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June 29, 2022

-VIA ELECTRONIC FILING-

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

RE: Docket No. 20220000-OT
Florida Power & Light Company's 2022-2031 Ten Year Power Plant Site Plan

Dear Mr. Teitzman:

Please find attached Florida Power & Light Company's responses to Staff's Fourth Data Request (Nos. 1-17). FPL's response to Staff's Fourth Data Request No. 13 is confidential in its entirety and is being filed separately along with a Request for Confidential Classification.

If there are any questions, please contact me at (561) 304-5662.

Sincerely,

/s/ William P. Cox
William P. Cox
Senior Attorney
Fla. Bar No. 00093531

WPC:ec
Enclosures
cc: Donald Phillips, Division of Engineering, DPhillip@psc.state.fl.us

QUESTION:
On page 11 of the Report, FPL details "DSM reductions for the years 2025 through 2031 are assumed based on FPL's projections in the 2019 DSM Goals docket of then-cost-effective DSM levels starting in 2025." Please answer the following.

a. Please explain the reasoning for using the 2019 DSM Goals docket for 2025-2029 projections when the goals outlined in FPL's 2019 Goal docket for that period were not approved by the Commission.

b. Please identify what alternative(s) the Company considered for projecting DSM reductions for 2025-2031

RESPONSE:
a. The Commission's approved Goals from the 2019 DSM Goals filing continued FPL's 2014 DSM Goals additions through the end of 2024. To account for DSM additions in the remainder of the 2025-2029 time period, FPL used cost-effective DSM additions from its proposed 2019 DSM Goals. DSM additions for 2030 and 2031 were based on continuing the same yearly incremental additions as FPL's proposed 2025-2029 DSM additions. FPL will reset its projected Goals for the 2025-2029 time period as part of the 2024 DSM Goals filing.

b. The only other alternative FPL considered for 2025-2031 DSM projections would be to have no additional DSM added during this period. As this alternative would not have aligned with FPL's proposed cost-effective ten-year Goals, it was not selected.

QUESTION:
On page 17 under Factor #4, projected reductions are provided for summer peak load (approximately 1,640 MW), Winter peak load (approximately 419 MW), and annual energy use (approximately 3,821 GWh). Please provide the cumulative and incremental reductions by year, including historical years' reductions back to the earliest year for which there is available data.

RESPONSE:
Please see Attachment No. 1 to this response.

QUESTION:
For the purpose of this question, please review the following table. For each time period presented in the table, please explain the variance between the values presented in the Goals Order shown in Column 2 and the TYSP values shown in Column 3.

(1)	(2)	(3)
Year	FPL and Gulf Summer Peak Demand Goal - Residential (MW)*	Forecast of Summer Peak Demand (MW)**
2022	27.6 (FPL) + 8.1 (Gulf) = 35.7	51 (2022 value for Column 6 less the 2021 value for Column 6 [31] + 2022 value for Column 7 [20])
2023	28.0 (FPL) + 8.8 (Gulf) = 36.8	39 (2023 value for Column 6 less the 2022 value for Column 6 [4] + 2023 value for Column 7) [35])
2024	28.5 (FPL) + 9.3 (Gulf) = 37.8	56 (2024 value for Column 6 less the 2023 value for Column 6 [5] + 2024 value for Column 7) [51]
*Summer Peak Demand Goals (Residential) appear on Pages 18 and 19, in Order No. PSC-2019-0509-FOF-EG ("Goals Order"). **FPL 2022 TYSP, Schedule 3.1 Forecast of Summer Peak Demand (MW), Page 76, Columns (6) and (7).		

RESPONSE:
The variance in the numbers shown in the TYSP Schedule 3.1 and the DSM Goals values is related to how FPL incorporates the goals into the Summer Peak Demand (MW) projections. The DSM projections of Summer Peak Demand (MW) in the TYSP are based on meeting the FPSC approved goals. The values for Summer Peak Demand (MW) are developed by using the approved incremental goals as a starting point for the prior year estimated actuals for load management (LM) and Energy Efficiency (EE). The LM values represent a net of incremental participation to meet goals, an adjustment for prior year actuals, and the projected attrition. The EE MWs are a cumulative value of annual goals and prior year results. Since FPL utilizes projections in August of each year for these forecasts, the EE MWs also include a year-end projection adjustment. See table below:

Summer-Residential MWs			
	2022	2023	2024
LM Incremental MWs Assummed	21	22	22
LM Attrition		-18	-17
Prior Year Actuals Adjustment	3		
LM Additional MWs for LEE & Fla. Keys	7		
LM MWs	31	4	5
EE Incremental MWs Assummed	10	10	11
Prior Year EE	5	20	35
End of Year Projection Adjustment	5	5	5
EE MWs	20	35	51
Total MWs	51	39	56

QUESTION:
For the purpose of this question, please review the following table. For each time period presented in the table, please explain the variance between the values presented in the Goals Order shown in Column 2 and the TYSP values shown in Column 3.

(1)	(2)	(3)
Year	Winter Peak Demand Goals – Residential (MW)*	Forecast of Winter Peak Demand (MW)**
2022	17.2 (FPL) + 4.6 (Gulf) = 21.8	29 (2022 value for Column 6 less the 2021 value for Column 6 [24] + 2022 value for Column 7 [5])
2023	17.5 (FPL) = 5 (Gulf) = 22.5	17 (2023 value for Column 6 less the 2022 value for Column 6 [10] + 2023 value for Column 7 [7])
2024	17.8 (FPL) + 5.3 (Gulf) = 23.1	21 (2024 value for Column 6 less the 2023 value for Column 6 [12] + 2024 value for Column 7 [9]
*Winter Peak Demand Goals (Residential) appear on Pages 18 and 19, in Order No. PSC-2019-0509-FOF-EG ("Goals Order") **FPL 2022 TYSP, Schedule 3.2, Forecast of Winter Peak Demand (MW), Page 78, Columns (6) and (7).		

RESPONSE:
The variance in the numbers shown in the TYSP Schedule 3.2 and the DSM Goals values is related to how FPL incorporates the goals into the Winter Peak Demand (MW) projections. The DSM projections of Winter Peak Demand (MW) in the TYSP are based on meeting the FPSC approved goals. The values for Winter Peak Demand (MW) are developed by using the approved incremental goals as a starting point for the prior year estimated actuals for load management (LM) and Energy Efficiency (EE). The LM values represent a net of incremental participation to meet goals, an adjustment for prior year actuals, and the projected attrition. The EE MWs are a cumulative value of annual goals and prior year results. Since FPL utilizes projections in August of each year for these forecasts, the EE MWs also include a year-end projection adjustment. See table below:

Winter-Residential MWs			
	2022	2023	2024
LM Incremental MWs Assummed	20	20	21
LM Attrition	-13	-10	-9
Prior Year Actuals Adjustment	6		
LM Additional MWs for LEE & Fla. Keys	11		
LM MWs	24	10	12
EE Incremental MWs Assummed	0	0	0
Prior Year EE	3	5	7
End of Year Projection Adjustment	2	2	2
EE MWs	5	7	9
Total MWs	29	17	21

QUESTION:
For the purpose of this question, please review the following table. For each time period presented in the table, please explain the variance between the values presented in the Goals Order shown in Column 2 and the TYSP values shown in Column 3.

(1)	(2)	(3)
Year	FPL and Gulf Summer Peak Demand Goal – Commercial/ Industrial (MW)*	Forecast of Summer Peak Demand (MW)**
2022	27.1 (FPL) + 0.9 (Gulf) = 28	78 (2022 value for Column 8 less the 2021 value for Column 8 [55] + 2022 value for Column 9 [23])
2023	27.5 (FPL) + 1.0 (Gulf) = 28.5	50 (2023 value for Column 8 less the 2022 value for Column 8 [9] + 2023 value for Column 9 [41])
2024	28.0 (FPL) + 1.1 (Gulf) = 29.1	68 (2024 value for Column 8 less the 2023 value for Column 8 [8] + 2024 value for Column 9 [60]
*Summer Peak Demand Goals (Commercial/Industrial) appear on Pages 18 and 19, in Order No. PSC-2019-0509-FOF-EG ("Goals Order") **FPL 2022 TYSP, Schedule 3.1 Forecast of Summer Peak Demand (MW), Page 76, Columns (8) and (9).		

RESPONSE:
The variance in the numbers shown in the TYSP Schedule 3.1 and the DSM Goals values is related to how FPL incorporates the goals into the Summer Peak Demand (MW) projections. The DSM projections of Summer Peak Demand (MW) in the TYSP are based on meeting the FPSC approved goals. The values for Summer Peak Demand (MW) are developed by using the approved incremental goals as a starting point for the prior year estimated actuals for load management (LM) and Energy Efficiency (EE). The LM values represent a net of incremental participation to meet goals, an adjustment for prior year actuals, and the projected attrition. The EE MWs are a cumulative value of annual goals and prior year results. Since FPL utilizes projections in August of each year for these forecasts, the EE MWs also include a year-end projection adjustment. See table below:

Summer-Commercial/Industrial MWs			
	2022	2023	2024
LM Incremental MWs Assummed	11	11	11
LM Attrition		-1	-2
Prior Year Actuals Adjustment	11		
LM Additional MWs for LEE, Fla. Keys & FPL NW	32		
LM MWs	55	9	8
EE Incremental MWs Assummed	8	9	9
Prior Year EE	7	23	41
End of Year Projection Adjustment	9	9	9
EE MWs	23	41	60
Total MWs	78	50	68

QUESTION:
For the purpose of this question, please review the following table. For each time period presented in the table, please explain the variance between the values presented in the Goals Order shown in Column 2 and the TYSP values shown in Column 3.

(1)	(2)	(3)
Year	Winter Peak Demand Goal - Commercial/Industrial (MW)*	Forecast of Winter Peak Demand (MW)**
2022	16.9 (FPL) + 0.3 (Gulf) = 17.2	51 (2022 value for Column 8 less the 2021 value for Column 8 [35] + 2022 value for Column 9 [16])
2023	17.3 (FPL) + 0.3 (Gulf) = 17.6	33 (2023 value for Column 8 less the 2022 value for Column 8 [6] + 2023 value for Column 9 [27])
2024	17.7 (FPL) + 0.3 (Gulf) = 18.0	46 (2024 value for Column 8 less the 2023 value for Column 8 [7] + 2024 value for Column 9 [39]
*Winter Peak Demand Goals (Residential) appear on Pages 18 and 19, in Order No. PSC-2019-0509-FOF-EG ("Goals Order") **FPL 2022 TYSP, Schedule 3.2, Forecast of Winter Peak Demand (MW), Page 78, Columns (8) and (9).		

RESPONSE:
The variance in the numbers shown in the TYSP Schedule 3.2 and the DSM Goals values is related to how FPL incorporates the goals into the Winter Peak Demand (MW) projections. The DSM projections of Winter Peak Demand (MW) in the TYSP are based on meeting the FPSC approved goals. The values for Winter Peak Demand (MW) are developed by using the approved incremental goals as a starting point for the prior year estimated actuals for load management (LM) and Energy Efficiency (EE). The LM values represent a net of incremental participation to meet goals, an adjustment for prior year actuals, and the projected attrition. The EE MWs are a cumulative value of annual goals and prior year results. Since FPL utilizes projections in August of each year for these forecasts, the EE MWs also include a year-end projection adjustment. See table below:

Winter-Commercial/Industrial MWs			
	2022	2023	2024
LM Incremental MWs Assummed	7	6	7
LM Attrition	0	0	0
Prior Year Actuals Adjustment	0		
LM Additional MWs for LEE & Fla. Keys	28		
LM MWs	35	6	7
EE Incremental MWs Assummed	1	1	1
Prior Year EE	6	16	27
End of Year Projection Adjustment	10	10	11
EE MWs	16	27	39
Total MWs	51	33	46

QUESTION:
On page 75 of FPL's 2022 Ten Year Site Plan (TYSP), Schedule 3.1, History of Summer Peak Demand (MW), reflects negative 15 MWs of summer peak demand reduction for Residential Load Management in 2021, and 11 MWs of summer peak demand reduction for Residential Conservation in 2021 (the 2021 value in Column 7 [1,600 MWs] less the 2020 value in Column 7 [589 MWs]). In FPL's Demand Side Management Annual Report for 2021, dated March 1, 2022 (a/k/a "FEECA filing"), Page 2, the Company reported that it achieved 18 MWs of residential summer peak demand reductions in 2021. Please explain the variance between the amounts of residential summer peak demand reduction reported in Schedule 3.1 for 2021, compared to the amount reflected the FEECA filing.

RESPONSE:
In FPL's Demand Side Management Annual Report for 2021, dated March 1, 2022, the incremental 18 MWs of achievement for the residential summer goal included 10 MWs from FPL's Residential EE programs and 8 MWs of Load Management associated with the Residential On Call (ROC) program for the calendar year 2021. In FPL's TYSP Schedule 3.1, the load management reduction of 15 MWs is a net of the incremental achievement and attrition experienced in the ROC program as of July 2021. The increase in Conservation of 11 MWs is for the period June 2020- July 2021 to align for the summer peak that occurred in August of 2021.

QUESTION:
On page 75 of FPL's 2022 TYSP, Schedule 3.1, History of Summer Peak Demand (MW), reflects negative 5 MWs of summer peak demand reduction for Commercial/Industrial Load Management in 2021, and 16 MWs of summer peak demand reduction for Commercial/Industrial Conservation 2021 (the 2021 value for Column 9 [956 MWs] less the 2020 value for Column 9 [940 MWs]). In FPL's Demand Side Management Annual Report for 2021, dated March 1, 2022 (a/k/a "FEECA filing"), page 2, the Company reported that it achieved 38 MWs of commercial/industrial summer peak demand reductions in 2021. Please explain the variance between the amounts of commercial/industrial summer peak demand reduction reported in Schedule 3.1 for 2021, compared to the amount reflected the FEECA filing.

RESPONSE:
In FPL's Demand Side Management Annual Report for 2021, dated March 1, 2022, the incremental 38 MWs of achievement for the business summer goal included 10 MWs from FPL's Commercial/Industrial (C/I) EE programs and 28 MWs of Load Management associated with the Business on Call (BOC) and Commercial Demand Response (CDR) program for the calendar year 2021. In FPL's TYSP Schedule 3.1, the C/I load management reduction of 5 MWs is a net of the incremental achievement in the BOC and CDR programs and attrition experienced as of July 2021 in the BOC, CDR, and closed CILC programs. The increase of 16 MWs for Conservation is for the period June 2020-July 2021 to align for the summer peak that occurred in August of 2021.

QUESTION:
On page 77 of FPL's 2022 TYSP, Schedule 3.2, History of Winter Peak Demand (MW), reflects negative 13 MWs of winter peak demand reduction for Residential Load Management in 2021, and 2 MWs of winter peak demand reductions for Residential Conservation in 2021 (the 2021 value for Column 7 [872 MWs] less the 2020 value for Column 7 [870 MWs]). In FPL's Demand Side Management Annual Report for 2021, dated March 1, 2022 (a/k/a "FEECA filing"), Page 2, the Company reported that it achieved 11 MWs of residential winter peak demand reductions in 2021. Please explain the variance between the amounts of residential winter peak demand reduction reported in Schedule 3.2 for 2021, compared to the amount reflected the FEECA filing.

RESPONSE:
In FPL's Demand Side Management Annual Report for 2021, dated March 1, 2022, the incremental 11 MWs of achievement for the residential winter goal included 2 MWs from FPL's Residential EE programs and 9 MWs of load management associated with the Residential On Call (ROC) program for the calendar year 2021. The 2021 values represented in the TYSP for load management and conservation are aligned with the 2021 winter peak. The load management reduction of 13 MWs is a net of the incremental achievement and attrition experienced in the ROC program as of December 2020. The increase in Conservation of 2 MWs is for the period January 2020-December 2020 to align for the winter peak in 2021.

QUESTION:
On Page 77 of FPL's 2022 TYSP, Schedule 3.2, History of Winter Peak Demand (MW), reflects 5 MWs of winter peak demand reductions for Commercial/Industrial Load Management (the 2021 value in Column 8 [619 MWs] less the 2020 value in Column 8 [614 MWs]), and 12 MWs of winter peak demand reductions for Commercial/Industrial Conservation 2021 (the 2021 value in Column 9 [402 MWs] less the 2020 value in Column 9 [390 MWs]). In FPL's Demand Side Management Annual Report for 2021, dated March 1, 2022 (a/k/a "FEECA filing"), page 2, the Company reported that it achieved 22 MWs of commercial/industrial winter peak demand reductions in 2021. Please explain the variance between the amounts of commercial/industrial winter peak demand reduction reported in Schedule 3.2 for 2021, compared to the amount reflected the FEECA filing.

RESPONSE:
In FPL's Demand Side Management Annual Report for 2021, dated March 1, 2022, the incremental 22 MWs of achievement for the business winter goal included 5 MWs from FPL's Commercial/Industrial EE programs and 18 MWs of Load Management associated with the CDR program for the calendar year 2021. In FPL's TYSP Schedule 3.2, the Load Management increase of 5 MWs is a net of the incremental achievement in the CDR program and attrition experienced as of December 2020 in the CDR and closed CILC programs. The increase of 12 MWs for Conservation is for the period January 2020-December 2020 to align for the winter peak in 2021.

QUESTION:
Please refer to page 105 of FPL's 2022 TYSP. Please explain the reason and elaborate on any factors known to FPL that caused the fuel price forecast for natural gas in the 2022 TYSP to be lower than what was projected in the 2021 TYSP.

RESPONSE:
In order to focus on the period during which new resources for FPL would be added, the Company compared and evaluated the fuel price curves used in the 2021 and 2022 Ten-Year Site Plans from 2025 to 2068, which eliminates the near-term years of volatility. The forecasted prices from S&P Global used in the 2022 TYSP are higher than those included in the 2021 TYSP through 2033, but lower to the end of their forecast period in 2040. Unfortunately, FPL does not receive any explanation or discussion of the internal assumptions S&P Global uses to develop their forecasts. As part of the forecast methodology, FPL calculates the rate of escalation by using the real price values from the Energy Information Administration's (EIA) Annual Energy Outlook (AEO) to develop the forecast prices from 2040 through 2068. The escalation rate decreased on average by 0.3% in the 2022 forecast, when compared to the prior year projection. The EIA AEO narrative does not provide a specific explanation for the change in the real price escalation rate, but mentions environmental policies are expected to be more supportive of long-term growth in renewable generation, thereby reducing the increase in natural gas prices being forecast.

QUESTION:
Please refer to page 164 of FPL's 2022 TYSP. The first paragraph states, "an October 2021 fuel price forecast was used in the analyses which developed the resource plans presented in this 2022 site plan." Are FPL's most current forecasts significantly different than the October 2021 fuel price used to support its 2022 TYSP? If so, what is/are driving those differences?

RESPONSE:
Yes, FPL's most current forecast is significantly different than the October 2021 fuel price forecast used to support its 2022 TYSP. The underlying prices in the front of the fuel curves for both natural gas and fuel oil have increased, when compared to those compiled in October 2021. The changes in near-term market prices have also caused S&P Global to adjust their projections upward for the 2025-2040 time period. Finally, the EIA published a new Annual Energy Outlook (AEO) in the first quarter of 2022. The current AEO includes updated assumptions and price growth changes that reflect current market conditions. The EIA escalator is now negative. Each of these drivers has caused the current forecast to vary from the price projections developed in October 2021.

QUESTION:
Please refer to page 164 of FPL's 2022 TYSP. Please provide FPL's High and Low fuel price forecasts.

RESPONSE:
FPL's high and low fuel price forecasts have been included in confidential Attachment No. 1 to this response. The forecasts can be accessed by toggling on the low/medium/high button incorporated within the spreadsheet.

QUESTION:
Please refer to page 165 of FPL's 2022 TYSP and page 161 of FPL's 2021 TYSP.

a. Please explain the timing differences of the JD Energy long-term forecast for coal used in the 2021 TYSP (forecast released in September of 2019) and for the 2021 TYSP (forecast released in March of 2021).

b. Please explain why FPL relied upon the JD Energy short-term price forecast for the 2021 TYSP but not for the 2022 TYSP.

RESPONSE:
a. The 2021 TYSP used JD Energy's September 2019 long-term forecast, updated with a current short-term forecast. With commodity prices and markets under stress during 2020, and low natural gas prices throughout the period, JD Energy believed their long-term forecast was still reasonable and reflective of the market in October 2020. JD Energy issued an updated long-term forecast in March 2021. This forecast was used to develop the fuel price forecast used in the 2022 TYSP.

b. JD Energy ceased operations after March 2021 and did not provide additional coal price projections for use in developing the fuel price forecast used in the 2022 TYSP. Since there were no short-term forecasts from JD Energy available past March-2021, none were used for the 2022 TYSP.

QUESTION:
Please refer to FPL's Response to Staff's First Data Request, No. 19 for the following questions.

a. Please identify the "knowledgeable professionals in the automotive industry" that FPL references.

b. Please cite and identify any sources that support FPL's PEV forecast methodology.

RESPONSE:
a. FPL engages in discussions with industry groups to include Drive Electric Florida, Electric Drive Transportation Association, Zero Emission Transportation Association, and Smart Electric Power Alliance.

b. As indicated in FPL's response to Staff's First Data Request No. 19, the following sources supported FPL's PEV forecast methodology:

- Bloomberg New Energy Finance, "Long-Term Electric Vehicle Outlook" (June 9, 2021)
- WoodMackenzie, "Road Transport 2021 outlook to 2050: H1 2021"(May 27, 2021)
- IHS Markit, RL Polk, Vehicles in Operation: Florida (June 30, 2021)
- IHS Markit, "Total Population US and Florida Forecast" (August 2021)
- IHS Markit, "Gross State Product Florida Forecast" (August 2021)
- IHS Markit, "Gross Domestic Product Forecast" (August 2021)
- Fueleconomy.gov, 2021 Datafile. https://fueleconomy.gov/feg/download.shtml
- Alternative Fuels Data Center, "Average Annual Vehicle Miles traveled by Major Vehicle Category" (last updated February 2020)
- Florida Department of Education, Total Miles divided by Buses in Daily Service. "Florida School District 2019-20 Transportation Profiles" (March 2021)
- U.S. Department of Energy and National Renewable Energy Laboratory, "Electric Vehicle Infrastructure Projection Tool Lite Load Profile"

QUESTION:
Please refer to Attachment 1 and 2 of FPL's Response to Staff's First Data Request No. 19 (FPL's 2021 TYSP), and Attachment 1 of FPL's Response to Staff's First Data Request No. 20 (FPL's 2022 TYSP).

a. Comparing FPL's 2021 and 2022 TYSP's, the Company has increased its PEV forecast for 2022 by approximately 87.3 percent (see charts/calculations below). Please identify and explain the major drivers in FPL's PEV forecasting models that have contributed to this significant increase.

FPL's 2021 TYSP

FPL Service Territory

Year	Number of PEVs[1]	Number of Public PEV Charging Stations[2]	Number of Public DCFC PEV Charging Stations.[2]	Cumulative Impact of PEVs[3]		
				Summer Demand (MW)	Winter Demand (MW)	Annual Energy (GWh)
2021	49,282	4,007	761	13	5	43
2022	59,636	5,286	1,045	36	13	112
2023	75,862	7,320	1,502	70	25	217
2024	97,925	9,210	1,959	117	42	362
2025	127,482	11,437	2,520	181	65	555
2026	168,680	13,815	3,148	267	95	813
2027	222,806	16,534	3,893	379	135	1,145
2028	291,594	20,377	4,952	520	186	1,558
2029	375,053	24,580	6,159	691	247	2,056
2030	479,126	26,857	6,821	899	321	2,660

Notes

1) Includes cars and trucks

2) Charging Stations represent estimated number of ports in FPL service territory. Quick-charge PEV station ports included in total Number of Public PEV Charging Stations.

3) MW and GWh are incremental from the end of 2020

Gulf Service Territory

Year	Number of PEVs[1]	Number of Public PEV Charging Stations[2]	Number of Public DCFC PEV Charging Stations.[2]	Cumulative Impact of PEVs[3]		
				Summer Demand (MW)	Winter Demand (MW)	Annual Energy (GWh)
2021	1,981	165	31	1	0	1
2022	2,397	218	43	1	1	2
2023	3,049	302	62	3	1	5
2024	3,936	380	81	5	2	8
2025	5,124	472	104	7	3	12
2026	6,780	570	130	11	4	18
2027	8,955	682	160	15	5	26
2028	11,720	841	204	21	7	36
2029	15,074	1,014	253	28	10	48
2030	19,257	1,108	281	36	13	63

Notes

1) Includes cars and trucks
2) Charging Stations represent estimated number of ports in Gulf service territory. Quick-charge PEV station ports included in total Number of Public PEV Charging Stations.
3) MW and GWh are incremental from the end of 2020

FPL 2022 PEV forecast: 59,636
Gulf 2022 PEV forecast: 2,397
FPL/Gulf 2022 PEV forecast combined: 62,033

FPL's 2022 TYSP

Year	Number of PEVs[1]	Number of Public PEV Charging Stations[2]	Number of Public DCFC PEV Charging Stations.[2]	Cumulative Impact of PEVs[3]		
				Summer Demand (MW)	Winter Demand (MW)	Annual Energy (GWh)
2022	116,202	4,646	1,713	34	15	231
2023	162,141	6,292	2,307	76	33	401
2024	220,697	5,535	2,993	131	57	623
2025	293,809	10,431	3,746	202	87	908
2026	391,240	10,802	3,944	297	129	1289
2027	512,104	12,678	4,589	418	181	1771
2028	657,776	14,681	5,381	565	244	2361
2029	831,693	17,063	6,338	744	322	3075
2030	1,037,328	18,700	7,476	958	414	3930
2031	1,273,609	20,908	8,588	1203	520	4913

Notes

1) Number of PEVs includes cars and trucks.
2) Charging Stations represent estimated number of ports in FPL service territory. Quick-charge PEV station ports included in total Number of Public PEV Charging Stations.
3) MW and GWh are incremental from the end of 2021.

FPL 2022 PEV forecast: 116,202
2022 Forecast variance:
(2022 TYSP forecast of 2022 PEV's – 2021 TYSP forecast of 2022 PEV's)/ 2021 TYSP forecast of 2022 PEV's = (116,202 – 62,033)/62,033 = 87.3 percent

b. Since there appears to be a significant increase in the Company's forecasted number of PEV's across the planning period (2022-2031) compared to FPL's 2021 TYSP, Has FPL performed any changes or alterations to its PEV forecast methodology? If so, please explain how?

c. Please identify and explain what factors are driving the lower growth rate in the number of Public PEV Charging Stations over the planning period in the Company's 2022 TYSP compared to the Company's 2021 TYSP. Please also reconcile this lower growth rate with the significant increase in forecasted number of PEV's operating in FPL's service territory.

d. Referring to the Company's 2022 TYSP PEV forecast, please explain the reasons or causes for the projected reduction in the number of Public PEV Charging Stations in 2024.

RESPONSE:

a. As indicated in FPL's response to Staff's First Data Request No. 25, the Company starts by forecasting the Number of PEVs by vehicle type expected in the United States using the number of PEVs by vehicle type expected in the United States using third-party resources Bloomberg New Energy Finance ("BNEF") and Wood Mackenzie ("WM"). These third-party sources cited a combination of government policy support, rising commitments from automakers, more charging infrastructure being built out, and improvements in battery density and cost as drivers to EV growth, as reflected in FPL's 2022 TYSP. In contrast, the 2020 BNEF and WM sources used for the 2021 TYSP cited primary drivers for the decrease in U.S. projections from prior forecasts due to production shutdowns from the COVID-pandemic, lack of policy, phase-out of EV federal tax credits, and battles between Trump Administration and California over fuel economy standards.

b. The company modified the methodology to project number of vehicles in Florida as a percentage of the U.S. forecast, resulting in an approximate increase of 2-basis-points from ~4% to ~6% annually. The primary driver to the increase in EV projections from 2021 TYSP to 2022 TYSP is stated in response to subpart (a) above. As stated in FPL's response to Staff's First Data Request No. 19, the Company calculates an estimated percentage of PEVs in Florida by taking a blended average of the forecasted population in Florida as a percentage of the U.S. population and forecasts gross-state product as a percentage of U.S. gross-domestic product for each year. This blended percentage share (5.9-6.1%) is then multiplied by the Company's national forecast to get the Florida PEV forecast by year. For the 2021 TYSP, the Company derived the estimated number of vehicles by taking the number of registered PEVs in Florida and divided it by the number of vehicles in use nationally to derive Florida's current share of the U.S. market. This percentage share (~4.3%) is then multiplied by the Company's national forecast to get the Florida PEV forecast by year. The revised methodology more accurately represents growth projections in Florida and correlations to projected EVs.

c. The 2021 TYSP was derived by applying annual growth projections from Wood Mackenzie's Grid Edge Data Hub U.S. EV Charging Points Forecast to installed charging port counts in the service territory as reported by the Department of Energy's Alternative Fuel Station Locator. The Wood Mackenzie Grid Edge Data Hub U.S. EV Charging Ports was unavailable for the 2022 TYSP forecast. The 2022 TYSP public charging infrastructure forecast was derived by inputting our BEV forecast into the U.S. Department of Energy and National Renewable Energy Laboratory Electric Vehicle Infrastructure Projection Tool Lite "EVI-Pro".

d. See FPL's response to subpart (c) above.

QUESTION:
Did the Company analyze the impacts, if any, the "extreme winter" scenario would have on energy and demand from PEV charging stations (home and public)?

RESPONSE:
No. FPL did not analyze the potential changes to energy and demand from PEV charging stations due to severe winter weather. FPL's assumption for PEV charging patterns in its load forecast during the "extreme winter" scenario remains the same as the assumption used for its "business as usual" scenario.

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	Cumulative Summer Peak MW Impact			Incrmental Summer Peak MW Impact			
	FPL	Gulf	Total		FPL	Gulf	Total
2005	-23	-3	-26				
2006	-165	-21	-186	2006	-141	-18	-160
2007	-326	-43	-369	2007	-162	-21	-183
2008	-566	-75	-641	2008	-240	-32	-271
2009	-708	-93	-801	2009	-142	-19	-160
2010	-867	-114	-981	2010	-160	-21	-181
2011	-1,040	-137	-1,177	2011	-173	-23	-195
2012	-1,215	-160	-1,374	2012	-175	-23	-197
2013	-1,448	-190	-1,638	2013	-233	-30	-263
2014	-1,709	-222	-1,931	2014	-261	-33	-293
2015	-2,017	-262	-2,279	2015	-309	-40	-348
2016	-2,329	-302	-2,631	2016	-312	-40	-352
2017	-2,638	-341	-2,979	2017	-309	-39	-348
2018	-2,936	-381	-3,317	2018	-299	-39	-338
2019	-3,265	-417	-3,682	2019	-329	-36	-365
2020	-3,578	-454	-4,032	2020	-313	-38	-351
2021	-3,781	-478	-4,259	2021	-203	-24	-227
2022	-4,039	-505	-4,544	2022	-258	-26	-285
2023	-4,207	-524	-4,731	2023	-168	-19	-187
2024	-4,333	-538	-4,871	2024	-126	-14	-140
2025	-4,492	-555	-5,047	2025	-158	-18	-176
2026	-4,647	-573	-5,219	2026	-155	-17	-172
2027	-4,804	-590	-5,393	2027	-157	-17	-174
2028	-4,972	-608	-5,580	2028	-168	-19	-187
2029	-5,030	-613	-5,643	2029	-58	-5	-63
2030	-5,087	-618	-5,705	2030	-57	-5	-62
2031	-5,261	-638	-5,899	2031	-174	-19	-194
2021-2031 Impact	-1,481	-159	-1,640				

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	Cumulative Winter Peak MW Impact			Incremental Winter Peak MW Impact			
	FPL	Gulf	Total		FPL	Gulf	Total
2005	0	0	0				
2006	-6	-2	-8	2006	-6	-2	-8
2007	-19	-6	-24	2007	-13	-4	-17
2008	-52	-16	-68	2008	-34	-10	-44
2009	-68	-21	-89	2009	-16	-5	-20
2010	-85	-26	-111	2010	-17	-5	-22
2011	-103	-32	-135	2011	-18	-5	-24
2012	-122	-37	-159	2012	-19	-6	-25
2013	-152	-46	-198	2013	-30	-9	-39
2014	-186	-56	-242	2014	-34	-10	-44
2015	-231	-68	-299	2015	-45	-12	-57
2016	-276	-80	-356	2016	-45	-12	-57
2017	-320	-92	-412	2017	-44	-12	-56
2018	-362	-103	-465	2018	-42	-11	-53
2019	-410	-115	-524	2019	-48	-12	-60
2020	-459	-126	-585	2020	-50	-12	-61
2021	-500	-135	-635	2021	-40	-9	-49
2022	-541	-145	-686	2022	-42	-9	-51
2023	-577	-153	-730	2023	-35	-8	-44
2024	-622	-161	-783	2024	-45	-8	-54
2025	-661	-169	-830	2025	-39	-8	-47
2026	-701	-177	-877	2026	-39	-8	-47
2027	-740	-184	-923	2027	-39	-7	-46
2028	-771	-189	-960	2028	-31	-5	-36
2029	-800	-194	-994	2029	-29	-5	-34
2030	-838	-200	-1,039	2030	-38	-7	-45
2031	-848	-206	-1,054	2031	-9	-6	-15
2021-2031 Impact	-348	-71	-419				

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	Cumulative NEL GWh Impact			Incremental NEL GWh Impact			
	FPL	Gulf	Total		FPL	Gulf	Total
2005	-38	0	-38				
2006	-194	0	-194	2006	-157	0	-157
2007	-445	-17	-463	2007	-251	-17	-268
2008	-1,002	-40	-1,042	2008	-557	-23	-580
2009	-1,262	-50	-1,312	2009	-260	-10	-269
2010	-1,545	-59	-1,604	2010	-283	-10	-292
2011	-1,846	-71	-1,917	2011	-301	-12	-314
2012	-2,163	-83	-2,245	2012	-317	-11	-328
2013	-2,638	-95	-2,733	2013	-476	-12	-488
2014	-3,190	-108	-3,298	2014	-552	-13	-565
2015	-3,817	-127	-3,944	2015	-627	-19	-646
2016	-4,452	-146	-4,598	2016	-635	-19	-654
2017	-5,087	-164	-5,251	2017	-635	-18	-653
2018	-5,655	-182	-5,837	2018	-568	-18	-585
2019	-6,277	-201	-6,479	2019	-623	-19	-642
2020	-6,864	-222	-7,086	2020	-586	-21	-607
2021	-7,324	-221	-7,546	2021	-461	1	-460
2022	-7,820	-233	-8,054	2022	-496	-12	-508
2023	-8,166	-231	-8,397	2023	-346	2	-344
2024	-8,642	-255	-8,897	2024	-475	-24	-499
2025	-9,020	-266	-9,286	2025	-378	-11	-390
2026	-9,404	-278	-9,682	2026	-384	-11	-395
2027	-9,753	-289	-10,042	2027	-349	-11	-360
2028	-10,056	-299	-10,355	2028	-302	-11	-313
2029	-10,331	-308	-10,638	2029	-275	-8	-283
2030	-10,682	-314	-10,996	2030	-351	-6	-357
2031	-11,047	-320	-11,367	2031	-365	-6	-371
2021-2031 Impact	-3,722	-99	-3,821				

The confidential documents responsive to Staff's Fourth Data Request No. 13, Bates No. 000028-000032, are confidential in their entirety.