# Draft Phase II Report

# Electric Cost of Service Study

City of Green Cove Springs, Florida



July 2023



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**DRAFT** 

July \_\_\_, 2023

City of Green Cove Springs 321 Walnut Street Green Cove Springs, Florida 32043 Florida Municipal Power Agency 8553 Commodity Circle Orlando, Florida 32819

Subject: Electric Cost of Service Study – Phase II

Ladies and Gentlemen:

In keeping with the provisions of the professional services agreement between the Florida Municipal Power Agency (FMPA) on behalf of the City of Green Cove Springs, Florida (the City) and Leidos Engineering, LLC, (the Consultant) and the direction provided by the City management and staff and FMPA, Phase I of the Electric Cost of Service Study (the Report) has been completed. The Report addresses the projected financial operations of the City's electric system (Electric System) for the fiscal years ending September 30, 2023 through 2032. We have summarized our assumptions and the results of our analyses and conclusions in this Report, which we hereby submit for your consideration. This Report summarizes the basis for the overall rate increases for electric service that are projected to be necessary to meet the projected revenue requirements in the next ten years.

In preparing the Electric Cost of Service Study, the Consultant relied upon historical and projected data for the development of operating revenues, operating expenses, and capital requirements. Historical data were obtained from various monthly reports, the City's Comprehensive Annual Financial Reports, actual customer billing records, and analyses and discussions with members of the City management and staff. Projected data were, in part, derived from the Electric System's current forecast of demand and energy requirements, the Electric System Operating Budget for Fiscal Year 2023 (the Budget), the 2022 Long Range Plan, and detailed information and data compiled and provided by the City and FMPA.

The projected costs and revenues used in this Report are for the fiscal years ending September 30, 2023 through 2032, and have been developed using the City's Budget as a basis for the projected costs, along with projections provided by FMPA. Such costs and revenues, as initially reflected in the Budget, were adjusted for known or anticipated changes.

#### SUMMARY OF FINDINGS

#### **ADEQUACY OF EXISTING RATES**

The various adjustments, assumptions and considerations are discussed in Section 2 regarding the projected number of customers, sales, and in Section 3 regarding the projected revenues and expenditures. In the fiscal years ending September 30, 2023 through 2032, the revenue requirements proposed herein include Operation and Maintenance expenses, a transfer to the City's General Fund,

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capital improvement expenditures, the payment of principal and interest on outstanding and future indebtedness, and an allowance for contingencies and reserves. Based on the foregoing, the Electric System revenue requirements for fiscal years ending September 30, 2023 through 2032 and the projected revenues, assuming the existing rates, are summarized on the following table:

	Projected Fiscal Year (\$000)									
Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Revenue Requirements	\$22,150	\$19,403	\$19,649	\$20,171	\$19,197	\$21,601	\$20,517	\$32,985	\$22,873	\$24,091
Existing Rate Revenue	15,142	13,576	14,710	15,144	15,664	16,154	16,870	17,779	18,336	18,908
Loan Proceeds	3,000	3,000	2,000	1,500	0	1,500	0	10,000	0	0
Other Revenue	3,178	662	709	960	994	1,426	1,481	1,540	1,026	1,055
Difference	(\$831)	(\$2,165)	(\$2,230)	(\$2,567)	(\$2,540)	(\$2,521)	(\$2,166)	(\$3,666)	(\$3,511)	(\$4,128)
Cumulative % of Base and BPCA Revenue [1]	-5.5%	-15.9%	-15.2%	-17.0%	-16.2%	-15.6%	-12.8%	-20.6%	-19.1%	-21.8%
Base Rate Increase	7.0%	7.0%	7.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Overall Rate Increase Cumulative % of Base	4.8%	5.5%	5.2%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
and BPCA Revenue [2]	-0.7%	-5.4%	-3.4%	1.0%						

<sup>[1]</sup> Without Rate Increases

As shown above, the existing rates produce revenues that are less than the projected revenue requirements in the fiscal years ending September 30, 2023 through 2032. Annual overall rate increases of approximately 5% are projected to be needed in the fiscal years 2023 through 2025, followed by an overall rate increase of approximately 4% in fiscal year 2026. The overall percent increases include the Bulk Power Cost Adjustment (BPCA) revenues. These increases in base rates will result in overall increases in customers' bills of approximately 4% to 5% per year. Section 6 of the Report presents four proposed rate options that are projected to recover the revenue requirements.

#### CONCLUSIONS

Based upon the results of our studies and analyses as summarized in this Report, which should be read in its entirety in conjunction with the following, and upon the numerous underlying assumptions and considerations relied upon in making such analyses, and the data and information provided by the City's management and staff and FMPA, we are of the opinion that:

- (i) The City's financial records and data provide a good basis for conducting the Cost of Service Study;
- (ii) The existing rates produce revenues that are less than the projected revenue requirements in the fiscal years ending September 30, 2023 through 2032;

<sup>[2]</sup> With Rate Increases. The goal is to recover the shortfall in revenues by 2026.

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- (iii) Annual overall rate increases of approximately 5% are projected to be needed in the fiscal years 2023 through 2025, followed by an overall rate increase of approximately 4% in fiscal year 2026;
- (iv) The City should consider adopting one of the four proposed rate options in Section 6 of the Report that are projected to recover the revenue requirements; and
- (v) The City should continue to monitor the cost of purchased power and current market conditions and should make adjustments, if necessary, to its Bulk Power Cost Adjustment to reflect such costs and conditions and to minimize the potential to under recover or over recover its purchased power costs.

We want to take this opportunity to express our appreciation for the spirited cooperation and valuable assistance given us throughout the course of this study by each member of the City management and staff, along with the staff of FMPA.

Respectfully submitted,

LEIDOS ENGINEERING, LLC

# **Electric Cost of Service Study**

# City of Green Cove Springs, Florida

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# Section 1 INTRODUCTION, PURPOSE, AND SCOPE

# Introduction

The City of Green Cove Springs (City), located in Northeast Florida, operates a transmission and distribution only utility consisting of facilities that provide electric service to approximately 4,500 customers. As a member of the Florida Municipal Power Agency (FMPA), the City currently meets its electric system load requirements through power supply contracts with FMPA and participation in the St. Lucie Nuclear Power Plant Project. Power is delivered through the City's Chapman substation by 230 kV transmission lines owned by Florida Power & Light Company (FPL).

Leidos Engineering, LLC, (the Consultant or the firm) conducted this Electric Cost of Service Study (Study), which relied upon historical and projected data for the development of operating revenues, operating expenses, and capital requirements. Historical data was obtained from various monthly reports, annual financial reports, actual billing records, analyses, and discussions with members of the management and staff of the City. Projected data was, in part, derived from historical data adjusted for current economic conditions, the Operating Budget for Fiscal Year ending September 30, 2023, the Capital Improvement Plan for Fiscal Years 2023 through 2032, the City's demand and energy forecasts, the various contracts, and the direction and instructions provided by the City, and other appropriate sources.

# **Purpose**

The primary purposes of the Study are:

- 1. To determine the estimated annual revenue requirements for the Fiscal Year ending September 30, 2023, as adjusted for known changes (the Test Year); and Fiscal Years ending September 30, 2024 through 2032 (Study Period).
- 2. To test the adequacy of the existing rates on a system-wide basis for the Fiscal Years 2023 through 2032;
- 3. To prepare a cost of service analysis to estimate the cost of providing electric service by customer class;
- 4. To adjust rate levels, if necessary, in order to recover the cost of providing electric service, and to reflect the policies established by the City; and
- 5. To continue to recover periodically the costs of purchased power.

# Scope

The overall scope of services of the Study provides for (i) the development of revenue requirements for the Test Year and Study Period; (ii) the development of proposed rate



options and rate structures that are designed to recover the revenue requirements for the Test Year and Study Period which reflect the City's policy and industry practices; and (iii) the development of comparisons of typical bills for electric service calculated using the existing and proposed rate options and the rates charged by neighboring private and public electric utilities.

The Electric Rate Study consists of two parts or phases, the results of which are presented in this report. Working closely with management and staff, Phase I activities include, among other things, (i) obtaining and reviewing historical billing data, (ii) reconciling such data, (iii) identifying the proper sales forecast to use for purposes of projecting rate revenues and costs (iv) projecting billing determinants in order to calculate the effect on revenues based on revised rates, (v) preparing projections of revenues by major customer class, (vi) developing projected annual revenue requirements for the Test Year and Study Period, (vii) preparing a comparison of the City's existing rates and the rates of other utilities, and (viii) preparing a Phase I report.

Phase II activities include (i) incorporating any necessary revisions to the revenue requirements after reviewing the Phase I results with the City, (ii) the affirmation of City policies and direction, (iii) the allocation of costs, (iv) the design of proposed rate options, and (v) the preparation of a final report.

# Section 2 ENERGY REQUIREMENTS AND CUSTOMER STATISTICS

# General

The development of an accurate forecast of future power and energy requirements, sales, customers, and customer usage characteristics, is essential in the evaluation of the adequacy of electric rates and rate structures. This section summarizes the various factors considered and utilized in the development of the City's near term future power and energy requirements.

The estimates of energy and demand requirements developed for inclusion in this Study were based on historical sales, customers, and customer usage characteristics.

# **Energy Requirements**

# **Historical Energy Sales**

Historical electric energy sales are based on information provided by the City and FMPA and checked for reasonableness based on historical growth, usage patterns, and weather.

Based on information provided by the City and FMPA, the following is a summary of Table 2-1 setting forth the historical number of customers and energy sales.

Historical Number of Customers										
Fiscal Year	Residential	Commercial City		Resale	Total					
2020	3,542	691	86	1	4,320					
2021	3,624	700	88	1	4,413					
2022	3,687	707	87	1	4,482					

Historical Energy Sales (MWh)										
Fiscal Year Residential		Commercial	City	Resale	Total					
2020	49,931	50,900	3,786	3,129	107,746					
2021	50,492	52,520	3,873	3,256	110,141					
2022	51,199	50,325	4,210	3,175	108,909					



# **Historical and Projected Demand**

The historical system peak demands for the fiscal years ended September 30, 2020, 2021 and 2022 were 25.9, 27.6 and 27.9 MW, respectively. For purposes of this Study, projections of system peak demand are based on the FMPA 2023 Load Forecast, for the Base Case and the Long Range Plan for the High Case, as follows:

System Peak Demand (MW)											
Fiscal Year	Base Case	High Case									
2023	26.8	29.1									
2024	27.3	30.7									
2025	28.1	33.5									
2026	29.0	35.2									
2027	29.9	36.8									
2028	30.9	38.4									
2029	32.2	40.1									
2030	33.4	41.7									
2031	34.2	43.3									
2032	35.0	45.0									

# **Projected Energy Sales**

The monthly system historical and projected energy sales are detailed in Table No. 2-1. The following tabulation is an annual summary of the projected energy sales for fiscal years 2023 through 2032 for the Base Case and the High Case:

Total E	Energy Sales	(MWh)
Fiscal Year	Base Case	High Case
2023	110,529	119,046
2024	113,360	125,183
2025	116,352	133,467
2026	119,995	139,603
2027	123,750	145,740
2028	128,469	151,878
2029	133,357	158,015
2030	138,524	164,151
2031	142,154	170,289
2032	145,871	176,426

# **Projected Average Number of Customers**

An integral part of the forecasting process is the average number of customers the City expects to serve by major customer class. The detailed historical and projected customers are set forth in Table No. 2-1. The following is a summary of the projected average number of customers used as a basis for this Study:

Average	Number of C	ustomers
Fiscal Year	Base Case	High Case
2023	4,614	4,970
2024	4,756	5,252
2025	4,896	5,616
2026	5,093	5,925
2027	5,285	6,224
2028	5,540	6,549
2029	5,795	6,867
2030	6,050	7,169
2031	6,190	7,415
2032	6,328	7,653

## **Purchased Power**

The City purchases capacity and energy requirements from the FMPA All Requirements Project and is a Participant in the FMPA St. Lucie Nuclear Project.

# **Energy Losses**

The loss factors utilized in developing the projected energy requirements for the Test Year are 4.0 percent of annual energy requirements and 4.1 percent of energy sales. This factor is used to take into account transmission and distribution losses and unaccounted for energy and demand.

# **Summary of Projected Demand and Energy Requirements**

The following tabulation sets forth the projected Test Year annual peak demand at the generation level, energy requirements and the system load factor used in this Study:

	Test Ye	ar 2023
Description	Base Case	High Case
System Peak Demand (MW)	26.8	29.1
Annual Energy Sales (MWh)	110,529	119,046
Losses (MWh)	4,561	4,960
Annual Energy Requirements (MWh)	115,090	124,006
Annual System Load Factor (%)	49.0%	48.6%
Load Factor = MWh / MW / 8,760 Hours		

# **Customer Statistics**

As shown on Table No. 2-1, the historical number of customers and energy sales have been relatively stable. However, the number of residential and commercial customers and energy sales are projected to grow significantly over the next ten years.

Projected customer statistics by major rate classification are set forth on Table No. 2-1 and No. 2-2. Table No. 2-1 sets forth for fiscal years ending September 30, 2020 through 2023 the historical and projected number of customers and energy sales. Table No. 2-2 sets forth the projected annual billing determinants by major rate classes for Test Year 2023. The projected average annual number of customers and annual energy sales for the fiscal year ending September 30, 2023 incorporate the following assumptions:

- i. continuation of recent historical sales and/or usage characteristics for existing customers;
- ii. projected new growth in residential and commercial customers and sales, including The Rookery development;
- iii. continuation of past, present, and projected conservation and demand-side management programs (if any); and
- iv. continuation of the existing regulatory structure.

Any departure from those assumptions (e.g., change in economic activity) could have a material adverse effect on energy sales and revenues.

As derived from Table No. 2-1 and No. 2-2, the projected fiscal year 2023 composition of the City's customers and associated energy sales by major rate classification is tabulated below for the Base Case:

	Te	Test Year 2023 - Base Case								
	Average		Annual							
	Number of	Percent	MWh	Percent						
Customer Class	Customers	of Total	Sales	of Total						
Residential	3,808	82.5%	53,397	48.3%						
Commercial	718	15.6%	50,016	45.3%						
City	87	1.9%	3,941	3.6%						
Resale	1	0.0%	3,175	2.9%						
Total Customers and MWh Sales	4,614	100.0%	110,529	100.0%						

For the High Case, the projected fiscal year 2023 customers and energy sales are as follows:

	Test Year 2023 - High Case								
	Average		Annual						
	Number of	Percent	MWh	Percent					
Customer Class	Customers	of Total	Sales	of Total					
Residential	4,108	82.7%	57,634	48.4%					
Commercial	773	15.6%	53,984	45.3%					
City	87	1.8%	4,253	3.6%					
Resale	1	0.0%	3,175	2.7%					
Total Customers and MWh Sales	4,970	100.0%	119,046	100.0%					

#### **Electric Cost of Service Study**

# Historical and Projected Customers Fiscal Years 2020-2023

Ln. No.		Oct	Nov	Dec	Jan	Feb	Mar	Apr	Mav	Jun	Jul	Aug	Sep	Total	Average
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(1)	(m)	(n)	(0)
	Historical FY 2020														
1	Residential	3,510	3,512	3,518	3,509	3,534	3,545	3,535	3,553	3,570	3,574	3,578	3,571	42,509	3,542
	Commercial														
2	General Service Non-Demand	570	543	545	543	547	550	552	547	551	555	548	539	6,590	549
3	General Service Demand	129	142	141	139	137	139	140	142	144	145	147	151	1,696	141
4	Subtotal Commercial	699	685	686	682	684	689	692	689	695	700	695	690	8,286	691
5	City	84	85	85	86	85	86	86	86	87	87	87	87	1,031	86
6	<b>Subtotal Ultimate Customers</b>	4,293	4,282	4,289	4,277	4,303	4,320	4,313	4,328	4,352	4,361	4,360	4,348	51,826	4,319
7	Resale	1	1	1	1	1	1	1	1	1	1	1	1	12	1
8	FY 2020 TOTAL CUSTOMERS	4,294	4,283	4,290	4,278	4,304	4,321	4,314	4,329	4,353	4,362	4,361	4,349	51,838	4,320
	Historical FY 2021														
9	Residential	3,589	3,584	3,607	3,585	3,614	3,644	3,635	3,641	3,639	3,640	3,657	3,656	43,491	3,624
	Commercial														
10	General Service Non-Demand	536	538	547	545	545	545	554	554	545	550	546	547	6,552	546
11	General Service Demand	154	155	153	153	151	152	152	153	158	160	156	154	1,851	154
12	Subtotal Commercial	690	693	700	698	696	697	706	707	703	710	702	701	8,403	700
13	City	87	87	87	88	89	90	88	88	87	87	88	88	1,054	88
14	<b>Subtotal Ultimate Customers</b>	4,366	4,364	4,394	4,371	4,399	4,431	4,429	4,436	4,429	4,437	4,447	4,445	52,948	4,412
15	Resale	1	1	1	1	1	1	1	1	1	1	1	1	12	1
16	FY 2021 TOTAL CUSTOMERS	4,367	4,365	4,395	4,372	4,400	4,432	4,430	4,437	4,430	4,438	4,448	4,446	52,960	4,413

#### **Electric Cost of Service Study**

# Historical and Projected Customers Fiscal Years 2020-2023

Ln.		0.4	NT.	D.	<b>T</b>	г	M	<b>A</b>	34.	<b>T</b>	T 1		G.	TD . 4 . 1	•
No.	Customer Classes (a)	Oct (b)	Nov (c)	Dec (d)	Jan (e)	Feb (f)	Mar (g)	Apr (h)	May (i)	Jun (j)	Jul (k)	(1)	Sep (m)	Total (n)	Average (o)
	,		(-)	(-)	(-)	(-)	(8)	()	(-)	<b>9</b> /	()	(-)	()	()	(-)
	Historical FY 2022	_													
17	Residential	3,646	3,662	3,658	3,652	3,656	3,727	3,678	3,686	3,720	3,739	3,712	3,712	44,248	3,687
	Commercial														
18	General Service Non-Demand	551	549	558	552	552	555	550	544	549	546	542	548	6,596	550
19	General Service Demand	154	154	154	158	158	156	162	156	160	159	158	156	1,885	157
20	Subtotal Commercial	705	703	712	710	710	711	712	700	709	705	700	704	8,481	707
21	City	88	88	88	89	88	87	87	87	87	88	85	86	1,048	87
22	Subtotal Ultimate Customers	4,439	4,453	4,458	4,451	4,454	4,525	4,477	4,473	4,516	4,532	4,497	4,502	53,777	4,481
23	Resale	1	1	1	1	1	1	1	1	1	1	1	1	12	1
24	FY 2022 TOTAL CUSTOMERS	4,440	4,454	4,459	4,452	4,455	4,526	4,478	4,474	4,517	4,533	4,498	4,503	53,789	4,482
	Projected FY 2023 - Base Case														
25	Residential	3,765	3,782	3,778	3,771	3,776	3,849	3,798	3,807	3,842	3,861	3,833	3,833	45,695	3,808
	Commercial														
26	General Service Non-Demand	559	557	566	560	560	563	558	552	557	554	550	556	6,695	558
27	General Service Demand	157	157	157	161	161	159	165	159	163	162	161	159	1,923	160
28	Subtotal Commercial	716	714	723	721	721	722	723	711	720	716	711	715	8,618	718
29	City	88	88	88	89	88	87	87	87	87	88	85	86	1,048	87
30	<b>Subtotal Ultimate Customers</b>	4,570	4,584	4,589	4,582	4,585	4,658	4,609	4,605	4,649	4,666	4,630	4,635	55,361	4,613
31	Resale	1	1	1	1	1	1	1	1	1	1	1	1	12	1
32	FY 2023 TOTAL CUSTOMERS	4,571	4,585	4,590	4,583	4,586	4,659	4,610	4,606	4,650	4,667	4,631	4,636	55,373	4,614

**Electric Cost of Service Study** 

#### <u>Historical and Projected Energy Sales (MWh)</u> Fiscal Years 2020-2023

Ln.		0.4	<b>N</b> Y		·		3.5						G	m . 1	
No.	Customer Classes (a)	Oct (b)	Nov (c)	Dec (d)	(e)	Feb (f)	Mar (g)	Apr (h)	May (i)	Jun (j)	Jul (k)	(1)	Sep (m)	Total (n)	Average (o)
	(u)	(0)	(0)	(u)	(0)	(1)	(6)	(11)	(1)	07	(R)	(1)	(111)	(11)	(0)
	Historical FY 2020														
1	Residential	4,796	3,573	3,009	3,676	3,617	3,509	3,676	3,602	4,393	5,223	5,517	5,340	49,931	4,161
1	Residential	4,790	3,373	3,009	3,070	3,017	3,309	3,070	3,002	4,393	3,223	3,317	3,340	49,931	4,101
	Commercial														
2	General Service Non-Demand	984	718	536	672	682	672	638	637	771	892	931	876	9,009	751
3	General Service Demand	4,190	3,295	2,628	3,245	3,039	3,378	3,041	3,053	3,487	3,969	4,329	4,237	41,891	3,491
4	Subtotal Commercial	5,174	4,013	3,164	3,917	3,721	4,050	3,679	3,690	4,258	4,861	5,260	5,113	50,900	4,242
5	City	324	336	241	303	342	301	333	305	315	349	321	316	3,786	316
6	Subtotal Sales to Ultimate Customers	10,294	7,922	6,414	7,896	7,680	7,860	7,688	7,597	8,966	10,433	11,098	10,769	104,617	8,718
7	Resale	283	214	207	250	245	251	220	241	267	288	347	316	3,129	261
8	FY 2020 TOTAL ENERGY SALES	10,577	8,136	6,621	8,146	7,925	8,111	7,908	7,838	9,233	10,721	11,445	11,085	107,746	8,979
	Historical FY 2021														
9	Residential	4,378	3,886	3,684	4,326	4,194	3,272	3,329	3,629	4,533	4,499	5,401	5,361	50,492	4,208
	Commercial														
10	General Service Non-Demand	734	642	590	624	589	551	575	658	809	779	857	843	8,251	688
11	General Service Demand	3,944	3,537	4,237	3,144	3,193	3,104	3,258	3,510	4,162	3,757	4,116	4,307	44,269	3,689
12	Subtotal Commercial	4,678	4,179	4,827	3,768	3,782	3,655	3,833	4,168	4,971	4,536	4,973	5,150	52,520	4,377
13	City	311	297	317	313	283	346	298	311	368	324	363	342	3,873	323
14	Subtotal Sales to Ultimate Customers	9,367	8,362	8,828	8,407	8,259	7,273	7,460	8,108	9,872	9,359	10,737	10,853	106,885	8,907
15	Resale	276	242	259	299	292	207	233	220	285	274	314	355	3,256	271
16	FY 2021 TOTAL ENERGY SALES	9,643	8,604	9,087	8,706	8,551	7,480	7,693	8,328	10,157	9,633	11,051	11,208	110,141	9,178

**Electric Cost of Service Study** 

#### <u>Historical and Projected Energy Sales (MWh)</u> Fiscal Years 2020-2023

Clustomer Classes   Oct   Nov   Oct   Glass   Feb   Mare   Apr   Apr   May   Jun   Jun   Agr   New   Sep   Total   Agraes   Agraes   Total	Ln.															
Historical FV 2022   Residential	No.	Customer Classes					Feb	Mar							Total	
Residential		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(1)	(m)	(n)	(o)
Commercial   Com		Historical FY 2022														
Seminal Service Non-Demand   Seminal Service Non-Demand   Seminal Service Demand   Seminal Ser	17	Residential	4,505	3,131	3,493	3,759	4,434	3,622	3,256	3,519	5,054	5,371	5,759	5,296	51,199	4,267
Seminal Service Non-Demand   Seminal Service Non-Demand   Seminal Service Demand   Seminal Ser		Commercial														
Subtotal Commercial         4,974         3,277         3,536         3,646         3,619         3,881         3,779         3,899         4,999         4,651         4,949         5,115         50,325         4,194           21 City         384         542         335         308         281         327         290         307         379         347         341         369         4,210         351           22 Subtotal Sales to Ultimate Customers         9,863         6,950         7,364         7,713         8,334         7,830         7,325         7,725         10,432         10,369         11,049         10,780         105,734         8,811           23 Resale         266         200         242         275         264         246         186         205         306         326         318         341         3,175         265           24 FY 202 TOTAL ENERGY SALES         10,129         7,150         7,606         7,988         8,598         8,076         7,511         7,930         10,738         10,695         11,367         11,121         108,909         9,076           Projected FY 2023 - Base Case           25 Residential         4,698         3,265         3,643 <th>18</th> <th>General Service Non-Demand</th> <th>823</th> <th>599</th> <th>596</th> <th>592</th> <th>620</th> <th>618</th> <th>598</th> <th>643</th> <th>883</th> <th>833</th> <th>884</th> <th>888</th> <th>8,577</th> <th>715</th>	18	General Service Non-Demand	823	599	596	592	620	618	598	643	883	833	884	888	8,577	715
20         Subtotal Commercial         4,974         3,277         3,536         3,646         3,619         3,881         3,779         3,899         4,999         4,651         4,949         5,115         50,325         4,194           21         City         384         542         335         308         281         327         290         307         379         347         341         369         4,210         351           22         Subtotal Sales to Ultimate Customers         9,863         6,950         7,364         7,713         8,334         7,830         7,325         7,725         10,432         10,369         11,049         10,780         105,734         8,811           23         Resale         266         200         242         275         264         246         186         205         306         326         318         341         3,175         265           24         FY 2022 TOTAL ENERGY SALES         10,129         7,150         7,606         7,988         8,598         8,076         7,511         7,930         10,738         10,695         11,367         11,121         108,909         9,076           Projected FY 2023 - Base Case           <	19	General Service Demand	4,151	2,678	2,940	3,054	2,999	3,263	3,181	3,256	4,116	3,818	4,065	4,227	41,748	3,479
22         Subtotal Sales to Ultimate Customers         9,863         6,950         7,364         7,713         8,334         7,830         7,325         7,725         10,432         10,369         11,049         10,780         105,734         8,811           23         Resale         266         200         242         275         264         246         186         205         306         326         318         341         3,175         265           24         FY 2022 TOTAL ENERGY SALES         10,129         7,150         7,606         7,988         8,598         8,076         7,511         7,930         10,738         10,695         11,367         11,121         108,909         9,076           Projected FY 2023 - Base Case           25         Residential         4,698         3,265         3,643         3,920         4,624         3,778         3,396         3,670         5,271         5,602         6,006         5,523         53,397         4,450           Commercial         Commercial         830         604         601         597         626         624         603         649         891         841         892         896         8,655         721	20	Subtotal Commercial	4,974	3,277	3,536	3,646	3,619	3,881	3,779	3,899	4,999		4,949		50,325	
22         Subtotal Sales to Ultimate Customers         9,863         6,950         7,364         7,713         8,334         7,830         7,325         7,725         10,432         10,369         11,049         10,780         105,734         8,811           23         Resale         266         200         242         275         264         246         186         205         306         326         318         341         3,175         265           24         FY 2022 TOTAL ENERGY SALES         10,129         7,150         7,606         7,988         8,598         8,076         7,511         7,930         10,738         10,695         11,367         11,121         108,909         9,076           Projected FY 2023 - Base Case           25         Residential         4,698         3,265         3,643         3,920         4,624         3,778         3,396         3,670         5,271         5,602         6,006         5,523         53,397         4,450           Commercial         Commercial         830         604         601         597         626         624         603         649         891         841         892         896         8,655         721	21	City	291	542	225	208	201	227	200	207	270	2.17	2/1	260	4.210	251
23 Resale         266         200         242         275         264         246         186         205         306         326         318         341         3,175         265           FY 2022 TOTAL ENERGY SALES         10,129         7,150         7,606         7,988         8,598         8,076         7,511         7,930         10,738         10,695         11,367         11,121         108,909         9,076           Projected FY 2023 - Base Case           25         Residential         4,698         3,265         3,643         3,920         4,624         3,778         3,396         3,670         5,271         5,602         6,006         5,523         53,397         4,450           Commercial         Commercial           26         General Service Non-Demand         830         604         601         597         626         624         603         649         891         841         892         896         8,655         721           27         General Service Demand         4,113         2,653         2,913         3,026         2,971         3,233         3,152         3,266         4,078         3,783         4,027         4,188         41,361	21	City	304	342	333	306	201	341	290	307	319	347	341	309	4,210	331
Projected FY 2023 - Base Case  Residential 4,698 3,265 3,643 3,920 4,624 3,778 3,396 3,670 5,271 5,602 6,006 5,523 53,397 4,450  Commercial General Service Non-Demand 830 604 601 597 626 624 603 649 891 841 892 896 8,655 721 General Service Demand 4,113 2,653 2,913 3,026 2,971 3,233 3,152 3,226 4,078 3,783 4,027 4,188 41,361 3,447  Subtotal Commercial 4,943 3,258 3,514 3,623 3,597 3,856 3,755 3,875 4,969 4,623 4,919 5,084 50,016 4,168  City 359 507 314 288 263 306 271 287 355 325 319 345 3,941 328  Subtotal Sales to Ultimate Customers 10,001 7,030 7,471 7,832 8,484 7,940 7,422 7,832 10,595 10,550 11,245 10,953 107,354 8,946  Resale 266 200 242 275 264 246 186 205 306 326 318 341 3,175 265	22	Subtotal Sales to Ultimate Customers	9,863	6,950	7,364	7,713	8,334	7,830	7,325	7,725	10,432	10,369	11,049	10,780	105,734	8,811
Projected FY 2023 - Base Case  25 Residential	23	Resale	266	200	242	275	264	246	186	205	306	326	318	341	3,175	265
Zommercial         Commercial           26 General Service Non-Demand         830         604         601         597         626         624         603         649         891         841         892         896         8,655         721           27 General Service Non-Demand         4,113         2,653         2,913         3,026         2,971         3,233         3,152         3,226         4,078         3,783         4,027         4,188         41,361         3,447           28 Subtotal Commercial         4,943         3,258         3,514         3,623         3,597         3,856         3,755         3,875         4,969         4,623         4,919         5,084         50,016         4,168           29 City         359         507         314         288         263         306         271         287         355         325         319         345         3,941         328           30 Subtotal Sales to Ultimate Customers         10,001         7,030         7,471         7,832         8,484         7,940         7,422         7,832         10,595         10,550         11,245         10,953         107,354         8,946           31 Resale         266         200         2	24	FY 2022 TOTAL ENERGY SALES	10,129	7,150	7,606	7,988	8,598	8,076	7,511	7,930	10,738	10,695	11,367	11,121	108,909	9,076
Commercial         26         General Service Non-Demand         830         604         601         597         626         624         603         649         891         841         892         896         8,655         721           27         General Service Demand         4,113         2,653         2,913         3,026         2,971         3,233         3,152         3,226         4,078         3,783         4,027         4,188         41,361         3,447           28         Subtotal Commercial         4,943         3,258         3,514         3,623         3,597         3,856         3,755         3,875         4,969         4,623         4,919         5,084         50,016         4,168           29         City         359         507         314         288         263         306         271         287         355         325         319         345         3,941         328           30         Subtotal Sales to Ultimate Customers         10,001         7,030         7,471         7,832         8,484         7,940         7,422         7,832         10,595         10,550         11,245         10,953         107,354         8,946           31         Resale	25		4 608	3 265	3 643	3 920	4 624	3 77 <b>8</b>	3 306	3 670	5 271	5 602	6,006	5 522	53 307	4.450
26 General Service Non-Demand         830 604 601 597 626 624 603 649 891 841 892 896 8,655 721           27 General Service Demand         4,113 2,653 2,913 3,026 2,971 3,233 3,152 3,226 4,078 3,783 4,027 4,188 41,361 3,447           28 Subtotal Commercial         4,943 3,258 3,514 3,623 3,597 3,856 3,755 3,875 4,969 4,623 4,919 5,084 50,016 4,168           29 City         359 507 314 288 263 306 271 287 355 325 319 345 3,941 328           30 Subtotal Sales to Ultimate Customers         10,001 7,030 7,471 7,832 8,484 7,940 7,422 7,832 10,595 10,550 11,245 10,953 107,354 8,946           31 Resale         266 200 242 275 264 246 186 205 306 326 318 341 3,175 265	23		4,098	3,203	3,043	3,920	4,024	3,776	3,390	3,070	3,271	3,002	0,000	3,323	33,391	4,430
27 General Service Demand         4,113         2,653         2,913         3,026         2,971         3,233         3,152         3,226         4,078         3,783         4,027         4,188         41,361         3,447           28 Subtotal Commercial         4,943         3,258         3,514         3,623         3,597         3,856         3,755         3,875         4,969         4,623         4,919         5,084         50,016         4,168           29 City         359         507         314         288         263         306         271         287         355         325         319         345         3,941         328           30 Subtotal Sales to Ultimate Customers         10,001         7,030         7,471         7,832         8,484         7,940         7,422         7,832         10,595         10,550         11,245         10,953         107,354         8,946           31 Resale         266         200         242         275         264         246         186         205         306         326         318         341         3,175         265	26		920	604	601	507	626	624	602	640	901	0.41	902	906	0 655	721
28         Subtotal Commercial         4,943         3,258         3,514         3,623         3,597         3,856         3,755         3,875         4,969         4,623         4,919         5,084         50,016         4,168           29         City         359         507         314         288         263         306         271         287         355         325         319         345         3,941         328           30         Subtotal Sales to Ultimate Customers         10,001         7,030         7,471         7,832         8,484         7,940         7,422         7,832         10,595         10,550         11,245         10,953         107,354         8,946           31         Resale         266         200         242         275         264         246         186         205         306         326         318         341         3,175         265																
29 City         359         507         314         288         263         306         271         287         355         325         319         345         3,941         328           30 Subtotal Sales to Ultimate Customers         10,001         7,030         7,471         7,832         8,484         7,940         7,422         7,832         10,595         10,550         11,245         10,953         107,354         8,946           31 Resale         266         200         242         275         264         246         186         205         306         326         318         341         3,175         265																
30 Subtotal Sales to Ultimate Customers 10,001 7,030 7,471 7,832 8,484 7,940 7,422 7,832 10,595 10,550 11,245 10,953 107,354 8,946 31 Resale 266 200 242 275 264 246 186 205 306 326 318 341 3,175 265	20	Subtotal Commercial	1,713	3,230	3,311	3,023	3,371	3,030	3,733	3,073	1,707	1,025	1,717	3,001	30,010	1,100
31 <b>Resale</b> 266 200 242 275 264 246 186 205 306 326 318 341 3,175 265	29	City	359	507	314	288	263	306	271	287	355	325	319	345	3,941	328
	30	Subtotal Sales to Ultimate Customers	10,001	7,030	7,471	7,832	8,484	7,940	7,422	7,832	10,595	10,550	11,245	10,953	107,354	8,946
32 <b>FY 2023 TOTAL ENERGY SALES</b> 10,267 7,230 7,713 8,107 8,748 8,186 7,608 8,037 10,901 10,876 11,563 11,294 110,529 9,211	31	Resale	266	200	242	275	264	246	186	205	306	326	318	341	3,175	265
	32	FY 2023 TOTAL ENERGY SALES	10,267	7,230	7,713	8,107	8,748	8,186	7,608	8,037	10,901	10,876	11,563	11,294	110,529	9,211

**Electric Cost of Service Study** 

# **Projected Annual Billing Determinants Fiscal Year Ending September 30, 2023**

			Billing	Energy
Ln.		Number	Demand	Sales
No.	<b>Customer Class Description</b>	of Bills	(kW)	(kWh)
	(a)	(b)	(c)	(d)
	Residential Service			
1	Energy < 1,000 kWh	- -	0	39,513,780
2	Energy > 1,000 kWh	-	0	13,883,220
3	Total Residential	45,695	0	53,397,000
	Commercial Service			
4	General Service Non-Demand	6,695	0	8,655,000
5	General Service Demand	1,923	135,167	41,361,000
6	Total Commercial	8,618	135,167	50,016,000
7	City	1,048		3,941,000
8	<b>Total Ultimate Customers</b>	55,361	135,167	107,354,000
9	Resale	12		3,175,000
10	TOTAL FISCAL YEAR 2023	55,373	135,167	110,529,000

# Section 3 REVENUE REQUIREMENTS

# General

The various components of costs associated with the operation, maintenance, funding of improvements, renewal and replacement of facilities, and assurance of the adequacy and continuity of reliable service to customers are generally referred to as the revenue requirements of a municipally owned and operated utility. The determination of the revenue requirements as they relate to the City, consistent with the methods of other publicly owned utilities, includes the various generalized cost components described below.

*Operation and Maintenance Expenses*: These expenses include the cost of purchased power, labor, materials, supplies, transportation, services, and other expenses, which are necessary to the operation and maintenance of the City's Electric Utility. These expenses do not include an allowance for depreciation or replacement of capital assets, any monies for the payment of interest on indebtedness or any monies transferred to a Reserve Fund.

**Debt Service**: Included in the debt service component of cost is the annual principal of and interest on bonds and related costs/transfers payable from the net revenues.

*Capital Improvements*: These expenditures are for the purpose of paying the cost of construction or acquisition of necessary improvements, betterments, extensions, enlargements or additions to, or the renewal and replacement of capital assets of the system and for unusual or extraordinary repairs thereto.

Revenues Available for Other Lawful Purposes: This component of cost is paid out of revenues and includes (a) any additional capital improvements to be financed from revenues; (b) additional working cash to provide for the payment of expenses incurred in providing service prior to the receipt of revenues associated with such service; (c) the establishment of operating reserves for special purposes such as providing funds for self-insuring the facilities against certain perils and for the stabilization of rates to smooth out rate increases and minimize customer rate shock, (d) transfers of certain amounts of revenues from the earnings of the Electric Utility to the City; and (e) allowances for any other lawful purpose.

**Revenue Credits:** In the determination of projected annual costs, adjustments should be made to reflect among other things, (a) the receipt of revenues from the investment of monies, and (b) the receipt of revenues from other operating sources such as the rental of land, the use of poles and the sale of scrap. The recognition of these revenue credits reduces the overall annual revenue requirement from electric rates to ultimate customers.

**Total Annual Net Revenue Requirements**: The total of the cost components described above less other income and other operating revenues is the total annual net revenue



requirements and such total represents the amount of revenues required to be recovered through rates and charges to ultimate customers.

# **Projected Revenue Requirements**

Electric rates should be set at a level such that the revenues produced will be sufficient to meet near future revenue requirements. An important objective of a projected test year is to establish rates and rate levels that will also reflect the then current and near future costs of providing service and market conditions. Thus, it is necessary to estimate or project the various cost components over a reasonable period of time in order to determine the required rate levels. Projections must consider changes in operating practices, new facilities, increased regulatory (environmental) costs, expected changes in cost, and other factors that may affect the overall cost of operating and maintaining the utility system.

It was determined that the revenue requirements for this Electric Cost of Service Study would be predicated on the budgeted costs of the City's Electric Utility for the fiscal year ending September 30, 2023. The budgeted expenditures were used as a baseline in the development of the projections of the annual revenue requirements for the fiscal period ending September 30, 2023 through 2032. Based upon that detailed data and certain adjustments to reflect any known and anticipated changes and certain pro forma adjustments, the Consultant, together with members of the management and staff of the City, developed detailed estimates of projected expenditures for the fiscal years 2023 through 2032.

# **Assumptions and Considerations**

The development of the projected revenue requirements for the Test Year required certain assumptions and considerations in order to reflect certain known or anticipated changes and certain pro forma adjustments. The analyses, estimates and projections summarized herein have been based upon an understanding of certain contracts, agreements, regulations, statutory requirements and planned operations. In the preparation of this report, certain assumptions have been made with respect to conditions, which may occur in the future. While these assumptions are reasonable for the preparation of this study, they are dependent upon future events and actual conditions may differ from those assumed. To the extent that actual future conditions differ from those assumed herein or provided to us by others, the actual results will vary from those projected.

The major assumptions and considerations included in the development of the projected annual revenue requirements have been divided into two categories and are listed below:

#### General

1. The general economic activity will not have a major impact on the City's electric sales and the annual inflation rate will be approximately 4.0 percent.

- 2. Existing federal and state environmental laws, including the Clean Air Act Amendments of 1990, the Clean Air Interstate Rule and the Clean Air Mercury Rule, will continue to be implemented, applied and enforced, and no new laws, regulations, rules and interpretations will be imposed on the City or its wholesale suppliers resulting in more stringent environmental restrictions in the near term.
- 3. There will be no material change in the taxation of fuel used to produce electricity.
- 4. There will be no material change in the taxation of municipally-owned or municipally financed electric generation or purchased power, transmission and distribution systems.
- 5. There will be no material change in the level of federal, state or local regulation of municipally-owned utilities.
- 6. There will be no material change in the City's existing ability to import or export power over the transmission grid.
- 7. The existing form of governance and policies established by the City will continue throughout the study period.
- 8. The City will continue to be the exclusive owner and operator of the Electric Utility, including its transmission, distribution, and customer care facilities.

# **Specific**

- 1. The fiscal year period ending September 30, 2023 through 2032 revenues and expenses for the Electric Utility and the underlying assumptions included therein provide a reasonable basis and reflect normalized system operation.
- 2. As discussed in Section 2, the sales forecast was the basis for the development of the projected retail energy and demand requirements for the Test Year. It should be recognized that (a) any meaningful variances in the load characteristics of existing or new customers, and/or (b) any differences in expected initiation of service for anticipated new customers, and/or (c) differences in the expected effectiveness of the various conservation programs initiated and contemplated by the City and/or (d) any changes in federal or state legislation that permit customers to select their energy service provider may result in a distortion and/or an over or under recovery of revenue requirements for the Test Year.
- 3. Power supply costs used herein are predicated in part on cost data provided by FMPA and on the continued purchase of power supply from its wholesale supplier.
- 4. Expenses for the fiscal years 2023 through 2032 have been increased based on the 2023 Budget and an assumed inflation rate of 4.0 percent per year, except where noted in Table No. 3-1.

- 5. Projected purchased power expenses have been estimated based on an analysis of purchased power expenses provided by FMPA and overall increases in kWh usage based on the FMPA 2023 Load Forecast.
- 6. Debt service has been projected based on information provided by the City, as shown on Table No. 3-5.
- 7. Capital improvement expenditures have been estimated each year, based on a review of the City's Long Range Plan. Table No. 3-6 shows the detail of the planned capital expenditures, which include \$600,000 to \$800,000 per year for ongoing system capital improvements.
- 8. The amount for the Transfer to the General Fund has been based on the amount shown in the 2023 Budget.
- 9. Projected revenues from existing rates for fiscal year 2023 are calculated on a detailed analysis by customer class shown on Table No. 3-2.
- 10. Other Revenue has been projected based on the adopted fiscal year ending September 30, 2023 Budget and is set forth in Table No. 3-3.
- 11. Projected Revenues from the Bulk Power Cost Adjustment (BPCA) are based on projected costs shown on Table No. 3-4.
- 12. Projected revenues from existing rates for fiscal years 2023 through 2032 have been estimated based on the projected increases in sales consistent with the FMPA 2023 Load Forecast and projected BPCA revenues.
- 13. An allowance for replenishing Cash Reserves has been included to build the cash balance of the Electric Fund through FY 2032.

Shown on Table No. 3-1 are the various expenditures and revenues for the fiscal years ending September 30, 2023 through 2032, and the adjustments discussed herein.

# **Summary**

Based on the projected revenue requirements developed for the Base Case on Table No. 3-1, the existing rates produce revenues that are less than the cost of providing service on a system wide basis. The projected differences and projected annual rate increases are summarized as follows:

				Pro	jected Fisc	al Year (\$0	00)			
Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Revenue Requirements	\$22,150	\$19,403	\$19,649	\$20,171	\$19,197	\$21,601	\$20,517	\$32,985	\$22,873	\$24,091
Existing Rate Revenue	15,142	13,576	14,710	15,144	15,664	16,154	16,870	17,779	18,336	18,908
Loan Proceeds	3,000	3,000	2,000	1,500	0	1,500	0	10,000	0	0
Other Revenue	3,178	662	709	960	994	1,426	1,481	1,540	1,026	1,055
Difference	(\$831)	(\$2,165)	(\$2,230)	(\$2,567)	(\$2,540)	(\$2,521)	(\$2,166)	(\$3,666)	(\$3,511)	(\$4,128)
Cumulative % of Base and BPCA Revenue [1]	-5.5%	-15.9%	-15.2%	-17.0%	-16.2%	-15.6%	-12.8%	-20.6%	-19.1%	-21.8%
Base Rate Increase	7.0%	7.0%	7.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Overall Rate Increase	4.8%	5.5%	5.2%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cumulative % of Base and BPCA Revenue [2]	-0.7%	-5.4%	-3.4%	1.0%						

<sup>[1]</sup> Without Rate Increases [2] With Rate Increases

#### **Electric Cost of Service Study**

#### Summary of Projected Revenue Requirements and Existing Rate Revenues - Base Case

Fiscal Year Ending September 30

T		D 1	Adjustments to		2024 Revenue	2025 Revenue	2026	2027 Revenue	2028	2029	2030	2031 Revenue	2032 Revenue
Ln. No.	Description	Budget 2023 [1]	Budget 2023	Revenue Requirements	Requirements		Revenue Requirements	Requirements	Revenue	Revenue Requirements	Revenue Requirements	Requirements	Requirements
110.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
	(4)	(6)	(0)	(u)	(0)	(1)	(5)	(11)	(1)	0)	(K)	(1)	(III)
1	Personal Services	\$1,519,519	\$0	\$1,519,519	\$1,710,300	\$1,778,712	\$1,989,860	\$2,069,455	\$2,152,233	\$2,238,322	\$2,327,855	\$2,420,969	\$2,517,808
2	Operating Expenses	10,000,000	975 122	10 975 122	0.712.692	10 742 726	11 005 564	11 479 249	11 927 090	12 456 921	12 102 095	12 659 214	14 120 949
2	Purchase of Energy	10,000,000	875,122	10,875,122	9,713,683	10,743,736	11,095,564	11,478,248	11,837,980	12,456,831	13,192,985	13,658,214	14,139,848
3	St. Lucie Participation Materials and Supplies	786,132 300,000	(106,237)	679,895 300,000	600,399	626,259	603,072	631,590 350,958	630,638	601,703 379,596	629,863	628,011	628,011
4 5	Tree Trimming	225,000	0	225,000	312,000 234,000	324,480 243,360	337,459 253,094	263,218	364,996 273,747	379,396 284,697	394,780 296,085	410,571 307,928	426,994 320,245
5 6	Other Operating Expenses	456,821	0	456,821	475,094	,	513,861	,	555,793	578,024	,	625,191	650,199
7						494,098		534,416			601,145		
•	Total Operating Expenses	11,767,953	768,885	12,536,838	11,335,176	12,431,932	12,803,051	13,258,429	13,663,153	14,300,850	15,114,858	15,629,915	16,165,296
8	Capital Expenses	5,577,900	0	5,577,900	3,600,560	2,657,991	2,209,753	675,549	2,566,483	730,674	11,541,119	790,297	1,345,687
	Non Operating Expenses							.=					
9	Bad Debt Expense	15,000	0	15,000	15,600	16,224	16,873	17,548	18,250	18,980	19,739	20,529	21,350
10	Regulatory Assessment Fee	2,000	0	2,000	2,080	2,163	2,250	2,340	2,433	2,531	2,632	2,737	2,847
11	Cost Recovery and Allocation	282,195	0	282,195	293,483	305,222	317,431	330,128	343,333	357,067	371,349	386,203	401,651
12	Customer Service Allocation	263,544	0	263,544	274,086	285,049	296,451	308,309	320,642	333,467	346,806	360,678	375,105
13	Transfer to General Fund	850,000	0	850,000	850,000	850,000	850,000	850,000	850,000	850,000	850,000	850,000	850,000
14	Existing Debt Service	853,400	0	853,400	853,279	853,953	854,404	853,632	853,655	853,456	853,034	854,389	853,488
15	Future Debt Service	0	0	0	217,947	217,947	581,191	581,191	581,191	581,191	1,307,680	1,307,680	1,307,680
16	Replenish Reserves	0	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
17	Total Non Operating Expenses	2,266,139	250,000	2,516,139	2,756,474	2,780,558	3,168,600	3,193,148	3,219,504	3,246,692	4,001,241	4,032,217	4,062,121
18	TOTAL REVENUE REQUIREMENTS	21,131,511	1,018,885	22,150,396	19,402,511	19,649,193	20,171,264	19,196,581	21,601,373	20,516,537	32,985,073	22,873,397	24,090,913
	Projected Revenue												
19	Existing Base Rate Revenues	11,000,000	(632,808)	10,367,192	10,628,689	10,905,168	11,244,438	11,592,152	12,029,725	12,482,264	12,958,750	13,289,578	13,627,316
20	Bulk Power Cost Adjustment Revenues	4,000,000	774,853	4,774,853	2,947,360	3,804,710	3,899,838	4,071,375	4,123,855	4,387,445	4,820,635	5,046,467	5,280,530
21	Rate Stabilization Fund	0	0	0	0	0	0	0	0	0	0	0	0
22	Other Revenue	6,131,511	46,200	6,177,711	3,661,809	2,709,193	2,459,806	993,522	2,926,414	1,481,087	11,540,184	1,026,222	1,054,793
23	TOTAL REVENUES	21,131,511	188,244	21,319,755	17,237,858	17,419,071	17,604,082	16,657,049	19,079,994	18,350,796	29,319,569	19,362,267	19,962,639
24	Revenue Surplus or (Deficiency)	\$0	(\$830,641)	(\$830,641)	(\$2,164,653)	(\$2,230,122)	(\$2,567,182)	(\$2,539,532)	(\$2,521,379)	(\$2,165,741)	(\$3,665,504)	(\$3,511,130)	(\$4,128,274)
	Surplus or (Deficiency) as a % of:												
25	Existing Base Rate Revenues			-8.0%	-20.4%	-20.5%	-22.8%	-21.9%	-21.0%	-17.4%	-28.3%	-26.4%	-30.3%
26	Existing Base Rate and Fuel Revenues			-5.5%	-15.9%	-15.2%	-17.0%	-16.2%	-15.6%	-12.8%	-20.6%	-19.1%	-21.8%
27	Annual Base Rate Increase			7.0%	7.0%	7.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
28	Annual Overall Rate Increase			4.8%	5.5%	5.2%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
29	Proposed Base Revenues			\$11,092,895	\$12,168,786	\$13,359,300	\$14,463,667	\$14,910,929	\$15,473,777	\$16,055,876	\$16,668,778	\$17,094,319	\$17,528,751
30	Surplus or Deficiency			(\$104,937)	(\$624,556)	\$224,010	\$652,047	\$779,245	\$922,673	\$1,407,871	\$44,524	\$293,611	(\$226,839)
31	Cumulative			(\$104,937)	(\$729,493)	(\$505,483)	\$146,564	\$925,809	\$1,848,481	\$3,256,352	\$3,300,876	\$3,594,487	\$3,367,648

<sup>[1]</sup> Based on the 2023 Budget provided by the City.

#### **Electric Cost of Service Study**

#### Summary of Projected Revenue Requirements and Existing Rate Revenues - High Case

Fiscal Year Ending September 30

Ln. No.	Description	Budget 2023 [1]	Adjustments to Budget 2023	Test Year Revenue Requirements		2025 Revenue Requirements	2026 Revenue Requirements		2028 Revenue Requirements	2029 Revenue Requirements		2031 Revenue Requirements	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(1)	(m)
1	Personal Services Operating Expenses	\$1,519,519	\$0	\$1,519,519	\$1,710,300	\$1,778,712	\$1,989,860	\$2,069,455	\$2,152,233	\$2,238,322	\$2,327,855	\$2,420,969	\$2,517,808
2	Purchase of Energy	10,000,000	1,341,586	11,341,586	10,214,454	11,681,302	12,267,901	12,894,113	13,457,505	14,327,960	15,329,922	16,126,369	16,964,194
3	St. Lucie Participation	786,132	(106,237)	679,895	600,399	626,259	603,072	631,590	630,638	601,703	629,863	628,011	628,011
4	Materials and Supplies	300,000	0	300,000	312,000	324,480	337,459	350,958	364,996	379,596	394,780	410,571	426,994
5	Tree Trimming	225,000	0	225,000	234,000	243,360	253,094	263,218	273,747	284,697	296,085	307,928	320,245
6	Other Operating Expenses	456,821	0	456,821	475,094	494,098	513,861	534,416	555,793	578,024	601,145	625,191	650,199
7	Total Operating Expenses	11,767,953	1,235,349	13,003,302	11,835,947	13,369,498	13,975,387	14,674,294	15,282,678	16,171,979	17,251,795	18,098,070	18,989,643
8	Capital Expenses	5,577,900	0	5,577,900	3,600,560	2,657,991	2,209,753	675,549	2,566,483	730,674	11,541,119	790,297	1,345,687
	Non Operating Expenses												
9	Bad Debt Expense	15,000	0	15,000	15,600	16,224	16,873	17,548	18,250	18,980	19,739	20,529	21,350
10	Regulatory Assessment Fee	2,000	0	2,000	2,080	2,163	2,250	2,340	2,433	2,531	2,632	2,737	2,847
11	Cost Recovery and Allocation	282,195	0	282,195	293,483	305,222	317,431	330,128	343,333	357,067	371,349	386,203	401,651
12	Customer Service Allocation	263,544	0	263,544	274,086	285,049	296,451	308,309	320,642	333,467	346,806	360,678	375,105
13	Transfer to General Fund	850,000	0	850,000	850,000	850,000	850,000	850,000	850,000	850,000	850,000	850,000	850,000
14	Existing Debt Service	853,400	0	853,400	853,279	853,953	854,404	853,632	853,655	853,456	853,034	854,389	853,488
15	Future Debt Service	0	0	0	217,947	217,947	581,191	581,191	581,191	581,191	1,307,680	1,307,680	1,307,680
16	Replenish Reserves	0	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
17	Total Non Operating Expenses	2,266,139	250,000	2,516,139	2,756,474	2,780,558	3,168,600	3,193,148	3,219,504	3,246,692	4,001,241	4,032,217	4,062,121
18	TOTAL REVENUE REQUIREMENTS	21,131,511	1,485,349	22,616,860	19,903,282	20,586,759	21,343,600	20,612,446	23,220,898	22,387,667	35,122,009	25,341,552	26,915,259
	Projected Revenue												
19	Existing Base Rate Revenues	11,000,000	166,031	11,166,031	11,737,223	12,509,271	13,081,875	13,652,087	14,221,701	14,790,266	15,356,158	15,919,806	16,481,767
20	Bulk Power Cost Adjustment Revenues	4,000,000	683,506	4,683,506	2,677,956	3,632,213	3,796,764	4,052,571	4,216,088	4,658,685	5,289,947	5,685,618	6,124,520
21	Rate Stabilization Fund	0	0	0	0	0	0	0	0	0	0	0	0
22	Other Revenue	6,131,511	46,200	6,177,711	3,661,809	2,709,193	2,459,806	993,522	2,926,414	1,481,087	11,540,184	1,026,222	1,054,793
23	TOTAL REVENUES	21,131,511	895,737	22,027,248	18,076,988	18,850,678	19,338,445	18,698,180	21,364,203	20,930,038	32,186,289	22,631,646	23,661,080
24	Revenue Surplus or (Deficiency)	\$0	(\$589,612)	(\$589,612)	(\$1,826,294)	(\$1,736,081)	(\$2,005,155)	(\$1,914,265)	(\$1,856,695)	(\$1,457,629)	(\$2,935,720)	(\$2,709,906)	(\$3,254,179)
2.5	Surplus or (Deficiency) as a % of:			# A	4 6 6 6 6	10.00	1.00	14.6	10.45	0.05	10.45	18.00	10.50:
25	Existing Base Rate Revenues			-5.3%	-15.6%	-13.9%	-15.3%	-14.0%	-13.1%	-9.9%	-19.1%	-17.0%	-19.7%
26	Existing Base Rate and Fuel Revenues			-3.7%	-12.7%	-10.8%	-11.9%	-10.8%	-10.1%	-7.5%	-14.2%	-12.5%	-14.4%
27	Annual Base Rate Increase			5.0%	5.0%	5.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
28	Annual Overall Rate Increase			3.5%	4.1%	3.9%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
				2.370	270	2.570	2.370	0.070	0.370	0.370	0.570	0.070	0.070
29	Proposed Base Revenues			\$11,724,332	\$12,940,288	\$14,481,045	\$15,598,223	\$16,278,117	\$16,957,298	\$17,635,229	\$18,309,973	\$18,982,041	\$19,652,096
30	Surplus or Deficiency			(\$31,310)	(\$623,229)	\$235,693	\$511,193	\$711,765	\$878,902	\$1,387,334	\$18,094	\$352,329	(\$83,850)
31	Cumulative			(\$31,310)	(\$654,539)	(\$418,846)	\$92,347	\$804,111	\$1,683,014	\$3,070,348	\$3,088,442	\$3,440,771	\$3,356,921

<sup>[1]</sup> Based on the 2023 Budget provided by the City.

**Electric Cost of Service Study** 

Projected Revenues at
EXISTING RATES
Fiscal Year Ending September 30, 2023

Ln. No.	<b>Customer Class Description</b>	]	Existing Rate	Billing Determinants	Base Rate Revenue	BPCA Revenue	Total Revenue
	(a)		(b)	(c)	 (d)	(e)	(f)
	Residential						
1	Customer Charge	\$	12.00	45,695	\$ 548,339	\$ -	\$ 548,339
2	Energy Charge < 1,000 kWh	\$	0.08300	39,513,780	3,279,644	-	3,279,644
3	Energy Charge > 1,000 kWh	\$	0.08700	13,883,220	1,207,840	-	1,207,840
4	Bulk Power Cost Adjustment	\$	0.04320	53,397,000	 -	 2,306,750	2,306,750
5	Total Residential				\$ 5,035,823	\$ 2,306,750	\$ 7,342,573
	Commercial						
	General Service Non-Demand						
6	Customer Charge		\$12.00	6,695	\$ 80,339	\$ -	\$ 80,339
7	Energy Charge	\$	0.09100	8,655,000	787,605	-	787,605
8	Bulk Power Cost Adjustment	\$	0.04320	8,655,000	 	 373,896	 373,896
9	Subtotal GSND				\$ 867,944	\$ 373,896	\$ 1,241,840
	General Service Demand						
10	Customer Charge	\$	50.00	1,923	\$ 96,135	\$ -	\$ 96,135
11	Demand Charge	\$	8.50	135,167	1,148,917	-	1,148,917
12	Energy Charge	\$	0.06100	41,361,000	2,523,021	-	2,523,021
13	Bulk Power Cost Adjustment	\$	0.04320	41,361,000		 1,786,795	 1,786,795
14	Subtotal General Service Demand				\$ 3,768,073	\$ 1,786,795	\$ 5,554,868
15	Total Commercial				\$ 4,636,017	\$ 2,160,691	\$ 6,796,708
16	City			3,941,000	\$ 336,202	\$ 170,251	\$ 506,453
17	Subtotal Ultimate Customers				\$ 10,008,042	\$ 4,637,693	\$ 14,645,734
18	Resale			3,175,000	\$ 359,150	\$ 137,160	\$ 496,310
19	TOTAL SYSTEM 2023 REVENUES				\$ 10,367,192	\$ 4,774,853	\$ 15,142,044

**Electric Cost of Service Study** 

#### **Summary of Other Electric Revenues**

Fiscal Year Ending September 30

Ln. No.	Description	Budget 2023	Adjustments to Budget	Adjusted Test Year Revenues	2024	2025	2026	2027	2028	2029	2030	2031	2032
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(1)	(m)
	Other Electric Revenues												
1	Night Lights	\$68,500	\$0	\$68,500	\$71,240	\$74,090	\$77,053	\$80,135	\$83,341	\$86,674	\$90,141	\$93,747	\$97,497
2	Electric Connection	10,000	0	10,000	10,400	10,816	11,249	11,699	12,167	12,653	13,159	13,686	14,233
3	Tempory Service Connection	3,500	0	3,500	3,640	3,786	3,937	4,095	4,258	4,429	4,606	4,790	4,982
4	Pole Rental	51,600	0	51,600	51,600	51,600	51,600	51,600	51,600	51,600	51,600	51,600	51,600
5	Capital Improvement Trust	300,300	46,200	346,500	380,889	419,100	660,174	683,968	1,106,542	1,150,484	1,198,421	672,853	689,353
6	Interest FSBA	6,500	0	6,500	6,760	7,030	7,312	7,604	7,908	8,225	8,554	8,896	9,252
7	Sale of Surplus	15,000	0	15,000	15,600	16,224	16,873	17,548	18,250	18,980	19,739	20,529	21,350
8	Bad Debts Collected	6,000	0	6,000	6,240	6,490	6,749	7,019	7,300	7,592	7,896	8,211	8,540
9	Miscellaneous Income	20,000	0	20,000	20,800	21,632	22,497	23,397	24,333	25,306	26,319	27,371	28,466
10	Miscellaneous / Late Fees	75,000	0	75,000	78,000	81,120	84,365	87,739	91,249	94,899	98,695	102,643	106,748
11	DSM Revenue	16,000	0	16,000	16,640	17,306	17,998	18,718	19,466	20,245	21,055	21,897	22,773
12	Unrestricted Cash Reserve	1,250,000	0	1,250,000	0	0	0	0	0	0	0	0	0
13	Transfers In From General Fund	55,435	0	55,435	0	0	0	0	0	0	0	0	0
14	Depreciation Reserve Transfer	1,253,676	0	1,253,676	0	0	0	0	0	0	0	0	0
15	Loan Proceeds	3,000,000	0	3,000,000	3,000,000	2,000,000	1,500,000	0	1,500,000	0	10,000,000	0	0
16	<b>Total Other Electric Revenues</b>	\$6,131,511	\$46,200	\$6,177,711	\$3,661,809	\$2,709,193	\$2,459,806	\$993,522	\$2,926,414	\$1,481,087	\$11,540,184	\$1,026,222	\$1,054,793

<sup>\*</sup>Based on the 2023 Electric Budget provided by the City.

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#### CITY OF GREEN COVE SPRINGS, FLORIDA **Electric Cost of Service Study**

#### **Calculation of Bulk Power Cost Adjustment**

Fiscal Year Ending September 30

Ln.											
No.	Description	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
	Bulk Power Costs (BPC) [1]										
1	Purchase of Energy	\$10,875,122	\$9,713,683	\$10,743,736	\$11,095,564	\$11,478,248	\$11,837,980	\$12,456,831	\$13,192,985	\$13,658,214	\$14,139,848
2	St. Lucie Participation	\$679,895	\$600,399	\$626,259	\$603,072	\$631,590	\$630,638	\$601,703	\$629,863	\$628,011	\$628,011
3	<b>Total Power Costs</b>	\$11,555,017	\$10,314,082	\$11,369,995	\$11,698,636	\$12,109,837	\$12,468,618	\$13,058,533	\$13,822,849	\$14,286,225	\$14,767,859
4	Bulk Power Cost True-up (BPCT)	\$400,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Rate Stabilization Fund Adjustment (RSFA)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	<b>Adjusted Total Power Costs</b>	\$11,955,017	\$10,314,082	\$11,369,995	\$11,698,636	\$12,109,837	\$12,468,618	\$13,058,533	\$13,822,849	\$14,286,225	\$14,767,859
7	Total Energy Purchased (kWh)	115,090,000	118,083,000	120,996,000	124,781,000	128,684,000	133,812,000	138,669,000	144,040,000	147,813,000	151,932,000
8	Total Cost Per kWh Purchased	\$0.1039	\$0.0873	\$0.0940	\$0.0938	\$0.0941	\$0.0932	\$0.0942	\$0.0960	\$0.0967	\$0.0972
9	System Loss Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
10	Total Energy Sales (kWh)	110,529,000	113,360,000	116,352,000	119,995,000	123,750,000	128,469,000	133,357,000	138,524,000	142,154,000	145,871,000
11	Total Cost Per kWh Sold	\$0.1082	\$0.0910	\$0.0977	\$0.0975	\$0.0979	\$0.0971	\$0.0979	\$0.0998	\$0.1005	\$0.1012
12	Power Cost Base (PCB)	\$0.0650	\$0.0650	\$0.0650	\$0.0650	\$0.0650	\$0.0650	\$0.0650	\$0.0650	\$0.0650	\$0.0650
13	Bulk Power Cost Adjustment (BPCA)	\$0.0432	\$0.0260	\$0.0327	\$0.0325	\$0.0329	\$0.0321	\$0.0329	\$0.0348	\$0.0355	\$0.0362

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<sup>[1]</sup> Based on information provided by the City and FMPA. Purchases and sales based on FMPA 2023 Base Case Forecast.

**Electric Cost of Service Study** 

**Debt Service Detail [1]** 

Fiscal Year Ending September 30

Ln.							Pro	jecteo	d				
No.	Description	2023		2024	2025	2026	2027		2028	2029	2030	2031	2032
	(a)	(b)		(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)
	Electric Revenue Bonds												
	<b>Refunding Note Series 2021</b>												
1	Principal	\$ 708,000	\$	720,000	\$ 733,000	\$ 746,000	\$ 758,000	\$	771,000	\$ 784,000	\$ 797,000	\$ 812,000	\$ 825,000
2	Interest	145,400		133,279	120,953	108,404	95,632		82,655	69,456	<u>56,034</u>	42,389	<u>28,488</u>
3	Total Series 2021	\$ 853,400	\$	853,279	\$ 853,953	\$ 854,404	\$ 853,632	\$	853,655	\$ 853,456	\$ 853,034	\$ 854,389	\$ 853,488
4	Total Existing Debt Service	\$ 853,400	\$	853,279	\$ 853,953	\$ 854,404	\$ 853,632	\$	853,655	\$ 853,456	\$ 853,034	\$ 854,389	\$ 853,488
	Future Debt Service [2]												
5	Future Series 2024 [3]	\$ -	\$	217,947	\$ 217,947	\$ 217,947	\$ 217,947	\$	217,947	\$ 217,947	\$ 217,947	\$ 217,947	\$ 217,947
6	Future Series 2026 [4]	\$ -	\$	-	\$ -	\$ 363,245	\$ 363,245	\$	363,245	\$ 363,245	\$ 363,245	\$ 363,245	\$ 363,245
7	Future Series 2030 [5]	\$ 	\$	-	\$ 	\$ 	\$ 	\$		\$ 	\$ 726,489	\$ 726,489	\$ 726,489
8	Total Future Debt Service	\$ -	\$	217,947	\$ 217,947	\$ 581,191	\$ 581,191	\$	581,191	\$ 581,191	\$ 1,307,680	\$ 1,307,680	\$ 1,307,680
9	TOTAL DEBT SERVICE	\$ 853,400	<b>\$</b> 1	1,071,226	\$ 1,071,900	\$ 1,435,595	\$ 1,434,823	\$	1,434,846	\$ 1,434,647	\$ 2,160,714	\$ 2,162,069	\$ 2,161,168

<sup>[1]</sup> Amounts shown reflect the allocable share of accrued payments of principal and interest and exclude interest expense funded from bond proceeds.

<sup>[2]</sup> Estimated based on the projected capital expenditure based on the Long Term Plan.

<sup>[3]</sup> Assumes level debt service on \$3,000,000 for 30 years at 6%.

<sup>[4]</sup> Assumes level debt service on \$5,000,000 for 30 years at 6%.

<sup>[5]</sup> Assumes level debt service on \$10,000,000 for 30 years at 6%.

**Electric Cost of Service Study** 

#### **Summary of Capital Improvement Projects and Funding Sources**

Fiscal Years Ending September 30

						riscai	rears Enaing Sep	nember 50				
Line No.	Projects	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Estimated Total
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(k)
	Proposed Long Range Plan Expenditurs	[1]										
1	Distribution Line Project 1	\$2,800,000	-	-	-	-	-	-	-	-	-	\$2,800,000
2	Substation Project - Chapman T1	\$2,200,438	-	-	-	-	-	-	-	-	-	\$2,200,438
3	Distribution Line Project 2	-	-	\$1,880,000	-	-	-	-	-	-	-	\$1,880,000
4	Voltage Conversion Project 101	-	-	-	\$1,387,000	-	-	-	-	-	-	\$1,387,000
5	Voltage Conversion Project 102	-	-	-	-	-	\$1,532,000	-	-	-	-	\$1,532,000
6	Voltage Conversion Project 103	-	-	-	-	-	-	-	\$1,593,000	-		\$1,593,000
7	Substation Project - New Substation	-	-	-	-	-	-	-	\$6,349,840	-		\$6,349,840
8	Distribution Line Project 3	-	-	-	-	-	-	-	\$250,000	-		\$250,000
9	Distribution Line Project 4	-	-	-	-	-	-	-	-	-	\$368,000	\$368,000
10	Total Proposed Expenditures	\$5,000,438	\$0	\$1,880,000	\$1,387,000	\$0	\$1,532,000	\$0	\$8,192,840	\$0	\$368,000	\$18,360,278
	Proposed Expenditures Including Inflation											
11	Distribution Line Project 1	\$2,800,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,800,000
12	Substation Project - Chapman T1	\$2,200,438	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,200,438
13	Distribution Line Project 2	-	-	2,033,408	-	-	-	-	-	-	-	\$2,033,408
14	Voltage Conversion Project 101	-	-	-	1,560,186	-	-	-	-	-	-	\$1,560,186
15	Voltage Conversion Project 102	-	-	-	-	-	1,863,912	-	-	-	-	\$1,863,912
16	Voltage Conversion Project 103	-	-	-	-	-	-	-	2,096,279	-	-	\$2,096,279
17	Substation Project - New Substation	-	-	-	-	-	-	-	8,355,956	-	-	\$8,355,956
18	Distribution Line Project 3	-	-	-	-	-	-	-	328,983	-	-	\$328,983
19	Distribution Line Project 4	<u> </u>									523,779	\$523,779
20	<b>Total Long Range Plan Expenditures</b>	\$5,000,438	\$0	\$2,033,408	\$1,560,186	\$0	\$1,863,912	\$0	\$10,781,219	\$0	\$523,779	\$21,762,942
21	New Electric Department Complex	-	\$3,000,000	-	-	-	-	-	-	-	-	\$3,000,000
22	Other Capital Expenses	\$577,462	\$600,560	\$624,583	\$649,566	\$675,549	\$702,571	\$730,674	\$759,901	\$790,297	\$821,908	\$6,933,071
23	Total Capital Expenses	\$5,577,900	\$3,600,560	\$2,657,991	\$2,209,753	\$675,549	\$2,566,483	\$730,674	\$11,541,119	\$790,297	\$1,345,687	\$31,696,013
				·				<u> </u>				
	Funding Source											
24	Existing Loans	\$3,000,000	-	_	-	-	-	-	-	-	-	3,000,000
25	Future Loans or Bonds	-	3,000,000	2,000,000	1,500,000	-	1,500,000	-	10,000,000	-	-	18,000,000
26	Lot Fees	200,000	-	200,000	200,000	-	200,000	-	200,000	-	200,000	1,200,000
27	Electric System Revenues	-	600,560	457,991	509,753	675,549	866,483	730,674	1,341,119	790,297	1,145,687	7,118,113
28	Transfers from Reserves	2,377,900	-	-	· -	· -	-	· -		· <u>-</u>	· · ·	2,377,900
29	<b>Total Funding Sources</b>	\$5,577,900	\$3,600,560	\$2,657,991	\$2,209,753	\$675,549	\$2,566,483	\$730,674	\$11,541,119	\$790,297	\$1,345,687	\$31,696,013

<sup>[1]</sup> Amounts shown are based on the 2022 Long Range Plan. Costs do not include inflation, cost of money or losses.

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<sup>[2]</sup> Costs include inflation assumed at 4.0% per year.

# Section 4 FUNCTIONALIZATION AND CLASSIFICATION OF COSTS AND DEVELOPMENT OF ALLOCATION FACTORS

# **Functionalization and Classification**

In allocating utility costs to the various customer classes, there are three major processes: functionalization, classification, and allocation. The functionalization and classification of the Test Year revenue requirement are discussed in the first part of this section. The development of allocation factors for the Test Year revenue requirement is discussed and set forth in the second half of this section.

# **Functionalization of Test Year Expenditures**

Although budgeting and accounting systems generally follow functional groups, i.e., production, transmission, etc., certain costs such as those associated with administrative and general expenses and bond service generally are not assigned by accounting and budgetary convention to a major function. A COS study usually requires the rearrangement of certain expenditures into functional groups (i) to be more representative of the expenditure causation, (ii) to combine costs that have been incurred for a similar purpose, and (iii) to facilitate the allocation of cost responsibility. Thus, the functionalization of certain costs is merely a ratemaking mechanism to apportion such costs to the common utility function.

The typical functions of the 2023 Test Year Revenue Requirements were developed in the COS model and summarized below.

Function and Description	Test Year <u>Amount</u>
<b>Production.</b> Those costs associated with generating or purchasing power and delivering that power to the utility's bulk transmission system	\$12,376,509
<b>Transmission and Distribution.</b> Those costs incurred in connection with the delivery of power over the bulk transmission system through the primary and secondary distribution system to the utility's consumers	\$9,491,607
<b>Customer.</b> Those costs that are related to the number, type and size of customers	<u>\$282,280</u>
Total	\$22,150,396

An analysis of the Test Year revenue requirements was made to estimate the functionalized Test Year revenue requirements.



## **Classification of Various Costs**

Historically, electric utility costs or the components of the annual revenue requirement have generally been classified as (1) demand-related, (2) variable or energy-related, and (3) customer-related. Thus, if a cost or expense is fixed or does not vary directly with the level of kWh purchased or sold, the cost was assumed to be generally related to the demands or load of the customers and was allocated to the various customer classes on the basis of demand or load relationships. Debt service is one example of an expenditure generally classified as demand-related. If a cost or expense was viewed to vary with the amount of kWh the electric utility sold, the cost or expense was usually classified as energy-related and allocated to the various customer classes on the basis of kWh relationships. Purchased energy costs are a primary example of expenses classified as variable or energy-related and allocated on the basis of kWh sales. If the cost is directly related to the number of customers which are being served, these costs would generally be classified as such and allocated to the customer classes based on the customer relationship among the customer classes. An example of customer-related costs is meter reading expenses.

Until such time that the development of more detailed data with regard to hourly usage characteristics and costs is economically justified or legally required, the classification of costs described below reflects usual regulatory practice as well as a reasonable and equitable approach.

**Demand (Fixed) Costs:** Are defined as those costs incurred to maintain in readiness-to-serve an electric system capable of meeting the total combined demands of all classes of customers. Demand costs are those costs that are generally fixed in the short-run, that do not materially vary directly with the number of kWh generated or sold, and that are not defined as customer costs. Demand costs will include that portion of operation and maintenance expenses; debt service; renewals, replacements and improvements; and other costs which are not designated as specifically customer or variable energy costs.

**Customer Costs:** Are defined as those costs directly related to the number, type and size of customers, such as customer accounting and collecting, and costs of meters and services.

**Energy (Variable) Costs:** Are defined as those costs that vary substantially or directly with the amount of energy sold or generated and purchased, including such items as fuel and a portion of operation and maintenance expense for production facilities.

# **Development of Allocation Factors**

#### General

This section discusses the development of the factors utilized to allocate the capacity related, energy related, customer related, and other costs to the various customer classes. The aforementioned costs are allocated to the customer classes according to their respective customer class, and the particular cost allocation factor developed for each

# FUNCTIONALIZATION AND CLASSIFICATION OF COSTS AND DEVELOPMENT OF ALLOCATION FACTORS

class and for each type of cost. The customer classes include Residential, General Service Non-Demand, General Service Demand, City, and Resale.

Allocation methodologies are based on industry practices and guidelines from the Florida Public Service Commission

#### **Demand Allocation Factors**

"Demand Allocation" refers to the basis on which capacity and other demand related costs are distributed or assigned (allocated) among the various customer classes for the purpose of determining the revenues required from each class to recover such costs. The demand allocation factors, as developed and used herein, reflect the cost responsibility for each of the various customer classes in relation to the capacity or demand related costs to be allocated. The demand allocation factors were used to apportion the following capacity or demand related costs among the various customer classes.

- Production and purchased power expenses (fixed capacity costs only);
- Transmission and distribution expenses;
- Debt service requirements;
- Capital Improvements
- Allowances for renewal and replacements, and reserves; and
- Payments to the City.

The demand allocation factors were developed based on load research information provided by the City and historical demand and energy relationships filed with the Florida Public Service Commission (PSC) by the investor—owned utilities in Florida. The demand allocation factors are based on the estimated annual coincident and non-coincident peak demands.

The City's production related demand costs are based on the monthly demand charges shown on its purchased power bills. The demand charges are based on the City's system peak demand for that month. The contribution of each class to the monthly system peak is the basis for allocating the purchased demand cost. Over a 12 month period, the class load coincident with the time of the system peak each month allocates those costs (12 CP method).

The distribution facilities must be able to serve a class of customers at the time of the non-coincident annual peak demand. Distribution demand related costs are allocated based on the non-coincident annual peak demand for that class.

Table No. 4-2 summarizes the demand allocation factors. Table No. 4-5 shows a comparison of load research results for the investor-owned utilities.

# **Energy Allocation Factors**

Energy allocation factors are the basis for apportioning those costs or expenses classified as variable or energy related and assumed to vary directly with the level of kWh sales or generation. The costs classified herein as variable or energy related are fuel, purchased power, and the variable portion of other production expenses. The City's

production related energy costs are based on the monthly energy charges shown on its purchased power bills. Those costs are allocated based on the energy used by each class for that month.

The projected fiscal year energy sales data are discussed in Section 2. The resulting energy allocation factors are shown on Table No. 4-3.

#### **Customer Allocation Factors**

Customer costs are defined herein as those costs related to the number of customers and the size of service required. Included in the customer related costs are the costs associated with meter reading, meter maintenance, customer installations, billing, collecting, and other customer related accounting, service, and information functions. The customer allocation factors were based on the projected average number of customers in each customer classification during the Test Year.

In apportioning customer related costs and revenues to the various customer classifications, customer allocation factors were utilized that recognized weighted and unweighted customers and fixtures. The customer weighting factors were based on Duke Energy customer charges. The customer allocation factors are shown on Table No. 4-4.

#### Other Allocation Factors

Certain elements of the annual revenue requirement are related to revenues. Miscellaneous other allocation factors including the revenue allocation factors are included in the COS model.

# CITY OF GREEN COVE SPRINGS, FLORIDA Electric Cost of Service Study

# **Functionalization of Test Year Revenue Requirements**

Ln	D		FY 2023	
<u>No</u> .	Description	<u> Test Yea</u>	<u>r Amount</u>	
1	Production	\$	12,376,508	
2	Transmission and Distribution	\$	9,491,607	
3	Customer	\$	282,280	
4	TOTAL REVENUE REQUIREMENTS	\$	22,150,396	

**Electric Cost of Service Study** 

#### **Development of Demand Allocation Factors**

					Average 12 (	СР			No	n-Coincident	Peak	
		Total FY 2023	Load	Demand		Demand	Percent	Load	Demand		Demand	Percent
Ln.		Energy	Factor	@ Meter	Delivery	@ Source	of Total	Factor	@ Meter	Delivery	@ Source	of Total
No.	Customer Class	(MWh)	(%) [1]	(kW)	Efficiency	(kW)	(%)	(%) [1]	(kW)	Efficiency	(kW)	(%)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(1)
1	Residential	53,397	55.00%	11,083	0.9600	11,545	50.23%	45.00%	13,546	0.9600	14,110	50.38%
	Commercial											
2	General Service Non Demand	8,655	58.00%	1,703	0.9600	1,774	7.72%	45.00%	2,196	0.9600	2,287	8.17%
3	General Service Demand	41,361	60.00%	7,869	0.9600	8,197	35.67%	50.00%	9,443	0.9600	9,837	35.12%
4	City	3,941	60.00%	750	0.9600	781	3.40%	50.00%	900	0.9600	937	3.35%
5	Resale	3,175	55.00%	659	0.9600	686	2.99%	45.00%	805	0.9600	839	3.00%
6	TOTAL SYSTEM	110,529	-	22,064	<u>.</u>	22,984	100.00%		26,890	- =	28,010	100.00%

<sup>[1]</sup> Average 12 CP and NCP Load Factors are based on information provided by the City and load research filed with the FPSC.

#### **Electric Cost of Service Study**

#### **Summary of Demand Allocation Factors**

		Average	12 CP	Average Demand			PSC 12 CP Methodology							y NCP I	
		Demand @	Percent	2023 Energy	Average	Percent	Avg. 12 CP	Avg. kW		_	Demand	Percent			
Ln.		Source	of Total	at Source	Demand	of Total	@12/13	@1/13	To	tal	@ Source	of Total			
No.	Customer Class	(kW)	(%)	(MWh)	(kW)	(%)	(kW)	(kW)	(kW)	(%)	(kW)	(%)			
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(1)			
1	Residential	11,545	50.23%	55,622	6,350	48.31%	10,657	488	11,145	50.14%	14,110	50.38%			
	Commercial														
2	General Service Non Demand	1,774	7.72%	9,016	1,029	7.83%	1,638	79	1,717	7.73%	2,287	8.17%			
3	General Service Demand	8,197	35.67%	43,084	4,918	37.42%	7,567	378	7,945	35.74%	9,837	35.12%			
4	City	781	3.40%	4,105	469	3.57%	721	36	757	3.41%	937	3.35%			
5	Resale	686	2.99%	3,307	378	2.87%	634	29	663	2.98%	839	3.00%			
6	TOTAL SYSTEM	22,984	100.00%	115,134	13,143	100.00%	21,216	1,011	22,227	100.00%	28,010	100.00%			

**Electric Cost of Service Study** 

#### **Summary of Energy Allocation Factors**

Fiscal Year 2023

		Energy (	MWh) [1]	Allocation F	actors (%)
Ln.		Energy	Net	Energy	Net
No.	Customer Class	Sales	Generation	Sales	Generation
	(a)	(b)	(c)	(d)	(e)
1	Residential	53,397	55,622	48.31%	48.31%
	Commercial				
2	General Service Non Demand	8,655	9,016	7.83%	7.83%
3	General Service Demand	41,361	43,084	37.42%	37.42%
4	City	3,941	4,105	3.57%	3.57%
5	Resale	3,175	3,307	2.87%	2.87%
6	TOTAL SYSTEM	110,529	115,134	100.00%	100.00%

<sup>[1]</sup> A factor of 4.0% was assumed for System Losses based on data received from the City.

**Electric Cost of Service Study** 

#### **Summary of Customer Allocation Factors**

Fiscal Year 2023

				W	eighted Custome	ers
Ln.		Unweighted	Customers	Weighting		
No.	<b>Customer Class</b>	Customers	Factor	Factor [1]	Customers [2]	Factor
	(a)	(b)	(c)	(d)	(e)	(f)
1	Residential	3,808	82.52%	1.00	3,808	78.41%
	Commercial					
2	General Service Non Demand	558	12.09%	1.30	725	14.93%
3	General Service Demand	160	3.47%	1.30	208	4.29%
4	City	87	1.89%	1.30	114	2.34%
5	Resale	1	0.02%	1.30	1	0.03%
6	TOTAL SYSTEM	4,614	100.00%		4,856	100.00%

<sup>[1]</sup> Based on Duke Energy Florida customer charges.

<sup>[2]</sup> Weighted customers are equal to Column (b), Unweighted Customers multiplied times Column (d), the Weighting

## CITY OF GREEN COVE SPRINGS, FLORIDA Electric Cost of Service Study

## Comparison of Load Research Results \*

Ln. No.	Utility	Rate Schedule	12 CP Load Factor	NCP Load Factor
	(a)	(b)	(c)	(d)
	Residential Service			
1	Duke Energy Florida	RS-1	54.8%	37.0%
2	Florida Power & Light Company	RS-1	66.2%	50.1%
3	Tampa Electric Company	RS	56.0%	45.0%
4	Gulf Power Company	RS	58.4%	38.8%
_	General Service Non-Demand			
5	Duke Energy Florida	GS-1 (no demand breakpoint)	57.6%	45.1%
6	Florida Power & Light Company	GS-1 (less than 21kw)	62.3%	53.1%
7	Tampa Electric Company	GS (less than 50 kw)	58.0%	43.0%
8	Gulf Power Company	GS (less than 20 kw)	57.4%	43.5%
	General Service Demand			
9	Duke Energy Florida	GSD-1 (above 24,000 kwh/year)	74.2%	62.6%
10	Florida Power & Light Company	GSD-1 (21 - 499 kw)	72.1%	64.0%
11	Tampa Electric Company	GSD-1 (50 - 999 kw)	75.0%	63.0%
12	Gulf Power Company	GSD-1 (20 - 499 kw)	74.4%	56.4%

<sup>\*</sup> The information shown for the investor owned electric utilities reflects the results of 2017-2018 Load Research reported to the PSC.

# Section 5 ALLOCATED COST OF SERVICE

#### General

As one of the factors considered in the development of the proposed rate options and rate structures included herein, certain analyses common in ratemaking have been employed which provide a reasonable indication of the revenue levels required to recover the full cost of service or revenue requirement of each customer class. Since it is not the practice in utility accounting to maintain a subdivision of accounts that will report the cost of rendering service to each customer class, an allocation of costs must be made on the basis of parameters predicated upon the available classifications of operating expense and utility plant.

## **Present and Future Rate Classifications**

The present customer classifications are as follows:

- Residential
- Commercial
  - General Service Non-Demand
  - General Service Demand
- City
- Resale

The present customer classifications are typical for municipal electric utilities in Florida. In the future, the City may want to investigate additional rate classifications such as:

- Residential Time of Use Rate
- Solar Subscription Rate
- Electric Vehicle Rate

# Allocation and Assignment of the Cost of Service

The allocated cost of service was developed, along with the rate adjustments for each class, based on a comparison of existing rate revenues.

Table No. 5-1 summarizes the results of the allocated COS study. Table No. 5-2 shows the results of the functionalization and classification of the Test Year revenue requirements and Table No. 5-3 summarizes the results of the COS study by customer class.



The projected Test Year revenues under the existing rates and charges, the projected cost of service, and the difference for each of the major rate classifications, as summarized from the COS model are as follows:

		Test Year 2023	
	Total Existing	Cost of	
Customer Class	Revenue (\$000)	Service (\$000)	Difference (\$000)
Residential	\$10,438	\$11,100	(\$662)
Commercial			
General Service Non-Demand	1,738	1,780	(41)
General Service Demand	7,749	7,869	(119)
City	717	755	(38)
Resale	677	647	30
Total System	\$21,320	\$22,150	(\$831)

#### City of Green Cove Springs, Florida Electric Cost of Service Study

## **Test Year Cost of Service by Customer Class**

Line					General Service (	General Service			
No.	Description	Total	Allocation Factor	Residential	Non-Demand	Demand	City	Resale	Total
	(a)	(b)	(c)	(d)	(e)	(g)	(i)	(j)	(k)
1	<u>Production</u>								
2	Production Demand related								
3	Production - D	6,435,887	12 CP	3,227,118	497,205	2,300,506	219,175	191,884	6,435,887
4	Blank	0	N/A	0	0	0	0	0	0
5	Blank	0	N/A	0	0	0	0	0	0
6	Blank	0	N/A	0	0	0	0	0	0
7	Blank	0	N/A	0	0	0	0	0	0
8	Blank	0	N/A	0	0	0	0	0	0
9	Production Energy related								
10	Fuel & PP	5,940,621	Test Year Sales - kWh	2,869,961	465,184	2,223,035	211,794	170,647	5,940,621
11	Variable O&M	0	N/A	0	0	0	0	0	0
12	Blank	0	N/A	0	0	0	0	0	0
13	Blank	0	N/A	0	0	0	0	0	0
14	Production Direct Assignment								
15	Dir. Assignment A	0	N/A	0	0	0	0	0	0
16	Other	0	N/A	0	0	0	0	0	0
17	Total Production	12,376,508		6,097,080	962,389	4,523,540	430,968	362,531	12,376,508
18	Check	TRUE							
19		12,376,508							
20	Transmission								
21	Demand Related								
22	115 kV	0	N/A	0	0	0	0	0	0
23	69 kV	0	N/A	0	0	0	0	0	0
24	115 kV - Sub	0	N/A	0	0	0	0	0	0
25	69 kV - Sub	0	N/A	0	0	0	0	0	0
26	Blank	0	N/A	0	0	0	0	0	0
27	Blank	0	N/A	0	0	0	0	0	0
28	Direct Assignment	9	19/73	O	O	O	O	O	O
29	Service 1	0	N/A	0	0	0	0	0	0
30	Service 2	0	N/A	0	0	0	0	0	0
31	Blank	0	N/A	0	0	0	0	0	0
32	Total Transmission		14/73	0	0	0	0	0	0
33	Check	TRUE		O	O	O	O	O	O
34	Chook	0							
35	<u>Distribution</u>								
36	Demand Related								
37	Substat.	0	N/A	0	0	0	0	0	0
38	Prim-Dmd	0	N/A	0	0	0	0	0	0
39	Sec-Dmd	0	N/A	0	0	0	0	0	0
40	Demand	9,491,607	1 NCP	4,781,444	775,011	3,333,280	317,569	284,303	9,491,607
41	Energy	0	Test Year Sales - kWh	0	0	0	0	0	0
42	Blank	0	N/A	0	0	0	0	0	0
43	Customer Related								
44	Prim-Cust	0	N/A	0	0	0	0	0	0
45	Sec-Cust	0	N/A	0	0	0	0	0	0
46	Serv Drp	0	N/A	0	0	0	0	0	0
47	Trans-CR	0	N/A	0	0	0	0	0	0
48	Total Cust	0	N/A	0	0	0	0	0	0
49	Blank	0	N/A	0	0	0	0	0	0

#### City of Green Cove Springs, Florida Electric Cost of Service Study

## **Test Year Cost of Service by Customer Class**

Line							Ge	neral Service	Ger	neral Service						
No.	Description		Total	Allocation Factor	ı	Residential	N	on-Demand		Demand		City		Resale		Total
	(a)		(b)	(c)		(d)		(e)		(g)		(i)		(j)		(k)
50																
51	Direct Assignment					_				_		_				
52	Lighting		0	N/A		0		0		0		0		0		0
53	Blank		0	N/A		0		775.044		0 000 000		0		0		0 404 607
54 55	Total Distribution Check		9,491,607 TRUE			4,781,444		775,011		3,333,280		317,569		284,303		9,491,607
56	Crieck		9,491,607													
	Customer		3,431,007													
57	<u>Customer</u>		•	W : 1. 10 .						•						
58	Meters		0	Weighted Customers		0		0		0		0		0		0
59 60	Cust. Accounting Cust. Service		0 282,280	Weighted Customers Weighted Customers		0 221,354		42,161		0 12,108		0 6,600		0 58		0 282,280
61	Sales		202,200	Weighted Customers		221,354		42,101		12,100		0,000		0		202,200
62	Blank		0	N/A		0		0		0		0		0		0
63	Total Customer		282.280	14/71		221.354		42.161		12.108		6.600		58		282,280
64	Check		TRUE					,		,		-,				,
65			0													
66	Direct Assignments Other															
67	Lighting Adjustment		0	Lighting - # of Cust/Lights		0		0		0		0		0		0
68	Total Direct Assignment Other		0	Lighting # of Odd/Lights		0		0		0		0		0		0
69	Check		TRUE			ŭ		· ·		· ·		ū		ŭ		· ·
70																
71	Total Cost of Service	\$	22,150,396		\$	11,099,877	¢	1,779,561	Ф	7,868,928	¢	755,138	¢	646,892	\$	22,150,396
72	Check	Ψ	TRUE		Ψ	11,033,077	Ψ	1,779,501	Ψ	7,000,920	Ψ	755,156	Ψ	040,032	Ψ	22,130,330
73	Total Unit Cost (\$/kWh)		TROL		\$	0.208	\$	0.206	\$	0.190	\$	0.192	\$	0.204	\$	0.200
74	Base Rate Unit Cost (\$/kWh)				\$	0.208	\$	0.206	\$	0.190		0.192		0.204		0.200
75					•		•		•		•	****	•		•	
76																
77	Revenue Adequacy Check															
78	TY Base Rate Revenue		\$10,367,192	TY Base Rate Rev		\$5,035,823		\$867,944		\$3,768,073		\$336,202		\$359,150		\$10,367,192
79	TY Other Revenue - BPCA		4,774,853	Test Year Sales - kWh		2,306,769		373,898		1,786,794		170,232		137,160		4,774,853
80	TY FCR Rate Stabilization		0	Revenue Req		0		0		0		0		0		0
81	TY Other Revenue		6,177,711	Revenue Req		3,095,739		496,317		2,194,632		210,607		180,417		6,177,711
82	Subtotal		\$21,319,755	_		\$10,438,331		\$1,738,159		\$7,749,498		\$717,041		\$676,727		\$21,319,755
83	Existing Rate Unit Cost (\$/kwh)				\$	0.195	\$	0.201	\$	0.187	\$	0.182	\$	0.213	\$	0.193
85	TY Rate Revenue		\$21,319,755			\$10,438,331		\$1,738,159		\$7,749,498		\$717,041		\$676,727		\$21,319,755
86	TY Retail Rate Revenue		\$0	Other Revenue		0		0		0		0		0		0
87	TY Total Rate Revenue		\$21,319,755	_		\$10,438,331		\$1,738,159		\$7,749,498		\$717,041		\$676,727		\$21,319,755
88					_		_		_		_		_			
89	TY Rate Revenue Requirement	\$	22,150,396		\$	11,099,877	\$	1,779,561	\$	7,868,928	\$	755,138 0	\$	646,892 0		\$22,150,396
90 91	TY Other Retail Rate Revenue TY Total Rate Revenue Requirement		\$22,150,396	<u> </u>		\$11,099,877		\$1,779,561		\$7,868,928		\$755.138		\$646,892		\$22,150,396
92	11 Total Nate Nevenue Nequilement		ψ22,130,330			ψ11,000,077		ψ1,773,501		ψ1,000,020		ψ1 33, 136		ψ0+0,032		Ψ22,130,330
93	Difference \$ (Surplus)		(\$830,641)			(\$661,547)		(\$41,402)		(\$119,430)		(\$38,097)		\$29,835		(830,641)
94	Difference % (Surplus)		-5.5%			-9.0%		-3.3%		-2.2%		-7.5%		6.0%		-5.5%
95																
96	Rate Adjustment \$		\$725,703			\$396,344		\$62,092		\$222,195		\$20,257		\$24,815		725,703
97	Rate Adjustment %		4.8%			5.4%		5.0%		4.0%		4.0%		5.0%		4.8%
98																

## **Electric Cost of Service Study**

## **Classification of Test Year Revenue Requirements**

Ln		FY	2023	
<u>No</u>	Description	<u>Test Yea</u>	ar Amount	
	Production			
1	Demand Related	\$	6,435,887	
2	Energy Related		5,940,621	
3	Total Production	\$	12,376,508	
	Transmission and Distribution			
4	Demand Related	\$	9,491,607	
5	Customer Related		0	
6	Direct Assignment		0	
7	Total Distribution	\$	9,491,607	
8	Customer (Customer Related)		282,280	
9	TOTAL REVENUE REQUIREMENTS	\$	22,150,396	
10	Total Demand Related	\$	15,927,495	72%
11	Total Energy Related		5,940,621	27%
12	Total Customer Related		282,280	1%
13	TOTAL REVENUE REQUIREMENTS	\$	22,150,396	
14	Total Fixed Including All Demand Related	\$	16,209,775	73%
15	Total Variable		5,940,621	27%
16	TOTAL REVENUE REQUIREMENTS	\$	22,150,396	

#### **Electric Cost of Service Study**

#### **Results of the Cost of Service Analysis**

Test Year 2023

			1 CSt 1 Ca	1 2025	
Ln No	Customer Class	Cost of Service	Existing Revenues	Difference	Difference (%)
	(a)	(b)	(c)	(d)	(e)
1	Residential	\$11,099,877	\$10,438,331	(\$661,547)	-9.0%
	Commercial				
2	General Service Non Demand	1,779,561	1,738,159	(41,402)	-3.3%
3	General Service Demand	7,868,928	7,749,498	(119,430)	-2.2%
4	City	755,138	717,041	(38,097)	-7.5%
5	Resale	646,892	676,727	29,835	6.0%
6	TOTAL	\$22,150,396	\$21,319,755	(\$830,641)	-5.5%

# **General Rate Design Criteria**

Rate design is the culmination of a rate study whereby the rates and charges for each customer classification are established in such a manner that the total revenue requirement of the system will be recovered in an equitable manner consistent with the results of the allocated cost of service study and any applicable orders and/or requirements of local, state, and federal regulatory authorities. To the extent possible, rate design should consider and reflect overall revenue stability, historical rate form, conservation considerations, competitiveness with neighboring utility systems, and the policies of those charged with the management and operation of the City.

The proposed rate options and rate structures developed and submitted to the City for consideration and adoption should continue to meet the following electric utility rate criteria for service provided by municipally owned utilities:

- Electric rates should be based on a rate policy which calls for the lowest possible prices consistent with customer requirements, quality service efficiently rendered, and a payment to the City.
- Electric rates should be simple and understandable.
- Electric rates should be equitable among classes of customers and individuals within classes, taking into consideration the cost of service.
- Electric rates should be designed to encourage the most efficient use of the utility plant and discourage unnecessary or wasteful use of service.
- Electric rates should comply with applicable orders and requirements of local, state and federal regulatory authorities that have jurisdiction.

The PSC has oversight over the City's rate structure (not total rate revenue). The City submits its rate tariff sheets to the PSC for review whenever it makes changes. The PSC will review the rates to ensure they do not unduly burden any rate class to be benefit of another.

# **Rate Options**

The existing rates and the rate options necessary to recover the revenue requirements are summarized on Table No. 6-1. Option 1 assumes an across-the-board base rate increase of 7 percent. Option 2 assumes a residential base rate increase of approximately 8 percent and commercial base rate increases of approximately 6 percent. Option 3 is the same as Option 2 except it moves \$0.02 per kWh from the BPCA into



the base rates. Option 4 is the same as Option 3 except it increases the customer charges and decreases the energy charges.

## **Customer Charge**

As with most utilities, most of the costs of providing electric service are fixed, while the revenues are mostly recovered through a variable energy (kWh) charge. To mitigate this risk, many utilities are increasing the fixed customer charges and demand charges, while lowering the energy charges. This helps to recover more of the fixed costs if the energy usage declines. The fixed costs are estimated to be approximately 73% of the total costs. The business risk for the City when the revenue is based mostly on a variable charge is that the City may not recover its necessary revenues. Since most of the City's costs are fixed, variations in weather (heating and cooling degree days), conservation, energy efficiencies and customer usage may have an adverse effect on the City recovering its fixed costs.

The existing customer charges do not recover the total fixed distribution and customer related costs. The proposed rates under Option 4 include increases in the customer charges to help recover fixed costs, with corresponding decreases in the energy charges..

# **Bulk Power Cost Adjustment**

It is recommended that a separate rate component continue to be implemented that recovers the cost of purchased power. The cost of bulk power purchases are passed through to the customer. The remaining bulk power costs are included in the base rates. The City may want to consider including more of the bulk power costs in the base rates. It is proposed that this factor continue to be calculated every month and adjusted if necessary.

# **Summary**

The following is a comparison of the projected Fiscal Year 2023 revenues produced by applying the projected billing determinants to the existing rates and the proposed rates under Option 1 for each classification:

		Fiscal Year 2023	
	Existing	Adjusted	Rate
	Revenue	Revenue	Adjustment
Customer Class	(\$000)	(\$000)	(%) [1]
Residential	\$10,438	\$10,791	4.8%
Commercial			
General Service Non-Demand	1,738	1,799	4.9%
General Service Demand	7,749	8,014	4.8%
City	717	741	4.6%
Resale	677	702	5.1%
Total System	\$21,320	\$22,046	4.8%

<sup>[1]</sup> Percent of base rate and BPCA revenues.

The following is a comparison of the projected Fiscal Year 2023 revenues produced by applying the projected billing determinants to the existing rates and the proposed rates under Options 2, 3 and 4 for each classification:

		Fiscal Year 2023	
	Existing	Adjusted	Rate
	Revenue	Revenue	Adjustment
Customer Class	(\$000)	(\$000)	(%) [1]
Residential	\$10,438	\$10,839	5.5%
Commercial			
General Service Non-Demand	\$1,738	1,790	4.2%
General Service Demand	\$7,749	7,975	4.1%
City	\$717	741	4.6%
Resale	\$677	702	5.1%
Total System	\$21,320	\$22,046	4.8%

<sup>[1]</sup> Percent of base rate and BPCA revenues.

**Electric Cost of Service Study** 

#### **Summary of Existing and Proposed Rates and Charges**

Ln.	D ( D ) ( (	<b>T</b> T *4		Proposed	Proposed	Proposed	Proposed
No.	Rate Description	Unit	<b>Existing Rates</b>	Option 1	Option 2	Option 3	Option 4
	(a) Residential Service	(b)	(c)	(d)	(e)	(f)	(g)
1	Monthly Customer Charge	\$/Mo.	\$12.00	\$12.84	\$12.84	\$12.84	\$15.00
	En augry Chaugas						
2	Energy Charges First 1,000 kWh	\$/kWh	\$0.08300	\$0.08881	\$0.08970	\$0.10970	\$0.10790
3	Additional kWh	\$/kWh	\$0.08700	\$0.09309	\$0.09402	\$0.11402	\$0.11222
	General Service Non-Demand						
4	Monthly Customer Charge	\$/Mo.	\$12.00	\$12.84	\$12.84	\$12.84	\$15.00
5	Energy Charge	\$/kWh	\$0.09100	\$0.09737	\$0.09640	\$0.11640	\$0.11470
	General Service Demand						
6	Monthly Customer Charge	\$/Mo.	\$50.00	\$53.50	\$53.50	\$53.50	\$60.00
7	Demand Charge	\$/kW	\$8.50	\$9.10	\$9.01	\$9.01	\$9.01
8	Energy Charge	\$/kWh	\$0.06100	\$0.06527	\$0.06462	\$0.08462	\$0.08432
	General Service Large Demand						
9	Monthly Customer Charge	\$/Mo.	\$225.00	\$240.75	\$240.75	\$240.75	\$250.00
10	Demand Charge	\$/kW	\$9.50	\$10.17	\$10.07	\$10.07	\$10.07
11	Energy Charge	\$/kWh	\$0.05100	\$0.05457	\$0.05402	\$0.07402	\$0.07402
	Bulk Power Cost Adjustment (BPCA)						
12	Effective May 2023	\$/kWh	\$0.04400	\$0.04400	\$0.04400	\$0.02400	\$0.02400

Option 1: Across the board 7.0% base rate increase.

Option 2: 8% residential and 6% commercial base rate increases to move toward the cost of service.

Option 3: Same as Option 2 except move \$0.02/kWh from BPCA to include in base rates.

Option 4: Same as Option 3 except higher customer charges and lower energy charges.

**Electric Cost of Service Study** 

Projected Revenues at PROPOSED RATES - OPTION 1 Fiscal Year Ending September 30, 2023

Ln. No.	Customer Class Description	P	Proposed Rate	Billing Determinants		Base Rate Revenue		BPCA Revenue		Total Revenue
	(a)		(b)	(c)		(d)		(e)		(f)
	Residential	_	Ф1 <b>2</b> 04	45.605	Φ	506 722	Φ		Φ	506 522
1	Customer Charge		\$12.84	45,695	\$	586,723	\$	-	\$	586,723
2	Energy Charge < 1,000 kWh	\$	0.08881	39,513,780		3,509,219		-		3,509,219
3	Energy Charge > 1,000 kWh	\$	0.09309	13,883,220		1,292,389		-		1,292,389
4 5	Bulk Power Cost Adjustment  Total Residential	\$	0.04320	53,397,000	\$	5,388,330	\$	2,306,750 2,306,750	\$	2,306,750 7,695,081
	Commercial									
	General Service Non-Demand									
6	Customer Charge		\$12.84	6,695	\$	85,963	\$	-	\$	85,963
7	Energy Charge	\$	0.09737	8,655,000		842,737		-		842,737
8	Bulk Power Cost Adjustment	\$	0.04320	8,655,000		-		373,896		373,896
9	Subtotal GSND				\$	928,700	\$	373,896	\$	1,302,596
	General Service Demand									
10	Customer Charge		\$53.50	1,923	\$	102,864	\$	-	\$	102,864
11	Demand Charge		\$9.10	135,167		1,230,017		-		1,230,017
12	Energy Charge	\$	0.06527	41,361,000		-		2,699,632		2,699,632
13	Bulk Power Cost Adjustment	\$	0.04320	41,361,000		1,786,795		-		1,786,795
14	Subtotal General Service Demand				\$	3,119,676	\$	2,699,632	\$	5,819,309
15	Total Commercial				\$	4,048,377	\$	3,073,528	\$	7,121,905
16	City				\$	359,736	\$	170,251	\$	529,987
17	Subtotal Ultimate Customers				\$	9,796,443	\$	5,550,530	\$	15,346,973
18	Resale				\$	384,291	\$	137,160	\$	521,451
19	TOTAL SYSTEM 2023 REVENUES				\$	10,180,734	\$	5,687,690	\$	15,868,424
20									\$	726,379

#### **Electric Cost of Service Study**

Projected Revenues at PROPOSED RATES - OPTION 2 Fiscal Year Ending September 30, 2023

Ln. No.	Customer Class Description	P	Proposed Rate	Billing Determinants		Base Rate Revenue		BPCA Revenue		Total Revenue
	(a)		(b)	(c)		(d)		(e)		(f)
	Residential		012.04	45.00	Φ.	50 £ <b>500</b>	Φ.		Φ.	50 < 500
1	Customer Charge		\$12.84	45,695	\$	586,723	\$	-	\$	586,723
2	Energy Charge < 1,000 kWh	\$	0.08970	39,513,780		3,544,311		-		3,544,311
3	Energy Charge > 1,000 kWh	\$	0.09402	13,883,220		1,305,313		-		1,305,313
4 5	Bulk Power Cost Adjustment  Total Residential	\$	0.04320	53,397,000	\$	5,436,346	\$	2,306,750 2,306,750	\$	2,306,750 7,743,097
	Commercial									
	General Service Non-Demand									
6	Customer Charge		\$12.84	6,695	\$	85,963	\$	-	\$	85,963
7	Energy Charge	\$	0.09640	8,655,000		834,310		-		834,310
8	Bulk Power Cost Adjustment	\$	0.04320	8,655,000		-		373,896		373,896
9	Subtotal GSND				\$	920,273	\$	373,896	\$	1,294,169
	General Service Demand									
10	Customer Charge		\$53.50	1,923	\$	102,864	\$	-	\$	102,864
11	Demand Charge		\$9.01	135,167		1,217,717		-		1,217,717
12	Energy Charge	\$	0.06462	41,361,000		-		2,672,636		2,672,636
13	Bulk Power Cost Adjustment	\$	0.04320	41,361,000		1,786,795		-		1,786,795
14	Subtotal General Service Demand				\$	3,107,376	\$	2,672,636	\$	5,780,012
15	Total Commercial				\$	4,027,649	\$	3,046,532	\$	7,074,181
16	City				\$	359,736	\$	170,251	\$	529,987
17	Subtotal Ultimate Customers				\$	9,823,732	\$	5,523,534	\$	15,347,265
18	Resale				\$	384,291	\$	137,160	\$	521,451
19	TOTAL SYSTEM 2023 REVENUES				\$	10,208,022	\$	5,660,694	\$	15,868,716
20									\$	726,671

#### **Electric Cost of Service Study**

Projected Revenues at PROPOSED RATES - OPTION 3 Fiscal Year Ending September 30, 2023

Ln. No.	Customer Class Description	P	Proposed Rate	Billing Determinants	Base Rate Revenue	BPCA Revenue	Total Revenue
	(a)		(b)	(c)	 (d)	(e)	(f)
	Residential				-040		
1	Customer Charge		\$12.84	45,695	\$ 586,723	\$ -	\$ 586,723
2	Energy Charge < 1,000 kWh	\$	0.10970	39,513,780	4,334,587	-	4,334,587
3	Energy Charge > 1,000 kWh	\$	0.11402	13,883,220	1,582,977	-	1,582,977
4	Bulk Power Cost Adjustment	\$	0.02320	53,397,000	 	 1,238,810	 1,238,810
5	Total Residential				\$ 6,504,286	\$ 1,238,810	\$ 7,743,097
	Commercial						
	General Service Non-Demand						
6	Customer Charge		\$12.84	6,695	\$ 85,963	\$ -	\$ 85,963
7	Energy Charge	\$	0.11640	8,655,000	1,007,410	-	1,007,410
8	Bulk Power Cost Adjustment	\$	0.02320	8,655,000	 	 200,796	 200,796
9	Subtotal GSND				\$ 1,093,373	\$ 200,796	\$ 1,294,169
	General Service Demand						
10	Customer Charge		\$53.50	1,923	\$ 102,864	\$ -	\$ 102,864
11	Demand Charge		\$9.01	135,167	1,217,717	-	1,217,717
12	Energy Charge	\$	0.08462	41,361,000	-	3,499,856	3,499,856
13	Bulk Power Cost Adjustment	\$	0.02320	41,361,000	959,575	-	959,575
14	Subtotal General Service Demand				\$ 2,280,156	\$ 3,499,856	\$ 5,780,012
15	Total Commercial				\$ 3,373,529	\$ 3,700,652	\$ 7,074,181
16	City				\$ 359,736	\$ 170,251	\$ 529,987
17	Subtotal Ultimate Customers				\$ 10,237,552	\$ 5,109,714	\$ 15,347,265
18	Resale				\$ 384,291	\$ 137,160	\$ 521,451
19	TOTAL SYSTEM 2023 REVENUES				\$ 10,621,842	\$ 5,246,874	\$ 15,868,716
20							\$ 726,671

**Electric Cost of Service Study** 

Projected Revenues at PROPOSED RATES - OPTION 4 Fiscal Year Ending September 30, 2023

Ln. No.	Customer Class Description	P	Proposed Rate	Billing Determinants	Base Rate Revenue	BPCA Revenue	Total Revenue
	(a)		(b)	(c)	 (d)	 (e)	 (f)
	Residential	_					
1	Customer Charge		\$15.00	45,695	\$ 685,424	\$ -	\$ 685,424
2	Energy Charge < 1,000 kWh	\$	0.10790	39,513,780	4,263,462	-	4,263,462
3	Energy Charge > 1,000 kWh	\$	0.11222	13,883,220	1,557,987	-	1,557,987
4	Bulk Power Cost Adjustment	\$	0.02320	53,397,000	 	 1,238,810	 1,238,810
5	Total Residential				\$ 6,506,873	\$ 1,238,810	\$ 7,745,683
	Commercial						
	General Service Non-Demand						
6	Customer Charge		\$15.00	6,695	\$ 100,424	\$ -	\$ 100,424
7	Energy Charge	\$	0.11470	8,655,000	992,696	-	992,696
8	Bulk Power Cost Adjustment	\$	0.02320	8,655,000	-	 200,796	200,796
9	Subtotal GSND				\$ 1,093,121	\$ 200,796	\$ 1,293,917
	General Service Demand						
10	Customer Charge		\$60.00	1,923	\$ 115,362	\$ -	\$ 115,362
11	Demand Charge		\$9.01	135,167	1,217,717	-	1,217,717
12	Energy Charge	\$	0.08432	41,361,000	-	3,487,448	3,487,448
13	Bulk Power Cost Adjustment	\$	0.02320	41,361,000	 959,575	 -	 959,575
14	Subtotal General Service Demand				\$ 2,292,654	\$ 3,487,448	\$ 5,780,102
15	Total Commercial				\$ 3,385,774	\$ 3,688,244	\$ 7,074,018
16	City				\$ 359,736	\$ 170,251	\$ 529,987
17	Subtotal Ultimate Customers				\$ 10,252,383	\$ 5,097,305	\$ 15,349,689
18	Resale				\$ 384,291	\$ 137,160	\$ 521,451
19	TOTAL SYSTEM 2023 REVENUES				\$ 10,636,674	\$ 5,234,465	\$ 15,871,139
20							\$ 729,095

# Section 7 RATE COMPARISONS

#### General

This section provides a summary of the billing effects of the proposed rates options for major rate classifications. Specifically, the tables in this section provide for two types of billing comparisons for each major rate classification at various levels of usage which include (i) monthly bills calculated under the City's proposed rate options compared with bills calculated under its existing rates, and (ii) monthly bills calculated under the City's existing and proposed rate options compared with those calculated under the rates of selected utilities for the billing month of May 2023.

# **Existing Rates and Rate Options**

Table No. 7-1 provides a comparison of monthly bills calculated under the proposed rate options and the existing rates over a wide range of usage levels.

# **Comparisons with Other Utilities**

Table No. 7-2 show the City's existing and proposed rate options along with those of other electric utilities. As can be seen from these tables, the City's rates are comparable to other utilities.



## **Electric Cost of Service Study**

			Residential	Service	
			Existing Option 1		
Customer Charge		(\$)	\$12.00	\$12.84	
Energy Charge	First 1,000 kWh	(\$/kWh)	\$0.08300	\$0.08881	
Energy Charge	Additional kWh	(\$/kWh)	\$0.08700	\$0.09309	
BPCA [2]	All kWh	(\$/kWh)	\$0.04400	\$0.04400	

	<b>Existing</b>		Opti	on 1	Difference			
Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent	
(kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(%)	
500	75.50	15.100	79.25	15.849	3.74	0.749	4.96%	
600	88.20	14.700	92.53	15.421	4.33	0.721	4.90%	
700	100.90	14.414	105.81	15.115	4.91	0.701	4.86%	
800	113.60	14.200	119.09	14.886	5.49	0.686	4.83%	
900	126.30	14.033	132.37	14.708	6.07	0.674	4.81%	
1,000	139.00	13.900	145.65	14.565	6.65	0.665	4.78%	
1,100	152.10	13.827	159.36	14.487	7.26	0.660	4.77%	
1,200	165.20	13.767	173.07	14.422	7.87	0.656	4.76%	
1,300	178.30	13.715	186.78	14.367	8.48	0.652	4.75%	
1,400	191.40	13.671	200.49	14.320	9.09	0.649	4.75%	
1,500	204.50	13.633	214.20	14.280	9.69	0.646	4.74%	
2,000	270.00	13.500	282.74	14.137	12.74	0.637	4.72%	
2,500	335.50	13.420	351.29	14.051	15.79	0.631	4.70%	
3,000	401.00	13.367	419.83	13.994	18.83	0.628	4.70%	

<sup>[1]</sup> Amounts shown reflect single phase, inside the City service.

<sup>[2]</sup> Bulk Power Cost Adjustment effective May 2023.

## **Electric Cost of Service Study**

			Residential Service		
			Existing Option 2		
Customer Charge		(\$)	\$12.00	\$12.84	
Energy Charge	First 1,000 kWh	(\$/kWh)	\$0.08300	\$0.08970	
Energy Charge	Additional kWh	(\$/kWh)	\$0.08700	\$0.09402	
BPCA [2]	All kWh	(\$/kWh)	\$0.04400	\$0.04400	

	Existing		Opti	on 2	Difference			
Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent	
(kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(%)	
500	75.50	15.100	79.69	15.938	4.19	0.838	5.55%	
600	88.20	14.700	93.06	15.510	4.86	0.810	5.51%	
700	100.90	14.414	106.43	15.204	5.53	0.790	5.48%	
800	113.60	14.200	119.80	14.975	6.20	0.775	5.46%	
900	126.30	14.033	133.17	14.797	6.87	0.763	5.44%	
1,000	139.00	13.900	146.54	14.654	7.54	0.754	5.42%	
1,100	152.10	13.827	160.34	14.577	8.24	0.749	5.42%	
1,200	165.20	13.767	174.14	14.512	8.94	0.745	5.41%	
1,300	178.30	13.715	187.95	14.457	9.65	0.742	5.41%	
1,400	191.40	13.671	201.75	14.411	10.35	0.739	5.41%	
1,500	204.50	13.633	215.55	14.370	11.05	0.737	5.40%	
2,000	270.00	13.500	284.56	14.228	14.56	0.728	5.39%	
2,500	335.50	13.420	353.57	14.143	18.07	0.723	5.39%	
3,000	401.00	13.367	422.58	14.086	21.58	0.719	5.38%	

<sup>[1]</sup> Amounts shown reflect single phase, inside the City service.

<sup>[2]</sup> Bulk Power Cost Adjustment effective May 2023.

## **Electric Cost of Service Study**

			Residential Service		
			Existing Option 3		
Customer Charge		(\$)	\$12.00	\$12.84	
Energy Charge	First 1,000 kWh	(\$/kWh)	\$0.08300	\$0.10970	
Energy Charge	Additional kWh	(\$/kWh)	\$0.08700	\$0.11402	
BPCA [2]	All kWh	(\$/kWh)	\$0.04400	\$0.02400	

		ting	Opti	on 3	Difference			
Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent	
(kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(%)	
500	75.50	15.100	79.69	15.938	4.19	0.838	5.55%	
600	88.20	14.700	93.06	15.510	4.86	0.810	5.51%	
700	100.90	14.414	106.43	15.204	5.53	0.790	5.48%	
800	113.60	14.200	119.80	14.975	6.20	0.775	5.46%	
900	126.30	14.033	133.17	14.797	6.87	0.763	5.44%	
1,000	139.00	13.900	146.54	14.654	7.54	0.754	5.42%	
1,100	152.10	13.827	160.34	14.577	8.24	0.749	5.42%	
1,200	165.20	13.767	174.14	14.512	8.94	0.745	5.41%	
1,300	178.30	13.715	187.95	14.457	9.65	0.742	5.41%	
1,400	191.40	13.671	201.75	14.411	10.35	0.739	5.41%	
1,500	204.50	13.633	215.55	14.370	11.05	0.737	5.40%	
2,000	270.00	13.500	284.56	14.228	14.56	0.728	5.39%	
2,500	335.50	13.420	353.57	14.143	18.07	0.723	5.39%	
3,000	401.00	13.367	422.58	14.086	21.58	0.719	5.38%	

<sup>[1]</sup> Amounts shown reflect single phase, inside the City service.

<sup>[2]</sup> Bulk Power Cost Adjustment effective May 2023.

## **Electric Cost of Service Study**

			Residential Service		
			Existing Option 4		
Customer Charge		(\$)	\$12.00	\$15.00	
Energy Charge	First 1,000 kWh	(\$/kWh)	\$0.08300	\$0.10790	
Energy Charge	Additional kWh	(\$/kWh)	\$0.08700	\$0.11222	
BPCA [2]	All kWh	(\$/kWh)	\$0.04400	\$0.02400	

	Exis	ting	Opti	on 4		Difference	
Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
(kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(%)
500	75.50	15.100	80.95	16.190	5.45	1.090	7.22%
600	88.20	14.700	94.14	15.690	5.94	0.990	6.73%
700	100.90	14.414	107.33	15.333	6.43	0.918	6.37%
800	113.60	14.200	120.52	15.065	6.92	0.865	6.09%
900	126.30	14.033	133.71	14.856	7.41	0.823	5.87%
1,000	139.00	13.900	146.90	14.690	7.90	0.790	5.68%
1,100	152.10	13.827	160.52	14.593	8.42	0.765	5.54%
1,200	165.20	13.767	174.14	14.512	8.94	0.745	5.41%
1,300	178.30	13.715	187.76	14.443	9.46	0.728	5.31%
1,400	191.40	13.671	201.39	14.385	9.99	0.713	5.22%
1,500	204.50	13.633	215.01	14.334	10.51	0.701	5.14%
2,000	270.00	13.500	283.12	14.156	13.12	0.656	4.86%
2,500	335.50	13.420	351.23	14.049	15.73	0.629	4.69%
3,000	401.00	13.367	419.34	13.978	18.34	0.611	4.57%

<sup>[1]</sup> Amounts shown reflect single phase, inside the City service.

<sup>[2]</sup> Bulk Power Cost Adjustment effective May 2023.

#### **Electric Cost of Service Study**

			General Service	General Service Non-Demand	
			Existing	Option 1	
Customer Charge		(\$)	\$12.00	\$12.84	
Energy Charge	All kWh	(\$/kWh)	\$0.09100	\$0.09737	
BPCA [2]	All kWh	(\$/kWh)	\$0.04400	\$0.04400	

	Exis	ting	Opti	on 1		Difference	
Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
(kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(%)
1,000	147.00	14.700	154.21	15.421	7.21	0.721	4.90%
1,250	180.75	14.460	189.55	15.164	8.80	0.704	4.87%
1,500	214.50	14.300	224.90	14.993	10.40	0.693	4.85%
1,750	248.25	14.186	260.24	14.871	11.99	0.685	4.83%
1,900	268.50	14.132	281.44	14.813	12.94	0.681	4.82%
2,000	282.00	14.100	295.58	14.779	13.58	0.679	4.82%
3,000	417.00	13.900	436.95	14.565	19.95	0.665	4.78%
4,000	552.00	13.800	578.32	14.458	26.32	0.658	4.77%
5,000	687.00	13.740	719.69	14.394	32.69	0.654	4.76%
7,500	1,024.50	13.660	1,073.12	14.308	48.61	0.648	4.75%
10,000	1,362.00	13.620	1,426.54	14.265	64.54	0.645	4.74%
11,000	1,497.00	13.609	1,567.91	14.254	70.91	0.645	4.74%
12,000	1,632.00	13.600	1,709.28	14.244	77.28	0.644	4.74%
13,000	1,767.00	13.592	1,850.65	14.236	83.65	0.643	4.73%
14,000	1,902.00	13.586	1,992.02	14.229	90.02	0.643	4.73%
15,000	2,037.00	13.580	2,133.39	14.223	96.39	0.643	4.73%
17,250	2,340.75	13.570	2,451.47	14.211	110.72	0.642	4.73%
20,000	2,712.00	13.560	2,840.24	14.201	128.24	0.641	4.73%

<sup>[1]</sup> Amounts shown reflect single phase, inside the City service.

<sup>[2]</sup> Bulk Power Cost Adjustment effective May 2023.

#### **Electric Cost of Service Study**

			General Service	General Service Non-Demand	
			Existing	Option 2	
Customer Charge		(\$)	\$12.00	\$12.84	
Energy Charge	All kWh	(\$/kWh)	\$0.09100	\$0.09640	
BPCA [2]	All kWh	(\$/kWh)	\$0.04400	\$0.04400	

	Exis	ting	Opti	on 2		Difference	
Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
(kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(%)
1,000	147.00	14.700	153.24	15.324	6.24	0.624	4.24%
1,250	180.75	14.460	188.34	15.067	7.59	0.607	4.20%
1,500	214.50	14.300	223.44	14.896	8.94	0.596	4.17%
1,750	248.25	14.186	258.54	14.774	10.29	0.588	4.15%
1,900	268.50	14.132	279.60	14.716	11.10	0.584	4.13%
2,000	282.00	14.100	293.64	14.682	11.64	0.582	4.13%
3,000	417.00	13.900	434.04	14.468	17.04	0.568	4.09%
4,000	552.00	13.800	574.44	14.361	22.44	0.561	4.07%
5,000	687.00	13.740	714.84	14.297	27.84	0.557	4.05%
7,500	1,024.50	13.660	1,065.84	14.211	41.34	0.551	4.04%
10,000	1,362.00	13.620	1,416.84	14.168	54.84	0.548	4.03%
11,000	1,497.00	13.609	1,557.24	14.157	60.24	0.548	4.02%
12,000	1,632.00	13.600	1,697.64	14.147	65.64	0.547	4.02%
13,000	1,767.00	13.592	1,838.04	14.139	71.04	0.546	4.02%
14,000	1,902.00	13.586	1,978.44	14.132	76.44	0.546	4.02%
15,000	2,037.00	13.580	2,118.84	14.126	81.84	0.546	4.02%
17,250	2,340.75	13.570	2,434.74	14.114	93.99	0.545	4.02%
20,000	2,712.00	13.560	2,820.84	14.104	108.84	0.544	4.01%

<sup>[1]</sup> Amounts shown reflect single phase, inside the City service.

<sup>[2]</sup> Bulk Power Cost Adjustment effective May 2023.

#### **Electric Cost of Service Study**

			General Service	General Service Non-Demand	
			Existing	Option 3	
Customer Charge		(\$)	\$12.00	\$12.84	
Energy Charge	All kWh	(\$/kWh)	\$0.09100	\$0.11640	
BPCA [2]	All kWh	(\$/kWh)	\$0.04400	\$0.02400	

	Exis	ting	Opti	on 3		Difference	
Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
(kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(%)
1,000	147.00	14.700	153.24	15.324	6.24	0.624	4.24%
1,250	180.75	14.460	188.34	15.067	7.59	0.607	4.20%
1,500	214.50	14.300	223.44	14.896	8.94	0.596	4.17%
1,750	248.25	14.186	258.54	14.774	10.29	0.588	4.15%
1,900	268.50	14.132	279.60	14.716	11.10	0.584	4.13%
2,000	282.00	14.100	293.64	14.682	11.64	0.582	4.13%
3,000	417.00	13.900	434.04	14.468	17.04	0.568	4.09%
4,000	552.00	13.800	574.44	14.361	22.44	0.561	4.07%
5,000	687.00	13.740	714.84	14.297	27.84	0.557	4.05%
7,500	1,024.50	13.660	1,065.84	14.211	41.34	0.551	4.04%
10,000	1,362.00	13.620	1,416.84	14.168	54.84	0.548	4.03%
11,000	1,497.00	13.609	1,557.24	14.157	60.24	0.548	4.02%
12,000	1,632.00	13.600	1,697.64	14.147	65.64	0.547	4.02%
13,000	1,767.00	13.592	1,838.04	14.139	71.04	0.546	4.02%
14,000	1,902.00	13.586	1,978.44	14.132	76.44	0.546	4.02%
15,000	2,037.00	13.580	2,118.84	14.126	81.84	0.546	4.02%
17,250	2,340.75	13.570	2,434.74	14.114	93.99	0.545	4.02%
20,000	2,712.00	13.560	2,820.84	14.104	108.84	0.544	4.01%

<sup>[1]</sup> Amounts shown reflect single phase, inside the City service.

<sup>[2]</sup> Bulk Power Cost Adjustment effective May 2023.

#### **Electric Cost of Service Study**

			General Service	Non-Demand
			Existing	Option 4
Customer Charge		(\$)	\$12.00	\$15.00
Energy Charge	All kWh	(\$/kWh)	\$0.09100	\$0.11470
BPCA [2]	All kWh	(\$/kWh)	\$0.04400	\$0.02400

	Exis	ting	Opti	on 4		Difference	
Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
(kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(%)
1,000	147.00	14.700	153.70	15.370	6.70	0.670	4.56%
1,250	180.75	14.460	188.38	15.070	7.63	0.610	4.22%
1,500	214.50	14.300	223.05	14.870	8.55	0.570	3.99%
1,750	248.25	14.186	257.73	14.727	9.47	0.541	3.82%
1,900	268.50	14.132	278.53	14.659	10.03	0.528	3.74%
2,000	282.00	14.100	292.40	14.620	10.40	0.520	3.69%
3,000	417.00	13.900	431.10	14.370	14.10	0.470	3.38%
4,000	552.00	13.800	569.80	14.245	17.80	0.445	3.22%
5,000	687.00	13.740	708.50	14.170	21.50	0.430	3.13%
7,500	1,024.50	13.660	1,055.25	14.070	30.75	0.410	3.00%
10,000	1,362.00	13.620	1,402.00	14.020	40.00	0.400	2.94%
11,000	1,497.00	13.609	1,540.70	14.006	43.70	0.397	2.92%
12,000	1,632.00	13.600	1,679.40	13.995	47.40	0.395	2.90%
13,000	1,767.00	13.592	1,818.10	13.985	51.10	0.393	2.89%
14,000	1,902.00	13.586	1,956.80	13.977	54.80	0.391	2.88%
15,000	2,037.00	13.580	2,095.50	13.970	58.50	0.390	2.87%
17,250	2,340.75	13.570	2,407.58	13.957	66.82	0.387	2.85%
20,000	2,712.00	13.560	2,789.00	13.945	77.00	0.385	2.84%

<sup>[1]</sup> Amounts shown reflect single phase, inside the City service.

<sup>[2]</sup> Bulk Power Cost Adjustment effective May 2023.

#### **Electric Cost of Service Study**

			General Service Demand	
			Existing	Option 1
Customer Charge	2	(\$)	\$50.00	\$53.50
Demand Charge		(\$/kW)	\$8.50	\$9.10
<b>Energy Charge</b>	All kWh	(\$/kWh)	\$0.06100	\$0.06527
BPCA [2]	All kWh	(\$/kWh)	\$0.04400	\$0.04400

		Exist	ting	Opti	on 1		Difference	
Hours	Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
	(kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(%)
200	10,000	1,525.00	15.250	1,601.20	16.012	76.20	0.762	5.00%
300	15,000	2,050.00	13.667	2,147.55	14.317	97.55	0.650	4.76%
400	20,000	2,575.00	12.875	2,693.90	13.470	118.90	0.594	4.62%
<b>500</b>	25,000	3,100.00	12.400	3,240.25	12.961	140.25	0.561	4.52%
600	30,000	3,625.00	12.083	3,786.60	12.622	161.60	0.539	4.46%
200	20,000	3,000.00	15.000	3,148.90	15.745	148.90	0.744	4.96%
300	30,000	4,050.00	13.500	4,241.60	14.139	191.60	0.639	4.73%
400	40,000	5,100.00	12.750	5,334.30	13.336	234.30	0.586	4.59%
<b>500</b>	50,000	6,150.00	12.300	6,427.00	12.854	277.00	0.554	4.50%
600	60,000	7,200.00	12.000	7,519.70	12.533	319.70	0.533	4.44%
200	100,000	14,800.00	14.800	15,530.50	15.531	730.50	0.730	4.94%
300	150,000	20,050.00	13.367	20,994.00	13.996	944.00	0.629	4.71%
400	200,000	25,300.00	12.650	26,457.50	13.229	1,157.50	0.579	4.58%
500	250,000	30,550.00	12.220	31,921.00	12.768	1,371.00	0.548	4.49%
600	300,000	35,800.00	11.933	37,384.50	12.462	1,584.50	0.528	4.43%
	200 300 400 500 600 200 300 400 500 600	(kWh)           200         10,000           300         15,000           400         20,000           500         25,000           600         30,000           200         20,000           300         30,000           400         40,000           500         50,000           600         60,000           200         100,000           300         150,000           400         200,000           500         250,000	Hours         Usage (kWh)         Amount (\$)           200         10,000         1,525.00           300         15,000         2,050.00           400         20,000         2,575.00           500         25,000         3,100.00           600         30,000         3,625.00           200         20,000         3,000.00           300         30,000         4,050.00           400         40,000         5,100.00           500         50,000         6,150.00           600         60,000         7,200.00           200         100,000         14,800.00           300         150,000         20,050.00           400         200,000         25,300.00           500         250,000         30,550.00	(kWh)         (\$)         (Cents/kWh)           200         10,000         1,525.00         15.250           300         15,000         2,050.00         13.667           400         20,000         2,575.00         12.875           500         25,000         3,100.00         12.400           600         30,000         3,625.00         12.083           200         20,000         3,000.00         15.000           300         30,000         4,050.00         13.500           400         40,000         5,100.00         12.750           500         50,000         6,150.00         12.300           600         60,000         7,200.00         12.000           200         100,000         14,800.00         14.800           300         150,000         20,050.00         13.367           400         200,000         25,300.00         12.650           500         250,000         30,550.00         12.220	Hours         Usage (kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)           200         10,000         1,525.00         15.250         1,601.20           300         15,000         2,050.00         13.667         2,147.55           400         20,000         2,575.00         12.875         2,693.90           500         25,000         3,100.00         12.400         3,240.25           600         30,000         3,625.00         12.083         3,786.60           200         20,000         3,000.00         15.000         3,148.90           300         30,000         4,050.00         13.500         4,241.60           400         40,000         5,100.00         12.750         5,334.30           500         50,000         6,150.00         12.300         6,427.00           600         60,000         7,200.00         12.000         7,519.70           200         100,000         14,800.00         14.800         15,530.50           300         150,000         25,300.00         12.650         26,457.50           500         250,000         30,550.00         12.220         31,921.00	Hours         Usage (kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)         Unit Cost (Cents/kWh)           200         10,000         1,525.00         15.250         1,601.20         16.012           300         15,000         2,050.00         13.667         2,147.55         14.317           400         20,000         2,575.00         12.875         2,693.90         13.470           500         25,000         3,100.00         12.400         3,240.25         12.961           600         30,000         3,625.00         12.083         3,786.60         12.622           200         20,000         3,000.00         15.000         3,148.90         15.745           300         30,000         4,050.00         13.500         4,241.60         14.139           400         40,000         5,100.00         12.750         5,334.30         13.336           500         50,000         6,150.00         12.300         6,427.00         12.854           600         60,000         7,200.00         12.000         7,519.70         12.533           200         100,000         14,800.00         14.800         15,530.50         15.531           300	Hours         Usage (kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)           200         10,000         1,525.00         15.250         1,601.20         16.012         76.20           300         15,000         2,050.00         13.667         2,147.55         14.317         97.55           400         20,000         2,575.00         12.875         2,693.90         13.470         118.90           500         25,000         3,100.00         12.400         3,240.25         12.961         140.25           600         30,000         3,625.00         12.083         3,786.60         12.622         161.60           200         20,000         3,000.00         15.000         3,148.90         15.745         148.90           300         30,000         4,050.00         13.500         4,241.60         14.139         191.60           400         40,000         5,100.00         12.750         5,334.30         13.336         234.30           500         50,000         6,150.00         12.300         6,427.00         12.854         277.00           600         60,000         7,200.00         12.000         7,519	Hours         Usage (kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)         Unit Cost (Cents/kWh)           200         10,000         1,525.00         15.250         1,601.20         16.012         76.20         0.762           300         15,000         2,050.00         13.667         2,147.55         14.317         97.55         0.650           400         20,000         2,575.00         12.875         2,693.90         13.470         118.90         0.594           500         25,000         3,100.00         12.400         3,240.25         12.961         140.25         0.561           600         30,000         3,625.00         12.083         3,786.60         12.622         161.60         0.539           200         20,000         3,000.00         15.000         3,148.90         15.745         148.90         0.744           300         30,000         4,050.00         13.500         4,241.60         14.139         191.60         0.639           400         40,000         5,100.00         12.750         5,334.30         13.336         234.30         0.586           500         50,000         6,150.00

<sup>[1]</sup> Amounts shown reflect inside the City service and exclude any applicable primary service discount or power factor correction.

<sup>[2]</sup> Bulk Power Cost Adjustment effective May 2023.

#### **Electric Cost of Service Study**

			General Service Demand	
			Existing	Option 2
Customer Charge	;	(\$)	\$50.00	\$53.50
Demand Charge		(\$/kW)	\$8.50	\$9.01
Energy Charge	All kWh	(\$/kWh)	\$0.06100	\$0.06462
BPCA [2]	All kWh	(\$/kWh)	\$0.04400	\$0.04400

		Existing		Opti	on 2	Difference			
Hours	Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent	
	(kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(%)	
200	10,000	1,525.00	15.250	1,590.20	15.902	65.20	0.652	4.28%	
300	15,000	2,050.00	13.667	2,133.30	14.222	83.30	0.555	4.06%	
400	20,000	2,575.00	12.875	2,676.40	13.382	101.40	0.507	3.94%	
500	25,000	3,100.00	12.400	3,219.50	12.878	119.50	0.478	3.85%	
600	30,000	3,625.00	12.083	3,762.60	12.542	137.60	0.459	3.80%	
200	20,000	3,000.00	15.000	3,126.90	15.635	126.90	0.634	4.23%	
300	30,000	4,050.00	13.500	4,213.10	14.044	163.10	0.544	4.03%	
400	40,000	5,100.00	12.750	5,299.30	13.248	199.30	0.498	3.91%	
500	50,000	6,150.00	12.300	6,385.50	12.771	235.50	0.471	3.83%	
600	60,000	7,200.00	12.000	7,471.70	12.453	271.70	0.453	3.77%	
200	100,000	14,800.00	14.800	15,420.50	15.421	620.50	0.621	4.19%	
300	150,000	20,050.00	13.367	20,851.50	13.901	801.50	0.534	4.00%	
400	200,000	25,300.00	12.650	26,282.50	13.141	982.50	0.491	3.88%	
500	250,000	30,550.00	12.220	31,713.50	12.685	1,163.50	0.465	3.81%	
600	300,000	35,800.00	11.933	37,144.50	12.382	1,344.50	0.448	3.76%	
	200 300 400 500 600 200 300 400 500 600 200 300 400 500	(kWh)           200         10,000           300         15,000           400         20,000           500         25,000           600         30,000           200         20,000           300         30,000           400         40,000           500         50,000           600         60,000           200         100,000           300         150,000           400         200,000           500         250,000	Hours         Usage (kWh)         Amount (\$)           200         10,000         1,525.00           300         15,000         2,050.00           400         20,000         2,575.00           500         25,000         3,100.00           600         30,000         3,625.00           200         20,000         3,000.00           300         30,000         4,050.00           400         40,000         5,100.00           500         50,000         6,150.00           600         60,000         7,200.00           200         100,000         14,800.00           300         150,000         20,050.00           400         200,000         25,300.00           500         250,000         30,550.00	Hours         Usage (kWh)         Amount (\$)         Unit Cost (Cents/kWh)           200         10,000         1,525.00         15.250           300         15,000         2,050.00         13.667           400         20,000         2,575.00         12.875           500         25,000         3,100.00         12.400           600         30,000         3,625.00         12.083           200         20,000         3,000.00         15.000           300         30,000         4,050.00         13.500           400         40,000         5,100.00         12.750           500         50,000         6,150.00         12.300           600         60,000         7,200.00         12.000           200         100,000         14,800.00         14.800           300         150,000         20,50.00         13.367           400         200,000         25,300.00         12.650           500         250,000         30,550.00         12.220	Hours         Usage (kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)           200         10,000         1,525.00         15.250         1,590.20           300         15,000         2,050.00         13.667         2,133.30           400         20,000         2,575.00         12.875         2,676.40           500         25,000         3,100.00         12.400         3,219.50           600         30,000         3,625.00         12.083         3,762.60           200         20,000         3,000.00         15.000         3,126.90           300         30,000         4,050.00         13.500         4,213.10           400         40,000         5,100.00         12.750         5,299.30           500         50,000         6,150.00         12.300         6,385.50           600         60,000         7,200.00         12.000         7,471.70           200         100,000         14,800.00         14.800         15,420.50           300         150,000         25,300.00         12.650         26,282.50           500         250,000         30,550.00         12.220         31,713.50	Hours         Usage (kWh)         Amount (S)         Unit Cost (Cents/kWh)         Amount (S)         Unit Cost (Cents/kWh)           200         10,000         1,525.00         15.250         1,590.20         15.902           300         15,000         2,050.00         13.667         2,133.30         14.222           400         20,000         2,575.00         12.875         2,676.40         13.382           500         25,000         3,100.00         12.400         3,219.50         12.878           600         30,000         3,625.00         12.083         3,762.60         12.542           200         20,000         3,000.00         15.000         3,126.90         15.635           300         30,000         4,050.00         13.500         4,213.10         14.044           400         40,000         5,100.00         12.750         5,299.30         13.248           500         50,000         6,150.00         12.300         6,385.50         12.771           600         60,000         7,200.00         12.000         7,471.70         12.453           200         100,000         14,800.00         14.800         15,420.50         15.421           300	Hours         Usage (kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)           200         10,000         1,525.00         15.250         1,590.20         15.902         65.20           300         15,000         2,050.00         13.667         2,133.30         14.222         83.30           400         20,000         2,575.00         12.875         2,676.40         13.382         101.40           500         25,000         3,100.00         12.400         3,219.50         12.878         119.50           600         30,000         3,625.00         12.083         3,762.60         12.542         137.60           200         20,000         3,000.00         15.000         3,126.90         15.635         126.90           300         30,000         4,050.00         13.500         4,213.10         14.044         163.10           400         40,000         5,100.00         12.750         5,299.30         13.248         199.30           500         50,000         6,150.00         12.300         6,385.50         12.771         235.50           600         60,000         7,200.00         12.000         7,471	Hours         Usage (kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)         Unit Cost (Cents/kWh)           200         10,000         1,525.00         15,250         1,590.20         15,902         65.20         0.652           300         15,000         2,050.00         13.667         2,133.30         14.222         83.30         0.555           400         20,000         2,575.00         12.875         2,676.40         13.382         101.40         0.507           500         25,000         3,100.00         12.400         3,219.50         12.878         119.50         0.478           600         30,000         3,625.00         12.083         3,762.60         12.542         137.60         0.459           200         20,000         3,000.00         15.000         3,126.90         15.635         126.90         0.634           300         30,000         4,050.00         13.500         4,213.10         14.044         163.10         0.544           400         40,000         5,100.00         12.750         5,299.30         13.248         199.30         0.498           500         50,000         6,150.00	

<sup>[1]</sup> Amounts shown reflect inside the City service and exclude any applicable primary service discount or power factor correction.

<sup>[2]</sup> Bulk Power Cost Adjustment effective May 2023.

#### **Electric Cost of Service Study**

			General Servi	ce Demand
			Existing	Option 3
Customer Charge	;	(\$)	\$50.00	\$53.50
Demand Charge		(\$/kW)	\$8.50	\$9.01
Energy Charge	All kWh	(\$/kWh)	\$0.06100	\$0.08462
BPCA [2]	All kWh	(\$/kWh)	\$0.04400	\$0.02400

		Existing		Opti	ion 3	Difference			
Hours	Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent	
	(kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(%)	
200	10,000	1,525.00	15.250	1,590.20	15.902	65.20	0.652	4.28%	
300	15,000	2,050.00	13.667	2,133.30	14.222	83.30	0.555	4.06%	
400	20,000	2,575.00	12.875	2,676.40	13.382	101.40	0.507	3.94%	
500	25,000	3,100.00	12.400	3,219.50	12.878	119.50	0.478	3.85%	
600	30,000	3,625.00	12.083	3,762.60	12.542	137.60	0.459	3.80%	
200	20,000	3,000.00	15.000	3,126.90	15.635	126.90	0.634	4.23%	
300	30,000	4,050.00	13.500	4,213.10	14.044	163.10	0.544	4.03%	
400	40,000	5,100.00	12.750	5,299.30	13.248	199.30	0.498	3.91%	
500	50,000	6,150.00	12.300	6,385.50	12.771	235.50	0.471	3.83%	
600	60,000	7,200.00	12.000	7,471.70	12.453	271.70	0.453	3.77%	
200	100,000	14,800.00	14.800	15,420.50	15.421	620.50	0.621	4.19%	
300	150,000	20,050.00	13.367	20,851.50	13.901	801.50	0.534	4.00%	
400	200,000	25,300.00	12.650	26,282.50	13.141	982.50	0.491	3.88%	
500	250,000	30,550.00	12.220	31,713.50	12.685	1,163.50	0.465	3.81%	
600	300,000	35,800.00	11.933	37,144.50	12.382	1,344.50	0.448	3.76%	
	200 300 400 500 600 200 300 400 500 600 200 300 400 500	(kWh)           200         10,000           300         15,000           400         20,000           500         25,000           600         30,000           200         20,000           300         30,000           400         40,000           500         50,000           600         60,000           200         100,000           300         150,000           400         200,000           500         250,000	Hours         Usage (kWh)         Amount (\$)           200         10,000         1,525.00           300         15,000         2,050.00           400         20,000         2,575.00           500         25,000         3,100.00           600         30,000         3,625.00           200         20,000         3,000.00           300         30,000         4,050.00           400         40,000         5,100.00           500         50,000         6,150.00           600         60,000         7,200.00           200         100,000         14,800.00           300         150,000         20,050.00           400         200,000         25,300.00           500         250,000         30,550.00	Hours         Usage (kWh)         Amount (\$)         Unit Cost (Cents/kWh)           200         10,000         1,525.00         15.250           300         15,000         2,050.00         13.667           400         20,000         2,575.00         12.875           500         25,000         3,100.00         12.400           600         30,000         3,625.00         12.083           200         20,000         3,000.00         15.000           300         30,000         4,050.00         13.500           400         40,000         5,100.00         12.750           500         50,000         6,150.00         12.300           600         60,000         7,200.00         12.000           200         100,000         14,800.00         14.800           300         150,000         20,050.00         13.367           400         200,000         25,300.00         12.650           500         250,000         30,550.00         12.220	Hours         Usage (kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)           200         10,000         1,525.00         15.250         1,590.20           300         15,000         2,050.00         13.667         2,133.30           400         20,000         2,575.00         12.875         2,676.40           500         25,000         3,100.00         12.400         3,219.50           600         30,000         3,625.00         12.083         3,762.60           200         20,000         3,000.00         15.000         3,126.90           300         30,000         4,050.00         13.500         4,213.10           400         40,000         5,100.00         12.750         5,299.30           500         50,000         6,150.00         12.300         6,385.50           600         60,000         7,200.00         12.000         7,471.70           200         100,000         14,800.00         14.800         15,420.50           300         150,000         25,300.00         12.650         26,282.50           500         250,000         30,550.00         12.220         31,713.50	Hours         Usage (kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)         Unit Cost (Cents/kWh)           200         10,000         1,525.00         15.250         1,590.20         15.902           300         15,000         2,050.00         13.667         2,133.30         14.222           400         20,000         2,575.00         12.875         2,676.40         13.382           500         25,000         3,100.00         12.400         3,219.50         12.878           600         30,000         3,625.00         12.083         3,762.60         12.542           200         20,000         3,000.00         15.000         3,126.90         15.635           300         30,000         4,050.00         13.500         4,213.10         14.044           400         40,000         5,100.00         12.750         5,299.30         13.248           500         50,000         6,150.00         12.300         6,385.50         12.771           600         60,000         7,200.00         12.000         7,471.70         12.453           200         100,000         14,800.00         14.800         15,420.50         15.421           300	Hours         Usage (kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)         Unit Cost (Cents/kWh)         Amount (\$)           200         10,000         1,525.00         15.250         1,590.20         15.902         65.20           300         15,000         2,050.00         13.667         2,133.30         14.222         83.30           400         20,000         2,575.00         12.875         2,676.40         13.382         101.40           500         25,000         3,100.00         12.400         3,219.50         12.878         119.50           600         30,000         3,625.00         12.083         3,762.60         12.542         137.60           200         20,000         3,000.00         15.000         3,126.90         15.635         126.90           300         30,000         4,050.00         13.500         4,213.10         14.044         163.10           400         40,000         5,100.00         12.750         5,299.30         13.248         199.30           500         50,000         6,150.00         12.300         6,385.50         12.771         235.50           600         60,000         7,200.00         12.000         7,471	Hours         Usage (kWh)         Amount (S)         Unit Cost (Cents/kWh)         Amount (S)         Unit Cost (Cents/kWh)         Amount (S)         Unit Cost (Cents/kWh)           200         10,000         1,525.00         15.250         1,590.20         15.902         65.20         0.652           300         15,000         2,050.00         13.667         2,133.30         14.222         83.30         0.555           400         20,000         2,575.00         12.875         2,676.40         13.382         101.40         0.507           500         25,000         3,100.00         12.400         3,219.50         12.878         119.50         0.478           600         30,000         3,625.00         12.083         3,762.60         12.542         137.60         0.459           200         20,000         3,000.00         15.000         3,126.90         15.635         126.90         0.634           300         30,000         4,050.00         13.500         4,213.10         14.044         163.10         0.544           400         40,000         5,100.00         12.750         5,299.30         13.248         199.30         0.498           500         50,000         6,150.00	

<sup>[1]</sup> Amounts shown reflect inside the City service and exclude any applicable primary service discount or power factor correction.

<sup>[2]</sup> Bulk Power Cost Adjustment effective May 2023.

#### **Electric Cost of Service Study**

			General Servi	ce Demand
			Existing	Option 4
Customer Charge	<b>;</b>	(\$)	\$50.00	\$60.00
Demand Charge		(\$/kW)	\$8.50	\$9.01
<b>Energy Charge</b>	All kWh	(\$/kWh)	\$0.06100	\$0.08432
BPCA [2]	All kWh	(\$/kWh)	\$0.04400	\$0.02400

			Existing		Opti	on 4	Difference			
Demand	Hours	Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent	
(kW)		(kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(\$)	(Cents/kWh)	(%)	
50	200	10,000	1,525.00	15.250	1,593.70	15.937	68.70	0.687	4.50%	
	300	15,000	2,050.00	13.667	2,135.30	14.235	85.30	0.569	4.16%	
	400	20,000	2,575.00	12.875	2,676.90	13.385	101.90	0.509	3.96%	
	<b>500</b>	25,000	3,100.00	12.400	3,218.50	12.874	118.50	0.474	3.82%	
	600	30,000	3,625.00	12.083	3,760.10	12.534	135.10	0.450	3.73%	
100	200	20,000	3,000.00	15.000	3,127.40	15.637	127.40	0.637	4.25%	
	300	30,000	4,050.00	13.500	4,210.60	14.035	160.60	0.535	3.97%	
	400	40,000	5,100.00	12.750	5,293.80	13.235	193.80	0.485	3.80%	
	<b>500</b>	50,000	6,150.00	12.300	6,377.00	12.754	227.00	0.454	3.69%	
	600	60,000	7,200.00	12.000	7,460.20	12.434	260.20	0.434	3.61%	
500	200	100,000	14,800.00	14.800	15,397.00	15.397	597.00	0.597	4.03%	
	300	150,000	20,050.00	13.367	20,813.00	13.875	763.00	0.509	3.81%	
	400	200,000	25,300.00	12.650	26,229.00	13.115	929.00	0.464	3.67%	
	<b>500</b>	250,000	30,550.00	12.220	31,645.00	12.658	1,095.00	0.438	3.58%	
	600	300,000	35,800.00	11.933	37,061.00	12.354	1,261.00	0.420	3.52%	

<sup>[1]</sup> Amounts shown reflect inside the City service and exclude any applicable primary service discount or power factor correction.

<sup>[2]</sup> Bulk Power Cost Adjustment effective May 2023.

#### CITY OF GREEN COVE SPRINGS, FLORIDA Electric Cost of Service Study

#### **Inter-Utility Comparison of Typical Monthly Electric Bills** [1]

Ln.		Fuel Adj.				Resident	ial Class			
No.	Utility	\$/1000 kWh	250 kWh	500 kWh	750 kWh	1,000 kWh	1,500 kWh	2,000 kWh	2,500 kWh	3,000 kWh
1	City of Green Cove Springs - Existing	44.00	43.75	75.50	107.25	139.00	204.50	270.00	335.50	401.00
2	City of Green Cove Springs - Proposed	44.00	46.04	79.25	112.45	145.65	214.20	282.74	351.29	419.83
	Other Florida Municipalities:									
3	City of Alachua	11.00	35.24	61.34	87.44	113.54	170.84	228.14	285.44	342.74
4	City of Bushnell	75.00	51.41	92.83	134.24	175.65	258.48	341.30	424.13	506.95
5	Fort Pierce Utilities Authority	34.00	42.86	79.11	115.37	154.48	232.71	310.94	389.17	467.40
6	Gainesville Regional Utilities	65.00	53.28	90.05	126.83	167.61	254.51	341.41	428.31	515.21
7	Jacksonville Electric Authority	41.85	41.83	68.66	95.48	122.31	175.97	229.62	283.28	339.43
8	Kissimmee Utilities Authority	(9.11)	41.43	72.70	103.96	135.22	208.29	281.35	354.42	427.49
9	City of Lakeland	55.00	39.23	66.45	93.68	120.90	179.02	240.25	301.49	362.72
10	City of Leesburg	70.00	55.74	96.47	137.21	177.94	270.69	363.43	456.18	548.92
11	City of New Smyrna Beach	21.30	36.12	63.98	91.85	119.71	183.21	246.71	310.21	373.71
12	City of Newberry	25.00	42.02	74.39	106.77	139.14	203.89	268.64	333.39	398.14
13	City of Ocala	56.00	53.41	89.82	126.23	162.64	235.46	308.28	381.10	453.92
14	Orlando Utilities Commission	70.52	48.00	81.00	114.00	147.00	225.50	304.00	382.50	461.00
15	City of Tallahassee	36.17	38.69	68.44	98.18	127.92	187.41	246.89	306.38	365.86
	Investor-Owned Utilities: [2]									
16	Florida Power and Light	36.56	42.67	75.87	109.06	142.25	218.60	294.94	371.29	447.63
17	FPL Northwest	36.56	46.89	84.29	121.70	159.10	233.91	308.72	383.53	458.34
18	Duke Energy	53.02	51.24	89.97	128.69	167.42	255.23	343.03	430.84	518.64
19	Tampa Electric Company	49.08	55.25	89.20	123.15	157.10	235.63	314.15	392.68	471.20

<sup>[1]</sup> Amounts shown are based on the rates for single phase service and reflect when applicable, inside city service. In addition, amounts include May 2023 fuel adjustments but do not include taxes or franchise fees.

<sup>[2]</sup> Amounts shown include the energy conservation, capacity, environmental and storm cost recovery charges where appropriate, as filed with the Florida Public Service Commission (FPSC). Franchise fees are not included but range up to 6 percent for each of the IOU's listed.

#### CITY OF GREEN COVE SPRINGS, FLORIDA Electric Cost of Service Study

**Inter-Utility Comparison of Typical Monthly Electric Bills** [1]

Ln.		Fuel Adj.			Genera	al Service N	on-Deman	d Class		
No.	Utility	\$/1000 kWh	250 kWh	500 kWh	750 kWh	1,000 kWh	1,500 kWh	2,000 kWh	2,500 kWh	3,000 kWh
1	City of Green Cove Springs - Existing	44.00	45.75	79.50	113.25	147.00	214.50	282.00	349.50	417.00
2	<b>City of Green Cove Springs - Proposed</b>	44.00	48.18	83.53	118.87	154.21	224.90	295.58	366.27	436.95
	Other Florida Municipalities:									
3	City of Alachua	11.00	39.06	66.43	93.81	121.18	175.93	230.68	285.43	340.18
4	City of Bushnell	75.00	54.72	99.43	144.15	188.86	278.29	367.72	457.15	546.58
5	Fort Pierce Utilities Authority	34.00	45.64	84.87	124.10	163.33	241.79	320.25	398.71	477.17
6	Gainesville Regional Utilities	65.00	77.38	120.75	164.13	207.50	294.25	398.90	503.55	608.20
7	Jacksonville Electric Authority	41.85	46.66	72.32	97.97	123.63	174.95	226.26	277.58	328.89
8	Kissimmee Utilities Authority	(9.11)	45.14	79.20	113.26	147.32	215.44	283.56	351.68	419.80
9	City of Lakeland	55.00	41.06	68.12	95.18	122.24	176.36	230.48	284.60	338.72
10	City of New Smyrna Beach	21.30	38.52	67.29	96.05	124.82	182.36	239.89	297.43	354.96
11	City of Ocala	56.00	56.69	93.39	130.08	166.77	240.16	313.54	386.93	460.31
12	Orlando Utilities Commission	70.52	51.85	86.20	120.55	154.90	223.60	292.30	361.00	429.70
13	City of Tallahassee	36.17	37.58	63.00	88.41	113.83	164.67	215.50	266.34	317.17
	Investor-Owned Utilities: [2]									
14	Florida Power and Light	39.68	46.62	80.56	114.50	148.44	216.32	284.20	352.08	419.96
15	FPL Northwest	39.68	51.47	90.26	129.05	167.84	245.42	323.00	400.58	478.16
16	Duke Energy	56.30	55.77	95.99	136.20	176.42	256.86	337.29	417.73	498.16
17	Tampa Electric Company	52.39	60.29	98.09	135.88	173.67	249.26	324.85	400.43	476.02

<sup>[1]</sup> Amounts shown are based on the rates for single phase service and reflect when applicable, inside city service. In addition, amounts include May 2023 fuel adjustments but do not include taxes or franchise fees.

<sup>[2]</sup> Amounts shown include the energy conservation, capacity, environmental and storm cost recovery charges where appropriate, as filed with the Florida Public Service Commission (FPSC). Franchise fees are not included but range up to 6 percent for each of the IOU's listed.

#### **Electric Cost of Service Study**

**Inter-Utility Comparison of Typical Monthly Electric Bills** [1]

#### **General Service Demand Class**

		General for the Demand Class									
			50 kW			100 kW			500 kW		
Ln. No.	Utility	10,000 kWh	20,000 kWh	30,000 kWh	20,000 kWh	40,000 kWh	60,000 kWh	100,000 kWh	200,000 kWh	300,000 kWh	
1	City of Green Cove Springs - Existing	1,525	2,575	3,625	3,000	5,100	7,200	14,800	25,300	35,800	
2	City of Green Cove Springs - Proposed	1,721	2,934	4,147	3,389	5,814	8,240	16,731	28,858	40,985	
	Other Florida Municipalities:										
3	Fort Pierce Utilities Authority	1,637	2,859	4,082	3,231	5,675	8,120	15,981	28,204	40,427	
4	Gainesville Regional Utilities	2,038	3,408	4,778	3,968	6,708	9,448	19,408	33,108	46,808	
5	Jacksonville Electric Authority	1,357	2,108	2,860	2,528	4,031	5,534	11,900	19,415	26,930	
6	Kissimmee Utilities Authority	1,534	2,568	3,602	3,013	5,081	7,149	15,641	25,145	34,649	
7	City of Lakeland	1,247	2,020	2,793	2,452	3,997	5,543	12,091	19,819	27,548	
8	City of New Smyrna Beach	1,413	2,393	3,372	2,793	4,752	6,711	13,352	22,659	31,966	
9	City of Ocala	1,547	2,700	3,852	3,045	5,349	7,654	15,257	26,674	38,091	
10	Orlando Utilities Commission	1,518	2,452	3,385	3,002	4,868	6,735	14,868	24,201	33,534	
11	City of Tallahassee	1,485	2,111	2,624	2,886	4,139	5,164	14,027	20,220	25,311	
	Investor-Owned Utilities: [2]										
12	Florida Power and Light	1,430	2,174	2,917	2,831	4,318	5,805	14,035	21,470	28,905	
13	FPL Northwest	1,560	2,433	3,305	3,090	4,835	6,581	15,328	24,056	32,784	
14	Duke Energy	1,586	2,557	3,529	3,155	5,098	7,042	15,712	25,428	35,144	
15	Tampa Electric Company	1,501	2,134	2,768	2,969	4,236	5,503	14,714	21,051	27,387	

<sup>[1]</sup> Amounts shown are based on the rates for single phase service and reflect when applicable, inside city service. In addition, amounts include May 2023 fuel adjustments but do not include taxes or franchise fees.

<sup>[2]</sup> Amounts shown include the energy conservation, capacity, environmental and storm cost recovery charges where appropriate, as filed with the Florida Public Service Commission (FPSC). Franchise fees are not included but range up to 6 percent for each of the IOU's listed.

#### GLOSSARY [1]

**Administrative and general expenses:** Expenses of an electric utility relating to the overall directions of its corporate offices and administrative affairs, as contrasted with expenses incurred for specialized functions. Examples include office salaries, office supplies, advertising, and other general expenses.

**AMI:** Advanced Metering Infrastructure is a term denoting electricity meters that measure and record usage data at a minimum, in hourly intervals, and provide usage data to both consumers and energy companies at least once daily.

**Base rate:** A fixed kilowatthour charge for electricity consumed that is independent of other charges and/or adjustments.

**Bulk power transactions:** The wholesale sale, purchase, and interchange of electricity among electric utilities. Bulk power transactions are used by electric utilities for many different aspects of electric utility operations, from maintaining load to reducing costs.

**Capacity (purchased):** The amount of energy and capacity available for purchase from outside the system.

**Capacity charge:** An element in a two-part pricing method used in capacity transactions (energy charge is the other element). The capacity charge, sometimes called Demand Charge, is assessed on the amount of capacity being purchased.

**Capacity factor:** The ratio of the electrical energy produced by a generating unit for the period of time considered to the electrical energy that could have been produced at continuous full power operation during the same period.

**Capital cost:** The cost of field development and plant construction and the equipment required for industry operations.

Class rate schedule: An electric rate schedule applicable to one or more specified classes of service, groups of businesses, or customer uses.

Classes of service: Customers grouped by similar characteristics in order to be identified for the purpose of setting a common rate for electric service. Usually classified into groups identified as residential, commercial, industrial, and other.

**Coincidental demand:** The sum of two or more demands that occur in the same time interval.

Coincidental peak load: The sum of two or more peak loads that occur in the same time interval.

**Consumer charge:** An amount charged periodically to a consumer for such utility costs as billing and meter reading, without regard to demand or energy consumption.

**Cost of service:** A ratemaking concept used for the design and development of rate schedules to ensure that the filed rate schedules recover only the cost of providing the electric service at issue. This concept attempts to correlate the utility's costs and revenue with the service provided to each of the various customer classes.

**Demand charge:** That portion of the consumer's bill for electric service based on the consumer's maximum electric capacity usage and calculated based on the billing demand charges under the applicable rate schedule.

**Distribution system:** The portion of the transmission and facilities of an electric system that is dedicated to delivering electric energy to an end-user.

**Electric rate:** The price set for a specified amount and type of electricity by class of service in an electric rate schedule or sales contract.

**Electric rate schedule:** A statement of the electric rate and the terms and conditions governing its application, including attendant contract terms and conditions that have been accepted by a regulatory body with appropriate oversight authority.

**Electricity sales:** The amount of kilowatthours sold in a given period of time; usually grouped by classes of service, such as residential, commercial, industrial, and other. "Other" sales include sales for public street and highway lighting and other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

**Energy charge:** That portion of the charge for electric service based upon the electric energy (kWh) consumed or billed.

**Federal Energy Regulatory Commission (FERC):** The Federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, oil pipeline rates, and gas pipeline certification. FERC is an independent regulatory agency within the Department of Energy and is the successor to the Federal Power Commission.

**FERC guidelines:** A compilation of the Federal Energy Regulatory Commission's enabling statutes; procedural and program regulations; and orders, opinions, and decisions.

**Fixed cost (expense):** An expenditure or expense that does not vary with volume level of activity.

**Fixed operating costs:** Costs other than those associated with capital investment that do not vary with the operation, such as maintenance and payroll.

**Investor-owned utility (IOU):** A privately-owned electric utility whose stock is publicly traded. It is rate regulated and authorized to achieve an allowed rate of return.

**Kilowatt (kW):** One thousand watts.

**Kilowatthour (kWh):** A measure of electricity defined as a unit of work or energy, measured as 1 kilowatt (1,000watts) of power expended for 1 hour. One kWh is equivalent to 3,412 Btu.

**Load diversity:** The difference between the peak of coincident and noncoincident demands of two or more individual loads.

**Load factor:** The ratio of the average load to peak load during a specified time interval.

Megawatt (MW): One million watts of electricity.

**Megawatthour (MWh):** One thousand kilowatt-hours or 1million watt-hours.

**Noncoincident demand:** Sum of two or more demands on individual systems that do not occur in the same demand interval.

**Noncoincidental peak load:** The sum of two or more peak loads on individual systems that do not occur in the same time interval. Meaningful only when considering loads within a limited period of time, such as a day, week, month, a heating or cooling season, and usually for not more than 1 year.

**O&M:** Operation and Maintenance.

**Peak demand:** The maximum load during a specified period of time.

**Purchased power:** Power purchased or available for purchase from a source outside the system.

Rate schedule (electric): The rates, charges, and provisions under which service is supplied to the designated class of customers.

**Ratemaking authority:** A utility commission's legal authority to fix, modify, approve, or disapprove rates as determined by the powers given the commission by a State or Federal legislature.

**Rates:** The authorized charges per unit or level of consumption for a specified time period for any of the classes of utility services provided to a customer.

**Time-of-day rate:** The rate charged by an electric utility for service to various classes of customers. The rate reflects the different costs of providing the service at different times of the day.

**Watt (W):** The unit of electrical power equal to one ampere under a pressure of one volt. A Watt is equal to 1/746 horse power.

<sup>[1]</sup> From U. S. Energy Information Administration Glossary https://www.eia.gov/tools/glossary/index.php?id=xyz.