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PROGRESS ENERGY SERVICE COMPANY, LLC

July 30, 2003

Ms. Blanca S. Bayó, Director
Division of the Commission Clerk
and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: Load Research Study

Dear Ms. Bayó:

Enclosed for filing on behalf of Progress Energy Florida, Inc., formerly Florida Power Corporation, pursuant to Rule 25-6.0437(7), F.A.C., are an original and fifteen copies of its Load Research Study Results for the 12-month study period ending March 31, 2003.

Please acknowledge your receipt of the above filing on the enclosed copy of this letter and return to the undersigned. A 3½ inch diskette containing the above-referenced document in Word format is also enclosed. Thank you for your assistance in this matter.

Very truly yours,

A handwritten signature in black ink that reads "James A. McGee".

James A. McGee

JAM/scc
Enclosures

DOCUMENT NUMBER - DATE

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06925 JUL 31 2003
FPLC-FLORIDA POWER & LIGHT COMPANY

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PROGRESS ENERGY FLORIDA CORPORATION

LOAD RESEARCH STUDY RESULTS

COVERING THE PERIOD FROM

APRIL, 2002 THROUGH MARCH, 2003

JULY 31, 2003

FPSC RULE 25-6.0437(7) F.A.C.

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TABLE OF CONTENTS

STUDY BACKGROUND AND OBJECTIVES	2
REPORTING PERIOD	2
RESIDENTIAL CLASS SAMPLE	3
GENERAL SERVICE NON-DEMAND CLASS SAMPLE	4
GENERAL SERVICE DEMAND CLASS	5
INTERRUPTIBLE CLASS	6
METERING OF SAMPLE MEMBERS	6
SELECTION OF REPLACEMENTS	6
STATISTICAL ACCURACY ACHIEVED	7
RESIDENTIAL CLASS HOURLY LOAD DATA	13

STUDY BACKGROUND AND OBJECTIVES

The purpose of this study is to meet the requirements of the Cost-of-Service Load Research Rule, Docket No. 820491-EU, Order No. 13026, adopted as Rule 25-6.0437 on February 23, 1984, by the Florida Public Service Commission.

The rule requires that every rate class which accounts for more than one percent of the utility's annual retail sales be sampled every two years. The load research studies must be designed to provide estimates within plus or minus 10% relative accuracy at the 90% confidence level for the summer and winter peak demands and the average of the twelve monthly coincident peaks.

REPORTING PERIOD

The new sample points were selected during the fall of 2001 and mass memory interval recording meters were installed in the winter of 2001/2002. Formal data collection began on April 1, 2002 and continued through March 31, 2003.

RESIDENTIAL CLASS SAMPLE

The residential class had over 1,237,700 customers when the data collection commenced. Over 434,623 customers were on the load management rate at that time. Due to the large number of residences on load management, independent and equal sized samples were drawn for both the load management residential rate and the standard residential rate. Past experience indicated that a residential sample of 350 would be more than enough to exceed the target accuracy goal. Combined ratio estimation was used for expansion to the class level.

The residential load management and non-load management samples were stratified by housing type:

- 1) single family detached,
- 2) mobile/manufactured homes
- 3) multi-family (apartments, townhouses, condos etc)

The following table shows the stratum design for the residential class sample.

Stratum	Load Management Residential Rate	Standard Residential Rate
Single Family Detached	85	85
Mobile / Manufactured Home	45	45
Multi-Family (Apartments)	45	45
Total	175	175

Table 1 - *Residential Sample Design*

GENERAL SERVICE NON-DEMAND CLASS SAMPLE

At the time of sample selection in the winter of 2001, the General Service Non-Demand class consisted of over 109,800 customers. By April 2002 when data collection officially began, FPC had 111,150 General Service Non-Demand customers.

Two dimensional stratification and combined ratio expansion were used for this rate class sample. The technique involved stratification using the billed energy for the winter peak month (January, 2001) and the summer peak month (August, 2001). The Dalenius-Hodges cumulative square root "uf" technique was applied to the class billed energy for the peak month to establish stratum boundaries. The following table shows the stratum design for the General Service Non- Demand class sample.

Stratum	Sample Size
1 - Jan 01 billed energy > 1,700 kWh & Aug 01 energy < 1,900 kWh	37
2 - Jan 01 billed energy > 1,700 kWh & Aug 01 energy > 1,900 kWh	301
3 - Jan 01 billed energy < 1,700 kWh & Aug 01 energy < 1,900 kWh	175
4 - Jan 01 billed energy < 1,700 kWh & Aug 01 energy > 1,900 kWh	35
5 - Census Stratum – customers over 1 MW	19
Total	567

Table 2 - *General Service Non-Demand Sample Design*

GENERAL SERVICE DEMAND CLASS

Two dimensional stratification and combined ratio expansion were used for the General Service Demand rate class sample. The technique involved stratification using the summer peak month (June, 1999) billed kW and the revenue class data. The Dalenius-Hodges cumulative square root "uf" technique was applied to the class billed demand for the peak month to establish stratum boundaries. All customers in over 1000 kW did not require sampling because each customer in this stratum is metered with a mass memory interval recording meter for billing purposes. Table 3 outlines stratum design for the General Service Demand class sample.

Stratum	Sample Size
1 – Customers with a June 99 billing demand less than 40 kW	151
2 – Customers with a June 99 billing demand between 40 kW & 200 kW	144
3 – Customers with a June 99 billing demand between 200 kW & 1,000 kW	109
4 – Customers with a June 99 billing demand greater than 1000 kW	491
Total	895

Table 3 - *General Service Demand Sample Design*

INTERRUPTIBLE CLASS

The Interruptible Class did not require sampling because each customer in this class is metered with a mass memory interval recording meter for billing purposes. At the beginning of data collection in April 2002, there were 153 customers in the Interruptible Class.

METERING OF SAMPLE MEMBERS

The sample customer's conventional meter was replaced with a solid-state meter. The solid-state meter records the customer's usage every 15 minutes and stores it in a mass memory chip within the meter. The data from these meters were translated and validated for accuracy in the MV-90 software package. Load data was analyzed on a calendar month basis using the MV90 Load Research Package to derive the data contained in this report.

SELECTION OF REPLACEMENTS

During the course of the study, a small number of sample points had to be replaced for various reasons. To minimize the amount of replacement necessary, Progress Energy Florida's policy is not to request permission from the customer before load research meters are installed. The selection of replacements was handled differently depending on the rate class.

Replacements for the Residential class were picked from a list of randomly selected alternates that was generated at the same time the original sample was drawn. When a replacement was needed, it was selected as the first available alternate on the list from within the same stratum and district as the original sample.

Five replacement lists for the General Service Non-Demand rate class were selected. At the time the original sample was drawn, additional random samples were drawn to be used as replacements. The replacement samples were then ordered by January 2001 billing demand and matched to the (ordered) original sample.

Replacement lists for the General Service Demand class were taken from lists of all unselected accounts that were generated for the General Service Demand rate class at the same time the original sample was drawn. The replacement selected was the first account within the same stratum and district as the account being replaced.

STATISTICAL ACCURACY ACHIEVED

Tables 4 through 7 contain the estimated class demands for the coincident and non-coincident peaks for the Residential, General Service, General Service Demand, and Interruptible rate classes. Also included are the 90% confidence intervals around the monthly peak demands and their relative accuracy in percentage. The twelve coincident peak averages for all rate classes, their 90% confidence intervals, and their relative accuracy are computed for the twelve month period ending March, 2003. The statistics shown in tables 4-7 were obtained using MV90's Load Research software package.

The winter peak hour occurred at hour ending 0800 on Friday, January 24, 2003 and the summer peak hour occurred at hour ending 1700 on Wednesday, July 17th, 2002. The target level of statistical accuracy of plus or minus 10% error at the 90% confidence level for the system summer peak was met for all rate classes. The system winter peak accuracy was met for the General Service

Demand and Residential rate classes and the accuracy of the average of the twelve monthly coincident peaks was met for all rate classes.

TABLE 4

**PROGRESS ENERGY FLORIDA CORPORATION
LOAD RESEARCH DATA
TWELVE MONTHS ENDING MARCH 2003**

RESIDENTIAL (RS) CLASS

Month	KWH Sales	Class Coincident Peak					Coincident with System Peak				
		90%					90%				
		Estimated Peak (MW)	Confidence Interval (MW)	Relative Accuracy (%)	Date	Time	Estimated Peak (MW)	Confidence Interval (MW)	Relative Accuracy (%)	Date	Time
Apr-02	1,245,689,692	3,598.1	236.4	6.57	04/28/02	18:00	3,208.2	196.3	6.12	04/22/02	17:00
May-02	1,653,435,422	4,291.1	211.6	4.93	05/05/02	16:00	3,926.2	187.3	4.77	05/03/02	17:00
Jun-02	1,609,389,218	4,053.5	174.3	4.30	06/02/02	17:00	3,701.6	184.3	4.98	06/13/02	17:00
Jul-02	1,778,345,644	4,711.2	245.0	5.20	07/17/02	17:00	4,711.2	245.0	5.20	07/17/02	17:00
Aug-02	1,826,480,001	4,497.6	209.1	4.65	08/18/02	17:00	4,067.1	172.0	4.23	08/06/02	17:00
Sep-02	1,892,003,301	4,337.3	193.4	4.46	09/15/02	17:00	4,190.3	189.8	4.53	09/18/02	17:00
Oct-02	1,715,747,950	3,939.9	187.5	4.76	10/06/02	18:00	3,591.8	155.5	4.33	10/07/02	17:00
Nov-02	1,541,388,049	3,773.4	348.3	9.23	11/30/02	09:00	3,183.5	213.3	6.70	11/11/02	15:00
Dec-02	1,412,141,033	4,361.4	290.9	6.67	12/16/02	08:00	4,361.4	290.9	6.67	12/16/02	08:00
Jan-03	1,750,217,681	5,354.4	288.6	5.39	01/24/03	07:00	5,337.3	292.5	5.48	01/24/03	08:00
Feb-03	1,605,174,842	4,823.8	289.4	6.00	02/13/03	08:00	4,822.5	266.7	5.53	02/12/03	08:00
Mar-03	1,191,153,275	3,016.7	179.8	5.96	03/19/03	18:00	2,904.3	183.0	6.30	03/20/03	15:00
TWELVE COINCIDENT PEAK STATISTICS: Twelve Months Ending March 2003							4,000.5	102.2	2.56		

TABLE 5

**PROGRESS ENERGY FLORIDA CORPORATION
LOAD RESEARCH DATA
TWELVE MONTHS ENDING MARCH 2003**

GENERAL SERVICE (GS) CLASS

Month	KWH Sales	Class Coincident Peak					Coincident with System Peak				
		Estimated Peak (MW)	90% Confidence Interval (MW)	Relative Accuracy (%)	Date	Time	Estimated Peak (MW)	90% Confidence Interval (MW)	Relative Accuracy (%)	Date	Time
Apr-02	105,707,647	279.0	30.6	10.97	04/30/02	15:00	233.5	26.4	11.31	04/22/02	17:00
May-02	125,253,758	293.3	34.9	11.91	05/09/02	15:00	264.9	33.5	12.65	05/03/02	17:00
Jun-02	112,903,221	286.2	24.2	8.45	06/05/02	15:00	240.7	21.8	9.04	06/13/02	17:00
Jul-02	129,399,193	355.5	26.8	7.53	07/17/02	14:00	324.4	26.4	8.15	07/17/02	17:00
Aug-02	124,417,397	304.5	27.9	9.15	08/14/02	15:00	265.7	21.4	8.06	08/06/02	17:00
Sep-02	129,313,495	309.4	24.6	7.95	09/18/02	15:00	290.4	24.4	8.39	09/18/02	17:00
Oct-02	123,884,064	292.0	27.8	9.51	10/11/02	15:00	251.0	21.3	8.49	10/07/02	17:00
Nov-02	120,505,077	289.3	28.2	9.74	11/12/02	15:00	279.6	30.3	10.84	11/11/02	15:00
Dec-02	94,870,988	250.8	35.5	14.16	12/16/02	10:00	193.4	34.4	17.79	12/16/02	08:00
Jan-03	96,750,794	284.4	37.4	13.16	01/24/03	10:00	239.8	35.1	14.63	01/24/03	08:00
Feb-03	96,429,915	249.6	27.1	10.86	02/12/03	09:00	210.3	23.2	11.04	02/12/03	08:00
Mar-03	91,533,395	247.5	25.6	10.34	03/19/03	15:00	246.4	25.3	10.26	03/20/03	15:00
TWELVE COINCIDENT PEAK STATISTICS: Twelve Months Ending March 2003							253.3	16.3	6.41		

TABLE 6

**PROGRESS ENERGY FLORIDA CORPORATION
LOAD RESEARCH DATA
TWELVE MONTHS ENDING MARCH 2003**

GENERAL SERVICE DEMAND (GSD) CLASS

Month	KWH Sales	Class Coincident Peak					Coincident with System Peak				
		90% Estimated Peak (MW)			Confidence Interval (MW)		Relative Accuracy (%)			90% Estimated Peak (MW)	
		Date	Time		Date	Time		Date	Time		
Apr-02	1,072,015,770	2,152.1	74.7	3.47	04/30/02	15:00	2,030.9	63.8	3.14	04/22/02	17:00
May-02	1,294,425,644	2,793.2	196.4	7.03	05/03/02	15:00	2,658.0	191.1	7.19	05/03/02	17:00
Jun-02	1,211,359,823	2,603.2	182.2	7.00	06/03/02	14:00	2,503.6	171.7	6.86	06/13/02	17:00
Jul-02	1,306,608,162	2,861.2	198.0	6.92	07/17/02	14:00	2,733.8	193.3	7.07	07/17/02	17:00
Aug-02	1,284,975,626	2,700.8	200.4	7.42	08/26/02	14:00	2,604.8	183.4	7.04	08/06/02	17:00
Sep-02	1,305,435,756	2,732.5	195.9	7.17	09/19/02	15:00	2,613.3	191.0	7.31	09/18/02	17:00
Oct-02	1,244,970,249	2,626.4	194.4	7.40	10/01/02	14:00	2,488.3	187.1	7.52	10/07/02	17:00
Nov-02	1,253,734,194	2,737.6	191.4	6.99	11/12/02	14:00	2,659.5	183.5	6.90	11/11/02	15:00
Dec-02	1,100,896,726	2,347.2	181.9	7.75	12/05/02	14:00	1,865.9	136.6	7.32	12/16/02	08:00
Jan-03	1,018,383,469	1,957.3	83.6	4.27	01/24/03	10:00	1,830.1	79.1	4.32	01/24/03	08:00
Feb-03	995,232,110	2,113.0	60.2	2.85	02/21/03	14:00	1,634.7	51.7	3.16	02/12/03	08:00
Mar-03	1,053,589,467	2,139.5	70.0	3.27	03/20/03	14:00	2,139.5	70.0	3.27	03/20/03	15:00
TWELVE COINCIDENT PEAK STATISTICS: Twelve Months Ending March 2003							2,313.5	46.7	2.02		

TABLE 7

**PROGRESS ENERGY FLORIDA CORPORATION
LOAD RESEARCH DATA
TWELVE MONTHS ENDING MARCH 2003**

INTERRUPTIBLE (IS) CLASS

Month	KWH Sales	Class Coincident Peak					Coincident with System Peak				
		Estimated Peak (MW)	90% Confidence Interval (MW)	Relative Accuracy (%)	Date	Time	Estimated Peak (MW)	90% Confidence Interval (MW)	Relative Accuracy (%)	Date	Time
Apr-02	180,445,507	324.4	N/A	N/A	04/26/02	11:00	233.1	N/A	N/A	04/22/02	17:00
May-02	212,112,209	364.0	N/A	N/A	05/14/02	11:00	308.6	N/A	N/A	05/03/02	17:00
Jun-02	162,337,770	292.4	N/A	N/A	06/06/02	11:00	258.4	N/A	N/A	06/13/02	17:00
Jul-02	174,304,998	322.2	N/A	N/A	07/11/02	11:00	264.4	N/A	N/A	07/17/02	17:00
Aug-02	175,444,712	306.6	N/A	N/A	08/06/02	10:00	241.9	N/A	N/A	08/06/02	17:00
Sep-02	174,517,756	318.3	N/A	N/A	09/17/02	10:00	251.4	N/A	N/A	09/18/02	17:00
Oct-02	167,363,203	303.4	N/A	N/A	10/11/02	09:00	221.0	N/A	N/A	10/07/02	17:00
Nov-02	194,951,561	349.0	N/A	N/A	11/12/02	12:00	318.4	N/A	N/A	11/11/02	15:00
Dec-02	182,056,931	339.4	N/A	N/A	12/19/02	15:00	256.5	N/A	N/A	12/16/02	08:00
Jan-03	164,865,870	275.2	N/A	N/A	01/23/03	09:00	215.4	N/A	N/A	01/24/03	08:00
Feb-03	191,061,242	357.1	N/A	N/A	02/07/03	12:00	283.7	N/A	N/A	02/12/03	08:00
Mar-03	162,044,964	280.3	N/A	N/A	03/25/03	14:00	268.6	N/A	N/A	03/20/03	15:00
TWELVE COINCIDENT PEAK STATISTICS: Twelve Months Ending March 2003							260.1	N/A	N/A		

032603	921	862	816	775	797	853	1234	1512	1369	1308	1298	1427
032603	1619	1761	1820	2013	2015	2064	1999	2199	2209	1931	1664	1200
032703	1037	942	882	818	812	925	1249	1493	1489	1543	1704	1797
032703	1862	1963	1838	1843	1890	2108	2008	1960	1766	1683	1264	1133
032803	899	791	782	786	819	809	1195	1480	1453	1413	1495	1544
032803	1692	1854	2081	2288	2424	2365	2346	2350	2206	1983	1789	1371
032903	1049	885	839	803	771	818	1045	1135	1355	1657	1876	2198
032903	2238	2444	2571	2492	2580	2714	2260	2210	2055	1903	1688	1477
033003	1136	1038	957	856	848	879	983	1285	1584	1857	1748	1776
033003	1883	1678	1557	1618	1739	1645	1832	1957	1882	1697	1479	1275
033103	1107	1141	1112	1164	1347	1675	2440	2621	2313	1975	1924	1776
033103	1872	1599	1451	1552	1596	1880	2086	2289	2439	2209	2037	1836