	11.29	1.00	1.00
2048	87	87	11.00	12.55	11.32	11.78	1.00	1.00
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.





A VOIDED GENERATING EMISSION IMPACT  
 PROGRAM METHOD SELECTED: REV\_REQ  
 PROGRAM NAME: Business Solar Water Heating

YEAR	(2) AVOIDED GEN UNIT EMISSION BENEFIT \$(000)	(3) REPLACEMENT EMISSION COST \$(000)	(4) PROGRAM EMISSION BENEFIT \$(000)	(5) OFF-PEAK EMISSION PAYBACK COST \$(000)	(6) NET EMISSION BENEFIT \$(000)
2014	0	0	0	0	0
2015	0	0	0	0	0
2016	0	0	0	0	0
2017	0	0	0	0	0
2018	0	0	0	0	0
2019	0	0	0	0	0
2020	0	0	0	0	0
2021	0	0	0	0	0
2022	0	0	0	0	0
2023	0	0	0	0	0
2024	0	0	0	0	0
2025	0	0	0	0	0
2026	0	0	0	0	0
2027	0	0	0	0	0
2028	0	0	0	0	0
2029	0	0	0	0	0
2030	0	0	0	0	0
2031	0	0	0	0	0
2032	0	0	0	0	0
2033	0	0	0	0	0
2034	0	0	0	0	0
2035	0	0	0	0	0
2036	0	0	0	0	0
2037	0	0	0	0	0
2038	0	0	0	0	0
2039	0	0	0	0	0
2040	0	0	0	0	0
2041	0	0	0	0	0
2042	0	0	0	0	0
2043	0	0	0	0	0
2044	0	0	0	0	0
2045	0	0	0	0	0
2046	0	0	0	0	0
2047	0	0	0	0	0
2048	0	0	0	0	0
NOM	1	1	0	0	0
NPV	0	0	0	0	0





page 11 RATE IMPACT TEST  
PROGRAM METHOD SELECTED: REV\_REQ  
PROGRAM NAME: Business Solar Water Heating

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	INCREASED SUPPLY COSTS \$'(000)	UTILITY PROGRAM COSTS \$'(000)	INCENTIVES \$'(000)	REVENUE LOSSES \$'(000)	OTHER COSTS \$'(000)	TOTAL COSTS \$'(000)	AVOIDED GEN UNIT & FUEL BENEFITS \$'(000)	AVOIDED T&D BENEFITS \$'(000)	REVENUE GAINS \$'(000)	OTHER BENEFITS \$'(000)	TOTAL BENEFITS \$'(000)	NET BENEFITS \$'(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$'(000)
2014	0	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	37	912	16	0	965	10	0	0	0	10	(955)	(888)
2016	0	0	0	32	0	32	29	3	0	0	32	0	(888)
2017	0	0	0	33	0	33	19	3	0	0	22	(11)	(897)
2018	0	0	0	35	0	35	25	3	0	0	28	(7)	(902)
2019	0	0	0	38	0	38	42	3	0	0	45	8	(896)
2020	0	0	0	39	0	39	42	3	0	0	45	6	(895)
2021	0	0	0	40	0	40	40	3	0	0	43	3	(890)
2022	0	0	0	41	0	41	40	3	0	0	43	1	(890)
2023	0	0	0	40	0	40	39	3	0	0	41	1	(889)
2024	0	0	0	41	0	41	38	3	0	0	41	0	(889)
2025	0	0	0	40	0	40	39	3	0	0	42	0	(888)
2026	0	0	0	41	0	41	38	3	0	0	40	(0)	(888)
2027	0	0	0	41	0	41	39	2	0	0	42	1	(888)
2028	0	0	0	42	0	42	39	2	0	0	41	(0)	(888)
2029	0	0	0	42	0	42	39	2	0	0	42	(0)	(888)
2030	0	0	0	43	0	43	39	2	0	0	42	(1)	(889)
2031	0	0	0	43	0	43	40	2	0	0	42	(1)	(889)
2032	0	0	0	45	0	45	40	2	0	0	42	(3)	(890)
2033	0	0	0	47	0	47	41	2	0	0	43	(4)	(891)
2034	0	0	0	48	0	48	41	2	0	0	43	(5)	(892)
2035	0	0	0	49	0	49	41	2	0	0	43	(6)	(893)
2036	0	0	0	51	0	51	42	2	0	0	44	(7)	(895)
2037	0	0	0	52	0	52	43	2	0	0	45	(7)	(896)
2038	0	0	0	53	0	53	44	2	0	0	46	(7)	(897)
2039	0	0	0	54	0	54	45	2	0	0	47	(8)	(898)
2040	0	0	0	55	0	55	45	2	0	0	47	(8)	(900)
2041	0	0	0	56	0	56	46	2	0	0	48	(8)	(901)
2042	0	0	0	57	0	57	48	2	0	0	50	(7)	(902)
2043	0	0	0	59	0	59	49	2	0	0	51	(9)	(903)
2044	0	0	0	61	0	61	50	2	0	0	52	(9)	(904)
2045	0	0	0	62	0	62	51	2	0	0	53	(9)	(905)
2046	0	0	0	64	0	64	52	2	0	0	54	(10)	(906)
2047	0	0	0	66	0	66	53	2	0	0	55	(11)	(907)
2048	0	0	0	68	0	68	55	2	0	0	57	(10)	(908)
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	37	912	1,595	0	2,545	1,386	78	0	0	1,464	(1,081)	
NPV	0	35	848	487	0	1,370	433	30	0	0	463	(908)	

Discount Rate: 7.54 %  
Benefit/Cost Ratio (Col(12) / Col(7)): 0.34



# APPENDIX B – Comparison of 2015 DSM Plan to the Current DSM Plan

Current DSM Plan	2015 DSM Plan and Differences v. Current Plan		Max Incentive Differences (Existing Measures) <sup>1</sup>
Programs/Pilots	Programs/Pilots and Differences	Measure Differences	
<b>Residential Sector Programs</b>	<b>Residential Sector Programs</b>		
Residential Energy Survey	Residential Energy Survey	None	Not Applicable (no rebates)
Residential Load Management (On Call®)	Residential Load Management (On Call®)	None	None (incentives per tariff)
Residential Air Conditioning	Residential Air Conditioning	<b>Discontinued:</b> All SFER levels except for 16 & 17, Multifamily & Mobile Home housing types, Plenum Seal, Electronically Commutated Motor (ECM)	<b>Reduced:</b> to \$208 from \$421
Residential New Construction (BuildSmart®)	Residential New Construction (BuildSmart®)	None	<b>Reduced:</b> to \$894 from \$1,286
Residential Building Envelope	<b>Modified:</b> Narrowed to Residential Ceiling Insulation only	<b>Discontinued:</b> Reflective Roof Coating, Reflective Roof Replacement	<b>Reduced:</b> to \$220 from \$350
Residential Low Income	Residential Low Income	<b>Added:</b> Energy Survey, A/C Unit Maintenance, A/C Duct System Testing & Repair, Faucet Aerator, Low Flow Showerhead, Water Heater Pipe Wrap <b>Discontinued:</b> Room Air Conditioner Replacement	<b>Increased:</b> Weatherization = to \$90 from \$45; A/C Unit Maintenance = to \$80 from \$60 <sup>2</sup>
Residential Duct System Testing & Repair	<b>Discontinued:</b> Added to Low Income		
<b>Business Sector Programs</b>	<b>Business Sector Programs</b>		
Business Energy Evaluation (BEE)	Business Energy Evaluation (BEE)	None	Not Applicable (no rebates)
Business On Call	Business On Call	None	None (incentives per tariff)
Commercial/Industrial Demand Reduction	Commercial/Industrial Demand Reduction	None	None (incentives per tariff)
Commercial/Industrial Load Control (CILC)	Commercial/Industrial Load Control (CILC)	None	None (incentives per tariff)
Business Heating, Ventilating, & Air Conditioning (HVAC)	Business Heating, Ventilating, & Air Conditioning (HVAC)	<b>Discontinued:</b> ECM	<b>Increased:</b> Chiller = to \$210 from \$99; DX = to \$180 from \$168; DCV = to \$2,010 from \$627; ERV = to \$1,270 from \$417
Business Lighting	Business Lighting	<b>Added:</b> High Bay LED	<b>Reduced:</b> TIES = to \$600 from \$898
Business Custom Incentive (BCI)	Business Custom Incentive (BCI)	None	<b>Increased:</b> PSMH = to \$185 from \$152; <b>Reduced:</b> CFL = to \$70 from \$132; Linear Fluorescents = to \$65 from \$132
Business Building Envelope	<b>Discontinued</b>		Not Applicable (project-specific)
Business Water Heating	<b>Discontinued</b>		
Business Refrigeration	<b>Discontinued</b>		
<b>Other Programs</b>	<b>Other Programs</b>		
Conservation Research & Development (CRD)	Conservation Research & Development (CRD)	None	Not Applicable (no rebates)
Cogeneration & Small Power Production	Cogeneration & Small Power Production	None	Not Applicable (no rebates)
<b>Solar Pilots</b>	<b>Solar Pilots</b>		
Residential Photovoltaic	Residential Photovoltaic	None	None
Business Photovoltaic	Business Photovoltaic	None	None
Business Photovoltaic for Schools	Business Photovoltaic for Schools	None	Not Applicable (based on installed cost)
Residential Solar Water Heating	Residential Solar Water Heating	None	None
Residential Solar Water Heating (LINC)	Residential Solar Water Heating (LINC)	None	Not Applicable (based on installed cost)
Business Solar Water Heating	Business Solar Water Heating	None	None
Renewable Research & Demonstration	Renewable Research & Demonstration	None	Not Applicable (no rebates)

<sup>1</sup> Reflects differences in maximum cost-effective rebates for existing measures only. <sup>2</sup> Rebates based on installed costs, not cost-effectiveness screening tests.

# ATTACHMENT 2

RESIDENTIAL LOAD MANAGEMENT PROGRAM  
(FPL "ON CALL" PROGRAM)  
(CLOSED SCHEDULE)

RATE SCHEDULE: RSL

AVAILABLE:

Available only within the geographic areas served by the Company's Load Management System.

APPLICATION:

To Customers receiving service under Rate Schedule RS-1 who were active participants in this program as of April 1, 2003 and who utilized at least one of the following installed electrical appliances on the premises that was designated as of April 1, 2003:

- 1. Conventional electric water heater
- 2. Central electric air conditioning
- 3. Swimming pool pump (including pool sweeps as appropriate)
- 4. Central electric space heating\*

\*Central electric space heating systems alone are ineligible for program participation. These systems are eligible for program participation only when one or more of the other 3 appliances listed above is signed up for participation.

This Rate Schedule is not applicable for service to commonly owned facilities of condominium, cooperative, or homeowners' associations. Service under this Rate Schedule is not transferable to either new Customers requesting service at any premises that were designated by a Customer participating in this program prior to April 1, 2003 OR to the Customers participating in this program as of April 1, 2003 who discontinue service at the premises designated prior to April 1, 2003.

SERVICE:

The same as specified in Rate Schedule RS-1.

LIMITATION OF SERVICE:

The same as specified in Rate Schedule RS-1. The specified electrical appliances shall be interrupted at the option of the Company by means of load management equipment installed at the Customer's premises.

MONTHLY CREDIT:

Customers receiving service under this schedule will receive a credit on the monthly bill as follows:

<u>DEVICE (OPTION)</u>	<u>APPLICABILITY</u>	<u>CREDIT</u>
1. Conventional electric water heater	Year round	\$ 3.50
2. Central electric air conditioning (Option C)	April-October	\$ 6.00
3. Central electric air conditioning (Option S)	April-October	\$ 9.00
4. Swimming pool pump	Year round	\$ 3.00
5. Central electric space heating (Option C)	November-March	\$ 2.00
6. Central electric space heating (Option S)	November-March	\$ 4.00

Total monthly credit shall not exceed 40 percent of the Rate Schedule RS-1 "Base Energy Charge" actually incurred for the month (if the Budget Billing Plan is selected, actual energy charges will be utilized in the calculations, not the levelized charges) and no credit will be applied to reduce the Minimum bill specified on Rate Schedule RS-1.

Note: Option C or Option S (listed below) may be selected for either central air conditioning or heating systems. If both appliance types are participating in the program, the same option must be selected.

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INTERRUPTION SCHEDULES FOR ELECTRICAL APPLIANCES

The Customer's participating electrical appliances will be interrupted only during the following periods except as noted below:

~~April 1 through October 31: 2 p.m. to 10 p.m.~~

~~November 1 through March 31: 5 a.m. to 11 a.m.~~

~~4 p.m. to 10 p.m.~~

The interruption schedules available for each appliance are as follows:

~~1. Conventional electric water heating equipment may be interrupted up to, but not to exceed, 240 minutes per day.~~

~~2. Central electric air conditioning equipment may be interrupted under one of the following options selected by the Customer:~~

~~Option C equipment may be interrupted an accumulated total of 15 minutes during any 30 minute period with a cumulative interruption time of up to 180 minutes per day. If normal operation of the Program is not able to provide sufficient demand reduction to divert an emergency situation, central electric air conditioners may be interrupted for 17.5 minutes during any 30 minute period with a cumulative interruption time of up to 210 minutes per day.~~

~~Option S equipment may be interrupted up to, but not to exceed, 180 minutes per day.~~

~~3. Swimming pool pump equipment may be interrupted up to, but not to exceed, 240 minutes per day.~~

~~4. Central electric space heating equipment may be interrupted under one of the following options selected by the Customer:~~

~~Option C equipment may be interrupted an accumulated total of 15 minutes during any 30 minute period with a cumulative interruption time of up to 180 minutes per day.~~

~~Option S equipment may be interrupted up to, but not to exceed, 180 minutes per day.~~

The limitations on interruptions of electrical equipment shall not apply during emergencies on the Company's system or to interruptions caused by force majeure or other causes beyond the control of the Company.

TERM OF SERVICE:

During service under this Rate Schedule, a Customer may discontinue service by giving the Company seven (7) days advance notice. If, upon seven (7) days advance notice, the Customer requests to change interruption options, the selection of electrical appliances connected to the load management equipment, or have one or more appliances removed from participation in the program on or subsequent to April 1, 2003, then the Customer will be ineligible to participate further in the program.

SPECIAL PROVISIONS

~~1. The Company shall not be required to install load management equipment if the installation cannot be economically justified for reasons such as: excessive installation costs, oversized/undersized heating or cooling equipment or abnormal utilization of equipment, including vacation or other limited occupancy residences.~~

~~2. Billing under this Rate Schedule will commence upon the installation and completion of required inspections of the load management equipment.~~

~~3. Multiple units of any particular appliance type must all be connected with load management equipment to qualify for the credit attributable to that appliance type. In such circumstances, only a single credit for that appliance type will be applied. Pool sweeps, when coupled with pool pumps, are included in this category.~~

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- ~~4. Installation of the load management equipment at the Customer's home is to be the sole responsibility of a licensed, independent contractor. The Customer agrees that the Company shall not be liable for any damages or injuries that may occur as a result of the interruption or restoration of electric service pursuant to the terms of this schedule.~~
- ~~5. The following types of electric water heaters are ineligible for participation in the program: solar water heaters, heat recovery units and heat pump water heaters.~~
- ~~6. If the Company determines that the Customer no longer uses one or more of the appliances signed up for program participation, then the Company has the right to remove the appropriate load management equipment and to discontinue the appropriate credits.~~
- ~~7. The Customer shall give the Company and the licensed, independent contractor reasonable access for installing, maintaining, testing and removing the Company's load management equipment, and for verifying that the equipment effectively controls the Customer's appliances as intended by this schedule.~~
- ~~8. If the Company determines that the effect of equipment interruptions has been offset by the Customer's use of supplementary or alternative electrical equipment, then service under this schedule may be discontinued and the Customer billed for all prior Monthly Credits received under this Rate Schedule over a period not to exceed six (6) months.~~
- ~~9. If the Company determines that its load management equipment on the Customer's premises has been rendered ineffective by mechanical, electrical or other devices or actions ("tampering"), then the Company may discontinue the Customer's participation in the program and bill for all expenses involved in removal of the load management equipment, plus applicable investigative charges. The Company may rebill all prior Monthly Credits received by the Customer from an established tampering date. If such a date cannot be established, then rebilling of the Monthly Credits shall be for the lesser of the number of months receiving service under this Rate Schedule or the previous twelve (12) months.~~
- ~~10. Service under this Rate Schedule is applicable only to eligible electrical equipment that was installed at the designated premises as of April 1, 2003. Installation of any new (but not replacement) electrical appliances on or subsequent to April 1, 2003 will not be eligible for service under this Rate Schedule.~~
- ~~11. Service under this Rate Schedule may not be combined with any other Residential Load Management Program or any other program with a provision for crediting on the Customer's monthly bill for eligible electrical appliances connected to load management equipment which may be offered by FPL in the future.~~

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