



FPSC Ten-Year Site Plan Workshop FPL TYSP Comparison

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FPL filed two official* resource plans in its 2022 TYSP – a Recommended Plan for extreme Winter and a Business as Usual Plan that uses a typical P50 Winter load

Major Resource Changes Common to Both Plans

- **Both plans add the Dania Beach Clean Energy Center (a 2x1 combined cycle unit) in 2022**
- **The North Florida Resiliency Connection (NFRC) transmission line is in-service in both plans in June 2022, electrically connecting the FPL and FPL Northwest Florida regions**
- **Summer MW upgrades to FPL’s existing combined cycle fleet occur in both plans (through 2026)**
- **All of FPL’s ownership positions in coal-fired generation are retired in both plans (Scherer 4 in 2022; Daniel 1&2 in 2024, and Scherer 3 in 2028)**
- **Both plans add over 9,000 MW (nameplate) of solar over the 10-year reporting period (9,462 MW in the Recommended Plan; 9,387 MW in the Business as Usual Plan)**
- **Both plans add significant amounts of batteries – 3,200 MW in the Recommended Plan; 1,800 MW in the Business as Usual plan**

*FPL also provided two “FYI-only” resource plans that detailed the effects of possible renewable tax credits.

FPL's Recommended Plan adds resources to meet a extreme Winter peak in the reporting period

Resource Changes to Plan for Extreme Winter

- **FPL's Recommended Plan plans for a future extreme Winter peak event**
- **FPL based this extreme Winter peak on temperatures from the Dec. 1989 Winter event, with hourly load patterns similar to the Jan. 2010 Winter event**
- **To be prepared for an extreme Winter event, FPL planned the following resource changes in its Recommended Plan:**
 - **Converting 1,828 MW of units previously planned for near-term retirement to "Winter Only" operation**
 - **Upgrading FPL's existing combined cycle units to provide another 700 MW of Winter-only capacity**
- **The above changes are projected to allow FPL to be prepared for extreme Winter load through the year 2026; a total of 1,400 MW of additional batteries are projected in 2027- 2031 due to continued load growth**

FPL's customer forecasts for the 2021 and 2022 TYSPs are compared below

FPL Customer Forecast

	2021 TYSP				2022 TYSP		
Year	Residential Customers	Commercial Customers	Industrial Customers		Residential Customers	Commercial Customers	Industrial Customers
2019	4,886,791	622,212	12,049		4,886,791	622,212	12,049
2020	4,960,827	628,861	12,244		4,960,827	628,861	12,244
2021	5,010,710	633,964	12,937		5,036,950	636,044	12,790
2022	5,057,606	640,371	13,115		5,106,987	642,492	13,325
2023	5,117,117	648,333	13,194		5,177,425	651,364	13,441
2024	5,179,421	656,481	13,286		5,247,177	659,873	13,432
2025	5,239,103	664,254	13,387		5,315,285	668,080	13,408
2026	5,297,595	671,478	13,450		5,382,382	676,141	13,360
2027	5,357,225	678,569	13,405		5,448,970	684,222	13,251
2028	5,417,530	685,752	13,319		5,515,079	692,124	13,150
2029	5,477,700	692,967	13,253		5,580,392	699,841	13,097
2030	5,537,659	700,185	13,209		5,645,085	707,540	13,064
2031	-	-	-		5,709,413	715,213	12,977
Average Annual Growth Rate (%)	1.1%*	1.1%*	0.2%*		1.2%**	1.2%**	-0.3%**

Source: Schedule 2.1 and 2.2

* Average annual growth rate from 2021-2030

** Average annual growth rate from 2022-2031



FPL’s Load Forecast information for its P50 Winter load and the natural gas price used in the analyses for the 2021 TYSP and one of the 2022 TYSP resource plans are shown below

FPL Forecast Values – Load and Fuel

2021 TYSP

2022 TYSP – Business as Usual

Metric	2021 Starting Value	Average Annual Growth Rate (%)*
Summer Peak Demand (MW)	25,113	1.5%
Winter Peak Demand (MW)	20,864	1.4%
Net Energy for Load (GWh)	134,847	0.9%
Natural Gas (\$/MMBtu)	\$3.00	2.1%

Metric	2022 Starting Value	Average Annual Growth Rate (%)**
Summer Peak Demand (MW)	25,469	1.4%
Winter Peak Demand (MW)	21,163	1.4%
Net Energy for Load (GWh)	136,705	1.0%
Natural Gas (\$/MMBtu)	\$4.72	-1.8%

Source: Schedule 3.1, 3.2, 3.3

* Average annual growth rate from 2021-2030

** Average annual growth rate from 2022-2031



Only the Winter Peak Demand and NEL changed in the analyses that produced the 2022 Recommended Plan compared to the 2022 Business as Usual

FPL Forecast Values – Load and Fuel

2022 TYSP – Business as Usual Plan

Metric	2022 Starting Value	Average Annual Growth Rate (%)**
Summer Peak Demand (MW)	25,469	1.4%
Winter Peak Demand (MW)	21,163	1.4%
Net Energy for Load (GWh)	136,705	1.0%
Natural Gas (\$/MMBtu)	\$4.72	-1.8%

2022 TYSP – Recommended Plan

Metric	2022 Starting Value	Average Annual Growth Rate (%)**
Summer Peak Demand (MW)	25,469	1.4%
Winter Peak Demand (MW)	30,270	1.4%
Net Energy for Load (GWh)	139,924	1.0%
Natural Gas (\$/MMBtu)	\$4.72	-1.8%

Source: Schedule 3.1, 3.2, 3.3

* Average annual growth rate from 2021-2030

** Average annual growth rate from 2022-2031



Firm Summer MW Generation Additions/Changes: 2021 - 2024

		2021 TYSP (includes FPL and Gulf)	2022 TYSP - Business as Usual Plan	2022 TYSP - Recommended Plan
Year	Type	<u>Firm Summer MW</u>	<u>Firm Summer MW</u>	<u>Firm Summer MW</u>
2021	PV	321	-	-
	CC	0	-	-
	CT	938	-	-
	Battery	469	-	-
	Retirements	0	-	-
	Total	1,728	-	-
2022	PV	232	190	190
	CC	1,221	1,361	1,361
	CT	0	0	0
	Battery	0	0	0
	Retirements	-2,260	-634	-634
	Total	-807	917	917
2023	PV	338	557	557
	CC	92	76	76
	CT	0	0	0
	Battery	0	0	0
	Retirements	-885	-885	-885
	Total	-455	-252	-252
2024	PV	434	715	715
	CC	213	155	155
	CT	0	0	0
	Battery	0	0	0
	Retirements	-502	-502	-502
	Total	145	368	368

Sources: Schedule 8 (Generation); Tables I.A.3.2 and I.B.3.2
 PV values do not include the effects of yearly degradation



Firm Summer MW Generation Additions/Changes: 2025 - 2028

		2021 TYSP (includes FPL and Gulf)	2022 TYSP - Business as Usual Plan	2022 TYSP - Recommended Plan
Year	Type	<u>Firm Summer MW</u>	<u>Firm Summer MW</u>	<u>Firm Summer MW</u>
2025	PV	434	542	542
	CC	104	104	104
	CT	0	0	0
	Battery	0	0	0
	Retirements	-90	-194	-194
	Total		448	452
2026	PV	404	178	178
	CC	4	4	4
	CT	0	0	0
	Battery	0	0	0
	Retirements	0	0	0
	Total		408	182
2027	PV	396	156	156
	CC	0	0	0
	CT	0	0	0
	Battery	0	0	300
	Retirements	-82	-4	-4
	Total		314	153
2028	PV	473	195	195
	CC	0	0	0
	CT	0	0	0
	Battery	0	0	360
	Retirements	-32	0	0
	Total		441	195

Sources: Schedule 8 (Generation); Tables I.A.3.2 and I.B.3.2 (Purchased Power)
 PV values do not include the effects of yearly degradation

Firm Summer MW Generation Additions/Changes: 2029 - 2031

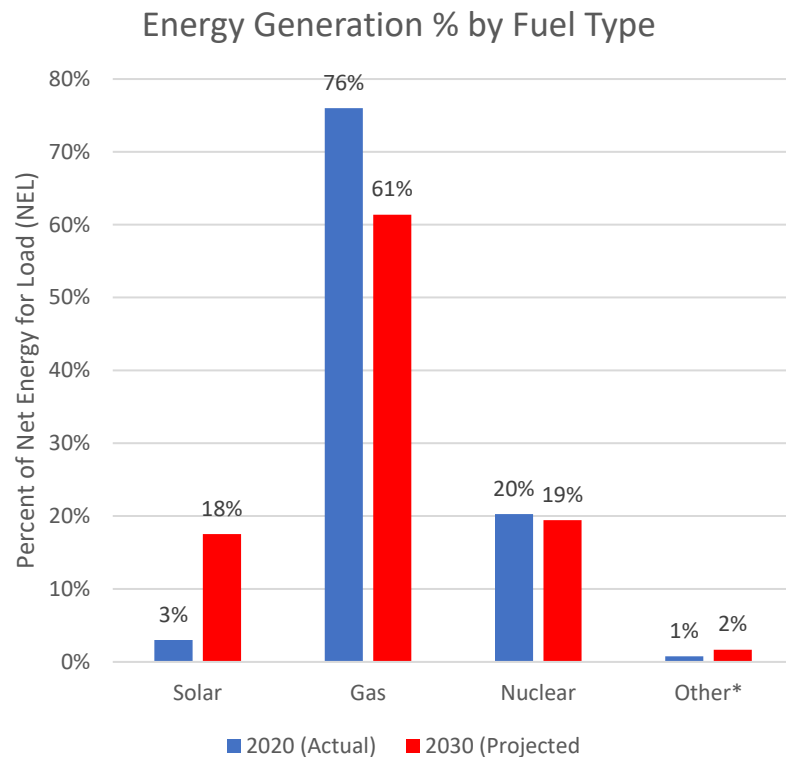
		2021 TYSP (includes FPL and Gulf)	2022 TYSP - Business as Usual Plan	2022 TYSP - Recommended Plan
Year	Type	<u>Firm Summer</u> <u>MW</u>	<u>Firm Summer</u> <u>MW</u>	<u>Firm Summer</u> <u>MW</u>
2029	PV	284	190	190
	CC	0	0	0
	CT	0	0	0
	Battery	300	500	637
	Retirements	0	-215	-215
	Total	584	475	612
2030	PV	288	58	58
	CC	0	0	0
	CT	0	0	0
	Battery	400	534	372
	Retirements	-3	-3	-3
	Total	685	589	427
2031	PV	-	63	63
	CC	-	0	0
	CT	-	0	0
	Battery	-	387	500
	Retirements	-	0	0
	Total	-	450	563

Sources: Schedule 8 (Generation); Tables I.A.3.2 and I.B.3.2
 PV values do not include the effects of yearly degradation

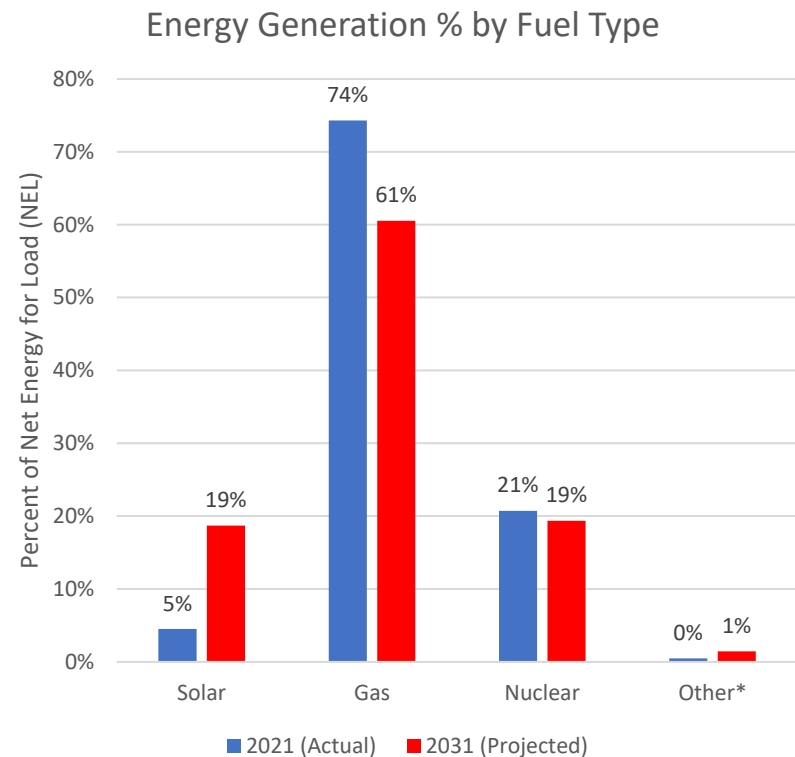
FPL's Generation mix for both 2022 plans follows a similar pattern as the 2021 TYSP

Energy Generation by Fuel Type (%)

2021 TYSP



2022 TYSP – Both Plans



Sources: Schedule 6.1 and 6.2

* Other is comprised of generation from oil, coal, and purchased power/interchange



Summer Reserve Margins – 2021 TYSP vs. 2022 TYSP (both plans)

FPL Summer Reserve Margins

Year	2021 TYSP (Includes FPL and Gulf)		2022 TYSP - Business as Usual Plan		2022 TYSP - Recommended Plan	
	Reserve Margin (MW)	% of Firm Peak	Reserve Margin (MW)	% of Firm Peak	Reserve Margin (MW)	% of Firm Peak
2021	6,367	25%	-	-	-	-
2022	6,478	26%	6,555	26%	6,555	26%
2023	5,579	22%	5,913	23%	5,913	23%
2024	5,271	20%	5,920	23%	5,920	23%
2025	5,368	20%	6,123	23%	6,123	23%
2026	5,411	20%	5,922	22%	5,922	22%
2027	5,458	20%	5,786	21%	6,086	22%
2028	5,539	20%	5,625	20%	6,285	23%
2029	5,629	20%	5,609	20%	6,406	23%
2030	5,736	20%	5,722	20%	6,357	22%
2031	-	-	5,744	20%	6,497	23%

Source: Schedule 7.1

Summer reserve margins for the Recommended Plan begin to increase in 2027 due to additional battery capacity addressing extreme Winter load



Winter Reserve Margins – 2021 TYSP vs. 2022 TYSP (both plans)

FPL Winter Reserve Margins

Year	2021 TYSP (Includes FPL and Gulf)		2022 TYSP - Business As Usual Plan		2022 TYSP - Recommended Plan	
	Reserve Margin (MW)	% of Firm Peak	Reserve Margin (MW)	% of Firm Peak	Reserve Margin (MW)	% of Firm Peak
20/21	10,017	48%	-	-	-	-
21/22	8,574	41%	8,892	42%	2,459	8%
22/23	9,431	44%	9,814	46%	2,823	9%
23/24	7,798	36%	8,112	37%	1,000	3%
24/25	7,521	34%	7,855	36%	454	1%
25/26	7,212	32%	7,559	34%	117	0%
26/27	6,918	31%	7,279	32%	18	0%
27/28	6,554	29%	6,974	30%	13	0%
28/29	6,519	28%	7,190	31%	15	0%
29/30	6,572	28%	7,624	32%	11	0%
30/31	-	-	7,908	33%	41	0%

Source: Schedule 7.2

FPL's Recommended Plan adds capacity to meet the extreme Winter load exactly without any additional reserves and therefore has near-zero values in the latter years

