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June 26, 2019

**Via Electronic Filing Clerk**
Mr. Adam Teitzman
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Blvd., Room 110
Tallahassee, FL 32399-0850

RE: FPL's Responses to Staff's First Data Request (Docket No. 20190000-OT)

Dear Mr. Teitzman:

Enclosed are Florida Power & Light Company's responses to Staff's First Data Request (Nos. 1-7) in Docket No. 20190000-OT. This is concerning FPL's 2019 Load Research Sampling Plan Filing (May 3, 2019) for informational purposes.

If you have any questions or require additional information about this filing, please call Tara Bachkosky at (561) 691-2391 or me at (561) 694-4184.

Sincerely,

/s/ *Tiffany Cohen*
Tiffany Cohen
Director, Rates and Tariffs

Enclosures
CC: Bill McNulty, Chief of Conservation and Forecasting (via electronic mail)
Tripp Coston, Economic Supervisor (via electronic mail)
Henry Merryday, Public Utility Analyst (via electronic mail)
Office of Commission Clerk

**QUESTION:**

Between 2017 and 2019, the GSD(T) Strata Break Point between strata 1 and 2 stayed at 16,640 kWh while the break point between strata 2 and 3 was adjusted from 65,920 kWh to 66,560 kWh (Columns [1]). What factors led to this particular change?

**RESPONSE:**

Prior to their deployment, the sample sizes shown on the 2017 Sampling Plan are recalculated using the most current available load research data. This is done to ensure that data is not stale when new samples are deployed. The process for developing sample sizes involves listing customers from smallest to largest usage and then applying a frequency distribution to develop strata breakpoints to ensure that samples incorporate customers from each stratum. When the GSD(T) sample was recalculated in 2018, the frequency distribution of the 2018 data resulted in different breakpoints due to the variability in customer usage patterns between the 2018 data and the data utilized in the 2017 sampling plan. The underlying reasons for changes in customer usage patterns are not revealed by the study. Examples for possible reasons include differences related to weather or the addition of large usage customers.

**QUESTION:**

For what reason(s) did the proposed sample size for GSD(T) increase from 240 in 2017 to 320 in 2019 (Columns [7])?

**RESPONSE:**

To ensure that a sufficient number of sample points are chosen, FPL analyzes three years of data to choose the month that produces the largest number of sample points. For example, the 2017 Sampling Plan utilized January 2014 data for the calculation which produced the largest sample size to date. When recalculating for the 2019 GSD(T)-1 sample deployment, January 2018 load research data produced the largest sample size requirement (320) and was therefore selected. The sample deviation from January 2014 to January 2018 was higher due to an early morning peak that occurred in January 2018 that resulted in greater customer usage variability.

**QUESTION:**

Similarly, for what reason(s) did the proposed sample for GSLD(T) decrease from 125 in 2017 to 109 in 2019 (Columns [7])?

**RESPONSE:**

To ensure that a sufficient number of sample points are chosen, FPL analyzes three years of data to choose the month that produces the largest number of sample points. The 2017 Sampling Plan utilized February 2015 data for the calculation which produced the largest sample size to date. When recalculating for the 2019 GSLD(T)-1 sample deployment, January 2018 load research data produced the largest sample size requirement (109) and was therefore selected. The sample size decreased because the sample points were more homogenous than in the previous sample.

**QUESTION:**

Please provide the calculations/basis for YBAR for both rate classes (Calculations table for 2019 Load Research Sampling Plan).

**RESPONSE:**

YBAR for GSD = GSD CP JAN2018 / Total # of Customers for JAN2018
2768905 / 105992 = 26.1237

YBAR for GSLD = GSLD CP JAN2018 / Total # of Customers for JAN2018
1135676 / 2858 = 397.3674

**QUESTION:**

Why is n (required new sample size) divided by 0.3 (Calculations table for 2019 Load Research Sampling Plan)? What is the meaning of 'n(with losses)'?

**RESPONSE:**

In the Sampling Plan, 'n' represents the sample size of customer premises and the 'n(with losses)' is the sample size adjusted for expected losses using the Neyman Allocation method. The Neyman Allocation method requires that sample sizes be adjusted to account for losses to ensure survey precision. These losses may occur when accounts are final billed, customers change rate schedules or data is compromised due to a bad meter. The 0.3 percentage of losses represents a very conservative estimate of the percentage of premises that are expected to remain in the sample. FPL began to use 0.3 for losses after AMI meters were implemented as AMI represented a significant new technology and process changes. A smaller percentage for losses results in a larger sample size which maximizes overall survey precision.

**QUESTION:**

Please define SDRh and explain what it measures. Please discuss the significance of the residuals and their standard deviation in each stratum.

**RESPONSE:**

In the Sampling Plan, SDRh stands for the Standard Deviation of Residuals for each stratum at the time of the supplied peak. The standard deviation of residuals is a statistical term used to describe the difference in standard deviations of observed values versus predicted values as shown by points in a regression analysis. Regression analysis is a method used in statistics to show a relationship between two different variables, and to describe how well you can predict the behavior of one variable based on the behavior of another. The residuals for each stratum are noted on column 3, labeled SDRh, for each sample installation.

**QUESTION:**

If previous load forecasting studies are not available, where would existing stratum sizes and samples come from for such load sampling plans?

**RESPONSE:**

FPL assumes that this question is asking about previous load research studies, as load forecasting studies are not used for load research. Load research uses actual customer meter data. If previous load research data were not available, FPL would deploy and analyze a pilot of 30 minimum sample points and, thereafter, deploy a more precise sample based on the pilot results.