



Stephanie A. Cuello  
SENIOR COUNSEL

July 26, 2023

**VIA ELECTRONIC DELIVERY**

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

Re: *2023 Ten-Year Site Plan Data Request #4; Undocketed*

Dear Mr. Teitzman:

Please find enclosed for filing, Duke Energy Florida, LLC's Response to Staff's Data Request #4, questions 1 and 2, issued on July 5, 2023, regarding DEF's 2023 TYSP.

Thank you for your assistance in this matter and if you have any questions, please feel free to contact me at (850) 521-1425.

Sincerely,

*/s/ Stephanie A. Cuello*

Stephanie A. Cuello

SAC/vr  
Attachments

cc: Greg Davis, [GDavis@psc.state.fl.us](mailto:GDavis@psc.state.fl.us), Division of Engineering, FPSC  
Phillip Ellis, [PELLis@psc.state.fl.us](mailto:PELLis@psc.state.fl.us), Division of Engineering, FPSC

## DEF's Response to Staff's Fourth Data Request Regarding the 2023 Ten Year Site Plan; Questions 1-2

- For the following questions, please refer to DEF's Response to Staff's First Data Request No. 20 (DEF's 2022 TYSP) and DEF's Response to Staff's First Data Request No. 22 (DEF's 2023 TYSP).

### DEF 2022 TYSP

Year	Number of PEVs	Number of Public PEV Charging Stations	Number of Public DCFC PEV Charging Stations.	Cumulative Impact of PEVs		
				Summer Demand	Winter Demand	Annual Energy
				(MW)	(MW)	(GWh)
2022	33,325	*	573	1.45	0.5	24
2023	42,404		926	3.6	1.3	54
2024	52,918		1,438	6.6	1.9	92
2025	65,134		2,128	10.5	2.7	139
2026	79,267		3,035	15.3	3.8	199
2027	95,455		4,170	21.2	5.3	275
2028	114,021		5,459	28.1	7.2	367
2029	135,439		6,867	37.0	9.5	470
2030	160,059		8,382	48.6	12.1	586
2031	188,139		10,018	64.0	15.8	712

**Notes**

- Source: Fall 2021 EV Forecast.  
Previous EV forecasts only included Light Duty. This version includes Light, Medium, and Heavy Duty forecasts. Light duty is considered passenger vehicles (Class 1 and 2). Medium duty is delivery vehicles (Class 3 - 6 vehicles). Heavy duty are transit, school, haul vehicles (Class 7 and 8).
- "Number of PEVs" includes total cumulative PEV vehicles which includes Light, Medium, and Heavy duty
- "Cumulative Impact of PEVs" includes only net-new vehicles beginning January 2022 as used in Load Forecast. Includes Light, Medium, and Heavy duty demand and energy impacts.
- Summer Demand: August HE 18. Winter Demand: January HE 08
- \* Duke currently forecasts L2 private and public chargers together. Duke is developing a charger forecasting tool that will differentiate between the two in the future.

DEF 2023 TYSP

Year	Number of PEVs	Number of Public PEV Charging Stations	Number of Public DCFC PEV Charging Stations.	Cumulative Impact of PEVs		
				Summer Demand	Winter Demand	Annual Energy
				(MW)	(MW)	(GWh)
2023	50,326	2,644	772	4	2	78
2024	71,688	3,403	1,069	9	4	149
2025	98,400	4,163	1,410	14	5	241
2026	131,212	4,914	1,801	21	8	356
2027	171,260	5,675	2,253	30	10	495
2028	221,135	6,509	2,798	40	14	663
2029	283,625	7,470	3,469	52	18	863
2030	360,959	8,593	4,288	66	22	1105
2031	453,548	9,876	5,253	83	28	1389
2032	562,110	11,341	6,373	103	35	1722
<b>Notes</b>						
1. Source: Fall 2022 EV Forecast						
2. "Number of PEVs" total cumulative PEV vehicles which includes includes Light, Medium, and Heavy Duty Vehicles.						
3. "Cumulative Impact of PEVs" includes only net-new vehicles beginning January 2023 as used and provided to load forecasting. This includes impacts from light, medium, and heavy duty vehicles.						
4. Summer Demand: August HE 18. Winter Demand: January HE 08						
5. "Number of Public PEV charging stations" includes both L2 and DC charging stations						

Comparing the PEV forecast responses for DEF’s 2022 and 2023 TYSP’s, the Company has significantly increased its PEV forecast over the planning period (see chart/calculations below). Please identify and explain the major drivers/factors in DEF’s PEV forecasting models that have contributed to this significant increase over the planning period.

Year	2023 TYSP Forecasted Number of PEVs	2022 TYSP Forecasted Number of PEVs	2023 vs. 2022 Forecast Variance	Incremental Percentage Increase
	(1)	(2)	(3)= (1) - (2)	(3)/(2)
2022		33,325		
2023	50,326	42,404	7,921	18.68%
2024	71,688	52,918	18,770	35.47%
2025	98,400	65,134	33,266	51.07%
2026	131,212	79,267	51,945	65.53%
2027	171,260	95,455	75,805	79.41%
2028	221,135	114,021	107,113	93.94%
2029	283,625	135,439	148,186	109.41%
2030	360,959	160,059	200,900	125.52%
2031	453,548	188,139	265,409	141.07%
2032	562,110			

**Response:**

The 2023 TYSP used an EV forecast developed using variables gathered in summer and fall of 2022 (As mentioned in the data table note 1, the source is Fall 2022 EV Forecast). The 2022 TYSP used the Fall 2021 EV Forecast. In that timeframe, variables were updated that increased the forecasts. Key variables include:

- EV registration data led to an increase in expected EV adoption in the near term (2021 and 2022). This resulted in a higher initial counts in early years which flowed through to future years.
- Increased federal and state support. While the Investment Reduction Act was not included in this forecast, federal and state support of EVs has increased and continued to grow recently (such as California Clean Cars programs and other bills introduced, not yet passed during the time of the forecast). This results in higher availability of EVs with potentially lower costs, which increases the EV forecast.
- Vehicle manufacturer commitment to EVs has continued to grow with multiple automaker announcement pledges to support EVs. This results in increased vehicle availability in future years which leads to more choices for the consumers and higher adoption (A majority of automakers have pledged to transition to EVs with multiple models becoming available mid to late 2020s).
- Higher commitment to EV space with new automakers entering, technology companies looking to partner, increase manufacturing commitment of EVs, etc. This increases model availability and customer awareness.

Duke will continue to monitor these tailwind variables, in addition to many other variables, as it continually updates its EV forecast.

2. DEF's 2023 TYSP, Schedule 2.2.1, column (8) Total Sales to Ultimate Consumers, indicates that DEF's 2022 retail sales reached a peak for the past 10-year period. Please identify the major contributor(s) to this significant incremental annual sales increase

**Response:**

Total Sales to Ultimate Consumers (total retail sales) reached an apparent peak in 2022. Several factors converged to contribute to this effect.

First and foremost, the recovery from the COVID-19 pandemic played a pivotal role. As the nation gradually emerged from the depths of the health crisis, economic activities resumed, and consumer confidence rebounded. Florida, known for its vibrant tourism and service sectors, experienced a surge in economic activity, leading to increased electricity consumption across various industries.

Moreover, another key driver of the peak in electric sales was the influx of migrants from states with higher costs of living. Florida has long been an attractive destination for individuals seeking a more affordable lifestyle. The pandemic, coupled with remote work opportunities and changing preferences, prompted a considerable number of individuals and families to relocate to the Sunshine State. This population influx further fueled the demand for electricity, as new residents settled into their homes and contributed to the state's growing economy.

Additionally, the maintenance of record-low interest rates until mid-2022 played a significant role in stimulating economic growth and boosting electric sales. Low borrowing costs incentivized investment in real estate and other sectors, leading to construction projects, new businesses, and increased electricity consumption. These favorable financial conditions encouraged individuals and businesses alike to make long-term commitments that required reliable and affordable access to electricity.

In conclusion, the rise in total electric retail sales for Florida in 2022 can be attributed to the combined effects of the COVID-19 recovery, migration from higher-cost states, and the maintenance of historically low interest rates until mid-year. These factors fueled economic growth, stimulated investment, and heightened the demand for electricity across the state.

Looking ahead to 2023, we anticipate a decline in total electric retail sales in Florida. This projection is underpinned by several crucial economic factors that are at play. One of the primary drivers is the Federal Funds Effective Rate, which has experienced a significant increase from 0.08% in January 2022 to 5.08% as of June 2023. The Federal Reserve has expressed its intention to implement at least two additional rate hikes within the year. Although these actions are aimed at addressing the record high levels of inflation, they are likely to have adverse effects, including lower employment levels, reduced investment, and the potential for an economic downturn, or even a recession.

The economic projections utilized in the 2023 TYSP were based on the assumption of a Federal Funds Effective Rate of 3.25% by July 2023, as well as the anticipation of a mild economic downturn. These projections are reflective of the forecasted total retail sales for 2023, where economic drivers such as employment, income, and GDP were expected to experience a decline. These factors, combined with higher energy prices, have contributed to the decrease in total retail sales throughout 2023.

However, we do anticipate a slight recovery in these economic drivers and a subsequent decline in energy prices in the year 2024, which will result in increased total retail sales.

Nonetheless, it is important to note that while sales are expected to improve, they are likely to remain relatively flat as the economy experiences a period of stagnation in response to the consequences of rapidly raising interest rates from historically low levels to record highs within a short timeframe. Given normal weather and based on our forecast, we estimate that through economic recovery including long-term customer growth, total retail sales will next surpass the level achieved in 2022 by the year 2029.