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October 18, 2022

VIA ELECTRONIC FILING

Mr. Adam J. Teitzman
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: Docket No. 20220000-OT
Florida Power & Light Company – 2021 Load Research Study

Dear Mr. Teitzman:

Pursuant to Rule 25-6.0437(7), F.A.C., enclosed for filing on behalf of Florida Power & Light Company is the Load Research Study for the period of January 1, 2021 through December 31, 2021.

Should you have any questions concerning this filing, please contact **Tara B. DuBose, Sr. Manager, Cost of Service and Wholesale, at (561) 691-2391**.

Respectfully submitted,

Christopher T. Wright
Authorized House Counsel No. 1007055

Enclosures

cc: Elisabeth Draper, Chief, Division of Economics (*via email: EDraper@PSC.STATE.FL.US*)

FLORIDA POWER & LIGHT COMPANY

Load Research Study Results
Covering the Period from
January 1 through December 31, 2021
FPSC Rule 25-6.0437(7) F.A.C.

October 2022

Rates and Tariff Administration Department
Load Research Section

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I. Purpose of the Study

The purpose of this load research study is to comply with the requirements of section (7) of the Florida Public Service Commission (FPSC) Rule No. 25-6.0437, Cost of Service Load Research, Florida Administrative Code. The Rule provides:

25-6.0437 Cost of Service Load Research.

(1) Applicability. This rule shall apply to all investor-owned electric utilities over which the Commission has jurisdiction and which provide electric service to more than 50,000 retail customers at the end of any calendar year.

(2) Purpose. The primary purpose of this rule is to require that load research that supports cost of service studies used in ratemaking proceedings is of sufficient precision to reasonably assure that tariffs are equitable and reflect the true costs of serving each class of customer. Load research data gathered and submitted in accordance with this rule will also be used by the Commission to allocate costs to the customer classes in cost recovery clause proceedings, in evaluating proposed and operating conservation programs, for research, and for other purposes consistent with the Commission's responsibilities.

(3) Sampling Plan. Within 90 days of becoming subject to this rule, each utility shall submit to the Commission a proposed load research sampling plan. The plan shall provide for sampling all rate classes that account for more than 1 percent of a utility's annual retail sales. The plan shall provide that all covered rate classes shall be sampled within two years of the effective date of this rule. The sampling plan shall be designed to provide estimates of the averages of the 12 monthly coincident peaks for each class within plus or minus 10 percent at the 90 percent confidence level. The sampling plan shall also be designed to provide estimates of the summer and winter peak demands for each rate class within plus or minus 10 percent at the 90 percent confidence level, except for the General Service Non-Demand rate class. The sampling plan shall be designed to provide estimates of the summer and winter peak demands for the General Service Non-Demand rate class within plus or minus 15 percent at the 90 percent confidence level.

(4) Review of Proposed Plan. Except where a utility has requested a formal ruling by the Commission, within 90 days after submission, the Commission's Division of Economic Regulation shall review each utility's plan to determine whether it satisfies the criteria set forth in subsection (3) above and shall notify the utility in writing of its decision accepting or rejecting the proposed sampling plan. If a proposed plan is rejected, the written notice of rejection shall state clearly the reasons for rejecting the proposed plan. If a utility's proposed plan is rejected, the utility shall submit a revised sampling plan to the Commission within 60 days after receiving the notice of rejection. Where a utility has requested staff review of its sampling plan and the plan has been rejected the utility may petition the Commission for approval of the plan. If a utility has not submitted a satisfactory sampling plan within 6 months following the submission of the initially proposed plan, the Commission may prescribe by order a sampling plan for the utility.

(5) Use of Approved Sampling Plan. The approved sampling plan shall be used for all load research performed for cost of service studies and other studies submitted to the Commission until a new sampling plan is approved by the Commission.

(6) Revised Sampling Plans. Each utility subject to this rule shall submit a current, revised sampling plan to the Commission no less often than every three years after the most recent sampling plan was required to be submitted. Any new or revised plan shall be developed using data from the utility's most current load research to determine the required sampling plan to achieve the precision required in subsection (3) of this rule. New or revised plans shall be reviewed by the Commission pursuant to subsection (4) of this rule.

(7) Load Research Data to be Reported. Each utility subject to this rule shall perform a complete load research study in accordance with the specifications of this rule no less often than every three years. Each utility shall, within 120 days following completion of the study, submit to the Commission the results of each load research study completed after the effective date of this rule. The submission shall include a detailed calculation of the average 12 coincident peak and class load factors for each covered rate class based upon the load research results.

(8) Hourly Data to be Available Upon Request. Each utility subject to this rule shall make available within 30 days of a request by the Commission the estimated hourly demands by class for all hours in the year derived from this load research.

Specific Authority 366.05(1), 350.127(2) FS. Law Implemented 350.117, 366.03, 366.04(2)(f), 366.05(1), 366.06(1), 366.82(3), (4) FS. History– New 3-11-84, Formerly 25-6.437, Amended 1-6-04.

The FPSC approved consolidated rates for Florida Power & Light Company (FPL) and Gulf Power Company (GPC) beginning January 1, 2022. However, as of the date of this report on the load research results, FPL has not filed and the FPSC has not approved a load research sampling plan for consolidated FPL.[1] Section (5) of FPSC Rule No. 25 6.0437 states: "The approved sampling plan shall be used for all load research performed for cost of service studies and other studies submitted to the Commission until a new sampling plan is approved by the Commission." Accordingly, for purposes of the 2021 load research study results reported herein, the FPL and Gulf load research was conducted under separate load research sampling plans as previously approved by the FPSC, and then combined to provide final results to be used for future consolidated filings until a consolidated sampling plan can be filed and approved.

This report contains the following sections:

- Sections II – VI: FPL Standalone Load Research Data for the Period January 1, through December 31, 2021
- Sections VII – XI: Gulf Standalone Load Research Data for the period January 1, through December 31, 2021
- Section XII: FPL Consolidated Load Research Data for the period January 1, through December 31, 2021

The FPL consolidated load research results are based on the consolidation of the standalone FPL and Gulf load research sampling plans as approved by the FPSC. These results will be used for consolidated cost of service studies and other studies submitted to the Commission until a new load research study can be conducted using a filed and approved sampling plan that is based on actual consolidated 2022 population data. Note that the preparation of three studies was required to meet precision requirements, which can only be calculated on the individual studies for which the sampling plans were designed.

II. FPL Standalone Population Data

The following table lists the rate classes included in this report and their respective annual retail billed sales and average customer population for 2021.

TABLE 1 (FPL)

FPL Retail Sales Rate Class	2021 Annual Retail Billed Sales		2021 Average Population
	MWH	Percent	
RS(T)-1 Residential Service: RS-1 and RTR-1	61,696,996	54.98%	4,615,497
GS(T)-1 General Service Non-Demand: GS-1 and GST-1	6,567,303	5.85%	466,503

1 FPL anticipates filing a consolidated load research sampling plan on November 4, 2022, which will be used for future load research studies conducted after the sampling plan is approved.

GSD(T)-1 General Service Demand: GSD-1, GSDT-1, HLFT-1, SDTR-1A and SDTR-1B	26,696,737	23.79%	103,551
GSLD(T)-1 General Service Large Demand 1 (500 to 1,999 kW): GSLD-1, GSLDT-1, CS-1, CST-1, HLFT-2, SDTR-2A and SDTR-2B	9,299,168	8.29%	2,625
GSLD(T)-2 General Service Large Demand 1 (2,000 + kW): GSLD-2, GSLDT-2, CS-2, CST-2, HLFT-3, SDTR-3A and SDTR-3B	2,570,063	2.29%	148
CILC-1D Commercial/Industrial Load Control, Distribution	2,525,958	2.25%	252
CILC-1T Commercial/Industrial Load Control, Transmission	1,529,567	1.36%	16
All Other Rate Classes[2]	1,283,527	1.19%	
Total	112,442,319	100%	

For purposes of this study, the time-of-use rate schedules were combined with their associated non-time-of-use rate schedules. For example, General Service Demand (GSD-1), General Service Demand - Time of Use (GSDT-1), High Load Factor - Time of Use 1 (HLFT-1), Seasonal Demand - Time of Use Rider 1A (SDTR-1A) and Seasonal Demand - Time of Use Rider 1B (SDTR-1B) were analyzed as one class — GSD(T)-1.

Due to their population sizes, the studies for the RS(T)-1, GS(T)-1, GSD(T)-1, and GSLD(T)-1 rate classes are based on statistical sampling. The population of the other rate classes included in this report (i.e., GSLD(T)-2, CILC-1D, and CILC-1T) are 100% studied and therefore do not require statistical sampling.

In accordance with section (3) of Rule 25-6.0437, the RS(T)-1, GS(T)-1, GSD(T)-1, and GSLD(T)-1 statistical samples were designed to provide estimates of the averages of the 12 monthly coincident peaks for each rate class within plus or minus 10 percent at the 90 percent confidence level. The sampling plan was also designed to provide estimates of the summer and winter peak demands for each rate class within plus or minus 10 percent at the 90 percent confidence level, except for the General Service Non-Demand (GS(T)-1) rate class. In accordance with section (3) of Rule 25-6.0437, the

2 Each rate class in this category falls below the 1% of annual retail sales criterion. Thus, load research sampling plans are not required.

sampling plan for the GS(T)-1 rate class was designed to provide estimates of the summer and winter peak demand within plus or minus 15 percent at the 90 percent confidence level.

III. FPL Standalone Sampling Methodology

This section summarizes the key elements of the load research sampling methodology used in this study.

Metering of Sampled Rate Classes

The sampled premises' conventional kilowatt-hour meters use Advanced Metering Infrastructure (AMI) meters to monitor electricity usage. AMI electric meters capture 60-minute energy intervals while AMI demand meters capture 15-minute energy intervals.

The data from the AMI meters was validated and processed in the Oracle Utilities Load Analysis (OULA) computer application. The interval load data was analyzed on a calendar month basis to derive the average load data, statistics and other related information contained in this report.

Sample Installation Procedure

The installed AMI meters collect interval data.

To ensure continuous recording of energy intervals, a new rate class sample group is deployed prior to the removal of the existing study group. Due to FPL's use of AMI meters, deploying a new sample group does not require changing a meter. The effective day for all new samples is January 1st.

AMI Replacement Procedure

To maintain the randomness of the sample, every effort is made to include the premises originally selected. In situations where it becomes impossible to include the original premise, a replacement is picked from a list of alternates randomly selected at the same time the original sample was drawn. The selected replacement is the first available alternate on the list within the same stratum and district as the original sample. Section V of this report provides the actual number of replacements for each sampled rate class.

The status of each active sample premise is continuously monitored to ensure that they remain within the same rate class. If an active sample premise migrates to a different rate class, the sampled premise is replaced with an alternate.

Extrapolation Technique

FPL uses the Stratified Combined Ratio extrapolation technique for the RS(T)-1, GS(T)-1, GSD(T)-1, and GSLD(T)-1 sampled rate classes. This methodology calculates a "combined ratio" across all strata, which is then used to extrapolate to the rate class level by applying the ratio to the rate class total billed energy. This technique produces demand estimates for the class; it does not produce stratum-level demand estimates.

The Non-Stratified Ratio extrapolation technique applies only to simple random samples (i.e., samples with no stratification) and 100% studied classes. In this report the Non-Stratified Ratio technique is used for the GSLD(T)-2 and CILC-1D rate classes.

The CILC-1T rate class uses the Non-Stratified Mean Per Unit (MPU) extrapolation method. This method

estimates the total rate class demand by multiplying the number of customers in the rate class by the average demand for each interval recorded. Finally, the unmetered rate classes, such as certain street light classes, are modeled based on their equipment usage characteristics.

IV. FPL Standalone Sampling Plans

Sampling plans for the RS(T)-1, GS(T)-1, GSD(T)-1, and GSLD(T)-1 sampled rate classes were filed with and approved by the Commission's Division of Economic Regulation in accordance with Rule No. 25-6.0437. The sampling plans approved in those filings form the basis for the samples that were used for this study. Consistent with the FPSC-approved plans, interval data from AMI meters of the selected sampled and alternate premises is obtained daily for load research. The AMI meter data is identified for study on or before December 31, 2020. The data used in this report covers the calendar months of 2021 (January 1, 2021 through December 31, 2021).

RS(T)-1 Residential Service
(RS-1 & RTR-1)

The sample used for this study was installed in 2020. Consistent with the sampling plan approved by the FPSC staff on July 8, 2020 the RS(T)-1 rate class used a one-dimensional stratification random technique. The technique stratified the sample based on annual average monthly energy consumption (kWh). The most current energy consumption (kWh) data available prior to the sample implementation was used. The customer population was divided into kWh strata break points based on the Dalenius-Hodges procedure.

Stratum	Strata Break Point	Population Size	Sample Points	Stratum Weight
1	0 to 546 kWh	1,499,562	185	0.34391
2	547 to 1,207 kWh	1,655,214	269	0.37961
3	1,208 to 1,898 kWh	987,697	201	0.22652
4	1,899 kWh and Above	217,831	59	0.04996
Total		4,360,304	714	1.00000

GS(T)-1 General Service Non-Demand
(GS-1 & GST-1)

The sample used for this study was installed in 2018. Consistent with the sampling plan approved by the FPSC staff on May 2, 2018, the GS(T)-1 rate class used a one-dimensional stratification random technique. The technique stratified the sample based on annual average monthly energy consumption (kWh). The most current energy consumption (kWh) data available prior to the sample implementation was used. The customer population was divided into kWh strata break points based on the Dalenius-Hodges procedure.

Stratum	Strata Break Point	Population Size	Sample Points	Stratum Weight
1	0 to 790 kWh	211,708	212	0.51064
2	791 to 1,900 kWh	111,313	147	0.26848
3	1,901 to 4,100 kWh	69,937	154	0.16869
4	4,101 kWh and Above	21,638	58	0.05219
Total		414,595	571	1.00000

GSD(T)-1 General Service Demand
(GSD-1, GSDT-1, HLFT-1, SDTR-1A and SDTR-1B)

The sample used for this study was installed in 2019. Consistent with the informational sampling plan filed with FPSC staff on May 3, 2019, the GSD(T)-1 rate class used a one-dimensional stratification random technique. The technique stratified the sample based on annual average monthly energy consumption (kWh). The most current energy consumption (kWh) data available prior to the sample implementation was used. The customer population was divided into kWh strata break points based on the DaleniusHodges procedure.

Stratum	Strata Break Point	Population Size	Sample Points	Stratum Weight
1	0 to 16,640 kWh	72,899	125	0.68778
2	16,641 to 66,560 kWh	25,901	133	0.24436
3	66,561 kWh and Above	7,193	62	0.06786
Total		105,992	320	1.00000

GSLD(T)-1 General Service Large Demand 1
(GSLD-1, GSLDT-1, CS-1, CST-1, HLFT-2, SDTR-2A and SDTR-2B)

The sample used for this study was installed in 2019. Consistent with the informational sampling plan filed with the FPSC staff on May 3, 2019, the GSLD(T)-1 rate class used a one-dimensional stratification random technique. The technique stratified the sample based on annual average monthly energy consumption (kWh). The most current energy consumption (kWh) data available at the time of the sample selection was used to determine the sample size. The customer population was divided into kWh strata break points based on the DaleniusHodges procedure.

Stratum	Strata Break Point	Population Size	Sample Points	Stratum Weight
1	**0 to 296,400 kWh**	**1,720**	**60**	**0.60165**
2	**296,401 kWh and Above**	**1,138**	**49**	**0.39835**
Total		**2,858**	**109**	**1.00000**

V. FPL Standalone Sample Replacements

The following table shows the actual replacements installed for each sampled rate class through 12/31/21. The table also shows the year the original sample selection was installed, the sample size and the sample depth. The sample depth column consists of the original sampled premise plus the number of replacement premises drawn. The replacements were obtained from the original computer-generated customer random sample selection list for each sampled rate class.

	Original Installation Year	Sample Size	Sample Depth	Actual Replacements Through 12/31/21
RS(T)-1 Residential Service	2020	714	51	297
GS(T)-1 General Service Non-Demand	2018	571	51	259
GSD(T)-1 General Service Demand	2019	320	51	123
GSLD(T)-1 General Service Large Demand 1	2019	109	21	47

VI. FPL Standalone Study Results

This section contains the estimated coincident and non-coincident peak demands for January 1 through December 31, 2021, for all rate classes included in this report. The 90 percent confidence intervals around the monthly peak demands and their percent relative accuracy is also presented for the sample rate classes. The averages of the twelve-monthly coincident peaks, their 90 percent confidence intervals, and their relative accuracy were computed for the twelve-month calendar period ending December 31, 2021. The annual class non-coincident and coincident peak load factors were computed using the 2021 annual retail billed sales provided on page 2 of this report. The statistics shown in this section were derived using the OULA computer application.

FPL's winter peak occurred on March 31, 2021, during the hour ending at 5:00 PM and the summer peak occurred on August 19, 2021, during the hour ending at 5:00 PM.

FPL met the target level of statistical accuracy of plus or minus 10 percent (15 percent for GS(T)-1) at the 90 percent confidence level for the summer and winter peaks for the sampled rate classes. FPL also met the target level of statistical accuracy for each class of plus or minus 10 percent at the 90 percent confidence level for the estimate of averages of the 12 monthly coincident peaks.

RS(T)-1 Residential Service
(RS-1 and RTR-1)

	Class Non-coincident Peak			Coincident Peak		
	Demand (MW)	Relative Accuracy	90% Confidence Interval	Demand (MW)	Relative Accuracy	90% Confidence Interval
Jan-21	10,167	5.35%	544	8,075	4.10%	331
Feb-21	11,054	6.73%	744	9,498	3.76%	357
Mar-21	11,097	3.74%	415	9,788	3.57%	349
Apr-21	12,135	3.07%	372	11,141	2.82%	314
May-21	12,408	2.51%	311	12,324	2.54%	313
Jun-21	12,985	2.69%	349	12,560	2.53%	317
Jul-21	13,088	2.45%	321	12,518	2.26%	283
Aug-21	14,130	2.36%	334	13,394	2.06%	276
Sep-21	14,549	2.02%	293	14,381	2.12%	306
Oct-21	12,209	2.52%	308	11,945	2.46%	294
Nov-21	10,556	3.63%	383	10,505	3.05%	320
Dec-21	9,105	3.87%	352	9,105	3.87%	352
Annual Peak	14,549					
Average of 12 CPs				11,269	1.97%	223
Load Factors	48.41%			62.50%		

GS(T)-1 General Service Non-Demand
(GS-1 and GST-1)

	Class Non-coincident Peak			Coincident Peak		
	Demand (MW)	Relative Accuracy	90% Confidence Interval	Demand (MW)	Relative Accuracy	90% Confidence Interval
Jan-21	992	5.94%	59	992	5.94%	59
Feb-21	1,077	5.00%	54	1,024	5.20%	53
Mar-21	1,097	5.33%	59	1,020	5.20%	53
Apr-21	1,202	4.58%	55	1,129	4.55%	51
May-21	1,283	4.18%	54	1,232	4.37%	54
Jun-21	1,296	3.96%	51	1,196	4.02%	48
Jul-21	1,306	3.99%	52	1,243	3.84%	48
Aug-21	1,360	3.78%	51	1,289	3.69%	48
Sep-21	1,431	3.52%	50	1,009	3.81%	38
Oct-21	1,284	4.85%	62	1,267	4.83%	61
Nov-21	1,178	4.60%	54	837	5.04%	42
Dec-21	1,039	4.92%	51	740	5.15%	38
Annual Peak	1,431					
Average of 12 CPs				1,081	5.22%	56
Load Factors	52.40%			69.32%		

GSD(T)-1 General Service Demand

(GSD-1, GSDT-1, HLFT-1, SDTR-1A and SDTR-1B)

	Class Non-coincident Peak			Coincident Peak		
	Demand (MW)	Relative Accuracy	90% Confidence Interval	Demand (MW)	Relative Accuracy	90% Confidence Interval
Jan-21	3,769	4.02%	152	3,672	3.76%	138
Feb-21	4,105	3.96%	162	3,822	3.99%	152
Mar-21	4,033	4.07%	164	3,846	4.07%	156
Apr-21	4,378	3.63%	159	4,151	3.48%	144
May-21	4,443	4.14%	184	4,247	3.34%	142
Jun-21	4,581	3.46%	159	4,234	2.89%	122
Jul-21	4,547	2.93%	133	4,367	2.72%	119
Aug-21	4,693	2.76%	130	4,461	2.42%	108
Sep-21	4,790	2.53%	121	4,017	2.78%	112
Oct-21	4,578	3.04%	139	4,508	2.90%	131
Nov-21	4,253	3.09%	132	3,690	3.21%	119
Dec-21	3,824	3.63%	139	3,170	3.46%	110
Annual Peak	4,790					
Average of 12 CPs				4,015	3.17%	127
Load Factors	63.63%			75.90%		

GSLD(T)-1 General Service Large Demand 1 (500-1999 kW)
(GSLD-1, GSLDT-1, CS-1, CST-1, HLFT-2, SDTR-2A and SDTR-2B)

	Class Non-coincident Peak			Coincident Peak		
	Demand (MW)	Relative Accuracy	90% Confidence Interval	Demand (MW)	Relative Accuracy	90% Confidence Interval
Jan-21	1,293	5.61%	73	1,273	4.72%	60
Feb-21	1,386	4.95%	69	1,213	5.81%	70
Mar-21	1,333	5.71%	76	1,277	4.48%	57
Apr-21	1,348	4.55%	61	1,281	4.34%	56
May-21	1,394	4.58%	64	1,334	4.26%	57
Jun-21	1,463	4.85%	71	1,375	4.33%	59
Jul-21	1,432	4.45%	64	1,345	4.76%	64
Aug-21	1,530	4.06%	62	1,362	3.85%	52
Sep-21	1,584	3.89%	62	1,189	4.87%	58
Oct-21	1,433	4.40%	63	1,374	4.07%	56
Nov-21	1,413	3.51%	50	1,121	3.94%	44
Dec-21	1,368	4.42%	60	1,025	4.65%	48
Annual Peak	1,584					
Average of 12 CPs				1,264	4.28%	54
Load Factors	67.02%			83.98%		

GSLD(T)-2 General Service Large Demand 2 (2000 kW +)

(GSLD-2, GSLDT-2, CS-2, CST-2, HLFT-3, SDTR-3A and SDTR-3B)

	Class Non-coincident Peak Demand (MW)	Coincident Peak Demand (MW)
Jan-21	328	328
Feb-21	345	330
Mar-21	324	314
Apr-21	336	326
May-21	341	323
Jun-21	357	339
Jul-21	361	347
Aug-21	374	348
Sep-21	381	331
Oct-21	361	354
Nov-21	377	304
Dec-21	344	294
Annual Peak	381	
Average of 12 CPs		328
Load Factors	77.00%	89.42%

CILC-1D Commercial/Industrial Load Control, Distribution

	Class Non-coincident Peak Demand (MW)	Coincident Peak Demand (MW)
Jan-21	315	309
Feb-21	335	329
Mar-21	315	306
Apr-21	330	314
May-21	334	322
Jun-21	336	326
Jul-21	346	329
Aug-21	347	331
Sep-21	359	309
Oct-21	339	338
Nov-21	331	290
Dec-21	315	270
Annual Peak	359	
Average of 12 CPs		314
Load Factors	80.40%	91.74%

CILC-1T Commercial/Industrial Load Control, Transmission

	Class Non-coincident Peak	Coincident Peak
	Demand (MW)	Demand (MW)
Jan-21	184	179
Feb-21	185	179
Mar-21	191	171
Apr-21	179	149
May-21	192	175
Jun-21	210	195
Jul-21	230	214
Aug-21	228	197
Sep-21	228	176
Oct-21	214	175
Nov-21	211	181
Dec-21	211	173
Annual Peak	230	
Average of 12 CPs		180
Load Factors	75.86%	96.80%

VII. Gulf Standalone Population Data

The following table lists the rate classes included in this report and their respective annual retail billed sales and average customer population for 2021.

TABLE 2 (GULF)

GULF Retail Sales Rate Class	2021 Annual Retail Billed Sales		2021 Average Population
	MWH	**Percent**	
RS/RSVP Residential Service: RS and RSVP	5,418,557	50.49%	417,180
GS General Service Non-Demand: GS-1	365,758	3.41%	34,371
GSD General Service Demand: GSD, GSDT and GSTOU	2,367,309	22.06%	15,622
LP Large Power: LP and LPT	804,034	7.49%	201
Major Accounts: RTP, CSA and PXT	1,605,531	14.96%	130
All Other Rate Classes[3]	170,221	1.59%	
Total	10,731,411	100%	

For purposes of this study, the time-of-use rate schedules were combined with their associated non-time-of-use rate schedules. For example, General Service Demand (GSD), General Service Demand - Time of Use (GSDT), and General Service - Time of Use 1 (GSTOU) were analyzed as one class.

Due to their population sizes, the studies for the RS/RSVP, GS and GSD rate classes are based on statistical sampling. The population of the other rate classes included in this report (i.e., LP and LPT, Major Accounts and All Other Rate Classes) are 100% studied and therefore do not require statistical sampling.

In accordance with section (3) of Rule 25-6.0437, the RS/RSVP, GS and GSD statistical samples were designed to provide estimates of the averages of the 12 monthly coincident peaks for each rate class

3 Each rate class in this category falls below the 1% of annual retail sales criterion. These rate classes include SBS, OS I/ II and OS III. Thus, load research sampling plans are not required.

within plus or minus 10 percent at the 90 percent confidence level. The sampling plan was also designed to provide estimates of the summer and winter peak demands for each rate class within plus or minus 10 percent at the 90 percent confidence level, except for the General Service Non-Demand (GS) rate class. In accordance with section (3) of Rule 25-6.0437, the sampling plan for the GS rate class was designed to provide estimates of the summer and winter peak demand within plus or minus 15 percent at the 90 percent confidence level.

VIII. Gulf Standalone Sampling Methodology

This section summarizes the key elements of the load research sampling methodology used in this study.

Metering of Sampled Rate Classes

The sampled premises' conventional kilowatt-hour meters use Advanced Metering Infrastructure (AMI) meters to monitor electricity usage. All AMI electric meters capture at least 60-minute energy or energy/demand intervals. Newer AMI meters are configured to capture 15-minute intervals.

The data from the AMI meters was validated and processed in the Oracle Utilities Load Analysis OULA computer application. The interval load data was analyzed on a calendar month basis to derive the average load data, statistics and other related information contained in this report.

Sample Installation Procedure

The installed AMI meters collect interval data. To ensure continuous recording of energy intervals, a new rate class sample group is deployed prior to the removal of the existing study group. With AMI meters, deploying a new sample group does not require a meter change. The effective day for all new samples is January 1st.

AMI Replacement Procedure

To maintain the randomness of the sample, every effort is made to include the premises originally selected. In situations where it becomes impossible to include the original premise, a replacement is picked from a list of alternates randomly selected at the same time the original sample was drawn. The selected replacement is the first available alternate on the list within the same stratum and district as the original sample. Section X of this report provides the actual number of replacements for each sampled rate class.

The status of each active sample premise is continuously monitored to ensure that they remain within the same rate class. If an active sample premise migrates to a different rate class, the sampled premise is replaced with an alternate.

Extrapolation Technique

Gulf uses the Stratified Combined Ratio extrapolation technique for the RS/RSVP, GS, and GSD sampled rate classes. This methodology calculates a "combined ratio" across all strata, which is then used to extrapolate to the rate class level by applying the ratio to the rate class total billed energy. This technique produces demand estimates for the class; it does not produce stratum-level demand estimates.

The Non-Stratified Mean Per Unit (MPU) extrapolation method is used for the LP and LPT, and Major Account rate classes. This method estimates the total rate class demand by multiplying the number of customers in the rate class by the average demand for each interval recorded.

Finally, the unmetered rate classes, such as certain street light classes, are modeled based on their equipment usage characteristics.

IX. Gulf Standalone Sampling Plans

The sampling plan for Gulf's RS/RSVP, GS and GSD sampled rate classes was filed with and approved by the Commission's Division of Economic Regulation in accordance with Rule No. 25-6.0437. The sampling plan approved in that filing forms the basis for the samples that were used for this study. Consistent with the FPSC-approved plan, interval data from AMI meters of the selected sampled and alternate premises were obtained daily for load research. The AMI meter data was identified for study on or before December 31, 2020. The data used in this report covers the calendar months of January 1, 2021 through December 31, 2021).

RS/RSVP Residential Service
(RS & RSVP)

The sample used for this study was installed in 2020. Consistent with the sampling plan approved by the FPSC staff on November 20, 2020, the RS/RSVP rate class used a one-dimensional stratified random sample process. The customer population was stratified based on average monthly energy consumption (kWh) for the twelve months ended July 31, 2020. The most current energy consumption (kWh) data available prior to the sample implementation was used. The customer population was divided into kWh strata break points based on energy consumption using the DaleniusHodges method.

Stratum	Strata Break Points	Population Size	Sample Points	Stratum Weight
1	0 to 663 kWh	116,190	209	.30332
2	664 to 1,196 kWh	141,293	162	.36885
3	1,197 to 1,976 kWh	96,674	140	.25237
4	1,977 kWh and Above	28,906	50	.07546
Total		383,063	561	1.0

GS General Service Non-Demand
(GS)

The sample used for this study was installed in 2020. Consistent with the sampling plan approved by the FPSC staff on November 20, 2020, the GS rate class used a one-dimensional stratified random sample process. The customer population was stratified on the basis of average monthly energy consumption (kWh) for the twelve months ended July 31, 2020. The most current energy consumption (kWh) data available prior to the sample implementation was used. The customer population was divided into kWh strata break points based on energy consumption using the DaleniusHodges method.

Stratum	Strata Break Point	Population Size	Sample Points	Stratum Weight
1	0 to 500 kWh	18,077	142	.54315
2	501 to 1,400 kWh	9,695	108	.29130
3	1,401 to 3,400 kWh	4,821	65	.14486
4	3,401 kWh and Above	689	30	.02069
Total		33,282	345	1.0

GSD General Service Demand
(GSD, GSDT, GSTOU)

The sample used for this study was installed in 2020. Consistent with the sampling plan approved by the FPSC staff on November 20, 2020, the GSD rate class used a one-dimensional stratified random sample process. The customer population was stratified on the basis of average monthly energy consumption (kWh) for the twelve months ended July 31, 2020. The most current energy consumption (kWh) data available prior to the sample implementation was used. The customer population was divided into kWh strata break points based on energy consumption using the DaleniusHodges method.

Stratum	Strata Break Point	Population Size	Sample Points	Stratum Weight
1	0 to 6,080 kWh	8,278	67	.55094
2	6,081 to 18,560 kWh	4,321	50	.28759
3	18,561 to 48,960 kWh	1,775	43	.11816
4	48,961 kWh and Above	651	30	.04331
Total		15,025	190	1.0

X. Gulf Standalone Sample Replacements

The following table shows the actual replacements installed for each sampled rate class through December 31, 2021. The table also shows the year the original sample selection was installed, the sample size and the sample depth. The sample depth column consists of the original sampled premise plus the number of replacement premises drawn. The replacements were obtained from the original computer-generated customer random sample selection list for each sampled rate class.

	Original Installation Year	Sample Size	Sample Depth	Actual Replacements Through 12/31/21
RS/RSVP Residential Service	2020	561	51	293
GS General Service Non-Demand	2020	345	51	115
GSD General Service Demand	2020	190	50	47

XI. Gulf Standalone Study Results

This section contains the estimated coincident and non-coincident peak demands for January 1 through December 31, 2021, for all rate classes included in this report. The 90 percent confidence intervals around the monthly peak demands and their percent relative accuracy are also presented for the sample rate classes. The averages of the twelve-monthly coincident peaks, their 90 percent confidence intervals, and their relative accuracy were computed for the twelve-month calendar period ending December 31, 2021. The annual class non-coincident and coincident peak load factors were computed using the 2021 annual retail billed sales provided on TABLE 2 (Gulf) page 16 of this report. The statistics shown in this section were derived using the OULA computer application.

Gulf's winter peak occurred on February 17, 2021, during the hour ending at 9:00 AM and the summer peak occurred on July 27, 2021, during the hour ending at 5:00 PM.

Gulf met the target level of statistical accuracy of plus or minus 10 percent (15 percent for GS) at the 90 percent confidence level for the summer and winter peaks for the sampled rate classes. Gulf also met the target level of statistical accuracy for each class of plus or minus 10 percent at the 90 percent confidence level for the estimate of averages of the 12 monthly coincident peaks.

RS/RSVP Residential Service
(RS, and RSVP)

	Class Non-coincident Peak			Coincident Peak		
	Demand (MW)	Relative Accuracy	90% Confidence Interval	Demand (MW)	Relative Accuracy	90% Confidence Interval
Jan-21	1,262	4.53%	57	1,247	4.16%	52
Feb-21	1,444	4.60%	66	1,402	4.13%	58
Mar-21	811	5.01%	41	766	4.58%	35
Apr-21	845	4.01%	34	823	4.17%	34
May-21	925	4.29%	40	865	4.49%	39
Jun-21	1,135	3.29%	37	1,065	3.24%	35
Jul-21	1,258	3.29%	41	1,183	3.01%	36
Aug-21	1,387	3.11%	43	1,295	2.72%	35
Sep-21	1,368	3.20%	44	1,200	2.98%	36
Oct-21	1,056	4.27%	45	1,013	3.88%	39
Nov-21	845	5.80%	49	845	5.80%	49
Dec-21	818	6.11%	50	818	6.11%	50
Annual Peak	1,444					
Average of 12 CPs				1,044	3.81%	40
Load Factors	42.84%			59.27%		

GS General Service Non-Demand
(GS)

	Class Non-coincident Peak			Coincident Peak		
	Demand (MW)	Relative Accuracy	90% Confidence Interval	Demand (MW)	Relative Accuracy	90% Confidence Interval
Jan-21	70	8.09%	6	50	8.00%	4
Feb-21	90	6.61%	6	75	6.06%	5
Mar-21	70	5.69%	4	62	5.51%	3
Apr-21	70	5.70%	4	63	5.91%	4
May-21	77	5.15%	4	72	5.91%	4
Jun-21	86	4.57%	4	83	4.65%	4
Jul-21	95	4.56%	4	91	4.06%	4
Aug-21	100	4.24%	4	100	4.09%	4
Sep-21	105	3.96%	4	104	3.99%	4
Oct-21	92	4.91%	5	85	4.42%	4
Nov-21	66	5.42%	4	46	6.71%	3
Dec-21	58	6.06%	4	52	9.57%	5
Annual Peak	105					
Average of 12 CPs				73	3.85%	3
Load Factors	39.86%			56.84%		

GSD General Service Demand
(GSD, GSDT, GSTOU)

	Class Non-coincident Peak			Coincident Peak		
	Demand (MW)	Relative Accuracy	90% Confidence Interval	Demand (MW)	Relative Accuracy	90% Confidence Interval
Jan-21	341	6.10%	21	295	6.36%	19
Feb-21	402	5.98%	24	357	6.62%	24
Mar-21	339	5.78%	20	325	5.18%	17
Apr-21	393	5.28%	21	366	4.83%	18
May-21	380	5.54%	21	360	5.10%	18
Jun-21	429	4.63%	20	406	4.11%	17
Jul-21	468	4.02%	19	468	4.02%	19
Aug-21	490	4.05%	20	489	3.94%	19
Sep-21	502	3.74%	19	497	3.71%	18
Oct-21	456	4.32%	20	441	3.93%	17
Nov-21	369	5.35%	20	256	5.50%	14
Dec-21	335	6.58%	22	235	5.53%	13
Annual Peak	502					
Average of 12 CPs				375	3.52%	13
Load Factors	53.84%			72.14%		

LP Large Power
(LP, LPT)

	Class Non-coincident Peak	Coincident Peak
	Demand (MW)	Demand (MW)
Jan-21	101	83
Feb-21	104	94
Mar-21	113	107
Apr-21	113	106
May-21	122	113
Jun-21	131	126
Jul-21	131	130
Aug-21	135	132
Sep-21	132	130
Oct-21	123	119
Nov-21	105	83
Dec-21	106	81
Annual Peak	135	
Average of 12 CPs		109
Load Factors	68.16%	84.43%

Major Accounts
(RTP, CSA, PXT)

	Class Non-coincident Peak	Coincident Peak
	Demand (MW)	Demand (MW)
Jan-21	196	173
Feb-21	213	195
Mar-21	233	230
Apr-21	225	214
May-21	255	204
Jun-21	264	206
Jul-21	269	269
Aug-21	269	253
Sep-21	250	233
Oct-21	275	265
Nov-21	221	187
Dec-21	222	179
Annual Peak	275	
Average of 12 CPs		217
Load Factors	66.68%	84.34%

XII. FPL Consolidated Study Results

This section contains the estimated coincident and noncoincident peak demands for January 1 through December 31, 2021, for all FPL Consolidated rate classes. Gulf customers were consolidated into FPL rate classes based on the same migration analyses used in FPL's 2021 base rate case Docket No. 20210015-EI. For the sampled rate classes, all Gulf RS and RSVP customers were moved to the FPL RS(T)-1 rate class; all Gulf GS customers were moved to the FPL GS(T)-1 rate class; and all Gulf GSD customers were moved to the FPL GSD(T)-1 rate class. The Gulf LP and Major Accounts customers were moved to their respective FPL commercial and industrial rate classes based on their demand levels. After combining the Gulf and FPL customers into their appropriate rate classes, the annual class non-coincident and coincident peak load factors were computed using the 2021 annual retail billed sales provided in TABLE 3 (Consolidated) below. The statistics shown in this section were derived using the OULA computer application.

FPL Consolidated winter peak occurred on March 31, 2021, during the hour ending at 5:00 PM and the summer peak occurred on August 19, 2021, during the hour ending at 5:00 PM.

Although the FPL and Gulf standalone studies met the target level of statistical accuracy of plus or minus 10 percent (15 percent for GS(T)-1) at the 90 percent confidence level for the summer and winter peaks for the sampled rate classes, it is not appropriate to calculate precision for the consolidated study as the sampling plans were based on separate FPL and Gulf populations.

TABLE 3 (FPL Consolidated)

FPL Consolidated Retail Sales Rate Class	2021 Annual Retail Billed Sales		2021 Average Population
	MWH	**Percent**	
RS(T)-1 Residential Service: RS-1 and RTR-1	67,158,659	54.62%	5,032,677
GS(T)-1 General Service Non-Demand: GS-1 and GST-1	6,985,194	5.68%	504,981
GSD(T)-1 General Service Demand: GSD-1, GSDT-1, HLFT-1, SDTR-1A and SDTR-1B	29,292,813	23.82%	119,294
GSLD(T)-1 General Service Large Demand 1 (500 to 1,999 kW): GSLD-1, GSLDT-1, CS-1, CST-1, HLFT-2, SDTR-2A and SDTR-2B	9,910,214	8.06%	2,793
GSLD(T)-2 General Service Large Demand 1 (2,000 + kW): GSLD-2, GSLDT-2, CS-2, CST-2, HLFT-3, SDTR-3A and SDTR-3B	3,384,341	2.75%	180
CILC-1D Commercial/Industrial Load Control, Distribution	2,525,958	2.05%	252
CILC-1T Commercial/Industrial Load Control, Transmission	1,529,567	1.24%	16
All Other Rate Classes[4]	2,111,116	1.76%	

4 Each rate class in this category falls below the 1% of annual retail sales criterion. Thus, load research sampling plans are not required.

Total	122,897,862	100%	

RS(T)-1 Residential Service
(RS-1 and RTR-1)

	Class Non-coincident Peak Demand (MW)	Coincident Peak Demand (MW)
Jan-21	11,402	8,590
Feb-21	12,119	10,215
Mar-21	11,916	10,535
Apr-21	12,912	11,905
May-21	13,027	12,667
Jun-21	13,877	13,552
Jul-21	14,287	13,653
Aug-21	15,353	14,607
Sep-21	15,726	15,726
Oct-21	12,945	12,634
Nov-21	11,231	10,065
Dec-21	9,752	9,408
Annual Peak	15,726	
Average of 12 CPs		11,963
Load Factors	48.75%	64.08%

GS(T)-1 General Service Non-Demand
(GS-1 and GST-1)

	Class Non-coincident Peak Demand (MW)	Coincident Peak Demand (MW)
Jan-21	1,044	1,044
Feb-21	1,137	1,080
Mar-21	1,164	1,084
Apr-21	1,269	1,194
May-21	1,336	1,264
Jun-21	1,377	1,325
Jul-21	1,396	1,332
Aug-21	1,448	1,379
Sep-21	1,527	1,079
Oct-21	1,361	1,343
Nov-21	1,238	1,160
Dec-21	1,090	781
Annual Peak	1,527	
Average of 12 CPs		1,183
Load Factors	52.22%	67.36%

GSD(T)-1 General Service Demand
(GSD-1, GSDT-1, HLFT-1, SDTR-1A and SDTR-1B)

	Class Non-coincident Peak	Coincident Peak
	Demand (MW)	Demand (MW)
Jan-21	4,094	3,997
Feb-21	4,414	4,121
Mar-21	4,366	4,178
Apr-21	4,761	4,533
May-21	4,744	4,624
Jun-21	4,983	4,746
Jul-21	5,006	4,829
Aug-21	5,163	4,932
Sep-21	5,225	4,460
Oct-21	4,980	4,910
Nov-21	4,581	4,332
Dec-21	4,116	3,487
Annual Peak	5,225	
Average of 12 CPs		4,429
Load Factors	64.00%	75.50%

GSLD(T)-1 General Service Large Demand 1 (500-1999 kW)
(GSLD-1, GSLDT-1, CS-1, CST-1, HLFT-2, SDTR-2A and SDTR-2B)

	Class Non-coincident Peak Demand (MW)	Coincident Peak Demand (MW)
Jan-21	1,371	1,352
Feb-21	1,464	1,283
Mar-21	1,410	1,354
Apr-21	1,430	1,366
May-21	1,465	1,407
Jun-21	1,547	1,416
Jul-21	1,525	1,442
Aug-21	1,630	1,463
Sep-21	1,685	1,279
Oct-21	1,527	1,469
Nov-21	1,495	1,400
Dec-21	1,451	1,097
Annual Peak	1,685	
Average of 12 CPs		1,361
Load Factors	67.12%	83.14%

GSLD(T)-2 General Service Large Demand 2 (2000 kW +)
(GSLD-2, GSLDT-2, CS-2, CST-2, HLFT-3, SDTR-3A and SDTR-3B)

	Class Non-coincident Peak	Coincident Peak
	Demand (MW)	Demand (MW)
Jan-21	431	431
Feb-21	447	420
Mar-21	422	414
Apr-21	444	436
May-21	449	444
Jun-21	463	442
Jul-21	481	472
Aug-21	498	479
Sep-21	504	440
Oct-21	488	483
Nov-21	490	474
Dec-21	448	381
Annual Peak	504	
Average of 12 CPs		443
Load Factors	76.72%	87.19%

CILC-1D Commercial/Industrial Load Control, Distribution

	Class Non-coincident Peak	Coincident Peak
	Demand (MW)	Demand (MW)
Jan-21	315	309
Feb-21	335	329
Mar-21	315	306
Apr-21	330	314
May-21	334	321
Jun-21	336	317
Jul-21	346	329
Aug-21	347	331
Sep-21	359	309
Oct-21	339	338
Nov-21	331	306
Dec-21	315	270
Annual Peak	359	
Average of 12 CPs		315
Load Factors	80.40%	91.60%

CILC-1T Commercial/Industrial Load Control, Transmission

	Class Non-coincident Peak Demand (MW)	Coincident Peak Demand (MW)
Jan-21	184	179
Feb-21	185	179
Mar-21	191	171
Apr-21	179	149
May-21	192	175
Jun-21	210	195
Jul-21	230	214
Aug-21	228	197
Sep-21	228	176
Oct-21	214	175
Nov-21	211	181
Dec-21	211	173
Annual Peak	230	
Average of 12 CPs		180
Load Factors	75.86%	96.80%