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-VIA ELECTRONIC FILING-

Mr. Adam Teitzman
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahsee, FL 32399-0850

**Re: Florida Power & Light Company's 2019 Ten Year Power Plant Site Plan
Docket 20190000-OT (Undocketed filings for 2019)**

Dear Mr. Teitzman:

Please find enclosed for electronic filing Florida Power & Light Company's response to Staff's Second Supplemental Data Request (Nos. 1-3)

If there are any questions regarding this transmittal, please contact me at 561-304-5662.

Sincerely,

s/ William P. Cox

William P. Cox
Senior Attorney
Florida Bar No. 0093531

Enclosure

cc: Douglas Wright / Philip Ellis, Division of Engineering

QUESTION:
Forecasting

With respect to the forecasting methodology, procedure, and accuracy associated with FPL's forecast of "Sales to Ultimate Customers," please specify all the differences/ modifications/ improvements, if any, between FPL's 2018 TYSP and 2019 TYSP.

RESPONSE:

The actual forecast variance for Sales to Ultimate Customers, through June has improved from +2.17% in the 2018 TYSP to -0.44% in the 2019 TYSP. The actual forecast variance for customers has improved as well over this time period, from -0.18% in the 2018 TYSP to +0.11% in the 2019 TYSP.

The models used in developing the 2019 TYSP forecast included an additional 14-15 months of actual data in the estimation period. Economic forecasts, provided by IHS Markit, were also updated to the latest forecasts available at the time the sales forecasts were developed.

Below is a detailed list of additional changes made to the models that were used to develop the forecast of Sales to Ultimate Customers. Since the sum of the revenue class forecasts is calibrated to the Sales derived from the Net Energy for Load (NEL) forecast, changes to the NEL model are also specified.

- Residential Sales Model
 - An income and an electric price term were added.
 - Dummy variables for January 2010 and November 2016 were removed from the model as they were no longer needed with the new model specification.

- Commercial Sales Models
 - The commercial sales forecast is developed using four separate models;
 - For the large commercial sales model, the heating degree day term was removed from the model, as was the dummy for Hurricane Irma.
 - For the medium commercial sales model, the electric price term and the dummy for Hurricane Irma were removed from the model.
 - For the small commercial sales model, the income term and Hurricane Irma dummy were removed from the model and a variable for housing starts and a lagged dependent variable were included in the model.
 - For the commercial lighting model, a Florida employment variable was added to the model and a lagged dependent variable and dummies for January 2010 and November 2016 were removed.

- Industrial Sales Models

The industrial sales forecast is developed using three separate models;

- For the large industrial sales model, no changes were made.
- For the medium industrial sales model, an exponential smoothing model was used. This replaced the regression model used in the 2018 TYSP.
- For the small industrial sales model, the lagged dependent variable and housing starts variable were removed from the model and a Gross State Product per employee variable was included in the model.

- No changes were made to the sales forecasting methodology for the Street & Highway Lighting, Sales to Public Authorities, Railroads & Railways, and Wholesale classes.

- Customer Forecasts

- Since our sales models are use-per-customer models, the forecast of customers will affect the sales forecast. There were no significant changes made to the customer forecast models or methodologies for the total, residential, commercial, industrial, Railroads & Railways, Sales to Public Authorities, and wholesale classes. For the Street & Highway customer forecast, we replaced the simple trended forecast with an exponential smoothing model.

- NEL Model

- The model was changed from a monthly to a daily model.
- The leap-year term was removed from the model.
- Monthly dummies were replaced with monthly temperature variables.
- The price decrease term was removed from the model.
- Dummy variables were added to account for Hurricane Irma.

QUESTION:
Manatee Retirement

Referring to FPL's decision to retire Manatee Units 1 and 2:

- a. Please identify and explain the net benefits of the retirement.
- b. Please identify and explain the reason for the retirement.
- c. Please identify what type of retirement is planned (full decommission, stasis, etc.).
- d. Please identify and explain any alternatives to the retirement FPL considered, if any.

RESPONSE:

- a. The Manatee units began commercial operations in 1976 (Unit 1) and 1977 (Unit 2). These 40-plus year-old units have heat rates in excess of 10,000 BTU/kWh, which means that they are relatively fuel-inefficient units, particularly compared to the rest of the units in FPL's current generation fleet. Consequently, both of the Manatee units are operating at low capacity factors (approximately 11% in 2018), and their capacity factors are projected to trend even lower in the coming years as FPL's generation system becomes even more fuel-efficient. In addition, these large 800 MW units have significant combined annual capital and O&M costs that are projected to continue in order to keep these units operational going forward.

As a result, FPL analyzed whether it was more economic to keep the Manatee units operational through the year 2028 or to retire the units earlier in 2021. (Please see FPL's response to part (d) of this data request.) The projected savings for FPL's customers in annual capital and O&M costs from a 2021 retirement, compared to a 2028 retirement, was approximately \$250 million CPVRR. Offsetting this to a degree were projected generation and transmission costs needed to address the retirement of the firm capacity from these Manatee units. The result is a projected net savings from early (2021) retirement of Manatee Units 1 & 2 of approximately \$101 million CPVRR. In addition to these projected net savings, there are also projected reductions in system gas usage and system CO₂ emissions between 2021 through 2028.

- b. Please see FPL's response to subpart (a) of this data request.
- c. The planned retirement is a full retirement including decommissioning and dismantlement of the units.
- d. FPL's analyses evaluated two retirement scenarios for these vintage units: a scenario of a late 2028 retirement for both units (which assumes an approximately 50-year life for the units), and a scenario of an earlier retirement in 2021 for both units. The projected annual operating

costs for each scenario were assumed. The analyses were performed as part of FPL's 2019 Ten Year Site Plan work, which used the EGEAS optimization model and which considered a variety of resource options including gas-fired generation, solar, and batteries.

QUESTION:
Flood Mitigation

Please explain the Utility's planning process for flood mitigation for current and proposed power plant sites and transmission/distribution substations.

RESPONSE:

FPL designs and constructs new infrastructure to comply with applicable codes, including flood protection requirements. The Company continuously monitors existing infrastructure – which was previously built to applicable codes – and makes necessary adjustments to ensure reliable generation and delivery of electricity to its customers.