Utilities Advisory Board Minutes

March 23, 2021 at 12:00 p.m.

Virtual | Winter Park, Florida

Present

Jack Miles (Chair), Mary Dipboye (Vice Chair), Karim Arja, Paul Conway, Jacob Kuzman, Michael Poole, Tate Scott

City of Winter Park Staff

Dan D'Alessandro, Director of Electric Utility

Justin Isler, Operations Manager Electric Utility

Michael Passarella, Engineer Electric Utility

David Zusi, Director of Water & Wastewater Utility

Jason Riegler, Asst. Director of Water & Wastewater Utility

Wes Hamil, Director of Finance

Kristopher Stenger, Assistant Director Building & Permitting Services

Vanessa A. Balta, Sustainability & Permitting Planner

Karen Hood, Recording Secretary

Guest

Navid Nowakhtar, FMPA

Craig Shepard, Leidos

Absent

Vanna Lawitzke, Chief Accountant

Meeting called to order

The meeting was conducted via Zoom webinar. Jack Miles called the meeting to order at 12:00 p.m.

Approval of minutes

Motion made by Tate Scott and seconded by Paul Conway to approve the amended minutes from the February 23, 2021 meeting. Motion carried 6-1 (Michael Poole voted no as he was not present at February 23, 2021 meeting).

Citizen Comments

None

Items for discussion

A. The Energy Efficiency Improvements at City Owned Facilities discussion was led by Mary Dipboye. Questions were asked and a discussion ensued.

B. The Strategic Plan discussion was led by Tate Scott. Questions were asked and a discussion ensued.

C. Craig Shepard presented (Final Draft) for the Cost of Service Study. Questions were asked and a discussion ensued. The study was completed by Leidos and submitted to the board.

D. The Capital Improvement Plans discussion was led by Dan D'Alessandro and David Zusi. Questions were asked and a discussion ensued.

E. Removal of Septic Tanks – Connection between Sewer & Water, Stormwater, and Lakes – UAB Role – Michael Poole, David Zusi was moved to next month.

Department Updates

A. Electric Utility - Dan D'Alessandro presented his report, attached. Questions were asked and a discussion ensued

B. Utility Monthly Performance Measurements - report attached

C. Financial – report attached

Adjournment

Chmn. Miles adjourned the meeting at 2:47 p.m. Next meeting is April 27, 2021.

Respectfully Submitted,
Karen Hood
Recording Secretary
Approved April 27, 2021

City of Winter Park

Energy Efficiency Opportunities for City Owned Buildings & Facilities

2-11-2021

The City of Winter Park, like local governments across the nation, is facing shrinking revenues and rising costs. And the current Pandemic crisis is exacerbating that equation. Furthermore, local governments are being asked to step up and play a bigger role in reducing pollution from burning fossil fuels.

By improving the energy efficiency of city operations, local governments are able to address, in part, the above concerns and achieve the following benefits.

*__Economic -__ lowering operating costs by reducing energy costs
*__Environmental -__ reducing GHG emissions
*__Enhanced Reputation:__ being seen as a leader who is proactively reducing operating expenses and protecting the environment
*__Reduce demand for energy imports__

While renewable energy can provide these same benefits, energy efficiency is the cheapest…. and often the most immediate way…. to reduce energy costs, meet energy requirements and reduce demand for fossil fuels.

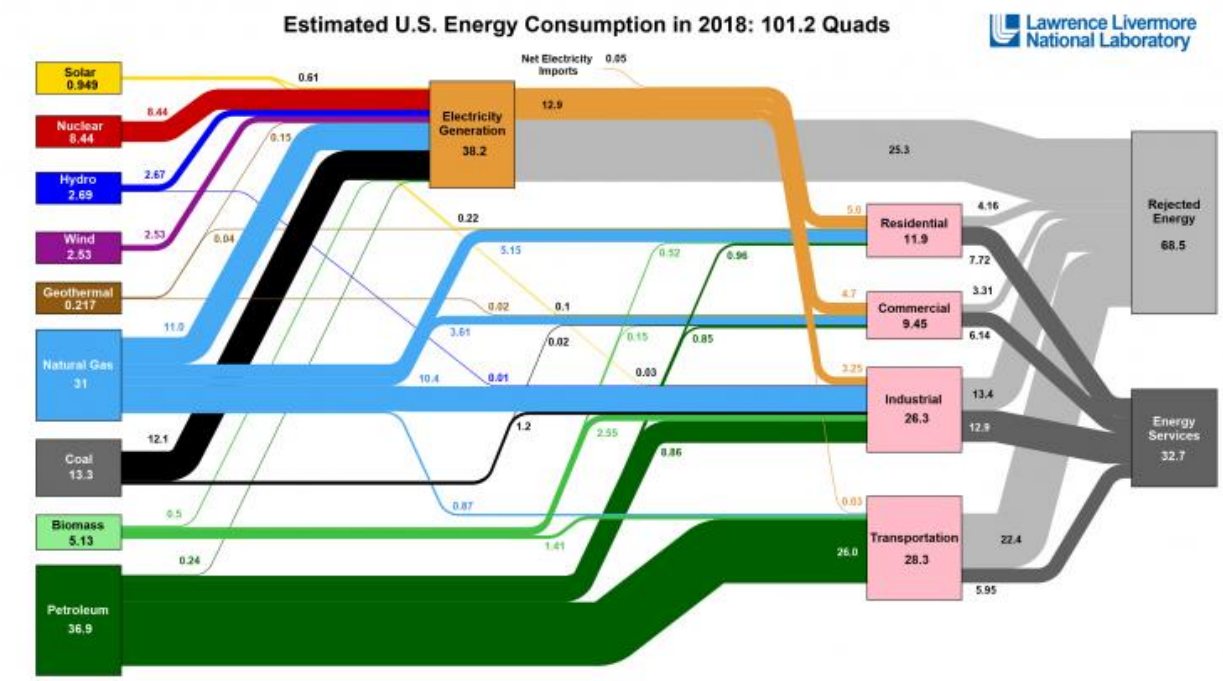
What is energy efficiency (EE)?

Energy efficiency is using less energy to perform the same task.

Improving energy efficiency utilizes building design and technology to lower energy usage.
Example: LED lights are 75-80% more efficient than incandescent lights

In contrast, energy conservation requires action to minimize energy use.
Example: turning off the lights when leaving the room

US Energy Consumption System
Energy efficiency opportunities are plentiful in the systems which produce the electricity used in buildings and facilities and the petroleum used in vehicles. Approximately two thirds of the energy moving through these systems is lost as escaped heat (see rejected energy below). Thus, improving the efficient use of energy at the end use will reduce the amount of heat lost through the delivery system. Lost heat is a proxy for Green House Gas emissions.



For city governments like the City of Winter Park, the biggest users of electricity are often water/wastewater facilities followed by buildings. This is reflected in City's electricity expenses for the FY ending 2020. Water and wastewater facilities accounted for 62% ($890,881) of electrical expenses in that fiscal year.

City of Winter Park, Electricity Expense (FY 2020)

Paid to	
Winter Park Utility	$873,189
Duke Electric	$552,230
OUC	$ 3,858
Total	$1,429,277

For more information on the expenses associated with specific buildings/plants, go to the Resource Section.

Federal Government Promotes Energy Efficiency

For the past 20 years, the EPA has played an active role in promoting energy efficiency through programs such as Energy Star certified products and buildings, Energy Star Portfolio free software for monitoring energy use at buildings and the Better Buildings Challenge.

City of Winter Park supports/utilizes Energy Efficiency

The City has policies which encourage energy efficiency.
Each year, funding is provided for energy audits and energy rebates that are made available to the City's residential customers.
The City has made funding sources available to local property owners for financing energy efficiency and solar projects through PACE and SELF.

Since the renovation of City Hall, the energy use of that building has dropped roughly 30%. Eight years ago, the City entered into a ten year

energy performance contract with Trane that has resulted in several projects such as installing new LED lighting and replacing a chiller. The Utility's tiered rate structure for electricity is designed to discourage using larger amounts of electricity use by ratepayers. The City's Sustainability staff uses EPA's Energy Star Portfolio software to monitor and report back to management on the electricity and water use at city owned facilities.

Energy Efficiency applied to Buildings

Energy efficiency improvement strategies that are applied to existing buildings include tightening the building's envelope, converting to LED lighting, upgrading and rightsizing cooling and heating systems, installing insulated windows and doors and Energy Star rated appliances.

When energy efficiency is a priority in the design and construction of new buildings, ultra low energy use can be achieved with relatively small premiums and short ROIs. A nearby example of an ultra low energy use building is the NeoCity Academy, built by the Osceola County Public School District. This school uses 76 per cent less energy than a regular school of a comparable size and is saving the Osceola School District $115,000 per year in energy costs.

Energy Efficiency in Water/Wastewater Treatment Plants

For many municipal governments, drinking water and wastewater plants typically are the largest energy consumers, often accounting for 30 to 40 percent of total energy consumed. By incorporating energy efficiency practices into their water and wastewater plants, municipalities and utilities can save 15 to 30 percent, saving thousands of dollars with payback periods of only a few months to a few years. *EPA "Sustainable Water Infrastructure"*

When management at water treatment plants were asked “What is your organization doing currently to manage electricity usage costs?”, they responded as follows.

61.3%	Invested in electric efficiency improvements in the last 3 years
40.3%	Considering electric efficiency upgrades
38.7%	Energy audit conducted with the 3 years
37.0%	Modifying operation for off-peak charges
35.3%	Invested in onsite power generation in the last 3 years

Black & Veatch, 2019 Strategic Directions

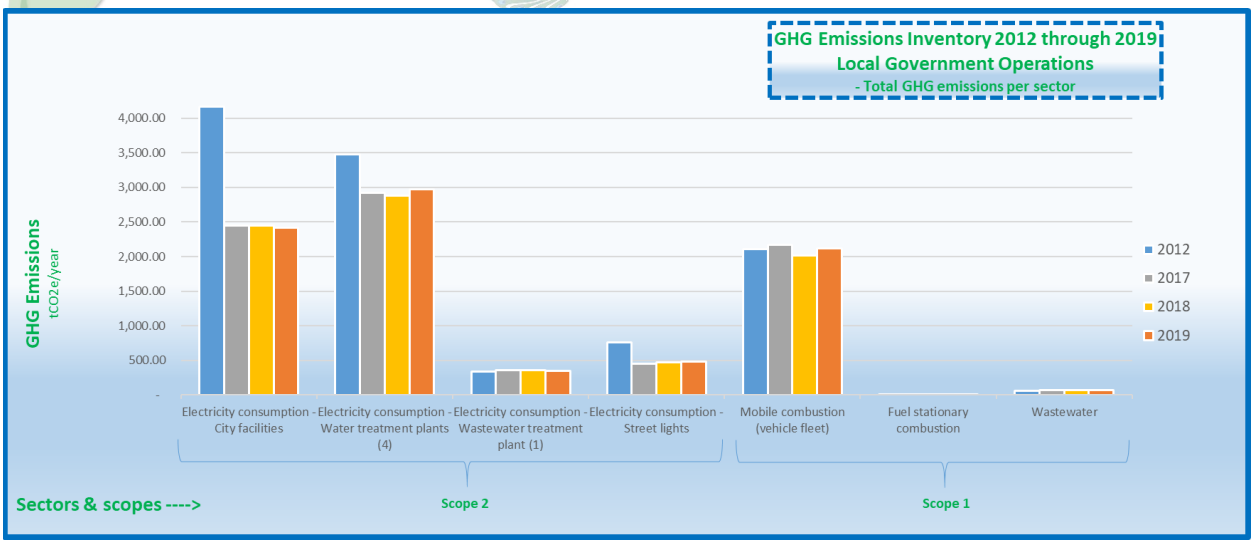
For water resource recovery facilities, there have been some noteworthy successes in reducing energy requirements. For instance, the Gresham, Oregon wastewater treatment saw its monthly electricity expense of $50,000/mo drop to zero through a combination of solar array deployment and biogas production. (A similar scenario is found at the water treatment plant in Downers Grove, Illinois.) However, what one facility needs to become a net-zero energy is not what another facility may need.
Understanding New Zero Energy in Wastewater Treatment, Luminul Team, March 25, 2019

Energy Efficiency & GHG emissions
GHG emissions come from primarily burning fossil fuels—coal, hydrocarbon gas liquids, natural gas, and petroleum—for energy use. The GHG emissions attributed to the operations of the City of Winter Park are divided into Scope 1 (transportation) & 2 (electricity) and across seven sectors. Here again, water facilities rank #1 as the leading source of GHG emissions while buildings take second place.

Winter Park's GHG Emissions – 2012 thru 2019

CITY OF WINTER PARK sustainability PROGRAM

LGO Inventory 2012 through 2019



LGO is Local Government Organization

The City's GHG levels from 2017-2019 show a stable system with little variation. However, the City of Winter Park's Sustainability Plan (2019) includes a goal to reduce GHG emissions from its own operations in 2030 by 50% over 2012 levels.

WP City Operations - GHG GOALS

metric	2012(base)	2019	2020	2030
tCO2e	11,248	8,591	Reduce by 20%	Reduce by 50%

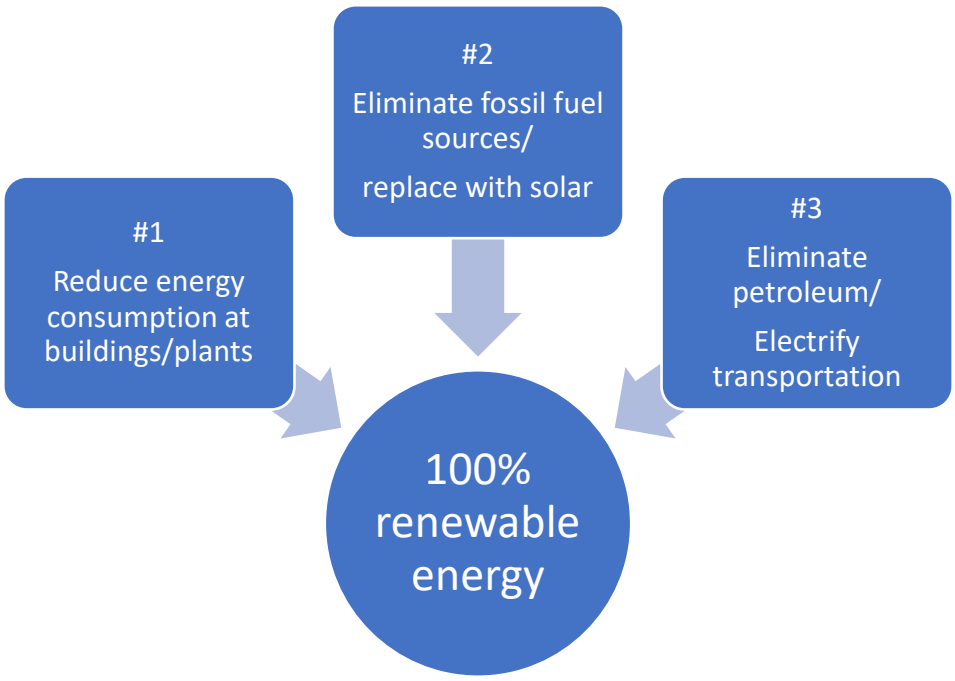
To achieve this aggressive goal, the City will need to implement robust actions over the next ten years. An approach using energy efficiency Improvements to reduce energy usage often proves to be most cost effective strategy available to reduce GHG gases.

Ready for 100% & Energy Efficiency

On a related matter, one of the City's Commissioners has introduced the idea of the City adopting a citywide goal to reach 100% renewable energy by a target date. These target dates are usually set at 2045 or 2050. When cities adopt these long range goals, the practice is to adopt a second goal applicable to the city's operation, i.e., achieve 100% renewable energy in ten to fifteen years. This second goal calls for local city leaders to lead by example and to share lessons learned with the community at large.

Many of the cities that have adopted these aggressive renewable energy goals are including energy efficiency improvements at buildings/facilities as a key strategy for reaching these goals.

As the City of Winter Park refines its cost estimate for achieving Ready for 100% goal, energy efficiency improvements should be incorporated into the cost estimate along with the other strategies of decarbonizing the electric and transportation sectors.



ENERGY EFFICIENCY RECOMMENDATIONS
for WINTER PARK's CITY & UTILITY MANAGEMENT

1	**Water/Wastewater Plants** – *Conduct in depth energy survey and identify the life cycle cost of energy savings projects. *Commit to and fund projects that will reduce energy consumption by at least 50% by 2030 for the portfolio of water/wastewater facilities. (See list of facilities and their energy use in Resource Section.) *Explore the feasibility and cost effectiveness of reaching net zero energy use at facilities in Duke's service territory.
2	**Existing Buildings** – *Conduct in depth energy survey and the identify the life cycle cost of energy savings projects.

	*Commit to and fund projects that will reduce energy consumption by at least 50% by 2030 for the portfolio of city owned buildings. (See list of buildings and their energy use in Resource Section.)
3.	**Audit Schedule** – Adopt a five year schedule for conducting in depth energy audits.
4.	**Community Visibility** – Share case studies on energy efficiency audits, projects, lessons learned with peers in other cities, professional associations, and the general community. The goal is to encourage others to implement energy efficiency projects of their own.
5.	**Ready for 100%** - Incorporate energy efficiency improvements into the cost estimate for the City of Winter to achieve 100% renewable energy. Determine if energy efficiency impacts would be sufficient to avoid the use of carbon credits.
6.	**Financial impact** – Analyze how the finances of the City and the Utility are impacted when electricity consumption drops at City operations. Do a separate analysis on City finances if electricity consumption declines at city owned facilities in Duke's service territory.

Resource Section

City of Winter Park
City Owned Facilities
Electrical Expense (FY 2020)

Division	Winter Park	Duke Energy	OUC	Total
Traffic	52,054.88			53,747.05
		1,692.17		
City Facilities	247,217.03			247,217.03
Police	12,623.60			12,623.60
Fire	19,845.44			19,845.44
Parks Maintenance	52,003.79		1,003.75	53,153.67
		146.13		
Parks Landscaping				1,925.88
	1,925.88			
Parks Cemeteries				4,014.36
	4,014.36			
Parks Tennis	16,319.49			16,319.49
Parks	31,365.80			31,365.80
Parks Facilities	16,638.94			16,742.50
		103.56		
Parks Community Center	46,127.38			46,127.38
Parks Golf Course				7,011.00
	7,011.00			
Parks Golf Course				8,135.60
	8,135.60			
Lakes				8,494.03
	8,494.03			
Water Treatment	237,702.79	357,482.01		595,184.80
Wastewater Treatment		67,677.70		67,677.70
Water Distribution				
	353.57	19.93		373.50
Water & Sewer Utility Construction	99,684.77	125,108.58	2,854.41	227,647.76
Electric Operations	11,670.79			11,670.79
	873,189.14	552,230.08	3,858.16	1,429,277.38

City of Winter Park
City Owned Buildings
Electric Use (calendar 2019)

City of Winter Park facility	Sum of Weather Normalized Site Electricity (kWh)	Sum of Weather Normalized Site Electricity (kBtu)	Sum of Weather Normalized Site Electricity Intensity (kBtu/ft²)
WINTER PARK PUBLIC SAFETY	1,656,342.50	5,651,675.20	64.15
PUBLIC WORKS COMPOUND	748,826.40	2,555,101.74	46.06
City Hall	567,628.10	1,936,827.47	61.76
WINTER PARK LIBRARY	472,074.30	1,610,784.37	47.09
WINTER PARK COMMUNITY CENTER	175,341.70	598,290.71	15.70
WINTER PARK FARMERS MARKET AND RAILROAD MUSEUM	134,869.70	460,194.52	63.47
CITY OF WINTER PARK FIRE STATION #62	128,196.40	437,424.27	49.48
Azalea Park Rec Center	126,832.00	432,768.75	96.56
WPPD GUN RANGE	96,343.60	328,738.01	28.32
Chamber of Commerce	92,589.10	315,927.12	25.93
WINTER PARK FIRE RESCUE STATION #64	83,416.20	284,627.89	45.38
City of Winter Park Golf Course - Country Club	53,015.00	180,894.69	38.56
Amtrak/Sunrail Winter Park Train Station	45,293.90	154,549.20	43.33
Hannibal Square Heritage Center	24,171.80	82,477.61	21.50
Golf Corse Pro Shop	20,753.00	70,812.18	36.17
PALM CEMETERY OFFICE	18,449.60	62,952.65	18.77
Mead Gardens complex	10,291.60	35,116.40	26.96

Note: the metric at the top of the far right column is also called Energy Utility Index(EUI). Traditional buildings score in the 50's – 70's while ultra low energy use buildings, like NeoCity Academy score in the 10's and 20's. Some low scores in the table above may be attributed to low use of the building. WP Community Center appears to be a "high performing building" with a high traffic load yet low EUI score of 15.70.

City of Winter Park
City Owned Water/Wastewater Treatment Plants
Electric Use (calendar 2018 & 2019)

Name	Sum of Energy cons [kBtu/yr]	Sum of EUI [kBtu/kgal]	Sum of kBtu/ft2
⊟2019	7,782,582.00	32.49	4,408.65
⊞Water Treatment Plant #1 (Swoope)	2,630,900.00	5.87	431.96
⊞Water Treatment Plant #6 (Aloma) - outside the City limits	2,322,400.00	6.37	865.39
⊞Water Treatment Plant #4 (Magnolia) - outside the City limits	1,928,700.00	6.38	731.22
⊞East Treatment Plant - Wastewater Treatment Plant (Bongart)	739,342.00	13.87	1,575.73
⊞Water Treatment Plant #3 (Wymore)	161,240.00	-	804.35
⊟2018	7,578,007.00	33.37	4,165.80
⊞Water Treatment Plant #1 (Swoope)	2,558,200.00	6.30	420.02
⊞Water Treatment Plant #6 (Aloma) - outside the City limits	2,312,800.00	7.27	861.81
⊞Water Treatment Plant #4 (Magnolia) - outside the City limits	1,862,600.00	6.90	706.16
⊞East Treatment Plant - Wastewater Treatment Plant (Bongart)	712,058.00	12.89	1,517.58
⊞Water Treatment Plant #3 (Wymore)	132,349.00	-	660.22

Draft Report

Electric Cost of Service Study

City of Winter Park, Florida

March 2021

leidos

This report has been prepared for the use of the client for the specific purposes identified in the report. The conclusions, observations and recommendations contained herein attributed to Leidos constitute the opinions of Leidos. To the extent that statements, information and opinions provided by the client or others have been used in the preparation of this report, Leidos has relied upon the same to be accurate, and for which no assurances are intended and no representations or warranties are made. Leidos makes no certification and gives no assurances except as explicitly set forth in this report.

March 10, 2021

Utility Advisory Board
City of Winter Park
City Hall, 401 South Park Avenue
Winter Park, Florida 32789

Subject: **Electric Cost of Service Study**

Ladies and Gentlemen:

In keeping with the provisions of the professional services agreement between the City of Winter Park, Florida (the City) and Leidos Engineering, LLC, (the Consultant) and the direction provided by the City management and staff and Utility Advisory Board, 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, 2020 through 2024. 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 proposed rate options for electric service that are necessary to meet the projected revenue requirements in the near future and which rates should recover such projected requirements from the customer classes generally in accordance with the direction provided by the City, the guidelines of the Florida Public Service Commission (the PSC) and the results of the allocated cost of service analyses.

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 Years 2020 and 2021 (the Budgets), the Ten Year Pro Forma, and detailed information and data compiled and provided by members of the City management and staff.

The projected costs and revenues used in this Report are for the fiscal years ending September 30, 2020 through 2024, and have been developed using the City's Budgets as a basis for the projected costs. Such costs and revenues, as initially reflected in the Budgets, were adjusted for known or anticipated changes.

The City acquired the Electric System from Progress Energy Florida (now doing business as Duke Energy Florida) in June 2005 and has not previously performed a cost of service study.

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, 2020 through 2024, the revenue requirements proposed herein include Operation and Maintenance expenses, a transfer to the City's General Fund, capital improvement expenditures, the payment of principal and interest on outstanding indebtedness, and an allowance for contingencies and reserves. Based on the foregoing, the Electric System revenue requirements for fiscal years ending September 30, 2020 through 2024 and the projected revenues, assuming the existing rates, are summarized on the following table:

	Projected				
Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Net Revenue Requirements	$44,912,177	$44,270,456	$44,662,613	$45,622,904	$45,975,542
Total Existing Rate Revenue	44,912,177	44,270,455	44,662,613	45,060,160	45,463,192
Difference	($0)	($0)	$0	($562,744)	($512,349)
Percent of Base and Fuel Revenue	0.0%	0.0%	0.0%	-1.4%	-1.3%

As shown above, the existing rates produce revenues that are approximately equal to the projected revenue requirements in the fiscal years ending September 30, 2020 through 2022 and slightly under recover the projected revenue requirements in the fiscal years ending September 30, 2023 and 2024.

Based on the analyses in this Report, the proposed rate options represent a realignment of costs allocated among the residential and commercial classes. It is projected that the proposed rate options will be sufficient to meet the projected revenue requirements for the fiscal years ending September 30, 2020 through 2022. For certain analyses, the "Test Year" has been identified as the fiscal year ending September 30, 2020.

COST OF SERVICE RESULTS

The Test Year revenue requirements were allocated to the customer classes based on a cost of service model that functionalizes costs among production, transmission, distribution and customer costs, and classifies costs according to demand related or energy related costs. Production (purchased power) demand related costs were allocated based on the contribution of each class to the average 12 month coincident peak demands and distribution demand related costs were allocated based on the contribution of each class to the annual system peak demand. Section 4 shows the development of allocation factors and Section 5 shows the results of the cost of service analysis.

The results of the cost of service analysis are summarized as follows:

Customer Class	Test Year 2020 Total Existing Revenue ($000)	Rate Adjustments ($000)	Rate Adjustments (%) [1]
Residential	$23,416	($601)	-2.9%
Commercial			
General Service Non-Demand	1,488	(17)	-1.3%
GS Non-Demand (100% Load Factor)	40	(0)	-0.4%
General Service Demand	12,545	519	4.8%
General Service Demand TOU	4,809	50	1.2%
Public Authority	2,129	48	2.6%
Lighting	485	1	0.3%
Total System	$44,912	$0	0.0%

[1] Percent of base rate and fuel adjustment revenues.
Rate adjustments based on moving 60% toward the Cost of Service.

RATE DESIGN

Four rate options are shown in Section 6. The electric rate options shown in Section 6 reflect, to the extent permitted, (i) the lowest possible price consistent with the projected revenue requirements, (ii) the discouragement of wasteful, unnecessary use of service, (iii) the policies of the City, and (iv) the cost of service methodologies recommended by the Florida Public Service Commission (the PSC).

The principal effects of adopting one of the rate options shown herein would be:

- Rate structures and levels, in general, will be based, in part, on allocated cost of service techniques.
- Fuel and purchased energy costs will continue to be shown in a separate charge, the Fuel Cost Recovery Factor.
- The rate options shown herein will be sufficient to meet the projected revenue requirements for the fiscal years ending September 30, 2020 through 2022.

RATE COMPARISONS

To assist the City in its evaluation and consideration of rate adjustment options, included in Table No. 7-1 are comparisons of typical monthly bills for the major rate classifications at various levels of usage. Typical bills calculated under the rate options have been compared with bills calculated under the existing rates. In addition, typical monthly bills calculated under the Electric System's existing and proposed rate options have been compared with those calculated under the rates of other Florida investor-owned and municipal electric utilities in Table No. 7-2 for the billing month of June 2020.

When reviewing the comparisons of typical bills, it must be recognized that a substantial portion of the electric bill is comprised of fuel and purchased energy costs. For electric utilities other than the Electric System, the bill comparisons shown reflect fuel costs that were estimated in mid-2020 and may not reflect actual current market prices for gas, oil and purchased energy.

As shown on Table No. 7-1, typical residential and small commercial customers' bills under the proposed rate options can be expected to decrease slightly and large commercial customers' bills can be expected to increase slightly.

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 incorporated by reference herein, and the data and information provided by the City's management and staff and others, 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 approximately equal to the projected revenue requirements in the fiscal years ending September 30, 2020 through 2022 and slightly under recover the projected revenue requirements in the fiscal years ending September 30, 2023 and 2024;

(iii) The proposed rate options reflect a realignment of costs among the residential and commercial rate classes, and are projected to meet the revenue requirements for the fiscal years ending September 30, 2020 through 2022.

(iv) The City's existing and proposed rate options are comparable or lower than other Florida electric utilities;

(v) The City may want to investigate additional rate offerings such as Residential Time of Use Rate, Solar Subscription Rate, or Electric Vehicle Rate;

(vi) The City should continue to monitor the cost of purchased power and current market conditions and should make adjustments, if necessary, to its fuel cost recovery factor to reflect such costs and conditions and to minimize the potential to under recover or over recover its fuel costs; and

(vii) The City should consider submitting this Report, together with other appropriate filing requirements, to the PSC.

We are prepared to present our analyses and proposed rate options to the City Commission and to assist the City with public meetings, with PSC filing requirements, and with presentations in connection with the adoption and implementation of the proposed rate options.

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 members of the Utility Advisory Board.

Respectfully submitted,

LEIDOS ENGINEERING, LLC

c: Mayor and City Commission
Daniel D'Allessandro
Wes Hamil

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List of Tables

Section 1
INTRODUCTION, PURPOSE, AND SCOPE

Introduction

The City of Winter Park (City), located in Central Florida, operates a transmission and distribution only utility consisting of facilities that provide electric service to approximately 15,000 customers. The City currently meets its load requirements through power supply contracts with the Orlando Utilities Commission (OUC), Covanta Energy Marketing LLC (Covanta), and the Florida Municipal Power Agency (FMPA). As a member of FMPA, the City benefits from the associated capacity and energy to meet its customers' load requirements. Power is delivered through the City's Canton Avenue and Interlachen substations served by 69 kV transmission lines owned by Duke Energy (Duke).

Leidos Engineering, LLC, (the Consultant or the firm) conducted this 2020 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 Budgets for Fiscal Years ending September 30, 2020 and 2021, the Capital Improvement Plan for Fiscal Years 2020 through 2024, the Ten Year Pro Forma projections, the City's demand and energy forecasts (including the effects of conservation), 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, 2020, as adjusted for known changes (the Test Year); and Fiscal Years ending September 30, 2021 through 2024 (Study Period).
2. To test the adequacy of the existing rates on a system wide basis for the Fiscal Years 2020 through 2024;
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 provided 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 optionss and the rates charged by neighboring private and public electric utilities.

The Electric Rate Study consists of two parts or phases. The results 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) the making of revisions to the revenue requirements, (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

Projection of Electricity Sales to Ultimate Customers

The projections of electric energy sales to ultimate customers are based on information provided by the City and checked for reasonableness based on historical growth, usage patterns, and weather.

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

Historical Retail Energy Sales (MWh)			
Fiscal Year	Residential	Commercial	Total
2014	183,301	242,713	426,014
2015	187,566	241,780	429,346
2016	192,100	245,935	438,035
2017	185,518	239,657	425,175
2018	182,964	231,731	414,695
2019	190,271	235,748	426,018

Historical Number of Customers			
Fiscal Year	Residential	Commercial	Total
2014	11,610	2,938	14,548
2015	11,864	3,001	14,864
2016	11,898	3,001	14,899
2017	11,898	3,287	15,185
2018	12,084	3,298	15,382
2019	12,048	3,296	15,344

Projected Demand

The historical system peak demand for the fiscal year ended September 30, 2019 was 97.1 MW occurring in June. For purposes of this Study, it was projected that the system peak demand for fiscal year 2020 would be 95.7 MW.

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 historical and projected energy sales by major customer class for fiscal years 2019 and 2020:

Retail Energy Sales (MWh)			
Fiscal Year	Residential	Commercial	Total
Historical 2019	190,271	235,748	426,018
Projected 2020	187,842	232,158	420,000

As can be seen from the summary table, energy sales in fiscal year ended September 30, 2019 were 426,018 MWh. Sales in fiscal year 2020 and the Study Period are based projected amounts provided by the City.

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 on Table No. 2-1. The following is a summary of the historical and projected average number of customers used as a basis for this Study:

Average Number of Customers			
Fiscal Year	Residential	Commercial	Total
Historical 2019	12,048	3,296	15,344
Projected 2020	12,180	3,300	15,479

Purchased Power

The City purchases capacity and energy requirements from a variety of sources, including OUC, Covanta, and FMPA. The contract with Covanta ends in 2024, and the contracts with OUC and FMPA end in 2026 and 2027, respectively.

Energy Losses

The loss factors utilized in developing the projected energy requirements for the Test Year are 3.8 percent of annual energy requirements and 4.0 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 annual peak demand at the generation level, energy requirements and the system load factor used in this Study:

Description	2020 Test Year
Annual 60-Minute Peak Demand (MW)	95.7
Annual Energy Sales (MWh)	420,000
Losses and Unaccounted for Energy (MWh)	16,590
Annual Energy Requirements (MWh)	436,590
Annual System Load Factor (%)	52.1 %

Customer Statistics

As shown on Table No. 2-1 and Table No. 2-2, the historical number of customers and energy sales have been relatively stable. The City's customer base is somewhat unique, since the residential base includes a significant number of above average energy users, and the average use per customer is higher than for other utilities in the area, the small commercial users such as those on Park Avenue are distinctive and may have different operating hours than typical small commercial users, and the large commercial customers include unique customers such as Rollins College and the hospital.

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, 2017 through 2020 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 2020. The projected average annual number of customers and annual energy sales for the fiscal year ending September 30, 2020 incorporate the following considerations:

i. continuation of recent historical sales and/or usage characteristics;

ii. continuation of past, present, and projected conservation and demand-side management programs (if any); and

iii. 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 2020 composition of the City's ultimate customers and associated energy sales by major rate classification is tabulated below:

Customer Class	Test Year 2020 Average Number of Customers	Percent of Total	Annual MWh Sales	Percent of Total
Residential	12,180	78.7%	187,842	44.7%
Commercial	1,167	7.5%	11,664	2.8%
Commercial Demand	1,069	6.9%	196,182	46.7%
Public Authority	269	1.7%	22,188	5.3%
Lighting	795	5.1%	2,124	0.5%
Total	15,479	100.0%	420,000	100.0%

The projected energy sales of 420,000 MWh in the Test Year reflects an estimated normal year. For Fiscal Year 2021, the projected energy sales are 407,000 MWh to reflect the unknown impact of Covid-19 on energy sales.

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Historical and Projected Customers

Fiscal Years 2017-2020

Ln. No.	Customer Classes	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Average
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
	Historical FY 2017														
1	**Residential**	11,857	11,831	11,852	11,852	11,842	11,894	11,866	11,917	11,980	11,959	11,994	11,929	142,773	11,898
	Commercial														
2	General Service Non-Demand	1,014	1,033	1,017	1,014	1,024	1,011	1,163	1,144	1,142	1,135	1,141	1,134	12,972	1,081
3	GS Non-Demand - 100% Load Factor	36	36	36	36	36	36	36	36	36	40	40	40	444	37
	General Service Demand														
4	Primary	2	2	2	2	2	2	2	2	2	3	2	2	25	2
5	Secondary	1,144	1,136	1,137	1,131	1,136	1,138	1,005	1,028	1,031	1,036	1,036	1,042	13,000	1,083
	Time of Use														
6	Primary	1	1	1	1	1	1	1	1	1	1	1	1	12	1
7	Secondary	20	20	21	19	21	21	21	20	20	20	20	20	243	20
8	**Subtotal Commercial**	2,217	2,228	2,214	2,203	2,220	2,209	2,228	2,231	2,232	2,235	2,240	2,239	26,696	2,225
	Public Authority														
9	General Service Non-Demand	186	186	186	189	187	187	183	178	189	180	179	182	2,212	184
10	GS Non-Demand - 100% Load Factor	22	23	23	23	23	23	23	23	23	23	23	23	275	23
11	General Service Demand	58	59	56	56	56	57	60	55	63	59	60	57	696	58
	Time of Use														
12	Primary	1	1	1	1	1	1	1	1	1	1	1	1	12	1
13	Secondary	1	1	1	1	1	1	1	1	1	1	1	1	12	1
14	**Subtotal Public Authority**	268	270	267	270	268	269	268	258	277	264	264	264	3,207	267
	Lighting														
15	Residential	649	649	649	649	649	649	649	649	649	649	649	649	7,788	649
16	Commercial	146	146	146	146	146	146	146	146	146	146	146	146	1,752	146
17	**Subtotal Lighting**	795	795	795	795	795	795	795	795	795	795	795	795	9,540	795
18	**FY 2017 TOTAL CUSTOMERS**	15,137	15,124	15,128	15,120	15,125	15,167	15,157	15,201	15,284	15,253	15,293	15,227	182,216	15,185
	Historical FY 2018														
19	**Residential**	11,860	11,865	11,889	11,840	12,147	12,217	12,130	12,171	12,250	12,206	12,263	12,167	145,005	12,084
	Commercial														
20	General Service Non-Demand	1,134	1,145	1,133	1,138	1,128	1,140	1,129	1,133	1,140	1,123	1,124	1,127	13,594	1,133
21	GS Non-Demand - 100% Load Factor	40	40	40	40	40	40	40	40	40	40	40	40	480	40
	General Service Demand														
22	Primary	2	1	1	1	1	1	1	1	1	1	1	1	13	1
23	Secondary	1,050	1,035	1,043	1,043	1,043	1,038	1,040	1,045	1,042	1,034	1,044	1,040	12,497	1,041
	Time of Use														
24	Primary	1	1	1	1	1	1	1	1	1	1	1	1	12	1
25	Secondary	20	20	20	20	20	20	20	20	21	20	20	20	241	20
26	**Subtotal Commercial**	2,247	2,242	2,238	2,243	2,233	2,240	2,231	2,240	2,245	2,219	2,230	2,229	26,837	2,236
	Public Authority														
27	General Service Non-Demand	182	183	182	182	182	181	182	183	181	181	180	185	2,184	182
28	GS Non-Demand - 100% Load Factor	23	23	23	23	23	23	23	23	23	23	23	23	276	23
	General Service Demand	62	59	59	59	59	59	59	58	58	61	63	60		
	Time of Use														
29	Primary	1	1	1	1	1	1	1	1	1	1	1	1	12	1
30	Secondary	1	1	1	1	1	1	1	1	1	1	1	1	12	1
31	**Subtotal Public Authority**	269	267	266	266	266	265	266	266	264	267	268	270	2,484	267
	Lighting														
32	Residential	649	649	649	649	649	649	649	649	649	649	649	649	7,788	649
33	Commercial	146	146	146	146	146	146	146	146	146	146	146	146	1,752	146
34	**Subtotal Lighting**	795	795	795	795	795	795	795	795	795	795	795	795	9,540	795
35	**FY 2018 TOTAL CUSTOMERS**	15,171	15,169	15,188	15,144	15,441	15,517	15,422	15,472	15,554	15,487	15,556	15,461	184,582	15,382

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Historical and Projected Customers

Fiscal Years 2017-2020

Ln. No.	Customer Classes	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Average
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
	Historical FY 2019														
36	**Residential**	12,017	12,005	11,999	12,045	12,059	12,017	12,081	12,089	12,089	12,083	12,078	12,012	144,574	12,048
	Commercial														
37	General Service Non-Demand	1,134	1,128	1,127	1,127	1,116	1,114	1,107	1,115	1,102	1,069	1,107	1,099	13,345	1,112
38	GS Non-Demand - 100% Load Factor	40	40	40	40	40	40	40	40	40	40	40	40	480	40
	General Service Demand														
39	Primary	1	1	1	1	1	1	1	1	1	1	1	1	12	1
40	Secondary	1,048	1,050	1,054	1,055	1,052	1,060	1,053	1,056	1,048	1,054	1,062	1,062	12,654	1,055
	Time of Use														
41	Primary	2	2	2	2	2	2	2	1	1	1	1	1	19	2
42	Secondary	19	19	19	18	20	19	19	20	20	19	19	19	230	19
43	**Subtotal Commercial**	2,244	2,240	2,243	2,243	2,231	2,236	2,222	2,233	2,212	2,184	2,230	2,222	26,740	2,228
	Public Authority														
44	General Service Non-Demand	184	186	185	185	185	186	184	188	184	195	195	195	2,252	188
45	GS Non-Demand - 100% Load Factor	23	23	23	23	23	23	23	23	23	23	23	23	276	23
46	General Service Demand	60	59	61	61	61	60	61	61	60	59	58	60	721	60
	Time of Use														
47	Primary	1	1	1	1	1	1	1	1	1	1	1	1	12	1
48	Secondary	1	1	1	1	1	1	1	1	1	1	1	1	12	1
49	**Subtotal Public Authority**	269	270	271	271	271	271	270	274	269	279	278	280	3,273	273
	Lighting														
50	Residential	649	649	649	649	649	649	649	649	649	649	649	649	7,788	649
51	Commercial	146	146	146	146	146	146	146	146	146	146	146	146	1,752	146
52	**Subtotal Lighting**	795	795	795	795	795	795	795	795	795	795	795	795	9,540	795
53	**FY 2019 TOTAL CUSTOMERS**	15,325	15,310	15,308	15,354	15,356	15,319	15,368	15,391	15,365	15,341	15,381	15,309	184,127	15,344
	Projected FY 2020														
54	**Residential**	12,146	12,135	12,126	12,181	12,205	12,176	12,130	12,171	12,250	12,206	12,263	12,167	146,156	12,180
	Commercial														
55	General Service Non-Demand	1,134	1,128	1,127	1,127	1,116	1,114	1,129	1,133	1,140	1,123	1,124	1,127	13,522	1,127
56	GS Non-Demand - 100% Load Factor	40	40	40	40	40	40	40	40	40	40	40	40	480	40
	General Service Demand														
57	Primary	1	1	1	1	1	1	1	1	1	1	1	1	12	1
58	Secondary	1,048	1,050	1,054	1,055	1,052	1,060	1,040	1,045	1,042	1,034	1,044	1,040	12,564	1,047
	Time of Use														
59	Primary	2	2	2	2	2	2	1	1	1	1	1	1	18	2
60	Secondary	19	19	19	18	20	19	20	20	21	20	20	20	235	20
61	**Subtotal Commercial**	2,244	2,240	2,243	2,243	2,231	2,236	2,231	2,240	2,245	2,219	2,230	2,229	26,831	2,236
	Public Authority														
62	General Service Non-Demand	184	186	185	185	185	186	182	183	181	181	180	185	2,203	184
63	GS Non-Demand - 100% Load Factor	23	23	23	23	23	23	23	23	23	23	23	23	276	23
64	General Service Demand	60	59	61	61	61	60	59	58	58	61	63	60	721	60
	Time of Use														
65	Primary	1	1	1	1	1	1	1	1	1	1	1	1	12	1
66	Secondary	1	1	1	1	1	1	1	1	1	1	1	1	12	1
67	**Subtotal Public Authority**	269	270	271	271	271	271	266	266	264	267	268	270	3,224	269
	Lighting														
68	Residential	649	649	649	649	649	649	649	649	649	649	649	649	7,788	649
69	Commercial	146	146	146	146	146	146	146	146	146	146	146	146	1,752	146
70	**Subtotal Lighting**	795	795	795	795	795	795	795	795	795	795	795	795	9,540	795
71	**FY 2020 TOTAL CUSTOMERS**	15,454	15,440	15,435	15,490	15,502	15,478	15,422	15,472	15,554	15,487	15,556	15,461	185,751	15,479

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Historical and Projected Energy Sales (kWh)
Fiscal Years 2017-2020

Ln. No.	Customer Classes	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Average
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
	Historical FY 2017														
1	**Residential**	18,162,291	13,444,261	12,229,953	12,753,019	12,375,894	11,886,726	12,706,951	15,080,783	18,080,150	19,209,581	19,786,658	19,801,670	185,517,937	15,459,828
	Commercial														
2	General Service Non-Demand	1,140,723	990,553	830,686	816,031	835,218	807,783	868,318	956,483	1,066,706	1,163,831	1,231,885	1,131,986	11,840,203	986,684
3	GS Non-Demand - 100% Load Factor	33,079	32,216	34,990	33,323	33,435	34,649	33,575	33,661	34,573	37,732	36,701	36,327	414,261	34,522
	General Service Demand														
4	Primary	15,356	12,233	10,985	10,735	11,024	10,169	11,915	13,876	13,386	10,742	7,458	7,012	134,891	11,241
5	Secondary	12,551,966	10,787,867	10,157,938	10,244,128	10,103,622	10,039,367	10,461,445	11,404,196	12,448,692	13,144,289	13,690,625	13,063,011	138,097,146	11,508,096
	Time of Use														
6	Primary - On Peak	466,400	381,600	374,400	295,200	345,600	360,000	374,400	367,200	374,400	424,800	424,800	432,000	4,620,800	385,067
7	Primary - Off Peak	1,310,400	1,130,400	1,224,000	936,000	1,087,200	1,123,200	1,173,600	1,209,600	1,188,000	1,432,800	1,281,600	1,432,800	14,529,600	1,210,800
8	Secondary- On Peak	1,051,627	942,849	882,054	860,197	867,068	873,428	855,363	908,277	989,368	989,069	945,740	1,031,275	11,196,315	933,026
9	Secondary - Off Peak	3,329,281	2,863,625	2,702,333	2,612,032	2,661,695	2,667,168	2,580,285	2,742,350	3,019,714	2,959,953	2,973,516	3,137,328	34,249,280	2,854,107
10	**Subtotal Commercial**	19,898,832	17,141,343	16,217,386	15,807,646	15,944,862	15,915,764	16,358,901	17,635,643	19,134,839	20,163,216	20,592,325	20,271,739	215,082,496	17,923,541
	Public Authority														
11	General Service Non-Demand	164,771	164,911	176,300	151,704	157,379	162,094	109,898	102,263	116,236	114,220	115,423	111,081	1,646,280	137,190
12	GS Non-Demand - 100% Load Factor	8,642	8,722	8,996	8,929	8,965	8,876	8,667	8,635	8,739	8,816	8,789	8,732	105,508	8,792
13	General Service Demand	1,207,375	1,097,988	1,033,900	953,668	935,224	1,002,941	1,011,727	1,090,267	1,205,205	1,168,148	1,283,693	1,244,346	13,234,482	1,102,874
	Time of Use														
14	Primary - On Peak	182,400	158,400	160,800	115,200	136,800	158,400	148,800	151,200	163,200	158,400	158,400	199,200	1,891,200	157,600
15	Primary - Off Peak	504,000	420,000	420,000	285,600	316,800	396,000	364,800	451,200	436,800	480,000	451,200	585,600	5,112,000	426,000
16	Secondary- On Peak	11,400	10,600	8,700	9,300	8,900	9,100	9,300	10,800	10,500	13,300	12,100	12,000	126,000	10,500
17	Secondary - Off Peak	33,400	27,500	21,500	24,600	23,600	23,800	24,600	30,900	30,000	38,800	37,600	32,900	349,200	29,100
18	**Subtotal Public Authority**	2,111,988	1,888,121	1,830,196	1,549,001	1,587,668	1,761,211	1,677,792	1,845,265	1,970,680	1,981,684	2,067,205	2,193,859	22,464,670	1,872,056
	Lighting														
19	Residential	6,650	6,658	6,551	6,683	6,687	6,696	6,742	6,201	6,254	6,169	6,453	6,228	77,972	6,498
20	Commercial	50,644	50,280	51,141	50,745	46,116	46,090	46,182	47,079	46,549	46,969	48,995	56,988	587,778	48,982
21	Public Authority	120,411	120,411	122,883	120,411	120,411	120,411	120,411	120,242	120,580	119,676	119,364	119,364	1,444,575	120,381
22	**Subtotal Lighting**	177,705	177,349	180,575	177,839	173,214	173,197	173,335	173,522	173,383	172,814	174,812	182,580	2,110,325	55,479
23	**FY 2017 TOTAL ENERGY SALES**	40,350,816	32,651,074	30,458,110	30,287,505	30,081,638	29,736,898	30,916,979	34,735,213	39,359,052	41,527,295	42,621,000	42,449,848	425,175,428	35,431,286

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Historical and Projected Energy Sales (kWh)
Fiscal Years 2017-2020

Ln. No.	Customer Classes	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Average
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
	Historical FY 2018														
24	**Residential**	16,850,689	14,407,780	12,032,570	15,234,078	14,301,731	12,299,746	11,517,908	13,627,407	15,644,114	18,581,628	19,321,843	19,144,243	182,963,737	15,246,978
	Commercial														
25	General Service Non-Demand	1,053,179	868,397	742,029	840,853	777,992	782,646	722,251	866,911	964,103	1,134,793	1,169,197	1,161,213	11,083,564	923,630
26	GS Non-Demand - 100% Load Factor	32,608	36,979	36,710	37,071	37,237	35,791	34,950	36,217	36,119	36,713	36,718	37,374	434,487	36,207
	General Service Demand														
27	Primary	5,947	3,461	3,368	3,439	2,851	2,895	2,447	3,344	3,499	3,911	3,790	3,148	42,100	3,508
28	Secondary	12,009,376	11,149,369	10,056,736	10,096,683	9,956,344	10,394,018	9,353,904	10,714,394	11,506,097	12,909,653	13,246,095	13,073,342	134,466,011	11,205,501
	Time of Use														
29	Primary - On Peak	432,000	388,800	367,200	280,800	352,800	360,000	295,200	381,600	338,400	374,400	403,200	381,600	4,356,000	363,000
30	Primary - Off Peak	1,303,200	1,180,800	1,224,000	943,200	1,008,000	1,238,400	1,029,600	1,159,200	1,116,000	1,288,800	1,180,800	1,245,600	13,917,600	1,159,800
31	Secondary- On Peak	941,609	942,803	839,213	838,703	852,360	826,546	782,344	897,059	902,437	965,901	943,868	908,373	10,641,216	886,768
32	Secondary - Off Peak	2,846,322	2,944,497	2,524,442	2,573,549	2,621,439	2,541,046	2,404,222	2,672,148	2,810,231	2,910,450	2,841,201	2,843,548	32,533,095	2,711,091
33	**Subtotal Commercial**	18,624,241	17,515,106	15,793,698	15,614,298	15,609,023	16,181,342	14,624,918	16,730,873	17,676,886	19,624,621	19,824,869	19,654,198	207,474,073	17,289,506
	Public Authority														
34	General Service Non-Demand	114,894	115,928	109,981	110,757	114,320	111,722	98,509	103,008	105,150	109,929	110,004	114,121	1,318,323	109,860
35	GS Non-Demand - 100% Load Factor	8,401	8,823	8,773	8,892	8,790	8,732	8,369	8,645	8,441	8,543	8,467	8,624	103,500	8,625
36	General Service Demand	1,297,844	1,272,790	1,130,449	1,002,132	1,027,933	1,005,484	854,395	967,623	1,026,936	1,144,283	1,405,375	1,264,502	13,399,746	1,116,646
	Time of Use														
37	Primary - On Peak	172,800	172,800	156,000	132,000	172,800	144,000	124,800	153,600	146,400	146,400	151,200	170,400	1,843,200	153,600
38	Primary - Off Peak	484,800	458,400	422,400	364,800	420,000	376,800	362,400	376,800	420,000	432,000	446,400	446,400	5,011,200	417,600
39	Secondary- On Peak	11,100	10,100	8,900	10,300	9,800	9,600	8,400	9,200	10,300	11,800	11,800	11,700	123,000	10,250
40	Secondary - Off Peak	32,200	28,200	21,300	22,500	23,800	23,100	22,500	28,500	29,100	32,900	36,900	32,800	333,800	27,817
41	**Subtotal Public Authority**	2,122,039	2,067,041	1,857,803	1,651,381	1,777,443	1,679,438	1,479,373	1,647,376	1,746,327	1,885,855	2,170,146	2,048,547	22,132,769	1,844,397
	Lighting														
42	Residential	6,187	6,175	6,479	6,357	6,352	6,374	6,424	6,414	6,381	6,492	6,406	6,392	76,433	6,369
43	Commercial	51,224	48,876	53,705	51,224	48,876	53,705	51,266	51,238	51,426	50,926	51,441	51,240	615,147	51,262
44	Public Authority	119,364	119,364	119,364	119,364	119,364	119,364	119,190	119,190	119,190	119,364	119,886	119,364	1,432,368	119,364
45	**Subtotal Lighting**	176,775	174,415	179,548	176,945	174,592	179,443	176,880	176,842	176,997	176,782	177,733	176,996	2,123,948	176,996
46	**FY 2018 TOTAL ENERGY SALES**	37,773,744	34,164,342	29,863,619	32,676,702	31,862,789	30,339,969	27,799,079	32,182,498	35,244,324	40,268,886	41,494,591	41,023,984	414,694,527	34,557,877

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Historical and Projected Energy Sales (kWh)
Fiscal Years 2017-2020

Ln. No.	Customer Classes	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Average
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
	Historical FY 2019														
47	**Residential**	20,059,385	14,922,098	13,464,512	13,862,510	13,681,753	11,630,802	11,494,848	15,006,519	18,842,877	18,539,574	18,793,014	19,972,857	190,270,749	15,855,896
	Commercial														
48	General Service Non-Demand	1,204,533	933,316	770,900	751,735	790,223	728,810	752,168	956,321	1,163,356	1,156,825	1,145,296	1,198,239	11,551,722	962,644
49	GS Non-Demand - 100% Load Factor	38,794	36,755	39,084	39,832	38,145	35,374	36,685	38,009	38,426	36,047	37,648	38,309	453,108	37,759
	General Service Demand														
50	Primary	3,656	3,312	3,368	3,338	2,971	2,297	2,501	2,458	2,496	2,574	2,527	2,512	34,010	2,834
51	Secondary	13,492,224	11,398,478	10,325,682	9,949,784	9,792,865	9,724,041	9,866,903	11,770,519	13,154,629	13,264,154	13,212,298	13,975,912	139,927,489	11,660,624
	Time of Use														
52	Primary - On Peak	453,600	417,600	338,400	280,800	352,800	266,400	316,800	345,600	273,600	302,400	324,000	324,000	3,996,000	333,000
53	Primary - Off Peak	1,447,200	1,188,000	1,130,400	921,600	1,058,400	936,000	921,600	1,202,400	900,000	964,800	972,000	1,058,400	12,700,800	1,058,400
54	Secondary- On Peak	1,010,290	869,078	857,092	747,581	863,657	740,455	784,908	877,269	898,747	895,516	944,700	1,000,375	10,489,668	874,139
55	Secondary - Off Peak	3,032,333	2,556,009	2,571,460	2,295,822	2,653,437	2,261,177	2,386,991	2,656,395	2,677,335	2,750,783	2,830,329	3,076,941	31,749,012	2,645,751
56	**Subtotal Commercial**	20,682,630	17,402,548	16,036,386	14,990,492	15,552,498	14,694,554	15,068,556	17,848,971	19,108,589	19,373,099	19,468,798	20,674,688	210,901,809	17,575,151
	Public Authority														
57	General Service Non-Demand	122,071	109,533	112,667	110,221	112,497	105,229	101,151	105,126	109,302	105,008	106,120	112,766	1,311,691	109,308
58	GS Non-Demand - 100% Load Factor	8,717	8,768	8,715	9,014	8,657	8,361	8,492	8,653	8,449	8,294	8,313	8,356	102,789	8,566
59	General Service Demand	1,333,369	1,148,341	1,032,453	930,514	1,023,386	963,305	942,525	1,110,564	1,247,664	1,164,270	1,177,820	1,323,229	13,397,440	1,116,453
	Time of Use														
60	Primary - On Peak	189,600	177,600	175,200	160,800	194,400	153,600	160,800	153,600	153,600	160,800	158,400	204,000	2,042,400	170,200
61	Primary - Off Peak	540,000	453,600	477,600	412,800	448,800	415,200	386,400	429,600	451,200	424,800	444,000	520,800	5,404,800	450,400
62	Secondary- On Peak	11,300	10,500	9,900	8,800	10,000	8,600	8,200	10,100	11,600	11,800	11,600	12,500	124,900	10,408
63	Secondary - Off Peak	33,000	31,100	23,200	24,400	23,000	24,100	24,000	30,100	32,700	33,100	32,700	36,900	348,300	29,025
64	**Subtotal Public Authority**	2,238,057	1,939,442	1,839,735	1,656,549	1,820,740	1,678,395	1,631,568	1,847,743	2,014,515	1,908,072	1,938,953	2,218,551	22,732,320	1,894,360
	Lighting														
65	Residential	6,416	6,464	6,239	6,343	6,357	6,437	6,419	6,383	6,374	6,374	6,374	6,374	76,554	6,380
66	Commercial	52,350	51,982	51,094	51,194	50,938	51,022	50,873	50,339	48,709	48,929	48,732	48,506	604,668	50,389
67	Public Authority	119,364	119,364	119,364	119,364	119,364	119,364	119,364	119,364	119,364	119,364	119,364	119,364	1,432,368	119,364
68	**Subtotal Lighting**	178,130	177,810	176,697	176,901	176,659	176,823	176,656	176,086	174,447	174,667	174,470	174,244	2,113,590	176,133
69	**FY 2019 TOTAL ENERGY SALES**	43,158,202	34,441,898	31,517,330	30,686,452	31,231,650	28,180,574	28,371,628	34,879,319	40,140,428	39,995,412	40,375,235	43,040,340	426,018,468	35,501,539

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Historical and Projected Energy Sales (kWh)
Fiscal Years 2017-2020

Ln. No.	Customer Classes	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Average
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
	Projected FY 2020														
70	**Residential**	20,317,219	15,113,900	13,637,579	14,040,693	13,857,612	11,780,299	11,665,954	13,802,568	15,845,196	18,820,468	19,570,197	19,390,315	187,842,000	15,653,500
	Commercial														
71	General Service Non-Demand	1,206,568	934,893	772,203	753,005	791,558	730,041	723,471	868,376	965,732	1,136,710	1,171,173	1,163,175	11,216,906	934,742
72	GS Non-Demand - 100% Load Factor	38,860	36,817	39,150	39,899	38,209	35,434	35,009	36,278	36,180	36,775	36,780	37,437	446,829	37,236
	General Service Demand														
73	Primary	3,662	3,318	3,374	3,344	2,976	2,301	2,451	3,350	3,505	3,918	3,796	3,153	39,147	3,262
74	Secondary	13,515,022	11,417,738	10,343,129	9,966,596	9,809,412	9,740,472	9,369,709	10,732,498	11,525,539	12,931,467	13,268,477	13,095,432	135,715,493	11,309,624
	Time of Use														
75	Primary - On Peak	454,366	418,306	338,972	281,274	353,396	266,850	295,699	382,245	338,972	375,033	403,881	382,245	4,291,239	357,603
76	Primary - Off Peak	1,449,645	1,190,007	1,132,310	923,157	1,060,188	937,582	1,031,340	1,161,159	1,117,886	1,290,978	1,182,795	1,247,705	13,724,752	1,143,729
77	Secondary- On Peak	1,011,997	870,546	858,540	748,844	865,116	741,706	783,666	898,575	903,962	967,533	945,463	909,908	10,505,857	875,488
78	Secondary - Off Peak	3,037,457	2,560,328	2,575,805	2,299,701	2,657,921	2,264,998	2,408,284	2,676,663	2,814,979	2,915,368	2,846,002	2,848,353	31,905,859	2,658,822
79	**Subtotal Commercial**	20,717,578	17,431,953	16,063,483	15,015,822	15,578,777	14,719,384	14,649,630	16,759,143	17,706,755	19,657,781	19,858,367	19,687,408	207,846,082	17,320,507
	Public Authority														
80	General Service Non-Demand	122,277	109,718	112,857	110,407	112,687	105,407	98,675	103,182	105,328	110,115	110,190	114,314	1,315,157	109,596
81	GS Non-Demand - 100% Load Factor	8,732	8,783	8,730	9,029	8,672	8,375	8,383	8,660	8,455	8,557	8,481	8,639	103,496	8,625
82	General Service Demand	1,335,622	1,150,281	1,034,198	932,086	1,025,115	964,933	855,839	969,258	1,028,671	1,146,217	1,407,750	1,266,639	13,116,608	1,093,051
	Time of Use														
83	Primary - On Peak	189,920	177,900	175,496	161,072	194,728	153,860	125,011	153,860	146,647	146,647	151,455	170,688	1,947,285	162,274
84	Primary - Off Peak	540,912	454,366	478,407	413,498	449,558	415,902	363,012	377,437	420,710	432,730	447,154	447,154	5,240,841	436,737
85	Secondary- On Peak	11,319	10,518	9,917	8,815	10,017	8,615	8,414	9,216	10,317	11,820	11,820	11,720	122,507	10,209
86	Secondary - Off Peak	33,056	31,153	23,239	24,441	23,039	24,141	22,538	28,548	29,149	32,956	36,962	32,855	342,077	28,506
87	**Subtotal Public Authority**	2,241,839	1,942,719	1,842,844	1,659,348	1,823,817	1,681,231	1,481,873	1,650,160	1,749,278	1,889,042	2,173,813	2,052,008	22,187,970	1,848,998
	Lighting														
88	Residential	6,412	6,460	6,235	6,339	6,353	6,433	6,420	6,410	6,377	6,488	6,402	6,388	76,718	6,393
89	Commercial	52,318	51,950	51,063	51,163	50,907	50,991	51,235	51,207	51,394	50,895	51,409	51,209	615,740	51,312
90	Public Authority	119,291	119,291	119,291	119,291	119,291	119,291	119,117	119,117	119,117	119,291	119,813	119,291	1,431,490	119,291
91	**Subtotal Lighting**	178,021	177,701	176,589	176,793	176,551	176,715	176,772	176,734	176,889	176,674	177,624	176,888	2,123,948	176,996
92	**FY 2020 TOTAL ENERGY SALES**	43,454,657	34,666,274	31,720,494	30,892,655	31,436,757	28,357,628	27,974,228	32,388,604	35,478,118	40,543,964	41,780,002	41,306,619	420,000,000	35,000,000

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Projected Annual Billing Determinants
Fiscal Year Ending September 30, 2020

Ln. No.	Customer Class Description	Number of Bills	Billing Demand (kW)	Energy Sales (kWh)
	(a)	(b)	(c)	(d)
	Residential Service			
1	Energy < 1,000 kWh	146,156	0	113,672,573
2	Energy > 1,000 kWh	0	0	74,169,427
3	Total Residential	146,156	0	187,842,000
	Commercial Service			
	General Service Non-Demand			
4	Secondary	13,522	0	11,216,906
5	General Service Non-Demand (100% LF)	480	0	446,829
	General Service Demand			
6	Primary	12	341	39,147
7	Secondary	12,564	395,612	135,715,493
	General Service Demand Time of Use			
8	Primary On-Peak	18	33,825	4,291,239
9	Primary Off-Peak	0	33,825	13,724,752
10	Secondary On-Peak	235	80,206	10,505,857
11	Secondary Off-Peak	0	82,477	31,905,859
12	Total Commercial	26,831	626,286	207,846,082
	Public Authority			
	General Service Non-Demand			
13	Secondary	2,203	0	1,315,157
14	General Service Non-Demand (100% LF)	276	0	103,496
15	General Service Demand - Secondary	721	50,746	13,116,608
	General Service Demand Time of Use			
16	Primary On-Peak	12	21,204	1,947,285
17	Primary Off-Peak	0	21,348	5,240,841
18	Secondary On-Peak	12	1,510	122,507
19	Secondary Off-Peak	0	1,510	342,077
20	Total Public Authority	3,224	96,316	22,187,970
	Lighting			
21	Residential	7,788	0	76,718
22	Commercial	1,752	0	2,047,230
23	Total Lighting	9,540	0	2,123,948
24	**TOTAL FISCAL YEAR 2020**	**185,751**	**722,602**	**420,000,000**

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. The transfers to the City include an equivalent franchise fee amount based on 6 percent of revenues. That amount is shown separately as a revenue requirement and also is included in other revenue since it is collected as a separate line item on customers' bills.

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, 2020. 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, 2020 through 2024. 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 2020 through 2024.

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 1.5 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, 2020 through 2024 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 the City and on the continued purchase of power supply from its wholesale suppliers.

4. Expenses for the fiscal years 2020 through 2024 have been increased based on the 2020 and 2021 Budgets, the 10 Year Pro Forma, an assumed inflation rate of 1.5 percent per year based on information from the U.S. Treasury, except where noted in Table No. 3-1.

5. Projected purchased power expenses have been estimated based on an analysis of purchased power expenses assuming an overall increase in kWh usage from 2020 of 0.5 percent per year.

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 Capital Improvement Plan. Table No. 3-6 shows the detail of the planned capital expenditures, which include $5,000,000 per year for undergrounding. Although the undergrounding expenditures may be considered optional, they have been included in the revenue requirements to be recovered from rate.

8. Gross receipts tax is included both as an expense and a revenue, while other taxes are not included since they are collected for the City's General Fund. The gross receipts tax is levied on the revenues of the seller of electricity. Payment of the gross receipts tax to the State is an operating expense and the billing to Winter Park customers is an operating revenue. The State sales tax and utility taxes are taxes on the customer purchasing the goods and are not expenses of the electric utility. Electric utility taxes go to Orange County for the fourteen electric customers in unincorporated Orange County. The rest of the Winter Park electric customers are all inside the City limits. All utility taxes billed to those customers goes to the City's General Fund.

9. The amount for the Transfer to the General Fund has been based on an equivalent franchise fee of 6 percent of revenues.

10. Projected revenues from existing rates for fiscal year 2020 calculated on a detailed analysis by customer class are shown on Table No. 3-2.

11. Other Revenue has been projected based on the adopted fiscal year ending September 30, 2020 Budget and is set forth in Table No. 3-3.

12. Projected Revenues from the Fuel Cost Recovery Factor are based on costs shown on Table No. 3-4.

13. Projected revenues from existing rates for fiscal years 2021 through 2024 have been estimated based on the projected increases in sales from 2020 levels of 0.5 percent per year.

14. Bulk Power expenses have been reduced from the FY 2020 Budget for the Test Year to reflect the lower costs of fuel experienced in the earlier months of FY 2020.

15. Warehousing costs have been reduced from the Test Year to FY 2021 based on one less inventory specialist position.

16. Utility Billing costs have been increased from the Test Year to FY 2021 since Utility Billing is one of the last applications from the legacy ERP computer system being used, and therefore, more of the annual support costs are allocated to Utility Billing.

17. Meter Servicing costs have been increased from the Test Year to FY 2021 based on additional meters being purchased to replace aging meters.

18. An allowance for contingency was included as the difference between projected revenues and appropriation.

19. An allowance for replenishing Cash Reserves to build the cash balance of the Electric Fund through FY 2022.

20. Fuel Cost Recovery revenues are projected to drop in the Test Year, then rise in FY2021, since in FY2020, funds were transferred from the Rate Stabilization Fund to lower the Fuel Cost Recovery during the pandemic. The amount in FY2021 was based on the City's projection of costs based on its wholesale contracts.

The underlying assumptions for the Test Year on which rates are being analyzed do not vary significantly and the revenue requirements are stable, ranging from $44.9 million to $45.9 million over the Study Period.

Shown on Table No. 3-1 are the various expenditures and revenues for the fiscal years ending September 30, 2020 through 2024, and the adjustments discussed herein. In addition, each of the adjustments is noted in the footnotes to Table No. 3-1.

Summary

Based on the projected Test Year revenue requirements developed on Table No. 3-1, the existing rates produce revenues that are approximately equal to the cost of providing service on a system wide basis. The projected differences are summarized as follows.

	Projected				
Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Net Revenue Requirements	$44,912,177	$44,270,456	$44,662,613	$45,622,904	$45,975,542
Total Existing Rate Revenue	44,912,177	44,270,455	44,662,613	45,060,160	45,463,192
Difference	($0)	($0)	$0	($562,744)	($512,349)
Percent of Base and Fuel Revenue	0.0%	0.0%	0.0%	-1.4%	-1.3%

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Summary of Projected Revenue Requirements and Existing Rate Revenues

Fiscal Year Ending September 30

Ln. No.	Description	Amended Budget 2020 [1]	Adjustments to Amended Budget 2020	**Test Year** Revenue Requirements	**2021** Revenue Requirements	**2022** Revenue Requirements	**2023** Revenue Requirements	**2024** Revenue Requirements
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Operating Expenses [2]							
1	Operations							
2	Bulk Power [3]	$19,696,363	($1,000,000)	$18,696,363	$18,291,563	$18,739,472	$19,253,432	$19,800,728
3	Transmission [4]	3,357,884	(3,357,884)	0	0	0	0	0
4	Gross Receipts Tax	1,152,998	0	1,152,998	1,073,749	1,084,486	1,095,331	1,106,285
5	Electric Capital	1,180,000	0	1,180,000	1,203,600	1,227,672	1,252,225	1,277,270
6	Other Operations	1,836,636	0	1,836,636	2,071,764	2,123,695	2,180,517	2,230,254
7	Total Operations	27,223,881	(4,357,884)	22,865,997	22,640,676	23,175,326	23,781,506	24,414,536
8	Undergrounding [5]	6,163,873	(1,738,873)	4,425,000	5,000,000	5,000,000	5,000,000	5,000,000
9	Tree Trimming	656,996	0	656,996	644,061	623,110	603,905	610,236
10	Warehousing	378,031	0	378,031	293,582	301,704	313,346	323,995
11	Street Lighting	480,000	0	480,000	510,000	517,650	528,003	543,843
12	Utility Billing	713,923	0	713,923	877,483	893,926	916,723	946,354
13	Meter Servicing	388,618	0	388,618	725,037	737,719	754,564	277,358
14	Administration	1,148,486	0	1,148,486	1,460,843	1,491,324	1,536,238	1,587,117
15	*Total Operating Expenses*	37,153,808	(6,096,757)	31,057,051	32,151,682	32,740,760	33,434,285	33,703,440
	Other Revenue Requirements							
16	Debt Service [6]	4,791,526	0	4,791,526	4,701,764	4,703,917	4,686,940	4,680,803
17	Interfund Administrative Services	1,728,412	0	1,728,412	1,740,681	1,772,013	1,825,174	1,879,929
18	Transfer to General Fund [7]	2,545,301	0	2,545,301	2,621,316	2,660,721	2,707,374	2,728,533
19	Other Transfers	255,698	0	255,698	253,317	248,101	249,293	262,999
20	Contingency	2,219,838	0	2,219,838	2,219,838	2,219,838	2,219,838	2,219,838
21	Replenish Cash Reserves [8]	0	2,314,351	2,314,351	581,858	317,263	500,000	500,000
22	*Total Other Revenue Requirements*	11,540,775	2,314,351	13,855,126	12,118,774	11,921,853	12,188,619	12,272,102
23	**TOTAL REVENUE REQUIREMENTS**	48,694,583	(3,782,406)	44,912,177	44,270,456	44,662,613	45,622,904	45,975,542
	Projected Revenue From Sales [9]							
24	Existing Base Rate Revenues	29,990,760	281,741	30,272,501 [10]	29,334,054	29,480,724	29,628,128	29,776,268
25	Fuel Cost Recovery [11]	12,156,576	(3,324,094)	8,832,482 [10]	10,089,986	10,292,542	10,499,165	10,709,936
26	Fuel Cost Stabilization Fund	0	1,000,000	1,000,000	0	0	0	0
27	Other Revenue [12]	6,529,606	(1,722,412)	4,807,194	4,846,416	4,889,346	4,932,867	4,976,988
28	**TOTAL REVENUES FROM SALES**	48,676,942	(3,764,765)	44,912,177	44,270,455	44,662,613	45,060,160	45,463,192
29	Revenue Surplus or (Deficiency)	($17,641)	$17,641	($0)	($0)	$0	($562,744)	($512,349)
	Surplus or (Deficiency) as a % of:							
30	Existing Base Rate Revenues			0.0%	0.0%	0.0%	-1.9%	-1.7%
31	Existing Base Rate and Fuel Revenues			0.0%	0.0%	0.0%	-1.4%	-1.3%

CITY OF WINTER PARK, FLORIDA
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Footnotes to Table No. 3-1

[1] Based on the 2020 Amended Budget and the 2021 Ten Year Pro Forma provided by the City.
[2] Unless otherwise noted, operating expenses are based on the 2020 Amended Budget, and the 2021 Ten Year Pro Forma.
[3] Based on the Power Costs shown on Table No. 3-4.
[4] Effective January 1, 2020, the only transmission expense is for Duke Energy transmission, which is included in the Bulk Power expense.
[5] Removal of $1,738,2873 for Fairbanks Avenue undergrounding funded by the Florida Department of Transportation.
[6] Based on the Debt Service schedule shown on Table No. 3-5.
[7] Calculated at 6% of Revenue Requirements for fiscal years 2021-2024.
[8] Additional funding to replenish cash reserves.
[9] Based on currently effective rates. Assumes sales of approximately 420,000,000 kWh in 2020, 407,000,000 kWh in 2021 and 0.5% growth in sales in 2022 through 2024.
[10] From Table No. 3-2, Page 2.
[11] Based on the fuel costs shown on Table No. 3-4.
[12] From Table No. 3-3.

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Projected Revenues at
EXISTING RATES
Fiscal Year Ending September 30, 2020

Ln. No.	Customer Class Description	Existing Rate	Billing Determinants	Base Rate Revenue	Fuel Cost Recovery	Total Revenue
	(a)	(b)	(c)	(d)	(e)	(f)
	Residential					
1	Customer Charge	$ 16.98	146,156	$ 2,481,729	$ -	$ 2,481,729
2	Energy Charge < 1,000 kWhs	$ 0.06624	113,672,573	7,529,671	-	7,529,671
3	Energy Charge > 1,000 kWhs	$ 0.08840	74,169,427	6,556,577	-	6,556,577
4	Fuel Cost Recovery Factor < 1,000 kWhs	$ 0.01708	113,672,573	-	1,941,528	1,941,528
5	Fuel Cost Recovery Factor > 1,000 kWhs	$ 0.02708	74,169,427	-	2,008,508	2,008,508
6	***Total Residential***			$ 16,567,977	$ 3,950,036	$ 20,518,013
	Commercial					
	General Service Non-Demand					
7	Customer Charge	$ 17.55	13,522	$ 237,311	$ -	$ 237,311
8	Energy Charge	$ 0.07368	11,216,906	826,462	-	826,462
9	Fuel Cost Recovery Factor	$ 0.02103	11,216,906	-	235,892	235,892
10	*Subtotal GSND*			$ 1,063,773	$ 235,892	$ 1,299,664
	General Service Non-Demand (100 % LF)					
11	Customer Charge	$ 18.38	480	$ 8,822	$ -	$ 8,822
12	Energy Charge	$ 0.03736	446,829	16,694	-	16,694
13	Fuel Cost Recovery Factor	$ 0.02103	446,829	-	9,397	9,397
14	*Subtotal GSND (100% LF)*			$ 25,516	$ 9,397	$ 34,913
	General Service Demand					
15	Customer Charge - Secondary	$ 18.28	12,564	$ 229,670	$ -	$ 229,670
16	Customer Charge - Primary	$ 231.26	12	2,775	-	2,775
17	Energy Charge	$ 0.04216	135,754,640	5,723,416	-	5,723,416
18	Fuel Cost Recovery Factor	$ 0.02103	135,754,640	-	2,854,920	2,854,920
19	Demand Charge	$ 5.05	395,953	1,999,562	-	1,999,562
20	*Subtotal General Service Demand*			$ 7,955,423	$ 2,854,920	$ 10,810,343
	General Service Demand Time of Use					
21	Customer Charge - Secondary	$ 29.01	235	$ 6,817	$ -	$ 6,817
22	Customer Charge - Primary	$ 234.93	18	4,229	-	4,229
23	Energy Charge - On-Peak	$ 0.07008	14,797,096	1,036,980	-	1,036,980
24	Energy Charge - Off-Peak	$ 0.02843	45,630,611	1,297,278	-	1,297,278
25	Fuel Cost Recovery - On-Peak	$ 0.02775	14,797,096	-	410,619	410,619
26	Fuel Cost Recovery - Off-Peak	$ 0.01882	45,630,611	-	858,768	858,768
27	Base Demand Charge	$ 1.27	116,302	147,704	-	147,704
28	On-Peak Demand Charge	$ 3.84	114,031	437,879	-	437,879
29	Primary Demand Charge Credit	$ (0.35)	67,650	(23,678)	-	(23,678)
30	*Subtotal General Service Demand TOU*			$ 2,907,210	$ 1,269,388	$ 4,176,598
31	***Total Commercial***			$ 11,951,922	$ 4,369,596	$ 16,321,518

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Projected Revenues at
EXISTING RATES
Fiscal Year Ending September 30, 2020

Ln. No.	Customer Class Description	Existing Rate	Billing Determinants	Base Rate Revenue	Fuel Cost Recovery	Total Revenue
	(a)	(b)	(c)	(d)	(e)	(f)
	Public Authority					
	General Service Non-Demand					
32	Customer Charge Secondary	$ 17.55	2,203	$ 38,663	$ -	$ 38,663
33	Energy Charge	$ 0.07368	1,315,157	96,901	-	96,901
34	Fuel Cost Recovery Factor	$ 0.02103	1,315,157	-	27,658	27,658
	General Service Non-Demand (100 % LF)					
35	Customer Charge 100 % LF	$ 18.38	276	5,073	-	5,073
36	Energy Charge 100 % LF	$ 0.03736	103,496	3,867	-	3,867
37	Fuel Cost Recovery Factor	$ 0.02103	103,496	-	2,177	2,177
	General Service Demand					
38	Customer Charge - Secondry	$ 18.28	721	13,180	-	13,180
39	Energy Charge	$ 0.04216	13,116,608	552,996	-	552,996
40	Fuel Cost Recovery Factor	$ 0.02103	13,116,608	-	275,842	275,842
41	Demand Charge	$ 5.05	50,746	256,265	-	256,265
	General Service Demand Time of Use					
42	Customer Charge Secondary	$ 29.01	12	348	-	348
43	Customer Charge Primary	$ 234.93	12	2,819	-	2,819
44	Energy Charge - On-Peak	$ 0.07008	2,069,791	145,051	-	145,051
45	Energy Charge - Off-Peak	$ 0.02843	5,582,918	158,722	-	158,722
46	Fuel Cost Recovery - On-Peak	$ 0.02775	2,069,791	-	57,437	57,437
47	Fuel Cost Recovery - Off-Peak	$ 0.01882	5,582,918	-	105,071	105,071
48	Base Demand Charge	$ 1.27	22,858	29,029	-	29,029
49	On-Peak Demand Charge	$ 3.84	22,713	87,219	-	87,219
50	Primary Demand Charge Credit	$ (0.35)	42,552	(14,893)	-	(14,893)
51	***Total Public Authority***			$ 1,375,240	$ 468,184	$ 1,843,424
	Lighting					
52	Residential - Fuel Cost Recovery	$ 0.02103	76,718	$ 14,545	$ 1,613	$ 16,158
53	Commercial - Fuel Cost Recovery	$ 0.02103	2,047,230	362,817	43,053	405,870
54	***Total Lighting***			$ 377,362	$ 44,667	$ 422,029
55	**TOTAL SYSTEM RATE REVENUES**			$ 30,272,501	$ 8,832,482	$ 39,104,983
56	**Other Revenues**					5,807,194
57	**TOTAL SYSTEM REVENUE**					$ 44,912,177

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Summary of Other Electric Revenues

Fiscal Year Ending September 30

Ln. No.	Description	Amended Budget 2020*	Adjustments to Budget	Adjusted Test Year Revenues
	(a)	(b)	(c)	(d)
	Other Electric Revenues			
1	Franchise Fee	$2,528,840	$16,461	$2,545,301
2	Gross Receipts Tax	1,152,998	0	$1,152,998
3	Contribution in Aid of Construction	500,000	0	500,000
4	Contribution from Water and Sewer	181,995	0	181,995
5	Carry Forward - Capital Projects	1,738,873	(1,738,873)	0
6	Miscellaneous Service Charges	1,500	0	1,500
7	Connect Fees	20,000	0	20,000
8	Turn On/Off Charges	92,000	0	92,000
9	Pole Attachment Fees	115,000	0	115,000
10	Equipment Rental	70,400	0	70,400
11	Temporary Pole Service	10,000	0	10,000
12	Surge and Wire Protection	73,000	0	73,000
13	Residential Underground Service Drops	80,000	0	80,000
14	Bad Debt Expense	(62,000)	0	(62,000)
15	Demolition Disconnect	27,000	0	27,000
16	Interest Paid on Customer Deposits	(25,000)	0	(25,000)
17	Sale of Surplus Materials	25,000	0	25,000
18	**Total Other Electric Revenues**	$6,529,606	($1,722,412)	$4,807,194

*Based on the Budgeted 2020 Electric Revenue Fund provided by the City.

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Calculation of Fuel Cost Recovery Factor
Fiscal Year Ending September 30

Ln. No.	Description	2020	2021	2022	2023	2024
	(a)	(b)	(c)	(d)	(e)	(f)
	Power Costs [1]					
1	FMPA		$7,513,787	$7,664,626	$7,818,493	$7,975,449
2	OUC		2,471,952	2,521,577	2,572,197	2,623,834
3	Covanta		5,570,362	5,682,187	5,796,257	5,912,617
4	Purchased Transmission		2,735,462	2,790,376	2,846,393	2,903,534
5	**Total Power Costs**	$19,696,363	$18,291,563	$18,658,766	$19,033,341	$19,415,435
6	**Total Energy Purchased (kWh)**	436,590,437	423,076,923	425,192,308	427,318,269	429,454,861
7	Total Cost Per kWh Purchased	$0.04511	$0.04323	$0.04388	$0.04454	$0.04521
8	**Total Energy Sales (kWh) [2]**	420,000,000	407,000,000	409,035,000	411,080,175	413,135,576
9	Total Cost Per kWh Sold	$0.04690	$0.04494	$0.04562	$0.04630	$0.04700
10	**Total Fuel Cost ($)**	$12,156,576	$10,089,986	10,292,542	10,499,165	10,709,936
11	Total Fuel Cost Per kWh Sold	$0.02894	$0.02479	$0.02516	$0.02554	$0.02592

[1] Based on information provided by the City.
[2] FY 2020 from Table No. 2-2; FY 2021 provided by the City; FY 2022-2024 based on a growth rate of 0.5% per year.

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Debt Service Detail [1]
Fiscal Year Ending September 30

Ln. No.	Description	Projected FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
	(a)	(b)	(c)	(d)	(e)	(f)
	Electric Revenue Bonds					
	Series 2010					
1	Principal	$ 250,000	$ 255,000	$ 265,000	$ 270,000	$ 280,000
2	Interest	109,920	101,840	93,520	84,960	76,160
3	Total Series 2010	$ 359,920	$ 356,840	$ 358,520	$ 354,960	$ 356,160
	Series 2014					
4	Principal	$ 345,000	$ 355,000	$ 365,000	$ 375,000	$ 385,000
5	Interest	167,757	158,166	148,302	138,165	127,753
6	Total Series 2014	$ 512,757	$ 513,166	$ 513,302	$ 513,165	$ 512,753
	Series 2014A					
7	Principal	$ 265,000	$ 275,000	$ 280,000	$ 290,000	$ 300,000
8	Interest	143,446	135,373	127,076	118,554	109,733
9	Total Series 2014A	$ 408,446	$ 410,373	$ 407,076	$ 408,554	$ 409,733
	Series 2016					
10	Principal	$ 640,000	$ 670,000	$ 705,000	$ 740,000	$ 775,000
11	Interest	591,418	558,668	524,293	488,168	450,293
12	Total Series 2016	$ 1,231,418	$ 1,228,668	$ 1,229,293	$ 1,228,168	$ 1,225,293
	Series 2019					
13	Principal	$ 400,000	$ 1,360,000	$ 1,395,000	$ 1,450,000	$ 1,485,000
14	Interest	636,464	846,510	798,573	749,070	698,001
15	Total Series 2019	$ 1,036,464	$ 2,206,510	$ 2,193,573	$ 2,199,070	$ 2,183,001
16	Total Existing Debt Service	$ 3,549,005	$ 4,715,557	$ 4,701,764	$ 4,703,917	$ 4,686,940
17	Future Debt Service [2]	0	0	0	0	0
18	**TOTAL DEBT SERVICE**	**$ 3,549,005**	**$ 4,715,557**	**$ 4,701,764**	**$ 4,703,917**	**$ 4,686,940**

[1] Amounts shown reflect the allocable share of accrued payments of principal and interest and exclude interest expense funded from bond proceeds.
[2] Amounts shown assume no new debt service in Fiscal Years 2020 - 2024.

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Summary of Capital Improvement Projects Funded By Electric Services

Line No.	Projects	*Fiscal Years Ending September 30* 2021	2022	2023	2024	Estimated Total
	(a)	(b)	(c)	(d)	(e)	(f)
	Proposed Expenditure Descriptions [1]					
1	Undergrounding Electric Lines, R&R, and other improvements required to provide service and improve reliability of electric service.	$1,203,600	$1,227,672	$1,252,225	$1,277,270	$4,960,767
2	Undergrounding Electric Lines	5,000,000	5,000,000	5,000,000	5,000,000	20,000,000
3	Solar Awning Construction	500,000	-	-	-	500,000
4	Facility replacement of flooring, roofing, air conditioning, painting, & misc. other [2]	50,000	50,000	50,000	50,000	200,000
5	Information Technology Infrastructure Upgrades [3]	87,500	87,500	87,500	100,000	362,500
6	**Total Proposed Expenditures**	**$6,841,100**	**$6,365,172**	**$6,389,725**	**$6,427,270**	**$26,023,267**
	Funding Source					
7	Electric System Revenues	6,841,100	6,365,172	6,389,725	6,427,270	26,023,267
8	**Total Funding Sources**	**$6,841,100**	**$6,365,172**	**$6,389,725**	**$6,427,270**	**$26,023,267**

[1] Amounts shown are provided and projected by the City.
[2] A Public Works Department project where funding is allocated 65% to the General Fund, 25% to the Water and Sewer Fund and 10% to the Electric Fund.
[3] An Information Technology project where funding is allocated 50% to the General Fund, 25% to the Water and Sewer Fund and 25% to the Electric Fund.

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 2020 Test Year Revenue Requirements were developed in the COS model and summarized below.

Function and Description	Test Year Amount
Production. Those costs associated with generating or purchasing power and delivering that power to the utility's bulk transmission system	$23,423,367
Transmission and Distribution. 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	$19,581,738
Customer. Those costs that are related to the number, type and size of customers	$1,907,072
Total	$44,912,177

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

class and for each type of cost. The customer classes include Residential, Commercial, Commercial Demand, and Lighting.

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;
- 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 for 2018. 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 City and 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.

Table No. 4-1

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study
Functionalization of Test Year Revenue Requirements

Ln No	Description	*FY 2020 Test Year Amount*
1	Production	$ 23,423,367
2	Transmission and Distribution	$ 19,581,738
3	Customer	$ 1,907,072
4	**TOTAL REVENUE REQUIREMENTS**	**$ 44,912,177**

CITY OF WINTER PARK FLORIDA
Electric Cost of Service Study

Summary of Demand Allocation Factors

Ln. No.	Customer Class	Average 12 CP Demand @ Source (kW)	Average 12 CP Percent of Total (%)	Average Demand 2020 Energy at Source (MWh)	Average Demand Average Demand (kW)	Average Demand Percent of Total (%)	PSC 12 CP Methodology Avg. 12 CP @12/13 (kW)	PSC 12 CP Methodology Avg. kW @1/13 (kW)	PSC 12 CP Methodology Total (kW)	PSC 12 CP Methodology Total (%)	NCP Demand Demand @ Source (kW)	NCP Demand Percent of Total (%)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
1	Residential	40,528	**49.83%**	195,262	22,290	**44.72%**	37,410	1,715	39,125	**49.58%**	50,430	**51.97%**
	Commercial											
2	General Service Non Demand	2,580	**3.17%**	11,660	1,331	**2.67%**	2,381	102	2,484	**3.15%**	3,060	**3.15%**
3	GS Non Demand (100% LF)	59	**0.07%**	464	53	**0.11%**	54	4	58	**0.07%**	59	**0.06%**
4	General Service Demand	25,530	**31.39%**	141,117	16,109	**32.32%**	23,566	1,239	24,805	**31.43%**	28,715	**29.59%**
5	General Service Demand TOU	7,967	**9.80%**	62,815	7,171	**14.39%**	7,354	552	7,906	**10.02%**	9,561	**9.85%**
6	Public Authority	4,173	**5.13%**	23,064	2,633	**5.28%**	3,852	203	4,054	**5.14%**	4,693	**4.84%**
7	Lighting	504	**0.62%**	2,208	252	**0.51%**	465	19	485	**0.61%**	526	**0.54%**
8	**TOTAL SYSTEM**	81,340	**100.00%**	436,590	49,839	**100.00%**	75,083	3,834	78,917	**100.00%**	97,045	**100.00%**

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Development of Demand Allocation Factors

Ln. No.	Customer Class	Total FY 2020 Energy (MWh)	Average 12 CP Load Factor (%) [1]	Average 12 CP Demand @ Meter (kW)	Average 12 CP Delivery Efficiency	Average 12 CP Demand @ Source (kW)	Average 12 CP Percent of Total (%)	Non-Coincident Peak Load Factor (%) [1]	Non-Coincident Peak Demand @ Meter (kW)	Non-Coincident Peak Delivery Efficiency	Non-Coincident Peak Demand @ Source (kW)	Non-Coincident Peak Percent of Total (%)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
1	Residential	187,842	55.00%	38,988	0.9620	40,528	**49.83%**	44.20%	48,514	0.9620	50,430	**51.97%**
	Commercial											
2	General Service Non Demand	11,217	51.60%	2,482	0.9620	2,580	**3.17%**	43.50%	2,944	0.9620	3,060	**3.15%**
3	GS Non Demand (100% LF)	447	90.00%	57	0.9620	59	**0.07%**	90.00%	57	0.9620	59	**0.06%**
4	General Service Demand	135,755	63.10%	24,560	0.9620	25,530	**31.39%**	56.10%	27,624	0.9620	28,715	**29.59%**
5	General Service Demand TOU	60,428	90.00%	7,665	0.9620	7,967	**9.80%**	75.00%	9,198	0.9620	9,561	**9.85%**
6	Public Authority	22,188	63.10%	4,014	0.9620	4,173	**5.13%**	56.10%	4,515	0.9620	4,693	**4.84%**
7	Lighting	2,124	50.00%	485	0.9620	504	**0.62%**	47.90%	506	0.9620	526	**0.54%**
8	**TOTAL SYSTEM**	420,000		78,249		81,340	**100.00%**		93,357		97,045	**100.00%**

[1] Average 12 CP and NCP Load Factors are based on information provided by the City and Duke Energy's load research filed with the FPSC.

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Summary of Energy Allocation Factors
Fiscal Year 2020

Ln. No.	Customer Class	Energy (MWh) [1] Energy Sales	Energy (MWh) [1] Net Generation	Allocation Factors (%) Energy Sales	Allocation Factors (%) Net Generation
	(a)	(b)	(c)	(d)	(e)
1	Residential	187,842	195,262	**44.72%**	**44.72%**
	Commercial				
2	General Service Non Demand	11,217	11,660	**2.67%**	**2.67%**
3	GS Non Demand (100% LF)	447	464	**0.11%**	**0.11%**
4	General Service Demand	135,755	141,117	**32.32%**	**32.32%**
5	General Service Demand TOU	60,428	62,815	**14.39%**	**14.39%**
6	Public Authority	22,188	23,064	**5.28%**	**5.28%**
7	Lighting	2,124	2,208	**0.51%**	**0.51%**
8	**TOTAL SYSTEM**	420,000	436,590	**100.00%**	**100.00%**

[1] A factor of 3.6% was assumed for System Losses based on data received from the City of Winter Park.

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Summary of Customer Allocation Factors
Fiscal Year 2020

Ln. No.	Customer Class	Unweighted Customers		Weighted Customers			Unweighted - No Lighting	
		Customers	Factor	Weighting Factor [1]	Customers [2]	Factor	Customers	Factor
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	Residential	12,180	**78.68%**	1.00	12,180	**73.95%**	12,180	**78.68%**
	Commercial							
2	General Service Non Demand	1,127	**7.28%**	1.30	1,465	**8.89%**	1,127	**7.28%**
3	GS Non Demand (100% LF)	40	**0.26%**	1.30	52	**0.32%**	40	**0.26%**
4	General Service Demand	1,048	**6.77%**	1.30	1,362	**8.27%**	1,048	**6.77%**
5	General Service Demand TOU	21	**0.14%**	1.30	27	**0.17%**	21	**0.14%**
6	Public Authority	269	**1.74%**	1.30	349	**2.12%**	269	**1.74%**
7	Lighting	795	**5.14%**	1.30	1,034	**6.28%**	795	**5.14%**
8	**TOTAL SYSTEM**	15,479	**100.00%**		16,469	**100.00%**	15,479	**100.00%**

[1] Based on Duke Energy Florida customer charges.
[2] Weighted customers are equal to Column (b), Unweighted Customers multiplied times Column (d), the Weighting Factor.

CITY OF WINTER PARK, 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%
5	City of Winter Park	RS	55.0%	44.2%
	General Service Non-Demand			
6	Duke Energy Florida	GS-1 (no demand breakpoint)	57.6%	45.1%
7	Florida Power & Light Company	GS-1 (less than 21kw)	62.3%	53.1%
8	Tampa Electric Company	GS (less than 50 kw)	58.0%	43.0%
9	Gulf Power Company	GS (less than 20 kw)	57.4%	43.5%
10	City of Winter Park	GS	51.6%	43.5%
	General Service Demand			
11	Duke Energy Florida	GSD-1 (above 24,000 kwh/year)	74.2%	62.6%
12	Florida Power & Light Company	GSD-1 (21 - 499 kw)	72.1%	64.0%
13	Tampa Electric Company	GSD-1 (50 - 999 kw)	75.0%	63.0%
14	Gulf Power Company	GSD-1 (20 - 499 kw)	74.4%	56.4%
15	City of Winter Park	GSD	59.8%	49.3%

* The information shown for the investor owned electric utilities reflects the results of 2017-2018 Load Research reported to the PSC. The load factors shown for the City of Winter Park are based on current load research analyses.

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 Non-Demand (100% Load Factor)
  - General Service Demand
  - General Service Demand Time of Use
- Public Authority
- Lighting

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

A summary of the pros and cons of possible new rate designs and classifications is shown on Table No. 5-4.

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 rate adjustments, and the percentages necessary to recover the projected cost of service for each of the major rate classifications, as summarized from the COS model are as follows**:**

	Test Year 2020		
	Total Existing Revenue	Rate Adjustments	
Customer Class	($000)	($000)	(%) [1]
Residential	$23,416	($601)	-2.9%
Commercial			
General Service Non-Demand	1,488	(17)	-1.3%
GS Non-Demand (100% Load Factor)	40	(0)	-0.4%
General Service Demand	12,545	519	4.8%
General Service Demand TOU	4,809	50	1.2%
Public Authority	2,129	48	2.6%
Lighting	485	1	0.3%
Total System	$44,912	$0	0.0%

[1] Percent of base rate and fuel adjustment revenues.
Rate adjustments based on moving 60% toward the Cost of Service.

Based on the cost of service and rate adjustments for the Test Year and the projected revenue requirements, the rate adjustments for Fiscal Year 2021 can be estimated as follows:

Customer Class	Fiscal Year 2021 Total Existing Revenue ($000)	Rate Adjustments ($000)	Rate Adjustments (%) [1]
Residential	$23,081	($593)	-2.9%
Commercial			
General Service Non-Demand	1,467	(17)	-1.3%
GS Non-Demand (100% Load Factor)	39	(0)	-0.4%
General Service Demand	12,366	511	4.8%
General Service Demand TOU	4,740	49	1.2%
Public Authority	2,099	47	2.6%
Lighting	478	1	0.3%
Total System	$44,270	$0	0.0%

[1] Percent of base rate and fuel adjustment revenues.
Rate adjustments based on moving 60% toward the Cost of Service.

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study
Test Year Cost of Service by Customer Class

Line No.	Description	Total	Allocation Factor	Residential	General Service Non-Demand	General Service Non-Demand (100% LF)	General Service Demand	General Service Demand TOU	Public Authority	Lighting	Total
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	**Production**										
2	**Production Demand related**										
3	Production - D	9,416,193	12 CP	4,668,288	296,328	6,975	2,959,695	943,338	483,738	57,832	9,416,193
4	Blank	0	N/A	0	0	0	0	0	0	0	0
5	Blank	0	N/A	0	0	0	0	0	0	0	0
6	Blank	0	N/A	0	0	0	0	0	0	0	0
7	Blank	0	N/A	0	0	0	0	0	0	0	0
8	Blank	0	N/A	0	0	0	0	0	0	0	0
9	**Production Energy related**										
10	Fuel & PP	14,007,173	Test Year Sales - kWh	6,264,608	374,088	14,902	4,527,473	2,015,289	739,978	70,835	14,007,173
11	Variable O&M	0	N/A	0	0	0	0	0	0	0	0
12	Blank	0	N/A	0	0	0	0	0	0	0	0
13	Blank	0	N/A	0	0	0	0	0	0	0	0
14	**Production Direct Assignment**										
15	Dir. Assignment A	0	N/A	0	0	0	0	0	0	0	0
16	Other	0	N/A	0	0	0	0	0	0	0	0
17	**Total Production**	23,423,367		10,932,896	670,417	21,877	7,487,168	2,958,627	1,223,716	128,666	23,423,367
18	Check	TRUE									
19		23,423,367									
20	**Transmission**										
21	**Demand Related**										
22	115 kV	0	N/A	0	0	0	0	0	0	0	0
23	69 kV	0	N/A	0	0	0	0	0	0	0	0
24	115 kV - Sub	0	N/A	0	0	0	0	0	0	0	0
25	69 kV - Sub	0	N/A	0	0	0	0	0	0	0	0
26	Blank	0	N/A	0	0	0	0	0	0	0	0
27	Blank	0	N/A	0	0	0	0	0	0	0	0
28	**Direct Assignment**										
29	Service 1	0	N/A	0	0	0	0	0	0	0	0
30	Service 2	0	N/A	0	0	0	0	0	0	0	0
31	Blank	0	N/A	0	0	0	0	0	0	0	0
32	**Total Transmission**	0		0	0	0	0	0	0	0	0
33	Check	TRUE									
34		0									
35	**Distribution**										
36	**Demand Related**										
37	Substat.	0	N/A	0	0	0	0	0	0	0	0
38	Prim-Dmd	0	N/A	0	0	0	0	0	0	0	0
39	Sec-Dmd	0	N/A	0	0	0	0	0	0	0	0
40	Total Demand	19,581,738	1 NCP	10,175,861	617,426	11,888	5,794,188	1,929,193	947,012	106,172	19,581,738
41	Blank	0	N/A	0	0	0	0	0	0	0	0
42	Blank	0	N/A	0	0	0	0	0	0	0	0
43	**Customer Related**										
44	Prim-Cust	0	N/A	0	0	0	0	0	0	0	0
45	Sec-Cust	0	N/A	0	0	0	0	0	0	0	0
46	Serv Drp	0	N/A	0	0	0	0	0	0	0	0
47	Trans-CR	0	N/A	0	0	0	0	0	0	0	0
48	Total Cust	0	N/A	0	0	0	0	0	0	0	0
49	Blank	0	N/A	0	0	0	0	0	0	0	0

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study
Test Year Cost of Service by Customer Class

Line No.	Description	Total	Allocation Factor	Residential	General Service Non-Demand	General Service Non-Demand (100% LF)	General Service Demand	General Service Demand TOU	Public Authority	Lighting	Total
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
50											
51	**Direct Assignment**										
52	Lighting	0	N/A	0	0	0	0	0	0	0	0
53	Blank	0	N/A	0	0	0	0	0	0	0	0
54	**Total Distribution**	19,581,738		10,175,861	617,426	11,888	5,794,188	1,929,193	947,012	106,172	19,581,738
55	Check	TRUE									
56		19,581,738									
57	**Customer**										
58	Meters	691,711	Weighted Customers	519,069	62,430	2,216	58,062	1,168	14,885	33,881	691,711
59	Cust. Accounting	0	Weighted Customers	0	0	0	0	0	0	0	0
60	Cust. Service	1,215,361	Weighted Customers	912,022	109,692	3,894	102,018	2,052	26,153	59,530	1,215,361
61	Sales	0	Weighted Customers	0	0	0	0	0	0	0	0
62	Blank	0	N/A	0	0	0	0	0	0	0	0
63	**Total Customer**	1,907,072		1,431,091	172,121	6,110	160,080	3,220	41,038	93,411	1,907,072
64	Check	TRUE									
65		0									
66	**Direct Assignments Other**										
67	Lighting Adjustment	0	Lighting - # of Cust/Lights	(130,616)	0	0	(27,170)	0	(2,214)	160,000	0
68	**Total Direct Assignment Other**	0		(130,616)	0	0	(27,170)	0	(2,214)	160,000	0
69	Check	TRUE									
70											
71	**Total Cost of Service**	$ 44,912,177		$ 22,409,232	$ 1,459,964	$ 39,875	$ 13,414,266	$ 4,891,040	$ 2,209,552	$ 488,249	$ 44,912,177
72	Check	TRUE									
73	Total Unit Cost ($/kWh)			$ 0.119	$ 0.130	$ 0.089	$ 0.099	$ 0.081	$ 0.100	$ 0.230	$ 0.107
74	Base Rate Unit Cost ($/kWh)			$ 0.119	$ 0.130	$ 0.089	$ 0.099	$ 0.081	$ 0.100	$ 0.230	$ 0.107
75											
76											
77	**Revenue Adequacy Check**										
78	TY Base Rate Revenue	$30,272,501	TY Base Rate Rev	$16,567,977	$1,063,773	$25,516	$7,955,423	$2,907,210	$1,375,240	$377,362	$30,272,501
79	TY Other Revenue - FCR	8,832,482	Fuel Cost Recovery	3,950,036	235,892	9,397	2,854,920	1,269,388	468,184	44,667	8,832,482
80	TY FCR Rate Stabilization	1,000,000	Revenue Req	498,957	32,507	888	298,678	108,902	49,197	10,871	1,000,000
81	TY Other Revenue	4,807,194	Revenue Req	2,398,582	156,268	4,268	1,435,802	523,515	236,500	52,260	4,807,194
82	Subtotal	$44,912,177		$23,415,551	$1,488,439	$40,069	$12,544,822	$4,809,014	$2,129,121	$485,160	$44,912,177
83	Existing Rate Unit Cost ($/kwh)			$ 0.125	$ 0.133	$ 0.090	$ 0.092	$ 0.080	$ 0.096	$ 0.228	$ 0.107
84											
85	TY Rate Revenue	$44,912,177		$23,415,551	$1,488,439	$40,069	$12,544,822	$4,809,014	$2,129,121	$485,160	$44,912,177
86	TY Retail Rate Revenue	$0	Other Revenue	0	0	0	0	0	0	0	0
87	TY Total Rate Revenue	$44,912,177		$23,415,551	$1,488,439	$40,069	$12,544,822	$4,809,014	$2,129,121	$485,160	$44,912,177
88											
89	TY Rate Revenue Requirement	$ 44,912,177		$ 22,409,232	$ 1,459,964	$ 39,875	$ 13,414,266	$ 4,891,040	$ 2,209,552	$ 488,249	$44,912,177
90	TY Other Retail Rate Revenue	0		0	0	0	0	0	0	0	0
91	TY Total Rate Revenue Requirement	$44,912,177		$22,409,232	$1,459,964	$39,875	$13,414,266	$4,891,040	$2,209,552	$488,249	$44,912,177
92											
93	**Difference $ (Surplus)**	**($0)**		**$1,006,319**	**$28,476**	**$194**	**($869,443)**	**($82,025)**	**($80,431)**	**($3,090)**	**(0)**
94	**Difference % (Surplus)**	**0.0%**		**4.9%**	**2.2%**	**0.6%**	**-8.0%**	**-2.0%**	**-4.4%**	**-0.7%**	**0.0%**
95											
96	**Rate Adjustment $**	**$0**		**($601,175)**	**($16,896)**	**($140)**	**$518,896**	**$50,119**	**$47,929**	**$1,266**	**0**
97	**Rate Adjustment %**	**0.0%**		**-2.9%**	**-1.3%**	**-0.4%**	**4.8%**	**1.2%**	**2.6%**	**0.3%**	**0.0%**
98											

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study
Classification of Test Year Revenue Requirements

Ln No	Description		*FY 2020 Test Year Amount*	
	Production			
1	Demand Related	$	9,416,193	
2	Energy Related		14,007,173	
3	**Total Production**	$	23,423,367	
	Transmission and Distribution			
4	Demand Related	$	19,581,738	
5	Customer Related		0	
6	Direct Assignment		0	
7	**Total Distribution**	$	19,581,738	
8	**Customer** *(Customer Related)*		1,907,072	
9	**TOTAL REVENUE REQUIREMENTS**	**$**	**44,912,177**	
10	Total Demand Related	$	28,997,932	65%
11	Total Energy Related		14,007,173	31%
12	Total Customer Related		1,907,072	4%
13	**TOTAL REVENUE REQUIREMENTS**	**$**	**44,912,177**	
14	Total Fixed Including All Demand Related	$	30,905,004	69%
15	Total Variable		14,007,173	31%
16	**TOTAL REVENUE REQUIREMENTS**	**$**	**44,912,177**	
17	Total Fixed Including Only Fixed Demand [1]	$	27,883,390	62%
18	Total Variable		17,028,788	38%
19	**TOTAL REVENUE REQUIREMENTS**	**$**	**44,912,177**	

[1] Excludes FMPA and OUC demand charges.

Table No. 5-3

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study
Results of the Cost of Service Analysis

Ln No	Customer Class	Test Year 2020 Cost of Service	Existing Revenues	Difference	Difference (%)
	(a)	(b)	(c)	(d)	(e)
1	Residential	$22,409,232	$23,415,551	$1,006,319	4.9%
	Commercial				
2	General Service Non Demand	1,459,964	1,488,439	28,476	2.2%
3	GS Non Demand (100% LF)	39,875	40,069	194	0.6%
4	General Service Demand	13,414,266	12,544,822	(869,443)	-8.0%
5	General Service Demand TOU	4,891,040	4,809,014	(82,025)	-2.0%
6	Public Authority	2,209,552	2,129,121	(80,431)	-4.4%
7	Lighting	488,249	485,160	(3,090)	-0.7%
8	**TOTAL**	$44,912,177	$44,912,177	($0)	**0.0%**

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Summary of Rate Design Options Pros and Cons

RATE DESIGN OPTION	PROS	CONS
Increased Customer Charges	Helps recover fixed costs; closer to cost of service; consistent with industry trends	Greater percentage impact on low users
Residential Time of Use Rate	Provides option for customer to save; may improve system load factor and reduce system cost per kWh	Increased administrative costs
Electric Vehicle Rate	Promotes electric vehicle use; provides option for customer to save if the vehicle is charged during off-peak hours	Increased administrative costs
Solar Subscription Rate	Supports the future FMPA solar projects; provides option for customer to have solar power supply without rooftop solar; ecomonies of scale compared to rooftop solar	Increased administrative costs
Large Commercial Interruptible Rate	Provides option for a large commercial customer willing and able to interrupt during peak periods and provides opportunity for customer and utility to save on power costs	Increased administrative costs; customer may not meet interruption requirements
Residential Demand Rate	Helps recover fixed costs through a demand charge; aligns more closely to the cost of service	Increased administrative costs; may be too great of an impact for customers with high demand and low energy usage; not common in Florida

Section 6
RATE DESIGN

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. The proposed rate options reflect the rate adjustments by class applied to the customer, demand and energy charges. Option 1 reflects an increase in the Residential customer charge to $18 and a corresponding decrease in energy charges. Option 2 assumes maintaining the present customer charges. Option 3 reflects an increase in the Residential customer charge to $30 and a corresponding

decrease in energy charges. Option 4 reflects a possible four block Residential energy charge. Table No. 6-5 summarizes the pros and cons of the four rate options. Table No. 6-2 shows calculation of the projected revenues at the Option 1 rates.

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. For Winter Park, the fixed costs are estimated to be between 62% and 69% 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. For the Residential class, Table No. 5-1 shows that the fixed distribution costs are $10,175,861 and the fixed customer costs are $1,431,091, for a total of $11,606,952. Dividing this amount by the Residential number of customers of 12,180 equals $953 per year, or approximately $79 per month. In order to help recover the fixed costs of providing service to the customer, the customer charges in Options 1, 3, and 4 have been increased for each class of service. Table No. 6-3 provides an analysis of the Residential monthly fixed costs per customer. Table No. 6-4 shows a comparison of customer charges for various utilities in Florida. To mitigate the impact of increased customer charges on low income customers, the City may want to investigate establishing a fund to assist those cutomers.

Fuel Cost Adjustment

It is recommended that a separate rate component continue to be implemented that recovers the cost of fuel included in the purchased power. Only the fuel costs portion of bulk power purchases are passed through to the customer. The remaining bulk power costs are included in the base rates. It is proposed that this factor be calculated once a year and adjusted if necessary.

Summary

The following is a comparison of the projected Fiscal Year 2021 revenues produced by applying the projected billing determinants to the existing rates and the proposed rate options for each classification:

Customer Class	Fiscal Year 2021 Existing Revenue ($000)	Adjusted Revenue ($000)	Rate Adjustment (%) [1]
Residential	$23,081	$22,488	-2.9%
Commercial			
General Service Non-Demand	1,467	1,451	-1.3%
GS Non-Demand (100% Load Factor)	39	39	-0.4%
General Service Demand	12,366	12,877	4.8%
General Service Demand TOU	4,740	4,790	1.2%
Public Authority	2,099	2,146	2.6%
Lighting	478	479	0.3%
Total System	$44,270	$44,270	0.0%

[1] Percent of base rate and fuel adjustment revenues.

Rate adjustments based on moving 60% toward the Cost of Service.

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Summary of Existing Rates and Rate Options

Ln. No.	Rate Description	Unit	Existing Rates Effective January 1, 2020	Option 1 Effective 2021	Option 2 Effective 2021	Option 3 Effective 2021	Option 4 Effective 2021
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Residential Service						
	Schedule RS						
1	Monthly Customer Charge	$/Mo.	$16.98	$18.00	$16.98	$30.00	$30.00
	Energy Charges < 1,000 kWh's						
2	Base	$/kWh	$0.06624	$0.06240	$0.06319	$0.04602	-
3	Fuel Cost Recovery Factor	$/kWh	$0.01708	$0.02015	$0.02015	$0.02015	$0.02015
	Energy Charges > 1,000 kWh's						
4	Base	$/kWh	$0.08840	$0.08456	$0.08535	$0.08602	-
5	Fuel Cost Recovery Factor	$/kWh	$0.02708	$0.03015	$0.03015	$0.03015	$0.03015
	Base Energy Charges - Option 4						
6	First 500 kWh	$/kWh	-	-	-	-	$0.03861
7	Next 500 kWh	$/kWh	-	-	-	-	$0.05861
8	Next 500 kWh	$/kWh	-	-	-	-	$0.07861
9	Additional kWh	$/kWh	-	-	-	-	$0.08861
	General Service Non-Demand						
	Rate Schedule GS-1						
	Monthly Customer Charges						
10	Non Metered Accounts	$/Mo.	$7.11	$8.00	$7.11	$12.00	$12.00
	Metered Accounts						
11	Secondary Delivery Voltage	$/Mo.	$17.55	$18.00	$17.55	$30.00	$30.00
12	Primary Delivery Voltage	$/Mo.	$221.86	$225.00	$221.86	$380.00	$380.00
	Energy and Demand Charges All kWh's						
13	Base	$/kWh	$0.07368	$0.07200	$0.07254	$0.07000	$0.07000
14	Fuel Cost Recovery Factor	$/kWh	$0.02103	$0.02423	$0.02423	$0.02423	$0.02423
	General Service Non-Demand						
	Rate Schedule GS-2 (100% Load Factor)						
	Monthly Customer Charge						
15	Non Metered Accounts	$/Mo.	$7.45	$8.00	$7.45	$8.00	$8.00
16	Metered Accounts	$/Mo.	$18.38	$19.00	$18.38	$19.00	$19.00
	Energy and Demand Charges All kWh's						
17	Base	$/kWh	$0.03736	$0.03640	$0.03640	$0.03640	$0.03640
18	Fuel Cost Recovery Factor	$/kWh	$0.02103	$0.02423	$0.02423	$0.02423	$0.02423
	General Service - Demand						
	Schedule GSD-1						
	Monthly Customer Charges						
	Metered Accounts						
19	Secondary Delivery Voltage	$/Mo.	$18.28	$19.00	$18.28	$30.00	$30.00
20	Primary Delivery Voltage	$/Mo.	$231.26	$235.00	$231.26	$400.00	$400.00
	Energy Charges All kWh's						
21	Base	$/kWh	$0.04216	$0.04216	$0.04216	$0.04216	$0.04216
22	Fuel Cost Recovery Factor	$/kWh	$0.02103	$0.02423	$0.02423	$0.02423	$0.02423
23	Demand Charge	$/kW	$5.05	$6.36	$6.38	$6.02	$6.02

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Summary of Existing Rates and Rate Options

Ln. No.	Rate Description	Unit	Existing Rates Effective January 1, 2020	Option 1 Effective 2021	Option 2 Effective 2021	Option 3 Effective 2021	Option 4 Effective 2021
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	General Service - Demand						
	Optional Time of Use Rate						
	Schedule GSDT-1						
	Monthly Customer Charges						
	Metered Accounts						
24	Secondary Delivery Voltage	$/Mo.	$29.01	$30.00	$29.01	$50.00	$50.00
25	Primary Delivery Voltage	$/Mo.	$234.93	$240.00	$234.93	$400.00	$400.00
	Energy Charges All kWh's						
26	On - Peak	$/kWh	$0.07008	$0.07008	$0.07008	$0.07008	$0.07008
27	Off - Peak	$/kWh	$0.02843	$0.02843	$0.02843	$0.02843	$0.02843
	Fuel Cost Recovery Factor						
28	On - Peak	$/kWh	$0.02775	$0.03197	$0.03197	$0.03197	$0.03197
29	Off - Peak	$/kWh	$0.01882	$0.02168	$0.02168	$0.02168	$0.02168
30	Base Demand Charge	$/kW	$1.27	$1.50	$1.50	$1.50	$1.50
31	On-Peak Demand Charge	$/kW	$3.84	$4.10	$4.10	$4.00	$4.00
32	Demand Charge Credit	$/kW	(0.35)	(0.35)	(0.35)	(0.35)	(0.35)

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Projected Revenues at
OPTION 1 RATES
Fiscal Year Ending September 30, 2021

Ln. No.	Customer Class Description	Option 1 Rate	Billing Determinants	Base Rate Revenue	Fuel Cost Recovery	Total Revenue
	(a)	(b)	(c)	(d)	(e)	(f)
	Residential					
1	Customer Charge	$18.00	141,625	$ 2,549,253	$ -	$ 2,549,253
2	Energy Charge < 1,000 kWhs	$ 0.06240	110,148,723	6,873,280	-	6,873,280
3	Energy Charge > 1,000 kWhs	$ 0.08456	71,870,175	6,077,342	-	6,077,342
4	Fuel Cost Recovery Factor < 1,000 kWhs	$ 0.02015	110,148,723	-	2,219,497	2,219,497
5	Fuel Cost Recovery Factor > 1,000 kWhs	$ 0.03015	71,870,175	-	2,166,886	2,166,886
6	***Total Residential***			$ 15,499,875	$ 4,386,383	$ 19,886,258
	Commercial					
	General Service Non-Demand					
7	Customer Charge	$18.00	13,103	$ 235,851	$ -	$ 235,851
8	Energy Charge	$ 0.07200	10,869,182	782,581	-	782,581
9	Fuel Cost Recovery Factor	$ 0.02423	10,869,182	-	263,360	263,360
10	*Subtotal GSND*			$ 1,018,432	$ 263,360	$ 1,281,792
	General Service Non-Demand (100 % LF)					
11	Customer Charge	$19.00	465	$ 8,837	$ -	$ 8,837
12	Energy Charge	$ 0.03640	432,977	15,760	-	15,760
13	Fuel Cost Recovery Factor	$ 0.02423	432,977	-	10,491	10,491
14	*Subtotal GSND (100% LF)*			$ 24,598	$ 10,491	$ 35,089
	General Service Demand					
15	Customer Charge - Secondary	$19.00	12,175	$ 231,316	$ -	$ 231,316
16	Customer Charge - Primary	$235.00	12	2,733	-	2,733
17	Energy Charge	$ 0.04216	131,546,246	5,545,990	-	5,545,990
18	Fuel Cost Recovery Factor	$ 0.02423	131,546,246	-	3,187,366	3,187,366
19	Demand Charge	$6.36	383,678	2,440,194	-	2,440,194
20	*Subtotal General Service Demand*			$ 8,220,233	$ 3,187,366	$ 11,407,598
	General Service Demand Time of Use					
21	Customer Charge - Secondary	$30.00	228	$ 6,831	$ -	$ 6,831
22	Customer Charge - Primary	$240.00	17	4,186	-	4,186
23	Energy Charge - On-Peak	$ 0.07008	14,338,386	1,004,834	-	1,004,834
24	Energy Charge - Off-Peak	$ 0.02843	44,216,062	1,257,063	-	1,257,063
25	Fuel Cost Recovery - On-Peak	$ 0.03197	14,338,386	-	458,435	458,435
26	Fuel Cost Recovery - Off-Peak	$ 0.02168	44,216,062	-	958,769	958,769
27	Base Demand Charge	$1.50	112,697	169,045	-	169,045
28	On-Peak Demand Charge	$4.10	110,496	453,034	-	453,034
29	Primary Demand Charge Credit	$ (0.35)	65,553	(22,944)	-	(22,944)
30	*Subtotal General Service Demand TOU*			$ 2,872,050	$ 1,417,203	$ 4,289,253
31	***Total Commercial***			$ 12,135,312	$ 4,878,420	$ 17,013,732

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Projected Revenues at
OPTION 1 RATES
Fiscal Year Ending September 30, 2021

Ln. No.	Customer Class Description	Option 1 Rate	Billing Determinants	Base Rate Revenue	Fuel Cost Recovery	Total Revenue
	(a)	(b)	(c)	(d)	(e)	(f)
	Public Authority					
	General Service Non-Demand					
32	Customer Charge Secondary	$ 18.00	2,135	$ 38,425	$ -	$ 38,425
33	Energy Charge	$ 0.07200	1,274,388	91,756	-	91,756
34	Fuel Cost Recovery Factor	$ 0.02423	1,274,388	-	30,878	30,878
	General Service Non-Demand (100 % LF)					
35	Customer Charge 100 % LF	$ 19.00	267	5,081	-	5,081
36	Energy Charge 100 % LF	$ 0.03640	100,287	3,650	-	3,650
37	Fuel Cost Recovery Factor	$ 0.02423	100,287	-	2,430	2,430
	General Service Demand					
38	Customer Charge - Secondry	$ 19.00	699	13,274	-	13,274
39	Energy Charge	$ 0.04216	12,709,993	535,853	-	535,853
40	Fuel Cost Recovery Factor	$ 0.02423	12,709,993	-	307,963	307,963
41	Demand Charge	$ 6.36	49,172	312,737	-	312,737
	General Service Demand Time of Use					
42	Customer Charge Secondary	$ 30.00	12	349	-	349
43	Customer Charge Primary	$ 240.00	12	2,791	-	2,791
44	Energy Charge - On-Peak	$ 0.07008	2,005,628	140,554	-	140,554
45	Energy Charge - Off-Peak	$ 0.02843	5,409,847	153,802	-	153,802
46	Fuel Cost Recovery - On-Peak	$ 0.03197	2,005,628	-	64,125	64,125
47	Fuel Cost Recovery - Off-Peak	$ 0.02168	5,409,847	-	117,306	117,306
48	Base Demand Charge	$ 1.50	22,149	33,223	-	33,223
49	On-Peak Demand Charge	$ 4.10	22,009	90,238	-	90,238
50	Primary Demand Charge Credit	$ (0.35)	41,233	(14,431)	-	(14,431)
51	***Total Public Authority***			$ 1,407,303	$ 522,702	$ 1,930,005
	Lighting					
52	Residential	$ 0.02423	74,340	$ 14,545	1,801	$ 16,346
53	Commercial	$ 0.02423	1,983,766	362,817	48,067	410,884
54	***Total Lighting***			$ 377,362	$ 49,868	$ 427,230
55	**TOTAL SYSTEM**			$ 29,419,852	$ 9,837,373	$ 39,257,225
56	**Other Revenues**					4,846,416
57	**TOTAL SYSTEM REVENUE**					$ 44,103,640

Table No. 6-3

CITY OF WINTER PARK, FLORIDA
Cost of Service Study
Analysis of Residential Fixed Cost per Customer [1]

		Cost of Service Table No. 5-1 [2] (a)	Excluding Undergrounding [3] (b)
1	Distribution Fixed Costs	$10,175,861	$7,502,289
2	Customer Fixed Costs	$1,431,091	$1,471,760
3	Total Fixed Costs	$11,606,952	$8,974,049
4	Residential Customers	12,180	12,180
5	$/Customer/Year	$953	$737
6	$/Customer/Month	**$79**	**$61**

[1] Based on Cost of Service allocated to the Residential Class.
[2] From Table No. 5-1, column (d) Residential.
[3] Cost of Service excluding Residential share of Undergrounding expense of $4,425,000.

Table No. 6-4

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Inter-Utility Comparison of Monthly Customer Charges

Ln. No.	Utility	Customer Charges by Class		
			General Service	
		Residential	Non-Demand	Demand
1	City of Winter Park - **Existing Charge**	$16.98	$17.55	$18.28
2	City of Winter Park - O**ption 1 Charge**	18.00	18.00	19.00
3	City of Winter Park - O**ption 2 Charge**	16.98	17.55	18.28
4	City of Winter Park - O**ption 3 Charge**	30.00	30.00	30.00
5	City of Winter Park - O**ption 4 Charge**	30.00	30.00	30.00
	Other Florida Municipalities:			
6	Fort Pierce Utilities Authority	6.01	5.84	39.30
7	Gainesville Regional Utilities	15.00	31.00	100.00
8	Jacksonville Electric Authority	5.50	9.25	85.00
9	Kissimmee Utilities Authority	10.17	11.08	55.54
10	City of Lakeland	11.00	13.00	42.00
11	City of New Smyrna Beach	5.65	6.05	33.50
12	City of Ocala	15.00	17.00	45.00
13	Orlando Utilities Commission	12.50	14.75	38.00
14	City of Tallahassee	7.92	10.77	74.16
	Florida Cooperatives			
15	Sumter Electric Cooperative	31.00	33.17	82.77
16	Clay Electric Cooperative	23.00	23.00	80.00
	Investor-Owned Utilities:			
17	Florida Power and Light	8.34	10.62	26.50
18	Gulf Power Company	19.20	25.25	46.92
19	Duke Energy	10.58	14.00	14.00
20	Tampa Electric Company	15.95	18.06	30.10
21	**Average Customer Charges**	$13.36	$16.27	$50.69

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

Summary of Residential Rate Design Options Pros and Cons

RATE DESIGN OPTION	PROS	CONS
Option 1 $18 Customer Charge; existing energy block differential of $0.02216 per kWh	Helps recover fixed costs; closer to cost of service; consistent with industry trends; avoids rate shock	Greater percentage impact on low users
Option 2 $16.98 Customer Charge; existing energy block differential of $0.02216 per kWh	Rate decrease similar for all usage levels	Does not provide additional recovery of fixed costs
Option 3 $30 Customer Charge; energy block differential of $0.04 per kWh	Helps recover fixed costs; closer to cost of service; consistent with industry trends	Greater percentage impact on low users; large energy block rate differential
Option 4 $30 Customer Charge; 4 Block energy charge; energy block differentials of $0.02 and $0.01 per kWh	Helps recover fixed costs; closer to cost of service	Greater percentage impact on low users;; multiple energy blocks not industry standard; major rate structure change

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 June 2020.

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.

In addition to the comparisons shown on Table No. 7-2, The Florida Municipal Electric Association prepares rate comparison schedules each month. The utilities designated as "G" on the comparisons are generating utilities, and the others are distribution only utilities. These schedules provide comparisons of both residential and commercial customers of varying usage levels. While generating utilities have different costs burdens, the distribution only utilities that purchase their power help the generating utilities recover those costs at wholesale rates. It is useful to include the generating utilities in the rate comparisons to make sure the City's rates are competitive.

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Comparison of Existing and Proposed Residential Service Rates [1]

			Residential Service	
			Existing	Option 1
Customer Charge		($)	$16.98	$18.00
Energy Charge	First 1,000 kWh	($/kWh)	$0.06624	$0.06240
Energy Charge	Additional kWh	($/kWh)	$0.08840	$0.08456
Fuel Cost [2]	First 1,000 kWh	($/kWh)	$0.02015	$0.02015
Fuel Cost [2]	Additional kWh	($/kWh)	$0.03015	$0.03015

		Existing		Option 1		Difference		
Usage		Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
(kWh)		($)	(Cents/kWh)	($)	(Cents/kWh)	($)	(Cents/kWh)	(%)
500		63.79	12.757	62.83	12.566	(0.95)	(0.191)	-1.50%
600		72.94	12.157	71.58	11.930	(1.36)	(0.227)	-1.87%
700		82.10	11.729	80.33	11.476	(1.77)	(0.253)	-2.15%
800		91.26	11.407	89.08	11.135	(2.18)	(0.272)	-2.38%
900		100.41	11.157	97.83	10.870	(2.58)	(0.287)	-2.57%
1,000		109.57	10.957	106.58	10.658	(2.99)	(0.299)	-2.73%
1,100	[3]	122.14	11.104	118.74	10.795	(3.40)	(0.309)	-2.78%
1,200		134.70	11.225	130.90	10.908	(3.80)	(0.317)	-2.82%
1,300	[4]	147.27	11.329	143.06	11.005	(4.21)	(0.324)	-2.86%
1,400		159.84	11.417	155.22	11.087	(4.62)	(0.330)	-2.89%
1,500		172.40	11.494	167.38	11.159	(5.02)	(0.335)	-2.91%
2,000		235.24	11.762	228.18	11.409	(7.06)	(0.353)	-3.00%
2,500		298.07	11.923	288.97	11.559	(9.09)	(0.364)	-3.05%
3,000		360.90	12.030	349.77	11.659	(11.13)	(0.371)	-3.08%
4,000		486.56	12.164	471.36	11.784	(15.20)	(0.380)	-3.12%
5,000		612.22	12.244	592.95	11.859	(19.27)	(0.385)	-3.15%

[1] Amounts shown reflect single phase, inside the City service, and include a 6% franchise fee.
[2] Projected Fuel Cost Recovery Factor for Fiscal Year 2021.
[3] Median Residential monthly usage.
[4] Average Residential monthly usage.

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Comparison of Existing and Proposed General Service Non-Demand Rates [1]

			General Service Non-Demand	
			Existing	Option 1
Customer Charge		($)	$17.55	$18.00
Energy Charge	All kWh	($/kWh)	$0.07368	$0.07200
Fuel Cost Recovery [2]		($/kWh)	$0.02423	$0.02423

	Existing		Option 1		Difference		
Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
(kWh)	($)	(Cents/kWh)	($)	(Cents/kWh)	($)	(Cents/kWh)	(%)
1,000	122.39	12.239	121.08	12.108	(1.30)	(0.130)	-1.07%
1,250	148.33	11.867	146.58	11.727	(1.75)	(0.140)	-1.18%
1,500	174.28	11.619	172.09	11.472	(2.19)	(0.146)	-1.26%
1,750	200.23	11.441	197.59	11.291	(2.64)	(0.151)	-1.32%
1,900	215.79	11.358	212.89	11.205	(2.91)	(0.153)	-1.35%
2,000	226.17	11.309	223.09	11.154	(3.08)	(0.154)	-1.36%
3,000	329.96	10.999	325.09	10.836	(4.87)	(0.162)	-1.47%
4,000	433.74	10.844	427.10	10.677	(6.65)	(0.166)	-1.53%
5,000	537.53	10.751	529.10	10.582	(8.43)	(0.169)	-1.57%
7,500	796.99	10.627	784.11	10.455	(12.88)	(0.172)	-1.62%
10,000	1,056.45	10.564	1,039.12	10.391	(17.33)	(0.173)	-1.64%
11,000	1,160.23	10.548	1,141.12	10.374	(19.11)	(0.174)	-1.65%
12,000	1,264.02	10.533	1,243.13	10.359	(20.89)	(0.174)	-1.65%
13,000	1,367.80	10.522	1,345.13	10.347	(22.67)	(0.174)	-1.66%
14,000	1,471.59	10.511	1,447.13	10.337	(24.45)	(0.175)	-1.66%
15,000	1,575.37	10.502	1,549.14	10.328	(26.23)	(0.175)	-1.67%
17,250	1,808.89	10.486	1,778.65	10.311	(30.24)	(0.175)	-1.67%
20,000	2,094.30	10.471	2,059.16	10.296	(35.14)	(0.176)	-1.68%

[1] Amounts shown reflect single phase, inside the City service, and include a 6% franchise fee.
[2] Projected Fuel Cost Recovery Factor for Fiscal Year 2021.

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Comparison of Existing and Proposed Rates for General Service Demand [1]

			General Service Demand	
			Existing	Option 1
Customer Charge		($)	$18.28	$19.00
Demand Charge		($/kW)	$5.05	$6.36
Energy Charge	All kWh	($/kWh)	$0.04216	$0.04216
Fuel Cost Recovery [2]		($/kWh)	$0.02423	$0.02423

			Existing		Option 1		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**	990.76	9.908	1,060.95	10.610	70.19	0.702	7.08%
	300	**15,000**	1,342.63	8.951	1,412.82	9.419	70.19	0.468	5.23%
	400	**20,000**	1,694.49	8.472	1,764.69	8.823	70.19	0.351	4.14%
	500	**25,000**	2,046.36	8.185	2,116.56	8.466	70.19	0.281	3.43%
	600	**30,000**	2,398.23	7.994	2,468.42	8.228	70.19	0.234	2.93%
100	**200**	**20,000**	1,962.14	9.811	2,101.77	10.509	139.62	0.698	7.12%
	300	**30,000**	2,665.88	8.886	2,805.50	9.352	139.62	0.465	5.24%
	400	**40,000**	3,369.61	8.424	3,509.24	8.773	139.62	0.349	4.14%
	500	**50,000**	4,073.35	8.147	4,212.97	8.426	139.62	0.279	3.43%
	600	**60,000**	4,777.08	7.962	4,916.70	8.195	139.62	0.233	2.92%
500	**200**	**100,000**	9,733.22	9.733	10,428.28	10.428	695.06	0.695	7.14%
	300	**150,000**	13,251.89	8.835	13,946.95	9.298	695.06	0.463	5.25%
	400	**200,000**	16,770.56	8.385	17,465.62	8.733	695.06	0.348	4.14%
	500	**250,000**	20,289.23	8.116	20,984.29	8.394	695.06	0.278	3.43%
	600	**300,000**	23,807.90	7.936	24,502.96	8.168	695.06	0.232	2.92%

[1] Amounts shown reflect inside the City service, 6% franchise fee, and exclude any applicable primary service discount or power factor correction.
[2] Projected Fuel Cost Recovery Factor for Fiscal Year 2021.

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Comparison of Existing and Proposed Residential Service Rates [1]

			Residential Service	
			Existing	Option 2
Customer Charge		($)	$16.98	$16.98
Energy Charge	First 1,000 kWh	($/kWh)	$0.06624	$0.06319
Energy Charge	Additional kWh	($/kWh)	$0.08840	$0.08535
Fuel Cost [2]	First 1,000 kWh	($/kWh)	$0.02015	$0.02015
Fuel Cost [2]	Additional kWh	($/kWh)	$0.03015	$0.03015

		Existing		Option 2		Difference		
Usage		Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
(kWh)		($)	(Cents/kWh)	($)	(Cents/kWh)	($)	(Cents/kWh)	(%)
500		63.79	12.757	62.17	12.434	(1.62)	(0.323)	-2.53%
600		72.94	12.157	71.00	11.834	(1.94)	(0.323)	-2.66%
700		82.10	11.729	79.84	11.405	(2.26)	(0.323)	-2.76%
800		91.26	11.407	88.67	11.084	(2.59)	(0.323)	-2.83%
900		100.41	11.157	97.51	10.834	(2.91)	(0.323)	-2.90%
1,000		109.57	10.957	106.34	10.634	(3.23)	(0.323)	-2.95%
1,100	[3]	122.14	11.104	118.58	10.780	(3.56)	(0.323)	-2.91%
1,200		134.70	11.225	130.83	10.902	(3.88)	(0.323)	-2.88%
1,300	[4]	147.27	11.329	143.07	11.005	(4.20)	(0.323)	-2.85%
1,400		159.84	11.417	155.31	11.094	(4.53)	(0.323)	-2.83%
1,500		172.40	11.494	167.55	11.170	(4.85)	(0.323)	-2.81%
2,000		235.24	11.762	228.77	11.438	(6.47)	(0.323)	-2.75%
2,500		298.07	11.923	289.98	11.599	(8.08)	(0.323)	-2.71%
3,000		360.90	12.030	351.20	11.707	(9.70)	(0.323)	-2.69%
4,000		486.56	12.164	473.63	11.841	(12.93)	(0.323)	-2.66%
5,000		612.22	12.244	596.06	11.921	(16.17)	(0.323)	-2.64%

[1] Amounts shown reflect single phase, inside the City service, and include a 6% franchise fee.
[2] Projected Fuel Cost Recovery Factor for Fiscal Year 2021.
[3] Median Residential monthly usage.
[4] Average Residential monthly usage.

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Comparison of Existing and Proposed General Service Non-Demand Rates [1]

			General Service Non-Demand	
			Existing	Option 2
Customer Charge		($)	$17.55	$17.55
Energy Charge	All kWh	($/kWh)	$0.07368	$0.07254
Fuel Cost Recovery [2]		($/kWh)	$0.02423	$0.02423

	Existing		Option 2		Difference		
Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
(kWh)	($)	(Cents/kWh)	($)	(Cents/kWh)	($)	(Cents/kWh)	(%)
1,000	122.39	12.239	121.18	12.118	(1.21)	(0.121)	-0.99%
1,250	148.33	11.867	146.82	11.746	(1.51)	(0.121)	-1.02%
1,500	174.28	11.619	172.47	11.498	(1.81)	(0.121)	-1.04%
1,750	200.23	11.441	198.11	11.321	(2.11)	(0.121)	-1.06%
1,900	215.79	11.358	213.50	11.237	(2.30)	(0.121)	-1.06%
2,000	226.17	11.309	223.76	11.188	(2.42)	(0.121)	-1.07%
3,000	329.96	10.999	326.33	10.878	(3.63)	(0.121)	-1.10%
4,000	433.74	10.844	428.91	10.723	(4.83)	(0.121)	-1.11%
5,000	537.53	10.751	531.48	10.630	(6.04)	(0.121)	-1.12%
7,500	796.99	10.627	787.92	10.506	(9.06)	(0.121)	-1.14%
10,000	1,056.45	10.564	1,044.37	10.444	(12.08)	(0.121)	-1.14%
11,000	1,160.23	10.548	1,146.94	10.427	(13.29)	(0.121)	-1.15%
12,000	1,264.02	10.533	1,249.52	10.413	(14.50)	(0.121)	-1.15%
13,000	1,367.80	10.522	1,352.09	10.401	(15.71)	(0.121)	-1.15%
14,000	1,471.59	10.511	1,454.67	10.390	(16.92)	(0.121)	-1.15%
15,000	1,575.37	10.502	1,557.25	10.382	(18.13)	(0.121)	-1.15%
17,250	1,808.89	10.486	1,788.04	10.365	(20.84)	(0.121)	-1.15%
20,000	2,094.30	10.471	2,070.13	10.351	(24.17)	(0.121)	-1.15%

[1] Amounts shown reflect single phase, inside the City service, and include a 6% franchise fee.

[2] Projected Fuel Cost Recovery Factor for Fiscal Year 2021.

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Comparison of Existing and Proposed Rates for General Service Demand [1]

			General Service Demand	
			Existing	Option 2
Customer Charge		($)	$18.28	$18.28
Demand Charge		($/kW)	$5.05	$6.38
Energy Charge	All kWh	($/kWh)	$0.04216	$0.04216
Fuel Cost Recovery [2]		($/kWh)	$0.02423	$0.02423

			Existing		Option 2		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	990.76	9.908	1,061.25	10.613	70.49	0.705	7.11%
	300	15,000	1,342.63	8.951	1,413.12	9.421	70.49	0.470	5.25%
	400	20,000	1,694.49	8.472	1,764.98	8.825	70.49	0.352	4.16%
	500	25,000	2,046.36	8.185	2,116.85	8.467	70.49	0.282	3.44%
	600	30,000	2,398.23	7.994	2,468.72	8.229	70.49	0.235	2.94%
100	200	20,000	1,962.14	9.811	2,103.12	10.516	140.98	0.705	7.18%
	300	30,000	2,665.88	8.886	2,806.86	9.356	140.98	0.470	5.29%
	400	40,000	3,369.61	8.424	3,510.59	8.776	140.98	0.352	4.18%
	500	50,000	4,073.35	8.147	4,214.33	8.429	140.98	0.282	3.46%
	600	60,000	4,777.08	7.962	4,918.06	8.197	140.98	0.235	2.95%
500	200	100,000	9,733.22	9.733	10,438.12	10.438	704.90	0.705	7.24%
	300	150,000	13,251.89	8.835	13,956.79	9.305	704.90	0.470	5.32%
	400	200,000	16,770.56	8.385	17,475.46	8.738	704.90	0.352	4.20%
	500	250,000	20,289.23	8.116	20,994.13	8.398	704.90	0.282	3.47%
	600	300,000	23,807.90	7.936	24,512.80	8.171	704.90	0.235	2.96%

[1] Amounts shown reflect inside the City service, 6% franchise fee, and exclude any applicable primary service discount or power factor correction.
[2] Projected Fuel Cost Recovery Factor for Fiscal Year 2021.

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Comparison of Existing and Proposed Residential Service Rates [1]

			Residential Service	
			Existing	Option 3
Customer Charge		($)	$16.98	$30.00
Energy Charge	First 1,000 kWh	($/kWh)	$0.06624	$0.04602
Energy Charge	Additional kWh	($/kWh)	$0.08840	$0.08602
Fuel Cost [2]	First 1,000 kWh	($/kWh)	$0.02015	$0.02015
Fuel Cost [2]	Additional kWh	($/kWh)	$0.03015	$0.03015

		Existing		Option 3		Difference		
Usage		Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
(kWh)		($)	(Cents/kWh)	($)	(Cents/kWh)	($)	(Cents/kWh)	(%)
500		63.79	12.757	66.87	13.374	3.08	0.617	4.84%
600		72.94	12.157	73.88	12.314	0.94	0.157	1.29%
700		82.10	11.729	80.90	11.557	(1.20)	(0.172)	-1.46%
800		91.26	11.407	87.91	10.989	(3.35)	(0.418)	-3.67%
900		100.41	11.157	94.93	10.547	(5.49)	(0.610)	-5.47%
1,000		109.57	10.957	101.94	10.194	(7.63)	(0.763)	-6.97%
1,100	[3]	122.14	11.104	114.25	10.387	(7.88)	(0.717)	-6.46%
1,200		134.70	11.225	126.57	10.547	(8.14)	(0.678)	-6.04%
1,300	[4]	147.27	11.329	138.88	10.683	(8.39)	(0.645)	-5.70%
1,400		159.84	11.417	151.20	10.800	(8.64)	(0.617)	-5.41%
1,500		172.40	11.494	163.51	10.901	(8.89)	(0.593)	-5.16%
2,000		235.24	11.762	225.08	11.254	(10.15)	(0.508)	-4.32%
2,500		298.07	11.923	286.65	11.466	(11.42)	(0.457)	-3.83%
3,000		360.90	12.030	348.22	11.607	(12.68)	(0.423)	-3.51%
4,000		486.56	12.164	471.36	11.784	(15.20)	(0.380)	-3.12%
5,000		612.22	12.244	594.50	11.890	(17.72)	(0.354)	-2.89%

[1] Amounts shown reflect single phase, inside the City service, and include a 6% franchise fee.
[2] Projected Fuel Cost Recovery Factor for Fiscal Year 2021.
[3] Median Residential monthly usage.
[4] Average Residential monthly usage.

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Comparison of Existing and Proposed General Service Non-Demand Rates [1]

			General Service Non-Demand	
			Existing	Option 3
Customer Charge		($)	$17.55	$30.00
Energy Charge	All kWh	($/kWh)	$0.07368	$0.07000
Fuel Cost Recovery [2]		($/kWh)	$0.02423	$0.02423

	Existing		Option 3		Difference		
Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
(kWh)	($)	(Cents/kWh)	($)	(Cents/kWh)	($)	(Cents/kWh)	(%)
1,000	122.39	12.239	131.68	13.168	9.30	0.930	7.60%
1,250	148.33	11.867	156.65	12.532	8.32	0.666	5.61%
1,500	174.28	11.619	181.63	12.108	7.35	0.490	4.21%
1,750	200.23	11.441	206.60	11.806	6.37	0.364	3.18%
1,900	215.79	11.358	221.58	11.662	5.79	0.304	2.68%
2,000	226.17	11.309	231.57	11.578	5.40	0.270	2.39%
3,000	329.96	10.999	331.45	11.048	1.49	0.050	0.45%
4,000	433.74	10.844	431.34	10.783	(2.41)	(0.060)	-0.55%
5,000	537.53	10.751	531.22	10.624	(6.31)	(0.126)	-1.17%
7,500	796.99	10.627	780.93	10.412	(16.06)	(0.214)	-2.01%
10,000	1,056.45	10.564	1,030.64	10.306	(25.81)	(0.258)	-2.44%
11,000	1,160.23	10.548	1,130.52	10.277	(29.71)	(0.270)	-2.56%
12,000	1,264.02	10.533	1,230.41	10.253	(33.61)	(0.280)	-2.66%
13,000	1,367.80	10.522	1,330.29	10.233	(37.51)	(0.289)	-2.74%
14,000	1,471.59	10.511	1,430.17	10.216	(41.41)	(0.296)	-2.81%
15,000	1,575.37	10.502	1,530.06	10.200	(45.31)	(0.302)	-2.88%
17,250	1,808.89	10.486	1,754.80	10.173	(54.09)	(0.314)	-2.99%
20,000	2,094.30	10.471	2,029.48	10.147	(64.82)	(0.324)	-3.10%

[1] Amounts shown reflect single phase, inside the City service, and include a 6% franchise fee.

[2] Projected Fuel Cost Recovery Factor for Fiscal Year 2021.

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Comparison of Existing and Proposed Rates for General Service Demand [1]

			General Service Demand	
			Existing	Option 3
Customer Charge		($)	$18.28	$30.00
Demand Charge		($/kW)	$5.05	$6.02
Energy Charge	All kWh	($/kWh)	$0.04216	$0.04216
Fuel Cost Recovery [2]		($/kWh)	$0.02423	$0.02423

			Existing		Option 3		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	990.76	9.908	1,054.59	10.546	63.83	0.638	6.44%
	300	15,000	1,342.63	8.951	1,406.46	9.376	63.83	0.426	4.75%
	400	20,000	1,694.49	8.472	1,758.33	8.792	63.83	0.319	3.77%
	500	25,000	2,046.36	8.185	2,110.20	8.441	63.83	0.255	3.12%
	600	30,000	2,398.23	7.994	2,462.06	8.207	63.83	0.213	2.66%
100	200	20,000	1,962.14	9.811	2,077.39	10.387	115.24	0.576	5.87%
	300	30,000	2,665.88	8.886	2,781.12	9.270	115.24	0.384	4.32%
	400	40,000	3,369.61	8.424	3,484.86	8.712	115.24	0.288	3.42%
	500	50,000	4,073.35	8.147	4,188.59	8.377	115.24	0.230	2.83%
	600	60,000	4,777.08	7.962	4,892.32	8.154	115.24	0.192	2.41%
500	200	100,000	9,733.22	9.733	10,259.74	10.260	526.52	0.527	5.41%
	300	150,000	13,251.89	8.835	13,778.41	9.186	526.52	0.351	3.97%
	400	200,000	16,770.56	8.385	17,297.08	8.649	526.52	0.263	3.14%
	500	250,000	20,289.23	8.116	20,815.75	8.326	526.52	0.211	2.60%
	600	300,000	23,807.90	7.936	24,334.42	8.111	526.52	0.176	2.21%

[1] Amounts shown reflect inside the City service, 6% franchise fee, and exclude any applicable primary service discount or power factor correction.

[2] Projected Fuel Cost Recovery Factor for Fiscal Year 2021.

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Comparison of Existing and Proposed Residential Service Rates [1]

			Residential Service	
			Existing	Option 4
Customer Charge		($)	$16.98	$30.00
Energy Charge	First 500 kWh	($/kWh)	$0.06624	$0.03861
Energy Charge	Next 500 kWh	($/kWh)	$0.06624	$0.05861
Energy Charge	Next 500 kWh	($/kWh)	$0.08840	$0.07861
Energy Charge	Additional kWh	($/kWh)	$0.08840	$0.08861
Fuel Cost [2]	First 1,000 kWh	($/kWh)	$0.02015	$0.02015
Fuel Cost [2]	Additional kWh	($/kWh)	$0.03015	$0.03015

	Existing		Option 4		Difference		
Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
(kWh)	($)	(Cents/kWh)	($)	(Cents/kWh)	($)	(Cents/kWh)	(%)
500	63.79	12.757	62.95	12.589	(0.84)	(0.168)	-1.32%
600	72.94	12.157	71.29	11.882	(1.65)	(0.275)	-2.26%
700	82.10	11.729	79.64	11.378	(2.46)	(0.351)	-2.99%
800	91.26	11.407	87.99	10.999	(3.26)	(0.408)	-3.58%
900	100.41	11.157	96.34	10.705	(4.07)	(0.453)	-4.06%
1,000	109.57	10.957	104.69	10.469	(4.88)	(0.488)	-4.45%
1,100	122.14	11.104	116.22	10.565	(5.92)	(0.538)	-4.85%
1,200	134.70	11.225	127.75	10.646	(6.96)	(0.580)	-5.16%
1,300	147.27	11.329	139.28	10.714	(7.99)	(0.615)	-5.43%
1,400	159.84	11.417	150.81	10.772	(9.03)	(0.645)	-5.65%
1,500	172.40	11.494	162.34	10.822	(10.07)	(0.671)	-5.84%
2,000	235.24	11.762	225.28	11.264	(9.95)	(0.498)	-4.23%
2,500	298.07	11.923	288.23	11.529	(9.84)	(0.394)	-3.30%
3,000	360.90	12.030	351.17	11.706	(9.73)	(0.324)	-2.69%
4,000	486.56	12.164	477.06	11.927	(9.50)	(0.237)	-1.95%
5,000	612.22	12.244	602.95	12.059	(9.27)	(0.185)	-1.51%

[1] Amounts shown reflect single phase, inside the City service, and include a 6% franchise fee.

[2] Projected Fuel Cost Recovery Factor for Fiscal Year 2021.

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Comparison of Existing and Proposed General Service Non-Demand Rates [1]

			General Service Non-Demand	
			Existing	Option 4
Customer Charge		($)	$17.55	$30.00
Energy Charge	All kWh	($/kWh)	$0.07368	$0.07000
Fuel Cost Recovery [2]		($/kWh)	$0.02423	$0.02423

	Existing		Option 4		Difference		
Usage	Amount	Unit Cost	Amount	Unit Cost	Amount	Unit Cost	Percent
(kWh)	($)	(Cents/kWh)	($)	(Cents/kWh)	($)	(Cents/kWh)	(%)
1,000	122.39	12.239	131.68	13.168	9.30	0.930	7.60%
1,250	148.33	11.867	156.65	12.532	8.32	0.666	5.61%
1,500	174.28	11.619	181.63	12.108	7.35	0.490	4.21%
1,750	200.23	11.441	206.60	11.806	6.37	0.364	3.18%
1,900	215.79	11.358	221.58	11.662	5.79	0.304	2.68%
2,000	226.17	11.309	231.57	11.578	5.40	0.270	2.39%
3,000	329.96	10.999	331.45	11.048	1.49	0.050	0.45%
4,000	433.74	10.844	431.34	10.783	(2.41)	(0.060)	-0.55%
5,000	537.53	10.751	531.22	10.624	(6.31)	(0.126)	-1.17%
7,500	796.99	10.627	780.93	10.412	(16.06)	(0.214)	-2.01%
10,000	1,056.45	10.564	1,030.64	10.306	(25.81)	(0.258)	-2.44%
11,000	1,160.23	10.548	1,130.52	10.277	(29.71)	(0.270)	-2.56%
12,000	1,264.02	10.533	1,230.41	10.253	(33.61)	(0.280)	-2.66%
13,000	1,367.80	10.522	1,330.29	10.233	(37.51)	(0.289)	-2.74%
14,000	1,471.59	10.511	1,430.17	10.216	(41.41)	(0.296)	-2.81%
15,000	1,575.37	10.502	1,530.06	10.200	(45.31)	(0.302)	-2.88%
17,250	1,808.89	10.486	1,754.80	10.173	(54.09)	(0.314)	-2.99%
20,000	2,094.30	10.471	2,029.48	10.147	(64.82)	(0.324)	-3.10%

[1] Amounts shown reflect single phase, inside the City service, and include a 6% franchise fee.

[2] Projected Fuel Cost Recovery Factor for Fiscal Year 2021.

CITY OF WINTER PARK, FLORIDA

Electric Cost of Service Study

Comparison of Existing and Proposed Rates for General Service Demand [1]

			General Service Demand	
			Existing	Option 4
Customer Charge		($)	$18.28	$30.00
Demand Charge		($/kW)	$5.05	$6.02
Energy Charge	All kWh	($/kWh)	$0.04216	$0.04216
Fuel Cost Recovery [2]		($/kWh)	$0.02423	$0.02423

			Existing		Option 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**	990.76	9.908	1,054.59	10.546	63.83	0.638	6.44%
	300	**15,000**	1,342.63	8.951	1,406.46	9.376	63.83	0.426	4.75%
	400	**20,000**	1,694.49	8.472	1,758.33	8.792	63.83	0.319	3.77%
	500	**25,000**	2,046.36	8.185	2,110.20	8.441	63.83	0.255	3.12%
	600	**30,000**	2,398.23	7.994	2,462.06	8.207	63.83	0.213	2.66%
100	**200**	**20,000**	1,962.14	9.811	2,077.39	10.387	115.24	0.576	5.87%
	300	**30,000**	2,665.88	8.886	2,781.12	9.270	115.24	0.384	4.32%
	400	**40,000**	3,369.61	8.424	3,484.86	8.712	115.24	0.288	3.42%
	500	**50,000**	4,073.35	8.147	4,188.59	8.377	115.24	0.230	2.83%
	600	**60,000**	4,777.08	7.962	4,892.32	8.154	115.24	0.192	2.41%
500	**200**	**100,000**	9,733.22	9.733	10,259.74	10.260	526.52	0.527	5.41%
	300	**150,000**	13,251.89	8.835	13,778.41	9.186	526.52	0.351	3.97%
	400	**200,000**	16,770.56	8.385	17,297.08	8.649	526.52	0.263	3.14%
	500	**250,000**	20,289.23	8.116	20,815.75	8.326	526.52	0.211	2.60%
	600	**300,000**	23,807.90	7.936	24,334.42	8.111	526.52	0.176	2.21%

[1] Amounts shown reflect inside the City service, 6% franchise fee, and exclude any applicable primary service discount or power factor correction.
[2] Projected Fuel Cost Recovery Factor for Fiscal Year 2021.

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

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

Ln. No.	Utility	Fuel Adj. $/1000 kWh	Residential Class 250 kWh	500 kWh	750 kWh	1,000 kWh	1,200 kWh	2,000 kWh	2,500 kWh	3,000 kWh
1	City of Winter Park - **Existing**	17.08	40.08	62.16	84.24	106.32	130.80	228.73	289.93	351.14
2	City of Winter Park - **Option 1**	20.15	40.96	62.83	84.71	106.58	130.90	228.18	288.97	349.77
3	City of Winter Park - **Option 2**	20.15	40.08	62.17	84.25	106.34	130.83	228.77	289.98	351.20
4	City of Winter Park - **Option 3**	20.15	49.34	66.87	84.41	101.94	126.57	225.08	286.65	348.22
5	City of Winter Park - **Option 4**	20.15	47.37	62.95	83.82	104.69	127.75	225.28	288.23	351.17
	Other Florida Municipalities:									
6	City of Alachua	0.00	32.49	55.84	79.19	102.54	123.26	206.14	257.94	309.74
7	City of Bushnell	10.00	35.16	60.33	85.49	110.65	130.78	211.30	261.63	311.95
8	Fort Pierce Utilities Authority	(13.00)	29.82	53.62	77.43	103.84	124.96	209.48	262.30	315.12
9	Gainesville Regional Utilities	30.00	41.13	67.25	93.38	123.13	148.87	251.83	316.18	380.53
10	Jacksonville Electric Authority	32.50	31.25	57.00	82.75	108.50	129.10	211.50	263.00	317.00
11	Kissimmee Utilities Authority	(51.19)	28.15	46.13	64.10	82.08	98.99	166.64	208.92	251.20
12	City of Lakeland	20.00	29.44	47.88	66.32	84.77	100.96	168.78	212.32	255.85
13	City of Leesburg	0.00	34.88	57.57	80.25	102.94	125.45	215.48	271.76	328.03
14	City of New Smyrna Beach	0.00	24.76	43.88	62.99	82.10	97.39	158.55	196.78	235.00
15	City of Newberry	5.00	35.00	61.50	88.00	114.50	142.00	226.00	278.50	331.00
16	City of Ocala	0.00	36.88	58.76	80.63	102.51	120.01	190.02	233.78	277.53
17	Orlando Utilities Commission	32.02	36.75	61.00	85.25	109.50	132.90	226.50	285.00	343.50
18	City of Tallahassee	29.39	33.59	59.26	84.92	110.59	131.12	213.26	264.60	315.93
	Florida Cooperatives									
19	Sumter Electric Cooperative	(20.70)	53.48	75.95	98.43	120.90	142.88	230.80	285.75	340.70
20	Central Florida Cooperative	(5.50)	52.58	75.70	98.83	121.95	140.45	214.45	260.70	306.95
21	Clay Electric Cooperative	17.40	45.48	67.95	90.43	112.90	134.64	221.60	275.95	330.30
	Investor-Owned Utilities: [2]									
22	Florida Power and Light	18.84	31.55	54.25	76.96	99.66	110.88	155.76	183.80	211.85
23	Gulf Power Company	32.62	51.55	82.74	113.94	145.14	170.09	269.92	332.31	394.70
24	Duke Energy	30.67	41.93	72.65	103.37	134.09	164.35	285.38	361.03	436.68
25	Tampa Electric Company	4.45	32.33	48.71	65.08	81.46	97.02	159.27	198.17	237.07

[1] Amounts shown are based on the rates for single phase service and reflect when applicable, inside city service. In addition, amounts include June 2020 fuel adjustments and franchise fees.

[2] Amounts shown include the energy conservation, capacity, environmental and storm cost recovery charges where appropriate, as filed with the the Florida Public Service Commission (FPSC). Franchise fees of 6 percent are included for each of the IOU's listed.

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

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

Ln. No.	Utility	Fuel Adj. $/1000 kWh	General Service Non-Demand Class 250 kWh	500 kWh	750 kWh	1,000 kWh	1,500 kWh	2,000 kWh	2,500 kWh	3,000 kWh
1	City of Winter Park - **Existing**	21.03	43.70	68.80	93.90	119.00	169.19	219.39	269.58	319.78
2	City of Winter Park - **Option 1**	24.23	44.58	70.08	95.58	121.08	172.09	223.09	274.09	325.09
3	City of Winter Park - **Option 2**	24.23	44.25	69.89	95.54	121.18	172.47	223.76	275.04	326.33
4	City of Winter Park - **Option 3**	24.23	56.77	81.74	106.71	131.68	181.63	231.57	281.51	331.45
5	City of Winter Park - **Option 4**	24.23	56.77	81.74	106.71	131.68	181.63	231.57	281.51	331.45
	Other Florida Municipalities:									
6	City of Alachua	0.00	36.31	60.93	85.56	110.18	159.43	208.68	257.93	307.18
7	City of Bushnell	10.00	38.47	66.93	95.40	123.86	180.79	237.72	294.65	351.58
8	Fort Pierce Utilities Authority	(13.00)	32.36	58.87	85.39	111.90	164.93	217.96	270.99	324.02
9	Gainesville Regional Utilities	30.00	63.10	95.20	127.30	159.40	223.60	304.05	384.50	464.95
10	Jacksonville Electric Authority	32.50	33.65	58.05	82.44	106.84	155.64	204.43	253.23	302.02
11	Kissimmee	(54.97)	30.91	50.74	70.57	90.40	130.06	169.71	209.37	249.03
12	City of Lakeland	20.00	31.23	49.46	67.69	85.93	122.39	158.85	195.32	231.78
13	City of New Smyrna Beach	0.00	24.68	43.30	61.93	80.55	117.80	155.05	192.30	229.55
14	City of Ocala	0.00	39.21	61.42	83.63	105.84	150.26	194.68	239.10	283.52
15	Orlando Utilities Commission	19.52	37.17	59.59	82.01	104.43	149.27	194.11	238.95	283.79
16	City of Tallahassee	29.39	32.61	54.45	76.29	98.13	141.81	185.49	229.17	272.85
	Florida Cooperatives									
17	Sumter Electric Cooperative	(20.70)	56.80	80.42	104.05	127.67	174.92	222.17	269.42	316.67
18	Clay Electric Cooperative	17.40	47.68	72.35	97.03	121.70	171.05	220.40	269.75	319.10
	Investor-Owned Utilities: [2]									
19	Florida Power and Light	(0.39)	28.45	45.64	62.84	80.03	114.42	148.80	183.19	217.58
20	Gulf Power Company	32.62	58.93	91.09	123.25	155.41	219.73	284.05	348.37	412.69
21	Duke Energy	7.33	40.33	65.83	91.32	116.81	167.80	218.78	269.77	320.76
22	Tampa Electric Company	30.16	43.01	66.88	90.75	114.62	162.35	210.09	257.83	305.57

[1] Amounts shown are based on the rates for single phase service and reflect when applicable, inside city service. In addition, amounts include June 2020 fuel adjustments and franchise fees.

[2] Amounts shown include the energy conservation, capacity, environmental and storm cost recovery charges where appropriate, as filed with the the Florida Public Service Commission (FPSC). Franchise fees of 6 percent are included for each of the IOU's listed.

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

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

Ln. No.	Utility	General Service Demand Class								
		50 kW			75 kW			150 kW		
		10,000 kWh	20,000 kWh	30,000 kWh	15,000 kWh	30,000 kWh	45,000 kWh	30,000 kWh	60,000 kWh	90,000 kWh
1	City of Winter Park - **Existing**	957	1,627	2,296	1,426	2,430	3,435	2,832	4,841	6,851
2	City of Winter Park - **Option 1**	1,061	1,765	2,468	1,581	2,637	3,693	3,143	5,254	7,365
3	City of Winter Park - **Option 2**	1,061	1,765	2,469	1,582	2,638	3,693	3,145	5,256	7,367
4	City of Winter Park - **Option 3**	1,055	1,758	2,462	1,566	2,622	3,677	3,100	5,211	7,323
5	City of Winter Park - **Option 4**	1,055	1,758	2,462	1,566	2,622	3,677	3,100	5,211	7,323
	Other Florida Municipalities:									
6	Fort Pierce Utilities Authority	1,122	1,867	2,612	1,664	2,781	3,898	3,289	5,522	7,756
7	Gainesville Regional Utilities	1,561	2,514	3,467	2,291	3,720	5,150	4,482	7,341	10,200
8	Jacksonville Electric Authority	1,172	1,838	2,505	1,715	2,715	3,715	3,345	5,345	7,345
9	Kissimmee	1,003	1,505	2,008	1,476	2,230	2,984	2,897	4,405	5,912
10	City of Lakeland	883	1,304	1,726	1,303	1,935	2,568	2,564	3,828	5,093
11	City of New Smyrna Beach	1,021	1,671	2,321	1,515	2,490	3,465	2,996	4,946	6,896
12	City of Ocala	971	1,553	2,134	1,434	2,306	3,178	2,892	4,603	6,313
13	Orlando Utilities Commission	1,114	1,690	2,265	1,652	2,515	3,379	3,265	4,993	6,720
14	City of Tallahassee	1,288	1,816	2,244	1,895	2,687	3,329	3,716	5,300	6,583
	Florida Cooperatives									
15	Sumter Electric Cooperative	1,078	1,776	2,474	1,576	2,623	3,670	3,069	5,163	7,257
	Investor-Owned Utilities: [2]									
16	Florida Power and Light	1,107	1,592	2,077	1,646	2,374	3,102	3,264	4,720	6,175
17	Gulf Power Company	1,252	2,081	2,909	1,853	3,096	4,339	3,656	6,142	8,628
18	Duke Energy	1,310	2,026	2,741	1,957	3,031	4,104	3,900	6,047	8,194
19	Tampa Electric Company	980	1,301	1,622	1,454	1,936	2,418	2,876	3,840	4,803

[1] Amounts shown are based on the rates for single phase service and reflect when applicable, inside city service. In addition, amounts include June 2020 fuel adjustments and franchise fees.

[2] Amounts shown include the energy conservation, capacity, environmental and storm cost recovery charges where appropriate, as filed with the the Florida Public Service Commission (FPSC). Franchise fees of 6 percent are included for each of the IOU's listed.

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

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

Ln. No.	Utility	General Service Demand Class								
		200 kW			300 kW			400 kW		
		40,000 kWh	80,000 kWh	120,000 kWh	60,000 kWh	120,000 kWh	180,000 kWh	80,000 kWh	160,000 kWh	240,000 kWh
1	City of Winter Park - **Existing**	3,769	6,448	9,128	5,644	9,663	13,682	7,519	12,878	18,236
2	City of Winter Park **- Option 1**	4,183	6,998	9,813	6,265	10,487	14,710	8,347	13,977	19,606
3	City of Winter Park **- Option 2**	4,187	7,002	9,817	6,271	10,493	14,715	8,354	13,984	19,614
4	City of Winter Park **- Option 3**	4,123	6,938	9,753	6,169	10,391	14,613	8,214	13,844	19,474
5	City of Winter Park **- Option 4**	4,123	6,938	9,753	6,169	10,391	14,613	8,214	13,844	19,474
	Other Florida Municipalities:									
6	Fort Pierce Utilities Authority	4,372	7,350	10,329	6,538	11,006	15,473	8,704	14,661	20,618
7	Gainesville Regional Utilities	5,942	9,754	13,566	8,863	14,581	20,299	11,784	19,408	27,032
8	Jacksonville Electric Authority	4,432	7,099	9,765	6,605	10,605	14,606	8,779	14,112	19,446
9	Kissimmee	3,844	5,854	7,865	5,738	8,754	11,769	7,632	11,653	15,674
10	City of Lakeland	3,404	5,091	6,777	5,085	7,615	10,144	6,767	10,139	13,512
11	City of New Smyrna Beach	3,984	6,584	9,184	5,584	9,184	12,784	7,434	12,234	17,034
12	City of Ocala	3,841	6,122	8,402	5,740	9,160	12,581	7,455	12,106	16,756
13	Orlando Utilities Commission	4,341	6,644	8,948	6,493	9,948	13,402	8,644	13,251	17,857
14	City of Tallahassee	4,930	7,042	8,753	7,358	10,526	13,092	9,786	14,010	17,431
	Florida Cooperatives									
15	Sumter Electric Cooperative	4,065	6,857	9,649	6,056	10,244	14,432	8,047	13,631	19,215
	Investor-Owned Utilities: [2]									
16	Florida Power and Light	4,343	6,284	8,224	6,501	9,412	12,323	8,658	12,539	16,421
17	Gulf Power Company	4,859	8,173	11,488	7,263	12,235	17,206	9,668	16,297	22,925
18	Duke Energy	5,195	8,058	10,921	7,785	12,079	16,373	10,375	16,101	21,826
19	Tampa Electric Company	3,825	5,109	6,394	5,721	7,648	9,575	7,617	10,187	12,756

[1] Amounts shown are based on the rates for single phase service and reflect when applicable, inside city service. In addition, amounts include June 2020 fuel adjustments and franchise fees.

[2] Amounts shown include the energy conservation, capacity, environmental and storm cost recovery charges where appropriate, as filed with the the Florida Public Service Commission (FPSC). Franchise fees of 6 percent are included for each of the IOU's listed.

CITY OF WINTER PARK, FLORIDA
Electric Cost of Service Study

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

Ln. No.	Utility	General Service Large Demand Class								
		500 kW			1,000 kW			1,500 kW		
		100,000 kWh	200,000 kWh	300,000 kWh	200,000 kWh	400,000 kWh	600,000 kWh	300,000 kWh	600,000 kWh	900,000 kWh
1	City of Winter Park - **Existing**	9,372	16,048	22,723	18,724	32,076	45,427	28,076	48,104	68,132
2	City of Winter Park - **Option 1**	10,428	17,466	24,503	20,836	34,911	48,986	31,245	52,357	73,469
3	City of Winter Park - **Option 2**	10,438	17,475	24,513	20,857	34,932	49,006	31,276	52,388	73,500
4	City of Winter Park - **Option 3**	10,260	17,297	24,334	20,488	34,562	48,637	30,716	51,828	72,940
5	City of Winter Park - **Option 4**	10,260	17,297	24,334	20,488	34,562	48,637	30,716	51,828	72,940
	Other Florida Municipalities:									
6	Fort Pierce Utilities Authority	10,870	18,316	25,762	26,475	39,781	53,087	39,693	59,652	79,611
7	Gainesville Regional Utilities	14,705	24,235	33,765	29,310	48,370	67,430	43,130	70,460	97,790
8	Jacksonville Electric Authority	10,952	17,619	24,286	21,819	35,153	48,487	35,879	53,183	70,487
9	Kissimmee	10,327	14,517	18,707	20,597	28,977	37,357	30,867	43,437	56,007
10	City of Lakeland	9,144	12,937	16,731	17,812	25,400	32,987	26,481	37,862	49,243
11	City of New Smyrna Beach	9,284	15,284	21,284	18,534	30,534	42,534	27,784	45,784	63,784
12	City of Ocala	9,931	15,537	21,143	19,817	31,029	42,241	29,703	46,521	63,339
13	Orlando Utilities Commission	10,796	16,554	22,312	21,554	33,070	44,586	32,312	49,586	66,860
14	City of Tallahassee	12,153	17,372	21,618	24,232	34,670	43,161	36,311	51,968	64,705
	Florida Cooperatives									
15	Sumter Electric Cooperative	10,038	17,018	23,998	19,993	33,953	47,913	29,948	50,888	71,828
	Investor-Owned Utilities: [2]									
16	Florida Power and Light	11,631	15,985	20,340	23,177	31,886	40,595	34,724	47,787	60,851
17	Gulf Power Company	14,541	20,747	26,953	28,803	41,216	53,628	43,065	61,684	80,303
18	Duke Energy	12,930	20,052	27,174	25,845	40,089	54,333	38,760	60,126	81,493
19	Tampa Electric Company	9,514	12,725	15,937	18,995	25,419	31,843	28,477	38,112	47,748

[1] Amounts shown are based on the rates for single phase service and reflect when applicable, inside city service. In addition, amounts include June 2020 fuel adjustments and franchise fees.

[2] Amounts shown include the energy conservation, capacity, environmental and storm cost recovery charges where appropriate, as filed with the the Florida Public Service Commission (FPSC). Franchise fees of 6 percent are included 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.

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

CITY OF WINTER PARK
SUMMARY OF CAPITAL PROJECTS
ELECTRIC DEPARTMENT
Individual Items over $25,000 in value should be included in the CIP

Department	Description	Funding Source	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Electric Services	Routine Capital improvements including: undergrounding electric lines, renewals and replacements, and other improvements required to provide service and improve the reliability of the electric system	Electric System Revenues	1,227,672	1,252,225	1,277,270	1,302,815	1,328,872
Electric Services	Undergrounding of Electric Lines	Electric System Revenues	5,250,000	5,500,000	5,750,000	6,000,000	6,000,000
Electric Services	Substation Upgrades	Electric System Revenues	250,000	1,000,000	1,000,000	1,000,000	1,000,000
Electric Services	Solar Array	Electric System Revenues	500,000	-	-	-	-
Public Works	Funding of facility replacement account for Public Works Complex items (flooring, roofing, air conditioning & paint) (65% General Fund, 25% Water and Sewer Fund and 10% Electric Fund)	Electric System Revenues	50,000	50,000	50,000	50,000	50,000
ITS	Information Technology Infrastructure Upgrades (50% General Fund, 25% Water and Sewer Fund and 25% Electric Services Fund)	Electric System Revenues	87,500	87,500	100,000	100,000	100,000
Totals			7,365,172	7,889,725	8,177,270	8,452,815	8,478,872

SUMMARY OF CAPITAL PROJECTS
WATER & WASTEWATER DEPARTMENT
Individual Items over $25,000 in value should be included in the CIP

Department	Description	Funding Source	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Water and Sewer	Rehabilitation of defective sewer mains with heavy ground water infiltration	Water and Sewer Fees	300,000	300,000	350,000	350,000	350,000
Water and Sewer	Rehabilitation of sanitary manholes to restore their structural integrity	Water and Sewer Fees	100,000	100,000	120,000	120,000	120,000
Water and Sewer	Short Liner Installation - for rehabilitation of sanitary sewer mains and laterals from the main to the property line	Water and Sewer Fees	100,000	200,000	325,000	325,000	325,000
Water and Sewer	Upgrade water mains - replacement of sub-standard water mains throughout the water distribution system.	Water and Sewer Fees	350,000	670,000	670,000	670,000	670,000
Water and Sewer	Replacement of asbestos cement sanitary force mains deteriorated by hydrogen sulfide gas	Water and Sewer Fees	20,000	20,000	20,000	20,000	20,000
Water and Sewer	Lift Station Upgrades	Water and Sewer Fees	100,000	150,000	150,000	150,000	150,000
* Water and Sewer	Upgrading/rerating of Iron Bridge Regional Wastewater Treatment Facility (City of Orlando).	Water and Sewer Reserves	660,000	660,000			
Water and Sewer	Richard Crotty Pkw Water	Water Impact Fees	421,000				
Water and Sewer	Richard Crotty Pkw Water	Water	943,000	25,000			
Water and Sewer	Richard Crotty Pkw Sewer	Sewer	818,000	25,000			
Water and Sewer	Kennedy Blvd Road Widening Force Main Upgrade	Sewer Impact Fees		1,000,000	600,000		
Water and Sewer	UT LINES 434 ROAD WIDENI	Water and Sewer Fees	2,200,000	25,000	25,000		
Water and Sewer	UT LINES 434 ROAD WIDENI	Water and Sewer Reserves					

Water and Sewer	Water Treatment Plants R&R Capital Improvements	Water and Sewer Fees	770,167	325,667	145,667	-	-
Water and Sewer	Wastewater Treatment Plant R&R Capital Improvements	Water and Sewer Fees	395,000	-	-	-	-
Water and Sewer	FDOT 17-92 Water/Sewer Relocation		100,000				
ITS	Information Technology Infrastructure Upgrades (50% General Fund, 25% Water and Sewer Fund and 25% Electric Services Fund)	Water and Sewer Fees	87,500	87,500	100,000	100,000	100,000
Public Works	Facility replacement account funding (replacement of flooring, roofing, air conditioning, painting, & other capital needs) (65% General Fund, 25% Water and Sewer Fund, and 10% Electric Fund)	Water and Sewer Fees	125,000	125,000	125,000	125,000	125,000
Water and Sewer	Expansion of reclaimed water system	Water and Sewer Reserves		100,000	100,000		1,550,000
		Sewer Impact Fees					1,100,000
		Water Impact Fees					1,100,000
Water and Sewer	Ground Storage Tank Expansion	Water and Sewer Fees					6,100,000
		Total	**7,489,667**	**3,813,167**	**2,730,667**	**1,860,000**	**11,710,000**

* City of Orlando is currently in the process of preparing its FY 2022 - 2026 capital improvement plan and expects to have a draft to Winter Park by the end of March

Utility Advisory Board

March 23, 2021

Septic Tanks

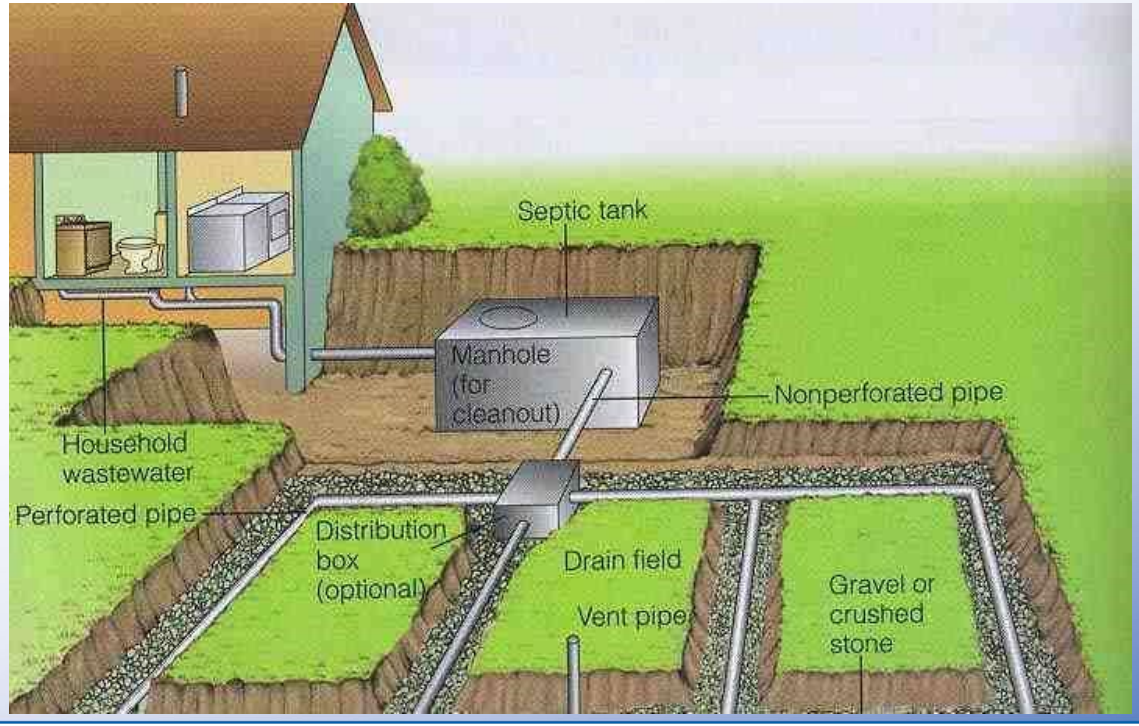
Agenda

General Discussion

- How septic tanks work
- System map
- City limits map
- Projected costs
- Environmental studies
- Fairbanks Ave experience
- Lee Rd zoning/ROI

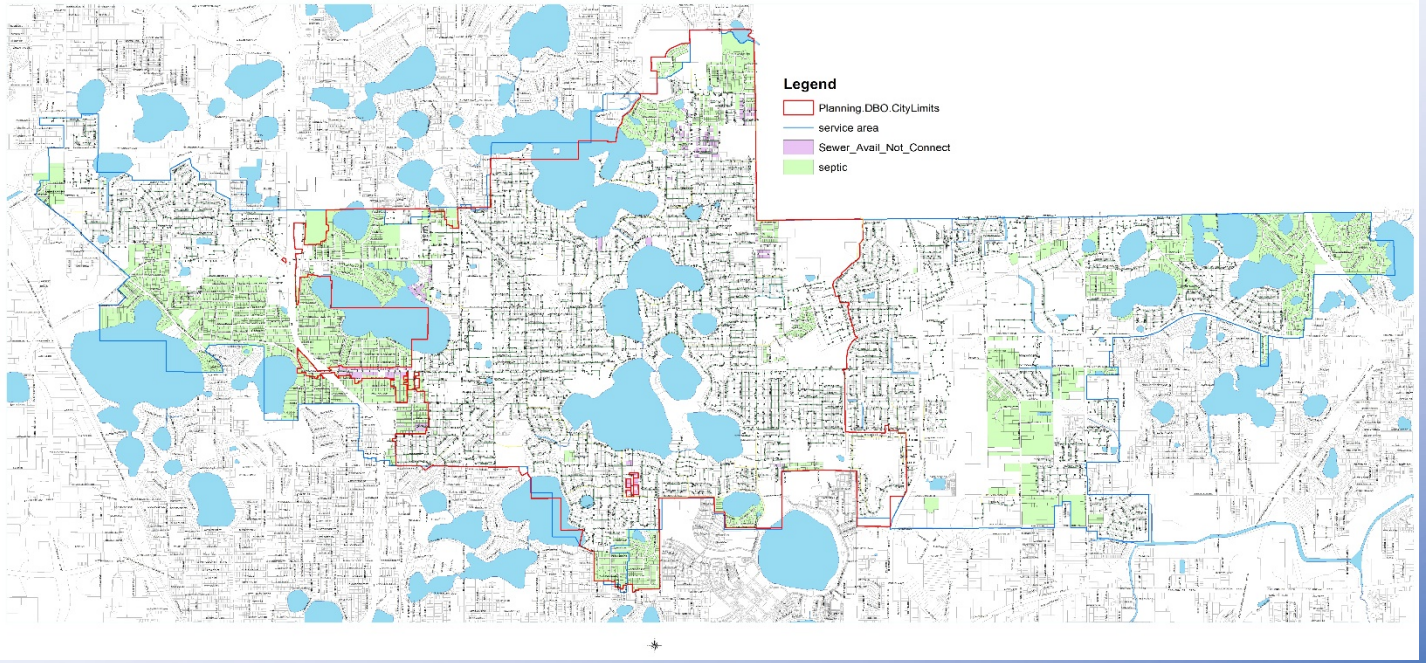
How Septic Tanks Work

Graphic explaining how septic tanks function



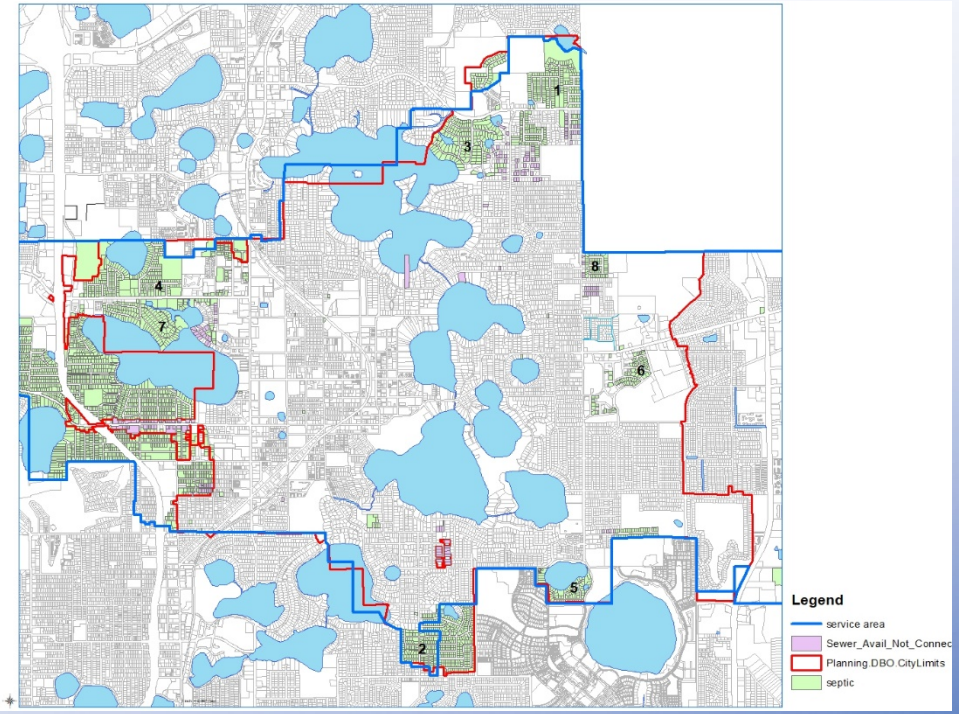
System Map

Map showing location of approximately 5,286 septic tanks



City Limits Map

Map showing location of approximately 1,630 septic tanks



Projected costs

Sanitary Sewer Construction Estimate for City Areas not on Sewer

		By City	By Contactor
1	WP Manor, Howell Heights Howell Forest Area (N. of Howell Branch Rd)	$1,965,558.23	$5,601,840.96
2	Lk Forest, Orangewood, Northwood, Parklando, Edgewood, WP Place, (N of Corrin	$3,496,603.38	$9,265,998.96
3	Maitland Shores, Tuscany Place, Tuscany Oaks Area	$7,445,281.15	$21,219,051.28
4	N. Side of Lee Rd Area, - Albert Lee Ridge, Lake Bell, Albert Heights, Albert Lee Hei	$6,352,811.57	$18,105,512.97
5	S. Lakemont Shores Area, Orlando Park Rep, Callum Sub. Div.	$1,349,267.12	$3,643,021.22
6	Aloma Section 1 - St. Andrews Area	$5,800,035.37	$16,240,099.04
7	Shores of Killarney, Killarney Pt. & Lords Sub.	$2,688,464.02	$7,393,276.06
8	Lakemont Heights - Palmer, Alice & Pineview Area	$1,267,747.48	$3,549,692.94
9	Typical Out Parcel (Single private pump station & 100 LF of 4" FM) X 43 ea.	$565,450.00	$1,470,170.00
	Totals:	**$30,931,218.32**	**$86,488,663.42**

Does not include easements or land acquisition for lift stations.

Estimated potential connections in City = 1486

Environmental Studies

Lk. Killarney water quality report cover page by ERD

Environmental Studies

Report Findings

Preliminary Summary

Of the ERD Draft Report

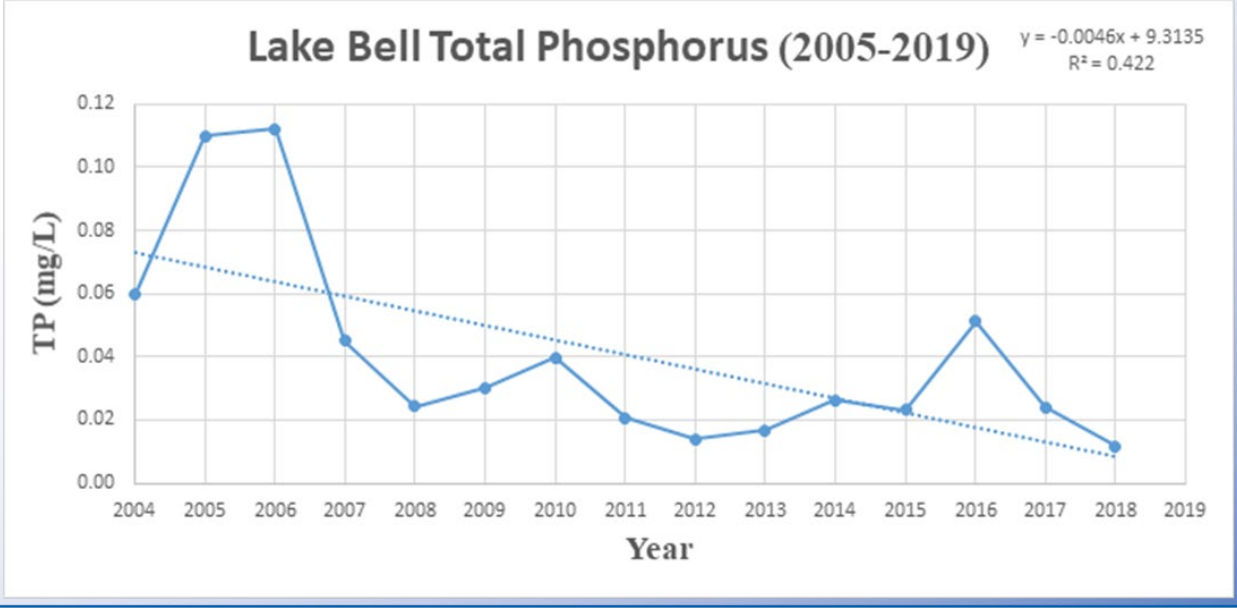
Lake Killarney Hydrologic/Nutrient Budget Evaluation

Report Highlights:

- Significant contributions of nutrients from internal recycling
  - Total N – 51%
  - Total P – 63%
- Minimal contributions from groundwater seepage
  - Total N – 16%
  - Total P – 8%
- Septic load evaluation not complete, but will be a fraction of the groundwater seepage component

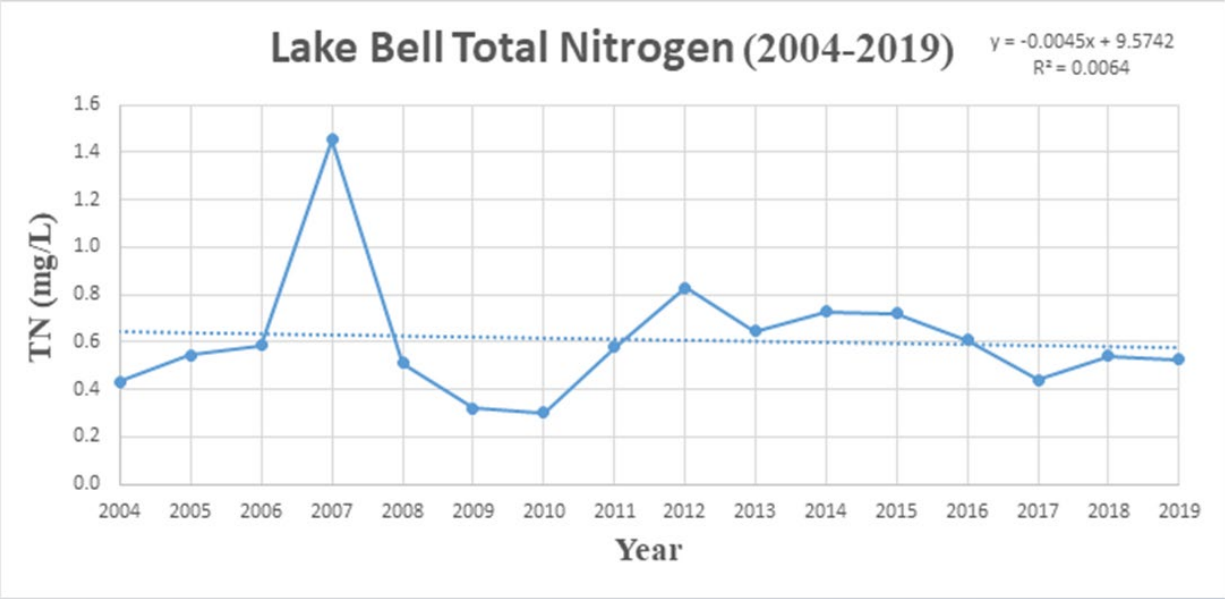
Lk Bell Test Results

Total Phosphorus



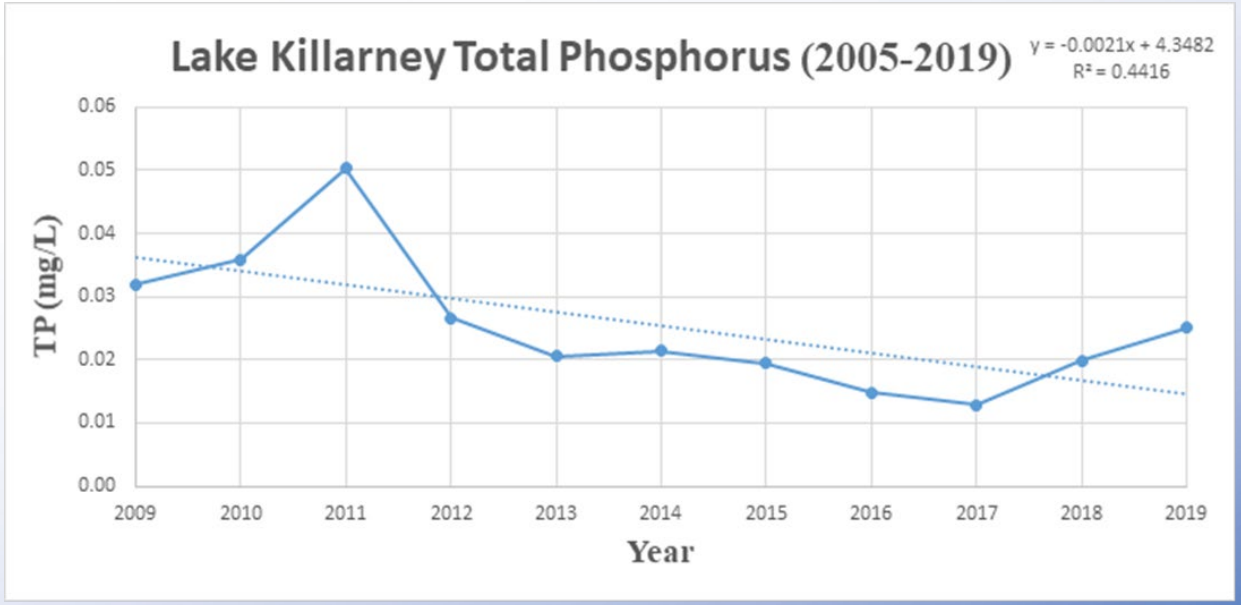
Lk Bell Test Results

Total Nitrogen



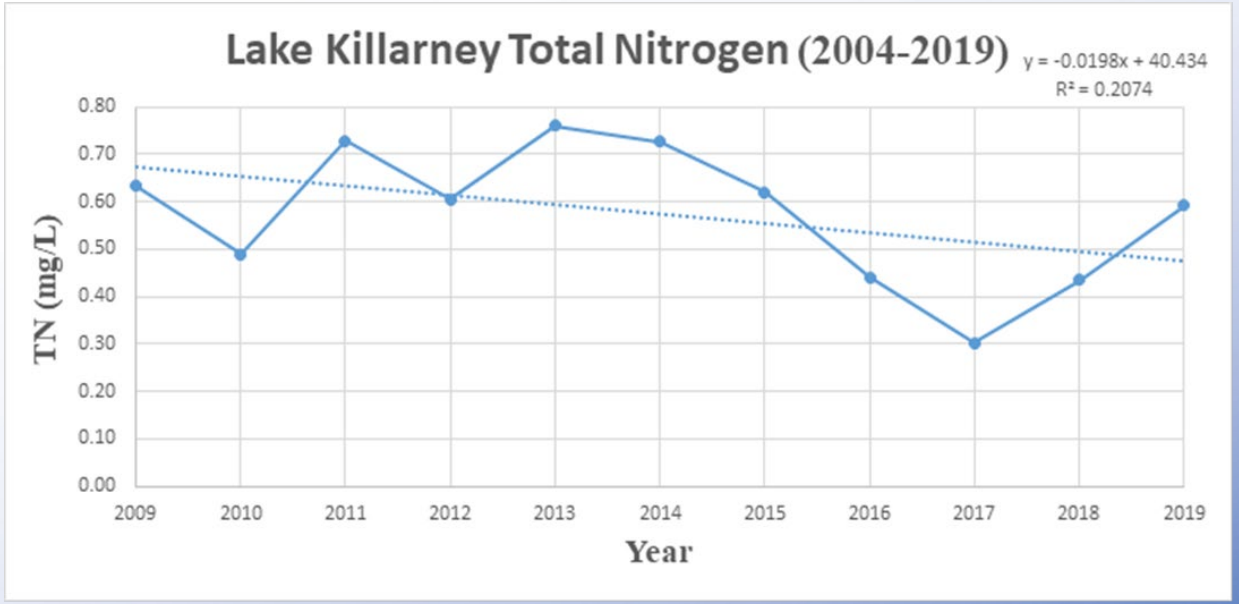
Lk Killarney Test Results

Total Phosphorus



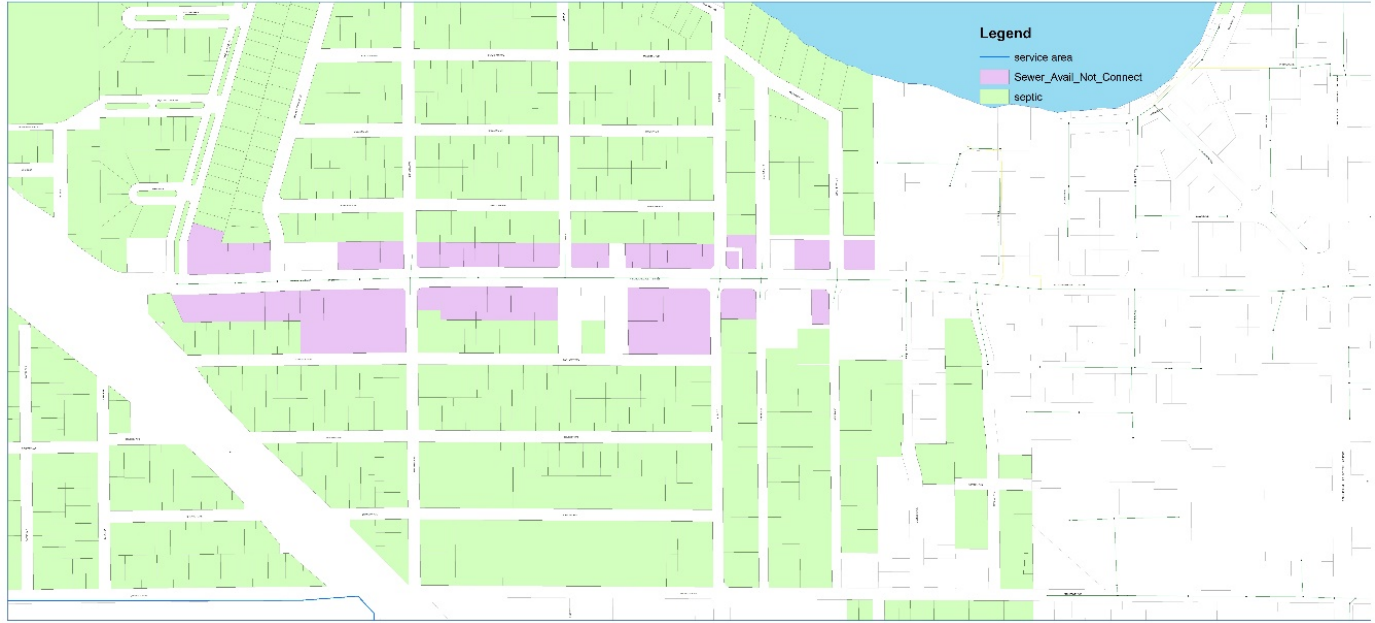
Lk Killarney Test Results

Total Phosphorus



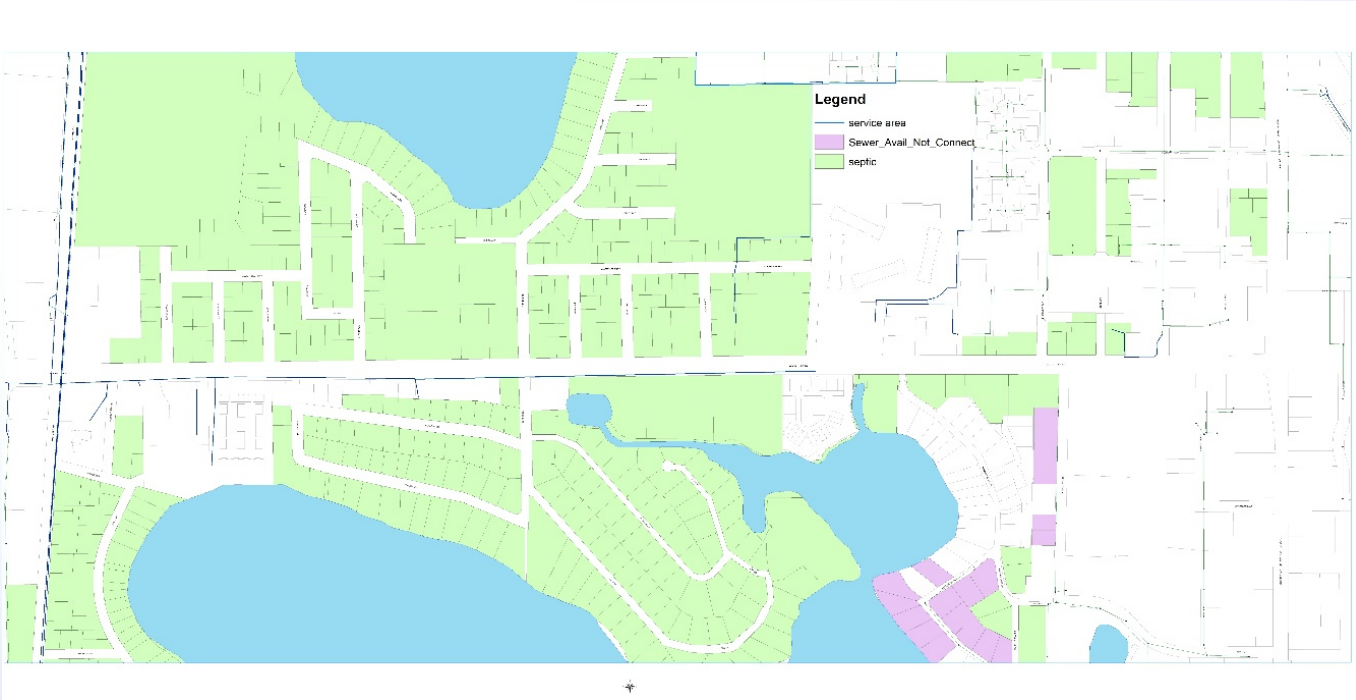
Fairbanks Avenue

Map of W. Fairbanks Ave



Lee Road

Map of Lee Rd E of I-4



Action Items

- Look at policies/ordinances that will encourage conversion from septic to sewer
- Reinstate Fairbanks Ave incentive ordinance & implement system wide
- Additional sampling points in Lake Killarney
- Prioritize work based on water quality
- Focus on City areas first

Monthly Electric Utility Update 3/1/21

Miles of Undergrounding performed

- Project G: 4.1 miles (90% complete)
- Project I: 6.9 miles (79% complete)
- Project W: 0.26 miles (90% complete)
- Project Q: 1.85 miles (5% complete) Reliability project

TOTAL so far for FY 2021- 2.7 miles

OH/UG Budget update

2020 Undergrounding budget = 5M

- FYTD = 1.983M

Total Project Review

- Total Citywide Project Miles- 127
- Total Miles Completed- 82.4
- Percentage Completed- 64.8 %
- Total miles remaining- 45.2

Notes of Interest

- **Fairbanks project:** Project is 99% complete. All old poles are gone. Street light installation is complete. Sidewalk and landscape restoration is underway.
- Mark Brown retires, officially, on March 13th
    - We will need to hire an engineer to fill this position
- RFI released for the solar installation and responses received. We now are developing and releasing an RFP.
- We have finally received permits from the railroad and construction on project “G” has resumed. This is the area of the RR tracks on Canton.
- We hired Tomas Soto as our new Lineman. He begins on March 8.

Issues/Concerns

- February 1st we had a significant feeder outage that affected 638 customers for approximately 2 hours. This has affected our SAIDI numbers significantly. We still are well above the municipal average but we will move from a SAIDI number around 36 minutes to a number around 42 minutes. The FMPA has not yet reported for the month of February so these numbers are assumptions.
- We will have to complete 8 miles per year for the next 6 years to meet deadline. This is achievable with the additional funds. We must perform very well.
- Replacing Mark Brown will leave us with a bit of a hole until we can get someone in place.

2021 Goals

- Zero personal injuries within work group
  - We had an employee injure his shoulder requiring light duty
- Zero controllable vehicle accidents within work group
  - We had an employee bump into a parked vehicle causing damage to customer vehicle
- Complete 8 miles (to include stretch goal) of underground conversions on the projects as designed
  - G and H , I & J
- Identify and complete areas with poor reliability for targeted undergrounding advancement (stretch goal of 2 miles) Project "Q" is our first target.
- We will utilize targeted overtime with Heart crews to accomplish the additional 2 mile stretch goal
- Negotiate and secure a 2nd interconnection with OUC
  (Obviously depends on appropriate deal)

- Green indicates goal has been met
- Red indicates goal will not be met
- Orange indicates still underway

Utility Monthly Performance Measurements

The Utility Advisory Board identified performance measurements for the Electric and Water Utilities. These are activity and profitability measures used as management tools to set baseline performance measures to be reviewed monthly to implement strategies for improved performance on those baselines. This report organizes the performance measurements by service type.

Water Sewer Utility

Service **Type**	**Measure**	**Goal**	**Dec**	**Jan**	**Feb**	**On Target**
Efficiency	% of Outside WW Plant Capacity Utilized	<85%	65.56	60.23	65.78	Above Goal
	% of WP Estates WW Capacity Utilized	>60%	41.68	40.7	39.65	Below Goal
Environment	Count of Rebates Processed		1	3	2	
	Total MWh generated from Aloma solar system	15 MWh	11.4	12.03	12.21	Below Goal
Operational	Average % Water meters reporting	98.50%	98.90%	98.79%	98.79%	Above Goal
	Count of Wastewater Incidents	0	0	0	0	Above Goal
	Wastewater Incident Overflow in 1,000s Gallons	0	0	0	0	Above Goal
	Water pumped compared to CUP allocation	<12.4 mgd	10	10.34	17.89	Below Goal

Both

Service **Type**	**Measure**	**Goal**	**Dec**	**Jan**	**Feb**	**On Target**
Customer Service	Call Abandonment Rate		28.70%	29.10%	24.30%	
	Number of disconnects for non-pay		226	186	159	
	Utility Billing Call Average Wait Time		11:36	10:01	8:07	
	Volume of calls to City Utility Billing		5,889	5234	4700	
Financial	Accounts receivable/billed revenue – FYTD	<10%	4.94%	7.15%	6.38%	Above Goal
	Average cost of purchased power per kWh - FYTD	<$0.05	$0.0431	$0.0429	$0.0463	Above Goal
	Average revenue per kWh – FYTD	>$0.10	$0.1013	$0.1027	$0.1034	Above Goal
	Bad debt expense/billed revenue – FYTD	<0.25%	0.30%	0.30%	0.18%	Near Goal
	Debt service coverage ratios - W&S - FYTD	>1.5	1.95	2.13	2.23	Above Goal
	Debt service coverage ratios - Electric - FYTD	>1.5	3.77	3.83	3.46	Above Goal
	Percentage of utility accounts receivable over 60 days outstanding		4.65%	2.97%	3.02%	
	Utility accounts receivable over 60 days outstanding		$220,204	$178,928	$171,791	

**Index Key- the monthly data text is colored green when the change from the previous month is an improvement, and red when it is not. The On Target column is highlighted comparing the most recent monthly data to the Goal: Red if below, Yellow if Near, Green if Above.*

Electric Utility

Service **Type**	**Measure**	**Goal**	**Dec**	**Jan**	**Feb**	**On Target**
Efficiency	Winter Park electric rates for 1,000 kWh residential customer as a % of statewide municipal (Average)		95.90%	96.18%		
	Winter Park electric rates for 1,000 kWh residential customer as a % of statewide municipal (Monthly)		96.50%	98.89%		
Environment	Electric Car Charger kWh use		4,469	4,367		
	Solar Net metering Count of Customers		113	117		
Financial	Rolling 12 month kWh	420 (FY20)	419,473,785	423,164,992		Near Goal
Operational	Heart of Florida United Way Emergency Utility Assistance Program: Assistance provided to customers (September – November)					
	Heart of Florida United Way Emergency Utility Assistance Program: Available balance (September – November)					
	Heart of Florida United Way Emergency Utility Assistance Program: Number of customers approved for assistance					
	Underground System Complete (%)		62.91%	64.00%		
Reliability	L-Bar		86.47			
	L-Bar Rank to Peers (12 mo rolling)	Top 5	14th/23			Below Goal
	Outage Occurrences		15	7		
	SAIDI		1.7			
	SAIDI Rank to Peers (12 mo rolling)	Top 5	4th/23			Above Goal
	SAIDI Sum	< 19 Annually	35.78			Below Goal

**FMPA data is delayed reporting.*

Translation Table

L-Bar	*Measures the average length of a single outage*
SAIDI	*Measures the average frequency of momentary interruption events for the average customer*
KWH	*Kilowatt hour*
CUP	*Consumptive Use Permit*
YTD	*Year to Date*
MWh	*Megawatt hour*

Water and Sewer – February 2021

	FYTD Budget	FYTD Actual	Variance
Water sales (thousands of gallons)	1,415,016	1,404,120	(10,896)
Sewer sales (thousands of gallons)	796,348	793,122	(3,226)
Operating revenues	$13,043,542	$12,831,118	$212,424
Net increase (decrease) in funds			($129,072)
Projected Debt Service Coverage		2.23	

Electric – February 2021

	FYTD Budget	FYTD Actual	Variance
kWh sales	160,846,400	166,965,336	6,118,936
Average revenue/kWh			$0.1062
Net revenue from sales of electricity	$9,759,049	$9,742,349	($16,700)
Net increase (decrease) in funds	$899,214	$1,147,105	$247,891
Projected Debt Service Coverage			3.79

Electric – Items of Note

- Sales in terms of kWh are about 4% higher than projected in the FY 2021 budget.
- In February, natural gas prices in the FMPA and OUC invoices were much higher than normal due to the extreme cold winter conditions experienced across the United States during mid-February. Both contracts have fuel pricing tied to natural gas. The average natural gas price from the January FMPA invoice was $19.8194/MWh. The average natural gas price from the February invoice was $38.5748/MWh, nearly double. OUC natural gas prices were similar. The high prices were due to the very high natural gas prices that occurred between February 12 and February 22. As a result, the City under recovered fuel costs in February by $454,274 which brought our balance down to $770,163. Our target balance for 12/31/21 is $745,000. We will continue to monitor costs and recoveries and will adjust rates if necessary.

Heart of Florida United Way (HFUW) Emergency Utility Assistance Program

- This is the assistance program Winter Park customers can contribute to through their utility bill to assist other customers experiencing financial hardship. The City has provided $25,000 in direct assistance to this program as part of its COVID-19 relief package and pledged up to an additional $25,000 in matching contributions ($4,013 of the matching has been contributed to date)
- The program provided a total of $34,023.66 in assistance to 92 Winter Park customers from September 1, 2020 to February 28, 2021
- As of February 28, 2021, the program has a balance of $63,385.00 to assist Winter Park customers.
- The City's utility billing staff refers customers facing financial hardships to its website which directs them to the HFUW program as well as the other federally funded programs providing assistance to qualifying low income and elderly customers.

WINTER PARK WATER AND WASTEWATER METRICS
February 28, 2021

	FY 2021 YTD	FY 2021 Annualized	FY 2021 Budget	Variance from Budget	FY 2020 YTD	FY 2020 in Total
Operating Performance:						
Water and Irrigation Sales (thousands of gallons)						
Sewer - inside city limits	426,832	1,022,915	1,015,000	7,915	440,048	1,042,266
Sewer - outside city limits	366,290	874,415	890,000	(15,585)	364,208	864,206
Water - inside city limits	652,110	1,588,038	1,500,000	88,038	677,177	1,648,234
Irrigation - Inside City	214,170	527,541	585,000	(57,459)	239,107	600,301
Water - outside city limits	495,322	1,187,583	1,235,000	(47,417)	495,622	1,183,691
Irrigation - Outside City	42,519	105,240	115,000	(9,760)	42,406	113,192
Total	**2,197,243**	**5,305,732**	**5,340,000**	**(34,268)**	**2,258,569**	**5,451,890**
Operating revenues:						
Sewer - inside city limits	$ 2,888,813	$ 6,933,151	$ 6,848,968	$ 84,183	2,300,760	6,870,798
Sewer - outside city limits	3,046,434	7,311,442	7,156,936	154,506	2,407,782	7,225,392
Water - inside city limits	3,822,714	9,174,513	9,740,853	(566,340)	3,291,839	9,977,058
Water - outside city limits	2,469,140	5,925,937	5,922,962	2,975	1,968,118	5,959,849
Other operating revenues	604,017	1,449,640	1,634,782	(185,142)	620,667	1,773,249
Total operating revenues	**12,831,118**	**30,794,683**	**31,304,501**	**(509,818)**	**10,589,166**	**31,806,347**
Operating expenses:						
General and adminstration	803,048	1,927,314	1,895,187	(32,127)	633,871	2,081,314
Operations	5,130,958	13,682,554	13,720,842	38,288	3,704,937	12,567,762
Labor costs capitalized	96,532	231,677	400,000	168,323	60,000	361,735
Wastewater treatment by other agencies	2,507,058	6,016,939	6,002,384	(14,555)	1,799,579	5,316,122
Total operating expenses	**8,537,595**	**21,858,483**	**22,018,413**	**159,930**	**6,198,387**	**20,326,933**

WINTER PARK WATER AND WASTEWATER METRICS
February 28, 2021

	FY 2021 YTD	FY 2021 Annualized	FY 2021 Budget	Variance from Budget	FY 2020 YTD	FY 2020 in Total
Net Operating income	**4,293,523**	**8,936,200**	**9,286,088**	**(349,888)**	**4,390,779**	**11,479,414**
Other sources (uses):						
Investment earnings	(29,049)	(69,718)	129,400	(199,118)	134,882	222,203
Miscellaneous revenue	12,794	30,706	10,000	20,706	6,619	22,698
Transfer to Renewal and Replacement Fund	(812,605)	(1,950,252)	(1,950,252)	-	(543,596)	(1,630,789)
Transfer to General Fund	(1,061,592)	(2,547,821)	(2,547,821)	(0)	(848,980)	(2,546,941)
Transfer for Organizational Support	(32,711)	(78,506)	(78,506)	(0)	(25,883)	(77,650)
Transfer to Capital Projects Fund	(103,125)	(247,500)	(247,500)	-	(69,167)	(207,500)
Other Capital Spending	(439,331)	(1,054,396)	(1,358,696)	304,300	(262,767)	(181,995)
Debt service sinking fund deposits	(1,956,975)	(4,542,229)	(4,655,409)	113,180	(2,021,345)	(1,838,422)
						(4,846,491)
Total other sources (uses)	**(4,422,595)**	**(10,459,716)**	**(10,698,784)**	**239,068**	**(3,630,237)**	**(11,084,887)**
Net increase (decrease) in funds	**$ (129,072)**	**$ (1,523,516)**	**$ (1,412,696)**	**$ (110,820)**	**760,542**	**394,527**
Debt service coverage	**2.23**	**2.01**				**2.44**

WINTER PARK ELECTRIC UTILITY METRICS
February 28, 2021

	FY'21 YTD	FY'21 Annualized	FY'21 Budget	Variance from Budget	FY'20	FY'19	FY'18	FY'17
Technical Performance								
Net Sales (kWh)	166,965,336	422,471,368	407,000,000	15,471,368	422,834,590	425,487,483	414,329,035	424,821,271
Average Revenue/kWh	0.1034	0.1062			0.1019	0.1098	0.1137	0.1043
Wholesale Power Purchased (kWh)	162,564,712	437,532,534	428,421,053	9,111,482	437,181,072	439,804,052	434,246,377	429,845,391
Wholesale Power Cost/kWh	(0.0463)	(0.0456)			(0.0432)	(0.0591)	(0.0632)	(0.0627)
Gross margin	0.0571	0.0607			0.0587	0.0507	0.0506	0.0415
Sold vs. Purchased kWh Ratio	102.71%	96.56%	95.00%		96.72%	96.74%	95.41%	98.83%
Revenues and Expenses Directly Related to Sales of Electricity:								
Electric Sales:								
Customer charges - residential	1,026,281	2,463,074	2,482,314	(19,240)	2,462,962	2,232,225		
Customer charges - commercial and public authority	224,604	539,050	548,363	(9,314)	543,319	499,223		
Demand charges	1,179,460	2,830,705	2,916,488	(85,783)	2,866,683	2,694,021		
Street Lighting	157,421	377,810	383,100	(5,290)	377,120	380,733		
Non-Fuel kWh charges	10,977,397	27,776,039	26,565,263	1,210,777	27,749,383	28,308,084	33,381,040	30,628,559
Fuel	3,699,691	10,895,122	10,054,482	840,640	9,091,571	12,623,109	13,739,354	13,663,392
Purchased Power :								
Fuel	(4,245,846)	(11,427,424)	(10,054,482)	(1,372,942)	(9,057,266)	(12,616,487)	(13,739,354)	(12,619,342)
Non-Fuel	(2,239,476)	(6,027,407)	(5,466,115)	(561,292)	(6,708,454)	(9,916,779)	(10,180,683)	(10,778,312)
Transmission Power Cost	(1,037,182)	(2,489,237)	(2,735,462)	246,225	(3,139,275)	(3,468,020)	(3,510,746)	(3,558,875)
Net Revenue from Sales of Electricity	**9,742,349**	**24,937,732**	**24,693,950**	**243,782**	**24,186,043**	**20,736,109**	**19,689,611**	**17,335,422**
Other Operating Income (Expenses):								
Other Operating Revenues	81,556	195,735	200,500	(4,765)	255,681	319,801	350,997	276,212
General and Adminstrative Expenses	(841,566)	(2,019,759)	(2,338,326)	318,567	(2,100,245)	(2,011,213)	(1,804,767)	(1,705,609)
Operating Expenses	(2,094,911)	(5,027,785)	(6,094,378)	1,066,593	(5,421,884)	(5,721,815)	(5,616,455)	(7,170,834)
Total Other Operating Income (Expenses)	(2,854,921)	(6,851,810)	(8,232,204)	1,380,394	(7,266,447)	(7,413,227)	(7,070,224)	(8,600,231)
Net Operating Income	**6,887,429**	**18,085,922**	**16,461,746**	**1,624,176**	**16,919,595**	**13,322,883**	**12,619,387**	**8,735,191**

WINTER PARK ELECTRIC UTILITY METRICS
February 28, 2021

	FY'21 YTD	FY'21 Annualized	FY'21 Budget	Variance from Budget	FY'20	FY'19	FY'18	FY'17
Nonoperating Revenues (Expenses):								
Investment Earnings	(23,106)	(55,455)	(30,000)	(25,455)	(35,720)	(386,874)	(34,021)	(35,398)
Principal on Debt	(1,254,167)	(3,010,000)	(3,010,000)	-	(2,915,000)	(2,670,000)	(2,530,000)	(2,450,000)
Interest on Debt	(727,953)	(1,747,088)	(1,769,588)	22,500	(1,854,026)	(2,218,854)	(2,913,548)	(2,995,826)
Miscellaneous Revenue	25,662	61,589	-	61,589	36,910	22,635	83,427	21,910
Proceeds from Sale of Assets	4,149	9,958	25,000	(15,042)	55,398	25,886	32,599	18,592
Contributions in Aid of Construction (CIAC)	175,869	422,086	500,000	(77,914)	264,227	479,648	789,480	498,577
Residential Underground Conversions	36,330	87,192	70,000	17,192	92,280	68,245	81,158	94,004
Capital (including the costs of improvements paid for by CIAC revenues)	(619,136)	(2,703,600)	(2,703,600)	-	(1,058,970)	(2,174,625)	(1,678,010)	(1,546,321)
Reimbursement of Hurricane Irma recovery costs	-	-	-	-	356,943			
Reimbursement of Fairbanks Distribution Line Costs	29,881	29,881	-	29,881	2,092,676	1,333,048		
Undergrounding Fairbanks Distribution Lines	(97,692)	(97,692)	-	(97,692)	(3,260,841)	(1,333,048)	(1,029)	-
Undergrounding of Power Lines	(2,286,458)	(5,487,500)	(5,000,000)	(487,500)	(4,171,735)	(3,851,032)	(4,429,125)	(3,303,800)
Total Nonoperating Revenues (Expenses)	**(4,736,622)**	**(12,490,630)**	**(11,918,188)**	**(572,442)**	**(10,397,857)**	**(10,704,970)**	**(10,599,071)**	**(9,698,262)**
Income Before Operating Transfers	**2,150,807**	**5,595,292**	**4,543,558**	**1,051,734**	**6,521,738**	**2,617,913**	**2,020,317**	**(963,071)**
Operating Transfers In/Out:								
Transfers from Water and Sewer Fund	49,453	118,688	148,360	(29,672)	181,995	188,431	146,561	1,151,088
Transfers to General Fund	(947,606)	(2,397,723)	(2,280,488)	(117,235)	(2,376,904)	(2,577,382)	(2,557,836)	(2,463,692)
Tranfers for organizational support	(48,257)	(115,817)	(115,817)	-	(123,198)	(126,258)	(120,705)	(118,947)
Tranfers to capital projects	(57,292)	(137,500)	(137,500)	-	(132,500)	(99,615)	(122,500)	(179,771)
Total Operating Transfers	**(1,003,702)**	**(2,532,352)**	**(2,385,445)**	(146,907)	**(2,450,607)**	(2,614,824)	**(2,654,480)**	**(1,611,322)**
Net Change in Working Capital	**1,147,105**	**3,062,941**	**2,158,113**	**904,827**	**4,071,131**	**3,089**	**(634,164)**	**(2,574,393)**
Other Financial Parameters								
Debt Service Coverage	3.46	3.79			3.38	2.59	2.53	1.67
Fixed Rate Bonds Outstanding	52,935,000				55,945,000	56,595,000	62,185,000	64,685,000
Auction Rate Bonds Outstanding	-				-	-	1,000,000	1,030,000
Total Bonds Outstanding	52,935,000				55,945,000	56,595,000	63,185,000	65,715,000
Principal Retired	3,010,000				2,915,000	2,670,000	2,530,000	2,450,000
Cash Balance					(1,824,067)	(4,187,304)	(2,377,803)	(324,693)
Current year change in cash balance								
Fuel Cost Stabilization Fund Balance:								
Beginning Balance	1,320,208						1,998,073	2,127,701
Fuel Revenues	3,695,802						13,516,532	13,821,741
Fuel Expenses	(4,245,846)						(14,211,039)	(13,951,369)
Ending Balance	770,163						1,303,566	1,998,073
Current year change in fuel stabilization fund	**(550,045)**						**(694,507)**	**(129,628)**