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FPL's Response to Staff's Second Set of Interrogatories, Nos. 3 - 6

(including attachments for No. 5)

QUESTION:
Please refer to the April 1, 2022, Petition. The last sentence on page 2 reads:

> Currently, FPL forecasts continued customer and load growth in the territory affected by the proposed Sweatt-Whidden Project [SWP] for the foreseeable future.

The last paragraph of Exhibit A at page 5 reads:

> The SWP will address the increasing forecasted demand in the Okeechobee, Highlands, DeSoto, Collier, Lee, Sarasota, and Manatee Counties ….

Please quantify FPL's forecasted "continued customer and load growth" and "increasing forecasted demand" in the SWP affected territory. As part of your answer, please also identify the assumptions and conditions FPL used in deriving these forecasts.

RESPONSE:
The SWP-affected territory is FPL's West Region (Division). From 2021 to 2030, the number of customers in the West Region were forecasted to grow an average of 1.5% per year while summer and winter peak demands were forecasted to grow an average of 1.9% per year and 1.8% per year, respectively. The primary driver of the customer forecast is population growth, which was based on the county-level population forecasts from IHS Markit's November 2020 vintage economic projections. The primary driver of both the summer and winter peak demand forecasts is customer growth.

QUESTION:
Please refer to the Petition at Exhibit A, page 6. FPL indicated that its West Region has reported winter peak loads between 4000 MW and 5400 MW for the past six years (2015-2021). FPL also projected that by 2031, the winter load in the region will be approximately 5800 MW, an increase of approximately 400 MW with respect to the 2020 forecast. Please explain the significant increase in winter peak load forecasted for the period ending in 2031.

RESPONSE:
The significant increase in winter peak load forecasted for the period ending in 2031 is the result of load growth as explained in FPL's response to Staff's Second Set of Interrogatories No. 3.

As shown in Table No. 1 below (and in the TransmissionPlanning_Calculations.xlsx Excel file, P50 CP (FRCC) WINTER tab in FPL's response to Staff's Second Request for Production of Documents No. 5), the FPL West Region (Division) winter peak load was calculated at 5,818 MW for the period ending in 2031. This value represented an increase with respect to the 2020 Division Peak Forecast of 276 MW increase for the West Region alone, with an approximate 400 MW total increase for the overall FPL's System.

Table No.1

Winter Coincident Peaks - Base Case (MW) P50

Transmission Planning year	Year	NORTHEASTERN			EASTERN			SOUTHEASTERN			SOUTH			WEST			SYSTEM					
		2021 TYSP	2020 TYSP	Delta %	2021 TYSP	2020 TYSP	Delta %	2021 TYSP	2020 TYSP	Delta %	2021 TYSP	2020 TYSP	Delta %	2021 TYSP	2020 TYSP	Delta %	2021 TYSP	2020 TYSP	Delta %	LCEC	Seminole	System w/ LCEC & Seminole 2021 TYSP
Winter 2017/18	**2018**	3,807	3,807	0.0%	4,381	4,381	0.0%	2,661	2,661	0.0%	3,071	3,071	0.0%	4,158	4,158	0.0%	**18,077**	**18,077**	0.0%	832	200	19,109
Winter 2018/19	**2019**	2,747	2,696	1.9%	3,225	3,572	-9.7%	2,296	2,499	-8.1%	2,776	2,917	-4.8%	4,310	3,671	17.4%	**15,355**	**15,355**	0.0%	845	200	16,400
Winter 2019/20	**2020**	3,157	3,386	-6.8%	4,203	4,462	-5.8%	2,515	3,115	-19.3%	2,875	3,660	-21.5%	4,160	4,621	-10.0%	**16,909**	**19,244**	-12.1%	794	200	17,703
Winter 2020/21	**2021**	3,629	3,441	5.4%	4,792	4,500	6.5%	2,860	3,140	-8.9%	3,282	3,720	-11.8%	4,785	4,707	1.7%	**19,349**	**19,508**	-0.8%	712	200	20,061
Winter 2021/22	**2022**	3,676	3,442	6.8%	4,818	4,469	7.8%	2,874	3,116	-7.8%	3,319	3,720	-10.8%	4,861	4,716	3.1%	**19,549**	**19,463**	0.4%	741	0	20,289
Winter 2022/23	**2023**	3,752	3,487	7.6%	4,882	4,494	8.6%	2,912	3,134	-7.1%	3,384	3,769	-10.2%	4,971	4,782	4.0%	**19,902**	**19,666**	1.2%	771	0	20,672
Winter 2023/24	**2024**	3,830	3,532	8.5%	4,947	4,521	9.4%	2,952	3,154	-6.4%	3,450	3,816	-9.6%	5,081	4,848	4.8%	**20,260**	**19,870**	2.0%	802	0	21,062
Winter 2024/25	**2025**	3,893	3,577	8.8%	4,992	4,547	9.8%	2,980	3,174	-6.1%	3,503	3,864	-9.3%	5,169	4,915	5.2%	**20,538**	**20,076**	2.3%	835	0	21,373
Winter 2025/26	**2026**	3,958	3,631	9.0%	5,039	4,584	9.9%	3,010	3,201	-6.0%	3,557	3,921	-9.3%	5,260	4,993	5.3%	**20,824**	**20,330**	2.4%	869	0	21,693
Winter 2026/27	**2027**	4,005	3,673	9.1%	5,063	4,606	9.9%	3,026	3,219	-6.0%	3,597	3,965	-9.3%	5,327	5,056	5.4%	**21,018**	**20,517**	2.4%	905	0	21,923
Winter 2027/28	**2028**	4,073	3,733	9.1%	5,113	4,651	9.9%	3,058	3,253	-6.0%	3,654	4,030	-9.3%	5,421	5,145	5.4%	**21,319**	**20,812**	2.4%	943	0	22,261
Winter 2028/29	**2029**	4,141	3,797	9.1%	5,164	4,700	9.9%	3,091	3,290	-6.0%	3,714	4,098	-9.4%	5,519	5,239	5.3%	**21,629**	**21,124**	2.4%	982	0	22,611
Winter 2029/30	**2030**	4,211	3,864	9.0%	5,218	4,755	9.7%	3,126	3,332	-6.2%	3,774	4,173	-9.5%	5,619	5,340	5.2%	**21,948**	**21,464**	2.3%	1023	0	22,971
Winter 2030/31	2031	4,281	3,932		5,271	4,810		3,161	3,374		3,835	4,247		5,718	5,441		22,266	21,803				
Winter 2031/32	2032	4,350	3,999		5,324	4,864		3,195	3,415		3,896	4,321		5,818	5,542		22,584	22,142				
			351			459			-220			-425			276			442				

Notes: 1. Division Peak Forecast (DPF) Winter Coincident Peak follows a different time frame than transmission planning's Winter Coincident Peak

1.1 For DPF, Winter 2019 corresponds to the end of 2018 and beginning to year 2019

1.2 For transmission planning, Winter 2018 corresponds to the end of 2018 and beginning to year 2019

2. If DPF does not include all years required for the transmission planning assessment such as year 2031 and 2032 on this table, the missing year information is calculated using the prior years information

QUESTION:
Please refer to FPL's Petition at Exhibit A, Attachment 2, Schedule 3.1, and Attachment 3, Schedule 3.2. Please also refer to FPL's 2021 Ten Year Site Plan (TYSP), Schedules 3.1 and 3.2, (Docket No. 20210000-OT, Document No. 03162-2021) for the following questions:

a. Table 1 below shows that FPL's 2021 actual summer peak demand is lower than what the Company projected in its 2021 TYSP. However, the Petition assumed 2022 and 2023 summer peak demand both will be higher than what FPL projected in its 2021 TYSP. Considering this observation, please explain the basis for the current petition's summer demand forecast exceeding the 2021 TYSP forecast.

	Table 1: FPL's Net Firm Summer Peak Demand (Schedule 3.1, Column 10)				
	2021 TYSP Forecasted	Petition Report Actual	Petition Forecasted	Difference	
	(MW)	(MW)	(MW)	(MW)	(%)
2021	22,799	22,330		-469	-2.1%
2022	25,392		25,469	77	0.3%
2023	25,828		25,848	20	0.1%
Sources of data: FPL's 2021 TYSP and FPL's instant Petition, Exhibit A, Attachment 2.					

b. Table 2 below shows that FPL's 2021 actual winter peak demand is lower than what the Company projected in its 2021 TYSP. However, the instant Petition presumed 2022 and 2023 winter peak demand both will be higher than what FPL projected in its 2021 TYSP. Considering this observation, please explain the basis for the current petition's winter peak demand forecast exceeding the 2021 TYSP forecast.

	Table 2: FPL's Net Firm Winter Peak Demand (Schedule 3.2, Column 10)				
	2021 TYSP Forecasted	Petition Report Actual	Petition Forecasted	Difference	
	(MW)	(MW)	(MW)	(MW)	(%)
2021	18,692	14,993		-3,699	-24.7%
2022	21,055		21,163	108	0.5%
2023	21,426		21,527	101	0.5%
Sources of data: FPL's 2021 TYSP and FPL's instant Petition, Exhibit A, Attachment 3.					

RESPONSE:
a. The 2021 actual net firm summer peak demand is not weather-normalized. The FPL legacy area, *i.e.*, the service territory of FPL prior to its acquisition of Gulf, experienced milder than normal weather which resulted in a reduction to the actual summer peak demand. 2021 weather-normalized net firm summer peak demand was 22,429 MW, which represents a difference of -370 MW or -1.6% compared to the 2021 TYSP net firm summer peak demand forecast (shown in Attachment No. 1 to this response). This difference is consistent with the Company's historical weather-normalized summer peak demand forecast errors.

This current petition relies on forecasts that are consistent with the Company's 2021 TYSP. Exhibit A, Attachment 2 of FPL's petition is from the Company's most recent forecast that was presented in FPL's 2022 TYSP. Attachment 2 was not intended to be representative of the underlying load forecasts; instead, this schedule was provided in order to give a relative indication of the reasonableness of the forecasts underlying this petition.

b. The 2021 actual net firm winter peak demand of 14,993 MW is not weather-normalized. The FPL legacy area experienced milder than normal weather which resulted in a reduction to the actual winter peak demand. 2021 weather-normalized net firm winter peak demand was 18,639 MW, which represents a difference of -53 MW or -0.3% compared to the 2021 TYSP net firm winter peak demand forecast (shown in Attachment No. 2 to this response). This difference is consistent with the Company's historical weather-normalized winter peak demand forecast errors.

This current petition relies on forecasts that are consistent with the Company's 2021 TYSP. Exhibit A, Attachment 3 of FPL's petition is from the Company's most recent forecast that was presented in FPL's 2022 TYSP. Attachment 3 was not intended to be representative of the underlying load forecasts; instead, this schedule was provided in order to give a relative indication of the reasonableness of the forecasts underlying this petition.

Schedule 3.1: FPL
History of Summer Peak Demand (MW)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Total	Wholesale	Retail	Interruptible	Res. Load Management	Residential Conservation	C/I Load Management	C/I Conservation	Net Firm Demand
2011	21,619	427	21,192	0	1,000	1,281	821	781	19,798
2012	21,440	431	21,009	0	1,013	1,351	833	810	19,594
2013	21,576	396	21,180	0	1,025	1,417	833	839	19,718
2014	22,935	1,155	21,780	0	1,010	1,494	843	866	21,082
2015	22,959	1,303	21,656	0	878	1,523	826	873	21,255
2016	23,858	1,367	22,491	0	882	1,548	836	888	22,140
2017	23,373	1,393	21,980	0	910	1,560	825	903	21,639
2018	23,217	1,338	21,879	0	866	1,571	866	916	21,485
2019	24,241	1,292	22,949	0	852	1,579	879	926	22,510
2020	24,499	1,530	22,969	0	845	1,589	887	940	22,767

Historical Values (2011 - 2020):

Col. (2) and Col. (3) are actual values for historical Summer peaks. As such, they incorporate the effects of conservation (Col. 7 & Col. 9) and may incorporate the effects of load control if load control was operated on these peak days. Col. (2) represents the actual Net Firm Demand.

Col. (5) through Col. (9) represent actual DSM capabilities and represent annual (12-month) values.

Col. (6) values for 2015-on reflect a hardware communications issue identified in 2015 that was subsequently resolved. A number of participating customers did not respond to FPL's efforts to reach them or refused access to correct the equipment problem at their home. As a result, these customers were removed from the program.

Col. (10) represents a hypothetical "Net Firm Demand" as if the load control values had definitely been exercised on the peak.
Col. (10) is derived by the formula: Col. (10) = Col. (2) - Col.(6) + Col. (8).

FPL's Summer Peak load in 2020 occurred in June.

Schedule 3.1: Gulf
History of Summer Peak Demand (MW)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Total	Wholesale	Retail	Interruptible	Res. Load Management	Residential Conservation	C/I Load Management	C/I Conservation	Net Firm Demand
2011	2,535	89	2,446	0	0	186	0	198	2,535
2012	2,351	76	2,275	0	0	206	0	212	2,351
2013	2,362	74	2,288	0	0	229	0	220	2,362
2014	2,437	75	2,362	0	0	243	0	224	2,437
2015	2,495	78	2,417	0	0	256	0	231	2,495
2016	2,508	76	2,432	0	0	261	0	231	2,508
2017	2,434	74	2,360	0	0	266	0	232	2,434
2018	2,491	80	2,411	0	0	268	0	233	2,491
2019	2,472	75	2,397	0	0	270	0	234	2,472
2020	2,410	65	2,345	0	0	272	0	234	2,410

Historical Values (2011 - 2020):

Col. (2) and Col. (3) are actual values for historical Summer peaks and include the effects of conservation (Col. 7 & Col. 9).

Col. (4) represents "Retail Demand" and is derived by the formula: Col. (2) - Col. (3).

Col. (10) is derived by the formula Col. (10) = Col. (2) - Col. (6) - Col. (8).

Schedule 3.1
Forecast of Summer Peak Demand (MW)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
August of Year	Total	Wholesale	Retail	Interruptible	Res. Load Management*	Residential Conservation	C/I Load Management*	C/I Conservation	Net Firm Demand
FPL									
2021	24,620	1,368	23,252	0	857	14	934	17	22,799
Gulf									
2021	2,462	61	2,401	0	0	5	0	1	2,455
Integrated FPL and Gulf									
2022	27,277	1,582	25,695	0	867	39	945	35	25,392
2023	27,771	1,606	26,166	0	874	60	956	54	25,828
2024	28,278	1,599	26,680	0	885	82	966	73	26,272
2025	28,675	1,605	27,070	0	904	89	977	80	26,625
2026	29,051	1,626	27,425	0	927	89	988	80	26,967
2027	29,340	1,558	27,781	0	950	89	999	80	27,221
2028	29,721	1,582	28,139	0	973	89	1,011	80	27,568
2029	30,233	1,605	28,628	0	996	89	1,022	80	28,047
2030	30,832	1,631	29,201	0	1,019	89	1,033	80	28,612

Projected Values (2021 - 2030):

Col. (2) - Col. (4) represent forecasted peak and do not include incremental conservation, cumulative load management, or incremental load management.

Col. (5) through Col. (9) represent cumulative load management, incremental conservation, and load management.
All values are projected August values.

Col. (8) represents FPL's Business On Call, CDR, CILC, and curtailable programs/rates.

Col. (10) represents a "Net Firm Demand" which accounts for all of the incremental conservation and assumes all of the load control is implemented on the peak. Col. (10) is derived by the formula: Col. (10) = Col. (2) - Col. (5) - Col. (6) - Col. (7) - Col. (8) - Col. (9).

* Res. Load Management and C/I Load Management include Lee County and FKEC whose loads are served by FPL.

Schedule 3.2: FPL
History of Winter Peak Demand (MW)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Total	Firm Wholesale	Retail	Interruptible	Res. Load Management	Residential Conservation	C/I Load Management	C/I Conservation	Net Firm Demand
2011	21,126	383	20,743	0	903	717	723	303	19,501
2012	17,934	382	17,552	0	856	755	722	314	16,356
2013	15,931	348	15,583	0	843	781	567	326	14,521
2014	17,500	890	16,610	0	828	805	590	337	16,083
2015	19,718	1,329	18,389	0	822	835	551	346	18,345
2016	17,031	1,087	15,944	0	742	858	570	352	15,719
2017	17,172	1,098	16,074	0	759	861	577	364	15,836
2018	19,109	1,262	17,847	0	750	864	588	369	17,771
2019	16,795	1,432	15,363	0	706	867	613	379	15,476
2020	17,514	1,243	16,271	0	702	870	614	390	16,197

Historical Values (2011 - 2020):

Col. (2) and Col. (3) are actual values for historical Winter peaks. As such, they incorporate the effects of conservation (Col. 7 & Col. 9) and may incorporate the effects of load control if load control was operated on these peak days. Col. (2) represents the actual Net Firm Demand. For year 2011, the actual winter peak occurred in December of 2010.

Col. (5) through Col. (9) represent actual DSM capabilities and represent annual (12-month) values.

Col.(6) values for 2015-on reflect a hardware communications issue identified in 2015 that was subsequently resolved. A number of participating customers did not respond to FPL's efforts to reach them or refused access to correct the equipment problem at their home. As a result, these customers were removed from the program.

Col. (10) represents a hypothetical "Net Firm Demand" as if the load control values had definitely been exercised on the peak.
Col. (10) is derived by the formula: Col. (10) = Col. (2) - Col.(6) + Col. (8).

Schedule 3.2: Gulf
History of Winter Peak Demand (MW)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Total	Firm Wholesale	Retail	Interruptible	Res. Load Management	Residential Conservation	C/I Load Management	C/I Conservation	Net Firm Demand
2011	2,495	89	2,406	0	0	297	0	157	2,495
2012	2,139	70	2,069	0	0	317	0	165	2,139
2013	1,766	90	1,676	0	0	341	0	169	1,766
2014	2,694	85	2,609	0	0	356	0	172	2,694
2015	2,492	74	2,418	0	0	369	0	176	2,492
2016	2,043	80	1,963	0	0	374	0	176	2,043
2017	2,211	89	2,122	0	0	377	0	177	2,211
2018	2,809	70	2,739	0	0	379	0	178	2,809
2019	2,066	66	2,000	0	0	381	0	178	2,066
2020	2,129	69	2,060	0	0	382	0	178	2,129

Historical Values (2011 - 2020):

Col. (2) and Col. (3) are actual values for historical Winter peaks and include the effects of conservation (Col. 7 & Col. 9).

Col. (4) represents "Retail Demand" and is derived by the formula: Col. (2) - Col. (3).

Col. (10) is derived by the formula Col. (10) = Col. (2) - Col. (6) - Col. (8).

Schedule 3.2
Forecast of Winter Peak Demand (MW)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
January of Year	Total	Firm Wholesale	Retail	Interruptible	Res. Load Management*	Residential Conservation	C/I Load Management*	C/I Conservation	Net Firm Demand
FPL									
2021	20,061	1,214	18,847	0	711	2	651	5	18,692
Gulf									
2021	2,439	64	2,375	0	0	0	0	0	2,438
Integrated FPL and Gulf									
2022	22,461	1,236	21,225	0	723	9	658	17	21,055
2023	22,869	1,277	21,592	0	734	16	664	29	21,426
2024	23,287	1,310	21,976	0	744	24	671	42	21,805
2025	23,624	1,313	22,311	0	763	33	677	54	22,098
2026	23,957	1,347	22,610	0	787	33	682	54	22,401
2027	24,199	1,296	22,903	0	811	33	687	54	22,614
2028	24,552	1,336	23,216	0	835	33	693	54	22,938
2029	24,916	1,378	23,537	0	859	33	698	54	23,272
2030	25,289	1,422	23,866	0	883	33	703	54	23,615

Projected Values (2021 - 2030):

Col. (2) - Col. (4) represent forecasted peak and do not include incremental conservation, cumulative load management, or incremental load management.

Col. (5) through Col. (9) represent cumulative load management, incremental conservation, and load management.
All values are projected January values.

Col. (8) represents FPL's Business On Call, CDR, CILC, and curtailable programs/rates.

Col. (10) represents a "Net Firm Demand" which accounts for all of the incremental conservation and assumes all of the load control is implemented on the peak. Col. (10) is derived by the formula: Col. (10) = Col. (2) - Col. (5) - Col. (6) - Col. (7) - Col. (8) - Col. (9).

* Res. Load Management and C/I Load Management include Lee County and FKEC whose loads are served by FPL.

QUESTION:
Please refer to the Petition at Exhibit A, Attachment 3, Schedule 3.2, column 10. Table 3 below shows that FPL and Gulf's combined actual 2021 winter peak demand is 17,226 MW; and FPL and Gulf's combined projected 2022 winter peak demand will be 21,163 MW, which is an increase of 3,937 MW (22.9%) over the 2021 actual winter peak demand experienced. Please explain what accounts for this forecasted increase in winter peak demand in 2022.

	Table 3: FPL's Net Firm Winter Peak Demand (Schedule 3.2, Column 10)					
	2021 Actual			2022 Projection	Incremental Amount	
	FPL	Gulf	FPL + Gulf	FPL + Gulf		
	(MW)	(MW)	(MW)	(MW)	(MW)	(%)
	(1)	(2)	(3) = (1) + (2)	(4)	(5) = (4) - (3)	(6) = (5) / (3)
2021	14,993	2,233	17,226			
2022				21,163	3,937	22.9%
Source of data: FPL's instant Petition, Exhibit A, Attachment 3.						

RESPONSE:
The combined 2021 actual net firm winter peak demand value of 17,226 MW is not weather-normalized. The FPL legacy area, *i.e.*, the service territory of FPL prior to its acquisition of Gulf, experienced milder than normal weather which resulted in a significant reduction to the actual winter peak demand. 2021 weather-normalized net firm winter peak demands for FPL and Gulf were 18,639 MW and 2,501 MW, respectively. The resulting 2021 combined weather-normalized winter peak of 21,140 MW represents a decrease of -23 MW compared to the forecasted net firm winter peak demand 21,163 MW in 2022.

DECLARATION

I, Jun Park, co-sponsored the answers to Interrogatory Nos. 3, 5, and 6 from Staff's Second Set of Interrogatories to Florida Power & Light Company in Docket No. 20220045-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.

Jun Park

Date: April 14, 2022

DECLARATION

I, Frank Prieto, sponsored the answer to Interrogatory No. 4 and co-sponsored the answers to Interrogatory Nos. 3, 5, and 6 from Staff's Second Set of Interrogatories to Florida Power & Light Company in Docket No. 20220045-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.

Frank Prieto

Frank Prieto

Date: April 14, 2022