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FPL's Response to Staff's Fifth Interrogatories Nos. 104-122.

(amended response for No. 115)

(including attachments for Nos. 107, 109, 115, 120, and 121)

QUESTION:
Please refer to FPL witness Park's Direct Testimony, page 8, lines 19-22. Witness Park states, "Through 2023, population is projected to grow at an average annual rate of 1 percent, compared to the average annual growth rate of 1.4 percent for the period from 2016 through 2019." Please identify Witness Park's source for these population growth figures and how this information was used, if at all, by FPL in its forecast of customers in this proceeding.

RESPONSE:
The population estimate referenced in Witness Park's testimony is *Resident Population of Florida*. Historical data is provided by the U.S. Census Bureau and forecasts are provided by IHS Markit (2020). The residential customer forecast models for both FPL and Gulf rely on households, not population, as an explanatory variable. However, population growth and household growth are linked, and the differentiating factor is persons per household.

QUESTION:
Please refer to FPL witness Park's Direct Testimony, page 9, lines 8-9 as well as MFR Schedule F-7 for the following questions. Witness Park states, "The impacts of COVID-19 to date, and the projected recovery are captured in the forecasts." Please identify and explain:

a. For FPL/Gulf Consolidated and Standalone forecasts, the methodology used to determine the differing impacts the COVID-19 pandemic on each rate class. For example, the FPL's small/medium commercial usage model appears to capture the COVID-19 impact via binary variables for April 2020 through July 2020 while the residential usage model appears to capture the COVID-19 impact via only one binary variable for May 2020.

b. The FPL/Gulf's quantitative assessment(s) of the impact the COVID-19 pandemic has had on the Company's 2020 and 2021 YTD customer and energy sales (by totals and by rate class, for both Consolidated and Standalone cases), as well as the Company's customer and energy sales forecasts (by totals and by rate class) for the remainder of 2021, the 2022 test year, and the 2023 subsequent test year.

RESPONSE:
a. In general, a binary variable is added to a model when the dependent variable is affected by factors not captured by the other explanatory variables, such as income or employment. In the case of FPL's small/medium commercial usage model, the decrease in usage was not adequately explained by the decrease in Florida's employment for the months of April through July 2020. The inclusion of those binary variables explained this difference and its timing coincided with Florida's economy shutting down. In the case of FPL's residential usage model, the increase in usage was greater during April 2020 than expected and did not appear to be adequately explained by the increase in real personal income for the month of May 2020. The inclusion of the binary variable in this instance supplements the model's explanatory variables and corresponds to the timing of the economy shutting down. The binary variable was only significant for 1 month.

b. The Company does not have a quantitative assessment of the full impacts of the COVID-19 pandemic on 2020 and 2021 YTD customer growth and energy sales because the Company is not able to quantify with certainty the impacts directly attributable to the COVID-19 pandemic on the various drivers of customer growth and energy usage. In the instance of Residential usage, the historical data for real personal income does not separately quantify the impacts from the COVID-19 pandemic versus the other factors with affected real personal income. Thus, the Company is not able to quantify with certainty the impacts directly attributable to the pandemic.

The Company does not have a quantitative assessment of the full impacts of the COVID-19 pandemic for the remainder of 2021, 2022, or 2023. The economic projections from IHS Markit explicitly incorporate assumptions regarding impact and recovery from the COVID-19 pandemic. However, the impacts directly attributable to the pandemic are not quantified separately for the economic variables, such as real personal income. Because the pandemic impacts are not quantified separately in the economic projections, the Company is not able to quantify with certainty the impacts directly attributable to the pandemic.

QUESTION:
Please refer to FPL Witness Park's Direct Testimony, Page 13, lines 12-15 for the following:

a. Please list all the FPSC filings in which FPL presented the customer, energy, or demand forecasts presented in MFR Schedules F5 and F7, and explain how they were used in dockets or otherwise by the Commission.

b. Please list all FPSC dockets which were opened after August 2020 in which FPL filed customer, energy, or demand forecasts which were different from the forecasts presented in witness Park's direct testimony and MFR Schedules F5 and F7. Explain in each instance, if any, why a different forecast was used and how those forecasts differed from those in the instant case.

c. What is the developmental schedule for each updated and/or scheduled FPL and Gulf load and customer forecast subsequent to the forecasts filed in this proceeding?

RESPONSE:
a. The following FPL filings used the same load forecast as provided in MFR Schedules F5 and F7:

- 20200000- OT– FPL's and Gulf's 2021-2030 Ten Year Site Plan
- 20210001-EI – Fuel and purchased power cost recovery clause with generating performance incentive factor (2021 fuel mid-course correction)
- 20210010-EI – Storm Protection Plan Cost Recovery Clause
- 20210067-EQ – Petition for approval of renewable energy tariff and standard offer contract

Additionally, the following Gulf filings use the same load forecast as provided in MFR Schedules F5 and F7:

- 20200241-EI - Petition for limited proceeding for recovery of incremental storm restoration costs related to Hurricane Sally, by Gulf Power Company
- 20210066-EQ – Petition for approval of new standard offer for purchase of firm capacity and energy from renewable energy facilities or small qualifying facilities and rate schedule QS-2

b. None.

c. FPL and Gulf update the load forecast on an annual basis. The load and customer forecasts presented in MFR Schedules F-5, F-7 and F-8 were released in October 2020. The next load and customer forecasts are expected to be updated late 2021.

QUESTION:
For each forecast appearing in MFR Schedule F-7 (Consolidated and Standalone), please provide the dependent variable annualized, using calendar year format (January through December, aggregated or averaged or end of year, as appropriate) for all years (historical, historical and forecasted, and forecasted), and provide year-over-year percentage changes for each such variable.

RESPONSE:
Please see Attachment No. 1 for FPL's response and Attachment No. 2 for Gulf Power's response.

QUESTION:
Please refer to FPL witness Park's Direct Testimony, page 16, lines 1-11. Witness Park states that the Company developed its historical normal weather benchmark using a 20-year average. Please describe the trend, if any, in the temperature data used by FPL and Gulf (CDHs, HDHs, etc.) over the 20-year period. Please explain how FPL analyzed this for FPL and Gulf as well as for the consolidated companies.

RESPONSE:
When comparing the 20-year normal weather for the period ending 2020 versus the period ending 2015, FPL and Gulf service areas have experienced higher cooling degree hours (CDHs), lower heating degree hours (HDHs), and greater volatility for both CDHs and HDHs, as expressed by higher standard deviations.

For the months of July and August, FPL's CDHs increased by an average of 1.9 percent while the standard deviations increased by an average of 9.6 percent. Gulf's CDHs increased by an average of 1.0 percent while the standard deviations increased by an average of 0.3 percent. The CDH analysis was performed using July and August because these months typically have the highest cooling load and the greatest number of CDHs for both FPL and Gulf.

For the months of December, January, and February, FPL's HDHs decreased by an average of 7.8 percent while the standard deviations increased by an average of 2.4 percent. Gulf's HDHs decreased by an average of 5.3 percent while the standard deviations increased by an average of 15.0 percent. The HDH analysis was performed using December, January, and February because these months typically have the highest heating load and the greatest number of HDHs for both FPL and Gulf.

FPL's historical weather data is a system, energy-weighted average of the Miami, West Palm Beach, Fort Myers, and Daytona Beach weather stations while Gulf's historical weather data is from the Pensacola weather station. The CDHs for both FPL and Gulf were calculated using a 72-degree threshold temperature while the HDHs were calculated using a 56-degree threshold temperature. The analyses were only performed for the standalone entities because historically the companies operated as separate entities. The forecasts were developed on a standalone basis and the consolidated FPL forecast was developed by combining the standalone forecasts.

QUESTION:
Please refer to FPL witness Park's Direct Testimony, page 20, lines 14-23; page 21, lines 1-22; page 30, lines 19-22; and page 31, lines 1-23. FPL witness Park states that certain changes were made to the customer and energy sales forecast methodology since FPL and Gulf's prior rate cases. For each rate class and forecast type (customer, energy, demand), please compare the model equations and model assumptions from the last rate case (for both FPL and Gulf) to those of the instant case. In the comparison, please identify all the changes, including added/deleted variables, new sources of data, model specifications, any changes in basic assumptions, as well as supporting rationale (R2, MAPE, and D-W) for these changes in methodology.

RESPONSE:
FPL customer models
Since FPL's 2016 rate case, FPL has adopted Gulf's "bottom-up" approach instead of the previously used "top-down" approach, which meant the total customer model was no longer needed. Another change was the combination of small and medium commercial customers into a single segment, whereas small and medium commercial customers were previously modeled separately. The Other and Railroads & Railways classes are now modeled using exponential smoothing models, whereas they were previously forecasted using either a simple trend or fixed level. Additionally, there were minor changes to variables, such as changing from population to households for the residential model.

The adoption of the bottom-up approach allows the customer forecast to better reflect the differences in growth rates between the classes as well as improving the consistency between FPL and Gulf. The combination of small and medium commercial customers improves model fit with history. The use of exponential smoothing models for Other and Railroads & Railways as well as the minor changes to variables are part of the ongoing process of improving the forecasting process and models.

Comparisons of all FPL Customer models, including model types, model variables, and model statistics, are shown in the attachment "Staff ROG 109 Attachment 1 – FPL Customers.xlsx".

FPL energy models
Since FPL's prior rate case, the major change was the adoption of the "bottom-up" approach instead of the previously used "top-down" approach, which meant the Net Energy for Load ("NEL") model was no longer needed. To remain consistent with the changes that were made in the FPL customer models, small and medium commercial energy sales are now combined into a single segment, whereas they were previously modeled separately. The current medium industrial and Other energy sales are now modeled using an exponential smoothing model when previously a regression model and a simple trend were used respectively. Additionally, the Metro sales are now modeled using a regression model whereas they were previously modeled using a simple trend. Lastly, there were minor changes to variables, such as changing from weighted per capital income to real personal income per household in the residential model.

The use of the "bottom-up" approach in the FPL energy sales models allows each forecast to better reflect the differences in growth rates between the classes as well and improving the consistency between FPL and Gulf. The combination of the Small and Medium Commercial classes into one model was done to be consistent with the customer model. Modeling the Medium Industrial and Other sales using an exponential smoothing model, modeling the Metro sales with a regression model, and the minor changes to variables in the models are part of the ongoing process of improving the forecasting process and models.

Comparisons of all FPL Energy Sales models, including model types, model variables, and model statistics, are shown in the attachment "Staff ROG 109 Attachment 2 – FPL Sales and Peaks.xlsx".

FPL peak demand models

FPL's peak demand models are generally similar to those used in its 2016 rate case, with minor changes to model variables such as changing from Florida household disposable income and CPI – Energy to total nonfarm employment in the summer peak model.

Additionally, the changes to the variables in the peak demand model were made as part of the ongoing process of improving the forecasting process and models.

Comparisons of all FPL Peak models, including model types, model variables, and model statistics, are shown in the attachment "Staff ROG 109 Attachment 2 – FPL Sales and Peaks.xlsx".

Gulf customer models

Since Gulf's 2016 rate case, Gulf has adopted FPL's econometric modeling approach instead of relying on field marketing managers for short-term forecasts of customers. Residential and Small Commercial Customers are now modeled using regression while Large Commercial Customers and Industrial Customers are now modeled using exponential smoothing.

The adoption of FPL forecasting methodology and econometric modeling improved the consistency between the FPL and Gulf forecasting processes.

Comparisons of all Gulf Customer models, including model types, model variables, and model statistics, are shown in the attachment "Staff ROG 109 Attachment 3 – Gulf Customers.xlsx".

Gulf energy models

Since Gulf's 2016 rate case, Gulf adopted FPL's approach for modeling industrial energy sales instead of relying on field marketing managers for short-term forecasts of energy sales. Additional changes from the 2016 rate case include minor changes to the variables used in the Residential, Small Commercial, and Large Commercial, energy sales models.

The use of an exponential smoothing model for Industrial energy sales improved the consistency between the FPL and Gulf forecasting processes and the minor changes to variables in the other models were part of the ongoing process of improving the forecasting models.

Comparisons of all Gulf Customer models, including model types, model variables, and model statistics, are shown in the attachment "Staff ROG 109 Attachment 4 – Gulf Sales and Peaks.xlsx".

Gulf peak demand models

Since Gulf's 2016 rate case, Gulf has adopted FPL's approach for modeling peak demands, which relies on econometric models to forecast summer and winter peaks. Previously, Gulf relied on a Southern Company proprietary model (Peak Demand Model or "PDM"). The variables used to model the summer peak now include the peak day cooling degree hour, the weighted per capita income, and the impact of codes and standards. The winter peak variables include the minimum temperature on peak day, the number of customers, and energy efficiency.

The adoption of FPL's peak demand forecasting methodology improved the consistency between the FPL and Gulf forecasting processes.

Comparisons of Gulf's Peak models, including model types, model variables, and model statistics, are shown in the attachment "Staff ROG 109 Attachment 4 – Gulf Sales and Peaks.xlsx".

QUESTION:
Please refer to FPL witness Park's Direct Testimony, page 32, lines 10-12. Witness Park states, "The standalone FPL model includes variables for cooling degree hours, heating degree hours, income, electricity prices, *energy efficiency codes and standards*, binary terms, and an autoregressive term." Please identify the source(s) of the "energy efficiency codes and standards" that Witness Park references.

RESPONSE:
The energy efficiency codes & standards variable is based on a study for FPL performed by Itron, one of the leading consulting firms in the energy sector. This study is conducted every two years and is designed to capture the efficiency improvements resulting from 16 specific federal and state energy efficiency programs. These 16 programs include efficiency improvements resulting from mandated efficiency standards for air conditioners, water heaters, refrigerators and freezers, the switch from incandescent to more efficient lighting such as CFLs and LEDs, electric motors, and higher building code standards.

QUESTION:
Please refer to FPL witness Park's Direct Testimony, Page 39, lines 2-4. Please define "other energy forecast" customers and explain their energy usage.

RESPONSE:
The "Other" customer class is a closed class consisting of a single military installation and a small number of sports field lighting customers. The class is closed to new customers, so the number of customers and energy sales will decline as existing customers drop off.

QUESTION:
Please refer to FPL witness Park's Direct Testimony, page 42. Please explain FPL's computational approach to determining the diversity benefit of the combined system.

RESPONSE:
The diversity benefits of the combined system were determined by comparing the sum of the individual system peak demands against the system peak demand of the combined system. The combined system peak demand was developed by combining the hourly forecasts for the individual systems. The hourly forecasts for the individual systems were developed by applying the forecasted monthly peak demands with a hourly seedshape, where the seedshape is a representative hourly load profile based on historical hourly load data. The Gulf hourly load profile was adjusted to Eastern time zone.

QUESTION:
Please explain how FPL calculated real electricity price for FPL and Gulf. Please identify all sources FPL utilized in its calculation.

RESPONSE:
Total projected retail revenues, including all clauses, taxes, and franchise fees, were divided by the projected retail energy sales to arrive at nominal retail electricity prices. The nominal prices were then deflated by the personal income deflator to arrive at the real electricity prices. The projected retail revenues for FPL and Gulf were provided by FPL's financial forecasting department in September 2020. The personal income deflator was from IHS Markit's August 2020 economic projections.

QUESTION:
Please refer to the Company's forecast models appearing in MFR Schedule F-5 (Document 29 of 69), in particular, the following models with relatively low adjusted R-squared values:

- FPL Large Industrial Usage (Adjusted R-Squared = 0.566)
- FPL Other Sales (Adjusted R-Squared = 0.419)
- FPL Railroads & Railways Sales (Adjusted R-Squared = 0.562)

Please explain if any alternative methods of projecting these series were considered by the Company, as well as the Company's rationale for selecting the models it did.

RESPONSE:
Auto Regressive Integrated Moving Average (ARIMA) models, Ordinary Least Squares (OLS) or regressions models, and Exponential Smoothing models are available options in the Metrix ND application and are investigated in the general course of model development. Final model specifications are chosen based on a number of factors, including reasonableness of the projections and model statistics, such as R-squared.

As discussed in FPL Witness Park's Direct Testimony, page 38, lines 4-15, FPL's large industrial customer segment has a relatively small number of customers and is driven by unpredictable factors such as customer outages. The model selection was not based on the R-squared value alone but instead was based on the ability of the model to produce a reasonable forecast.

FPL's Other class is closed to new customers and is composed of a single military installation and a small number of ball field lighting customers. Similar to Large Industrial usage, the Other class model was selected based on the ability of the model to produce a reasonable forecast and not solely on the R-squared value alone.

FPL's Railroads & Railways class consists of a single customer whose usage has a seasonal pattern but generally flat growth. The model was selected based on its ability to produce a reasonable forecast of the customer's usage.

QUESTION:
For MFR Schedule F-7 Consolidated and Standalone Forecasts, beginning with the first data point (month/year) that FPL/Gulf used for their model customer and sales projections to the most recent available actual monthly data point, please provide the following:

a. For each rate class, a side-by-side comparison of FPL/Gulf's then-projected monthly forecasts to FPL/Gulf's actual monthly result, including both quantities and percent differences.

b. A causative explanation for any deviations greater than 15 percent for sales and demand forecasts and 3 percent for customer forecasts.

RESPONSE:
a. Please see Attachments No 1 and No 2 to this response for the customer variances, weather normalized retail energy variances, and weather normalized winter peak variances for FPL and Gulf Power, respectively. Since the summer peak has not yet occurred, the summer peak variances cannot be determined.

b. Explanations for any deviations greater than 15 percent for sales and demand forecasts and 3 percent for customer forecasts can be found on the respective tab in the attached files.

QUESTION:
For MFR Schedule F-7 Consolidated and Standalone Forecasts, beginning with the first data point (month/year) that FPL/Gulf used for their model customer and sales projections to the most recent available actual monthly data point, please provide the following:

a. For each rate class, a side-by-side comparison of FPL/Gulf's then-projected monthly forecasts to FPL/Gulf's actual monthly result, including both quantities and percent differences.

b. A causative explanation for any deviations greater than 15 percent for sales and demand forecasts and 3 percent for customer forecasts.

RESPONSE:
a. Please see Attachments No 1 and No 2 to this response for the customer variances, retail energy variances, and winter peak variances for FPL and Gulf Power, respectively. Since the summer peak has not yet occurred, the summer peak variances cannot be determined.

b. Explanations for any deviations greater than 15 percent for sales and demand forecasts and 3 percent for customer forecasts can be found on the respective tab in the attached files.

QUESTION:
Is it correct that FPL MFR Schedules F-5, F6, and F7 for the 2022 test year (Standalone case, appearing in Documents 44 and 45 of 69) are identical to the MFR Schedules F-5, F-6, and F-7 for the 2023 Subsequent Test Year (also Standalone case, appearing in Documents 52 and 53 of 69)? Is this relationship (2022 schedule data the same as 2023 schedule data) also true for similar Gulf Standalone MFR schedules as well as Consolidated Companies' MFR Schedules? If not, please explain the reasons for any differences.

RESPONSE:
FPL MFR Schedules F-5 and F-7 for the 2022 test year are identical to the MFR Schedules F-5 and F-7 for the 2023 Subsequent Test Year. However, MFR Schedule F-6 for the 2022 Test Year differs slightly from the 2023 Subsequent Test Year due to the year over year change in the values of the dependent variables that the sensitivity analysis is applied to.

This relationship is the same for Gulf Standalone as well as Consolidated companies' MFR Schedules

QUESTION:
Please refer to Page 21 of witness Park's direct testimony, Lines 6-17. How do FPL's models account for specific events for the 2022 and 2023 test years that are known to its field marketing managers which may significantly impact customers, sales, and demand, such as new housing developments, port expansions, new large commercial expansions or contractions in the service area, and new or exiting large industrial customers and/or processes?

RESPONSE:
FPL witness Park's direct testimony, page 21, line 6-17 refer to a method that was previously used by Gulf in its 2016 rate case. As explained on page 21, lines 13-17 of the direct testimony of FPL witness Park, Gulf's current forecast used in this proceeding relies on the same economic modeling methods that have been employed by FPL for several years, including FPL's 2016 rate case.

Events that impact customer, sales, and demand growths, such as new housing developments and commercial expansions, are reflected in the economic variables used in FPL's models. The impacts of similar factors on Gulf's customer, sales, and demand growths are also reflected in the economic variables used in Gulf's models.

QUESTION:
Please provide actual data and three-year forecast data for total customers and retail energy sales, for 2017, 2018, 2019, and 2020, for FPL and Gulf (consolidated and standalone) as shown below:

Year	FPL Standalone - Accuracy of Total Customers Forecasts					
	Forecast Error Rate (%)				0-3 Year Error (%)	
	Years Prior*				Average	Absolute Average
	3 Years	2 Years	1 Year	0 Years		
2017						
2018						
2019						
2020						
Average						

*Examples: In the column '3 Years,' row '2017', enter the percent error in the Company's 2014 forecast of 2017 customers. Similarly, in the column '0 Years', row '2020', enter the percent error in the Company's 2020 forecast of 2020 customers.

Year	FPL Standalone - Accuracy of Retail Energy Sales Forecasts					
	Forecast Error Rate (%)				0-3 Year Error (%)	
	Years Prior*				Average	Absolute Average
	3 Years	2 Years	1 Year	0 Years		
2017						
2018						
2019						
2020						
Average						

*Examples: In the column '3 Years,' row '2017', enter the percent error in the Company's 2014 forecast of 2017 retail energy sales. Similarly, in the column '0 Years', row '2020', enter the percent error in the Company's 2020 forecast of 2020 retail energy sales.

Year	Gulf Standalone - Accuracy of Total Customers Forecasts					
	Forecast Error Rate (%)				0-3 Year Error (%)	
	Years Prior*				Average	Absolute Average
	3 Years	2 Years	1 Year	0 Years		
2017						
2018						
2019						
2020						
Average						

*Examples: In the column '3 Years,' row '2017', enter the percent error in the Company's 2014 forecast of 2017 customers. Similarly, in the column '0 Years', row '2020', enter the percent error in the Company's 2020 forecast of 2020 customers.

Year	Gulf Standalone - Accuracy of Retail Energy Sales Forecasts					
	Forecast Error Rate (%)				0-3 Year Error (%)	
	Years Prior*				Average	Absolute Average
	3 Years	2 Years	1 Year	0 Years		
2017						
2018						
2019						
2020						
Average						

*Examples: In the column '3 Years,' row '2017', enter the percent error in the Company's 2014 forecast of 2017 retail energy sales. Similarly, in the column '0 Years', row '2020', enter the percent error in the Company's 2020 forecast of 2020 retail energy sales.

Year	FPL/Gulf Consolidated- Accuracy of Total Customers Forecasts					
	Forecast Error Rate (%)				0-3 Year Error (%)	
	Years Prior*				Average	Absolute Average
	3 Years	2 Years	1 Year	0 Years		
2017						
2018						
2019						
2020						
Average						

*Examples: In the column '3 Years,' row '2017', enter the percent error in the Company's 2014 forecast of 2017 customers. Similarly, in the column '0 Years', row '2020', enter the percent error in the Company's 2020 forecast of 2020 customers.

Year	FPL/Gulf Consolidated- Accuracy of Retail Energy Sales Forecasts					
	Forecast Error Rate (%)				0-3 Year Error (%)	
	Years Prior*				Average	Absolute Average
	3 Years	2 Years	1 Year	0 Years		
2017						
2018						
2019						
2020						
Average						

*Examples: In the column '3 Years,' row '2017', enter the percent error in the Company's 2014 forecast of 2017 retail energy sales. Similarly, in the column '0 Years', row '2020', enter the percent error in the Company's 2020 forecast of 2020 retail energy sales.

RESPONSE:
See the tables below for standalone FPL, standalone Gulf, and consolidated FPL. Please note that a negative variance means that the actuals were less than the forecast, and a positive variance means that the actuals were greater than the forecast. Additionally, all actual retail energy sales are weather normalized.

Standalone FPL

Year	FPL Standalone - Accuracy of Total Customers Forecasts					
	Forecast Error Rate (%)				0-3 Year Error (%)	
	Years Prior*				Average	Absolute Average
	3 Years	2 Years	1 Year	0 Years		
2017	-0.4	-0.4	-0.3	-0.2	-0.3	0.3
2018	-0.6	-0.6	-0.4	-0.1	-0.4	0.4
2019	0.0	0.3	0.6	0.2	0.3	0.3
2020	0.5	0.9	0.5	0.4	0.6	0.6
Average	-0.1	0.1	0.1	0.1	0.0	0.4

*Examples: In the column '3 Years,' row '2017', enter the percent error in the Company's 2014 forecast of 2017 customers. Similarly, in the column '0 Years', row '2020', enter the percent error in the Company's 2020 forecast of 2020 customers.

Year	FPL Standalone - Accuracy of Retail Energy Sales Forecasts					
	Forecast Error Rate (%)				0-3 Year Error (%)	
	Years Prior*				Average	Absolute Average
	3 Years	2 Years	1 Year	0 Years		
2017	-5.8	-4.6	-1.2	-2.0	-3.4	3.4
2018	-2.8	1.6	0.3	2.5	0.4	1.8
2019	0.3	-0.9	0.5	-1.0	-0.3	0.6
2020	-1.1	0.6	-1.3	-1.3	-0.8	1.1
Average	-2.4	-0.8	-0.4	-0.5	-1.0	1.7

*Examples: In the column '3 Years,' row '2017', enter the percent error in the Company's 2014 forecast of 2017 retail energy sales. Similarly, in the column '0 Years', row '2020', enter the percent error in the Company's 2020 forecast of 2020 retail energy sales.

Standalone Gulf

Year	Gulf Standalone - Accuracy of Total Customers Forecasts					
	Forecast Error Rate (%)				0-3 Year Error (%)	
	Years Prior*				Average	Absolute Average
	3 Years	2 Years	1 Year	0 Years		
2017	-0.3	0.0	0.1	0.2	0.0	0.1
2018	-0.3	-0.2	0.2	-0.2	-0.1	0.2
2019	-1.4	-0.9	-1.5	-1.5	-1.3	1.3
2020	-0.7	-1.4	-1.8	-0.3	-1.1	1.1
Average	-0.7	-0.6	-0.8	-0.5	-0.6	0.7

*Examples: In the column '3 Years,' row '2017', enter the percent error in the Company's 2014 forecast of 2017 customers. Similarly, in the column '0 Years', row '2020', enter the percent error in the Company's 2020 forecast of 2020 customers.

Year	Gulf Standalone - Accuracy of Retail Energy Sales Forecasts					
	Forecast Error Rate (%)				0-3 Year Error (%)	
	Years Prior*				Average	Absolute Average
	3 Years	2 Years	1 Year	0 Years		
2017	-3.3	-2.2	-1.0	0.8	-1.4	1.8
2018	-4.0	-2.9	-0.8	0.9	-1.7	2.1
2019	-4.2	-1.7	0.2	-1.2	-1.7	1.8
2020	-3.7	-1.2	-2.6	-1.2	-2.2	2.2
Average	-3.8	-2.0	-1.0	-0.2	-1.7	2.0

*Examples: In the column '3 Years,' row '2017', enter the percent error in the Company's 2014 forecast of 2017 retail energy sales. Similarly, in the column '0 Years', row '2020', enter the percent error in the Company's 2020 forecast of 2020 retail energy sales.

Consolidated FPL

Year	FPL/Gulf Consolidated- Accuracy of Total Customers Forecasts					
	Forecast Error Rate (%)				0-3 Year Error (%)	
	Years Prior*				Average	Absolute Average
	3 Years	2 Years	1 Year	0 Years		
2017	-0.4	-0.3	-0.3	-0.1	-0.3	0.3
2018	-0.5	-0.5	-0.3	-0.1	-0.4	0.4
2019	-0.1	0.2	0.4	0.0	0.1	0.2
2020	0.4	0.7	0.3	0.3	0.4	0.4
Average	-0.2	0.0	0.0	0.0	0.0	0.3

*Examples: In the column '3 Years,' row '2017', enter the percent error in the Company's 2014 forecast of 2017 customers. Similarly, in the column '0 Years', row '2020', enter the percent error in the Company's 2020 forecast of 2020 customers.

Year	FPL/Gulf Consolidated- Accuracy of Retail Energy Sales Forecasts					
	Forecast Error Rate (%)				0-3 Year Error (%)	
	Years Prior*				Average	Absolute Average
	3 Years	2 Years	1 Year	0 Years		
2017	-5.6	-4.4	-1.2	-1.7	-3.2	3.2
2018	-2.9	1.2	0.2	2.3	0.2	1.7
2019	-0.2	-0.9	0.5	-1.0	-0.4	0.6
2020	-1.3	0.5	-1.4	-1.3	-0.9	1.1
Average	-2.5	-0.9	-0.5	-0.4	-1.1	1.7

*Examples: In the column '3 Years,' row '2017', enter the percent error in the Company's 2014 forecast of 2017 retail energy sales. Similarly, in the column '0 Years', row '2020', enter the percent error in the Company's 2020 forecast of 2020 retail energy sales.

QUESTION:
Please refer to Witness Barrett testimony, page 17 line 11.

Please provide details concerning "FPL's tax-exempt bond portfolio" and how "That feature has provided significant cost savings for customers…"

RESPONSE:
The 2020 average daily rate for FPL's variable tax-exempt portfolio that bears daily interest rate is 53 basis points which is 345 basis points less than FPL's long-term cost of debt. Based on FPL's variable tax-exempt portfolio of $874 MM at year-end 2020, the estimated cost savings is approximately $30 MM annually.

QUESTION:
Please explain how Florida Power & Light Company (FPL) reflected any under- or overrecoveries related to the Fuel and Purchase Power Adjustment Clause for both the 2022, and if applicable, the 2023 projected test years. Please also cite any relevant Minimum Filing Requirements (MFR) locations supporting the response.

RESPONSE:
FPL has forecasted a net under recovery related to its Fuel and Purchase Power Adjustment Clause for both the 2022 Test and 2023 Subsequent Years and has excluded it from working capital consistent with Commission Order No. 135137, Docket No. 830465-EI. Please refer to Attachment 1 for details on the amount of the net under recovery for each period and the MFR references to the Commission adjustments where FPL has removed these amounts from rate base. Note, the Commission adjustment reflected on MFR B-2 includes the removal of all cost recovery clauses net under recoveries, not just the amount related to FPL's Fuel and Purchase Power Adjustment Clause.

QUESTION:
Please explain how FPL reflected any under- or over-recoveries related to the Capacity Cost Recovery Clause for both the 2022, and if applicable, the 2023 projected test years. Please also cite any relevant MFR locations supporting the response.

RESPONSE:
FPL has forecasted a net under recovery related to its Capacity Cost Recovery Clause for both the 2022 Test and 2023 Subsequent Years and has excluded it from working capital consistent with Commission Order No. 135137, Docket No. 830465-EI. Please refer to Attachment 1 for details on the amount of the net under recovery for each period and the MFR references to the Commission adjustments where FPL has removed these amounts from rate base. Note, the Commission adjustment reflected on MFR B-2 includes the removal of all cost recovery clauses net under recoveries, not just the amount related to FPL's Capacity Cost Recovery Clause.

QUESTION:
Please identify the level(s) of fossil fuel inventories FPL has included in its MFRs for both the 2022, and if applicable, the 2023 projected test years while also discussing how this/these amount(s) were determined to be appropriate for accounting purposes in this case. Please cite to any relevant MFR locations supporting the response.

RESPONSE:
The levels of fossil fuel inventories FPL has included in its MFRs for both the 2022 Test Year and 2023 Subsequent Year can be found in MFR B-18. Descriptions about how the projected amounts were developed for each type of fuel are included below.

Distillate Fuel Oil
FPL uses distillate fuel oil as an emergency back-up fuel in case of any interruption to natural gas supply or during times when natural gas requirements exceed FPL's delivery capability due to extreme loads. Distillate fuel oil is predominately resupplied via tanker trucks which is a slow process. Each tanker truck can carry approximately 175 barrels of fuel oil and FPL's combustion turbine ("CT") fleet can burn approximately 350 to nearly 600 barrels per hour, depending on the type of CT. Consumption rates can exceed replenishment rates and while FPL's distillate fuel oil system does provide a high level of flexibility, from delivery options to varying tank sizes across generation sites to site locations and proximity to supply points, FPL's target is to maintain full inventory at all distillate fuel oil locations.

Distillate Fuel Oil (Lighter Oil)
The distillate fuel oil (lighter oil) inventory amounts reflected on MFR B-18 for the 2022 Test Year and 2023 Subsequent Year were developed based on depleting the inventory of lighter oil at Crist (no longer required as the units have converted to natural gas) and maintaining the end of period 2021 volumes through 2022 and 2023 for both Scherer and Daniel.

Heavy Fuel Oil
The quantities of heavy oil reflected on MFR B-18 for the 2022 Test Year and 2023 Subsequent Year at the Manatee plant were developed utilizing the assumption that this site will not burn heavy oil beyond 2021.

Natural Gas
The natural gas storage amounts reflected on MFR B-18 for the 2022 Test Year and 2023 Subsequent Year were developed based on reducing Gulf Power's storage obligations prior to exiting the Southern pool and FPL's historical average storage inventory levels.

Coal

The purpose of FPL's coal inventory is to provide for the continuous operation of Scherer 3. In order to achieve this objective, both the relative supply and delivery risk must be considered. Coal supply comes from distant locations that can present many logistical challenges and coal inventory cannot be adjusted quickly. Typically, deliveries do not match consumption and therefore, inventory will fluctuate within a larger range. FPL's target inventory for Scherer 3 is 35 days of full load supply. This minimum level provides adequate coverage when deliveries are delayed or interrupted. During the 2022 Test Year and 2023 Subsequent Year, MFR B-18 reflects a reduction in Scherer 3 inventory from projected higher levels at the end of 2021 down into the 35-day range by the beginning of 2023, no additional coal procurement for Daniel and roughly 33 days of full load supply, and the retirement of Scherer 4 at the end of 2021.