

Stephanie A. Cuello

May 1, 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 #1; Undocketed

Dear Mr. Teitzman:

Please find enclosed for filing, Duke Energy Florida, LLC's Response to Staff's Data Request #1, questions 3 through 95, issued on February 27, 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/mw Attachments

cc: Greg Davis, <u>GDavis@psc.state.fl.us</u>, Division of Engineering, FPSC Phillip Ellis, <u>PEllis@psc.state.fl.us</u>, Division of Engineering, FPSC



DEF's Response to Staff's Data Request Regarding the 2023 Ten Year Site Plan; Questions 3-95

Instructions: Accompanying this data request is a Microsoft Excel (Excel) document titled "2023 TYSP - Data Request #1.Excel Tables," (Excel Tables File). For each question below that references the Excel Tables File, please complete the table, and provide, in Excel Format, all data requested for those sheet(s)/tab(s) identified in parenthesis.

General Items

1. Please provide an electronic copy of the Company's Ten-Year Site Plan (TYSP) for the current planning period (2023-2032) in PDF format.

RESPONSE:

Please see PDF file DEF 2023 TYSP.PDF, submitted on April 3, 2023.

2. Please provide an electronic copy of all schedules and tables in the Company's current planning period TYSP in Excel format.

RESPONSE:

Please see Excel files *DEF 2023 TYSP Schedules 1-10.xlsx and DEF 2023 TYSP – Tables.xlsx*, submitted on April 3, 2023.

3. Please refer to the Excel Tables File (Financial Assumptions, Financial Escalation). Complete the tables by providing information on the financial assumptions and financial escalation assumptions used in developing the Company's TYSP. If any of the requested data is already included in the Company's current planning period TYSP, state so on the appropriate form.

RESPONSE:

Please see tables below and the following tabs of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables: Financial Assumptions Financial Escalation

Financial Assumptions Base Case									
AFUDC RATE		7.33%	%						
CAPITALIZATION RATIOS:									
	DEBT	47%	%						
F	PREFERRED		%						
	EQUITY	53%	%						
RATE OF RETURN									
	DEBT	4.2%	%						
F	PREFERRED		%						
	EQUITY	10.1%	%						
INCOME TAX RATE:									
	STATE	5.5%	%						
	FEDERAL	21%	%						
	EFFECTIVE	25.35%	%						
OTHER TAX RATE:		N/A	%						
DISCOUNT RATE:		6.83%	%						
TAX									
DEPRECIATION RATE: (1)			%						
(1)									
for CT:	15 Years (MA	CRS Table)							
for CC:	20 Years (MA								
for Solar and SPS:	5 Years (MAC								
for Battery:	5 Years (MAC	CRS Table)							

	Financial I	Escalation Assu	mptions	
	General	Plant Construction	Fixed O&M	Variable O&M
	Inflation	Cost ⁽¹⁾	Cost	Cost
Year	%	%	%	%
2023	2.50%		2.5%	2.5%
2024	2.50%		2.5%	2.5%
2025	2.50%		2.5%	2.5%
2026	2.50%		2.5%	2.5%
2027	2.50%		2.5%	2.5%
2028	2.50%		2.5%	2.5%
2029	2.50%		2.5%	2.5%
2030	2.50%		2.5%	2.5%
2031	2.50%		2.5%	2.5%
2032	2.50%		2.5%	2.5%
	⁽¹⁾ Long Term E	Escalation Rates		
	Combustion	Turbine	1.78%	
	Combined C	ycle	1.78%	
	Solar		1.27%	
	Solar Plus S	torage	1.47%	
	Battery		2.29%	

Load & Demand Forecasting

Historic Load & Demand

- 4. **[Investor-Owned Utilities Only]** Please refer to the Excel Tables File (Hourly System Load). Complete the table by providing, on a system-wide basis, the hourly system load in megawatts (MW) for the period January 1 through December 31 of the year prior to the current planning period. For leap years, please include load values for February 29. Otherwise, leave that row blank.
 - a. Please also describe how loads are calculated for those hours just prior to and following Daylight Savings Time (March 13, 2022, and November 6, 2022).

RESPONSE:

Please see tab *Hourly System Load* of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables.

- a. For March DST, there is a zero in hour 3. For November DST, DEF computes the average for hours 2 and hour 3 and places it in hour 2 as hour 3 is shifted back to hour 2.
- 5. Please refer to the Excel Tables File (Historic Peak Demand). Complete the table by providing information on the monthly peak demand experienced during the three-year period prior to the current planning period, including the actual peak demand experienced, the amount of demand response activated during the peak, and the estimated total peak if demand response had not been activated. Please also provide the day, hour, and system-average temperature at the time of each monthly peak.

RESPONSE:

Please see table below and tab *Historic Peak Demand* of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables:

Year	Month	Actual Peak Demand	Demand Response Activated	Estimated Peak Demand	Day	Hour	System- Average Temperature
		(MW)	(MW)	(MW)			(Degrees F)
	1	9240	0	9240	30	8	45.12
	2	7539	0	7539	1	8	57.81
	3	7003	0	7003	18	18	73.65
	4	7905	0	7905	6	18	79.37
	5	8743	0	8743	23	17	81.55
2022	6	9977	0	9977	15	17	84.79
50	7	9799	0	9799	29	17	83.96
	8	9848	0	9848	1	17	84.13
	9	9306	0	9306	6	17	84.17
	10	7956	0	7956	11	17	78.48
	11	7811	0	7811	1	17	77.58
	12	9157	0	9157	25	9	38.36
	1	7052	0	7052	19	8	45.20
	2	8308	0	8308	4	8	43.05
	3	7565	0	7565	31	17	86.25
	4	7871	0	7871	29	18	86.90
	5	8735	0	8735	5	18	87.50
21	6	9147	0	9147	11	17	92.55
2021	7	9452	0	9452	22	17	89.70
	8	9681	0	9681	19	17	94.10
	9	8770	0	8770	13	17	87.55
	10	8701	0	8701	7	17	87.95
	11	6198	0	6198	3	17	81.40
	12	6210	0	6210	31	17	79.00
	1	8407	0	8407	22	8	34.80
	2	6312	0	6312	13	17	80.05
	3	8090	0	8090	30	18	83.10
	4	8146	0	8146	13	17	85.30
	5	8592	0	8592	22	17	89.05
2020	6	9647	0	9647	25	17	91.00
20	7	9393	0	9393	14	17	87.75
	8	9623	0	9623	25	17	88.85
	9	9533	0	9533	3	17	89.35
	10	8468	0	8468	7	16	86.60
	11	6943	0	6943	15	16	76.10
		7551	0	7551	27	9	40.45

Forecasted Load & Demand

6. Please identify the weather station(s) used for calculation of the system-wide temperature for the Company's service territory. If more than one weather station is utilized, please describe how a system-wide average is calculated.

DEF uses dry bulb temperature readings from three weather stations - St Petersburg (45%), Orlando (45%) and Tallahassee (10%), weight included in parenthesis.

Weather station weightings are developed using "weather-sensitive" energy sales by customer building types reported by eighteen individual Operation Centers located around the service area. Energy sales by Operation Centers are grouped to its closest weather station to determine weather station weights.

- 7. Please explain, to the extent not addressed in the Company's current planning period TYSP, how the reported forecasts of the number of customers, demand, and total retail energy sales were developed. In your response, please include the following information:
 - Methodology.
 - Assumptions.
 - Data sources.
 - Third-party consultant(s) involved.
 - Anticipated forecast accuracy.
 - Any difference/improvement(s) made compared with those forecasts used in the Company's most recent prior TYSP.

RESPONSE:

- Methodology. Please refer to the DEF 2023 TYSP.
- Assumptions. Please refer to the DEF 2023 TYSP.
- Data sources. Please refer to the DEF 2023 TYSP.
- Third-party consultant(s) involved. No third-party consultants involved.
- Anticipated forecast accuracy. As in every published DEF Load Forecast, the use of "most recently available" economic projections from a most-reliable source has been employed. Also, every TYSP Base Case planning projection is designed to result in a 50/50 probability of outcome.
- Any difference/improvement(s) made compared with those forecasts used in the Company's most recent prior TYSP.
 One difference from the previous TYSP projection is using Moody's economic data for all inputs rather than a combination of Moody's and University of Florida's BEBR population projections. This was done to streamline/standardize the forecasting process.

We will continue to monitor BEBR's projections for any significant deviation from Moody's.

8. Please identify all closed and open Florida Public Service Commission (FPSC) dockets and all non-docketed FPSC matters which were/are based on the same load forecast used in the Company's current planning period TYSP.

RESPONSE:

- Fuel and purchased power cost recovery clause with generating performance incentive factor (Docket No. 20230001-EI)
- Petition for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Elsa, Eta, Isaias, Ian, Nicole, and Tropical Storm Fred, by Duke Energy Florida, LLC. (Docket No. 20230020-EI)
- Petition for approval of amended standard offer contract (Docket No. 20230044-EQ)
- 9. Please explain if your Company evaluates the accuracy of its forecasts of customer growth and annual retail energy sales presented in its past TYSPs by comparing the actual data for a given year to the data forecasted one, two, three, four, five, or six years prior.
 - a. If your response is affirmative, please explain the method used in your evaluation, and provide the corresponding results, including work papers, in Excel format for the analysis of each forecast presented in the TYSPs filed with the Commission during the 20-year period prior to the current planning period. If your Company limits its analysis to a period shorter than 20 years prior to the current planning period, please provide what analysis you have and a narrative explaining why your Company limits its analysis period.
 - b. If your response is negative, please explain.

RESPONSE:

DEF maintains annual Forecast Evaluation Tables reflecting projection accuracy for all previous TYSP projections from 2002 to 2022 for Net Energy for Load (NEL), System Customers, System MW and Retail MW. Each previous projection's ten-year forecast horizon is compared to all existing comparable historical data-to date. For NEL and Customer data, reported actual company data is compared to projection. For System and Retail MW, both actual and forecast Summer and Winter MW peaks are evaluated on a comparable basis assuming no activated demand response. See attached file *TYSP Error Fan_2023.xlsx*.

- 10. Please explain if your Company evaluates the accuracy of its forecasts of Summer/Winter Peak Energy Demand presented in its past TYSPs by comparing the actual data for a given year to the data forecasted one, two, three, four, five, or six years prior.
 - a. If your response is affirmative, please explain the method used in your evaluation, and provide the corresponding results, including work papers, in Excel format for the analysis of each forecast presented in the TYSPs filed with the Commission during the 20-year period prior to the current planning period. If your Company limits its analysis to a period

shorter than 20 years prior to the current planning period, please provide what analysis you have and a narrative explaining why your Company limits its analysis period.

b. If your response is negative, please explain why.

RESPONSE:

Please refer to response to Q9 and the corresponding Excel file.

- a. DEF prepared a forecast comparison of the past Ten-Year Site Plan forecasts from 2002 to 2022 as compared to the history. Variance calculation of (History / Forecast) are calculated across history and the TYSPs. This is the "TYSP Error Fan" in excel spread sheet form. The calculations compare the forecasts of Net Energy for Load, System Customers, Retail Peak Load and System Peak Load. Annual forecasts are compared for Net Energy for Load and System Customers and season forecasts are compared for Retail Peak Load and System Load.
- 11. Please explain any historic and forecasted trends in each of the following:
 - a. Growth of customers, by customer type (residential, commercial, industrial) as well as Total Customers, and identify the major factors (historically, currently, and in the forecasted period) that contribute to the growth/decline of the trends.
 - b. Average KWh consumption per customer, by customer type (residential, commercial, industrial), and identify the major factors (historically, currently, and in the forecasted period) that contribute to the growth/decline of the trends.
 - c. Total Sales (GWh) to Ultimate Customers, identify the major factors (historically, currently, and in the forecasted period) that contribute to the growth/decline of the trends.
 - d. By customer type (residential, commercial, industrial) provide a detailed discussion of how the Company's demand-side management program(s) and conservation/energy-efficiency program(s) impact the observed trends in gigawatt hour sales (Schedule 3.3).

RESPONSE:

a. DEF customer growth has always been dominated by the Residential and Commercial customer classes. Customer growth trends are driven by broad economic and demographic trends. These generic trends are typically covered in each years' assumptions section of the DEF's TYSP. Items such as population growth, population migration, retirement demographic trends determine customer growth. Housing market issues like affordability, mortgage rates and job growth have always applied a significant influence on customer growth dynamics as well. More recent site plans reflect a return to the long-term trend of population migration into Florida. Commercial customer growth typically tracks residential growth supplying needed services.

One anomalous period of importance now buried in the middle of the error fan time horizon was the U.S. financial crisis. The severe financial crisis in the 2008-2010 timeframe caused many homeowners to lose substantial equity and in some cases their homes. This severely limited both retirees and other movers from migrating to Florida for a period. Negative forecast variances can be seen in the "System Customers" tab of the "error fan" all the way through projections made between 2003-2009 for the years 2009-2017.

There are no projections of future wars, pandemics, or abnormal weather events embedded in the customer growth forecast.

- b. Residential and commercial class per customer usage are driven, primarily, by fluctuations in electric price, end use appliance saturation, changing (improving) end use appliance efficiency, improved building codes, housing type/building size, and space conditioning equipment fuel type. More recently, the ability to self-generate has begun to make an impact. A small percentage of industrial/commercial customers have chosen to install their own natural gas generation, reducing KWh consumption from the power grid. Similarly, residential and some commercial accounts have reduced their utility requirements by installing solar panels behind their meter. Contrarily, the penetration of plug-in electric vehicles has grown, leading to an increase in residential use per customer, all else being equal. Each of these stated items are handled either implicitly in the economic scenario presented by Moody's Analytics or explicitly in the internal DEF projections of UEE, Solar PV and plug-in Electric Vehicles.
- c. This series is defined as the aggregation of all retail, wholesale, "company use" energy consumption. The resulting sum is grossed up to "generation level requirements" by applying a line-loss factor which estimates transmission line-losses. Non-weather trends and variation in this series include all items listed in parts "a." and "b." above. A very significant item included in NEL is "Sales for Resale" (SFR) MWh. SFR or Wholesale energy sales are bulk transactions to sell power through contractual obligations that typically include a maximum MW capacity. DEF was successful for winning many wholesale power contracts in past years but the non-renewal of many contracts of late has caused a significant drop in SFR sales and thus NEL.
- d. Demand-side management program(s) and conservation/energy-efficiency program(s) continue to contribute to load reductions in the forecast period. As customers adopt these programs it is assumed that adoption will eventually plateau. This can be observed in the commercial/industrial class. Residential conservation continues to grow during the forecast period albeit by a lower rate than the previous 10 years.
- 12. Please explain any historic and forecasted trends in each of the following components of Summer/Winter Peak Demand:
 - a. Demand Reduction due to the Company's demand-side management program(s) and Self Service, by customer type (residential, commercial, industrial) as well as Total Customers, and identify the major factors (historically, currently, and in the forecasted period) that contribute to the growth/decline in the trends.
 - b. Demand Reduction due to Demand Response, by customer type (residential, commercial, industrial), and identify the major factors (historically, currently, and in the forecasted period) that contribute to the growth/decline of the trends.
 - c. Total Demand, and identify the major factors (historically, currently, and in the forecasted period) that contribute to the growth/decline in the trends.
 - d. Net Firm Demand, by the sources of peak demand appearing in Schedule 3.1 and Schedule 3.2 of the current planning period TYSP, and identify the major factors

(historically, currently, and in the forecasted period) that contribute to the growth/decline in the trends.

RESPONSE:

- a. Conservation (utility-sponsored and "naturally occurring" appliance efficiency & building code improvements) and self-generation are primary contributors to the long-term trends in lower energy use per customer and resulting reductions in the growth of the peak demand. Stricter building codes and improved heating/cooling (as well as other) equipment efficiencies have been a steady and effective way to reduce the growth in Summer/Winter peak for all classes of customers. The forecast projects continuing improvement as newer homes and newer appliances replace older, less efficient homes and appliances. DEF's conservation programs incentivize customers to purchase heating/cooling equipment at a level just above the required Federal Standards. In addition to conservation measures, customers in several different customer classes have installed "behind-the-meter" solar generation and more are projected to in the forecast. DEF has experienced a slight increase in installations of small gas turbines on-site of a paper manufacturer and a large hospital. If natural gas remains cheap and plentiful, we can expect to see more.
- b. DEF residential customers continue to allow the company to control their designated home appliances. The number of billed accounts on residential DR tariffs went from 396,000 in 2010 to 433,563 in 2022. Growth slowed during 2022 due to lack of available switches and related equipment plus labor and shipping issues but has been corrected. Residential growth can be expected to continue trending upward in the projection period. Commercial and Industrial growth has slowed but the trend is steadily upward.
- c. Please see response to Q11. Most factors that impact levels of "energy" have similar effects for energy at time of peak.
- d. Please see response to Q11. Most factors that impact levels of "energy" have similar effects for energy at time of peak.
- 13. **[FEECA Utilities Only]** In the 2019 goal-setting proceeding, the Commission chose to continue the goals established by its 2014 goal-setting decision for the period 2020-2024. Beyond 2024 through the end of the forecasted period, how did the Company project what demand savings amounts are reflected on the DSM and Conservation-related portions of Schedules 3.1, 3.2, and 3.3? Please explain what assumptions are incorporated in those amounts, and why.

RESPONSE:

In the absence of specific direction from the Commission, DEF has assumed that the programs will continue in the same general trend as established in the goals established for 2019-2024, which were continued from 2014. Beginning with 2025, DEF are sets values calculated as 90% of the last five-year average of annual incremental values. These values are then added to the accumulative 2024 forecast and so on for each year after that.

- 14. On August 16, 2022, the Inflation Reduction Act of 2022 ("IRA") became law. Regarding the provisions of the IRA and related funding, please explain the following
 - a. Whether the conservation related provisions are reflected on the DSM and Conservationrelated portions of Schedules 3.1, 3.2, and 3.3 through the forecast (planning) period, and if so, how. If the provisions of the Act are not reflected in such forecasts, please explain why.
 - b. Whether the electrification related provisions are reflected on the demand and energy load-related portions of Schedules 3.1, 3.2, and 3.3 through the forecast (planning) period, and if so, how. If the provisions of the IRA are not reflected in such forecasts, please explain why.

- a. The DSM & EE forecasts are based on the data developed from the 2019 order and have not been updated for the IRA, pending the technical and economic achievability studies underway for the 2024 FEECA docket.
- b. The provisions of the IRA are not reflected in the demand and energy forecasts. The forecasts and their various inputs were developed before the IRA was signed into law.
- 15. Please explain any anomalies caused by non-weather events with regard to annual historical data points for the period 10 years prior to the current planning period that have contributed to the following, respectively:
 - a. Summer Peak Demand.
 - b. Winter Peak Demand.
 - c. Annual Retail Energy Sales.

RESPONSE:

In the ten-year period beginning in 2013 there have been no significant non-weather changes or anomalies impacting DEF's Summer/Winter Peak MW demand. General trends impacting the demand have continued over the ten-year period. DEF's service to wholesale jurisdictional demand and energy continues to be a declining share of total company Summer Peak, Winter Peak, and NEL. Secondly, seasonal peak demand continues to be affected by more efficient end-use appliances and lighting.

The most significant non-weather impact on DEF load and demand is only beginning to be felt and is reflected more in the forecast than the historic trend data and that is the broader saturation of self-generation particularly rooftop solar PV. Impacts of customer owned generation have been modest thus far, but the trend of increasing adoption indicates that there will be significant and growing impacts especially to the annual energy sales in the near future.

16. Please provide responses to the following questions regarding the weather factors considered in the Company's retail energy sales and peak demand forecasts:

- a. Please identify, with corresponding explanations, all the weather-related input variables that were used in the respective Retail Energy Sales, Winter Peak Demand, and Summer Peak Demand models.
- b. Please specify the source(s) of the weather data used in the aforementioned forecasting models.
- c. Please explain in detail the process/procedure/method, if any, the Company utilized to convert the raw weather data into the values of the model input variables.
- d. Please specify with corresponding explanations:
 - i. How many years' historical weather data was used in developing each retail energy sales and peak demand model.
 - ii. How many years' historical weather data was used in the process of these models' calibration and/or validation.
- e. Please explain how the projected values of the input weather variables (that were used to forecast the future sales or demand outputs for each planning years 2023 2032) were derived/obtained for the respective retail sales and peak demand models.

Please refer to the DEF 2023 TYSP.

- 17. **[Investor-Owned Utilities Only]** If not included in the Company's current planning period TYSP, please provide load forecast sensitivities (high band, low band) to account for the uncertainty inherent in the base case forecasts in the following TYSP schedules, as well as the methodology used to prepare each forecast:
 - a. Schedule 2.1 History and Forecast of Energy Consumption and Number of Customers by Customer Class.
 - b. Schedule 2.2 History and Forecast of Energy Consumption and Number of Customers by Customer Class.
 - c. Schedule 2.3 History and Forecast of Energy Consumption and Number of Customers by Customer Class.
 - d. Schedule 3.1 History and Forecast of Summer Peak Demand.
 - e. Schedule 3.2 History and Forecast of Winter Peak Demand.
 - f. Schedule 3.3 History and Forecast of Annual Net Energy for Load.
 - g. Schedule 4 Previous Year and 2-Year Forecast of Peak Demand and Net Energy for Load by Month.

RESPONSE:

Please refer to the DEF 2023 TYSP.

- 18. Please provide responses to the following questions regarding the possible impacts of COVID-19 Pandemic (Pandemic) on the utility load forecast:
 - a. Please briefly summarize the impacts due to the Pandemic, if any, to the accuracy of the Company's respective forecast of annual retail energy sales and peak demands for 2021 and 2022.
 - b. Have any of your 2023 TYSP retail energy sales and peak demand forecasts incorporated the potential impacts of the Pandemic? Please explain your response.

a. Please see attached file *TYSP Error Fan_2023.xlsx*. Supply chain issues, and constantly changing monetary and fiscal policy have affected the accuracy of the annual retail energy sales. The forecast underestimated retail sales in 2021 and 2022. While economic expectations became more pessimistic due to inflation and continued rate hikes, the labor market and consumer spending have remained strong for longer than expected.

There was no significant change in the accuracy of the peak demand forecast.

- b. The COVID-19 pandemic had mixed impacts on various sectors, with some commercial and industrial activities negatively affected, while residential growth and in-migration of retirees to Florida increased. Factors such as early retirement, work-from-home policies, and lower cost of living contributed to this population influx, which was captured in Moody's Analytics Forecast. As the state continues to recover from the Pandemic, Florida's expansion will remain a step ahead of the nation's but in the short-term, higher prices and rising interest rates will take a toll, slowing net job creation from its current pace and putting pressure on the housing market. Florida's vital tourism industry will feel the effects of a weaker U.S. economy. Longer term, relatively low costs, pleasant weather, and an increasingly favorable industrial composition will cause job and income growth to outperform the nation. DEF's sales and peak forecasts have incorporated these economic assumptions in the 2023 TYSP.
- 19. Please address the following questions regarding the impact of all customer-owned/leased renewable generation (solar and otherwise) and/or energy storage devices on the Utility's forecasts.
 - a. Please explain in detail how the Utility's load forecast accounts for the impact of customer's renewables and/or storage.
 - b. Please provide the annual impact, if any, of customer's renewables and/or storage on the Utility's retail demand and energy forecasts, by class and in total, for 2023 through 2032.
 - c. If the Utility maintains a forecast for the planning horizon (2023-2032) of the number of customers with renewables and/or storage, by customer class, please provide.

RESPONSE:

- a. Existing customer owned renewable generation is captured in the historical dataset used for load forecast modeling. The projected impact of future customer owned renewable generation is added to the base load forecast as a reduction to load.
- b. Annual impact, if any, of customer-owned/leased renewable generation (solar and otherwise) on the Utility's retail demand and energy forecasts, by class and in total, for 2023 through 2032 is shown in the tables below. The "existing customer owned renewable generation is captured in the historical dataset used for load forecast modeling" as such, the energy and demand data as presented represents "net new" as of 1/1/2023 and is a cumulative view from that point.

Please see tables below and tab *Customer Own-Leased Renew Gen* of the attached Excel File 2023 TYSP 2023 TYSP - Data Request #1.Excel Tables_Q19.

			Cumulative Cu	ustomer Owned/	Leased Renewa	ble Generation		
Year	Residential Summer Demand (MW)	Residential Winter Demand (MW)	Commercial Summer Demand (MW)	Commercial Winter Demand (MW)	Industrial Summer Demand (MW)	Industrial Winter Demand (MW)	Total Summer Demand (MW)	Total Winter Demand (MW)
2023	(27)	(0)	(0)	(0)	(0)	0	(28)	(0)
2024	(71)	(2)	(1)	(0)	(0)	(0)	(72)	(2)
2025	(116)	(4)	(2)	(0)	(0)	(0)	(118)	(4)
2026	(162)	(6)	(3)	(0)	(0)	(0)	(165)	(6)
2027	(197)	(8)	(3)	(0)	(0)	(0)	(201)	(8)
2028	(220)	(9)	(4)	(0)	(1)	(0)	(224)	(9)
2029	(242)	(10)	(4)	(0)	(1)	(0)	(247)	(10)
2030	(265)	(11)	(5)	(0)	(1)	(0)	(271)	(11)
2031	(290)	(12)	(5)	(0)	(1)	(0)	(295)	(12)
2032	(315)	(13)	(5)	(0)	(1)	(0)	(321)	(13)
Notes								
The negative values indicate	te that customer	owned PV is a	reduction to pro	ojected load				

	Cumulative Cu	istomer Owned/	Leased Renewa	ble Generation
Year	Residential Energy Impact (MWh)	Commercial Energy Impact (MWh)	Industrial Energy Impact (MWh)	Total Energy Impact (MWh)
2023	(151,323)	(2,542)	(364)	(154,229)
2024	(461,368)	(8,002)	(1,046)	(470,417)
2025	(783,385)	(13,539)	(1,723)	(798,647)
2026	(1,113,695)	(19,061)	(2,398)	(1,135,154)
2027	(1,387,028)	(23,381)	(3,069)	(1,413,479)
2028	(1,557,737)	(26,118)	(3,745)	(1,587,600)
2029	(1,711,619)	(28,718)	(4,402)	(1,744,739)
2030	(1,877,413)	(31,365)	(5,063)	(1,913,841)
2031	(2,050,418)	(33,998)	(5,721)	(2,090,137)
2032	(2,233,685)	(36,701)	(6,390)	(2,276,777)
Notes				
The negative values indicat	e that customer	owned PV is a	reduction to pro	ojected load

c. Forecast for the planning horizon (2023-2032) of the number of customers with customer-owned/leased renewable generation (solar and otherwise), by customer class, please provide. The data represents a cumulative view of all customers, including those that added renewable generation prior to 1/1/2023.

Please see table below and tab *Customer Own-Leased Renew Cust* of the attached Excel File 2023 TYSP 2023 TYSP - Data Request #1.Excel Tables_Q19.

	Cumulative (Customer Owned/Leased	Renewable Generation	Counts
Year	Residential Customers	Commercial Customers	Industrial Customers	Total Customers
2023	90,115	692	3	90,810
2024	114,007	764	5	114,776
2025	137,914	836	7	138,757
2026	161,955	908	9	162,872
2027	175,263	948	11	176,222
2028	186,944	984	13	187,941
2029	199,281	1,020	15	200,316
2030	212,319	1,056	17	213,392
2031	225,817	1,092	19	226,928
2032	239,758	1,128	21	240,907
Notes				

Plug-in Electric Vehicles (PEVs)

- 20. Please discuss whether the Company included plug-in electric vehicle (PEV) loads in its demand and energy forecasts for its current planning period TYSP. If so, how were these impacts accounted for in the modeling and forecasting process?
 - a. Has the Company also included the impact of demand response and time of use rates for the PEV loads? If so, please provide the impact of these measures. If not, please explain why not.

RESPONSE:

Yes, PEV loads were included in the Company's demand and energy forecasts for the 2022 TYSP. Load from existing PEVs was captured in the historical dataset used by load forecast modeling. Projected load from future PEVs was added to the base load forecast as a positive load modifier.

Time of Use Rates (TOU rates) are a type of Demand Response (DR), and neither is included in the EV forecast at this time. Duke Energy is continuing to evaluate modeling and incorporating DR and TOU rates in the EV forecast and as these technologies become established, approved, and impactful they will be used in the future EV forecasts.

- 21. Please discuss with detail any changes or modifications from the Company's previous TYSP report regarding the following PEV related topics:
 - a. The major drivers of the Company's PEV growth.
 - b. The methodology and the assumptions (or, if applicable, the source(s) of the data) used to estimate the number of PEVs operating in the Company's service territory and the methodology used to estimate the cumulative impact on system demand and energy consumption.

- c. The Company's process for monitoring the installation of PEV public charging stations in its service area.
- d. The processes or technologies, if any, that are in place to allow the Company to be notified when a customer has installed a PEV charging station in their home.
- e. Any instances since January 1 of the year prior to the current planning period in which upgrades to the distribution system were made where PEVs were a contributing factor.

- a. The Company continues to see many influential drivers to PEV growth. Such drivers include but are not limited to lower projected costs associated with vehicles and/or batteries, additional models available for purchase, increased charging infrastructure, regulatory support, and increased consumer support. These drivers are continually updated and support the underlying base data for the EV forecast.
- b. The Company continues to use a tool developed by Guidehouse called Vehicle Analytics and Simulation Tool (VAST) to develop the forecast for the number of PEVs operating in its service territory and the potential loading impacts to system demand and energy. VAST includes an EV Adoption Module which uses multiple variables (registration data, fuel costs, vehicle availability, vehicle miles traveled, etc.) to develop vehicle forecast scenarios. This Adoption Module feeds the EV Charging Needs Module and Load Impacts Module which use additional variables (vehicle per charger ratio, daily traffic data, vehicle charging profiles, etc.) to develop the impact on system demand and energy consumption.
- c. The Company monitors PEV public charging stations through the U.S. Department of Energy Alternative Fuels Data Center (https://afdc.energy.gov). VAST also uses AFDC data as an input to monitor the installation of PEV charging stations.
- d. At this time, the Company knows with certainty that a customer has installed an EV charger only when the customer participates in one of the Company's active EV programs. It is otherwise very rare, especially in residential settings, that a customer notifies the Company when installing an EV charger. The deployment of advanced metering infrastructure (AMI) has enabled the company over time to identify and detect probable L2 EV charging loads when doing analyses comparing historical load data trends to current load data trends.
- e. The Company is not aware of any upgrades to the distribution system since 1/1/2022 that would be specifically attributable to PEV loads. Distribution system upgrades often result from a combination of factors and determining the existence and contribution of a single source such as PEV loads would be challenging.
- 22. Please refer to the Excel Tables File (Electric Vehicle Charging). Complete the table by providing estimates of the requested information within the Company's service territory for the current planning period. Direct current fast charger (DCFC) PEV charging stations are those that require a service drop greater than 240 volts and/or use three-phase power.

- a. Please describe all significant technological, market, regulatory, or other events or announcements since the filing of the Company's 2022 TYSP which have impacted the metrics reported
- b. Please explain if and how the tax incentives and grants for transportation electrification associated with the IRA, adopted in August 2022, has impacted the Company's PEV and PEV charging station adoption/installation, as well as the PEV energy/demand forecast(s). If the provisions of the IRA are not reflected in such forecasts, please explain why.

Please see table below and tab *Electric Vehicle Charging* of the attached Excel File 2023 *TYSP - Data Request #1.Excel Tables:*

	Number of	Number of Public	Number of Public	Cumulative Impact of PEVs				
Year	PEVs	PEV Charging Stations	DCFC PEV Charging Stations.	Summer	Winter	Annual		
		Stations	Stations.	Demand	Demand	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	40 14			
2029	283,625	7,470	3,469	52				
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		
Notes								
1. Source: Fall 2022 EV	Forecast							
2. "Number of PEVs" tota	al cumulative F	EV vehicles which	h includes includes Lig	ht, Medium, and Hea	vy Duty Vehic	les.		
3. 'Cumulative Impact of	PEVs" include	s only net-new vel	hicles beginning Januar	y 2023 as used and p	rovided			
to load forecasting. The	nis includes im	pacts from light, r	nedium, and heavy duty	vehicles.				
4. Summer Demand: Aug	gust HE 18. Wi	nter Demand: Janu	uary HE 08					
5 "Number of Public PF	V charging stat	tions" includes bot	h I 2 and DC charging a	stations				

- 5. "Number of Public PEV charging stations" includes both L2 and DC charging stations
- a. For each forecast the underlying variables are updated as part of the forecast refresh. Any particular technological, market, regulatory, or other event might not have a direct impact on the forecast, but those events can positively or negatively impact the base data set of variables. For example, OEM pledges and announcements have occurred in recent years. These pledges result in more EV models available for consumers to buy, which results in an increase in EV adoption. Other impacts include technological advancements in decreasing battery costs, positive regulatory support of EVs and chargers, and less of a supply chain impact which resulted in an overall higher penetration in EVs being bought today.

- b. The IRA impacts were not included in the Fall 2022 forecast. The variables for this forecast are developed in mid-summer (June/July 2022) and at the time the IRA variables and impacts were too speculative to be included in the base forecast. In future forecasts IRA impacts will be included and they are likely to support higher EV adoptions which would also impact the charger forecast and EV adoption forecast.
- 23. Please describe any Company programs or tariffs currently offered to customers relating to PEVs and describe whether any new or additional programs or tariffs relating to PEVs will be offered to customers within the current planning period.
 - a. Of these programs or tariffs, are any designed for or do they include educating customers on electricity as a transportation fuel?
 - b. Does the Company have any programs where customers can express their interest or expectations for electric vehicle infrastructure as provided for by the Utility, and if so, please describe in detail.

In addition to an expansion of the pilot program public DC fast charging network, the company launched an EV charging installation rebates program for commercial & industrial customers that install EV charging solutions as well as a program that assists residential customers to avoid system on-peak charging and rewards that behavior with small monthly credits. The Company consistently evaluates potential new programs that might be offered to assist customers with EV adoption.

- a. While all programs include budget for education & outreach that inherently increases customer knowledge of electricity as a transportation fuel, the off-peak credit program, in particular, provides prospective and actual participants with education and experience not only in using electricity as a fuel but also in managing that use for the benefit of the system as a whole. The Company also regularly updates its website to enhance web pages for consumer information of electric vehicles and electric vehicle infrastructure.
- b. The Company consistently seeks to add programs and processes that ease the transition to electric transport for customers. These efforts include consideration of programs that would assist with or directly provide for privately controlled charging infrastructure. The aforementioned DC fast charging expansion is a program that is offered today and for which customers can express interest in electric vehicle infrastructure. Under this program, for a limited number of customer sites fitting criteria defined by the 2021 Settlement Agreement (Order No. PSC-2021-0202A-AS-EI), the company installs DC fast charging equipment on the real estate of site host customer for use by the general public.
- 24. Has the Company conducted or contracted any research to determine demographic and regional factors that influence the adoption of PEVs applicable to its service territory? If so, please describe in detail the methodology and findings.

The Company has not studied demographic characteristics. The Company uses registration data as a base dataset for EV adoption so some regional characteristics/factors would be reflected in this dataset, but at this time the company has not conducted any research into demographics factors that influence adoption based on historical adoption and future trends.

25. Please describe if and how Section 339.287, Florida Statutes, (Electric Vehicle Charging Stations; Infrastructure Plan Development) has impacted the Company's projection of PEV growth and related demand and energy growth.

RESPONSE:

The Florida Statute Section 287 resulted in the FDOT EV Infrastructure Master Plan which delivers a comprehensive course of action to efficiently and effectively provide for PEV charging infrastructure to support the goals of F.S. 339.287. The company is evaluating the Master Plan utility recommendations and believes the potential impacts from improving a key adoption driver (PEV charging infrastructure) will result in a more positive trajectory of PEV adoption which then correlates with higher demand and energy growth.

26. What has the Company learned about the impact of PEV ownership on the Company's actual and forecasted peak demand?

RESPONSE:

The Company is still evaluating the impacts of PEV ownership on the peak demand. Using the ChargeFL pilot program data and VAST the Company has developed load charging profiles for PEVs. These have shown PEV charging impacts summer peak demand more than winter peak demand. The Company has also been analyzing the differences in impacts by duty (light duty vs medium vs heavy). As additional PEV adoption occurs, and more datasets are developed using additional pilot programs and publicly available data sources a more complete dataset will be able to be analyzed to determine further impacts on peak demand.

27. If applicable, please describe any key findings and metrics of the Company's PEV pilot program(s) which reveal the PEV impact to the demand and energy requirements of the Company.

RESPONSE:

The Company's 5th Annual Report to the Florida Public Service Commission on its EV programs provides findings and metrics of its programs.

Demand Response

28. **[FEECA Utilities Only]** Please refer to the Excel Tables File (DR Participation). Complete the table by providing for each source of demand response annual customer participation

information for 10 years prior to the current planning period. Please also provide a summary of all sources of demand response using the table.

RESPONSE:

Please see tables below and tab *DR Participation* of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables.

	[Demand F	lesponse Sou	rce or All De	mand Respon	se Sourc	es]			
Year	Beginning Year: Number of Customers	Available Capacity (MW)		New Customers Added	Added Capacity (MW)		Customers Lost	Lost Capacity (MW)	
	Customers	Sum	Win	nuucu	Sum	Win		Sum	Win
2013	406,194	681	1,035	4,337	16	20	839	DNA	DNA
2014	409,689	724	1,014	3,156	23	27	1,977	DNA	DNA
2015	410,855	752	1,055	6,372	29	35	1,375	DNA	DNA
2016	415,838	714	1,014	8,782	79	88	1,569	DNA	DNA
2017	424,246	756	1,065	9,592	34	43	2,559	DNA	DNA
2018	429,750	783	1,090	6,478	42	51	2,545	DNA	DNA
2019	432,277	786	1,098	6,862	69	76	2,058	DNA	DNA
2020	435,224	875	1,136	2,758	97	85	1,983	DNA	DNA
2021	435,102	908	1,161	1,613	9	10	2,709	DNA	DNA
2022	433,981	924	1,172	772	5	5	1,215	DNA	DNA
Notes		•							
(Include Notes Here)									

		Resident	tial Load Man	agement					
Year	Beginning Year: Number of Customers	Available Capacity (MW)		New Customers Added	Added Capacity (MW)		Customers Lost	Lost Capacity (MW)	
	Customers	Sum	Win	nuucu	Sum	Win		Sum	Win
2013	405,737	341	652	4,321	5	9	831	1	4
2014	409,227	355	654	3,145	3	7	1,976	2	4
2015	410,396	357	656	6,345	7	13	1,372	2	3
2016	415,369	366	669	8,634	10	19	1,300	1	6
2017	423,900	382	694	9,561	11	20	2,553	3	4
2018	429,403	388	698	6,424	7	13	2,542	3	4
2019	431,862	396	711	6,847	7	14	2,046	2	4
2020	434,807	394	671	2,735	3	6	1,980	2	4
2021	434,663	392	667	1,604	2	3	2,704	4	5
2022	433,563	390	665	767	1	1	1,181	2	2
Notes						•	•		
A transition from CSS to SAP	began Nov 1 2021. 7	The residential	transition is or	ngoing and man	y of the re	ports hav	e not been co	mpleted	

		Comi	mercial Load	Management		-	a		
Year	Beginning Year: Number of	Available Ca	pacity (MW)	New Customers Added	Added C (M		Customers Lost		apacity W)
	Customers	Sum	Win	Indea	Sum	Win		Sum	Win
2013	65	4	0	0	0	0	0	2	0
2014	65	4	0	0	0	0	0	2	0
2015	64	4	0	0	0	0	1	0	0
2016	63	4	0	0	0	0	0	0	0
2017	63	4	0	0	0	0	0	0	0
2018	63	4	0	0	0	0	0	0	0
2019	63	4	0	0	0	0	0	0	0
2020	63	4	0	0	0	0	0	0	0
2021	63	4	0	0	0	0	4	0	0
2022	59	4	0	0	0	0	1	0	0
Notes									
The program closed to ne	w participants in 2000	and several par	ticipants have	closed their accour	nts.				

		Sta	ndby Generat	tion					
Year	Beginning Year: Number of Customers	Available Capacity (MW)		New Customers Added	Added Capacity (MW)		Customers Lost	Lost Capacity (MW)	
	Customers	Sum	Win	nuucu	Sum			Sum	Win
2013	253	98	98	12	5	5	4	DNA	DNA
2014	259	103	104	10	5	5	1	DNA	DNA
2015	260	108	109	25	20	20	2	DNA	DNA
2016	269	68	68	147	68	68	269	DNA	DNA
2017	145	77	77	28	7	7	5	DNA	DNA
2018	147	82	82	12	3	3	1	DNA	DNA
2019	178	83	83	1	0	0	3	DNA	DNA
2020	175	80	80	5	2	0	1	DNA	DNA
2021	179	81	80	5	2	2	3	1	1
2022	183	83	82	3	1	1	0	0	0
Notes		•							
See note below	-								

		Int	erruptible Ser	vice					
Year	Beginning Year: Number of Customers	of Available Capacity (MWV)		New Customers Added	Added Capacity (MW)		Customers Lost	Lost Capacity (MW)	
	Customers	Sum	Win	nuucu	Sum	Win		Sum	Win
2013	135	233	278	4	7	7	3	DNA	DNA
2014	134	256	249	1	15	15	0	DNA	DNA
2015	131	277	283	2	3	3	1	DNA	DNA
2016	133	270	270	1	1	1	0	DNA	DNA
2017	134	287	287	3	16	16	1	DNA	DNA
2018	133	303	303	42	32	34	2	DNA	DNA
2019	170	297	297	14	62	62	5	DNA	DNA
2020	175	389	376	18	92	79	1	DNA	DNA
2021	193	395	381	4	6	6	2	2	2
2022	172	398	384	2	3	3	34	5	5
Notes	•	•	-		•		÷		
34 accounts no longer qualifie	d for Interruptible Se	ervice beginnin	ng Jan 1 2022 a	nd were remove	d from th	e progran	n.		

	•	Cı	Irtailable Serv	ice							
Year	Beginning Year: Number of Customers	Available Ca	Customers (MW) Lost		Customers Lost		apacity W)				
	Customers	Sum	Win	Added	Sum Win			Sum	Win		
2013	4	5	7	0	0	0	0	DNA	DNA		
2014	4	6	7	0	0	0	0	DNA	DNA		
2015	4	6	7	0	0	0	0	DNA	DNA		
2016	4	6	7	0	0	0	0	DNA	DNA		
2017	4	6	7	0	0	0	0	DNA	DNA		
2018	4	6	7	0	0	0	0	DNA	DNA		
2019	4	6	7	0	0	0	0	DNA	DNA		
2020	4	8	9	0	0	0	0	DNA	DNA		
2021	4	36	33	0	0	0	0	DNA	DNA		
2022	4	49	41	0	0	0	0	DNA	DNA		
Notes	•										
As shown it was discovered in	as shown it was discovered in 2020 that one large account was not included in the CSS reports. The increase in reported MW is due to that.										

Table Footnotes:									
(1) Total available capacity ma	y change as a result	of multiple fac	ctors including	changes in parti	cipation,				
changes in contribution fro	m existing participar	ts, and periodi	ic evaluation of	f system respons	se.				
Thus, changes in total availa	able capacity do not	lirectly correl	ate to changes	in participation.					
(2) Added capacity correspond	ds to the addition of	new participan	ts and those co	onverted from su	spended	accounts.			
(3) Data is Not Available (DN	A) on lost capacity f	or certain sour	ce programs a	nd therefore is li	isted as				
DNA in their specific table	and for the aggregat	ed ALL Source	e Table.						
(4) Nov1 2021, the customer	accounting system (SS was moved	d to Customer	Connect (SAP)					
(5) The transtion has resulted	in reporting errors a	fecting all pro	grams, especia	ally residential I	DR reporti	ng			
(6) The Interruptible Tariff wa	s revised January 1 2	022 resulting	in 34 participa	nts no longer qu	alifying fo	or the pro	gram		
(7) In 2021 it was discovered	that a large Curtailab	le customer lo	ad was not bein	ng reported and	corrected	acoounti	ng for additio	onal report	ed load.
(8) The Commerical Load Ma	nagement program w	as closed to no	ew participants	in 2000 and par	ticipation	is slowly	v diminishing		
(9) During 2016 the Emergence	y Stand-by Tariff wa	s closed and th	ne customers w	ere removed fro	om the pro	gram.			
The Standby Generation T	ariff was modified a	nd the program	m renewed as	non-Emergency	Standby ⁻	Tariff.			

29. **[FEECA Utilities Only]** Please refer to the Excel Tables File (DR Annual Use). Complete the table by providing for each source of demand response annual usage information for 10 years prior to the current planning period. Please also provide a summary of all demand response using the table.

RESPONSE:

Please see tables below and tab *DR Annual Use* of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables.

			[Demand Resp	onse Source o	or All Demand R	esponse Sourc	ces]			
			Summer	-				Winter		
Year	Number of			Maximu	n Event Size	Number of	Average	Event Size	Maximum Event Size	
	Events	MW	Number of Customers	MW	Number of Customers	of Events MW		Number of Customers	MW	Number of Customers
2013	0	0	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	1	48	174	79	180
2021	0	0	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0	0	0
Notes The last reported event w	12/10/20	20 1:1:	1 10 1 0				1 T. 1	105 1	11 - 21	1000

The last reported event was on 12/18/2020 which involved Standby Generation and Water Heaters for approximately an hour. It was difficult to separate residential and SBG contributions

				Residential L	oad Manageme	nt				-
			Summer					Winter		
Year	Number of	Avera	ge Event Size	Maximur	n Event Size	Number of	Average	Event Size	Maximum Event Size	
	Events	(MW)	Number of Customers	(MW)	Number of Customers	Events	(MW)	Number of Customers	(MW)	Number of Customers
2013	0	0	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0	0	0
Notes										

The last reported event was on 12/18/2020 which involved Standby Generation and Water Heaters for approximately an hour. It was difficult to separate residential and SBG contributions.

				Commercial L	oad Managem	ent		·		·		
			Summer					Winter				
Year	Number of	Average Event Size		Maximu	n Event Size	Number of	Average	e Event Size	Maximum Event Size			
	Events	(MW)	Number of Customers	(MW)	Number of Customers	Events	(MW)	Number of Customers	(MW)	Number of Customers		
2013	*	*	*	*	*	*	*	*	*	*		
2014	*	*	*	*	*	*	*	*	*	*		
2015	*	*	*	*	*	*	*	*	*	*		
2016	*	*	*	*	*	*	*	*	*	*		
2017	*	*	*	*	*	*	*	*	*	*		
2018	*	*	*	*	*	*	*	*	*	*		
2019	*	*	*	*	*	*	*	*	*	*		
2020	*	*	*	*	*	*	*	*	*	*		
2021	*	*	*	*	*	*	*	*	*	*		
2022	*	*	*	*	*	*	*	*	*	*		
Notes												
Commercial Demand Re	Commercial Demand Response is included in Residential Table Above											

				Standby	Generation					
			Summer					Winter		
Year	Number of	Avera	ge Event Size	Maximur	n Event Size	Number of	Average	Event Size	Maximum Event Size	
	Events	(MW)	Number of Customers	(MW)	Number of Customers	Events	(MW)	Number of Customers	(MW)	Number of Customers
2013	0	0	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	1	48	174	79	180
2021	0	0	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0	0	0

Notes
The last reported event was on 12/18/2020 which involved Standby Generation and Water Heaters for approximately an hour. It was difficult to separate residential and SBG contributions

				Interrup	tible Service					
			Summer					Winter		
Year	Number of	Avera	ge Event Size	Maximur	n Event Size	Number of	Average	Event Size	Maximum Event Size	
	Events	(MW)	Number of Customers	(MW)	Number of Customers	Events	(MW)	Number of Customers	(MW)	Number of Customers
2013	0	0	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0	0	0
Notes										
(Include Notes Here)										

			-	Curtail	able Service					
			Summer					Winter		
Year	Number of	Avera	ge Event Size	Maximur	n Event Size	Number of	Average	Event Size	Maximum Event Size	
	Events	(MW)	Number of Customers	(MW)	Number of Customers	Events	(MW)	Number of Customers	(MW)	Number of Customers
2013	0	0	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0	0	0
Notes										
(Include Notes Here)										

30. **[FEECA Utilities Only]** Please refer to the Excel Tables File (DR Peak Activation). Complete the table by providing for each source of demand response annual seasonal peak activation information for 10 years prior to the current planning period. Please also provide a summary of all demand response using the table.

RESPONSE:

Please see tables below and tab *DR Peak Activation* of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables.

	[Deman	d Response S	ource or All D	emand Resp	onse Sources]		
			Summer Peak			Winter Peak	
Year	Average Number of Customers	Activated During Peak?	Number of Customers Activated	Capacity Activated	Activated During Peak?	Number of Customers Activated	Capacity Activated
		(Y/N)		(MW)	(Y/N)		(MW)
2013	406,194	Ν	0	0	Ν	0	0
2014	409,689	Ν	0	0	Ν	0	0
2015	410,855	Ν	0	0	Ν	0	0
2016	415,839	Ν	0	0	Ν	0	0
2017	424,246	Ν	0	0	Ν	0	0
2018	429,750	N	0	0	Ν	0	0
2019	432,277	N	0	0	Ν	0	0
2020	435,224	Ν	0	0	Ν	0	0
2021	435,102	Ν	0	0	Ν	0	0
2022	433,981	Ν	0	0	Ν	0	0
Notes	-			•			
No events occurred		-		-			

		Resid	ential Load Ma	nagement			
			Summer Peak			Winter Peak	
Year	Average Number of Customers	Activated During Peak?	Number of Customers Activated	Capacity Activated	Activated During Peak?	Number of Customers Activated	Capacity Activated
		(Y/N)		(MW)	(Y/N)		(MW)
2013	405,737	Ν	0	0	Ν	0	0
2014	409,227	Ν	0	0	Ν	0	0
2015	410,396	Ν	0	0	Ν	0	0
2016	415,369	Ν	0	0	Ν	0	0
2017	423,900	Ν	0	0	Ν	0	0
2018	429,403	Ν	0	0	Ν	0	0
2019	431,862	Ν	0	0	Ν	0	0
2020	434,807	Ν	0	0	Ν	0	0
2021	434,663	Ν	0	0	Ν	0	0
2022	433,563	Ν	0	0	Ν	0	0
Notes							
(Include Notes Here)							

			Summer Peak		Winter Peak			
Year	Average Number of Customers	Activated During Peak? (Y/N)	Number of Customers Activated	Capacity Activated (MW)	Activated During Peak? (Y/N)	Number of Customers Activated	Capacit Activato (MW)	
2013	65	*	*	*	*	*	*	
2014	65	*	*	*	*	*	*	
2015	64	*	*	*	*	*	*	
2016	64	*	*	*	*	*	*	
2017	63	*	*	*	*	*	*	
2018	63	*	*	*	*	*	*	
2019	63	*	*	*	*	*	*	
2020	63	*	*	*	*	*	*	
2021	63	*	*	*	*	4	*	
2022	59	*	*	*	*	*	*	

* Commercial Demand Response is included in Residential Table above

	Standby Generation											
			Summer Peak			Winter Peak						
Year	Average Number of Customers	Activated During Peak?	Number of Customers Activated	Capacity Activated	Activated During Peak?	Number of Customers Activated	Capacity Activated					
		(Y/N)		(MW)	(Y/N)		(MW)					
2013	253	Ν	0	0	Ν	0	0					
2014	259	Ν	0	0	Ν	0	0					
2015	260	Ν	0	0	Ν	0	0					
2016	269	Ν	0	0	Ν	0	0					
2017	145	Ν	0	0	Ν	0	0					
2018	147	Ν	0	0	Ν	0	0					
2019	178	Ν	0	0	Ν	0	0					
2020	175	Ν	0	0	Ν	0	0					
2021	179	Ν	0	0	Ν	0	0					
2022	183	Ν	0	0	Ν	0	0					
Notes												
(Include Notes Here)												

	<u> </u>	l	nterruptible S	ervice			
			Summer Peak			Winter Peak	
Year	Average Number of Customers	Activated During Peak?	Number of Customers Activated	Capacity Activated	Activated During Peak?	Number of Customers Activated	Capacity Activated
		(Y/N)		(MW)	(Y/N)		(MW)
2013	135	Ν	0	0	Ν	0	0
2014	134	Ν	0	0	Ν	0	0
2015	131	Ν	0	0	Ν	0	0
2016	133	Ν	0	0	Ν	0	0
2017	134	Ν	0	0	Ν	0	0
2018	133	Ν	0	0	Ν	0	0
2019	170	Ν	0	0	Ν	0	0
2020	175	Ν	0	0	Ν	0	0
2021	193	Ν	0	0	Ν	0	0
2022	172	Ν	0	0	Ν	0	0
Notes							
(Include Notes Here)							

			Curtailable Se	rvice			
			Summer Peak			Winter Peak	
Year	Average Number of Customers	Activated During Peak?	Number of Customers Activated	Capacity Activated	Activated During Peak?	Number of Customers Activated	Capacity Activated
		(Y/N)		(MW)	(Y/N)		(MW)
2013	4	Ν	0	0	Ν	0	0
2014	4	Ν	0	0	Ν	0	0
2015	4	Ν	0	0	Ν	0	0
2016	4	Ν	0	0	N	0	0
2017	4	Ν	0	0	N	0	0
2018	4	Ν	0	0	Ν	0	0
2019	4	Ν	0	0	Ν	0	0
2020	4	Ν	0	0	Ν	0	0
2021	4	Ν	0	0	Ν	0	0
2022	4	Ν	0	0	Ν	0	0
Notes							
(Include Notes Here)							

31. Please refer to the Excel Tables File (LOLP). Complete the table by providing the loss of load probability, reserve margin, and expected unserved energy for each year of the planning period.

RESPONSE:

Please see table below and tab *LOLP* of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables.

Loss o	of Load Pro	•••	rve Margin, and ase Load Fore	•	Inserved Energy	/
		Annual Isolated			Annual Assisted	
	Loss of Load F	Reserve Margin (%) Expected	Loss of Load	Reserve Margin (%)) Expected
Year	Probability	(Including Firm	Unserved Energy	Probability	(Including Firm	Unserved Energy
	(Days/Yr)	Purchases)	(MWh)	(Days/Yr)	Purchases)	(MWh)
2023						
2024						
2025						
2026						
2027	Duke Energ	y Florida is rec	quired to maintai	n a 20% Res	erve Margin, ther	efore no LOLP
2028			study was	s conducted		
2029						
2030						
2031						
2032	l		·			

Generation & Transmission

Utility-Owned Generation

32. Please refer to the Excel Tables File (Unit Performance). Complete the table by providing information on each utility-owned generating resources' outage factors, availability factors,

and average net operating heat rate (if applicable). For historical averages, use the past three years and for projected factors, use an average of the next ten-year period.

RESPONSE:

Please see table below and tab *Unit Performance* of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables.

UPC (FO) (EAP) Instance Number Plant Name Nistorica Projected Historica <			Planned Ou	Itage Factor	Forced Ou	tage Factor	Equivalent Ava	ailability Factor	Average Ne	et Operating
Plant Name Hestorical Progenet Hestorical Hestorical <th< th=""><th></th><th></th><th>(PC</th><th>OF)</th><th>(F</th><th>OF)</th><th>(E</th><th>AF)</th><th></th><th></th></th<>			(PC	OF)	(F	OF)	(E	AF)		
ANCLOTE 1 4.13 4.13 1.199 1.199 84.27 74.23 1.1121 1.1121 BARTOW P1 3.65 3.65 3.60 3.60 75.57 75.57 1.1123 DARTOW P1 3.65 3.65 0.55 74.25 75.57 1.524 1.539 P2 5.21 5.21 5.21 5.21 5.21 5.21 5.21 5.21 5.21 5.21 5.21 5.21 5.21 5.21 5.21 5.21 5.21 5.22 6.67 6.67 6.67 5.21 5.28 1.22 1.22 1.22 1.22 1.22 1.22 1.22 1.22 1.23 1.03	Plant Nama		Historiaal	Projected	Historiaal	Drojected	Historiaal	Drainated	Historiaal	Droiget
2 7.55 7.55 3.82 7.83 77.43 77.43 77.43 77.43 11.231										
BARTOW P1 3.85 3.80 3.60 75.57 75.57 15.97 75.57 15.97 P2 5.21 5.21 0.21 0.23 7425 7425 15.93 15.93 BARTOWICC 44 4.40 4.40 2.074 65.07 16.93 13.31 13.31 BARTOWICC 40 4.40 4.40 2.086 2.086 7.155 7.155 7.122 10.326 11.305 40 2.23 2.43 2.248 2.208 2.086 7.122 11.305 11.02 11.702 <	/1102012							•=.		
P3 4.46 4.46 20.74 20.74 61.93 61.93 13.31 13.33 13.3	BARTOW									
PA 4.77 4.77 15.22 15.22 66.67 14.954										
BARTOW CC 4A 44 4.94 9.63 9.63 76.35 76.35 17.208 11.208 4C 2.43 2.049 2.086 77.16 77.168 11.305 11.32 4D 9.29 9.27 2.77 77 79.95 77.172 11.74 11.74 <										
46 6.49 3.63 7.16 7.16 7.16 7.130 11.305 11.305 40 9.243 2.243 2.268 2.078 7.172 7.132 10.328 10.328 45 7.34 7.34 7.34 1.80 1.80 81.90 55.3 57.83 BAYBORO P1 1.21 1.21 1.511 5.11 7.828 7.8.28 16.845 16.845 P2 1.22 1.22 1.38 1.38 7.8.55 7.8.55 15.5440 15.446 P3 1.21 1.22 2.41 2.41 7.7.43 10.448 10.445 P4 1.22 1.32 2.41 8.027 6.027 6.027 6.027 10.044 10.445 10.44 16 10.03 10.33 1.029 2.08 8.44 10.441 10.44 28 10.05 10.05 2.062 8.57.3 595 595 CRWSTAL RNER 4	BARTOW CC									
4C 243 2086 20.86 71.72 71.72 71.72 10.32 4D 92.9 2.77 2.77 79.95 11.702 11.702 11.702 11.702 11.702 11.702 11.702 11.702 11.702 11.702 11.702 11.702 11.702 11.702 11.702 11.702 11.702 11.702 11.702 11.714 12.11 12.11 5.11 5.11 76.28 77.855 15.555 55.555 55.555 55.555 55.555 55.555 55.555 55.55 55.555 55.55	BARTOW 00									
4b 9.29 9.27 2.77 7.955 7.955 11.702 11.702 45 7.34 7.34 1.80 1.80 8190 5183 583 BAYBORO P1 1.21 1.21 1.511 5.11 78.25 78.26 16.644 16.445 P3 1.21 1.22 1.33 1.38 78.55 78.55 15.449 15.449 P4 1.22 1.22 2.41 2.41 77.43 77.43 10.448 10.48 18 10.03 10.03 1.39 77.35 77.73 10.441 10.449 28 10.05 10.05 2.08 2.06 85.73 959 959 CRVSTAL RNER 4 16.40 10.82 0.62 62.26 10.076 10.76 28 8.10 8.10 0.20 2.02 84.44 44.44 15.86 CRVSTAL RNER 4 16.40 10.82 10.82 64.53 62.51<		4C	2.43	2.43						
45 7.34 7.34 1.80 1.80 81.90 81.90 583 583 BAVBORD P1 1.21 1.21 5.11 5.11 78.28 78.28 16.844 16.444 P3 1.21 1.21 1.21 3.16 3.16 79.25 77.25 17.747 17.74 P4 1.22 1.22 2.41 2.41 8.01 77.35 10.651 10.555 CIRUSCC 1A 10.34 1.38 77.31 17.731 10.641 10.54 18 10.70 1.38 1.38 77.31 17.735 10.641 10.447 28 1.06 10.50 0.79 0.77 17.756 10.647 10.447 28 1.06 10.50 0.28 0.622 0.682 68.73 966 10.66 CRYSTAL RER 4 16.40 10.62 10.82 16.42 16.42 15.72 15.76 DEBARY 2 89.9 </td <td></td> <td>4D</td> <td>9.29</td> <td>9.29</td> <td></td> <td></td> <td>79.95</td> <td>79.95</td> <td></td> <td></td>		4D	9.29	9.29			79.95	79.95		
BAYBORD P1 1.21 1.21 5.11 5.11 78.28 78.28 16.645 16.645 P2 1.22 1.22 1.38 1.38 78.55 75.55 15.444 15.44 P3 1.21 1.21 1.21 2.41 2.41 80.27 15.555 15.55 CITRUSCC 1.0 0.34 0.281 2.81 7.743 77.43 77.43 17.44 10.445 18 10.0.70 1.0.70 1.38 1.38 77.31 77.31 10.445 10.649 28 10.0.80 10.0 2.0 12.8 77.31 10.0447 10.44 28 10.0 16.0 2.0 2.0 8.57.3 8.56 10.076 10.076 10.72 10.441 10.42 10.82 8.62 8.25.6 10.076 10.72 10.74 14.724 14.72 15.2 15.2 8.52 8.25 8.25 10.65.9 6.69 8.8.7 6.8.75 16.										
P2 121 121 138 138 78.55 78.55 15.44 P3 1.21 1.21 3.16 3.16 78.25 78.25 17.747 17.747 CITRUS CC 1A 10.34 1.24 2.241 2.241 0.271 17.73 17.43 10.44 10.44 CITRUS CC 1A 10.34 1.241 2.241 2.241 77.31 77.43 10.44 10.44 CITRUS CC 1A 10.34 1.241 2.241 2.241 77.31 77.43 10.441 10.44 P3 1.026 10.05 2.08 70.9 77.31 77.43 10.441 10.44 28 10.06 10.05 2.08 2.044 84.48 10.447 10.44 28 8.10 8.10 1.431 4.43 69.88 6.607 15.765 15.66 15.66 15.672 15.76 15.76 15.76 15.76 15.76 15.76 15.76 15.76	PAVPODO									
P3 121 121 316 792.5 77.47 17.747 17.747 17.747 17.743 17.85 15.535 CITRUS CC 1A 10.34 10.34 2.81 2.81 77.33 17.34 10.641 10.541 10.4411 10.411 10.411 10.411 10.411 10.411 10.411 10.411 10.411 10.411 10.411 10.441 10.451 10.76 10.76 10.76 10.76 10.76 10.76 10.76 10.76 10.76 10.76 10.76 <td< td=""><td>BAYBURU</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	BAYBURU									
P4 122 121 241 241 80.27 16.535 15.535 CITRUS CC 1A 10.34 2.81 2.71 7.33 10.48 10.48 IB 10.70 1.38 1.38 77.31 17.731 10.541 10.541 2A 10.03 10.33 0.79 0.79 77.31 77.31 10.711 10.411 2B 10.05 10.05 2.08 8.44 8.44 10.447 10.44 2B 8.10 8.10 0.62 0.62 85.73 85.73 595 595 CRYSTAL RVER 4 16.40 10.82 10.82 64.84 64.84 158.62 15.58 DEBARY P2 8.99 1.43 1.43 16.98 69.26 15.72 15.72 P4 8.52 3.65 9.24 9.24 64.26 15.124 15.12 P4 8.52 3.25 9.24 9.24 64.26 64.25										
CITRUS CC 1A 10.34 10.34 2.81 2.71 77.31 77.43 10.485 10.485 1B 0.070 10.33 0.779 77.31 77.31 10.541 10.54 2A 10.035 10.035 2.08 2.08 84.48 10.447 10.447 2B 10.05 10.62 2.08 2.04 84.48 10.447 10.44 2S 8.10 10.62 10.82 64.84 10.64.73 155.5 55.5 CRYSTAL RVER 4 16.40 10.82 10.82 64.84 156.82 155.24 DEBARY P2 8.99 8.99 1.43 1.43 66.98 68.07 15.763 15.763 P4 8.52 8.52 4.61 4.61 66.07 16.763 15.763 15.77 P5 3.25 2.84 2.88 76.70 76.70 13.75 13.77 P6 5.10 5.01 0.75 6.26.1										
18 10.70 10.70 1.38 1.38 77.31 77.31 10.541 10.541 2A 10.33 10.33 0.79 0.79 77.35 77.85 76.85 669 669 2B 10.05 10.05 2.08 8.44.8 84.48 10.447 10.44 2B 8.10 8.10 0.62 0.62 68.57 85.573 59.56 CRYSTAL RUER 4 16.40 10.82 10.82 64.84 64.84 15.86 DEBARY P2 8.99 1.43 1.43 69.96 69.96 10.766 10.766 DEBARY P2 8.99 1.43 1.43 69.86 69.86 11.472 14.72 P4 8.52 3.25 9.24 9.24 64.26 15.124 15.126 P5 3.25 3.25 9.24 9.24 64.26 16.172 15.172 P6 5.61 5.10 6.59 68.75 68.70<	CITRUS CC									
15 9.09 9.09 1.29 1.29 77.85 669 669 2A 10.03 10.33 0.79 0.79 77.31 77.31 10.41 10.447 2B 10.05 10.05 2.08 2.08 84.48 10.447 10.447 2S 81.00 0.62 0.62 65.73 15.75 15.75 75.765 75.765 75.765 15.74 15.72 75.75 15.75 75.75 16.659 76.70 76.70 13.75 15.75 75.75 14.650 14.421 14.221 14.221 14.22 14.221 14	011100 00									10,46
2A 10.33 10.33 0.79 0.79 77.31 10.411 10.411 28 10.05 10.065 2.08 2.08 84.48 84.48 10.447 10.444 28 8.10 8.10 0.62 0.62 85.73 85.73 595 595 5 9.41 9.41 2.03 2.03 82.56 10.766 10.762 DEBARY P2 8.99 8.99 1.43 1.43 69.98 69.98 16.71 15.73 15.75 P4 8.52 3.25 3.25 9.24 9.24 64.26 64.26 15.172 15.172 P6 5.10 5.10 5.61 5.61 1.960 62.26 62.26 13.041 13.05 P7 5.28 5.28 2.88 2.89 76.70 13.761 13.75 P8 5.61 5.64 10.75 10.75 62.11 62.26 13.360 13.36 P10 5.8										
28 8.10 8.10 0.02 0.02 8573 8573 595 595 CRYSTA.WER 4 16.40 10.82 64.84 64.84 15.862 15.86 CRYSTA.WER 4 9.41 2.03 2.03 82.56 82.56 10.766 10.776 PB 3.37 3.37 4.16 4.16 68.26 68.26 15.124 14.72 P4 8.52 3.25 9.24 9.44 64.26 64.26 15.172 15.77 P6 5.10 5.10 5.61 5.61 19.60 14.660 14.660 14.660 P7 5.28 5.28 2.88 2.88 76.70 76.70 13.71 13.75 P9 0.58 0.69 10.75 10.75 62.11 62.26 61.30 14.30 14.21 HNES 1A 8.28 8.29 3.66 82.56 11.22 11.22 11.22 H18 8.37		2A	10.33	10.33	0.79	0.79	77.31	77.31	10,411	10,41
CRYSTAL RNER 4 16.40 10.82 10.82 64.44 64.84 15.862 15.862 DEBARY P2 8.99 8.99 1.43 1.43 69.98 69.98 14.724 14.724 14.724 P4 8.52 8.52 4.61 4.61 66.07 66.07 15.763 15.772 P5 3.25 3.25 9.24 9.24 64.26 15.772 15.772 P6 5.10 5.10 6.59 6.59 68.75 68.75 14.650 14.650 P7 5.28 5.28 2.88 2.88 76.70 73.751 13.751 P8 5.61 5.61 19.60 19.60 62.26 62.26 11.224 14.216 14.216 14.216 14.216 14.216 14.216 14.226 11.224 11.4216 14.226 13.004 11.30 P10 6.18 6.49 6.49 6.49 6.49 6.265 62.265 11.224										10,44
5 9.41 9.41 2.03 2.03 8.256 8.256 10.766 10.767 DEBAR P3 3.37 3.37 4.16 4.16 68.26 68.26 15.124 15.124 15.126 P4 8.52 3.25 3.25 9.24 9.24 64.26 64.26 15.1763 15.763 P5 3.25 3.25 9.24 9.24 64.26 64.26 15.172 15.773 P5 5.28 5.28 2.88 2.88 76.70 76.70 13.751 13.751 P4 5.61 5.61 19.60 19.60 62.26 62.26 13.034 13.03 HNES 1.4 6.48 6.49 60.60 60.60 13.508 13.50 HNES 1.4 8.28 3.66 3.66 82.56 83.31 0 0 15 8.37 8.37 2.11 2.11 83.31 0 0 0 11.22 11.22										
DEBARY P2 8.99 1.4.3 1.5.12 1.5.12 1.5.12 1.5.12 1.5.12 1.5.12 1.5.12 1.5.12 1.5.12 1.5.172 1.5.137 1.5	CRYSTAL RIVER									
P3 3.37 3.37 4.16 4.16 66.26 68.26 15.124 15.124 P4 8.52 3.25 3.25 9.24 4.46 64.26 64.26 15.176 P5 3.25 3.25 9.24 9.24 64.26 64.26 15.172 15.177 P6 5.10 5.10 6.50 19.60 12.26 62.26 13.034 13.03 P8 5.61 5.61 19.80 19.60 62.26 62.26 13.034 13.03 P10 6.18 6.18 6.49 6.060 60.60 15.508 13.504 118 8.50 8.50 4.35 4.316 83.16 81.16 11.304 11.30 12A 11.43 11.43 1.38 1.33 0.33 80.01 80.01 11.82 11.82 28 11.24 11.24 0.36 0.36 82.05 0 0 0 28 11.24 1									-1	
P4 8.52 8.52 4.61 4.61 66.07 66.07 15.763 15.773 P6 5.10 5.10 5.10 6.59 6.59 68.75 64.26 15.172 15.17 P7 5.28 5.28 2.288 2.88 76.70 76.70 13.751 13.75 P8 5.61 5.61 19.60 19.60 62.26 62.26 10.034 13.03 P9 0.58 0.58 10.75 10.76 62.11 62.11 42.11 44.216 14.216 HHES 1A 8.28 8.26 3.66 32.56 82.56 11.225 11.22 HB 8.50 8.57 2.11 2.11 83.31 0 0 0 0 11.30 11.30 11.30 11.30 11.22 12.25 11.24 11.26 12.25 11.27 11.77 11.77 12.77 2.67 88.06 11.820 11.82 11.26 11.28 11.28 </td <td>DEDART</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	DEDART									
P5 3.25 3.24 9.24 64.26 64.26 15.172 15.172 P7 5.28 5.28 2.28 2.88 76.70 76.70 13.751 13.75 P8 5.61 5.61 19.80 19.60 62.26 62.26 13.034 13.03 P9 0.58 0.58 10.75 10.75 62.11 62.11 42.11 </td <td></td>										
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	TIGER BAY	1A	7.75	7.75	12.54	12.54	68.02	68.02	11,986	11,98
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	LINIV OF FLA	P1	11.87	11.87	1.39	1.39	81.36	81.36	8,170	8,170

33. Please refer to the Excel Tables File (Utility Existing Traditional). Complete the table by providing information on each utility-owned traditional generation resource in service as of Page 27 of 66

December 31 of the year prior to the current planning period. For multiple small (<250 kW per installation) distributed resources of the same type and fuel source, please include a single combined entry. For capacity factor, use the net capacity as a basis.

RESPONSE:

Please see table below and tab *Utility Existing Traditional* of the attached Excel File 2023 *TYSP - Data Request #1.Excel Tables.*

ANCLOTE 1 ANCLOTE 2 CRYSTAL RIVER 4 4 CRYSTAL RIVER 5 P L BARTOW 4 CRYSTAL RIVER 5 P L BARTOW 4 4 CITRUS COUNTY COMBINED CYCLE PBI CITRUS COUNTY COMBINED CYCLE PBI CITRUS COUNTY COMBINED CYCLE PBI INTES ENERGY COMPLEX 1 HINES ENERGY COMPLEX 3 HINES ENERGY COMPLEX 3 HINES ENERGY COMPLEX 3 HINES ENERGY COMPLEX 4 0SPREY ENERGY COMPLEX 4 0SPREY ENERGY COMPLEX 4 BARTOW P1 BARTOW P1 BARTOW P2 BARTOW P2 BARTOW P3 BARTOW P3 BARTOW P4 BAYBORO P1 BAYBORO P1 BAYBORO P2 BAYBORO P2 BAYBORO P2 BAYBORO P3 BAYBORO P4 DEBARY P3 DEBARY P5 DEBARY P5 DEBARY P6 DEBARY P1 DEBARY P1 DEBARY P1 DEBARY P1 DEBARY P1 DEBARY P1 DEBARY P1 DEBARY P1 DEBARY P1 MTERCESSION CITY P1 NITERCESSION CITY P4 NITERCESSION CITY P4 NITERCESSION CITY P4 NITERCESSION CITY P4	PASCO PASCO CITRUS CITRUS PINELLAS CITRUS POLK POLK POLK POLK POLK POLK POLK POLK	ST ST ST ST CC GT GT	NG NG BIT NG NG NG NG NG NG NG NG DF0 DF0 DF0 DF0 DF0 DF0 DF0 DF0	Mo October October October June October November April December May August May June June June April June April	Yr 1974 1978 2009 2018 2009 2018 2003 2003 2003 2007 2004 1997 2004 1997 1972 1972 1972 1972	Sum 522 520 769 755 1132 825 821 495 540 531 524 597 202 41 41 45	Win 534 527 778 778 1279 959 961 534 563 564 552 612 231 50 53 51 50	Sum 508 505 712 698 1112 807 803 490 532 523 516 583 199 41 41	Win 521 514 721 721 1259 925 929 521 549 555 544 600 230 50 53	Sum 508 505 712 698 1112 807 803 490 532 523 516 245 199 41	Win 521 514 721 729 925 929 521 549 555 544 245 230 50 53	(%) 27.0 22.6 30.3 39.0 59.9 69.7 69.8 73.2 56.7 68.4 59.8 35.2 62.8 0.5 2.1
ANCLOTE2CRYSTAL RIVER4CRYSTAL RIVER5P L BARTOW4CRYSTAL RIVER5P L BARTOW4CITRUS COUNTY COMBINED CYCLEPBJITRUS COUNTY COMBINED CYCLEPBJHINES ENERGY COMPLEX1HINES ENERGY COMPLEX3HINES ENERGY COMPLEX4OSPREY ENERGY COMPLEX4OSPREY ENERGY COMPLEX1BARTOWP1BARTOWP2BARTOWP3BARTOWP4BAYBOROP2BAYBOROP2DEBARYP4DEBARYP4DEBARYP6DEBARYP6DEBARYP8DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP10INTERCESSION CITYP10INTERCESSION CITYP3INTERCESSION CITYP4P4P4DESSION CITYP4DESSION CITYP4	PASCO CITRUS CITRUS CITRUS CITRUS POLK POLK POLK POLK POLK POLK POLK POLK	ST ST CC CC CC CC CC CC CC CC CC CC CC CC CC	NG BIT BIT NG NG NG NG NG NG NG DFO NG DFO NG DFO DFO DFO	October December October June October November April December May August May June June June June	1978 1982 1984 2009 2018 2003 2005 2007 2004 1997 1972 1972 1972	520 769 755 1132 825 821 495 540 531 524 597 202 41 41	527 778 778 1279 959 961 534 563 564 552 612 231 50 53 51	505 712 698 1112 807 803 490 532 523 516 583 199 41	514 721 725 925 929 521 549 555 544 600 230 50 53	505 712 698 1112 807 803 490 532 523 516 245 199 41	514 721 721 1259 925 929 521 549 555 544 245 230 50	22.6 30.3 39.0 59.9 69.7 69.8 73.2 56.7 68.4 59.8 35.2 62.8 0.5
CRYSTAL RIVER4CRYSTAL RIVER5P L BARTOW4CTITUS COUNTY COMBINED CYCLEPBICTIRUS COUNTY COMBINED CYCLEPBICTIRUS COUNTY COMBINED CYCLEPBIHINES ENERGY COMPLEX1HINES ENERGY COMPLEX3HINES ENERGY COMPLEX4OSPREY ENERGY COMPLEX4MARTOWP1BARTOWP1BARTOWP3BARTOWP4BAYBOROP2BAYBOROP3BAYBOROP4DEBARYP4DEBARYP6DEBARYP6DEBARYP7DEBARYP8DEBARYP9DEBARYP9DEBARYP9DEBARYP6DEBARYP9DEBARYP9DEBARYP10INTERCESSION CITYP10INTERCESSION CITYP3INTERCESSION CITYP4P4P4P5P5DESSION CITYP10INTERCESSION CITYP3INTERCESSION CITYP4	CITRUS CITRUS PINELLAS CITRUS POLK POLK POLK POLK POLK POLK POLK POLK	ST ST CC CC CC CC CC CC CC CC CC CC CC CC CC	BIT BIT NG NG NG NG NG NG NG NG DFO NG DFO NG DFO DFO DFO DFO	December October June October November April December May August May June June June June	1982 1984 2009 2018 2018 2003 2005 2005 2007 2004 1997 1972 1972 1972 1972	769 755 1132 825 821 495 540 531 524 597 202 41 41	778 778 1279 959 961 534 563 564 552 612 231 50 53 51	712 698 1112 807 803 490 532 523 516 583 199 41 41	721 721 1259 925 929 521 549 555 544 600 230 50 53	712 698 1112 807 803 490 532 523 516 245 199 41	721 721 1259 925 929 521 549 555 544 245 230 50	30.3 39.0 59.9 69.7 69.8 73.2 56.7 68.4 59.8 35.2 62.8 0.5
CRYSTAL RIVER5P L BARTOW4CTIRUS COUNTY COMBINED CYCLEPBICTIRUS COUNTY COMBINED CYCLEPB2HINES ENERGY COMPLEX1HINES ENERGY COMPLEX3HINES ENERGY COMPLEX4OSPREY ENERGY COMPLEX4ARTOWP1BARTOWP2BARTOWP3BAYBOROP1BAYBOROP3BAYBOROP4DEBARYP2DEBARYP3DEBARYP4DEBARYP5DEBARYP6DEBARYP7DEBARYP8DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP1P1P1NTERCESSION CITYP1NTERCESSION CITYP3NTERCESSION CI	CITRUS PINELLAS CITRUS CITRUS POLK POLK POLK POLK POLK POLK PINELLAS PINEL	ST CC CC CC CC CC CC CC CC CC CC CC CC CC	BIT NG NG NG NG NG NG NG DFO NG DFO NG DFO DFO DFO	October June October November April December November December May August June June June June April	1984 2009 2018 2018 1999 2003 2005 2007 2007 2007 1997 1972 1972 1972 1972	755 1132 825 821 495 540 531 524 597 202 41 41 41	778 1279 959 961 534 563 564 552 612 231 50 53 51	698 1112 807 803 490 532 523 516 583 199 41 41	721 1259 925 929 521 549 555 544 600 230 50 53	698 1112 807 803 490 532 523 516 245 199 41	721 1259 925 929 521 549 555 544 245 230 50	39.0 59.9 69.7 69.8 73.2 56.7 68.4 59.8 35.2 62.8 0.5
P L BARTOW4CITRUS COUNTY COMBINED CYCLEPBJCITRUS COUNTY COMBINED CYCLEPBJCITRUS COUNTY COMBINED CYCLEPBJHINES ENERGY COMPLEX1HINES ENERGY COMPLEX4OSPREY ENERGY COMPLEX4MINES ENERGY COMPLEX4ARTOWP1BARTOWP2BARTOWP3BARTOWP3BARTOWP4BAYBOROP1BAYBOROP2BAYBOROP3BAYBOROP4DEBARYP5DEBARYP6DEBARYP7DEBARYP8DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP1NITERCESSION CITYP1INTERCESSION CITYP3INTERCESSION CITYP4	PINELLAS CITRUS CITRUS POLK POLK POLK POLK POLK POLK PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS	CC GT	NG NG NG NG NG NG NG DFO NG DFO DFO DFO DFO DFO	June October November April December November December May August June June June June April	2009 2018 2018 1999 2003 2005 2007 2004 1997 1972 1972 1972 1972	1132 825 821 495 540 531 524 597 202 41 41	1279 959 961 534 563 564 552 612 231 50 53 51	1112 807 803 490 532 523 516 583 199 41 41	1259 925 929 521 549 555 544 600 230 50 53	1112 807 803 490 532 523 516 245 199 41	1259 925 929 521 549 555 544 245 230 50	59.9 69.7 69.8 73.2 56.7 68.4 59.8 35.2 62.8 0.5
CITRUS COUNTY COMBINED CYCLEPBJCITRUS COUNTY COMBINED CYCLEPBZHINES ENERGY COMPLEX1HINES ENERGY COMPLEX3HINES ENERGY COMPLEX3HINES ENERGY COMPLEX3HINES ENERGY COMPLEX1ITGER BAY1BARTOWP1BARTOWP3BARTOWP4BAYBOROP1BAYBOROP2BAYBOROP3BAYBOROP4DEBARYP2DEBARYP5DEBARYP5DEBARYP6DEBARYP7DEBARYP8DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP1<	CITRUS CITRUS POLK POLK POLK POLK POLK POLK PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS	CC GT GT	NG NG NG NG NG NG DF0 NG DF0 NG DF0 DF0 DF0 DF0	October November April December November December May August May June June June April	2018 2018 1999 2003 2005 2007 2004 1997 1972 1972 1972 1972	825 821 495 540 531 524 597 202 41 41 41	959 961 534 563 564 552 612 231 50 53 51	807 803 490 532 523 516 583 199 41 41	925 929 521 549 555 544 600 230 50 53	807 803 490 532 523 516 245 199 41	925 929 521 549 555 544 245 230 50	69.7 69.8 73.2 56.7 68.4 59.8 35.2 62.8 0.5
CITRUS COUNTY COMBINED CYCLEPB2HINES ENERGY COMPLEX1HINES ENERGY COMPLEX2HINES ENERGY COMPLEX3HINES ENERGY COMPLEX3HINES ENERGY COMPLEX4OSPREY ENERGY COMPLEX4BARTOWP1BARTOWP2BARTOWP3BARTOWP4BAYBOROP1BAYBOROP2BAYBOROP3BAYBOROP4DEBARYP2DEBARYP3DEBARYP4DEBARYP4DEBARYP5DEBARYP6DEBARYP8DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9INTERCESSION CITYP1INTERCESSION CITYP3INTERCESSION CITYP4	CITRUS POLK POLK POLK POLK POLK POLK PNELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS	CC CC CC CC CC CC CC CC CC GT GT GT GT GT GT GT	NG NG NG NG NG DF0 NG DF0 NG DF0 DF0 DF0 DF0	November April December November December May August May June June June April	2018 1999 2003 2005 2007 2004 1997 1972 1972 1972 1972	821 495 540 531 524 597 202 41 41 41	961 534 563 552 612 231 50 53 51	803 490 532 523 516 583 199 41 41	929 521 549 555 544 600 230 50 53	803 490 532 523 516 245 199 41	929 521 549 555 544 245 230 50	69.8 73.2 56.7 68.4 59.8 35.2 62.8 0.5
HINES ENERGY COMPLEX1HINES ENERGY COMPLEX2HINES ENERGY COMPLEX3HINES ENERGY COMPLEX4osprey ENERGY COMPLEX4Integer Bary1BARTOWP1BARTOWP2BARTOWP4BAYBOROP2BAYBOROP2BAYBOROP2DEBARYP2DEBARYP4DEBARYP4DEBARYP4DEBARYP4DEBARYP4DEBARYP4DEBARYP6DEBARYP6DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP10INTERCESSION CITYP10INTERCESSION CITYP3INTERCESSION CITYP3INTERCESSION CITYP3INTERCESSION CITYP4P4P4P5P5P5P5P6P6P7P7P6P7P7P7P7P7P7P7P7P7P7P7P6P7	POLK POLK POLK POLK POLK POLK POLK PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS	CC CC CC CC CC CC CC GT GT GT GT GT GT GT	NG NG NG NG DFO NG DFO NG DFO DFO DFO	April December November December May August May June June June April	1999 2003 2005 2007 2004 1997 1972 1972 1972 1972 1972 1972	495 540 531 524 597 202 41 41 41	534 563 564 552 612 231 50 53 51	490 532 523 516 583 199 41 41	521 549 555 544 600 230 50 53	490 532 523 516 245 199 41	521 549 555 544 245 230 50	73.2 56.7 68.4 59.8 35.2 62.8 0.5
HINES ENERGY COMPLEX2HINES ENERGY COMPLEX3HINES ENERGY COMPLEX4OSPREY ENERGY CENTER POWER PLANT1ITGER BAY1BARTOWP1BARTOWP2BARTOWP3BARTOWP4BAYBOROP1BAYBOROP3BAYBOROP3BAYBOROP4DEBARYP2DEBARYP3DEBARYP4DEBARYP4DEBARYP6DEBARYP6DEBARYP7DEBARYP6DEBARYP9DEBARYP9DEBARYP9INTERCESSION CITYP1INTERCESSION CITYP3INTERCESSION CITYP3INTERCESSION CITYP3INTERCESSION CITYP4DESSION CITYP4DESSION CITYP4DESSION CITYP4DESSION CITYP4DESSION CITYP4	POLK POLK POLK POLK POLK PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS VOLUSIA	CC CC CC CC CC GT GT GT GT GT GT GT GT	NG NG NG DFO NG DFO NG DFO DFO DFO	December November December May August May June June June April	2003 2005 2007 2004 1997 1972 1972 1972 1972	540 531 524 597 202 41 41 41	563 564 552 612 231 50 53 51	532 523 516 583 199 41 41	549 555 544 600 230 50 53	532 523 516 245 199 41	549 555 544 245 230 50	56.7 68.4 59.8 35.2 62.8 0.5
HINES ENERGY COMPLEX3HINES ENERGY COMPLEX4OSPREY ENERGY CENTER POWER PLANT1TIGER BAY1BARTOWP1BARTOWP2BARTOWP3BARTOWP4BAYBOROP2BAYBOROP3BAYBOROP4DEBARYP2DEBARYP4DEBARYP4DEBARYP4DEBARYP4DEBARYP4DEBARYP4DEBARYP4DEBARYP6DEBARYP6DEBARYP7DEBARYP8DEBARYP9DEBARYP9DEBARYP1INTERCESSION CITYP1INTERCESSION CITYP3INTERCESSION CITYP3INTERCESSION CITYP4ANDP4P4P4P5P4P5P4P6P4P7P5P7P5P7P5P8P6P8P6P8P7P6P7P6P7P7P7P7P6P7P6P7P7P6P7	POLK POLK POLK POLK PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS VOLUSIA VOLUSIA	CC CC CC GT GT GT GT GT GT GT GT	NG NG NG DFO NG DFO NG DFO DFO DFO	November December May August May June June June April	2005 2007 2004 1997 1972 1972 1972 1972	531 524 597 202 41 41 41	564 552 612 231 50 53 51	523 516 583 199 41 41	555 544 600 230 50 53	523 516 245 199 41	555 544 245 230 50	68.4 59.8 35.2 62.8 0.5
HINES ENERGY COMPLEX4OSPREY ENERGY CENTER POWER PLANT1ITIGER BAY1BARTOWP1BARTOWP2BARTOWP3BARTOWP4BAYBOROP1BAYBOROP3BAYBOROP4DEBARYP2DEBARYP3DEBARYP4DEBARYP5DEBARYP6DEBARYP7DEBARYP8DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9DEBARYP9INTERCESSION CITYP1INTERCESSION CITYP3INTERCESSION CITYP4AND AND AND AND AND AND AND AND AND AND	POLK POLK POLK PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS VOLUSIA	CC CC GT GT GT GT GT GT GT GT GT	NG NG DFO NG DFO NG DFO DFO DFO	December May August May June June June April	2007 2004 1997 1972 1972 1972 1972 1972	524 597 202 41 41 41	552 612 231 50 53 51	516 583 199 41 41	544 600 230 50 53	516 245 199 41	544 245 230 50	59.8 35.2 62.8 0.5
OSPREY ENERGY CENTER POWER PLANT1TIGER BAY1BARTOWP1BARTOWP2BARTOWP3BARTOWP4BARTOWP4BAYBOROP2BAYBOROP4DEBARYP2DEBARYP3DEBARYP4DEBARYP5DEBARYP6DEBARYP7DEBARYP8DEBARYP9DEBARYP9DEBARYP9INTERCESSION CITYP1INTERCESSION CITYP3INTERCESSION CITYP4	POLK POLK PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS VOLUSIA	CC CC GT GT GT GT GT GT GT GT GT	NG NG DFO NG DFO NG DFO DFO DFO	May August May June June June April	2004 1997 1972 1972 1972 1972 1972	597 202 41 41 41	612 231 50 53 51	583 199 41 41	600 230 50 53	245 199 41	245 230 50	35.2 62.8 0.5
TIGER BAY1BARTOWP1BARTOWP2BARTOWP3BARTOWP3BARTOWP4BARTOWP4BAYBOROP2BAYBOROP4DEBARYP2DEBARYP3DEBARYP3DEBARYP4DEBARYP6DEBARYP6DEBARYP7DEBARYP8DEBARYP9DEBARYP9INTERCESSION CITYP1INTERCESSION CITYP3INTERCESSION CITYP4ANTERCESSION CITYP4INTERCESSION CITYP4ANTERCESSION CITYP4	POLK PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS VOLUSIA	CC GT GT GT GT GT GT GT GT GT	NG DFO NG DFO NG DFO DFO DFO	August May June June June April	1997 1972 1972 1972 1972	202 41 41 41	231 50 53 51	199 41 41	230 50 53	199 41	230 50	62.8 0.5
TIGER BAY1BARTOWP1BARTOWP2BARTOWP3BARTOWP3BARTOWP4BARTOWP4BAYBOROP2BAYBOROP4DEBARYP2DEBARYP3DEBARYP3DEBARYP4DEBARYP6DEBARYP6DEBARYP7DEBARYP8DEBARYP9DEBARYP9INTERCESSION CITYP1INTERCESSION CITYP3INTERCESSION CITYP4ANTERCESSION CITYP4INTERCESSION CITYP4ANTERCESSION CITYP4	PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS VOLUSIA	GT GT GT GT GT GT GT GT	DFO NG DFO DFO DFO DFO DFO	May June June June April	1972 1972 1972 1972 1972	41 41 41	50 53 51	41 41	50 53	41	50	0.5
BARTOWP2BARTOWP3BARTOWP4BAYBOROP1BAYBOROP2BAYBOROP3BAYBOROP4DEBARYP2DEBARYP4DEBARYP4DEBARYP6DEBARYP6DEBARYP7DEBARYP6DEBARYP6DEBARYP7DEBARYP6DEBARYP9DEBARYP9INTERCESSION CITYP10INTERCESSION CITYP3INTERCESSION CITYP4P4P4P4P4P5P5P6P6P7	PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS VOLUSIA VOLUSIA	GT GT GT GT GT GT GT	NG DFO NG DFO DFO DFO	June June June April	1972 1972 1972	41 41	53 51	41	53			
BARTOWP3BARTOWP4BAYBOROP1BAYBOROP2BAYBOROP3BAYBOROP4DEBARYP2DEBARYP3DEBARYP4DEBARYP4DEBARYP5DEBARYP6DEBARYP6DEBARYP7DEBARYP6DEBARYP7DEBARYP6DEBARYP7DEBARYP8DEBARYP9DEBARYP10INTERCESSION CITYP1INTERCESSION CITYP3INTERCESSION CITYP4	PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS VOLUSIA VOLUSIA	GT GT GT GT GT GT	DFO NG DFO DFO DFO	June June June April	1972 1972	41	51			41	53	2.1
BARTOWP4BAYBOROP1BAYBOROP2BAYBOROP3BAYBOROP4DEBARYP2DEBARYP4DEBARYP4DEBARYP4DEBARYP4DEBARYP6DEBARYP7DEBARYP6DEBARYP7DEBARYP8DEBARYP8DEBARYP9DEBARYP9INTERCESSION CITYP1INTERCESSION CITYP3INTERCESSION CITYP4	PINELLAS PINELLAS PINELLAS PINELLAS PINELLAS VOLUSIA VOLUSIA	GT GT GT GT GT	NG DFO DFO DFO	June April	1972			41	51	-		
BAYBOROP1BAYBOROP2BAYBOROP3BAYBOROP4DEBARYP2DEBARYP4DEBARYP4DEBARYP4DEBARYP4DEBARYP4DEBARYP6DEBARYP7DEBARYP7DEBARYP8DEBARYP8DEBARYP9DEBARYP9DEBARYP9INTERCESSION CITYP1INTERCESSION CITYP3INTERCESSION CITYP4	PINELLAS PINELLAS PINELLAS PINELLAS VOLUSIA VOLUSIA	GT GT GT GT	DFO DFO DFO	April		45	50		51	41	51	0.4
BAYBOROP2BAYBOROP3BAYBOROP4DEBARYP2DEBARYP3DEBARYP3DEBARYP4DEBARYP5DEBARYP6DEBARYP7DEBARYP7DEBARYP8DEBARYP9DEBARYP9DEBARYP9DEBARYP9INTERCESSION CITYP1INTERCESSION CITYP3INTERCESSION CITYP4	PINELLAS PINELLAS PINELLAS VOLUSIA VOLUSIA	GT GT GT	DFO DFO	1	1973		58	45	58	45	58	2.0
BAYBORO P3 BAYBORO P4 DEBARY P2 DEBARY P3 DEBARY P4 DEBARY P4 DEBARY P5 DEBARY P5 DEBA	PINELLAS PINELLAS VOLUSIA VOLUSIA	GT GT	DFO	April		44	58	44	58	44	58	0.2
BAYBOROP4DEBARYP2DEBARYP3DEBARYP4DEBARYP5DEBARYP6DEBARYP7DEBARYP7DEBARYP9DEBARYP9DEBARYP10INTERCESSION CITYP1INTERCESSION CITYP3INTERCESSION CITYP4	PINELLAS VOLUSIA VOLUSIA	GT			1973	41	55	41	55	41	55	0.2
DEBARY P2 DEBARY P3 DEBARY P4 DEBARY P5 DEBARY P6 DEBARY P6 DEBARY P7 DEBARY P7 DEBARY P8 DEBARY P9 DEBARY P9 DEBARY P10 INTERCESSION CITY P1 INTERCESSION CITY P3 INTERCESSION CITY P4	VOLUSIA VOLUSIA		DFO	April	1973	43	57	43	57	43	57	0.1
DEBARY P3 DEBARY P4 DEBARY P5 DEBARY P6 DEBARY P6 DEBARY P7 DEBARY P7 DEBARY P8 DEBARY P10 INTERCESSION CITY P1 INTERCESSION CITY P3 INTERCESSION CITY P4	VOLUSIA	GT		April	1973	43	56	43	56	43	56	0.2
DEBARY P3 DEBARY P4 DEBARY P5 DEBARY P6 DEBARY P6 DEBARY P7 DEBARY P7 DEBARY P8 DEBARY P10 INTERCESSION CITY P1 INTERCESSION CITY P3 INTERCESSION CITY P4	VOLUSIA		DFO	December	1975	45	57	45	57	45	57	0.6
DEBARY P4 DEBARY P5 DEBARY P6 DEBARY P7 DEBARY P7 DEBARY P8 DEBARY P9 DEBARY P9 DEBARY P10 INTERCESSION CITY P1 INTERCESSION CITY P3 INTERCESSION CITY P4		GT	DFO	December	1975	45	59	45	59	45	59	0.5
DEBARY P5 DEBARY P6 DEBARY P7 DEBARY P8 DEBARY P8 DEBARY P9 DEBARY P9 DEBARY P10 INTERCESSION CITY P1 INTERCESSION CITY P2 INTERCESSION CITY P3 INTERCESSION CITY P4	VOLUSIA	GT	DFO	December	1975	46	59	46	59	46	59	0.5
DEBARY P6 DEBARY P7 DEBARY P8 DEBARY P9 DEBARY P9 DEBARY P10 INTERCESSION CITY P1 INTERCESSION CITY P2 INTERCESSION CITY P3 INTERCESSION CITY P4	VOLUSIA	GT	DFO	December	1975	45	58	45	58	45	58	0.2
DEBARY P7 DEBARY P8 DEBARY P9 DEBARY P9 DEBARY P10 INTERCESSION CITY P1 INTERCESSION CITY P2 INTERCESSION CITY P3 INTERCESSION CITY P4	VOLUSIA	GT	DFO	December	1975	46	59	46	59	46	59	0.3
DEBARY P9 DEBARY P10 INTERCESSION CITY P1 INTERCESSION CITY P2 INTERCESSION CITY P3 INTERCESSION CITY P4	VOLUSIA	GT	NG	October	1992	74	93	74	93	74	93	6.3
DEBARY P9 DEBARY P10 INTERCESSION CITY P1 INTERCESSION CITY P2 INTERCESSION CITY P3 INTERCESSION CITY P4	VOLUSIA	GT	NG	October	1992	75	94	75	94	75	94	1.7
DEBARY P10 INTERCESSION CITY P1 INTERCESSION CITY P2 INTERCESSION CITY P3 INTERCESSION CITY P4	VOLUSIA	GT	NG	October	1992	76	94	76	94	76	94	4.2
INTERCESSION CITY P1 INTERCESSION CITY P2 INTERCESSION CITY P3 INTERCESSION CITY P4	VOLUSIA	GT	DFO	October	1992	72	88	72	88	72	88	0.7
INTERCESSION CITY P2 INTERCESSION CITY P3 INTERCESSION CITY P4	OSCEOLA	GT	DFO	May	1974	45	61	45	61	45	61	0.3
INTERCESSION CITY P3 INTERCESSION CITY P4	OSCEOLA	GT	DFO	May	1974	46	60	46	60	46	60	0.2
INTERCESSION CITY P4	OSCEOLA	GT	DFO	May	1974	46	61	46	61	46	61	0.3
	OSCEOLA	GT	DFO	May	1974	46	62	46	62	46	62	0.1
	OSCEOLA	GT	DFO	May	1974	45	59	45	59	45	59	0.3
INTERCESSION CITY P6	OSCEOLA	GT	DFO	May	1974	47	60	47	60	47	60	0.3
INTERCESSION CITY P7	OSCEOLA	GT	NG	October	1993	78	90	78	90	78	90	6.4
INTERCESSION CITY P8	OSCEOLA	GT	NG	October	1993	77	88	77	88	77	88	6.3
INTERCESSION CITY P9	OSCEOLA	GT	NG	October	1993	77	88	77	88	77	88	1.6
INTERCESSION CITY P10	OSCEOLA	GT	NG	October	1993	74	86	74	86	74	86	4.5
INTERCESSION CITY P11	OSCEOLA	GT	DFO	January	1997	140	161	140	161	140	161	0.5
INTERCESSION CITY P12	OSCEOLA	GT	NG	December	2000	73	89	73	89	73	89	5.7
INTERCESSION CITY P13	OSCEOLA	GT	NG	December	2000	73	91	73	91	73	91	10.8
INTERCESSION CITY P14	OSCEOLA	GT	NG	December	2000	73	90	73	90	73	90	10.0
SUWANNEE RIVER P1	SUWANNEE	GT	NG	October	1980	48	65	48	65	48	65	4.6
SUWANNEE RIVER P2	SUWANNEE	GT	DFO	October	1980	48	64	48	64	48	64	3.9
SUWANNEE RIVER P3	SUWANNEE	GT	NG	November	1980	40	65	49	65	49	65	5.3
UNIVERSITY OF FLORIDA P1	ALACHUA	GT	NG	January	1980	49	50	49	50	49	50	85.8
Notes		01	110	3 anuar y	1777		50		50		50	05.0
(Include Notes Here)												

34. Please refer to the Excel Tables File (Utility Planned Traditional). Complete the table by providing information on each utility-owned traditional generation resource planned for inservice within the current planning period. For multiple small (<250 kW per installation)

distributed resources of the same type and fuel source, please include a single combined entry. For projected capacity factor, use the net capacity as a basis.

a. For each planned utility-owned traditional generation resource in the table, provide a narrative response discussing the current status of the project.

RESPONSE:

Please see table below and tab *Utility Planned Traditional* of the attached Excel File 2023 *TYSP - Data Request #1.Excel Tables*.

Facility Name	Unit No.	County Location	Unit Type	Primary Fuel		ercial In- vice	Gross C (M			apacity W)	Firm C (M	Capacity W)	Projected Capacity Factor
					Mo	Yr	Sum	Win	Sum	Win	Sum	Win	(%)
Notes													
(Include Notes Here)													

35. Please refer to the Excel Tables File (Utility Existing Renewable). Complete the table by providing information on each utility-owned renewable generation resource in service as of December 31 of the year prior to the current planning period. For multiple small (<250 kW per installation) distributed resources of the same type and fuel source, please include a single combined entry. For capacity factor, use the net capacity as a basis.

RESPONSE:

Please see table below and tab *Utility Existing Renewable* of the attached Excel File 2023 *TYSP - Data Request #1.Excel Tables.*

Facility Name	Unit No.	County Location	Unit Type	Primary Fuel	Commercia	al In-Service	Gross Cap	acity (MW)	Net Capa	city (MW)	Firm Cap	acity (MW)	Capacity Factor
					Mo	Yr	Sum	Win	Sum	Win	Sum	Win	(%)
Econolockhatchee Photovoltaic Array	1	Volusia	PV	SO	1	1989	0.007	0.007	0.007	0.007	0	0	13
Osceola	1	Osceola	PV	SO	5	2016	3.8	3.8	3.8	3.8	1.7	0	17
Perry	1	Taylor	PV	SO	7	2016	5.1	5.1	5.1	5.1	2.3	0	18
Suwannee	1	Suwannee	PV	SO	12	2017	8.8	8.8	8.8	8.8	4.0	0	22
Hamilton	1	Hamilton	PV	SO	12	2018	74.9	74.9	74.9	74.9	42.7	0	26
Lake Placid	1	Highlands	PV	SO	12	2019	45.0	45.0	45.0	45.0	25.7	0	20
Trenton	1	Gilchrist	PV	SO	12	2019	74.9	74.9	74.9	74.9	42.7	0	25
St. Petersburg Pier	1	Pinellas	PV	SO	12	2019	0.35	0.35	0.35	0.35	0.2	0	19
Columbia	1	Columbia	PV	SO	3	2020	74.9	74.9	74.9	74.9	42.7	0	27
DeBary	1	Volusia	PV	SO	5	2020	74.5	74.5	74.5	74.5	33.5	0	22
Sante Fe	1	Columbia	PV	SO	3	2021	74.9	74.9	74.9	74.9	42.7	0	24
Twin Rivers	1	Hamilton	PV	SO	3	2021	74.9	74.9	74.9	74.9	42.7	0	25
Duette	1	Manatee	PV	SO	10	2021	74.5	74.5	74.5	74.5	42.5	0	25
Sandy Creek	1	Bay	PV	SO	5	2022	74.9	74.9	74.9	74.9	42.5	0	26
Ft Green	1	Hardee	PV	SO	6	2022	74.9	74.9	74.9	74.9	33.5	0	20
Charlie Creek	1	Hardee	PV	SO	8	2022	74.9	74.9	74.9	74.9	42.7	0	19
Bay Trail	1	Citrus	PV	SO	9	2022	74.9	74.9	74.9	74.9	42.7	0	23
Dolphin Solar	1	Pinellas	PV	SO	8	2022	0.25	0.25	0.25	0.25	0	0	21
Notes								•		•			
**Solar CFs are from: Scho	edule A-4s or I	DEF's year-end	l Solar Plant O	peration Statu	s Report filed	as requested u	nder docket #	20230007.					

36. Please refer to the Excel Tables File (Utility Planned Renewable). Complete the table by providing information on each utility-owned renewable generation resource planned for inservice within the current planning period. For multiple small (<250 kW per installation)

distributed resources of the same type and fuel source, please include a single combined entry. For projected capacity factor, use the net capacity as a basis.

a. For each planned utility-owned renewable resource in the table, provide a narrative response discussing the current status of the project.

RESPONSE:

Please see table below and tab *Utility Planned Renewable* of the attached Excel File 2023 *TYSP - Data Request #1.Excel Tables*.

Facility Name	Unit No.	County Location	Unit Type	Primary Fuel		ercial In- vice	Gross Cap	acity (MW)	Net Capa	city (MW)	Firm Cap	acity (MW)	Projected Capacity Factor
					Mo	Yr	Sum	Win	Sum	Win	Sum	Win	(%)
Bay Ranch	1	Bay	PV	SO	5	2023	74.9	74.9	74.9	74.9	42.7	0	~28%
Hildreth	1	Suwannee	PV	SO	5	2023	74.9	74.9	74.9	74.9	42.7	0	~28%
Hardeetown	1	Levy	PV	SO	5	2023	74.9	74.9	74.9	74.9	42.7	0	~28%
High Spring	1	Alachua	PV	SO	7	2023	74.9	74.9	74.9	74.9	42.7	0	~28%
Mule Creek	1	Bay	PV	SO	2	2024	74.9	74.9	74.9	74.9	42.7	0	~28%
Winquepin	1	Madison	PV	SO	2	2024	74.9	74.9	74.9	74.9	42.7	0	~28%
Falmouth	1	Suwannee	PV	SO	3	2024	74.9	74.9	74.9	74.9	42.7	0	~28%
Renewable Energy Center #27	1	Unknown	PV	SO	1	2025	74.9	74.9	74.9	74.9	18.5	0	~28%
Renewable Energy Center #28	1	Unknown	PV	SO	1	2025	74.9	74.9	74.9	74.9	18.5	0	~28%
County Line	1	Gilchrist	PV	SO	2	2025	74.9	74.9	74.9	74.9	42.7	0	~28%
Renewable Energy Center #29	1	Unknown	PV	SO	8	2025	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #30	1	Unknown	PV	SO	8	2025	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #31	1	Unknown	PV	SO	8	2025	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #32	1	Unknown	PV	SO	8	2025	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #33	1	Unknown	PV	SO	12	2025	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #34	1	Unknown	PV	SO	12	2026	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #35	1	Unknown	PV	SO	12	2026	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #36	1	Unknown	PV	SO	12	2026	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #30	1	Unknown	BA	N/A	12	2020	100	100	100	100	90	90	~10%
Renewable Energy Center #38	1	Unknown	PV	SO	12	2027	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #39	1	Unknown	PV PV	SO	12	2027	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #40	1	Unknown	PV PV	SO	12	2027	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #41	1	Unknown	PV PV	SO	12	2027	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #41 Renewable Energy Center #42	1	Unknown	PV PV	SO	12	2027	74.9	74.9	74.9	74.9	9.25	0	~28%
												-	
Renewable Energy Center #43	1	Unknown	PV PV	SO SO	12	2028	74.9 74.9	74.9 74.9	74.9 74.9	74.9 74.9	9.25 9.25	0	~28%
Renewable Energy Center #44	1	Unknown				2028							~28%
Renewable Energy Center #45	1	Unknown	PV	SO	12	2028	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #46	1	Unknown	PV	SO	12	2029	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #47	1	Unknown	PV	SO	12	2029	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #48	1	Unknown	PV	SO	12	2029	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #49	1	Unknown	SPS	SO	12	2029	74.9	74.9	74.9	74.9	9.5	33.5	~34%
Renewable Energy Center #50	1	Unknown	SPS	SO	12	2029	74.9	74.9	74.9	74.9	9.5	33.5	~34%
Renewable Energy Center #51	1	Unknown	PV	SO	12	2030	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #52	1	Unknown	PV	SO	12	2030	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #53	1	Unknown	PV	SO	12	2030	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #54	1	Unknown	PV	SO	12	2030	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #55	1	Unknown	SPS	SO	12	2030	74.9	74.9	74.9	74.9	9.5	33.5	~34%
Renewable Energy Center #56	1	Unknown	SPS	SO	12	2030	74.9	74.9	74.9	74.9	9.5	33.5	~34%
Renewable Energy Center #57	1	Unknown	PV	SO	12	2031	74.9	74.9	74.9	74.9	9.4	0	~28%
Renewable Energy Center #58	1	Unknown	PV	SO	12	2031	74.9	74.9	74.9	74.9	9.4	0	~28%
Renewable Energy Center #59	1	Unknown	PV	SO	12	2031	74.9	74.9	74.9	74.9	9.4	0	~28%
Renewable Energy Center #60	1	Unknown	PV	SO	12	2031	74.9	74.9	74.9	74.9	9.4	0	~28%
Renewable Energy Center #61	1	Unknown	PV	SO	12	2031	74.9	74.9	74.9	74.9	9.4	0	~28%
Renewable Energy Center #62	1	Unknown	SPS	SO	12	2031	74.9	74.9	74.9	74.9	8.5	33.5	~34%
Renewable Energy Center #63	1	Unknown	SPS	SO	12	2031	74.9	74.9	74.9	74.9	8.5	33.5	~34%
Renewable Energy Center #64	1	Unknown	BA	N/A	6	2032	150	150	150	150	135	135	~17%
Renewable Energy Center #65	1	Unknown	PV	SO	12	2032	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #66	1	Unknown	PV	SO	12	2032	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #67	1	Unknown	PV	SO	12	2032	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #68	1	Unknown	PV	SO	12	2032	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #69	1	Unknown	PV	SO	12	2032	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #70	1	Unknown	PV	SO	12	2032	74.9	74.9	74.9	74.9	9.3	0	~28%
TODE WADIE LINE BY COLLET # /U	1	OUMINOWI	1 V	50	12	2032	/4.7	/+.7	/ 4.7	/ 4.7	7.3		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Bay Ranch, Hildreth and Hardeetown are under construction and are expected to be in service Q2-2023. High Spring is also under construction and expected to be in service Q3-2023. Mule Creek, Winquepin, and Falmouth are expected to be in service early 2024. The rest of the units are still in the development or planning stages. *DEF modeling derives an equivalent summer non-coincident, but onpeak-hour capacity value equal to 25% of the facility's nameplate rating for planned PV installations from 2025 to 2026 and 12.5% for 2027 and beyond. 37. Please list and discuss any planned utility-owned renewable resources that have, within the past year, been cancelled, delayed, or reduced in scope. What was the primary reason for the changes? What, if any, were the secondary reasons?

RESPONSE:

The 2022 Bay Trail and Sandy Creek solar projects primarily saw in service delays due to extreme weather events. The St Marks solar project was replaced in favor of the 2024 County Line solar project for a lower cost option. The 2022 projects also experienced delays due to permitting, workforce constraints, and supply chain issues.

38. **[Investor-Owned Utilities Only]** Please refer to the Excel Tables File (As-Available Energy Rate). Complete the table by providing, on a system-wide basis, the historical annual average as-available energy rate in the Company's service territory for the 10-year period prior to the current planning period. Also, provide the projected annual average as-available energy rate in the Company's service territory for the current planning period. If the Company uses multiple areas for as-available energy rates, please provide a system-average rate as well.

RESPONSE:

Please see table below and tab *As-Available Energy Rate* of the attached Excel File 2023 *TYSP - Data Request #1.Excel Tables.*

		As-Available	On-Pe ak	Off-Peak						
Year		Energy	Average	Average						
		(\$/MWh)	(\$/MWh)	(\$/MWh)						
	2013	34.35	38.29	31.02						
	2014	37.68	42.97	33.21						
	2015	26.03	28.74	23.74						
	2016	25.97	29.79	22.73						
Actual	2017	28.97	32.44	26.03						
Act	2018	30.84	34.80	27.49						
	2019	23.71	27.22	20.73						
	2020	18.57	21.22	16.33						
	2021	34.45	40.53	29.30						
	2022	61.67	73.74	51.45						
	2023	56.34	64.82	49.17						
	2024	46.82	54.19	40.59						
	2025	40.83	46.33	36.17						
-	2026	39.67	44.89	35.26						
scte	2027	38.36	42.72	34.67						
Projected	2028	40.09	45.17	35.79						
-	2029	39.23	43.70	35.45						
	2030	37.75	40.83	35.14						
	2031	36.40	39.14	34.08						
	2032	35.42	37.91	33.30						
Notes										
The Actuals and the Projected As-Available payment rates shown reflect all components but for the delivery voltage adjustment (because the generator's interconnection level is unknown) defined under rule 25-17.0825(2)(a). These components include: identifiable variable operating and maintenance expenses, start up costs, and a reasonable as-available block size of solar QF generation for appropriate customer protections. The Projected										

values are only valid and effective as of December 31, 2022 due to the volume of potential solar QF activity and fuel price volatility. DEF also anticipates that at some point, the system will have increasing events when the required DEF system resources combined with potential solar QF generation may exceed DEF load levels and that excess generation is not fully captured in the Projected values herein.

39. Please refer to the Excel Tables File (Planned PPSA Units). Complete the table by providing information on all planned traditional units with an in-service date within the current planning period. For each planned unit, provide the date of the Commission's Determination of Need and Power Plant Siting Act certification, if applicable.

RESPONSE:

Please see table below and tab *Planned PPSA Units* of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables.

	Summer Capacity	Certification Dates (if Applicable)	In-Service Date
Generating Unit Name	(MW)	Need Approved (Commission)	PPSA Certified	(MM/YY)
		Nuclear Unit Additions		
	Co	mbustion Turbine Unit Addit	ions	
	(Combined Cycle Unit Addition	ns	
		Steam Turbine Unit Addition	S	
Notes				
(Include Notes Here)				

40. For each of the planned generating units, both traditional and renewable, contained in the Company's current planning period TYSP, please discuss the "drop dead" date for a decision on whether or not to construct each unit. Provide a timeline for the construction of each unit, including regulatory approval, and final decision point.

RESPONSE:

A "drop dead" decision date to proceed with the solar, storage and solar plus storage units would typically occur 18 months prior to the in-service date. However, some sites may require longer permitting times and the "drop dead" may be extended.

41. Please refer to the Excel Tables File (Capacity Factors). Complete the table by providing the actual and projected capacity factors for each existing and planned unit on the Company's system for the 11-year period beginning one year prior to the current planning period.

RESPONSE:

Please see table below and tab *Capacity Factors* of the attached Excel File 2023 TYSP - Data Request #1. Excel Tables.

	Unit	Unit	Fuel					Ca	pacity Factor	(%)				
Plant	No.	Туре	Туре	Actual					· ·	ected				
				2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Anclote	1-2	Steam	Gas	24.8	18.6	20.4	8.7	14.6	13.8	13.3	10.1	8.6	6.0	6.2
Crystal River	4-5	Steam	Coal	34.6	10.3	12.5	12.9	11.1	11.4	16.7	16.1	22.3	32.7	29.4
Bartow CC	4	Combined Cycle	Gas	59.9	63.5	59.5	60.5	59.5	55.4	56.1	59.8	59.9	60.5	60.1
Citrus CC	1-2	Combined Cycle	Gas	69.7	83.9	86.0	83.1	83.6	86.1	75.8	82.1	80.7	73.5	75.8
Hines Energy Complex	1-4	Combined Cycle	Gas	64.4	61.8	64.3	58.7	56.8	56.8	56.5	53.3	49.9	46.6	44.7
Osprey CC	1	Combined Cycle	Gas	35.2	58.2	71.0	78.4	75.5	70.5	76.0	66.8	65.0	63.1	55.9
Tiger Bay	1	Combined Cycle	Gas	62.8	61.4	57.5	49.1	55.6	48.8	51.9	43.2	37.9	26.2	28.2
Bartow Peaker	1-4	Gas Turbine	Gas/Oil	1.3	0.4	0.7	0.7	0.7	0.6	0.8	1.1	0.7	0.7	0.6
Bayboro	1-4	Gas Turbine	Oil	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DeBary	2-10	Gas Turbine	Gas/Oil	1.9	2.3	2.8	2.7	2.4	1.8	2.3	2.1	2.2	1.8	1.8
Intercession City	1-14	Gas Turbine	Gas/Oil	3.7	2.0	2.8	2.3	1.9	1.4	1.7	1.8	1.7	1.3	1.2
Suwannee Peaker	1-3	Gas Turbine	Gas/Oil	4.6	1.9	2.5	2.5	2.8	1.9	2.3	2.4	2.7	2.1	2.0
University of Florida	1	Gas Turbine	Gas	85.8	78.1	78.1	77.6	77.2	78.8	0.0	0.0	0.0	0.0	0.0
Solar Bay Ranch	1	PV	SO	0.0	28.9	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar Bay Trail	1	PV	SO	18.3	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.5
Solar Charlie Creek	1	PV	SO	16.7	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.0
Solar Columbia	1	PV	SO	27.0	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.0	25.7	23.6
Solar County Line	1	PV	SO	0.0	0.0	0.0	29.3	28.7	28.7	28.7	28.7	28.7	28.7	28.4
Solar Debary	1	PV	SO	21.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.4	22.0	20.4
Solar Duette	1	PV	SO	24.5	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.0	25.7	23.7
Solar Falmouth	1	PV	SO	0.0	0.0	29.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar Fort Green	1	PV	SO	18.1	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.4
Solar Hamilton	1	PV	SO	26.3	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.1	25.8	23.8
Solar Hardeetown	1	PV	SO	0.0	28.9	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar High Spring	1	PV	SO	0.0	27.0	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar Hildreth	1	PV	SO	0.0	28.9	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar Lake Placid	1	PV	SO	19.7	27.0	27.0	27.1	27.0	27.0	27.0	27.0	26.9	25.7	23.9
Solar Mule Creek	1	PV	SO	0.0	0.0	29.3	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar Osc Perry Suw	1	PV	SO	22.2	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.3	22.1	20.2
Solar Sandy Creek	1	PV	SO	23.4	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.0
Solar Santa Fe	1	PV	SO	26.6	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.0	25.8	23.7
Solar St Pete Pier	1	PV	SO	0.0	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.3	22.1	20.4
Solar Trenton	1	PV	SO	27.6	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.0	25.7	23.8
Solar Twin Rivers	1	PV	SO	27.7	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.1	25.8	23.7
Solar Winquepin	1	PV	SO	0.0	0.0	29.3	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar Generic	1-36	PV	SO	0.0	0.0	0.0	26.3	27.2	27.4	27.3	27.4	27.4	27.4	27.2
Solar plus Storage Gene	1-6	PV-Storage	SO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.6	33.1	33.5	33.4
Battery 2 Hours	1-2	Storage	SO	0.0	0.0	0.0	0.0	0.0	9.9	10.1	10.3	10.7	10.0	10.5
Battery 4 Hours	1-3	Storage	SO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.9
Notes														
(Include Notes Here)														

42. **[Investor-Owned Utilities Only]** For each existing unit on the Company's system, please provide the planned retirement date. If the Company does not have a planned retirement date for a unit, please provide an estimated lifespan for units of that type and a non-binding estimate of the retirement date for the unit.

RESPONSE:

DEF does not strictly maintain a retirement schedule for each unit on the DEF system, but periodically evaluates each unit on a case-by-case basis, taking into account changes in many factors including unit dispatch (history and projections of starts and capacity factor), changes in upcoming maintenance, the anticipated impact of final or proposed environmental regulations, potential transmission impacts, and availability of parts and vendor maintenance support. DEF uses the most recently approved depreciation schedules as a guideline. The table below presents the current depreciation schedules.

	Major	Probable	
DEPRECIABLE GROUP	Year in	Retirement	Life
	Service	Year	Span
STEAM PRODUCTION			
ANCLOTE	1974	2029	55
CRYSTAL RIVER UNITS 4 and 5	1982	2034	52
OTHER PRODUCTION			
COMBINED-CYCLE			
BARTOW	2009	2049	40
CITRUS	2018	2058	40
OSPREY ENERGY CENTER	2004	2044	40
HINES UNIT 1	1999	2039	40
HINES UNIT 2	2003	2043	40
HINES UNIT 3	2005	2045	40
HINES UNIT 4	2007	2047	40
TIGER BAY	1995	2035	40
<u>SIMPLE CYCLE</u>			
BARTOW UNITS 1 and 3	1972	2034	62
BARTOW UNITS 2 and 4	1972	2027	55
SUWANNEE RIVER	1980	2034	54
BAYBORO	1973	2024	51
DEBARY UNITS 2-6	1975	2027	52
DEBARY UNITS 7-10	1992	2037	45
INTERCESSION CITY UNITS 1-6	1974	2034	60
INTERCESSION CITY UNITS 7-10	1993	2038	45
INTERCESSION CITY UNITS 11	1997	2042	45
INTERCESSION CITY UNITS 12-14	2000	2045	45
UNIV. OF FLA.	1993	2027	34
SOLAR			
OSCEOLA	2016	2046	30
PERRY	2016	2046	30
SUWANNEE	2017	2047	30
HAMILTON	2018	2048	30
LAKE PLACID	2019	2049	30
TRENTON	2019	2049	30
COLUMBIA	2020	2050	30
DEBARY	2020	2050	30
SANTA FE	2021	2051	30
	2021	2051	30
DUETTE	2021	2051	30
SANDY CREEK	2022	2052	30
FORT GREEN	2022	2052	30
CHARLIE CREEK	2022	2052	30
BAY TRAIL	2022	2052	30

43. Please refer to the Excel Tables File (Steam Unit CC Conversion). Complete the table by providing information on all of the Company's steam units that are potential candidates for repowering to operation as Combined Cycle units.

RESPONSE:

Please see table below and tab *Steam Unit CC Conversion* of the attached Excel File 2023 *TYSP - Data Request #1.Excel Tables.*

Plant Name	Fuel Type	Summer Capacity (MW)	In-Service Date (MM/YYY)	Potential Conversion	Potential Issues			
Anclote	NG	508	10/74	CC	Project Development			
Anclote	NG	505	10/78	CC	Project Development			
Crystal River	BIT	712	12/82	CC/IGCC	Project Development			
Crystal River	BIT	698	10/84	CC/IGCC	Project Development			
Notes								
(Include Notes Here)								

44. Please refer to the Excel Tables File (Steam Unit Fuel Switching). Complete the table by providing information on all of the Company's steam units that are potential candidates for fuel-switching.

RESPONSE:

Please see table below and tab *Steam Unit Fuel Switching* of the attached Excel File 2023 *TYSP - Data Request #1.Excel Tables.*

Plant Name	Fuel Type	Summer Capacity (MW)	In-Service Date (MM/YYY)	Potential Conversion	Potential Issues			
Crystal River	BIT	712	12/82	CC/IGCC	Project Development			
Crystal River	BIT	698	10/84	CC/IGCC	Project Development			
Notes								
(Include Notes Here)								

45. Please refer to the Excel Tables File (Transmission Lines). Complete the table by providing a list of all proposed transmission lines for the current planning period that require certification under the Transmission Line Siting Act. Please also include in the table transmission lines that have already been approved but are not yet in-service.

RESPONSE:

Please see table below and tab *Transmission Lines* of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables.

	Line	Nominal	Date	Date	In-Service				
Transmission Line	Length	Voltage	Need	TLSA	Date				
	(Miles)	(kV)	Approved	Certifie d					
N/A	N/A	N/A	N/A	N/A	N/A				
Notes									
DEF has no proposed	transmiss	ion lines for the current plan	nning period that	require certifica	ution under				
the Transmission Line Siting Act, nor are there any that have already been approved, but are not yet in-									

Purchases and Sales

46. Please refer to the Excel Tables File (Firm Purchases). Complete the table by providing information on the Utility's firm capacity and energy purchases.

RESPONSE:

Please see table below and tab *Firm Purchases* of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables.

Nominal, Firm Purchases										
	Firm	Purchases								
Year	\$/MWh	Escalation %								
HISTORY:										
2020	138.66									
2021	156.92	13.2%								
2022	179.25	14.4%								
FORECAST:										
2023	213.15									
2024	183.98	-13.7%								
2025	135.52	-26.3%								
2026	114.16	-15.8%								
2027	75.89	-33.5%								
2028	50.29	-33.7%								
2029	51.94	3.3%								
2030	49.44	-4.8%								
2031	42.63	-13.8%								
2032	41.32	-3.1%								

47. Please refer to the Excel Tables File (PPA Existing Traditional). Complete the table by providing information on each purchased power agreement with a traditional generator still in effect by December 31 of the year prior to the current planning period pursuant to which energy was delivered to the Company during said year.

RESPONSE:

Please see table below and tab *PPA Existing Traditional* of the attached Excel File 2023 *TYSP - Data Request #1.Excel Tables.*

Seller Name	Facility Name Uni		County Location	Unit Ivne	Primary Fuel		Capacity W)	Net Capa	city (MW)		ted Firm ty (MW)		Ferm Dates I/YY)
						Sum	Win	Sum	Win	Sum	Win	Start	End
Northern Star Generation	Mulberry	1	Polk	CC	NG	115	115	115	115	115	115	12/1/1994	8/8/2024
Northern Star Generation	Orange Cogen	1	Polk	CC	NG	104	104	104	104	104	104	12/16/1995	12/31/2025
Northern Star Generation	Orlando Cogen	1	Orange	CC	NG	115	115	115	115	115	115	1/7/1994	12/31/2023
General Electric Financial Services	Shady Hills	1-3	Pasco	GT	NG	482	523	482	523	482	523	4/1/2007	4/30/2024
Northern Star Generation	Vandolah Power	1-4	Hardee	GT	NG	657	701	657	701	657	701	6/1/2012	5/31/2027
Notes													
(Include Notes Here)													

- 48. Please refer to the Excel Tables File (PPA Planned Traditional). Complete the table by providing information on each purchased power agreement with a traditional generator pursuant to which energy will begin to be delivered to the Company during the current planning period.
 - a. For each purchased power agreement in the table, provide a narrative response discussing the current status of the project.

Please see table below and tab *PPA Planned Traditional* of the attached Excel File 2023 *TYSP - Data Request #1.Excel Tables.*

Seller Name	Facility Name	Unit No.	County Location	Unit Type	Primary Fuel		Capacity W)	Net Capacity (MW)			ted Firm ty (MW)		Ferm Dates I/YY)
				~1		Sum	Win	Sum	Win	Sum	Win	Start	End
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Notes													
(Include Notes Here)													

49. Please refer to the Excel Tables File (PPA Existing Renewable). Complete the table by providing information on each purchased power agreement with a renewable generator still in effect by December 31 of the year prior to the current planning period pursuant to which energy was delivered to the Company during said year.

RESPONSE:

Please see table below and tab *PPA Existing Renewable* of the attached Excel File 2023 *TYSP - Data Request #1.Excel Tables.*

Seller Name	eller Name Facility Name		o. Location	Unit Type	Primary Fuel		Capacity W)	Net Capao	city (MW)	Capacity (MW)		Contract Term Dates (MM/YY)	
			Location		r uei	Sum	Win	Sum	Win	Sum	Win	Start	End
Pasco County	Pasco County Resource Recovery	ST	Pasco	ST	MSW	23	23	23	23	23	23	1/1/1995	12/31/2024
Pinellas County	Pinellas County Resource Recovery	ST	Pinellas	ST	MSW	55	55	55	55	55	55	1/1/1995	12/31/2024
				As	Available								
Lake County	Lake County Resource Recovery	ST	Lake	ST	MSW	13	13	13	13	N/A	N/A	7/1/2014	N/A
Dade County	Metro-Dade County Resource Recovery	ST	Dade	ST	MSW	43	43	43	43	N/A	N/A	1/1/2014	N/A
Lee County	Lee County Resource Recovery	ST	Lee	ST	MSW	40	40	40	40	N/A	N/A	1/1/2017	N/A
PCS Phosphate	Swift Creek	ST	WH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1/1/1980	N/A
Notes		-	-										
(Include Notes Here)													

- 50. Please refer to the Excel Tables File (PPA Planned Renewable). Complete the table by providing information on each purchased power agreement with a renewable generator pursuant to which energy will begin to be delivered to the Company during the current planning period.
 - a. For each purchased power agreement in the table, provide a narrative response discussing the current status of the project.

Please see table below and tab *PPA Planned Renewable* of the attached Excel File 2023 *TYSP - Data Request #1.Excel Tables.*

Seller Name	Facility Name	Unit No.	County Location	Unit Type	Primary Fuel		Gross Capacity (MW)		Net Capacity (MW)		ted Firm ty (MW)		Ferm Dates I/YY)
						Sum	Win	Sum	Win	Sum	Win	Start	End
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Notes													
(Include Notes Here)													

51. Please list and discuss any purchased power agreements with a renewable generator that have, within the past year, been cancelled, delayed, or reduced in scope. What was the primary reason for the change? What, if any, were the secondary reasons?

RESPONSE:

DEF did not have any purchased power agreements with a renewable generator that were cancelled, delayed, or reduced in scope within the past year.

52. Please refer to the Excel Tables File (PSA Existing). Complete the table by providing information on each power sale agreement still in effect by December 31 of the year prior to

the current planning period pursuant to which energy was delivered from the Company to a third-party during said year.

RESPONSE:

Please see table below and tab *PSA Existing* of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables.

Buyer Name	* Unit No.		County Location	Unit Type	Primary Fuel	Gross Cap	acity (MW)	Net Capa	city (MW)		ted Firm y (MW)		Ferm Dates I/YY)	Description	Status (Expired / Modified /
						Sum	Win	Sum	Win	Sum	Win	Start	End		Same)
Seminole	N/A	N/A	N/A	N/A	Nat Gas	N/A	N/A	N/A	N/A	200-500	200-500	6/1/2016	12/31/2024	Partial Reqs	Same
Seminole	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	0.014	0.014	6/1/1987	Evergreen	Partial Reqs	Same
Seminole	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	0	50-600	1/1/2021	3/31/2027	Partial Reqs	Same
Seminole	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	50-400	50-400	1/1/2021	12/31/2030	Partial Reqs	Same
Seminole	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	50-400	50-400	1/1/2021	12/31/2035	Partial Reqs	Same
Seminole	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	150	0	6/1/2022	9/30/2022	Partial Reqs	Modified
Reedy Creek	N/A	N/A	N/A	N/A	Nat Gas	N/A	N/A	N/A	N/A	141	81	1/1/2016	12/31/2024	Partial Reqs	Modified
Tampa Electric	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	0-515	0-515	1/26/2019	12/31/2023	Partial Reqs	Modified
Notes															
The Seminole agreements	s have optional	lity. The agree	ements with 50)-400 MW list	ed have a com	bined maximu	m of 450 MW	through 2030							
A Seminole system average	ge product wa	s added for su	mmer of 2022												
Tampa Electric was exten	ded through th	ne end of 2023													
Reedy Creek Natural Gas	was extended	through the en	nd of 2024												

- 53. Please refer to the Excel Tables File (PSA Planned). Complete the table by providing information on each power sale agreement pursuant to which energy will begin to be delivered from the Company to a third-party during the current planning period.
 - a. For each power sale agreement in the table, provide a narrative response discussing the current status of the agreement.

RESPONSE:

Please see table below and tab *PSA Planned* of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables.

Buyer Name	Facility Name	Unit No.	County Location		Primary Fuel	Primary Gross Capacity (MW) Net Capacity (MW) Fuel		city (MW)	Contracted Firm Capacity (MW)		Contract Term Dates (MM/YY)		Description	Status (Expired / Modified /	
						Sum	Win	Sum	Win	Sum	Win	Start	End		Same)
Seminole	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	250	0	6/1/2023	9/30/2023	Partial Reqs	New
Notes															
Filed with FERC 3/29/20	23, but not ye	t approved	as of March	31, 2023							-				

54. Please list and discuss any long-term power sale agreements within the past year that were cancelled, expired, or modified. What was the primary reason for the change? What, if any, were the secondary reasons?

RESPONSE:

No contracts were cancelled during 2022. A column has been added to response Q53 that indicates what agreements have expired, changed, or kept the same. The notes at the bottom of the table provides additional information.

The Reedy Creek 2-10 MW system solar agreement expired 12/31/2021 per the agreement and has been removed from the table.

Renewable Generation

55. Please refer to the Excel Tables File (Annual Renewable Generation). Complete the table by providing the actual and projected annual energy output of all renewable resources on the Company's system, by source, for the 11-year period beginning one year prior to the current planning period.

RESPONSE:

Please see table below and tab *Annual Renewable Generation* of the Excel File 2023 TYSP - Data Request #1.Excel Tables.xlsx.

				A	nnual Renev	vable Gener	ration (GWh	l)			
Renewable Source	Actual					Proje	ected				
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Utility - Firm	1,581	2,554	3,345	4,178	4,663	5,363	6,074	6,767	7,723	8,797	9,955
Utility - Non-Firm	0	0	0	0	0	0	0	0	0	0	0
Utility - Co-Firing	0	0	0	0	0	0	0	0	0	0	0
Purchase - Firm	620	522	531	527	0	0	0	0	0	0	0
Purchase - Non-Firm	25	118	188	242	601	667	755	819	904	969	1,057
Purchase - Co-Firing	0	0	0	0	0	0	0	0	0	0	0
Customer - Owned	787	1,028	1,345	1,672	2,009	2,287	2,462	2,619	2,788	2,964	3,151
Total	3,012	4,222	5,409	6,618	7,273	8,317	9,290	10,204	11,415	12,730	14,162
Notes											
(Include Notes Here)											

56. Please describe any actions the Company engages in to encourage production of renewable energy within its service territory.

RESPONSE:

DEF encourages renewable energy advancement within its service territory as it continues to educate, engage, and discuss Florida renewable policy and regulation and the need for dependable and renewable energy that would contribute to reliable fuel diversity in Florida. DEF continues to address inquiries about developing renewable energy projects or initiatives in the state. DEF continues to explore renewable energy production through good faith purchased power discussions with qualified parties. In addition, DEF continues to educate interested parties at various industry conferences, local community events, and via our web site on renewable energy resources and innovative technologies. During 2022, DEF continued to engage

stakeholders, customers, and potential companies interested in the production or use of renewable energy within the state.

57. **[Investor-Owned Utilities Only]** Please discuss whether the Company has been approached by renewable energy generators during the year prior to the current planning period regarding constructing new renewable energy resources. If so, please provide the number and a description of the type of renewable generation represented.

RESPONSE:

DEF managed and connected about 18,000 requests in 2022 from customer-owned renewable energy generators and DEF responded to many more informal emails and phone inquiries. As the cost of solar PV technology continues to decline and subsidies remain, there continues to be interest from various customer segments trying to utilize, develop, install, and learn how to interconnect solar PV technology to the Florida power grid. DEF recorded about 10 inquiries in 2022 from potential large scale renewable energy generators and DEF responded to many more informal emails and phone conversations. This large-scale interest can be seen in the continued solar PV generator interconnection requests that DEF receives from speculative parties. As of December 31, 2022, DEF had over 5,100 MW of potential third-party solar PV generators on the Qualifying Facility criteria, FERC Orders, and structure requirements. DEF also educates on pricing, and obligations under FPSC Rules for a negotiated renewable power purchase agreement and an agreement for purchase of as-available energy. All of the inquiries during 2022 were for potential renewable energy generators utilizing solar PV technology.

58. Does the Company consider solar PV to contribute to one or both seasonal peaks for reliability purposes? If so, please provide the percentage contribution and explain how the Company developed the value.

RESPONSE:

DEF has assigned DEF owned solar PV generation an equivalent summer capacity value equal to 57% of the nameplate capacity of the planned installations from 2021 to 2024. DEF modeling derives an equivalent summer non-coincident, but on-peak-hour capacity value equal to 25% of the facility's nameplate rating for planned PV installations from 2025 to 2026 and 12.5% for 2027 and beyond. These assignments assume that the projects developed over the period of this plan will be single-axis tracking technology.

Other technologies may result in other values such as DEF's DeBary Solar Plant in a fixed tilt configuration has been assigned a 45% equivalent summer capacity value. DEF assigns no winter peak capacity value to solar PV. DEF recognizes that actual performance will differ from year to year; and may differ from the model and that the correlation to peak load will change as the amount of solar is installed and there are changes in the load behavior. As a result, DEF expects that these values may be revised further as additional solar PV power plants are in service and there is longer-term demonstrated operating data.

- 59. Please identify and describe any programs the Company offers that allows its customers to contribute towards the funding of specific renewable projects, such as community solar programs.
 - a. Please describe any such programs in development with an anticipated launch date within the current planning period.

Duke Energy Florida is excited to have launched a shared solar program, offering customers subscriptions to local clean energy in Florida. DEF's Clean Energy Connection is an opportunity for our Florida customers who want access to renewable energy without the hassle, long term commitment, or up-front installation cost of installing or maintaining solar equipment.

Program participants subscribe to kilowatt (kW) blocks of power associated with the program's solar plants for a fixed \$8.35/kW monthly subscription fee, where each block represents 1 kW. This subscription fee supports the operation of these solar plants and is added to the customer's regular monthly DEF bill. In return, the customer will receive monthly bill credits associated with their participation in the program.

The power generated by the solar plant feeds into the Duke Energy electric grid across Florida, and customers will have the ability to subscribe to enough solar generation to match their energy usage.

The Program has allocations for large commercial and industrial customers, local government customers, residential and small business customers, and low-income customers. Low-income participants will pay a fixed monthly-kW subscription fee for the life of the program and can expect to receive immediate and sustained savings, as the fixed credit rate will be higher than the subscription fee. DEF has worked with local governments and community organizations, before the program opens, to help drive awareness of the program benefits to low-income customers.

DEF opened the approved Clean Energy Connection Program for enrollment for large business and industrial customers in 2021 and is fully subscribed for those customer types. Enrollment for residential and small to medium business (SMB) customers opened in April 2022. Through the first quarter of 2023, enrollments for residential/SMB (combined segment) and low-income customers have grown to 63% and 100% respectively based on inservice solar centers through the first quarter of 2023. As new Clean Energy Connection sites come online in second quarter 2023 and into 2024, additional allocations will be available for residential/SMB and low-income segments. Please see docket #20200176 and Order PSC-2021-0059-S-EI for additional details.

Further, DEF continues to offer and review the practicality and interest of another community type shared solar program through its Shared Solar Rider. This Rider is available to all Customers throughout the entire service area served by the Company on a first come first served basis subject. Customers can voluntarily subscribe to 50-kWh blocks of energy per month from solar photovoltaic (PV) facilities owned and operated by Duke Energy

Florida. The subscription fee per 50 kWh-energy block is \$7.75 per month and the customer receives an as-available energy-based bill credit.

Energy Storage

60. Briefly discuss any progress in the development and commercialization of non-lithium-ion based battery storage technology the Company has observed in recent years.

RESPONSE:

Duke Energy continues to monitor the non-lithium battery solutions. This includes sodium sulfur, nickel hydrogen, iron air, flow storage, zinc hybrid, gravity storage, adiabatic compressed air energy storage, and electro-thermal energy storage. Duke Energy participates in development and testing of battery technologies through its partnerships with entities such as EPRI as well as research and pilot projects across the Duke Energy regulated and non-regulated companies.

61. If applicable, please describe the strategy of how the Company charges and discharges its energy storage facilities. As part of the response discuss if any recent legislation, including the IRA has changed how the Company dispatches its energy storage facilities.

RESPONSE:

Energy storage assets directly connected through the Distribution system are dispatched through a combination of manual charge / discharge operations and schedules that automate their operation. The Lake Placid battery is operated in PV smoothing mode to minimize the 15-minute variability that results due to the variable nature of solar energy. Lake Placid is also operated through manual charge and discharge controls. To maximize the value of the Solar ITC taken for the Lake Placid storage investment Duke Energy targets charging the asset >75% from solar energy.

62. Briefly discuss any considerations reviewed in determining the optimal positioning of energy storage technology in the Company's system (e.g., Closer to/further from sources of load, generation, or transmission/distribution capabilities).

RESPONSE:

Duke Energy considers energy storage to be another power grid operator tool or resource for distribution, transmission, and generation solutions. The optimal positioning is very project specific and is dependent upon the problem being solved. Ultimately, energy storage projects are compared to traditional tools or methods to determine if energy storage is in fact a low cost and optimal solution. For example, Duke Energy is evaluating solar power plants with adjacent battery storage as well as investigating solutions to distribution reliability closer to the customer loads. Duke Energy has also been focusing on opportunities to maximize the recently passed ITC for energy storage by locating future facilities in Energy Communities. Where feasible this will increase the ITC 10% thus improving project economics.

63. Please explain whether customers have expressed interest in energy storage technologies. If so, describe the type of customer (residential, commercial industrial) and how have their interests been addressed.

RESPONSE:

DEF's retail customers are showing an interest in energy storage by installing battery storage at their premise along with their customer-owned renewable generators. DEF continues to see a modest percentage of customers installing energy storage equipment in concert with participation in the state's net metering policy. DEF continues to carefully monitor this activity and the customer's battery project configuration. DEF's commercial and industrial customers have inquired about using energy storage in various forms, usually for business continuity whether post-hurricane or temporary interruptions. Some customers have developed their own backup power strategy. However, few have found battery storage external to their business as the best, economical solution to date. The customer is often looking for days of backup power which presently prices Li-ion technology out of consideration. Lastly, in late 2021, DEF launched a "Bring Your Own Battery" (BYOB) program as part of the Technology Development Program. BYOB allowed a small group of customers who have batteries installed in their homes to participate. This pilot studied potential grid enhancements and resiliency contributions when DEF, as the grid operator is able to thoughtfully dispatch these distributed resources.

64. Please refer to the Excel Tables File (Existing Energy Storage). Complete the table by providing information on all energy storage technologies that are currently either part of the Company's system portfolio or are part of a pilot program sponsored by the Company.

RESPONSE:

Please see table below and tab *Existing Energy Storage* of the Excel File 2023 TYSP - Data Request #1.Excel Tables.xlsx.

Project Name	Pilot Program	In-Service/ Pilot Start Date	Max Capacity Output (MW)	Max Energy Stored (MHh)	Conversion Efficiency (%)
	(Y/N)	(MM/YY)			
USF Microgrid Energy Storage Pilot	Y	7/8/2018	0.25	0.48	88.0%
Trenton	Y	12/21/2021	11.00	15.60	83.2%
Lake Placid BESS	Y	12/9/2021	17.28	50.60	83.5%
Cape San Blas	Y	2/10/2022	5.50	20.50	83.5%
Jennings	Y	4/5/2022	5.50	8.50	84.0%
Duke / UCF Long-Duration Energy Storage Project	Y	7/27/2022	0.01	0.04	75.0%
Micanopy	Y	8/5/2022	8.25	18.20	83.5%
Notes					
(Include Notes Here)					

65. Please refer to the Excel Tables File (Planned Energy Storage). Complete the table by providing information on all energy storage technologies planned for in-service during the current planning period either as part of the Company's system portfolio or as part of a pilot program sponsored by the Company.

RESPONSE:

Please see table below and tab *Planned Energy Storage* of the Excel File 2023 TYSP - Data Request #1.Excel Tables.xlsx.

Project	Pilot	In-Service/	Projected	Projected	Projected
Name	Program	Pilot Start Date	Max Capacity	Max Energy	Conversion
	(Y/N)	(MM/YY)	Output (MW)	Stored (MHh)	Efficiency (%)
John Hopkins Microgrid	Y	3Q 2022	2.475	23.5	83.5%
Notes					
(Include Notes Here)					

- 66. Please identify and describe the objectives and methodologies of all energy storage pilot programs currently running or in development with an anticipated launch date within the current planning period. If the Company is not currently participating in or developing energy storage pilot programs, has it considered doing so? If not, please explain.
 - a. Please discuss any pilot program results, addressing all anticipated benefits, risks, and operational limitations when such energy storage technology is applied on a utility scale (> 2 MW) to provide for either firm or non-firm capacity and energy.
 - b. Please provide a brief assessment of how these benefits, risks, and operational limitations may change over the current planning period.
 - c. Please identify and describe any plans to periodically update the Commission on the status of your energy storage pilot programs.

RESPONSE:

- a. Duke Energy is currently beginning to test the energy storage projects as part of the 50 MW battery energy storage pilot program identified in the 2017 DEF Settlement Agreement. The pilot program is studying how energy storage is a cost-effective tool to improve customer reliability, defer or eliminate traditional distribution investment, and improve system operations at universal solar assets.
- b. DEF expects the current pilot program as well as future energy storage projects will help to better optimize the best blend of multiple use battery locations which may system balancing, capacity, and energy arbitrage values. These will include projects to mitigate intermittency from solar power and improve the coincidence between renewable generation and load. DEF also expects to better understand the benefits of energy storage as a key component of localized resiliency for locations as well as future uses of batteries to harden the local grids for counties and municipalities. As costs continue to decline on Li-ion batteries and perhaps other technologies provide additional paths to energy storage, storage will become a part of the myriad of tools DEF deploys to optimize grid resiliency and reduce certain transmission or distribution congestion/redundancy needs.

- c. Duke Energy plans to update the Commission on the status of our energy storage pilot programs during future Ten Year Site Plan filings and during any ad hoc requests made by the Commission
- 67. If the Company utilizes non-firm generation sources in its system portfolio, please detail whether it currently utilizes or has considered utilizing energy storage technologies to provide firm capacity from such generation sources. If not, please explain.
 - a. Based on the Company's operational experience, please discuss to what extent energy storage technologies can be used to provide firm capacity from non-firm generation sources. As part of your response, please discuss any operational challenges faced and potential solutions to these challenges.

DEF has an increasing amount of solar PV generation on its system and projects to have more through the forecast period. While a portion of that capacity is considered to be firm in the summer, i.e. coincident with the peak, some portion of that capacity is also considered to be non-firm. Only a minimal amount of the PV capacity is coincident with the winter peak. DEF continues to examine the opportunity to use energy storage in combination with solar generation and other sources to provide additional firm capacity.

a. DEF has been testing the DC coupled energy storage located at the Lake Placid Solar Facility. The asset primarily operates in PV smoothing mode but can be dispatched provide firm capacity from the solar facility.

Other

68. Please identify and discuss the Company's role in the research and development of utility power technologies, including, but not limited to research programs that are funded through the Energy Conservation Cost Recovery Clause. As part of this response, please describe any plans to implement the results of research and development into the Company's system portfolio and discuss how any anticipated benefits will affect your customers.

RESPONSE:

Through our research and development efforts, Duke Energy's Emerging Technology Office continuously reviews technology trends that may provide benefit for our customers. We are active in industry groups such as the Electric Power Research Institute (EPRI), national labs (NREL, ORNL, PNNL, etc.) and the U.S. Department of Energy (DOE), where we collaborate with government, other utility, and industry experts on emerging technologies, including renewables and emission-free resources. The goal of our work is to monitor and assess technology readiness to solve current and future power system issues whether they be behind the meter or universally grid tied. New technologies like microgrids, energy storage, battery energy storage coupled with solar PV, hydrogen, and grid-connected/controlled devices are being tested to enable the Company to meet evolving customers' needs.

<u>Environmental</u>

- 69. Please explain if the Company assumes carbon dioxide (CO₂) compliance costs in the resource planning process used to generate the resource plan presented in the Company's current planning period TYSP. If the response is affirmative, answer the following questions:
 - a. Please identify the year during the current planning period in which CO2 compliance costs are first assumed to have a non-zero value.
 - b. **[Investor-Owned Utilities Only]** Please explain if the exclusion of CO2 compliance costs would result in a different resource plan than that presented in the Company's current planning period TYSP.
 - c. **[Investor-Owned Utilities Only]** Please provide a revised resource plan assuming no CO2 compliance costs.

RESPONSE:

DEF did not assume CO2 compliance costs in the resource planning process used to generate the resource plan presented in the current TYSP.

- a. N/A.
- b. [Investor-Owned Utilities Only] N/A.
- c. [Investor-Owned Utilities Only] N/A.
- 70. Provide a narrative explaining the impact of any existing environmental regulations relating to air emissions and water quality or waste issues on the Company's system during the previous year. As part of your narrative, please discuss the potential for existing environmental regulations to impact unit dispatch, curtailments, or retirements during the current planning period.

RESPONSE:

There were no impacts to unit dispatch, curtailments, or retirements during 2022 due to environmental regulations. DEF is not planning to retire any units in the current planning period as a response to existing environmental regulations. In the past DEF has experienced curtailments of some units related to water temperature restrictions. Because these events are weather related, there is no anticipated curtailment in the plan.

- 71. For the U.S. EPA's Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units Rule:
 - a. Will your Company be materially affected by the rule?
 - b. What compliance strategy does the Company anticipate employing for the rule?
 - c. If the strategy has not been completed, what is the Company's timeline for completing the compliance strategy?

- d. Will there be any regulatory approvals needed for implementing this compliance strategy? How will this affect the timeline?
- e. Does the Company anticipate asking for cost recovery for any expenses related to this rule? Refer to the Excel Tables File (Emissions Cost). Complete the table by providing information on the costs for the current planning period.
- f. If the answer to any of the above questions is not available, please explain why.

- a. No, DEF has not been materially affected by the EPA's "Standards of Performance for Greenhouse Gas Emissions from New, Modified and Reconstructed Stationary Sources: Electric Utility Generating Units" (CO2 NSPS) final rule. The "New" Citrus Combined Cycle units affected by these standards meet the compliance requirements outlined in the rule and DEF has not identified any units potentially affected as "Modified" or "Reconstructed" stationary sources. As such, DEF does not anticipate any reliability impacts of this rule. The framework of the regulation of greenhouse gas emissions is now being evaluated by the Biden administration. The current CO2 NSPS rules remain in effect pending outcome of the review. DEF will continue to monitor the status of the rule and any proposed changes to ascertain any further compliance steps that may be required.
- b. While DEF's existing facilities are not materially affected by the rule, DEF will ensure that all future "New" generating facilities comply with standards and will monitor maintenance and compliance activities related to existing facilities that could potentially result in the facilities being identified as "Modified" or "Reconstructed" stationary sources under the rule.
- c. N/A.
- d. There are no specific regulatory approvals identified as associated with compliance with this rule.
- e. Please see the table below and tab *Emission Cost* of the Excel File 2023 TYSP Data Request #1-Excel Tables.xlsx.

Year		Estimated Cost of Standards of Performance for Greenhouse Gas Emissions Rule for New Sources Impacts (Present-Year \$ millions)										
	Capital Costs	O&M Costs	Fuel Costs	Total Costs								
2021	0	0	0	0								
2022	0	0	0	0								
2023	0	0	0	0								
2024	0	0	0	0								
2025	0	0	0	0								
2026	0	0	0	0								
2027	0	0	0	0								
2028	0	0	0	0								
2029	0	0	0	0								
2030	0	0	0	0								
Notes												
(Include Notes Here)												

- f. N/A.
- 72. Explain any expected reliability impacts resulting from each of the EPA rules listed below. As part of your explanation, please discuss the impacts of transmission constraints and changes to units not modified by the rule that may be required to maintain reliability.
 - a. Mercury and Air Toxics Standards (MATS) Rule.
 - b. Cross-State Air Pollution Rule (CSAPR).
 - c. Cooling Water Intake Structures (CWIS) Rule.
 - d. Coal Combustion Residuals (CCR) Rule.
 - e. Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units.
 - f. Affordable Clean Energy Rule or its replacement.
 - g. Effluent Limitations Guidelines and Standards (ELGS) from the Steam Electric Power Generating Point Source Category.

a. Mercury and Air Toxics Standards (MATS) Rule.

DEF has provided its compliance strategy for MATS in the Integrated Clean Air Compliance Plan submitted to the Commission on March 29, 2019 in Docket 20190007-EI and updated in Docket 20210007-EI. This compliance strategy has been implemented and there are no reliability impacts from this regulation.

b. Cross-State Air Pollution Rule (CSAPR).

DEF sources are not subject to CSAPR and therefore there are no reliability impacts from this regulation.

c. Cooling Water Intake Structures (CWIS) Rule.

DEF has provided updates on the compliance strategy for CWIS at the Crystal River station in the testimony provided to the Commission on April 1, 2021, Docket No 20210007-EI. There are no reliability impacts from this regulation.

As explained in the prior testimonies of DEF witnesses Patricia West and Kim McDaniel in Dockets 20170007-EI, 20180007-EI, and 20190007-EI, DEF has been conducting 316(b) studies at the Anclote and Bartow stations and study results, along with proposed compliance strategies, were filed with the Florida Department of Environmental Protection ("FDEP") in July and August 2020, respectively, as part of the NPDES renewal process. Bartow NPDES permit renewal was issued on January 12, 2023, including a schedule to install modified traveling screens and organism return in compliance with the 316(b) rule within 5 years from issuance of the renewed permit. The Anclote NPDES renewal is still under review by the agency. Therefore, the full extent of compliance activities cannot be determined until FDEP's review of the proposed options has been completed and the NPDES permit renewal issued. There are no reliability impacts anticipated with the proposed compliance strategies.

d. Coal Combustion Residuals (CCR) Rule.

In 2021 DEF completed the installation of a liner system in the existing sedimentation basin and west ditch. The liner system was installed as a corrective measure to address groundwater quality impacts. Actions to address groundwater exceedances and comply with groundwater assessment mandates resulting from the CCR landfill are described in Docket No. 20190007-EI, approved by PSC-2019-0500-FOF-EI, and updated in Docket Nos. 20200007-EI, 20210007-EI, and Docket No. 20220007-EI. This compliance strategy is not expected to have any impacts on reliability.

- e. Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units.
 The new units (Citrus Combined Cycle Units) affected by these standards meet the compliance requirements outlined in the rule. This compliance strategy is not expected to have any impacts on reliability.
- f. Affordable Clean Energy Rule or its replacement.

On January 19, 2021, the court vacated the ACE rule and remanded it back to EPA. Currently, neither the ACE rule nor Clean Power Plan rule are in effect. On October 29, 2021, the Supreme Court agreed to hear the appeal of ACE vacatur. The case was heard at the Supreme Court in February 2022, and on June 30, 2022, the Court issued a decision reversing and remanding the January 19, 2021, D.C. Circuit Court decision. Currently, neither the CPP nor the ACE rule are in effect, as the EPA is working on a replacement rule that is expected to be proposed in April 2023, therefore, any potential reliability impacts are yet to be determined.

g. Effluent Limitations Guidelines and Standards (ELGS) from the Steam Electric Power Generating Point Source Category.

On November 22, 2019, EPA published a revised ELG rule with proposed changes to the FGD effluent and bottom ash transport water limits. EPA published the final ELG Reconsideration Rule on October 13, 2020, with an effective date of December 14, 2020. The rule has been challenged by environmental organizations and is also under review by the EPA under President Biden's administration. DEF has evaluated the changes in the ELG Reconsideration Rule and has determined that modifications completed at the Crystal River North station in 2020 under the original rule satisfy the requirements of the ELG Reconsideration Rule. On March 8, 2023, EPA released a pre-publication proposed rule ("2023 Proposed Rule") revising the Agency's 2020 ELG Reconsideration Rule. The 20233 Proposed Rule includes a proposal for zero-discharge limitation for all pollutants in FGD wastewater and Bottom Ash Transport Water and numeric discharge limitations for mercury and arsenic in Combustion Residual Leachate. These proposed limits, should they become final, could require implementation of additional modifications at the Crystal River Units 4&5 Station. DEF will continue to work with FDEP to reflect to reflect future developments of this rule in the pending Crystal River Units 4 and 5 NPDES permit renewal. The NPDES permit renewal has not been issued by FDEP. There are no anticipated reliability impacts from this rule.

73. Please refer to the Excel Tables File (EPA Operational Effects). Complete the table by identifying, for each unit affected by one or more of EPA's rules, what the impact is for each rule, including; unit retirement, curtailment, installation of additional emissions controls, fuel switching, or other impacts identified by the Company.

RESPONSE:

Please see the table below and tab *EPA Operational Effects* of the Excel File 2023 TYSP - Data Request #1-Excel Tables.xlsx.

	Unit	Fuel	Net Summer			Esti	mated EPA Rule Impac	ts: Operational Ef	fects	
Unit	Туре	Туре	Capacity				CSAPR/		CCR	
Unit			(MW)	ELGS	ACE or replacement	MATS	CAIR	CWIS	Non-Hazardous Waste	Special Waste
Anclote 1	Steam	NG	508	NA	NA	Convert to NG	Convert to NG	Impacted	NA	NA
Anclote 2	Steam	NG	505	NA	INA	Convert to ING	Convert to ING	Impacted	INA	NA
P L Bartow	CC	NG	1,112	NA	NA	NA	Dispatch Changes	Impacted	NA	NA
Citrus Combined Cycle	CC	NG	1,610	NA	NA	NA	NA	Compliant as Constructed	NA	NA
Crystal River 4	Steam	Coal	712	T . 1	T (1	Reagent,	FCD CCD D' (1	T (1	T ()	NA
Crystal River 5	Steam	Coal	698	Impacted	Impacted	CEMS	FGD, SCR, Dispatch	Impacted	Impacted	NA
Osprey	CC	NG	245	NA	NA	NA	NA	NA	NA	NA
Hines PB1-4	CC	NG	2,061	NA	NA	NA	Dispatch Changes	NA	NA	NA
Notes	·		•							
(Include Notes Here)										

74. Please refer to the Excel Tables File (EPA Cost Effects). Complete the table by identifying, for each unit impacted by one or more of the EPA's rules, what the estimated cost is for implementing each rule over the course of the planning period.

Please see the table below and tab *EPA Cost Effects* of the Excel File 2023 TYSP - Data Request #1-Excel Tables.xlsx.

	Unit	Fuel	Net Summer				A Rule Impacts PVRR \$ million			
Unit	Туре	Туре	Capacity				CSAPR/		CO	CR
			(MW)	ELGS	ACE or replacement	MATS	CAIR	CWIS	Non- Hazardous Waste	Spe cial Was te
Anclote 1	Steam	NG	508			0	0		NA	NA
Anclote 2	Steam	NG	505	NA	NA	0	0	15-130	NA	NA
P L Bartow	CC	NG	1112	NA	NA	0	0	10-170	NA	NA
Crystal River 4	Steam	Coal	712	TDD	TDD	0	0		TDD	0
Crystal River 5	Steam	Coal	698	TBD	TBD	0	0	1-5	TBD	0
Notes										
(Include Notes Here)										

75. Please refer to the Excel Tables File (EPA Unit Availability). Complete the table by identifying, for each unit impacted by one or more of EPA's rules, when and for what duration units would be required to be offline due to retirements, curtailments, installation of additional controls, or additional maintenance related to emission controls. Include important dates relating to each rule.

RESPONSE:

Please see the table below and tab *EPA Unit Availability* of the Excel File 2023 TYSP - Data Request #1-Excel Tables.xlsx.

	Unit		Net Summer	Estimated EPA Rule Impacts: Unit Availability (Month/Year - Duration)												
Unit	Туре	Туре	Capacity				CSAPR/		CC	CR						
			(MW)	ELGS	ACE or replacement	MATS	CAIR	CWIS	Non- Hazardous Waste	Special Waste						
Anclote 1	Steam	NG	508	NA	NA	NA	NA	TBD	NA	NA						
Anclote 2	Steam	NG	505	NA	NA	NA	NA	TBD	NA	NA						
P L Bartow	CC	NG	1,112	NA	NA	NA	NA	TBD	NA	NA						
Citrus Combined Cycle	CC	NG	1,610	NA	NA	NA	NA	NA	NA	NA						
Crystal River 4	Steam	Coal	712	TBD	TBD	NA	NA	NA	TBD	NA						
Crystal River 5	Steam	Coal	698	TBD	TBD	NA	NA	NA	TBD	NA						
Osprey	CC	NG	245	NA	NA	NA	NA	NA	NA	NA						
Hines 1-4	CC	NG	2,061	NA	NA	NA	NA	NA	NA	NA						
Notes																
(Include Notes Here)																

76. If applicable, identify any currently approved costs for environmental compliance investments made by your Company, including but not limited to renewable energy or energy efficiency measures, which would mitigate the need for future investments to comply with

recently finalized or proposed EPA regulations. Briefly describe the nature of these investments and identify which rule(s) they are intended to address.

RESPONSE:

DEF's currently approved costs for environmental compliance investments which may be considered in the EPA's future CO2 regulations include plant conversions to natural gas, coal resource retirements, and utilizing advanced natural gas technologies as discussed in detail in question #72. These plans were undertaken to address the requirements of various new or forthcoming rules. The retirement of Crystal River units 1 and 2 in response to MATS and the Regional Haze rule also reduced the impacts of the CCR rule, the CWIS rule and updates to the State Implementation Plan to achieve attainment with SO2 and Ozone National Ambient Air Quality Standards (NAAQS). This retirement reduced DEF's CO2 footprint. The conversion of the two units at Anclote to natural gas firing in response to MATS similarly reduced priority pollutant emissions and the resultant risk around future updates to the NAAQS as well as CO2 emissions.

Until the EPA's CO2 emission reduction regulations are clearly defined, DEF can only estimate which investments would contribute to compliance and to what degree. DEF does, however, have some approved renewable energy and energy efficiency investments, recovered, or administered under the energy conservation cost recovery clause that may mitigate the need for some limited future investments that may be contemplated in the EPA's future CO2 regulations; and, finally, DEF continues to evaluate clean energy technologies and prudently prepare now for a CO2 constrained future.

Fuel Supply & Transportation

77. Please refer to the Excel Tables File (Fuel Usage & Price). Complete the table by providing, on a system-wide basis, the actual annual fuel usage (in GWh) and average fuel price (in nominal \$/MMBTU) for each fuel type utilized by the Company in the 10-year period prior to the current planning period. Also, provide the forecasted annual fuel usage (in GWh) and forecasted annual average fuel price (in nominal \$/MMBTU) for each fuel price (in

RESPONSE:

Please see the table below and tab *EPA Unit Availability* of the Excel File 2023 TYSP - Data Request #1-Excel Tables.xlsx.

Year		Ura	nium	Co	al	Natur	al Gas	Resid	ual Oil	Distilla	ate Oil	Hydr	ogen
rear		GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU
	2013	-	0	10,577	3.94	23,061	5.63	127.000	12.93	93	21.13	-	0.00
	2014	-	0	11,729	3.98	22,953	5.66	-	0.00	76	21.97	-	0.00
	2015	-	0	9,718	3.72	25,227	4.67	-	0.00	73	22.30	-	0.00
	2016	-	0	8,885	3.62	24,807	4.09	-	0.00	77	18.66	-	0.00
Actual	2017	-	0	8,722	3.44	27,307	4.26	-	0.00	62	16.43	-	0.00
Act	2018	-	0	8,422	3.20	28,687	4.52	-	0.00	90	19.80	-	0.00
	2019	-	0	4,322	3.66	35,170	3.93	-	0.00	33	20.36	-	0.00
	2020	-	0	3,287	3.66	36,327	3.37	-	0.00	33	22.28	-	0.00
	2021	-	0	5,042	3.03	34,517	5.28	-	0.00	61	20.27	-	0.00
	2022	-	0	4,375	4.58	36,423	8.50	-	0.00	146	22.63	-	0.00
	2023	-	0	1,233	7.52	36,532	6.52	-	0.00	1	21.33	-	0.00
	2024	-	0	1,567	6.22	37,880	5.40	-	0.00	1	19.26	-	0.00
	2025	-	0	1,609	5.49	36,684	5.16	-	0.00	2	18.29	-	0.00
ę	2026	-	0	1,388	5.65	37,140	5.08	-	0.00	3	19.08	-	0.00
ecte	2027	-	0	1,404	5.71	36,429	5.15	-	0.00	1	20.39	-	0.00
Projected	2028	-	0	2,096	5.50	35,245	5.28	-	0.00	4	18.75	-	0.00
-	2029	-	0	1,983	4.99	34,840	5.28	-	0.00	12	16.92	-	0.00
	2030	-	0	2,789	4.50	33,346	5.16	-	0.00	8	15.65	-	0.00
	2031	-	0	4,025	3.99	30,575	5.18	-	0.00	3	15.17	-	0.00
	2032	-	0	3,642	4.07	30,086	5.33	-	0.00	1	15.53	-	0.00
Notes													
(Include Notes Here)													

78. Please discuss how the Company compares its fuel price forecasts to recognized, authoritative independent forecasts.

RESPONSE:

DEF's fuel price forecasts are developed based on the forward market price for the first five years, followed by the long-term fundamental forecast beyond year five. The fundamental forecast is created as a composite of several nationally recognized fuel forecasts including both publicly available data (e.g. EIA) and purchased proprietary forecasts prepared by major consulting companies.

As part of its forecast comparison process, Duke Energy compares its composite fundamental commodity price outlooks to a range of individual forecasts, including both public forecasts like EIA, and proprietary outlooks from other leading energy consultants. Duke Energy also compares supply and demand fundamentals where they are available to review the underlying drivers. Natural gas and distillate fuel oil are widely traded commodities with multiple forecasts although these forecasts are influenced by views of not only domestic supply and demand effects, but also international market trends. Coal price forecast comparisons are more tenuous given the limited number of qualified outlooks, the significance of transportation cost and the non-homogeneous nature of the commodity itself. Duke Energy utilizes direct comparisons for select coal product qualities widely available in the market. Since the objective of Duke Energy fundamental forecasting process is to produce a comprehensive internally consistent forecast, Duke Energy also performs checks that the final price forecast is intuitively aligned with the supply/demand balances across the various commodities.

- 79. Please identify and discuss expected industry trends and factors for each fuel type listed below that may affect the Company during the current planning period.
 - a. Coal
 - b. Natural Gas
 - c. Nuclear
 - d. Fuel Oil
 - e. Other (please specify each, if any)

a. Coal

Since the fall of 2021, near term coal pricing for CAPP, NAPP and ILB regions climbed over \$100 per ton as international coal prices hit record highs at ~ \$400/ton. Near term coal prices, in all regions, during the planning period remained supported by strong international demand and tight domestic supply conditions. On average, in the first year of the period the high-sulfur high chlorine Illinois basin coal prices generally are in the low \$80's to low \$100's per ton declining to the mid to upper-\$50's for the balance of the period; while Illinois basin low chlorine coal prices are ~\$119 per ton declining to mid-\$50's per ton across the period before breaking the \$60 per ton barrier in the period's last two years. Central Appalachia coal prices in the first year of the period are \$98 per ton declining to upper \$70's to low \$80's per ton for the balance of the period; Northern Appalachia coal prices are ~\$86 per ton declining to the low to mid-\$60's across the period; Powder River Basin coal prices are in the mid-teens escalating to the high teens; and Colorado coal prices are \$52 per ton in the first year of the period declining to the mid to high-\$40's across the balance of the period. Coal demand is primarily driven by changes in electric power consumption and is expected to continue to be volatile based on changes in natural gas pricing, weather driven demand, purchase power costs, increasing availability of renewable generation, and export demand. Looking forward, coal markets continue to experience a high degree of market volatility due to a number of factors, including: (1) the inability of coal suppliers to respond timely to changes in demand; (2) natural gas price volatility; (3) continued uncertainty regarding proposed and imposed U.S. Environmental Protection Agency ("EPA") regulations for power plants; (4) increased demand in global markets for both steam and metallurgical coal; (5) tightened access to investor financing; (6) continued shifts in production from thermal to metallurgical coal as producers move away from supplying declining electric generation to take advantage of increasing demand from industry; and, (7) continued labor and resource constraints further limiting suppliers' operational flexibility and placing producers under increasing operational stress. International coal pricing assumptions are not currently accounted for in long-term fundamental price modeling. In the future if domestic coal supply becomes increasingly constrained, importing international supply may become necessary to ensure adequate supply.

b. Natural Gas

Over the planning horizon there are a number of trends that could have an impact on natural gas prices, and the overall supply and demand for domestic natural gas. First, is the level of production of domestic natural gas, particularly from associated gas. Second, is the forecasted growth in the use of natural gas from electric power generation, and the industrial sector. Third, is the level of natural gas exports via pipelines to Mexico, and LNG to the global natural gas market from U.S. export facilities.

Each year, the U.S. Energy Information Agency ("EIA") publishes a long-term forecast of energy market fundamentals and has an update for their 2023 outlook published March 16, 2023. In their reference case, the EIA projects total U.S. dry natural gas production to grow from 100 Bcf/day in 2023 to approximately 104 Bcf/day on average for 2032. Permian Basin is the primary driver behind associated dissolved natural gas growth. Increases in shale gas production mainly comes from the Texas-Louisiana Salt Basin and the Appalachian Basin. Additional production growth from the Marcellus and Utica plays in the Appalachia region could be limited by the lack of new pipeline infrastructure projects. In 2032, the EIA reference case forecasts domestic natural gas consumption will be approximately 76 Bcf/day, with a total volume of net exports at approximately 27 Bcf/day. Power generation is expected to be approximately 19.5 Bcf/day of the domestic natural gas demand in 2032. U.S. LNG exports reached 10.75 Bcf/d in 2022 and are expected to grow to an average of 22 Bcf/d in 2032. Current US LNG exports are limited to approximately 14 Bcf/day until additional infrastructure is completed at end of 2024.

Across all cases, domestic production outpaces domestic consumption putting downward pressure on prices over the planning horizon from 2023 through 2032. According to the EIA long-term forecast, spot prices at the Henry Hub averaged \$6.52 per MMBtu in 2022 and are expected to average \$3.21 by 2032 (in real terms).

c. Nuclear

DEF has retired the Crystal River 3 Nuclear plant and does not plan to add a new nuclear unit in the ten-year horizon. Therefore, it does not expect to be significantly impacted by trends and factors of nuclear fuel.

d. Fuel Oil

With respect to industry trends, per the EIA's Annual Energy Outlook ("AEO") 2023 Reference Case published in February 2023, the combination of decreased domestic consumption and increased international demand should combine to keep production levels relatively flat throughout 2023. EIA's AEO 2023 expects high international demand to lead to continued growth in U.S. production, and combined with relatively little growth in domestic consumption, allows the United States to remain a net exporter of petroleum products through 2050. EIA is projecting WTI Sweet Crude prices to range from \$86/Bbl in 2023 to \$98/Bbl in 2050. Actual price outcomes will be dependent on the degree to which existing sanctions imposed on Russia, any potential future sanctions, and independent corporate actions affect Russia's oil production or the sale of Russia's oil in the global market. In addition, the degree to which other oil producers respond to current oil prices, as well as the effects macroeconomic developments might have on global oil demand, will be important for oil price formation in the coming months. EIA's Short Term Energy Outlook forecasts that global consumption of petroleum and liquid fuels will average 100.9 million b/d for all of 2023, up 1.5 million b/d from 2022, and forecast that consumption will increase by 1.8 million b/d in 2024 to average 102.7 million b/d. Uncertainty around the consumption forecasts exist driven by differing possible global economic conditions, CO2 emission reduction efforts, and travel and oil demand as China pivots away from their zero-Covid strategy.

DEF will continue to monitor oil prices, trends and its fuel forecast over time and will procure needed fuel oil supply and transportation services to meet its generation fleet needs over the planning horizon. As new information becomes available, DEF will monitor this information for potential developments.

e. Other (please specify each, if any)

N/A.

80. Please provide a comparison of the Utility's 2022 fuel price forecast and the actual 2022 delivered fuel prices.

RESPONSE:

Please see table below and tab 2022 Fuel Prices-FCastvsActual of the attached Excel File 2023 TYSP - Data Request #1.Excel Tables Q80.

Veer		C	bal	Natur	al Gas	Distillate Oil				
Year		GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU			
Projected	2022	4,986	3.83	33,638	4.43	4	17.45			
Actual	2022	4,375	4.58	36,423	8.50	146	22.63			
Notes										
(Include Notes Here)										

Projected values include commodity price and variable transportation cost.

Actual values include commodity price, variable and fixed transportation cost, surcharge deliver costs, and cost of existing inventory (coal sitting on the pile, oil in the tanks).

81. Please explain any notable changes in the Utility's forecast of fuel prices used to prepare the Utility's 2023 TYSP compared to the fuel process used to prepare the Utility's 2022 TYSP.

RESPONSE:

DEF's 2023 TYSP is based on fuel forecasts developed in the Fall of 2022. Markets continue to change based on both near term and projected long-term factors. Markets in 2022 were strongly affected by the impacts of the war in Ukraine and the related disruption of oil and natural gas supplies from Russia, which in turn increased prices for LNG worldwide. In addition, domestic markets continued to be impacted by the supply and demand disruptions caused by the COVID pandemic and the economic recovery from that event. Labor and supply chain disruptions limited domestic supplies while demand was supported by the rapid economic recovery. Taken together, these factors caused a spike in prices across all fuel categories.

While this increase is expected to mitigate going forward, higher prices than those from the previous forecast are projected to persist through the ten-year forecast. In the longer term, gas prices are projected to moderate but remain above the previous forecast through 2030 even as the impacts of increasing amounts of renewables, particularly solar PV generation, are seen.

The higher natural gas prices in 2022 supported gas-to-coal switching. The higher coal demand, paired with production levels that had yet to recover following the past 5 years of steep decline and transportation issues, drew coal inventory down and pushed prices up for the fall forecast. These near-term factors are expected to impact the market for the next three to four years. Longer term, the expectation is for steep declines in coal use for electric generation. While this might be expected to lead to lower coal prices, the forecast is that the resulting shrinkage in the number of available suppliers and in the availability of transportation will keep prices moderately elevated above the previous forecast throughout the forecast period.

82. Please identify and discuss steps that the Company has taken to ensure natural gas supply availability and transportation over the current planning period.

RESPONSE:

DEF has broad contacts and relationships with natural gas suppliers and pipeline transportation providers. DEF performs short-term and long-term fuel forecasts to project estimated fuel usage for future periods. The short-term forecasts typically cover a period of five years, and the long-term forecasts cover years six through year twenty. Fuel forecasts includes items such as, but not limited to, load forecasts, fuel and emission prices, operational specifics of owned generation and contracted generation resources, wholesale power sales agreements, and unit maintenance schedules. The short-term forecast is performed approximately four times per year for a five-year period and currently covers years 2023 through 2028. The long-term forecast is performed two times per year and currently covers years 2028 through 2048.

To ensure that DEF has the needed natural gas supply to meets its generation needs over the planning horizon, DEF performs periodic competitive natural gas supply Request for Proposals ("RFP's") and market solicitations to procure the needed competitively priced natural gas supply consistent with its procurement approach. In addition, DEF also monitors potential pipeline expansion projects that can access competitively priced and secure natural gas for delivery to DEF's facilities. DEF monitors potential pipeline expansions through ongoing discussions and periodic meetings with gas suppliers and pipeline providers, open seasons issued by pipelines, industry events, and publications.

83. Please identify and discuss any existing or planned natural gas pipeline expansion project(s), including new pipelines and those occurring or planned to occur outside of Florida that would affect the Company during the current planning period.

The project descriptions outlined below are not intended to be an all-inclusive or exhaustive list of all the upstream pipeline projects that are in-service or proposed in the Gulf Coast and Southeast region, but those that DEF believes could have an impact on the natural gas supply available for DEF and the State of Florida.

Callahan Pipeline

Status: In-service as of November 2020

Peoples Gas expanded its natural gas service in Jacksonville, Fla., with the construction the Callahan Pipeline project. The pipeline starts at the Southern Natural Gas Cypress Interstate Pipeline in Callahan and travels east to Highway 17 in Yulee. The initiative was done through a partnership with Florida Public Utilities Co (FPU). TECO's affiliate, SeaCoast Gas Transmission, and FPU's affiliate, Peninsula Pipeline Co. Inc., are jointly developing the Callahan Pipeline. This will help the Company meet current and future natural gas demand in the Jacksonville area, including the planned Eagle LNG export terminal. The Eagle LNG project filed with the FERC on March 10, 2023, requesting authorization to commence construction and initial site preparation activities. Upon completion, Eagle is expected to be capable of exporting up to 49.8 Bcf of LNG per year.

Florida Gas Transmission – Putnam Expansion Project

Status: In-service as of February 2022

FGT has proposed a 21-mile, 169,000 MMBtu/d, pipeline project to increase Seminole Electric Cooperative volumes at the SeaCoast Gas Transmission delivery point in Putnam County, Florida. The project would allow previously unsubscribed firm capacity available on FGT's West Leg system to be moved to FGT's East Leg mainline, according to an application filed with FERC (CP19-474). This would be accomplished through loop extensions on the East Leg mainline to meet SECI's contractual firm volumes at the SeaCoast Gas Transmission delivery point in Putnam County. Downstream of the delivery point, SeaCoast plans to build a roughly 21.3-mile pipeline to ship gas to an existing SECI power plant, which will be replaced by a gas-fired, combined-cycle unit. The project entails about 13.7 miles of 30-inch-diameter loop extension in Clay and Putnam counties, along with seven miles of 30-inch-diameter loop extension in Clay and Putnam counties and other modifications in Orange County to FGT's existing Compressor Station 18 to allow for bi-directional flows. According to the application at FERC, CS-18 will be able to discharge and flow from south to north to accommodate the total deliveries at the FGT/SeaCoast interconnection.

Gulfstream Natural Gas – Phase VI Expansion

Status: In-service as of July 2022

GNGS proposed the Phase VI Expansion project, designed to add about 78,000 Dt/d of mainline capacity from receipt points in Mississippi and Alabama, to a delivery point in Manatee County, Florida. Tampa Electric, which is transforming one unit at a coal-fired station in Hillsborough County, Florida, into a combined-cycle gas generating unit, has a 25-year Precedent Agreement for the full capacity. The project facilities entail one 16,000 hp compressor unit at an existing station in Mobile County, Alabama; four miles of 36-inch-diameter pipeline onshore in Mobile County; abandonment of a four-mile segment; uprating

the MAOP of the 55-mile segment in offshore in Mobile County; metering equipment; and other facilities.

Sabal Trail Transmission

Status: Phases I & II In-Service, Phase III Extension Request filed at FERC as of 3/15/2023 Sabal Trail Transmission, LLC is a joint venture of Spectra Energy Corp (an Enbridge subsidiary), NextEra Energy, and Duke Energy. Sabal Trail is an approximately 515-mile interstate pipeline extending from Transco Station 85 in Choctaw County, Alabama to the Central Florida Hub. It interconnects with FGT, Gulfstream, and the Florida Southeast Connection in Osceola County, Florida. Sabal Trail's Phase I facilities were placed into full commercial service on July 3, 2017. The full Phase I capacity of the Sabal Trail pipeline is 830,000 Dth/day with the ability to scale-up its design capacity of 1.1 Bcf/day with the implementation of the third and final phase. Adding this additional pipeline into the State will increase overall direct onshore supply access to the State of Florida. Sabal Trail has two foundation shippers, Florida Power & Light and DEF.

Transco - Hillabee Expansion Project

Status: Phases I & II In-Service, Phase III not yet under construction

The Transco Hillabee Expansion Project will provide 1,131,730 MMBtu/day of incremental firm capacity in three phases. It originates at Transco Station 85 in Choctaw County, Alabama to a proposed interconnection between Transco and Sabal Trail in Tallapoosa County, Alabama. Sabal Trail acquired 100% of the project capacity via a long-term lease to provide Sabal Trail shippers gas supply access at Transco Station 85. Construction for Phase 1 began in 2016 and was placed in-service in July 2017. Phase II began construction in May of 2019 and was placed in-service on April 13, 2020. Phase III has yet to begin construction.

84. Please identify and discuss expected liquefied natural gas (LNG) industry factors and trends that will impact the Company, including the potential impact on the price and availability of natural gas, during the current planning period.

RESPONSE:

LNG exports are projected to remain at or near full export capabilities which is currently approximately 14 Bcf/day. This is due to the robust spread between United States natural gas prices and global LNG prices which is expected to continue through 2032. EIA projects LNG exports to average 12.3 Bcf/d in 2023, a 14% increase from 2022, with the full return of Freeport LNG. According to the Federal Energy Regulatory Commission (FERC) there are currently 2 LNG export terminals that are approved by FERC and under construction and 13 more terminals that are approved but not yet under construction. Added U.S. export capacity over the next 5 years is estimated to be approximately 9 Bcf/day or a total of 23 Bcf/day.

The future trends of U.S. LNG exports are difficult to predict as it can be impacted by both domestic and global developments over the long-term period. These factors include, but are not limited to, global natural gas prices, fundamentals of supply and demand, storage levels, economic cycles, and government regulations. DEF will continue to monitor LNG infrastructure projects and exports from these facilities.

85. Please identify and discuss the Company's plans for the use of firm natural gas storage during the current planning period.

RESPONSE:

DEF utilizes firm natural gas storage as part of its overall gas fuel contract portfolio. DEF has agreements with Bay Gas Storage Company LTD ("Bay Gas") and SG Resources Mississippi LLC ("Southern Pines") for firm storage capacity. Both gas storage facilities are directly connected to interstate pipelines (FGT, Gulfstream, SESH and Transco) on which DEF currently holds firm transportation. Bay Gas and Southern Pines both provide DEF with greater supply reliability, operational flexibility, and price protection during severe weather events and pipeline operational flow orders. DEF expects high deliverability storage to continue to be a critical component of its overall natural gas contract portfolio throughout the planning period. DEF will continue to evaluate any additional needs or changes in firm gas storage capacity throughout the planning period.

86. Please identify and discuss expected coal transportation industry trends and factors, for transportation by both rail and water that will impact the Company during the current planning period. Please include a discussion of actions taken by the Company to promote competition among coal transportation modes, as well as expected changes to terminals and port facilities that could affect coal transportation.

RESPONSE:

With respect to transportation by rail, several years of steep declines in coal generation demand combined with increased mining costs, along with increasing labor and resource constraints, continues to apply pressure for coal transported by rail to be cost competitive. Additionally, increased demand for coal in foreign countries could put pressure on the railroads infrastructure to transport coal to the ports for export shipments. Declining demand for coal in the utility sector has also driven rail transportation providers to modify their business models to be less dependent on coal related transportation revenues. Although rail transportation providers have limited resources to adapt to significant changes in scheduling demand resulting from the Company's burn volatility, specifically in higher than forecasted coal burn scenarios. DEF maintains communications with the rail transportation to its coal generating station. DEF expects the coal market will remain volatile during the planning period and that access to rail transportation will continue to provide flexibility to respond to rapidly changing generation needs.

With respect to water transportation, because of the addition of scrubbers to many coal generation plants in the Midwest and Southeast, use of higher sulfur coal originating from the Illinois Basin remains the primary fuel source with the main mode of transportation from this region being via water. Here again, several years of steep declines in coal generation demand combined with increased mining costs, along with increasing labor and resource constraints continues to apply pressure for waterborne coal deliveries to be cost competitive. Declining demand for coal in the utility sector has also driven waterborne transportation providers to be

less dependent on coal related transportation revenues as competition for barging capacity has increased. DEF expects waterborne transportation to remain a key component of its transportation portfolio during the planning period and maintains communications with the river and gulf barge transportation providers as well as its coal suppliers to actively explore opportunities to maintain cost competitive waterborne transportation to its coal generating station. Over the planning period, the Company expects terminal services in the Gulf to continue to play a role in waterborne purchases.

Having the ability to transport coal via waterborne barge and rail transportation creates opportunities for competition between transportation modes while also allowing DEF to mitigate unfavorable weather conditions and continue reliable deliveries. Additionally, the ability to take coal from various coal basins promotes competition between the different modes of transportation as well as the competition of coal pricing between coal basins. DEF expects the coal market will remain volatile during the planning period and having varying modes of transportation will continue to provide valuable flexibility. DEF continues to monitor and explore opportunities to maintain competition between water and rail delivery of coal.

87. Please identify and discuss any expected changes in coal handling, blending, unloading, and storage at coal generating units during the current planning period. Please discuss any planned construction projects that may be related to these changes.

RESPONSE:

Coal handling, blending, unloading, and storage requirements for coals from different basins are a consideration when determining coals to purchase. Expected decreases in demand over the planning period are in turn expected to reduce coal handling and unloading activities at the Company's coal generating units. The Company expects to continue to require on-site resources to manage its contractional obligations. The Company also expects that terminal services in the Gulf, while continuing to facilitate coal blending, may play a decreasing role over the planning period as demand declines. Continuous communications with the station, terminal facilities, river and gulf barge companies, railroads, and suppliers are critical for DEF's coal transportation strategy in the future.

88. Please identify and discuss the Company's plans for the storage and disposal of spent nuclear fuel during the current planning period. As part of this discussion, please include the Company's expectation regarding short-term and long-term storage, dry cask storage, litigation involving spent nuclear fuel, and any relevant legislation.

RESPONSE:

The United States Federal Government is legally obligated to take title and possession of all spent nuclear fuel. DEF will utilize on-site dry storage until the government fulfills its contractual obligations. All fuel at Crystal River #3 has been moved into dry cask storage. Reimbursement for costs incurred to store fuel on site is expected if the storage is as a result of the DOE's breach of the standard contract for disposal of spent nuclear fuel. DEF cannot predict what future actions the government will take to fulfill its contractual obligations. The

Nuclear Waste Policy Act of 1982, as amended cannot be changed except by an act of Congress.

89. Please identify and discuss expected uranium production industry trends and factors that will affect the Company during the current planning period.

RESPONSE:

DEF has retired the Crystal River 3 Nuclear plant and does not plan to add a new nuclear unit in the ten-year horizon. Therefore, it will not be affected by uranium production industry trends

- 90. [FPL Only] The following questions are with regard to hydrogen fuel creation and use at the Cavendish NextGen Hydrogen Hub:
 - a. Please explain how FPL plans to account for the produced hydrogen fuel that is integrated into the natural gas system for use at FPL's Okeechobee Clean Energy Center.
 - b. Please explain how FPL plans to price the produced hydrogen fuel that is integrated into FPL's natural gas system over the Ten-Year Site Plan time horizon

RESPONSE:

N/A.

Extreme Weather

91. Please identify and discuss steps, if any, that the Company has taken to ensure continued energy generation in case of a severe cold weather event.

RESPONSE:

Regulated & Renewable Energy (RRE) had weathered 2 recent polar vortexes (2014 & 2015) and a severe cold weather event in Jan 2018 and implemented weather hardening procedures and projects to ensure enhanced reliability through future cold weather events. For example, heat tracing and insulation of key equipment has provided dividends. Through each winter event, we gather lessons learned and disseminate throughout the fleet to mitigate future weather risks. In the fall of each year prior to cold weather each station executes a cold weather PM to ensure adequate protection of controlled devices. Since Florida is winter peaking, focusing on winter hardening provides the most benefit to our customers although we prepare our fleet for summer weather as well. During the recent Texas blackouts (Feb 2021), we understand that the deregulated energy providers had issues getting operators to plants. In times of system critical needs, we ensure adequate staffing of operating shifts and if needed, even have operators remain close to plants (and in some cases, sleep at plants) to minimize travel risk.

Each station has an extreme weather procedure and RRE has developed a fleet guidance document outlining general expectations and harnessing lessons learned from around the fleet.

For example, while not the same extreme temperature, Florida stations can benefit from freezing events at our Indiana or North Carolina stations.

- Cold weather guidance document fleet wide Stations have hot weather preparedness procedure/checklists (Spring)
- Stations have cold weather preparedness procedure/checklist (Fall)
- Stations have standard Preventive Maintenance (PMs) associated with cold weather preparation entered into the Work Management System.
- Extreme weather Operations Protocol (Sterile control room, hands off, etc.)
- Preference to Spring / Fall outages to ensure reliability for peak Summer / Winter runs.
- Asset Inspection & Maintenance Programs (i.e., Reliability)
- Engineered Insulation upgrades and maintenance of our critical monitoring and control instrumentation.
- 92. Please identify any future winterization plans, if any, the Company intends to implement over the current planning period.

RESPONSE:

At this time, Regulated & Renewable Energy (RRE) has no specific winterization plans for the current planning period beyond what has been described in response to Q91. RRE has taken lessons learned from previous cold weather events and added protective systems to generation stations (e.g., heat tracing and insulation). During the coldest winter in recent Florida history (January 2010), Duke Energy Florida's Generation Fleet recorded its peak generation to our customers without issue. Since then, we have continued to review equipment performance and modify our systems as necessary to continue to reliably supply power when needed.

93. Please explain the Company's planning process for flood mitigation for current and proposed power plant sites and transmission/distribution substations.

RESPONSE:

Power Plants - Each of Duke Energy Florida's (DEF) existing generating facilities have a Natural Disaster Emergency Response Plan that details the actions the facility will execute in the event of a forecasted or impending natural disaster. This includes attempts to mitigate the impacts of coastal floods, flash floods and high-water events.

DEF's fossil engineering new power plant design criteria require all sites to have a grade level above the 100-year flood level. In some cases, this addressed by raising the site elevation. DEF solar and storage sites are typically located above the 100-year flood level.

Transmission/Distribution Substations - DEF's Substation Flood Mitigation program builds in protection for substations most vulnerable to flood damage using flood plain and storm surge data. It includes a systematic review and prioritization of substations at risk of flooding to determine the proper mitigation solution, which may include elevating or modifying equipment, or relocating substations altogether.

Flood mitigation is a targeted application of mitigation measures for the 69kV to 12 kV substations. New assets could include control houses, relays, or total station rebuilds to increase elevation, etc.

- 94. Please address the following questions regarding the impact of all major storm events, such as Hurricane Ian, with associated flooding, destruction of utility facilities and customer buildings, and forced customer permanent migration.
 - a. Based on actual data, please briefly summarize the impact that major storms have had on your utility's customer number, retail sales and peak load.
 - b. Please explain whether the above discussed impact is included in your company's customer/retail energy sales/demand forecasts.
 - c. If your response to subpart (b) is affirmative, please explain how this impact is modeled.

RESPONSE:

a. Three major hurricanes have impacted the DEF service territory in the last decade, Irma (September 10-12, 2017), Michael (October 6-16, 2018) and Ian (September 28-30, 2022).

Hurricane Irma caused outages to over 1.3 million customers, and destroyed 1,800 distribution poles, 140 transmission poles and 1,100 transformers. Duke Energy restored power to more than 75 percent of its customers in just three days and 99 percent within eight days.

Hurricane Michael caused outages to approximately 72,000 customers. Additionally, Michael was the first hurricane to require the complete rebuild of three distribution feeders and 34 miles of transmission lines served by Duke Energy Florida.

Hurricane Ian resulted in 23,000 outages impacting 1,159,000 customers. There was damage to 601 distribution poles, 8 transmission poles and 642 transformers.

In the cases of Irma and Michael, DEF is unaware of any significant permanent relocation. There has been no long-range change in the number of customers or the customer growth in the areas of DEF territory affected by the storms. Hurricane Michael caused significant flood damage to some coastal communities, but these areas now report more customers than before the hurricane. In the case of hurricane Ian, it is too soon to address the potential for permanent relocation, but the areas of DEF territory affected by Ian were inland and subject to short term flooding and modest wind impacts that are very unlikely to cause long term changes to customer land use or behavior.

b. No impacts are included in DEF's long term forecasts. There were some short-term impacts following Irma due to extended customer outages and the time required for repairs. These were contained to the months following the hurricane.

- c. N/A.
- 95. Has the Company had to make any upgrades to any generating units or changes to operations practices as a result of any FERC Orders addressing extreme weather planning within the last two years? If so, please describe.

DEF is in compliance with all FERC requirements due to the preventative measures previously adopted. Please see response to Q91.

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2023 TYSP - Data Request #1.Excel Tables

TYSP Year	2023	
Staff's Data Request #	1	
Question No.	3	

Financial Assumptions											
	ase Case	10113									
AFUDC RATE		7.33% %									
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	DEBT	47%_%									
	PREFERRED	%									
	EQUITY	53% %									
RATE OF RETURN	•										
	DEBT	4.2% %									
	PREFERRED	%									
	EQUITY	10.1% %									
INCOME TAX RATE:	•										
	STATE	5.5% %									
	FEDERAL	21% %									
	EFFECTIVE	25.35% %									
OTHER TAX RATE:	-	N/A %									
DISCOUNT RATE:		6.83% %									
ТАХ	-										
DEPRECIATION RATE: (1)		%									
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(1)											
for CT: for CC:	15 Years (MA 20 Years (MA										
for Solar and SPS:	5 Years (MA										
for Battery:	5 Years (MA										

2023 TYSP - Data Request #1.Excel Tables

TYSP Year	2023
Staff's Data Request #	1
Question No.	3

	Financial E	scalation Assu	mptions	
	General	Plant Construction	Fixed O&M	Variable O&M
	Inflation	Cost ⁽¹⁾	Cost	Cost
Year	%	%	%	%
2023	2.50%		2.5%	2.5%
2024	2.50%		2.5%	2.5%
2025	2.50%		2.5%	2.5%
2026	2.50%		2.5%	2.5%
2027	2.50%		2.5%	2.5%
2028	2.50%		2.5%	2.5%
2029	2.50%		2.5%	2.5%
2030	2.50%		2.5%	2.5%
2031	2.50%		2.5%	2.5%
2032	2.50%		2.5%	2.5%
	⁽¹⁾ Long Term E	scalation Rates		
	Combustion		1.78%	
	Combined C	ycle	1.78%	
	Solar Solar Plus St	torago	1.27% 1.47%	
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TYSP Year2023Staff's Data Request #1Question No.4

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black black <td>1/9/2022</td> <td>3,097</td> <td>2,900</td> <td></td> <td>-</td> <td>,</td> <td>2,851</td> <td>-</td> <td>3,197</td> <td>-</td> <td>3,730</td> <td>3,946</td> <td>4,142</td> <td>4,337</td> <td>4,558</td> <td>4,746</td> <td>· ·</td> <td>,</td> <td>4,902</td> <td>5,024</td> <td>4,831</td> <td>4,619</td> <td>4,273</td> <td>3,883</td> <td>3,484</td>	1/9/2022	3,097	2,900		-	,	2,851	-	3,197	-	3,730	3,946	4,142	4,337	4,558	4,746	· ·	,	4,902	5,024	4,831	4,619	4,273	3,883	3,484
130 130 <td>1/10/2022</td> <td>3,236</td> <td>2,864</td> <td>2,763</td> <td>2,733</td> <td>2,806</td> <td>3,047</td> <td>3,387</td> <td>3,749</td> <td>3,926</td> <td>4,108</td> <td>4,305</td> <td>4,509</td> <td>4,767</td> <td>4,814</td> <td>4,879</td> <td>4,813</td> <td>4,821</td> <td>4,994</td> <td>5,262</td> <td>5,156</td> <td>4,803</td> <td>4,329</td> <td>3,830</td> <td>3,308</td>	1/10/2022	3,236	2,864	2,763	2,733	2,806	3,047	3,387	3,749	3,926	4,108	4,305	4,509	4,767	4,814	4,879	4,813	4,821	4,994	5,262	5,156	4,803	4,329	3,830	3,308
10 100	1/11/2022	3,015	2,789	2,729	2,745	2,852	3,162	3,828	4,488	4,714	4,540	4,292	4,118	3,914	3,896	3,900	4,005	4,125	4,379	4,860	4,800	4,586	4,252	3,807	3,440
1 1	1/12/2022	3,240	3,121	3,058	3,082	3,208	3,598	4,222	4,828	4,851	4,586	4,286	4,041	4,018	3,999	3,990	4,067	4,193	4,402	4,776	4,696	4,427	4,047	3,707	3,322
0.882 0.20 0.40 </td <td>1/13/2022</td> <td>3,080</td> <td>2,928</td> <td>2,842</td> <td>2,811</td> <td>2,893</td> <td>3,232</td> <td>3,923</td> <td>4,485</td> <td>4,541</td> <td>4,438</td> <td>4,269</td> <td>4,087</td> <td>4,051</td> <td>4,035</td> <td>4,017</td> <td>4,074</td> <td>4,260</td> <td>4,531</td> <td>5,022</td> <td>5,003</td> <td>4,766</td> <td>4,413</td> <td>3,994</td> <td>3,492</td>	1/13/2022	3,080	2,928	2,842	2,811	2,893	3,232	3,923	4,485	4,541	4,438	4,269	4,087	4,051	4,035	4,017	4,074	4,260	4,531	5,022	5,003	4,766	4,413	3,994	3,492
Intervint 114 202 203 204 204 100 100 100 10	1/14/2022	3,252	3,116	3,081	3,091	3,200	3,604	4,272	4,907	4,989	4,702	4,416	4,201	4,063	3,985	3,936	3,991	4,107	4,338	4,819	4,755	4,606	4,445	4,150	3,864
193020 330 330 140 530 440 440 </td <td>1/15/2022</td> <td>3,637</td> <td>3,615</td> <td>3,663</td> <td>3,767</td> <td>3,946</td> <td>4,194</td> <td>4,664</td> <td>5,242</td> <td>5,413</td> <td>5,148</td> <td>4,641</td> <td>4,197</td> <td>3,973</td> <td>3,841</td> <td>3,779</td> <td>3,852</td> <td>3,957</td> <td>4,082</td> <td>4,330</td> <td>4,250</td> <td>4,108</td> <td>3,908</td> <td>3,635</td> <td>3,335</td>	1/15/2022	3,637	3,615	3,663	3,767	3,946	4,194	4,664	5,242	5,413	5,148	4,641	4,197	3,973	3,841	3,779	3,852	3,957	4,082	4,330	4,250	4,108	3,908	3,635	3,335
193020 330 330 140 530 440 440 </td <td>1/16/2022</td> <td>3,134</td> <td>2,975</td> <td>2,889</td> <td>2,850</td> <td>2,844</td> <td>2,903</td> <td>3,019</td> <td>3,253</td> <td>3,590</td> <td>3,959</td> <td>4,180</td> <td>4,203</td> <td>4,209</td> <td>4,065</td> <td>4,042</td> <td>4,054</td> <td>4,163</td> <td>4,446</td> <td>4,850</td> <td>4,819</td> <td>4,643</td> <td>4,381</td> <td>3,995</td> <td>3,661</td>	1/16/2022	3,134	2,975	2,889	2,850	2,844	2,903	3,019	3,253	3,590	3,959	4,180	4,203	4,209	4,065	4,042	4,054	4,163	4,446	4,850	4,819	4,643	4,381	3,995	3,661
193000 1300 1300 1300		,				3.278		4,171	4.691		-	5.068			4,405	4.2.56	,	4,345	-	-	5,451	-	5,140		4,346
Image: Cons Cons Cons Cons <th< td=""><td></td><td>,</td><td></td><td></td><td>-</td><td></td><td></td><td>,</td><td></td><td>-</td><td>,</td><td>-</td><td></td><td>,</td><td>-</td><td>-</td><td>,</td><td>-</td><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td>,</td><td>5,336</td></th<>		,			-			,		-	,	-		,	-	-	,	-		-	-	-	-	,	5,336
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100022 200 200 </td <td></td> <td>-)</td> <td>, </td> <td>,</td> <td>,</td> <td>· ·</td> <td>· ·</td> <td>· ·</td> <td>,</td> <td>,</td> <td>,</td> <td></td> <td>-</td> <td>,</td> <td>-</td> <td>· ·</td> <td>· ·</td> <td>-</td> <td></td> <td>,</td> <td>-</td> <td>· ·</td> <td>,</td> <td></td> <td>3,514</td>		-)	, 	,	,	· ·	· ·	· ·	,	,	,		-	,	-	· ·	· ·	-		,	-	· ·	,		3,514
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101 4.44 4.40 4.70 4.70 5.80 5.80 5.80 5.90 5.90 5.		-	, 		-			-		,	-				-		-				-				3,975
100 4017 401 <td></td> <td>,</td> <td>,</td> <td>,</td> <td>,</td> <td>,</td> <td>,</td> <td>-</td> <td>,</td> <td></td> <td></td> <td>,</td> <td>,</td> <td>,</td> <td>-</td> <td>,</td> <td>,</td> <td>,</td> <td>,</td> <td>,</td> <td>,</td> <td>,</td> <td>,</td> <td></td> <td>5,101</td>		,	,	,	,	,	,	-	,			,	,	,	-	,	,	,	,	,	,	,	,		5,101
1990/02 400 400 400 400 400 400 400 500	1/23/2022	4,801	4,646	,	4,700	,	,	,	-	,	-)	-	,		-	,			,	,	,	,	,	-	6,053
Deprovem 4/m 0.m 4/m 0.m 0.	1/24/2022	6,074	6,051	6,170	6,406	6,736	7,379	8,283	8,873	8,589	7,715	6,812	5,941	5,302	4,739	4,404	4,279	4,517	5,042	5,700	5,858	5,958	5,676	5,199	4,739
10700000 1380 1380 2380 2380 2380 <t< td=""><td>1/25/2022</td><td>4,657</td><td>4,396</td><td>4,343</td><td>4,439</td><td>4,487</td><td>4,912</td><td>5,479</td><td>5,889</td><td>5,973</td><td>5,955</td><td>5,813</td><td>5,780</td><td>5,708</td><td>5,580</td><td>5,569</td><td>5,756</td><td>6,099</td><td>6,456</td><td>6,812</td><td>6,594</td><td>6,163</td><td>5,607</td><td>5,110</td><td>4,589</td></t<>	1/25/2022	4,657	4,396	4,343	4,439	4,487	4,912	5,479	5,889	5,973	5,955	5,813	5,780	5,708	5,580	5,569	5,756	6,099	6,456	6,812	6,594	6,163	5,607	5,110	4,589
1090022 3.36 3.28 3.01 3.02 3.01 3.00 3.00 3.00 3.00 3.00 5.00 5.00 5.01 5.00 5.01 5.00 5.01 5.01 5.00 5.01 5.00 5.01 5.00 5.01 5.00 5.01 5.00 5.01 5.00 5.01 5.00 5.01 5.00 5.01 5.00 5.01 5.00 5.01 <	1/26/2022	4,281	4,091	4,020	3,970	4,105	4,482	5,124	5,603	5,659	5,544	5,478	5,348	5,156	5,100	4,835	4,787	4,965	5,250	5,499	5,506	5,241	4,810	4,342	3,929
100002 600 4.01 4.03 4.08 5.00 <t< td=""><td>1/27/2022</td><td>3,672</td><td>3,490</td><td>3,411</td><td>3,361</td><td>3,449</td><td>3,762</td><td>4,511</td><td>5,144</td><td>5,256</td><td>4,896</td><td>4,793</td><td>4,632</td><td>4,488</td><td>4,346</td><td>4,265</td><td>4,231</td><td>4,403</td><td>4,743</td><td>5,196</td><td>5,140</td><td>4,941</td><td>4,618</td><td>4,113</td><td>3,827</td></t<>	1/27/2022	3,672	3,490	3,411	3,361	3,449	3,762	4,511	5,144	5,256	4,896	4,793	4,632	4,488	4,346	4,265	4,231	4,403	4,743	5,196	5,140	4,941	4,618	4,113	3,827
Unit Unit <thunit< th=""> Unit Unit <thu< td=""><td>1/28/2022</td><td>3,385</td><td>3,298</td><td>3,267</td><td>3,310</td><td>3,457</td><td>3,818</td><td>4,369</td><td>4,965</td><td>5,156</td><td>5,041</td><td>4,659</td><td>4,259</td><td>4,144</td><td>4,068</td><td>4,117</td><td>4,188</td><td>4,300</td><td>4,614</td><td>4,863</td><td>4,813</td><td>4,665</td><td>4,599</td><td>4,336</td><td>4,059</td></thu<></thunit<>	1/28/2022	3,385	3,298	3,267	3,310	3,457	3,818	4,369	4,965	5,156	5,041	4,659	4,259	4,144	4,068	4,117	4,188	4,300	4,614	4,863	4,813	4,665	4,599	4,336	4,059
1010202 6.410 6.401 7.22 7.01 6.417 6.405 6.405 4.005 4.007 4.001 <th< td=""><td>1/29/2022</td><td>3,990</td><td>4,011</td><td>4,178</td><td>4,351</td><td>4,585</td><td>5,008</td><td>5,676</td><td>6,455</td><td>6,832</td><td>6,783</td><td>6,502</td><td>6,115</td><td>5,661</td><td>5,368</td><td>5,126</td><td>5,125</td><td>5,393</td><td>6,061</td><td>6,813</td><td>7,258</td><td>7,378</td><td>7,387</td><td>7,272</td><td>7,162</td></th<>	1/29/2022	3,990	4,011	4,178	4,351	4,585	5,008	5,676	6,455	6,832	6,783	6,502	6,115	5,661	5,368	5,126	5,125	5,393	6,061	6,813	7,258	7,378	7,387	7,272	7,162
101202 4.01 6.047 7.02 5.07 5.07 5.07 6.07 5.07 6.07 5.07 6.07 5.07 6.07 5.07 6.07 5.07 6.07 5.07 6.07 5.07 <	1/30/2022	6,990	7,100	7,165	7,310	7,694	8,006	8,633	9,240	9,224	8,480	7,674	6,553	5,914	5,292	4,809	4,638	4,733	5,043	5,805	6,200	6,819	6,613	6,589	6,416
92/02/2 4.90 5.20 6.40 7.90 6.12 5.44 4.70 4.80 <					, 	, ,	,	· ·	,	-	-		,	-	-	-	-	-	,		-			,	4,438
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92/02/2 150/7 120/8 320/7 220 341/7 401/1 400/7 420/7 440/7 <th< td=""><td></td><td>-)</td><td>,</td><td></td><td>,</td><td>,</td><td>-</td><td>3,437</td><td>3,805</td><td>,</td><td>,</td><td>4,266</td><td>4,516</td><td>,</td><td>,</td><td>,</td><td>5,476</td><td>5,648</td><td>,</td><td>,</td><td>,</td><td>,</td><td>,</td><td>4,102</td><td>3,661</td></th<>		-)	,		,	,	-	3,437	3,805	,	,	4,266	4,516	,	,	,	5,476	5,648	,	,	,	,	,	4,102	3,661
272022 4371 3106 3271 3200 3200 5300 5300 5301 5401 <	2/5/2022	3,323	3,082	2,934	2,852	2,820	2,923	3,184	3,519	3,921	-	4,538		4,315	4,086	4,099		4,212	4,384	4,688	4,650	4,554	4,280	4,029	3,741
28:2822 1.432 5.401 <	2/6/2022	3,593	3,364	3,293	3,307	3,293	3,413	3,611	4,095	4,618	4,870	4,982	4,832	4,760	4,601	4,552	4,571	4,615	4,979	5,214	5,191	4,875	4,417	4,025	3,671
2021022 4.112 4.119 4.194 5.281 5.396 <	2/7/2022	3,423	3,305	3,244	3,272	3,386	3,920	4,659	5,302	5,310	5,300	5,352	5,240	4,894	4,552	4,173	4,083	4,306	4,729	5,366	5,455	5,322	4,878	4,353	3,887
210.9802 4.573 4.464 4.687 4.911 5.341 5.988 6.219 4.668 4.157 3.961 3.831 3.833 4.027 4.910 4.825 4.600 4.527 4.946 4.557 4.446 4.557 4.446 4.557 4.446 4.557 4.446 4.557 4.446 4.557 4.446 4.557 4.446 4.577 4.346 4.577 4.346 4.577 4.346 4.577 4.346 4.577 4.346 4.577 4.346 4.577 4.346 4.577 4.346 4.577 4.346 4.577 4.346 4.571 4.307 4.377 4.787 4.787 4.787 4.787 4.787 4.787 4.787 4.787 4.784 4.787 4.988 4.481 4.381 4.381 4.381 4.381 4.497 4.408 4.117 4.904 4.983 4.481 4.381 4.391 4.391 4.381 4.381 4.391 4.391 4.391 4.391 4.391 4.391 4.391 4.391 4.391 4.391 4.391 4.391 4.391	2/8/2022	3,652	3,504	3,447	3,480	3,718	4,217	4,976	5,466	5,691	5,702	5,566	5,474	5,426	5,281	5,242	5,416	5,683	6,036	6,397	6,351	6,016	5,590	5,008	4,567
2111002 5.420 3.64 4.866 4.005 4.212 4.040 4.212 4.000 4.215 4.002 4.061 4.005 4.000 4.216 4.001 4.015 4.000 4.001 <t< td=""><td>2/9/2022</td><td>4,312</td><td>4,189</td><td>4,159</td><td>4,225</td><td>4,541</td><td>5,068</td><td>5,938</td><td>6,443</td><td>6,287</td><td>5,719</td><td>5,099</td><td>4,640</td><td>4,235</td><td>3,980</td><td>3,886</td><td>3,880</td><td>4,031</td><td>4,369</td><td>4,944</td><td>5,288</td><td>5,386</td><td>5,156</td><td>5,080</td><td>4,720</td></t<>	2/9/2022	4,312	4,189	4,159	4,225	4,541	5,068	5,938	6,443	6,287	5,719	5,099	4,640	4,235	3,980	3,886	3,880	4,031	4,369	4,944	5,288	5,386	5,156	5,080	4,720
2122022 3.001 3.014 3.015 3.014 3.015 3.016 4.122 4.205 4.205 3.207 4.206 4.205 4.207 4.200 4.201 4.200 4.201 4.200 4.201 4.200 4.201 4.200 4.201 4.200 4.201 4.200 4.201 4.200 4.201 4.200 4.201 4.200 4.201 4.200 4.201 4.200 4.201 4.200 4.201 4.200 4.201 4.200 4.201 4.400 4.401 <	2/10/2022	4,573	4,454	4,687	4,911	5,314	5,888	6,613	7,189	6,840	5,998	5,219	4,668	4,157	3,961	3,831	3,833	4,027	4,375	4,714	4,910	4,826	4,606	4,352	4,008
2133002 5.867 2.881 2.772 2.791 2.791 2.791 2.791 2.791 2.791 2.791 2.791 2.791 2.791 2.791 2.791 2.791 6.295 5.708 5.205 4.405 4.302 4.005 4.303 4.006 4.303 4.006 4.303 4.006 4.303 4.006 4.303 4.006 4.303 4.006 4.303 4.006 4.303 4.006 4.303 4.006 4.303 4.008 4.707 4.794 4.804 4.407 4.901 4.804 4.407 4.901 4.804 4.407 4.901 4.804 4.407 4.901 4.804 4.903 4.905 4.804 4.908 4.971 4.901 4.804 4.901 <	2/11/2022	3,820	3,864	3,866	4,036	4,321	4,841	5,569	6,065	5,743	5,196	4,623	4,187	4,082	3,969	3,933	4,007	4,252	4,346	4,562	4,440	4,215	4,030	3,730	3,442
2133002 3.087 2.881 2.772 2.791 <	2/12/2022	3,200	3,047	3,001	3,014	3,085	3,376	3,676	4,122	4,392	4,251	4,029	3,875	3,868	3,931	4,063	4,202	4,269	4,282	4,374	4,307	4,114	3,851	3,597	3,302
2142022 3355 3300 348 3477 4500 5478 6275 6283 57.06 52.05 4302 4033 3913 4006 4339 4939 5.144 5.096 5.045 4403 3103 3117 3090 4000 4407 4401 3103 331 4064 4071 4299 5.04 4447 3403 331 4040 4001 3300 3031 4080 4001 4300 4223 4244 4444 4444 4447 3447 2107022 3290 2331 2.060 3.01 3.01 4.00 4.01 4.00 4.01 4.01 4.00 4.01 4.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 4.00 4.01	2/13/2022	3.052	2,881		2,719	2.737		-	3.207	-	-	4.063		-	-	4.095	4.038	-	-	4,492	-	4.301	-	-	3,562
2182002 4,338 4,337 4,494 4,714 5.093 5,787 6,584 7,167 6,767 5,949 5,270 4,632 4,017 4,203 4,003 4,077 4,203 4,004 4,014 3,001 3,02 3,970 4,644 4,011 4,016 4,017 4,203 4,044 4,049 4,044 3,046 3,118 4,314 4,514 4,516 4,504 <t< td=""><td></td><td>,</td><td></td><td>-</td><td>-</td><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td></td><td>,</td><td></td><td>,</td><td>,</td><td>,</td><td>,</td><td>,</td><td>,</td><td></td><td>,</td><td>,</td><td>,</td><td>-</td><td>4,808</td></t<>		,		-	-		-	-	-	-		,		,	,	,	,	,	,		,	,	,	-	4,808
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2225/2022 3.037 2.867 2.811 2.846 3.048 3.431 3.787 4.037 4.255 4.510 4.909 5.326 5.820 6.152 6.433 6.546 6.462 6.148 5.898 5.417 4.900 4.254 3.052 2262022 3.323 3.054 2.884 2.807 2.771 2.788 2.888 3.125 3.523 4.063 4.407 4.900 5.405 5.804 6.152 6.320 6.110 6.346 6.171 5.971 5.616 5.132 4.438 3.22 2282022 3.372 3.031 2.833 3.703 3.895 4.147 4.304 4.766 4.766 4.766 4.764 4.551 5.418 5.417 5.901 5.312 4.438 3.3 228/2022 3.316 2.739 2.890 3.239 3.895 4.147 4.374 4.175 4.106 4.122 4.218 4.314 4.564 4.551 5.735 5.514 5.2	2/23/2022	3,472	3,269	2,946	2,797	2,864	3,182	3,663	4,176	4,410	4,622	4,697	4,868	5,199	5,530	5,871	6,141	6,226	6,225	6,092	5,853	5,345	4,786	4,346	3,675
2/26/2022 3,112 3,118 2,920 2,812 2,822 2,828 2,960 3,192 3,613 3,993 4,305 4,683 5,137 5,546 5,800 6,157 6,200 6,609 5,804 5,468 5,000 4,472 4,007 3 2/27/2022 3,323 3,054 2,884 2,807 2,771 2,788 2,888 3,125 3,525 4,053 4,477 4,909 5,405 5,804 6,122 6,320 6,410 6,346 6,171 5,971 5,516 5,132 4,438 3 2/28/2022 3,155 3,582 2,400 3,125 3,703 3,895 4,142 4,358 4,497 4,626 4,786 4,708 5,123 5,144 5,20 5,409 5,21 5,400 5,21 5,400 4,405 4,402 4,402 4,	2/24/2022	3,295	3,047	2,900	2,812	2,836	3,032	3,436	3,769	3,941	4,201	4,346	4,657	5,121	5,609	6,009	6,373	6,476	6,399	6,229	5,975	5,456	4,954	4,373	3,653
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228/2022 3,372 3,031 2,833 2,734 2,802 3,135 3,703 3,895 4,142 4,358 4,497 4,626 4,786 4,978 5,123 5,144 5,767 5,445 5,409 5,312 5,040 4,560 4,566 4,788 4,805 4,276 4,405 4,774 4,175 4,106 4,122 4,218 4,374 4,564 4,655 4,738 4,805 4,742 4,415 4,062 3,643 3 3/2/2022 2,916 2,773 2,719 2,711 2,800 3,172 4,317 4,098 3,870 3,882 3,022 4,037 4,085 5,022 5,110 5,006 4,783 4,101 4,098 4,066 4,001 5,036 5,793 5,737 5,640 5,26 4,910 4,602 4,016 3 3/4/2022 3,043 2,986 2,657 2,646 2,949 3,413 3,838 4,015 4,110 4,279 4,488 5,016 </td <td>2/26/2022</td> <td>3,412</td> <td>3,118</td> <td>2,920</td> <td>2,812</td> <td>2,822</td> <td>2,828</td> <td>2,960</td> <td>3,192</td> <td>3,613</td> <td>3,993</td> <td>4,305</td> <td>4,683</td> <td>5,137</td> <td>5,546</td> <td>5,890</td> <td>6,157</td> <td>6,250</td> <td>6,069</td> <td>5,804</td> <td>5,468</td> <td>5,000</td> <td>4,472</td> <td>4,087</td> <td>3,649</td>	2/26/2022	3,412	3,118	2,920	2,812	2,822	2,828	2,960	3,192	3,613	3,993	4,305	4,683	5,137	5,546	5,890	6,157	6,250	6,069	5,804	5,468	5,000	4,472	4,087	3,649
228/2022 3,372 3,031 2,833 2,734 2,802 3,135 3,703 3,895 4,142 4,358 4,497 4,626 4,786 4,978 5,123 5,144 5,767 5,445 5,409 5,312 5,040 4,560 4,566 4,788 4,805 4,276 4,405 4,774 4,175 4,106 4,122 4,218 4,374 4,564 4,655 4,738 4,805 4,742 4,415 4,062 3,643 3 3/2/2022 2,916 2,773 2,719 2,711 2,800 3,172 4,317 4,098 3,870 3,882 3,022 4,037 4,085 5,022 5,110 5,006 4,783 4,101 4,098 4,066 4,001 5,036 5,793 5,737 5,640 5,26 4,910 4,602 4,016 3 3/4/2022 3,043 2,986 2,657 2,646 2,949 3,413 3,838 4,015 4,110 4,279 4,488 5,016 </td <td>2/27/2022</td> <td>3,323</td> <td>3,054</td> <td>2,884</td> <td>2,807</td> <td>2,771</td> <td>2,788</td> <td>2,888</td> <td>3,125</td> <td>3,525</td> <td>4,053</td> <td>4,477</td> <td>4,909</td> <td>5,405</td> <td>5,804</td> <td>6,122</td> <td>6,320</td> <td>6,410</td> <td>6,346</td> <td></td> <td></td> <td></td> <td>5,132</td> <td>4,438</td> <td>3,880</td>	2/27/2022	3,323	3,054	2,884	2,807	2,771	2,788	2,888	3,125	3,525	4,053	4,477	4,909	5,405	5,804	6,122	6,320	6,410	6,346				5,132	4,438	3,880
Leave Row Blank Image: Constraint of the state state state of the sta	2/28/2022		3,031		-		-		-	-	4,358	-	-	-	-	5,123	5,144	-	5,345	5,409		-	-		3,614
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3/7/2022 3,295 3,027 2,847 2,802 2,858 3,107 3,497 3,833 4,146 4,649 5,095 5,508 6,005 6,379 6,621 6,813 6,941 6,884 6,768 6,355 5,743 5,072 4,600 4,833 3/8/2022 3,649 3,373 3,200 3,166 3,240 3,533 4,045 4,395 4,659 4,838 5,296 5,508 6,089 6,813 6,941 6,884 6,768 6,355 5,743 5,072 4,600 4,833 3/8/2022 3,711 3,463 3,363 3,277 3,294 3,535 4,133 4,429 4,578 5,888 6,343 6,537 6,849																									3,577
3/8/2022 3,649 3,373 3,200 3,166 3,240 3,533 4,045 4,395 4,659 4,838 5,296 5,650 6,089 6,388 6,595 6,849 6,877 6,741 6,463 6,212 5,776 5,342 4,837 4,837 3/9/2022 3,771 3,463 3,363 3,277 3,294 3,535 4,133 4,429 4,576 4,844 5,378 5,888 6,333 6,595 6,849 6,897 6,741 6,463 6,617 6,646 6,639 6,671 6,463 6,617 6,666 6,639 6,671 6,645 6,639 6,647 6,617 6,646 6,639 6,647 6,645 6,639 6,647 6,645 6,649 6,649 6,693 6,671 5,645 5,616 5,572 5,164 5,015 5,155 4,939 4,614 4,111 3,33 3/11/2022 3,328 3,021 2,874 3,430 3,506 3,572 4,187 4,695 4,647 4,397 4,659 4,974 5,349 5,616 5,572																									3,895
3/9/2022 3,771 3,463 3,363 3,277 3,294 3,535 4,133 4,429 4,576 4,844 5,378 5,888 6,343 6,537 6,686 6,930 6,970 6,865 6,639 6,487 6,076 5,479 4,764 4,764 3/10/2022 3,616 3,362 3,235 3,187 3,198 3,432 3,859 4,227 4,431 4,603 4,896 5,174 5,489 5,616 5,572 5,164 5,041 5,051 5,155 4,939 4,641 4,111 3,333 3/11/2022 3,328 3,021 2,874 2,840 2,878 3,115 3,506 3,875 4,187 4,569 4,974 5,349 5,681 5,951 6,172 6,296 6,292 6,210 6,064 5,859 5,480 4,904 4,504 3/12/2022 3,738 3,480 3,323 3,247 3,274 3,350 3,502 3,788 4,641 4,625 4,646 4,499 4,307 4,059 3,891 3,765 3,782 3,869 4,084		3,295	3,027	2,847	2,802	2,858	3,107	3,497	3,833	4,146	4,649	5,095	5,508	6,005	6,379	6,621	6,813	6,941	6,884	6,768	6,355	5,743	5,072	4,600	4,065
3/10/2022 3,616 3,362 3,235 3,187 3,198 3,432 3,859 4,227 4,431 4,603 4,896 5,174 5,489 5,616 5,572 5,164 5,041 5,051 5,155 4,939 4,641 4,111 3,115 3/11/2022 3,328 3,021 2,874 2,840 2,878 3,115 3,506 3,875 4,187 4,569 4,974 5,349 5,616 5,572 5,164 5,041 5,045 5,156 4,939 4,641 4,111 3,115 3/11/2022 3,738 3,480 3,332 3,247 3,274 3,350 3,502 3,788 4,314 4,625 4,646 4,499 4,307 4,059 3,891 3,756 3,782 3,869 4,089 4,243 4,269 4,025 4,640 4,499 4,307 4,059 3,891 3,756 3,782 3,869 4,089 4,243 4,269 4,025 4,640 4,499 4,307 4,059 3,891 3,756 3,782 3,869 4,089 4,243 4,269 4,025	3/8/2022	3,649	3,373	3,200	3,166	3,240	3,533	4,045	4,395	4,659	4,838	5,296	5,650	6,089	6,388	6,595	6,849	6,897	6,741	6,463	6,212	5,776	5,342	4,837	4,284
3/11/2022 3,328 3,021 2,874 2,840 2,878 3,115 3,506 3,875 4,187 4,569 4,974 5,349 5,681 5,951 6,172 6,296 6,292 6,210 6,064 5,859 5,480 4,998 4,564 4,974 3/12/2022 3,738 3,480 3,332 3,247 3,274 3,350 3,502 3,788 4,314 4,625 4,646 4,499 4,307 4,059 3,891 3,756 3,782 3,869 4,089 4,243 4,269 4,225 4,646 4,499 4,307 4,059 3,891 3,756 3,782 3,869 4,089 4,243 4,269 4,225 4,072 3,373 3/13/2022 3,593 3,579 - 3,702 3,929 4,277 4,750 5,188 5,674 5,726 5,522 5,022 4,500 4,033 3,607 3,627 3,769 3,895 4,137 4,314 4,100 3,892 3,993 3,910 4,466 4,892 4,898 4,641 4,299 3,998 3,867	3/9/2022	3,771	3,463	3,363	3,277	3,294	3,535	4,133	4,429	4,576	4,844	5,378	5,888	6,343	6,537	6,686	6,930	6,970	6,865	6,639	6,487	6,076	5,479	4,764	4,079
3/12/2022 3,738 3,480 3,332 3,247 3,274 3,350 3,502 3,788 4,314 4,625 4,646 4,499 4,307 4,059 3,891 3,756 3,782 3,869 4,089 4,243 4,269 4,269 4,072 3,733 3/13/2022 3,593 3,579 - 3,702 3,929 4,277 4,750 5,188 5,674 5,522 5,022 4,500 4,069 3,607 3,607 3,667 3,689 4,010 3,892 3,891 3,617 3,627 3,768 4,110 3,892 3,891 3,617 3,627 3,627 3,628 4,110 4,010 3,892 3,891 3,617 3,617 4,101 3,892 3,998 3,817 3,974 4,033 4,120 4,299 4,032 3,998 3,974 4,033 4,120 4,299 4,043 4,032 4,033 4,120 4,299 4,041 4,033 4,120 4,299 4,032 3,998 3,974 4,033 4,120 4,299 4,043 3,998 3,974 4,033 <	3/10/2022	3,616	3,362	3,235	3,187	3,198	3,432	3,859	4,227	4,431	4,603	4,896	5,174	5,489	5,616	5,572	5,164	5,041	5,051	5,145	5,156	4,939	4,641	4,111	3,615
3/12/2022 3,738 3,480 3,332 3,247 3,274 3,350 3,502 3,788 4,314 4,625 4,646 4,499 4,307 4,059 3,891 3,756 3,782 3,869 4,089 4,243 4,269 4,225 4,072 3,313/2022 3/13/2022 3,593 3,579 - 3,702 3,929 4,277 4,750 5,188 5,674 5,522 5,022 4,500 4,069 3,607 3,607 3,669 4,089 4,010 3,892 3,891 3,607 3,607 3,627 3,769 3,895 4,131 4,110 3,892 3,891 3/14/2022 3,354 3,218 3,167 3,279 3,489 3,910 4,466 4,892 4,641 4,299 4,032 3,998 3,974 4,033 4,120 4,292 4,414 4,033 4,120 4,299 4,032 3,998 3,974 4,033 4,120 4,292 4,414 4,033 4,120 4,292 4,414 4,033 4,464 4,404 4,404 4,404 4,404 4,404	3/11/2022	3,328	3,021	2,874	2,840	2,878	3,115	3,506	3,875	4,187	4,569	4,974	5,349	5,681	5,951	6,172	6,296	6,292	6,210	6,064	5,859	5,480	4,998	4,564	4,075
3/13/2022 3,593 3,579 - 3,702 3,929 4,277 4,750 5,188 5,674 5,746 5,522 5,022 4,500 4,069 3,720 3,627 3,769 3,895 4,137 4,314 4,110 3,892 3,895 3/14/2022 3,354 3,218 3,167 3,279 3,489 3,910 4,466 4,892 4,898 4,641 4,299 4,032 3,998 3,974 4,033 4,120 4,292 4,414 4,641 4,801 4,448 3,965 3,998	3/12/2022		3,480				-			-	-		-	4,307		-	-			4,089					3,876
3/14/2022 3,354 3,218 3,167 3,279 3,489 3,910 4,466 4,892 4,898 4,641 4,299 4,032 3,998 3,867 3,974 4,033 4,120 4,292 4,414 4,641 4,801 4,448 3,965 3,996 3,9					-				-		-	-		-	-	-	-	-	-	-	-			-	3,556
					-		-	-			-			-	-		-			-	-				3,534
3/15/2022 3,170 2,921 2,765 2,720 2,764 2,910 3,341 3,663 3,897 4,040 4,230 4,260 4,366 4,553 4,742 4,880 4,977 5,042 5,078 5,189 5,284 4,869 4,285 3,									-		-							-							3,760

2/1//2022	2 2 2 0	2 014	0.076	0.700	2 0 1 0	2.025	2 214	2546	2.000	4 102	4 402	4 (70	4.007	5 10 4		6 2 7 1	5 207	5 40 7	5 500	5 42 4	5 275	4.005	1.460	2 002
3/16/2022	3,338	3,014	,	-	-				-		4,402	4,679	-				-	5,497	5,529	-			4,469	3,893
3/17/2022	3,365	3,067	2,898	2,782	2,815	2,939	3,196	3,518	3,840	4,040	4,107	4,226	4,481	4,744	5,091	5,464	5,783	5,967	5,923	5,657	5,485	5,022	4,504	3,865
3/18/2022	3,301	3,003	2,815	2,724 3,070	2,731	2,860	3,129	3,445	3,666	3,856	4,112	4,516	5,066	5,619	6,079	6,544	6,898	7,003	6,796	6,367	6,060 5,070	5,496	4,941	4,306
3/19/2022	3,858	3,483	3,206	,	3,038	3,067	3,201	3,393	3,689	4,156	4,591	5,009	5,515	5,977	6,399	6,706	6,876	6,817	6,493	6,266	5,970	5,436	4,840	4,303
3/20/2022 3/21/2022	3,944 3,098	3,609 2,831	3,384 2,695	3,188 2,666	3,113 2,750	3,088 2,967	3,188 3,356	3,319 3,873	3,542 4,038	3,980 4,017	4,251 4,032	4,386 4,002	4,593 4,077	4,782 4,262	5,002 4,629	5,262 4,929	5,538 5,331	5,709 5,730	5,641 5,782	5,352 5,561	5,137 5,382	4,614 4,878	4,034 4,175	3,518 3,669
3/22/2022	3,243	2,831	2,831	2,000	2,750	3,024	3,433	3,779	3,854	3,932	4,032	4,002	4,444	4,202	5,244	5,790	6,276	6,499	6,435	6,079	5,924	5,380	4,751	4,194
3/23/2022	3,243	3,386		3,108	3,117	3,305	3,685	4,049	4,219	4,570	5,017	5,433	5,840	6,065	6,372	6,575	6,431	6,311	6,213	6,136	6,022	5,580	5,053	4,194
3/23/2022	,	-	3,380	3,249	3,248	3,402	3,871	,	4,219	4,370	5,062	5,168	,	,	,	5,290	5,330	5,304	,	5,173	,	4,853	4,380	3,710
3/25/2022	4,011 3,230	3,609 2,962	2,822	2,745	2,796	2,998	3,436	4,271 3,774	3,900	3,947	3,986	4,033	5,178 4,084	5,201 4,192	5,268 4,374	4,586	4,854	5,037	5,231 4,952	4,743	5,145 4,685	4,833	4,380	3,495
3/26/2022	3,193	2,902	2,822	2,745	2,790	2,998	2,951	3,226	3,900	3,947	3,980	3,876	3,865	3,924	4,374	4,380	4,834	4,643	4,932	4,743	4,085	4,339	3,763	3,387
3/20/2022	3,193	2,923	2,730	2,639	2,718	2,665	2,931	3,166	3,365	3,609	3,719	3,791	3,805	3,924	4,023	4,239	4,704	4,043	5,053	4,918	4,408	4,100	3,952	3,472
3/28/2022	2,994	2,801	2,733	2,039	2,663	2,003	3,447	3,790	3,994	4,098	4,263	4,338	4,488	4,796	5,184	5,666	6,129	6,419	6,389	6,060	5,856	5,314	4,560	3,881
3/29/2022	3,269	2,943	2,090	2,693	2,003	2,902	3,397	3,687	3,816	3,966	4,102	4,244	4,525	4,934	5,453	5,938	6,386	6,647	6,581	6,145	5,938	5,367	4,668	3,962
3/29/2022	3,364	3.022	2,771	2,093	2,711		3,406	3,696	3,969	4,177	4,102	4,746	5,166	5,625	5,962	6,310	6,616	6,794	6,697	6,396	6,260	5,774	5,076	4,445
3/31/2022	3,933	3,533		3,105	3,101	3,275	3,648	4,070	4,328	4,639	5,086	5,419	5,767	6,014	6,241	6,417	6,519	6,485	6,276	6,099	5,859	5,485	4,876	4,235
4/1/2022	3,712	3,466		3,199	3,183	3,362	3,741	4,211	4,329	4,481	4,710	4,892	5,183	5,569	5,985	6,294	6,548	6,551	6,435	6,154	6,017	5,534	4,935	4,325
4/2/2022	3,903	3,553	3,254	3,107	3,075	3,134	3,258	3,494	3,831	4,375	4,887	5,275	5,550	5,729	5,739	5,327	4,950	4,801	4,593	4,436	4,405	4,157	3,862	3,481
4/3/2022	3,205	2,973	2,776	2,686	2,674	2,729	2,835	3,069	3,396	3,806	4,055	4,185	4,248	4,516	4,833	5,139	5,486	5,748	5,706	5,560	5,508	5,027	4,314	3,661
4/4/2022	3,151	2,857	2,720	2,682	2,717	2,940	3,415	3,727	3,894	4.088	4,156	4,342	4,754	5,226	5,705	6.075	6,404	6.545	6.512	6,242	6,146	5,729	4,949	4,264
4/5/2022	3,600	3,194	3,028	2,952	2,995	3,224	3,801	3,986	4,180	4,500	4,932	5,398	6.023	6,437	6,821	7,182	7,522	7,711	7,516	7,183	6,816	6,335	5,797	5,022
4/6/2022	4,271	3,815	,	3,333	3,388	,	4,198	4,460	4,780	5,148	5,572	6,115	6,589	6,886	7,169	7,393	7,733	7,905	7,711	7,291	7,059	6,638	6,067	5,422
4/7/2022	4,696	4,167	3,863	3,713	3,778		4,643	5,039	5,337	5,703	5,892	6,044	5,901	5,724	5,493	5,553	5,607	5,685	5,716	5,587	5,651	5,381	4,749	4,002
4/8/2022	3,334	3,038	2,843	2,767	2,746	2,959	3,472	3,900	4,106	4,073	4,102	4,118	4,237	4,199	4,307	4,630	4,800	4,947	4,963	4,814	4,805	4,631	4,344	3,953
4/9/2022	3,455	3,169	3,015	2,916	2,958		3,345	3,672	4,059	4,262	4,214	4,226	4,242	4,289	4,339	4,380	4,428	4,517	4,552	4,505	4,567	4,417	4,194	3,821
4/10/2022	3,381	3,074	2,851	2,910	2,936	3,116	3,469	3,931	4,278	4,316	4,278	4,146	4,070	4,036	4,150	4,326	4,575	4,836	4,791	4,591	4,603	4,272	3,838	3,286
4/11/2022	2,920	2,701	2,617	2,646	2,770	3,019	3,558	4,083	4,137	4,039	3,950	4,032	4,114	4,344	4,702	5,113	5,561	5,830	5,878	5,683	5,590	5,203	4,532	3,769
4/12/2022	3,244	3,102	3,076	2,851	2,849	3,154	3,658	3,812	3,814	3,909	4,094	4,313	4,607	5,085	5,578	6,118	6,495	6,770	6,602	6,256	6,100	5,665	4,919	4,287
4/13/2022	3,665	3,236	2.027	2,934	2,923		3,500	3,784	4,017	4,308	4,561	4,927	5,114		6,082	6,457	6,740	6,833	6,632	6,209	5,953	5,442	4,905	4,220
4/14/2022	3,721	3,419	3,229	3,106	3,145	3,284	3,649	3,881	4,103	4,398	4,693	5,110	5,597	6,040	6,556	· ·	7,164	7,049	6,942	6,490	6,258	5,691	5,146	4,468
4/15/2022	3,984	3,653	3,419	3,308	3,327	3,473	3,742	4,032	4,241	4,552	4,987	5,424	5,911	6,499	6,801	6,883	6,938	6,852	6,704	6,231	5,941	5,468	4,856	4,326
4/16/2022	3,912	3,548	3,323	3,154	3,094	3,103	3,164	3,365	3,858	4,279	4,706	5,142	5,701	6,304	6,762	7,148	7,402	7,455	7,181	6,743	6,334	5,841	5,261	4,597
4/17/2022	4,130	3,774	3,500	3,340	3,229	3,209	3,274	3,493	3,952	4,442	4,983	5,658	6,303	6,821	7,129	7,432	7,466	7,273	7,034	6,653	6,215	5,527	4,871	4,259
4/18/2022	3,835	3,524	3,382	3,283	3,314	3,473	3,824	4,152	4,535	4,809	5,305	5,810	6,267	6,631	6,799	7,007	7,194	7,251	7,259	6,832	6,353	5,683	5,008	4,399
4/19/2022	3,916	3,603	3,348	3,206	3,203	3,346	3,742	4,090	4,243	4,373	4,584	4,751	5,027	5,146	5,209	5,497	5,846	6,195	6,092	5,703	5,427	4,910	4,224	3,528
4/20/2022	3,185	2,954	2,795	2,739	2,784	3,000	3,254	3,659	3,761	3,846	4,022	4,198	4,384	4,592	4,946	5,197	5,469	5,652	5,570	5,194	5,063	4,694	4,248	3,737
4/21/2022	3,356	3,082	2,932	2,818	2,893	3,092	3,466	3,742	3,854	4,049	4,295	4,524	4,733	4,992	5,337	5,667	5,988	6,144	5,990	5,627	5,458	5,013	4,474	3,934
4/22/2022	3,503	3,202	3,035	2,963	2,893	3,177	3,485	3,739	3,952	4,153	4,374	4,587	4,826	5,234	5,550	5,834	6,011	6,087	5,859	5,426	5,222	4,903	4,469	4,037
4/23/2022	3,701	3,283	3,044	2,971	2,931	2,986	3,078	3,244	3,595	4,026	4,345	4,644	4,954	5,313	5,620	5,963	6,206	6,257	6,100	5,787	5,488	5,011	4,520	3,989
4/24/2022	3,647	3,357	3,149	2,991	2,924	2,899	2,998	3,186	3,567	3,998	4,409	4,761	5,245	5,621	6,017	6,476	6,778	6,909	6,720	6,403	6,054	5,489	4,947	4,228
4/25/2022	3,739	3,481	3,253	3,117	3,143	3,320	3,666	3,946	4,154	4,585	5,023	5,536	6,058	6,430	6,782	7,077	7,299	7,420	7,239	6,902	6,524	5,856	5,216	4,361
4/26/2022	3,850	3,514	3,276	3,119	3,087	3,221	3,570	3,850	4,142	4,420	4,774	5,332	5,849	6,461	6,768	7,216	7,404	7,440	7,298	7,010	6,697	6,074	5,275	4,591
4/27/2022	3,939	3,602	3,342	3,202	3,191	3,397	3,729	4,003	4,235	4,559	4,993	5,606	6,185	6,716	7,087	7,426	7,659	7,772	7,501	6,948	6,616	6,193	5,519	4,855
4/28/2022	4,183	3,754	3,449	3,294	3,272	3,520	3,978	4,243	4,490	4,721	5,014	5,535	6,043	6,345	6,486	6,636	6,762	6,749	6,598	6,316	6,128	5,683	4,970	4,192
4/29/2022	3,828	3,348	3,143	3,001	3,011	3,218	3,638	3,943	4,121	4,549	4,891	5,255	5,779	6,178	6,452	6,482	6,497	6,445	6,193	5,796	5,646	5,376	4,922	4,398
4/30/2022	3,695	3,348	3,157	3,002	2,979	3,011	3,136	3,338	3,729	4,142	4,592	5,042	5,578	6,022	6,419	6,594	6,597	6,480	6,215	5,831	5,717	5,372	4,930	4,462
5/1/2022	3,903	3,449	3,138	3,008	2,941	2,972	3,045	3,188	3,721	4,373	4,982	5,499	6,009	6,406	6,733	6,986	7,184	7,104	6,824	6,452	6,263	5,770	5,027	4,536
5/2/2022	4,093	3,634	3,242	3,085	3,092	3,350	3,838	4,011	4,274	4,649	5,380	5,926	6,368	6,807	7,094	7,390	7,685	7,731	7,449	7,018	6,765	6,362	5,844	5,212
5/3/2022	4,469	4,003	3,662	3,543	3,467	3,688	4,150	4,720	5,016	5,261	5,564	5,889	6,265	6,677	7,007	7,351	7,623	7,757	7,535	7,032	6,724	6,166	5,413	4,582
5/4/2022	3,974	3,703	3,668	3,469	3,432	3,717	3,840	4,103	4,356	4,716	5,246	5,968	6,614	7,061	7,360	7,681	7,928	8,046	7,964	7,403	7,031	6,476	5,636	4,803
5/5/2022	4,248	3,900	3,706	3,570	3,641	3,635	3,923	4,279	4,626	5,138	5,808	6,583	7,215	7,682	8,056	8,397	8,661	8,699	8,599	7,937	7,567	7,028	6,292	5,373
5/6/2022	4,857	4,392	4,039	3,824	3,739	3,829	4,229	4,557	5,148	5,598	6,132	6,518	6,965	7,396	7,888	8,086	8,115	8,088	7,803	7,322	7,028	6,544	5,935	5,224
5/7/2022	5,050	4,807	4,690	4,510	4,305	4,085	4,162	4,407	4,926	5,365	5,906	6,335	6,700	6,927	7,124	7,150	7,258	7,345	7,170	6,681	6,386	5,913	5,298	4,769
5/8/2022	4,557	3,988	3,661	3,594	3,439	3,403	3,532	3,897	4,414	4,852	5,374	5,897	6,263	6,580	6,963	7,198	7,372	7,417	7,297	6,966	6,610	6,270	5,727	4,989
5/9/2022	4,324	3,764	3,519	3,388	3,384	3,652	4,074	4,513	4,667	4,886	5,231	5,659	6,013	6,358	6,627	6,873	7,013	7,128	7,100	6,674	6,349	5,843	5,112	4,299
5/10/2022	3,587	3,267	3,072	2,943	2,950	3,092	3,444	3,658	3,832	4,065	4,334	4,704	5,263	5,692	5,974	6,280	6,547	6,639	6,572	6,243	5,846	5,411	4,720	3,966
5/11/2022	3,421	3,158 3,209	2,969 2,977	2,847 2,935	2,874 2,969	3,051	3,363	3,611 3,981	3,851 4,243	4,070	4,478 4 794	4,905	5,170 5,565	5,617 5,937	5,918	6,176	6,442	6,603 6,520	6,538	6,133	5,799 5,962	5,338 5,607	4,685 4,973	4,024
5/12/2022 5/13/2022	3,543 3,617	3,209 3,326	2,211	2,935	2,969 3,081	3,155	3,536	3,981	4,243	4,509	4,794	5,198 5,220	5,565 5,719	5,937 6,056	6,135 6,375	6,371 6,666	6,461 6,876	6,520 6,918	6,386 6,733	6,157 6,327	5,962 5,974	5,607	4,973	4,175
5/13/2022	4,000	3,544	3,120	3,072	3,081	3,230	3,513	3,811	4,056 3,968	4,375	4,770	5,220 5,481	5,719 6,104	6,056 6,540	6,375 6,823	6,666 7,105	6,876 7,230	6,918 7,196	6,733 7,091	6,327 6,756	5,974 6,465	5,641 6,067	5,167	4,495 5,124
5/15/2022	4,000	4,111	3,733	3,187	3,358		3,201	3,762	4,306	4,461	4,932	6,207	6,761	7,024	0,823 7,087	7,105	7,230	7,048	7,091	6,665	6,263	5,829	5,309	4,665
5/16/2022	4,339	3,753	3,453	3,316	3,350		4,028	4,313	4,500	5,044	5,563	5,949	6,438	6,841	7,087	7,119	7,073	7,048	7,040	7,386	6,935	6,506	5,870	5,264
5/17/2022	4,217	4,087	3,647	3,478	3,330	3,693	4,028	4,515	4,907	5,424	5,929	6,402	6,944	7,389	7,774	8,119	8,408	8,455	8,171	7,580	7,159	6,645	6,159	5,453
5/18/2022	4,734	4,087	4,003	3,783	3,479	3,881	4,264	4,505	5,151	5,703	6,330	6,902	7,436	7,811	8,223	8,512	8,528	8,579	8,308	7,716	7,279	6,819	6,220	5,567
5/19/2022	4,929	4,466		4,021	4,050		4,382	4,686	5,105	5,663	6,243	6,762	7,277	7,672	8,041	8,265	8,362	8,306	8,098	7,754	7,496	7,057	6,463	5,775
5/20/2022	5,195	4,710		3,956	3,859	,	4,550	4,875	5,330	5,567	5,663	5,622	5,809	6,260	6,766	,	6,870	6,700	6,562	6,377	6,176	5,897	5,513	5,018
5/21/2022	4,588	4,164		3,701	3,612	-	3,745	4,186	4,654	5,117	5,592	6,035	6,464	6,931	7,288	7,591	7,652	7,529	7,111	6,502	6,184	5,789	5,430	4,835
5/22/2022	4,446	4,040	,	3,392	3,362	-	3,512	3,991	4,701	5,382	5,974	6,554	7,027	7,419	7,773	8,128	8,364	8,448	8,228	7,810	7,455	7,052	6,475	5,737
5/23/2022	5,251	4,697	4,331	4,128	4,115	,	4,815	5,247	5,553	6,054	6,472	6,961	7,513	7,864	8,177	8,463	8,743	8,626	8,555	8,004	7,669	7,199	6,573	5,872
5/24/2022	5,329	4,804	4,168	4,017	3,948		4,743	5,016	5,448	5,857	6,378	6,800	7,255	7,690	8,137	8,468	8,612	8,578	8,319	7,805	7,312	6,898	6,303	5,697
5/25/2022	4,913	4,464		3,858	3,799	3,986	4,436	4,853	5,274	5,654	6,155	6,654	7,102	7,582	7,940	8,179	8,380	8,279	7,977	7,498	7,237	6,864	6,341	5,645
5/26/2022	5,042	4,554		4,009	3,940		4,514	4,991	5,393	5,833	6,272	6,699	7,152	7,569	7,890	8,115	8,307	8,216	7,958	7,624	7,362	6,965	6,438	5,731
5/27/2022	5,061	4,552		3,961	3,916		4,377	4,672	5,195	5,851	6,553	7,034	7,370	7,598	7,725	7,602	7,339	7,296	7,093	6,772	6,554	6,297	5,903	5,316
5/28/2022	4,703	4,278		3,700	3,592		3,627	3,944	4,575	5,246	5,984	6,351	6,706	7,009	7,283	7,543	7,762	7,842	7,713	7,344	6,901	6,532	6,024	5,344
5/29/2022	4,753	4,215	3,825	3,564	3,415	3,343	3,373	3,650	4,342	5,132	5,898	6,486	7,014	7,418	7,711	7,927	8,223	8,133	7,906	7,504	7,126	6,778	6,291	5,651
5/30/2022	4,943	4,339	3,921	3,626	3,498	3,483	3,512	3,815	4,517	5,286	5,952	6,509	7,073	7,531	7,865	8,091	8,248	8,228	8,055	7,678	7,245	6,659	6,064	5,415
5/31/2022	4,678	4,081	3,742	3,580	3,568	3,669	3,982	4,482	5,058	5,538	6,060	6,610	7,231	7,567	7,817	8,011	8,064	7,972	7,679	7,115	6,841	6,509	5,989	5,245
6/1/2022	4,715	4,167	3,826	3,609	3,596	3,872	4,157	4,736	5,107	5,749	6,227	6,724	7,084	7,324	7,503	7,646	7,598	7,562	7,602	7,338	7,069	6,725	6,191	5,354
6/2/2022	4,582	4,079	3,738	3,557	3,499	3,671	3,994	4,552	5,100	5,696	6,290	6,878	7,527	7,937	8,187	8,341	8,469	8,562	8,444	8,048	7,649	7,040	6,393	5,682
6/3/2022	4,951	4,398	4,033	3,834	3,787	3,922	4,187	4,592	5,066	5,603	6,118	6,708	7,198	7,424	7,501	7,459	7,311	7,138	6,889	6,599	6,423	6,192	5,794	5,245
6/4/2022	4,703	4,197	3,937	3,712	3,628	3,650	3,794	4,099	4,589	5,149	5,679	5,986	6,297	6,532	6,595	6,769	6,904	7,014	6,918	6,637	6,400	6,106	5,740	5,091
(15/2022	4,606	4,066	3,727	3,528	3,453	3,414	3,445	3,806	4,563	5,359	5,997	6,511	7,054	7,514	7,913	8,215	8,275	8,209	8,024	7,714	7,362	7,005	6,477	5,737
6/5/2022	.,																							

6/6/2022	5.047	1.500	4 1 2 2	2 004	2.076	4 1 0 2	4 4 4 0	4.017	5 427	6 0 1 1	6.641	7.010	7 000	0.150	0.204	0.410	0.104	7.010	7 000	7.400	7 1 4 6	6006	6 207	6 6 7 1
6/7/2022	5,047	4,506	· ·	3,904	3,876	-	4,449	4,917	-		6,641	7,219		-	-			-	-	7,426	-	,		5,571
6/7/2022	4,865	4,311	3,930	3,756	3,740	3,907	4,151	4,520	5,045	5,711	6,446	6,998	7,593 8 427	8,077	8,477	8,815	9,014	9,068	8,815	8,379	7,956	,	-	6,237
6/8/2022	5,723	5,192	4,727	4,524	4,419	4,495	4,803	5,070	5,635	6,451	7,268	7,867	8,427	8,697	8,915	8,737	8,341	8,133	7,948	7,500	7,250		6,111	5,460
6/9/2022	4,954	4,477	4,204	4,038	4,003	4,183	4,568	5,004	5,467	6,223	7,010	7,482	7,896	8,041	7,881	7,976	8,224	8,438	8,431	8,076	7,790	7,404	6,744	5,975
6/10/2022 6/11/2022	5,337 4,744	4,810 4,310	4,418 4,014	4,251 3,820	4,217 3,708	4,336	4,577 3,853	4,937 4,094	5,557 4,819	6,256 5,440	6,917 6,082	7,602 6,782	8,005 7,391	8,053 7,770	7,929 7,825	7,833 7,944	7,539 7,942	7,219 7,682	7,013 7,381	6,620 7,054	6,485 6,559	6,305 6,073	5,834 5,491	5,242 4,933
6/12/2022	4,772	4,432	,	3,731	3,627	3,655	3,701	4,382	5,221	5,865	6,535	7,217	7,670	8,022	8,256	8,483	8,635	8,631	8,507	8,225	7,718	7,311	6,747	6,123
6/13/2022	5,448	4,868	4,443	4,287	4,266	4,467	4,792	5,371	5,881	6,479	7,168	7,754	8,234	8,692	8,250	9,159	9,293	9,347	9,226	8,860	8,439	8,088	7,458	6,525
6/14/2022	6,203	5,620	5,124	4,207	4,758	4,838	5,104	5,497	6,045	6,727	7,468	8,091	8,683	9,045	9,332	9,623	9,293	9,719	9,220	9,093	8,655	8,140	7,474	6,736
6/15/2022	6,203	5,606	5,234	4,932	4,798	4,951	5,249	5,585	6,205	6,819	7,400	8,109	8,715	9,226	9,588	9,806	9,977	9,922	9,599	9,168	8,786	8,296	7,614	6,910
6/16/2022	6,212	5,701	5,168	4.882	4,785	4,879	5,143	5,525	6.046	6.698	7,532	8,267	8.919	9,388	9,699	9,863	9,927	9,877	9.644	9,183	8,735	8,368	7,724	7,172
6/17/2022	6,581	5,853	5,361	5,094	5,016	5,061	5,195	5,432	5,985	6,634	7,326	7,878	8,424	8,857	9,238	9,508	9,719	9,779	9,621	9,171	8,689	8,308	7,641	7,095
6/18/2022	6,584	5,967	5,484	5,147	4,943	4,847	4,851	5,049	5,811	6,659	7,384	8,151	8,708	9,007	8,906	8,437	8,057	7,808	7,619	7,410	7,275	7,040	,	6,148
6/19/2022	5,725	5,230	4,865	4,543	4,403	4,416	4,393	4,595	5,277	6,213	7,061	7,763	8,330	8,676	8,690	8,368	8,036	7,590	7,083	6,901	6,772	6,652	6,181	5,779
6/20/2022	5,193	4,858	4,526	4,251	4,140	4,240	4,475	4,896	5,565	6,335	7,012	7,729	8,300	8,721	9,016	9,035	8,976	8,640	8,448	8,080	7,814	7,423	6,813	6,165
6/21/2022	5,492	4,930	4,567	4,231	4,142	4,284	4,580	4,887	5,398	5,890	6,584	7,170	7,579	7,843	8,150	8,480	8,653	8,682	8,599	8,183	7,841	7,455	6,775	5,970
6/22/2022	5,374	4,768	4,377	4,141	4,079	4,197	4,390	4,883	5,349	5,782	6,299	6,908	7,556	7,974	8,301	8,633	8,804	8,887	8,839	8,513	8,042	7,575	6,949	6,167
6/23/2022	5,533	5,014	4,606	4,360	4,232	4,330	4,534	4,966	5,526	6,344	7,097	7,804	8,437	8,953	9,376	9,723	9,927	9,911	9,440	8,848	8,423	8,032	7,493	6,815
6/24/2022	6,332	5,981	5,680	5,518	5,444	5,605	5,819	6,076	6,621	7,216	8,007	8,667	9,213	9,642	9,875	9,649	8,993	8,384	7,879	7,315	6,924	6,651	6,140	5,774
6/25/2022	5,373	4,891	4,497	4,329	4,277	4,278	4,355	4,561	5,096	5,719	6,230	6,718	7,160	7,529	7,785	8,019	8,065	7,814	7,498	7,222	6,990	6,774	6,328	5,854
6/26/2022	5,353	4,871	4,475	4,182	4,036	4,018	4,049	4,461	5,117	5,804	6,425	6,921	7,430	7,684	7,878	8,045	8,164	8,003	7,700	7,355	7,052	6,759	6,343	5,704
6/27/2022	5,131	4,654	4,301	4,093	4,012	4,142	4,431	5,036	5,619	6,194	6,781	7,456	8,101	8,524	8,829	8,955	9,044	8,990	8,815	8,420	8,037	7,553	6,903	6,104
6/28/2022	5,502	4,934	4,602	4,369	4,325	4,394	4,646	5,181	5,711	6,323	6,888	7,558	8,038	8,658	8,926	9,125	9,180	9,084	8,749	8,407	8,051	7,644	7,042	6,308
6/29/2022	5,537	5,082	4,678	4,319	4,240	4,474	4,735	5,267	5,852	6,386	7,051	7,611	8,274	8,754	9,129	9,252	9,358	9,342	9,300	8,872	8,445	7,871	7,261	6,389
6/30/2022	5,797	5,208	4,875	4,568	4,557	4,682	4,897	5,387	5,908	6,459	6,997	7,671	8,291	8,698	8,920	8,963	8,839	8,552	8,269	7,938	7,667	7,261	6,662	6,093
7/1/2022	5,423	4,932	4,556	4,316	4,263	4,366	4,625	5,065	5,605	6,224	6,811	7,391	7,816	7,990	8,127	8,239	8,081	7,788	7,545	7,276	7,023	6,706	6,278	5,764
7/2/2022	5,235	4,773	4,502	4,260	4,152	4,104	4,119	4,458	5,074	5,849	6,531	7,110	7,529	7,537	7,206	6,965	6,762	6,620	6,560	6,481	6,441	6,253	5,930	5,500
7/3/2022	4,979	4,561	4,259	4,045	3,968	3,940	4,004	4,369	5,091	5,872	6,629	7,152	7,520	7,554	7,316	7,136	6,997	6,873	6,757	6,638	6,572	6,275	5,961	5,502
7/4/2022	5,130	4,658	4,246	3,985	3,881	3,872	3,889	4,298	4,991	5,745	6,596	7,273	7,882	8,259	8,571	8,816	8,992	8,964	8,655	8,071	7,602	7,142	6,822	6,338
7/5/2022	5,863	5,315	4,878	4,623	4,585	4,657	4,902	5,249	5,883	6,457	7,109	7,704	8,372	8,695	8,986	9,178	9,223	9,136	8,987	8,434	8,066	7,705	7,172	6,528
7/6/2022	6,054	5,521	5,115	4,885	4,808	4,906	5,128	5,516	5,989	6,531	7,254	8,029	8,594	9,092	9,324	9,435	9,292	8,947	8,582	8,219	7,858	7,532	6,919	6,245
7/7/2022	5,674	5,293	4,960	4,744	4,670	4,837	5,063	5,434	5,959	6,730	7,346	7,991	8,568	8,968	9,216	9,385	9,379	9,314	9,083	8,582	8,111	7,694	7,059	6,520
7/8/2022	5,864	5,343	4,975	4,765	4,755	4,814	5,036	5,325	5,929	6,570	7,294	7,889	8,325	8,691	8,900	9,169	9,374	9,501	9,329	8,979	8,567	8,084	7,427	6,807
7/9/2022	6,241	5,759	5,310	5,006	4,837	4,838	4,924	5,154	5,874	6,448	7,226	7,829	8,321	8,534	8,732	8,998	9,183	9,264	8,832	8,402	7,870	7,412	6,953	6,442
7/10/2022	6,014	5,558	5,186	4,963	4,762	4,585	4,801	4,962	5,631	6,409	6,961	7,488	8,129	8,319	8,510	8,755	8,635	8,455	8,300	7,905	7,426	7,086	6,596	6,055
7/11/2022	5,514	5,079	4,732	4,537	4,468	4,748	5,001	5,382	6,020	6,495	6,956	7,364	7,908	8,178	8,091	8,109	8,417	8,650	8,630	8,355	7,940	7,527	6,948	6,329
7/12/2022	5,801	5,207	4,716	4,467	4,429	4,543	4,875	5,201	5,964	6,668	7,410	8,052	8,517	8,896	9,192	9,426	9,535	9,516	9,381	9,110	8,717	8,289	7,677	6,975
7/13/2022	6,201	5,592	5,162	4,888	4,765	4,776	4,999	5,462	6,218	6,960	7,514	8,292	8,750	9,097	9,377	9,576	9,773	9,730	9,461	8,951	8,452	7,969	7,293	6,555
7/14/2022	6,024	5,299	4,862	4,596	4,567	4,621	4,863	5,317	5,791	6,393	6,961	7,621	8,099	8,439	8,417	8,599	8,762	8,881	8,520	7,888	7,384	6,872	6,360	5,488
7/15/2022	4,955	4,525	4,123	3,864	3,797	3,939	4,275	4,666	5,238	5,835	6,465	7,086	7,724	8,247	8,627	8,880	8,941	8,999	8,784	8,341	7,950	7,521	6,934	6,157
7/16/2022	5,480	5,048	4,631	4,375	4,286	4,300	4,343	4,623	5,131	5,893	6,705	7,143	7,370	7,539	7,782	8,014	8,097	7,985	7,569	6,944	6,651	6,440	5,993	5,411
7/17/2022	4,843	4,421	4,069	3,726	3,628	3,620	3,628	3,968	4,670	5,478	6,242	7,168	7,688	7,904	8,096	8,172	8,131	7,889	7,572	7,284	7,066	6,777	6,190	5,551
7/18/2022	5,012	4,563	4,207	3,989	3,976	4,153	4,543	5,001	5,628	6,377	7,159	7,845	8,298	8,647	8,943	8,865	8,736	8,721	8,622	8,304	7,997	7,673	7,078	6,266
7/19/2022	5,749	5,307	4,999	4,801	4,575	4,733	5,085	5,445	5,973	6,606	7,298	8,000	8,549	8,938	9,074	8,851	8,604	8,416	8,188	7,872	7,651	7,273	6,709	6,025
7/20/2022	5,531	5,063	4,729	4,555	4,532	4,735	5,018	5,441	5,985	6,729	7,256	7,739	8,255	8,634	8,907	8,985	9,130	8,971	8,661	8,077	7,704	7,329	6,810	5,851
7/21/2022	5,269	4,720	4,304	4,130	4,087	4,194	4,519	5,091	5,747	6,398	7,185	7,892	8,421	8,773	8,897	9,231	9,458	9,521	9,318	8,868	8,458	8,033	7,440	6,592
7/22/2022	5,829	5,314	4,943	4,591	4,508	4,700	4,954	5,304	5,929	6,699	7,403	8,022	8,635	9,021	9,306	9,373	9,294	9,054	8,916	8,389	7,977	7,647	7,176	6,421
7/23/2022	5,760	5,206	4,727	4,495	4,404	4,384	4,388	4,691	5,418	6,237	6,924	7,605	8,230	8,588	8,729	8,582	8,315	7,917	7,591	7,299	7,107	6,870	6,399	5,630
7/24/2022	5,163	4,634	4,291	3,996	3,911	3,890	3,985	4,421	5,207	6,017	6,605	7,194		8,339	8,536	8,833	8,963	8,943	8,586	8,030	7,709	7,403	6,884	6,052
7/25/2022 7/26/2022	5,353 5,326	4,866	4 4 ()	4 1 0 5	4 1 2 0	4 200	4.015	,	5 024	(140	7.0(4	-	7,818	0 7 (7	0.000		8,734		0.107	7 0 2 0		7 257		5,897
7/27/2022		4 801	4,463	4,185	4,129	4,308	4,815	5,206	5,834	6,449	7,064	7,773	8,425	8,767	8,890	8,970		8,395	8,186	7,828	7,611	7,257	6,661	5 1 9 2
112112022	,	4,891	4,461	4,251	4,198	4,338	4,626	5,206 5,096	5,743	6,401	7,116	7,773 7,640	8,425 8,202	8,684	8,963	8,563	7,879	7,470	7,169	6,705	7,611 6,353	6,114	5,754	5,183
7/28/2022	4,817	4,399	4,461 4,123	4,251 3,958	4,198 3,943	4,338 4,145	4,626 4,428	5,206 5,096 4,770	5,743 5,374	6,401 5,930	7,116 6,533	7,773 7,640 7,170	8,425 8,202 7,950	8,684 8,443	8,963 8,857	8,563 9,065	7,879 9,195	7,470 9,177	7,169 8,866	6,705 8,357	7,611 6,353 7,868	6,114 7,330	5,754 6,769	6,090
7/28/2022	4,817 5,458	4,399 5,018	4,461 4,123 4,655	4,251 3,958 4,520	4,198 3,943 4,506	4,338 4,145 4,633	4,626 4,428 4,930	5,206 5,096 4,770 5,208	5,743 5,374 5,727	6,401 5,930 6,406	7,116 6,533 7,088	7,773 7,640 7,170 7,672	8,425 8,202 7,950 8,339	8,684 8,443 8,789	8,963 8,857 9,169	8,563 9,065 9,374	7,879 9,195 9,611	7,470 9,177 9,684	7,169 8,866 9,604	6,705 8,357 9,208	7,611 6,353 7,868 8,787	6,114 7,330 8,295	5,754 6,769 7,650	6,090 6,807
7/29/2022	4,817 5,458 6,026	4,399 5,018 5,407	4,461 4,123 4,655 5,005	4,251 3,958 4,520 4,868	4,198 3,943 4,506 4,823	4,338 4,145 4,633 4,985	4,626 4,428 4,930 5,230	5,206 5,096 4,770 5,208 5,337	5,743 5,374 5,727 5,782	6,401 5,930 6,406 6,371	7,116 6,533 7,088 7,030	7,773 7,640 7,170 7,672 7,751	8,425 8,202 7,950 8,339 8,430	8,684 8,443 8,789 8,909	8,963 8,857 9,169 9,257	8,563 9,065 9,374 9,608	7,879 9,195 9,611 9,799	7,470 9,177 9,684 9,771	7,169 8,866 9,604 9,618	6,705 8,357 9,208 9,153	7,611 6,353 7,868 8,787 8,687	6,114 7,330 8,295 8,220	5,754 6,769 7,650 7,495	6,090 6,807 6,788
	4,817 5,458	4,399 5,018	4,461 4,123 4,655	4,251 3,958 4,520	4,198 3,943 4,506	4,338 4,145 4,633	4,626 4,428 4,930	5,206 5,096 4,770 5,208	5,743 5,374 5,727 5,782 5,171	6,401 5,930 6,406	7,116 6,533 7,088	7,773 7,640 7,170 7,672	8,425 8,202 7,950 8,339	8,684 8,443 8,789	8,963 8,857 9,169	8,563 9,065 9,374	7,879 9,195 9,611	7,470 9,177 9,684	7,169 8,866 9,604	6,705 8,357 9,208	7,611 6,353 7,868 8,787	6,114 7,330 8,295	5,754 6,769 7,650	6,090 6,807
7/29/2022 7/30/2022	4,817 5,458 6,026 5,912	4,399 5,018 5,407 5,349	4,461 4,123 4,655 5,005 4,897	4,251 3,958 4,520 4,868 4,647	4,198 3,943 4,506 4,823 4,477	4,338 4,145 4,633 4,985 4,399	4,626 4,428 4,930 5,230 4,397	5,206 5,096 4,770 5,208 5,337 4,579	5,743 5,374 5,727 5,782	6,401 5,930 6,406 6,371 5,941	7,116 6,533 7,088 7,030 6,658	7,773 7,640 7,170 7,672 7,751 7,399	8,425 8,202 7,950 8,339 8,430 8,189	8,684 8,443 8,789 8,909 8,643	8,963 8,857 9,169 9,257 8,976	8,563 9,065 9,374 9,608 9,217	7,879 9,195 9,611 9,799 9,361	7,470 9,177 9,684 9,771 9,407	7,169 8,866 9,604 9,618 9,362	6,705 8,357 9,208 9,153 9,052	7,611 6,353 7,868 8,787 8,687 8,537	6,114 7,330 8,295 8,220 7,946	5,754 6,769 7,650 7,495 7,263	6,090 6,807 6,788 6,758
7/29/2022 7/30/2022 7/31/2022	4,817 5,458 6,026 5,912 6,145	4,399 5,018 5,407 5,349 5,532	4,461 4,123 4,655 5,005 4,897 5,120	4,251 3,958 4,520 4,868 4,647 4,665	4,198 3,943 4,506 4,823 4,477 4,502	4,338 4,145 4,633 4,985 4,399 4,390	4,626 4,428 4,930 5,230 4,397 4,373	5,206 5,096 4,770 5,208 5,337 4,579 4,473	5,743 5,374 5,727 5,782 5,171 5,231	6,401 5,930 6,406 6,371 5,941 6,041	7,116 6,533 7,088 7,030 6,658 6,758	7,773 7,640 7,170 7,672 7,751 7,399 7,455	8,425 8,202 7,950 8,339 8,430 8,189 8,267	8,684 8,443 8,789 8,909 8,643 8,839	8,963 8,857 9,169 9,257 8,976 9,061	8,563 9,065 9,374 9,608 9,217 9,309	7,879 9,195 9,611 9,799 9,361 9,495	7,470 9,177 9,684 9,771 9,407 9,430	7,169 8,866 9,604 9,618 9,362 9,299	6,705 8,357 9,208 9,153 9,052 8,906	7,611 6,353 7,868 8,787 8,687 8,537 8,444	6,114 7,330 8,295 8,220 7,946 7,931 8,230	5,754 6,769 7,650 7,495 7,263 7,246	6,090 6,807 6,788 6,758 6,677
7/29/2022 7/30/2022 7/31/2022 8/1/2022	4,817 5,458 6,026 5,912 6,145 6,133	4,399 5,018 5,407 5,349 5,532 5,563	4,461 4,123 4,655 5,005 4,897 5,120 5,184	4,251 3,958 4,520 4,868 4,647 4,665 4,849	4,198 3,943 4,506 4,823 4,477 4,502 4,800	4,338 4,145 4,633 4,985 4,399 4,390 4,928	4,626 4,428 4,930 5,230 4,397 4,373 5,112	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209	5,743 5,374 5,727 5,782 5,171 5,231 5,750	6,401 5,930 6,406 6,371 5,941 6,041 6,370	7,116 6,533 7,088 7,030 6,658 6,758 7,109	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595	8,684 8,443 8,789 8,909 8,643 8,839 9,196	8,963 8,857 9,169 9,257 8,976 9,061 9,475	8,563 9,065 9,374 9,608 9,217 9,309 9,666	7,879 9,195 9,611 9,799 9,361 9,495 9,848	7,470 9,177 9,684 9,771 9,407 9,430 9,837	7,169 8,866 9,604 9,618 9,362 9,299 9,733	6,705 8,357 9,208 9,153 9,052 8,906 9,332	7,611 6,353 7,868 8,787 8,687 8,537 8,537 8,444 8,938	6,114 7,330 8,295 8,220 7,946 7,931 8,230	5,754 6,769 7,650 7,495 7,263 7,263 7,246 7,273	6,090 6,807 6,788 6,758 6,677 6,748
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859	4,399 5,018 5,407 5,349 5,532 5,563 5,245	4,461 4,123 4,655 5,005 4,897 5,120 5,184 4,834	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692	4,338 4,145 4,633 4,985 4,399 4,390 4,928 4,886	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380	5,743 5,374 5,727 5,782 5,171 5,231 5,750 5,900	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833	8,425 8,202 7,950 8,339 8,430 8,430 8,189 8,267 8,595 8,614	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538	7,470 9,177 9,684 9,771 9,407 9,430 9,837 9,343	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791	6,090 6,807 6,788 6,758 6,677 6,748 6,147
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947	4,461 4,123 4,655 5,005 4,897 5,120 5,184 4,834 4,450	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,160	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692 4,073	4,338 4,145 4,633 4,985 4,399 4,390 4,928 4,928 4,886 4,279	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136	5,743 5,374 5,727 5,782 5,171 5,231 5,750 5,900 5,645	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,683	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167	7,470 9,177 9,684 9,771 9,407 9,430 9,837 9,343 9,029	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571	5,754 6,769 7,650 7,495 7,263 7,263 7,246 7,273 6,791 6,729	6,090 6,807 6,788 6,758 6,677 6,748 6,147 5,850
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022 8/4/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520 5,330	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947 4,790	4,461 4,123 4,655 5,005 4,897 5,120 5,120 5,184 4,834 4,450 4,461	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,160 4,200	4,198 3,943 4,506 4,823 4,477 4,502 4,502 4,800 4,692 4,073 4,166	4,338 4,145 4,633 4,985 4,399 4,390 4,928 4,886 4,279 4,308	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896	5,743 5,374 5,727 5,782 5,171 5,231 5,750 5,900 5,645 5,415	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199 6,168	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,683 7,651	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,790	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437	7,470 9,177 9,684 9,771 9,407 9,430 9,837 9,343 9,029 9,327	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,396	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,041	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571 7,639	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,929 6,741	6,090 6,807 6,788 6,758 6,677 6,748 6,147 5,850 6,251
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022 8/3/2022 8/4/2022 8/5/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520 5,520 5,330 5,493	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947 4,790 4,934	4,461 4,123 4,655 5,005 4,897 5,120 5,184 4,834 4,450 4,461 4,540	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,160 4,200 4,345	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692 4,073 4,166 4,299	4,338 4,145 4,633 4,985 4,399 4,390 4,928 4,928 4,928 4,928 4,928 4,928 4,928 4,928 4,279 4,308 4,439	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638 4,694	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896 4,968	5,743 5,374 5,727 5,782 5,171 5,231 5,750 5,900 5,645 5,415 5,493	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199 6,168 6,334	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983 7,168	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,683 7,683 7,651 7,834	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251 8,390	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,790 8,728	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119 8,851	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375 8,907	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437 8,993	7,470 9,177 9,684 9,771 9,407 9,407 9,430 9,837 9,343 9,029 9,327 8,813	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003 8,375	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,342 8,396 7,988	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,014 8,041 7,627	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571 7,639 7,301	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,929 6,741	6,090 6,807 6,788 6,758 6,758 6,77 6,748 6,147 5,850 6,251 6,141
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022 8/4/2022 8/4/2022 8/5/2022 8/6/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520 5,330 5,493 5,559	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947 4,790 4,934 5,013	4,461 4,123 4,655 5,005 4,897 5,120 5,120 5,184 4,834 4,834 4,450 4,461 4,540 4,798	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,160 4,200 4,345 4,564	4,198 3,943 4,506 4,823 4,477 4,502 4,692 4,692 4,073 4,166 4,299 4,423	4,338 4,145 4,633 4,985 4,399 4,390 4,390 4,928 4,886 4,279 4,308 4,439 4,421	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638 4,694 4,528	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896 4,968 4,784	5,743 5,374 5,727 5,782 5,782 5,171 5,231 5,231 5,750 5,900 5,645 5,415 5,415 5,493 5,389	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,168 6,334 6,269	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983 7,168 7,080	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,683 7,651 7,834 7,594	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251 8,390 8,013	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,790 8,728 8,180	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119 8,851 8,275	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375 8,907 8,459	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437 8,993 8,563	7,470 9,177 9,684 9,771 9,407 9,430 9,837 9,343 9,029 9,327 8,813 8,483	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003 8,375 8,213	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,396 7,988 7,894	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,041 7,627 7,569	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571 7,639 7,301 7,216	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,929 6,929 6,741 6,620	6,090 6,807 6,788 6,758 6,677 6,748 6,147 5,850 6,251 6,141 5,961
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022 8/3/2022 8/4/2022 8/5/2022 8/6/2022 8/7/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520 5,330 5,493 5,559 5,424	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947 4,790 4,934 5,013 4,890	4,461 4,123 4,655 5,005 4,897 5,120 5,184 4,834 4,450 4,461 4,540 4,798 4,433	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,160 4,200 4,345 4,564 4,210	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692 4,073 4,166 4,299 4,423 4,106	4,338 4,145 4,633 4,985 4,399 4,390 4,928 4,928 4,928 4,928 4,928 4,928 4,928 4,928 4,928 4,279 4,308 4,439 4,421 4,066	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638 4,694 4,528 4,049	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896 4,968 4,784 4,308	5,743 5,374 5,727 5,782 5,171 5,231 5,750 5,900 5,645 5,415 5,493 5,389 5,060	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199 6,168 6,334 6,269 5,873	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983 7,168 7,080 6,665	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,683 7,683 7,683 7,651 7,834 7,594 7,419	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251 8,390 8,013 8,073	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,790 8,728 8,180 8,416	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119 8,851 8,275 8,711	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375 8,907 8,459 8,850	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437 8,993 8,563 9,055	7,470 9,177 9,684 9,771 9,407 9,407 9,430 9,837 9,343 9,029 9,327 8,813 8,483 8,818	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003 8,375 8,213 8,595	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,342 8,346 7,988 7,988 7,984 8,149	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,014 8,041 7,627 7,569 7,686	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571 7,639 7,301 7,216 7,223	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,929 6,741 6,620 6,561	6,090 6,807 6,788 6,758 6,758 6,77 6,748 6,147 5,850 6,251 6,141 5,961 5,661
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022 8/4/2022 8/4/2022 8/6/2022 8/6/2022 8/7/2022 8/8/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520 5,330 5,493 5,559 5,424 4,928	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947 4,790 4,934 5,013 4,890 4,427	4,461 4,123 4,655 5,005 4,897 5,120 5,184 4,834 4,450 4,461 4,540 4,461 4,540 4,798 4,433 4,189 3,991	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,160 4,200 4,345 4,564 4,210 4,086	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692 4,073 4,166 4,299 4,423 4,106 4,080	4,338 4,145 4,633 4,985 4,399 4,399 4,390 4,928 4,886 4,279 4,308 4,439 4,421 4,066 4,158	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638 4,694 4,528 4,049 4,483	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896 4,968 4,784 4,308 4,863	5,743 5,374 5,727 5,782 5,782 5,171 5,231 5,231 5,750 5,900 5,645 5,415 5,415 5,493 5,389 5,060 5,483	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199 6,168 6,334 6,269 5,873 6,278	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983 7,168 7,080 6,665 6,956	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,683 7,683 7,651 7,834 7,594 7,419 7,489	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251 8,390 8,013 8,013 8,068	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,790 8,728 8,180 8,416 8,202	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119 8,851 8,275 8,711 8,243	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375 8,907 8,459 8,459 8,850 8,209	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437 8,993 8,563 9,055 7,987	7,470 9,177 9,684 9,771 9,407 9,430 9,837 9,343 9,029 9,327 8,813 8,483 8,483 8,483	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003 8,375 8,213 8,595 7,197	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,396 7,988 7,894 8,149 6,870	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,041 7,627 7,569 7,686 6,561	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571 7,639 7,301 7,216 7,223 6,284	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,729 6,729 6,741 6,620 6,561 5,857 6,165	6,090 6,807 6,788 6,758 6,677 6,748 6,147 5,850 6,251 6,141 5,961 5,270
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022 8/3/2022 8/4/2022 8/5/2022 8/6/2022 8/6/2022 8/7/2022 8/8/2022 8/9/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520 5,330 5,493 5,559 5,424 4,928 4,680	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947 4,790 4,934 5,013 4,890 4,427 4,214	4,461 4,123 4,655 5,005 4,897 5,120 5,184 4,834 4,834 4,450 4,461 4,540 4,798 4,433 4,189 3,991 4,098	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,160 4,200 4,345 4,564 4,210 4,086 3,851	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692 4,073 4,166 4,299 4,423 4,106 4,080 3,866	4,338 4,145 4,633 4,985 4,399 4,390 4,928 4,886 4,279 4,308 4,421 4,066 4,158 4,030	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638 4,694 4,528 4,049 4,483 4,301	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896 4,968 4,968 4,784 4,308 4,863 4,679	5,743 5,374 5,727 5,782 5,171 5,231 5,750 5,900 5,645 5,415 5,493 5,389 5,060 5,483 5,399	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199 6,168 6,334 6,269 5,873 6,278 6,062	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983 7,168 7,168 7,080 6,665 6,956 6,720	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,683 7,683 7,683 7,683 7,683 7,683 7,683 7,651 7,834 7,594 7,419 7,489 7,387	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251 8,390 8,013 8,073 8,068 7,886	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,790 8,728 8,728 8,180 8,416 8,416 8,202 8,082	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119 8,851 8,275 8,711 8,243 8,169	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375 8,904 9,375 8,907 8,459 8,850 8,850 8,209 7,764	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437 8,993 8,563 9,055 7,987 7,292	7,470 9,177 9,684 9,771 9,407 9,407 9,430 9,837 9,343 9,029 9,327 8,813 8,813 8,813 8,818 7,536 7,233	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003 8,375 8,213 8,595 7,197 7,211	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,345 8,342 8,396 7,988 7,988 7,988 7,984 8,149 6,870 7,162	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,014 8,041 7,627 7,569 7,686 6,561 7,064	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571 7,639 7,301 7,216 7,223 6,284 6,817	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,729 6,729 6,741 6,620 6,561 5,857 6,165	6,090 6,807 6,788 6,758 6,758 6,77 6,748 6,147 5,850 6,251 6,141 5,961 5,661 5,270 5,399
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022 8/4/2022 8/4/2022 8/6/2022 8/6/2022 8/6/2022 8/7/2022 8/8/2022 8/9/2022 8/10/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520 5,330 5,493 5,559 5,424 4,928 4,680 4,803	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947 4,790 4,934 5,013 4,890 4,427 4,214 4,309	4,461 4,123 4,655 5,005 4,897 5,120 5,184 4,834 4,450 4,461 4,540 4,461 4,540 4,798 4,433 4,189 3,991 4,098 4,534	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,618 4,160 4,200 4,345 4,564 4,210 4,086 3,851 4,023	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692 4,073 4,166 4,299 4,423 4,106 4,080 3,866 4,026	4,338 4,145 4,633 4,985 4,399 4,399 4,390 4,928 4,886 4,279 4,308 4,439 4,421 4,066 4,158 4,030 4,238	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638 4,694 4,528 4,694 4,528 4,049 4,483 4,301 4,619	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896 4,968 4,784 4,308 4,863 4,863 4,679 4,835	5,743 5,374 5,374 5,727 5,782 5,171 5,231 5,231 5,231 5,231 5,231 5,403 5,405 5,415 5,415 5,415 5,493 5,389 5,060 5,483 5,399 5,228	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199 6,168 6,334 6,269 5,873 6,278 6,062 5,932	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983 7,168 7,080 6,665 6,956 6,956 6,720 6,658	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,653 7,651 7,834 7,594 7,419 7,489 7,387 7,290	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251 8,390 8,013 8,013 8,073 8,068 7,886 7,873	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,790 8,728 8,180 8,416 8,202 8,082 8,338	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119 8,851 8,275 8,711 8,243 8,169 8,723	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375 8,904 9,375 8,907 8,459 8,459 8,850 8,209 7,764 9,110	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437 8,993 8,563 9,055 7,987 7,292 9,351	7,470 9,177 9,684 9,771 9,407 9,430 9,837 9,343 9,029 9,327 8,813 8,483 8,483 8,483 8,818 7,536 7,233 9,280	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003 8,375 8,213 8,595 7,197 7,211 8,929	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,396 7,988 7,894 8,149 6,870 7,162 8,374	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,041 7,627 7,569 7,686 6,561 7,064 7,851	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571 7,639 7,301 7,216 7,223 6,284 6,817 7,335 6,427	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,729 6,729 6,741 6,620 6,561 5,857 6,165 6,572 5,793	6,090 6,807 6,788 6,758 6,677 6,748 6,147 5,850 6,251 6,141 5,961 5,961 5,270 5,399 5,920
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022 8/3/2022 8/3/2022 8/4/2022 8/5/2022 8/6/2022 8/7/2022 8/8/2022 8/9/2022 8/10/2022 8/11/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520 5,330 5,493 5,559 5,424 4,928 4,680 4,803 5,254	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947 4,790 4,934 5,013 4,890 4,427 4,214 4,309 4,816	4,461 4,123 4,655 5,005 4,897 5,120 5,184 4,834 4,450 4,461 4,540 4,461 4,540 4,461 4,540 4,798 4,433 4,189 3,991 4,098 4,534 4,147 4,822	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,160 4,200 4,345 4,564 4,210 4,086 3,851 4,023 4,378	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692 4,073 4,166 4,299 4,423 4,106 4,080 3,866 4,026 4,362	4,338 4,145 4,633 4,985 4,399 4,390 4,928 4,886 4,279 4,308 4,421 4,066 4,158 4,030 4,238 4,469	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638 4,694 4,528 4,694 4,528 4,049 4,483 4,301 4,619 4,722	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896 4,968 4,968 4,968 4,784 4,308 4,863 4,679 4,835 4,893	5,743 5,374 5,374 5,727 5,782 5,171 5,231 5,750 5,900 5,645 5,415 5,493 5,389 5,060 5,483 5,399 5,228 5,150 4,985 5,158	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199 6,168 6,334 6,269 5,873 6,278 6,062 5,932 5,471	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983 7,168 7,080 6,665 6,956 6,720 6,658 5,968	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,683 7,651 7,834 7,651 7,834 7,594 7,419 7,419 7,387 7,290 6,539	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251 8,390 8,013 8,073 8,068 7,886 7,886 7,873 6,962	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,790 8,728 8,180 8,416 8,416 8,202 8,082 8,082 8,338 7,402	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119 8,851 8,275 8,711 8,243 8,169 8,723 7,402	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375 8,904 9,375 8,907 8,459 8,850 8,850 8,209 7,764 9,110 7,415	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437 8,993 8,563 9,055 7,987 7,292 9,351 7,513	7,470 9,177 9,684 9,771 9,407 9,407 9,430 9,837 9,343 9,029 9,327 8,813 8,813 8,813 8,818 7,536 7,233 9,280 7,420	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003 8,375 8,213 8,595 7,197 7,211 8,929 7,362	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,342 8,342 8,345 7,988 7,988 7,988 7,988 7,984 8,149 6,870 7,162 8,374 7,083	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,041 7,627 7,569 7,686 6,561 7,064 7,851 6,863	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571 7,639 7,301 7,216 7,223 6,284 6,817 7,335 6,427	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,729 6,729 6,741 6,620 6,561 5,857 6,165 6,572 5,793	6,090 6,807 6,788 6,758 6,758 6,77 6,748 6,147 5,850 6,251 6,141 5,961 5,661 5,270 5,399 5,920 5,038
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022 8/3/2022 8/4/2022 8/5/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/7/2022 8/8/2022 8/10/2022 8/10/2022 8/11/2022 8/12/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520 5,330 5,493 5,559 5,424 4,928 4,680 4,803 5,254 4,642 5,277 5,242	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947 4,790 4,934 5,013 4,890 4,427 4,214 4,309 4,816 4,330 4,952 4,683	4,461 4,123 4,655 5,005 4,897 5,120 5,184 4,834 4,450 4,461 4,540 4,461 4,540 4,461 4,540 4,461 4,540 4,433 4,189 3,991 4,098 4,534 4,147 4,822 4,392	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,160 4,200 4,345 4,564 4,210 4,086 3,851 4,023 4,378 4,017 4,572 4,136	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692 4,073 4,166 4,299 4,423 4,106 4,080 3,866 4,026 4,026 4,362 3,974	4,338 4,145 4,633 4,985 4,399 4,390 4,928 4,886 4,279 4,308 4,421 4,066 4,158 4,030 4,238 4,469 4,141 4,392 3,979	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638 4,694 4,528 4,049 4,483 4,049 4,483 4,301 4,619 4,722 4,433 4,457 4,061	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896 4,968 4,784 4,308 4,863 4,863 4,679 4,835 4,893 4,731	5,743 5,774 5,727 5,782 5,171 5,231 5,750 5,900 5,645 5,415 5,493 5,389 5,060 5,483 5,389 5,228 5,150 4,985	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199 6,168 6,334 6,269 5,873 6,278 6,062 5,932 5,471 5,372	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983 7,168 7,080 6,665 6,956 6,956 6,720 6,658 5,928	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,653 7,651 7,834 7,594 7,594 7,419 7,489 7,387 7,290 6,539 6,757 7,138 6,706	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251 8,390 8,013 8,013 8,073 8,068 7,873 6,962 7,355 7,705 7,174	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,790 8,728 8,180 8,728 8,180 8,416 8,202 8,082 8,338 7,402 7,975	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119 8,851 8,275 8,711 8,243 8,169 8,723 7,402 8,579	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375 8,904 9,375 8,904 9,375 8,907 8,459 8,850 8,850 8,209 7,764 9,110 7,415 8,929 8,490 7,406	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437 8,993 8,563 9,055 7,987 7,292 9,351 7,513 9,005 8,458 7,227	7,470 9,177 9,684 9,771 9,407 9,430 9,837 9,343 9,029 9,327 8,813 8,483 8,818 7,536 7,233 9,280 7,420 8,763 8,245 7,116	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003 8,375 8,213 8,595 7,197 7,211 8,929 7,362 8,354 7,942 7,059	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,342 8,346 7,988 7,988 7,988 7,988 7,988 7,984 8,149 6,870 7,162 8,374 7,961 7,528 6,923	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,041 7,936 8,014 7,569 7,569 7,569 7,686 6,561 7,064 7,851 6,863 7,748	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571 7,639 7,301 7,216 7,223 6,284 6,817 7,335 6,427 7,149 6,721 6,550	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,729 6,729 6,729 6,741 6,620 6,561 5,857 6,165 6,572 5,793 6,705 6,212	6,090 6,807 6,788 6,758 6,677 6,748 6,147 5,850 6,251 6,141 5,961 5,961 5,270 5,399 5,920 5,920 5,920 5,920 5,938 5,863 5,863
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022 8/3/2022 8/4/2022 8/5/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/7/2022 8/8/2022 8/10/2022 8/11/2022 8/13/2022 8/13/2022 8/14/2022 8/15/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520 5,330 5,493 5,559 5,424 4,928 4,680 4,803 5,254 4,642 5,277 5,242 4,848	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947 4,790 4,934 5,013 4,890 4,427 4,214 4,309 4,427 4,214 4,309 4,816 4,330 4,952 4,683 4,458	4,461 4,123 4,655 5,005 4,897 5,120 5,184 4,834 4,450 4,461 4,540 4,461 4,540 4,461 4,540 4,798 4,433 4,189 3,991 4,098 4,534 4,147 4,822 4,392 4,194	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,160 4,200 4,345 4,564 4,210 4,345 4,564 4,210 4,086 3,851 4,023 4,378 4,017 4,572 4,136 4,037	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692 4,073 4,166 4,299 4,423 4,106 4,299 4,423 4,106 4,080 3,866 4,026 4,362 3,974 4,406 4,028	4,338 4,145 4,633 4,985 4,399 4,390 4,928 4,886 4,279 4,308 4,421 4,066 4,158 4,030 4,238 4,469 4,141 4,392 3,979 4,245	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638 4,694 4,528 4,694 4,528 4,049 4,483 4,301 4,619 4,722 4,433 4,457 4,061 4,742	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896 4,968 4,784 4,308 4,784 4,308 4,863 4,679 4,835 4,893 4,679 4,835 4,893 4,731 4,666 4,221 5,176	5,743 5,374 5,374 5,727 5,782 5,171 5,231 5,750 5,900 5,645 5,415 5,493 5,389 5,060 5,483 5,399 5,228 5,150 4,985 5,158 4,836 5,466	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199 6,168 6,334 6,269 5,873 6,278 6,062 5,932 5,471 5,372 5,710 5,488 5,814	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983 7,168 7,080 6,665 6,956 6,720 6,658 5,968 5,968 5,968 5,928 6,343 6,035 6,260	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,683 7,651 7,834 7,651 7,834 7,594 7,419 7,489 7,387 7,290 6,539 6,757 7,138 6,706 6,826	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251 8,390 8,013 8,073 8,073 8,068 7,886 7,886 7,873 6,962 7,355 7,705 7,174 7,275	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,790 8,728 8,400 8,728 8,728 8,180 8,416 8,202 8,082 8,082 8,082 8,338 7,402 7,975 8,035 7,402 7,651	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119 8,851 8,275 8,711 8,243 8,169 8,723 7,402 8,579 8,176 7,497 8,072	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375 8,904 9,375 8,904 9,375 8,907 8,459 8,850 8,209 7,764 9,110 7,415 8,929 8,490 7,406 8,443	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437 8,993 8,563 9,055 7,987 7,292 9,351 7,513 9,005 8,458 7,227 8,784	7,470 9,177 9,684 9,771 9,407 9,407 9,430 9,837 9,343 9,029 9,327 8,813 8,818 7,536 7,233 9,280 7,420 8,763 8,245 7,116 8,977	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003 8,375 8,213 8,595 7,197 7,211 8,929 7,362 8,354 7,942 7,059 8,897	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,149 6,870 7,162 8,374 7,083 7,961 7,528 6,923 8,501	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,041 7,936 8,014 8,041 7,627 7,569 7,686 6,561 7,064 7,851 6,863 7,748 7,149 6,887 8,121	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571 7,639 7,301 7,216 7,223 6,284 6,817 7,335 6,427 7,149 6,550 7,527	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,729 6,729 6,729 6,729 6,741 6,620 6,561 5,857 6,165 6,572 5,793 6,705 6,212 5,964 6,836	6,090 6,807 6,788 6,758 6,677 6,748 6,147 5,850 6,251 6,141 5,961 5,961 5,270 5,399 5,920 5,038 5,863 5,651 5,297 6,049
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7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022 8/3/2022 8/4/2022 8/5/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/7/2022 8/8/2022 8/10/2022 8/11/2022 8/11/2022 8/13/2022 8/14/2022 8/15/2022 8/16/2022 8/16/2022 8/17/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520 5,330 5,559 5,424 4,928 4,680 4,803 5,254 4,642 5,277 5,242 4,848 5,510 5,786	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947 4,790 4,934 5,013 4,890 4,427 4,214 4,309 4,427 4,214 4,309 4,816 4,330 4,952 4,683 4,458	4,461 4,123 4,655 5,005 4,897 5,120 5,184 4,834 4,450 4,461 4,540 4,461 4,540 4,461 4,540 4,798 4,433 4,189 3,991 4,098 4,534 4,147 4,822 4,392 4,194 4,745 4,879	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,160 4,200 4,345 4,564 4,210 4,345 4,564 4,210 4,086 3,851 4,023 4,378 4,017 4,572 4,136 4,037 4,427 4,618	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692 4,073 4,166 4,299 4,423 4,106 4,299 4,423 4,106 4,020 4,362 3,974 4,406 4,028 4,337 4,601	4,338 4,145 4,633 4,985 4,399 4,390 4,928 4,886 4,279 4,308 4,421 4,066 4,158 4,030 4,238 4,469 4,141 4,392 3,979 4,245 4,474 4,802	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638 4,694 4,528 4,694 4,528 4,694 4,528 4,049 4,483 4,301 4,619 4,722 4,433 4,457 4,061 4,742 4,864 5,302	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896 4,968 4,784 4,308 4,784 4,308 4,863 4,679 4,835 4,893 4,679 4,835 4,893 4,731 4,666 4,221 5,176	5,743 5,374 5,374 5,727 5,782 5,171 5,231 5,750 5,900 5,645 5,415 5,493 5,389 5,060 5,483 5,389 5,060 5,483 5,399 5,228 5,150 4,985 5,158 4,836 5,466 5,466 5,747 6,040	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199 6,168 6,334 6,269 5,873 6,278 6,062 5,932 5,471 5,372 5,710 5,488 5,814 6,400 6,552	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983 7,168 7,080 6,665 6,956 6,720 6,658 5,968 5,968 5,968 5,968 5,928 6,343 6,035 6,260 6,935 7,053	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,683 7,651 7,834 7,651 7,834 7,651 7,834 7,594 7,419 7,489 7,387 7,290 6,539 6,757 7,138 6,706 6,826 7,510 7,438	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251 8,390 8,013 8,073 8,073 8,068 7,873 6,962 7,355 7,705 7,174 7,275 8,051 7,831	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,728 8,400 8,728 8,728 8,400 8,728 8,728 8,416 8,416 8,202 8,082 8,082 8,082 8,338 7,402 7,975 8,035 7,402 7,651 8,465 7,986	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119 8,851 8,275 8,711 8,243 8,169 8,723 7,402 8,579 8,176 7,497 8,072 8,784 8,205	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375 8,904 9,375 8,904 9,375 8,907 8,459 8,850 8,209 7,764 9,110 7,415 8,929 8,490 7,406 8,443 9,066 8,493	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437 8,993 8,563 9,055 7,987 7,292 9,351 7,513 9,005 8,458 7,227 8,784 9,209 8,685	7,470 9,177 9,684 9,771 9,407 9,407 9,430 9,837 9,343 9,029 9,327 8,813 8,818 7,536 7,233 9,280 7,420 8,763 8,245 7,116 8,977	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003 8,375 8,213 8,595 7,197 7,211 8,929 7,362 8,354 7,942 7,059 8,897	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,342 8,344 7,988 7,988 7,988 7,988 7,988 7,988 7,983 7,961 7,528 6,923 8,501 8,584 8,156	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,041 7,936 8,014 8,041 7,627 7,569 7,686 6,561 7,064 7,851 6,863 7,748 7,149 6,887 8,121	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571 7,639 7,301 7,216 7,223 6,284 6,817 7,335 6,427 7,149 6,550 7,527 7,784 7,491	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,729 6,729 6,729 6,729 6,741 6,620 6,561 5,857 6,165 6,572 5,793 6,705 6,212 5,964 6,836	6,090 6,807 6,788 6,758 6,748 6,748 6,748 6,748 6,147 5,850 6,251 6,141 5,961 5,270 5,399 5,920 5,038 5,651 5,297 6,049 6,123
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4,427 4,4136 4,037 4,427 4,618 4,371 4,427 4,517 4,442 4,479	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692 4,073 4,166 4,299 4,423 4,106 4,020 4,423 4,106 4,026 4,362 3,974 4,406 4,028 4,362 3,974 4,406 4,028 4,362 3,974 4,406 4,028 4,337 4,601 4,342 4,032 4,032 4,032 4,388 4,411 4,380	4,338 4,145 4,633 4,985 4,399 4,390 4,928 4,886 4,279 4,308 4,421 4,066 4,158 4,439 4,421 4,066 4,158 4,030 4,238 4,469 4,141 4,392 3,979 4,245 4,474 4,802 4,543 4,199 4,090 4,345 4,669 4,465	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638 4,694 4,528 4,694 4,528 4,694 4,528 4,694 4,528 4,694 4,528 4,694 4,528 4,694 4,528 4,694 4,722 4,433 4,457 4,061 4,742 4,864 5,302 4,925 4,578 4,578 4,171 4,366 5,048 4,862	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896 4,968 4,784 4,308 4,863 4,863 4,863 4,679 4,835 4,893 4,731 4,666 4,221 5,176 5,287 5,601 5,163 4,960 4,331 4,719 5,307 5,180	5,743 5,374 5,374 5,727 5,782 5,171 5,231 5,750 5,900 5,645 5,415 5,493 5,389 5,060 5,483 5,399 5,228 5,150 4,985 5,158 4,836 5,158 4,836 5,158 4,836 5,466 5,747 6,040 5,625 5,529 5,520 5,520 5,520	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199 6,168 6,334 6,269 5,873 6,278 6,062 5,932 5,471 5,372 5,710 5,488 5,814 6,400 6,552 6,303 6,108 5,845 6,350 6,559 6,149	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983 7,168 7,080 6,665 6,956 6,720 6,658 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,928 6,343 6,035 6,260 6,935 7,053 7,127 6,681 6,619 6,953 7,195 6,726	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,683 7,683 7,683 7,651 7,834 7,594 7,419 7,489 7,387 7,290 6,539 6,757 7,138 6,706 6,826 7,510 7,438 7,842 7,296 7,364 7,525 7,757 7,651	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251 8,013 8,013 8,013 8,013 8,013 8,013 8,068 7,873 6,962 7,355 7,705 7,174 7,275 8,051 7,275 8,051 7,831 8,365 7,811 7,831 8,365 7,811 7,831	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,728 8,400 8,728 8,416 8,202 8,082 8,338 7,402 7,975 8,035 7,402 7,651 8,035 7,402 7,651 8,035 7,402 7,651 8,035 7,402 7,651 8,035 7,402 7,651 8,035 7,986 8,699 8,377 8,564 8,564 8,778	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119 8,851 8,275 8,711 8,243 8,169 8,723 7,402 8,579 8,176 7,402 8,579 8,176 7,407 8,072 8,579 8,176 7,497 8,072 8,579 8,176 7,497 8,072 8,579 8,176 7,497 8,072 8,569 8,823 9,112 9,113 9,216 8,905	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375 8,904 9,375 8,904 9,375 8,907 8,459 8,850 8,209 7,764 9,110 7,415 8,929 8,490 7,406 8,443 9,066 8,443 9,066 8,443 9,066 8,443 9,066	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437 8,993 8,563 9,055 7,987 7,292 9,351 7,513 9,005 8,458 7,227 8,784 9,209 8,685 7,959 9,368 9,417 9,103 9,373 8,497	7,470 9,177 9,684 9,771 9,407 9,407 9,430 9,837 9,343 9,029 9,327 8,813 8,483 8,818 7,536 7,233 9,280 7,420 8,763 8,245 7,116 8,977 9,179 8,739 7,643 9,170 9,330 9,048 9,109 8,209	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003 8,375 8,213 8,595 7,197 7,211 8,929 7,362 8,354 7,942 7,362 8,354 7,942 7,059 8,897 9,058 8,897 9,058 8,516 7,363 8,501 8,516 7,363 8,601 8,762 8,861 8,762	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,341 8,149 6,870 7,162 8,374 7,961 7,528 6,923 8,501 8,584 8,156 7,131 7,854 8,328 7,727	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,041 7,627 7,569 7,686 6,561 7,064 7,851 6,863 7,748 7,149 6,887 8,121 8,253 7,904 7,105 7,491 7,626 7,911 8,024 7,487	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571 7,639 7,301 7,216 7,223 6,284 6,817 7,335 6,427 7,149 6,550 7,527 7,784 7,491 6,588 7,015 7,172 7,463 7,096	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,729 6,729 6,741 6,620 6,561 5,857 6,165 6,572 5,793 6,705 6,572 5,964 6,836 7,150 6,887 6,018 6,494 6,707 6,830 6,967 6,535	6,090 6,807 6,788 6,758 6,778 6,748 6,748 6,748 6,748 6,748 6,748 6,748 6,147 5,850 6,251 6,141 5,961 5,270 5,920 5,939 5,920 5,038 5,863 5,651 5,297 6,049 6,416 6,123 5,389 5,919 5,995 6,220 6,328 5,862
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022 8/3/2022 8/3/2022 8/4/2022 8/5/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/7/2022 8/10/2022 8/10/2022 8/11/2022 8/12/2022 8/13/2022 8/14/2022 8/15/2022 8/16/2022 8/16/2022 8/18/2022 8/18/2022 8/19/2022 8/20/2022 8/21/2022 8/22/2022 8/23/2022 8/24/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520 5,330 5,493 5,559 5,424 4,928 4,680 4,803 5,254 4,642 5,277 5,242 4,803 5,254 4,642 5,277 5,242 4,803 5,510 5,786 5,602 4,989 5,423 5,551 5,551 5,638 5,297	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947 4,790 4,934 5,013 4,890 4,427 4,214 4,309 4,816 4,330 4,952 4,683 4,458 4,999 5,306 5,091 4,538 4,911 5,087 5,014 5,017 4,797	4,461 4,123 4,655 5,005 4,897 5,120 5,184 4,834 4,450 4,461 4,540 4,461 4,540 4,461 4,540 4,461 4,540 4,461 4,540 4,534 4,147 4,822 4,392 4,194 4,534 4,147 4,822 4,392 4,194 4,572 4,572 4,572 4,575 4,575 4,575 4,575	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,160 4,200 4,345 4,564 4,210 4,345 4,564 4,210 4,086 3,851 4,023 4,378 4,017 4,572 4,136 4,037 4,427 4,618 4,371 4,427 4,618 4,371 4,427 4,618	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692 4,073 4,166 4,299 4,423 4,106 4,026 4,026 4,362 3,974 4,406 4,026 4,362 3,974 4,406 4,026 4,362 3,974 4,406 4,028 4,337 4,601 4,342 4,032 4,095 4,388 4,411 4,380 4,170	4,338 4,145 4,633 4,985 4,399 4,390 4,928 4,886 4,279 4,308 4,421 4,066 4,158 4,030 4,238 4,439 4,421 4,066 4,158 4,030 4,238 4,469 4,141 4,392 3,979 4,245 4,474 4,802 4,543 4,199 4,090 4,345 4,669 4,465 4,333	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638 4,694 4,528 4,049 4,483 4,694 4,528 4,049 4,483 4,301 4,619 4,722 4,433 4,457 4,061 4,722 4,433 4,457 4,061 4,742 4,864 5,302 4,925 4,578 4,171 4,366 5,048 4,862 4,624	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896 4,968 4,784 4,308 4,784 4,308 4,784 4,308 4,784 4,308 4,784 4,308 4,784 4,863 4,679 4,835 4,893 4,731 4,666 4,221 5,176 5,287 5,601 5,163 4,960 4,331 4,719 5,307 5,180 4,900	5,743 5,774 5,727 5,782 5,171 5,231 5,750 5,900 5,645 5,415 5,493 5,389 5,060 5,483 5,389 5,060 5,483 5,399 5,228 5,150 4,985 5,158 4,836 5,158 4,836 5,158 4,836 5,158 4,836 5,158 4,836 5,747 6,040 5,625 5,529 5,079 5,520 5,901 5,603 5,354	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199 6,168 6,334 6,269 5,873 6,278 6,062 5,932 5,471 5,372 5,710 5,488 5,814 6,400 6,552 6,303 6,108 5,845 6,350 6,559 6,149 5,847	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983 7,168 7,168 7,080 6,665 6,956 6,720 6,658 5,968 5,968 5,968 5,968 5,968 5,928 6,343 6,035 6,260 6,935 7,053 7,127 6,681 6,619 6,953 7,195 6,726 6,640	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,683 7,651 7,834 7,651 7,834 7,594 7,419 7,419 7,489 7,387 7,290 6,539 6,757 7,138 6,706 6,826 7,510 7,438 7,842 7,296 7,364 7,364 7,525 7,757 7,651 7,403	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251 8,390 8,013 8,073 8,068 7,886 7,886 7,886 7,886 7,873 6,962 7,355 7,705 7,174 7,275 8,051 7,705 7,174 7,275 8,051 7,831 8,365 7,811 7,831 8,365 7,811	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,728 8,400 8,728 8,180 8,416 8,202 8,082 8,338 7,402 7,975 8,035 7,402 7,975 8,035 7,402 7,975 8,035 7,402 7,975 8,035 7,402 7,975 8,035 7,402 7,975 8,035 7,402 7,975 8,035 7,402 7,975 8,035 7,402 7,975 8,035 7,402 7,975 8,035 7,402 7,975 8,035 7,402 7,975 8,035 7,402 7,975 8,035 7,402 7,975 8,035 7,402 7,986 8,699 8,377 8,564 8,578 8,565 8,705	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119 8,851 8,275 8,711 8,243 8,169 8,723 7,402 8,579 8,176 7,402 8,579 8,176 7,407 8,579 8,176 7,497 8,072 8,579 8,176 7,497 8,072 8,569 8,569 8,569 8,823 9,112 9,113 9,216 8,905 9,139	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375 8,907 8,459 8,850 8,209 7,764 9,110 7,415 8,929 8,450 8,209 7,764 9,110 7,415 8,929 8,490 7,406 8,443 9,066 8,443 9,066 8,443 9,066 8,493 8,205 9,188 9,370 9,099 9,408 8,779 9,342	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437 8,993 8,563 9,055 7,987 7,292 9,351 7,513 9,005 8,458 7,227 8,784 9,209 8,685 7,959 9,368 9,417 9,357	7,470 9,177 9,684 9,771 9,407 9,407 9,430 9,837 9,343 9,029 9,327 8,813 8,483 8,818 7,536 7,233 9,280 7,420 8,763 8,245 7,116 8,977 9,179 8,739 7,643 9,170 9,330 9,048 9,109 8,209 8,929	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003 8,375 8,213 8,595 7,197 7,211 8,929 7,362 8,354 7,942 7,059 8,354 7,942 7,059 8,897 9,058 8,897 9,058 8,897 9,058 8,897 9,058 8,897 9,058 8,816 7,363 8,516 7,363 8,601 8,762 8,861 8,762 8,815	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,342 8,346 7,988 7,988 7,988 7,988 7,988 7,984 8,149 6,870 7,162 8,374 7,083 7,961 7,528 6,923 8,501 8,584 8,501 8,584 8,584 8,584 8,501 8,584 8,565 8,328	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,041 7,627 7,569 7,686 6,561 7,064 7,851 6,863 7,748 7,149 6,887 8,121 8,253 7,904 7,105 7,491 7,626 7,911 8,024 7,870	6,1147,3308,2958,2207,9467,9318,2307,4487,5717,6397,3017,2167,2236,2846,8177,3356,4277,1496,7216,5507,5277,7847,4916,5887,0157,1727,4637,5067,348	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,729 6,741 6,620 6,561 5,857 6,165 6,572 5,793 6,705 6,212 5,964 6,836 7,150 6,887 6,018 6,836 7,150 6,887 6,018 6,494 6,707 6,830 6,967 6,535 6,774	6,090 6,807 6,788 6,758 6,778 6,748 6,748 6,748 6,147 5,850 6,251 6,141 5,961 5,270 5,920 5,920 5,938 5,651 5,297 6,049 6,416 6,123 5,389 5,919 5,995 6,220 6,328 5,862 5,938
7/29/2022 7/30/2022 7/31/2022 8/1/2022 8/2/2022 8/3/2022 8/4/2022 8/5/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/6/2022 8/1/2022 8/10/2022 8/11/2022 8/11/2022 8/12/2022 8/13/2022 8/14/2022 8/15/2022 8/16/2022 8/17/2022 8/18/2022 8/19/2022 8/19/2022 8/20/2022 8/21/2022 8/21/2022 8/23/2022	4,817 5,458 6,026 5,912 6,145 6,133 5,859 5,520 5,330 5,559 5,424 4,928 4,680 4,803 5,254 4,642 5,277 5,242 4,642 5,510 5,786 5,602 4,989 5,423 5,545 5,551 5,638	4,399 5,018 5,407 5,349 5,532 5,563 5,245 4,947 4,790 4,934 5,013 4,890 4,427 4,214 4,309 4,427 4,214 4,309 4,816 4,330 4,952 4,683 4,458 4,999 5,306 5,091 4,538 4,911 5,087 5,014 5,037	4,461 4,123 4,655 5,005 4,897 5,120 5,184 4,834 4,450 4,461 4,540 4,461 4,540 4,461 4,540 4,798 4,433 4,189 3,991 4,098 4,534 4,147 4,822 4,392 4,194 4,745 4,879 4,572 4,572 4,572 4,575 4,575 4,574	4,251 3,958 4,520 4,868 4,647 4,665 4,849 4,618 4,160 4,200 4,345 4,564 4,210 4,086 3,851 4,023 4,378 4,017 4,572 4,136 4,017 4,572 4,136 4,037 4,427 4,4136 4,037 4,427 4,618 4,371 4,427 4,517 4,442 4,479	4,198 3,943 4,506 4,823 4,477 4,502 4,800 4,692 4,073 4,166 4,299 4,423 4,106 4,020 4,423 4,106 4,026 4,362 3,974 4,406 4,028 4,362 3,974 4,406 4,028 4,362 3,974 4,406 4,028 4,337 4,601 4,342 4,032 4,032 4,032 4,388 4,411 4,380	4,338 4,145 4,633 4,985 4,399 4,390 4,928 4,886 4,279 4,308 4,421 4,066 4,158 4,439 4,421 4,066 4,158 4,030 4,238 4,469 4,141 4,392 3,979 4,245 4,474 4,802 4,543 4,199 4,090 4,345 4,669 4,465	4,626 4,428 4,930 5,230 4,397 4,373 5,112 5,129 4,822 4,638 4,694 4,528 4,694 4,528 4,694 4,528 4,694 4,528 4,694 4,528 4,694 4,528 4,694 4,528 4,694 4,722 4,433 4,457 4,061 4,742 4,864 5,302 4,925 4,578 4,578 4,171 4,366 5,048 4,862	5,206 5,096 4,770 5,208 5,337 4,579 4,473 5,209 5,380 5,136 4,896 4,968 4,784 4,308 4,863 4,863 4,863 4,679 4,835 4,893 4,731 4,666 4,221 5,176 5,287 5,601 5,163 4,960 4,331 4,719 5,307 5,180	5,743 5,374 5,374 5,727 5,782 5,171 5,231 5,750 5,900 5,645 5,415 5,493 5,389 5,060 5,483 5,399 5,228 5,150 4,985 5,158 4,836 5,158 4,836 5,158 4,836 5,466 5,747 6,040 5,625 5,529 5,520 5,520 5,520	6,401 5,930 6,406 6,371 5,941 6,041 6,370 6,497 6,199 6,168 6,334 6,269 5,873 6,278 6,062 5,932 5,471 5,372 5,710 5,488 5,814 6,400 6,552 6,303 6,108 5,845 6,350 6,559 6,149	7,116 6,533 7,088 7,030 6,658 6,758 7,109 7,232 6,837 6,983 7,168 7,080 6,665 6,956 6,720 6,658 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,968 5,928 6,343 6,035 6,260 6,935 7,053 7,127 6,681 6,619 6,953 7,195 6,726	7,773 7,640 7,170 7,672 7,751 7,399 7,455 7,828 7,833 7,683 7,683 7,683 7,651 7,834 7,594 7,419 7,489 7,387 7,290 6,539 6,757 7,138 6,706 6,826 7,510 7,438 7,842 7,296 7,364 7,525 7,757 7,651	8,425 8,202 7,950 8,339 8,430 8,189 8,267 8,595 8,614 8,140 8,251 8,013 8,013 8,013 8,013 8,013 8,013 8,068 7,873 6,962 7,355 7,705 7,174 7,275 8,051 7,275 8,051 7,831 8,365 7,811 7,831 8,365 7,811 7,831	8,684 8,443 8,789 8,909 8,643 8,839 9,196 9,033 8,400 8,728 8,400 8,728 8,416 8,202 8,082 8,338 7,402 7,975 8,035 7,402 7,651 8,035 7,402 7,651 8,035 7,402 7,651 8,035 7,402 7,651 8,035 7,402 7,651 8,035 7,986 8,699 8,377 8,564 8,564 8,778	8,963 8,857 9,169 9,257 8,976 9,061 9,475 9,258 8,664 9,119 8,851 8,275 8,711 8,243 8,169 8,723 7,402 8,579 8,176 7,402 8,579 8,176 7,407 8,072 8,579 8,176 7,497 8,072 8,579 8,176 7,497 8,072 8,579 8,176 7,497 8,072 8,569 8,823 9,112 9,113 9,216 8,905	8,563 9,065 9,374 9,608 9,217 9,309 9,666 9,527 8,904 9,375 8,904 9,375 8,904 9,375 8,907 8,459 8,850 8,209 7,764 9,110 7,415 8,929 8,490 7,406 8,443 9,066 8,443 9,066 8,443 9,066 8,443 9,066	7,879 9,195 9,611 9,799 9,361 9,495 9,848 9,538 9,167 9,437 8,993 8,563 9,055 7,987 7,292 9,351 7,513 9,005 8,458 7,227 8,784 9,209 8,685 7,959 9,368 9,417 9,103 9,373 8,497	7,470 9,177 9,684 9,771 9,407 9,407 9,430 9,837 9,343 9,029 9,327 8,813 8,483 8,818 7,536 7,233 9,280 7,420 8,763 8,245 7,116 8,977 9,179 8,739 7,643 9,170 9,330 9,048 9,109 8,209	7,169 8,866 9,604 9,618 9,362 9,299 9,733 8,981 8,696 9,003 8,375 8,213 8,595 7,197 7,211 8,929 7,362 8,354 7,942 7,362 8,354 7,942 7,059 8,897 9,058 8,897 9,058 8,516 7,363 8,501 8,516 7,363 8,601 8,762 8,861 8,762	6,705 8,357 9,208 9,153 9,052 8,906 9,332 8,405 8,342 8,341 8,149 6,870 7,162 8,374 7,961 7,528 6,923 8,501 8,584 8,156 7,131 7,854 8,328 7,727	7,611 6,353 7,868 8,787 8,687 8,537 8,444 8,938 7,936 8,014 8,041 7,627 7,569 7,686 6,561 7,064 7,851 6,863 7,748 7,149 6,887 8,121 8,253 7,904 7,105 7,491 7,626 7,911 8,024 7,487	6,114 7,330 8,295 8,220 7,946 7,931 8,230 7,448 7,571 7,639 7,301 7,216 7,223 6,284 6,817 7,335 6,427 7,149 6,550 7,527 7,784 7,491 6,588 7,015 7,172 7,463 7,096	5,754 6,769 7,650 7,495 7,263 7,246 7,273 6,791 6,729 6,729 6,729 6,741 6,620 6,561 5,857 6,165 6,572 5,793 6,705 6,572 5,964 6,836 7,150 6,887 6,018 6,494 6,707 6,830 6,967 6,535	6,090 6,807 6,788 6,758 6,778 6,748 6,748 6,748 6,748 6,748 6,748 6,748 6,147 5,850 6,251 6,141 5,961 5,270 5,920 5,939 5,920 5,038 5,863 5,651 5,297 6,049 6,416 6,123 5,389 5,919 5,995 6,220 6,328 5,862

0/07/0000	5 120	4 004	4 400	4.072	2.040	2.046	4.020	4.270	4.005		(20)	6.0.40	7.400	7.070	0.100	0.077	0.000	7 700	7 617	7.150	6 000	6 400	5.067	
8/27/2022	5,130	4,804	,				-	,	-	-	6,386	6,949	7,482	-	-	-	8,089	7,798	7,517	-	6,902	6,492	5,967	5,464
8/28/2022	5,112	4,809	4,525	4,238	4,086	4,085	4,206	4,496	5,050	5,728	6,311	6,946	7,515	7,834	7,978	8,057	8,059	7,970	7,754	7,494	7,228	6,669	6,132	5,454
8/29/2022	5,023	4,698	4,441	4,271	4,240	4,561	4,998	5,416	5,676	6,049	6,473	6,994	7,522	7,963	8,301	8,447	8,470	8,335	7,993	7,676	7,415	6,968	6,466	5,802
8/30/2022	5,177	4,818	4,474	4,228	4,257	4,543	4,959	5,318	5,547	6,020	6,677	7,296	7,921	8,317	8,487	8,622	8,896	8,826	8,418	8,078	7,837	7,313	6,689	6,055
8/31/2022 9/1/2022	5,494 5,235	5,031 4,715	4,703 4,332	4,464 4,073	4,333 4,099	4,528 4,395	4,944 4,766	5,218 5,112	5,718 5,515	6,230 6,141	6,979 6,469	7,670 7,473	8,299 8,269	8,708 8,753	9,034 8,967	9,301 8,944	9,269 8,957	9,081 8,552	8,730 8,108	8,292 7,627	7,861 7,338	7,237 6,681	6,651 6,135	5,964 5,520
9/2/2022	4,919	4,713	4,332	4,073	3,977	4,393	4,700	5,056	5,384	5,842	6,398	7,005	7,512	7,984	8,300	8,456	8,433	8,332	7,772	7,224	6,946	6,435	5,845	5,391
9/3/2022	4,919	4,320	4,230	4,001	3,895	3,960	4,007	4,266	4,869	5,399	5,964	6,611	7,312	7,984	8,300	8,474	8,515	8,202	7,869	7,224	7,167	6,584	5,986	5,676
	4,830 5,192	4,389	4,137	4,000	-	4,097	4,001	4,200	4,809	5,599		6,957	-		-	8,474 8,970	8,958	8,303	8,434		7,708	7,311	6,779	6,233
9/4/2022 9/5/2022	5,680	4,703 5,173	4,530	4,198	4,113 4,273	4,097	4,199	4,282	4,843	5,589	6,270 6,468	7,251	7,741 7,747	8,125 8,442	8,724 8,774	9,024	9,113	8,979	8,757	8,018 8,473	8,208	7,511	6,991	6,250
9/6/2022	5.607	5.248	4,073	4,420	4,273	4,747	5,078	5,205	5,516	6,113	6,787	7,231	8,415	8,839	8,999	9,024	9,115	9,236	8.853	8,388	8,208	7,856	7,221	6,422
9/7/2022	5,734	5,191	4,934	4,678	4,550	4,747	5,078	5,205	5,608	6,119	6,808	7,644	8,348	8,821	8,999	8,969	8,817	9,230 8,646	8,030	7,583	7,187	6,696	6,107	5,462
9/8/2022	5,051	4.622	4,785	4,078	,	4,700	4,823	5,230	5,501	5,854	6,093	6,357	6,643	6,834	6,634	6,395		,	5,965	5,927	5,824	5,571	5,121	4,584
9/8/2022	4,293	4,022	3,928	3,723	4,118 3,614	4,373	4,823	4,638	5,022	5,834	5,895	6,505	7,096	7,352	7,264	6,872	6,101 6,661	6,068 6,258	5,965	5,779	5,655	5,599	5,325	4,384
9/10/2022	4,549	4,056	3,831	3,719	3,678	3,703	3,830	4,043	4,414	4,923	5,515	6,062	6.533	6,922	6,642	6,106	5,842	5,601	5,704	5,676	5,595	5,399	4,913	4,495
9/10/2022	4,349	3,972	3,747	3,623	3,566	3,703	3,830	3,833	4,414	5,006	5,873	6,609	7,403	7,746	7,888	8,092	8,251	8,145	7,820	7,486	6,990	6,541	5,937	5,147
9/12/2022	4,668	4,258	3,998	3,879	3,855	4,048	4,447	4,739	5,113	5,493	6,193	6,983	7,403	8,253	8,601	8,585	8,274	7,864	7,820	7,148	6,990	6,455	5,787	5,063
9/13/2022	4,634	4,230	4,015	3,891	3,865	4,091	4,602	4,970	5,231	5,664	6,133	6,803	7,000	7,687	7,748	7,933	8,123	8,140	8.044	7,723	7,400	6,852	6,018	5,312
9/14/2022	4,701	4,410	4,168	4,030	3,973	4,232	4,614	4,899	5,248	5,616	6,032	6,478	6,927	7,196	7,309	7,406	7,547	7,359	7,081	6,830	6,607	6,149	5,496	4,774
9/15/2022	4,231	4.041	3,850	3,722	3,720	3,927	4,447	5,095	5,346	5,650	5,984	6,491	7.051	7,532	7,918	8,191	8,236	8,016	7,527	7,250	6,946	6,455	5,817	5,034
9/16/2022	4,515	4,182	3,919	3,728	3,752	3,947	4,311	4,723	5,087	5,494	6,236	6,862	7,404	7,705	7,769	7,633	7,377	7,089	6,769	6,572	6,181	5,873	5,424	4,861
9/17/2022	4.039	3,785	3,607	3,577	3,557	3,590	3,692	3,952	4,482	5,008	5,505	6,057	6,682	7,101	7,234	7,140	6,986	6,765	6,458	6,253	6,083	5,679	5,245	4,580
9/18/2022	4,059	3,756	3,564	3,458	3,366	3,316	3,408	3,631	4,027	4,663	5,240	5,734	6,326	6,733	7,043	7,262	7,481	7,626	7,496	7,234	7,017	6,441	5,692	4,906
9/19/2022	4,032	3,906	3,689	3,587	3,618	3,791	4,103	4,460	4,859	5,387	6,028	6,532	7,158	7,586	7,824	8,203	8,301	8,231	7,900	7,511	7,145	6,579	5,858	4,900
9/20/2022	4,356	4,067	3,883	3,758	3,736	3,909	4,353	4,824	5,172	5,617	6,198	6,930	7,531	8,061	8,388	8,506	8,502	8,294	7,861	7,511	7,212	6,741	5,986	5,003
9/21/2022	4,481	4,140	3,946	3,858	3,821	3,979	4,327	4,740	5,294	5,804	6,328	6,791	7,146	7,492	7,763	7,846	7,901	7,844	7,658	7,344	7,088	6,607	5,943	5,003
9/22/2022	4,396	4,117	3,941	3,815	3,819	3,976	4,308	4,581	4,909	5,472	6,114	6,667	7,374	7,836	8,133	8,390	8,688	8,851	8,536	7,959	7,587	6,894	6,158	5,377
9/23/2022	4,576	4,233	3,980	3,831	3,823	3,993	4,358	4,672	5,121	5,716	6,420	7,114	7,737	8,161	8,543	8,499	8,384	8,078	7,717	7,363	7,086	6,597	6,016	5,285
9/24/2022	4,710	4,287	4,059	3,888	3,791		3,819	4,000	4,409	5,059	5,643	6,272	6,848	7,277	7,516	-	7,841	7,877	7,600	7,126	6,694	6,080	5,417	4,835
9/25/2022	4,255	3,963	3,727	3,578	3,502	3,522	3,597	3,789	4,247	4,704	5,529	6,069	6,672	7,067	7,436	7,866	8,148	8,186	7,776	7,419	7,140	6,560	6,034	5,205
9/26/2022	4,574	4,199	3,944	3,781	3,788	3,979	4,470	4,740	5,040	5,603	6,371	7,207	7,756	8,159	8,476	8,733	8,829	8,529	8,064	7,751	7,438	6,720	6,062	5,425
9/27/2022	4,870	4,477	4,165	4,023	3,990	4,058	4,333	4,726	4,932	5,016	5,244	5,572	5,881	6,218	6,413	6,365	6,518	6,519	6,324	6,258	6,071	5,678	5,158	4,496
9/28/2022	4,001	3,689	3,517	3,413	3,400	3,496	3,688	3,970	4,290	4,678	5,024	5,177	5,239	5,195	5,208	5,115	5,051	4,960	4,836	4,746	4,414	3,920	3,430	3,115
9/29/2022	2,670	2,505	2,325	2,246	2,229	2,287	2,258	2,599	2,642	2,797	2,863	3,041	3,172	3,220	3,261	3,308	3,398	3,582	3,603	3,695	3,696	3,378	2,975	2,584
9/30/2022	2,552	2,428	2,351	2,284	2,201	2,371	2,561	2,732	3,036	3,240	3,517	3,717	3,982	4,409	4,659	5,071	5,356	5,503	5,383	5,227	5,087	4,726	4,142	3,683
10/1/2022	3,242	2,893	2,728	2,645	2,609	2,651	2,782	3,138	3,565	3,904	4,197	4,649	5,221	5,514	5,750	5,761	6,169	6,265	5,870	5,428	5,010	4,568	4,374	3,965
10/2/2022	3,490	3,056	2,865	2,748	2,744	2,753	2,875	3,268	3,680	4,175	4,540	4,934	4,948	5,069	5,906	5,789	6,599	6,788	6,522	6,118	5,880	5,362	4,721	4,082
10/3/2022	3,740	3,337	3,084	2,971	2,937	3,168	3,676	3,863	3,820	4,036	4,308	4,639	5,315	5,562	5,649	5,824	5,934	5,866	5,616	5,481	5,553	5,033	4,517	3,912
10/4/2022	3,403	3,111	2,944	2,827	2,872	3,193	3,660	3,936	3,828	3,943	4,168	4,656	4,949	5,064	5,104	5,223	5,400	5,447	5,310	5,201	5,002	4,580	4,335	3,801
10/5/2022	3,239	3,003	2,851	2,753	2,768	2,941	3,461	3,864	4,035	3,888	4,010	4,240	4,583	4,909	5,350	5,622	5,790	5,864	5,679	5,444	5,183	4,743	4,247	3,735
10/6/2022	3,558	3,380	3,180	3,013	2,980	3,273	3,727	3,905	3,746	3,950	4,063	4,401	4,817	5,327	5,810	6,271	6,550	6,737	6,499	6,274	5,831	5,317	4,806	4,261
10/7/2022	3,720	3,229	2,914	2,816	2,818	2,985	3,309	3,597	3,763	4,077	4,328	4,603	5,046	5,403	5,783	6,432	7,009	6,972	6,562	6,196	5,773	5,388	4,794	4,167
10/8/2022	3,684	3,384	3,086	2,955	2,889	2,933	3,086	3,261	3,584	4,241	4,487	4,834	5,254	5,820	6,176	6,490	6,805	6,861	6,527	6,122	5,645	5,182	4,670	4,183
10/9/2022	3,755	3,355	3,141	3,016	2,935	2,937	3,040	3,218	3,693	4,203	4,664	5,086	5,766	6,225	6,562	6,835	7,064	7,053	6,821	6,467	6,091	5,584	5,031	4,434
10/10/2022	3,925	3,648	3,462	3,380	3,392	3,565	3,891	4,241	4,568	4,670	5,086	5,423	6,108	6,758	7,177	7,608	7,878	7,772	7,395	7,101	6,607	5,977	5,332	4,658
10/11/2022	4,116	3,808	3,590	3,469	3,481	3,629	3,946	4,247	4,416	4,720	5,073	5,606	6,270	6,863	7,346	7,754	7,956	7,861	7,518	7,108	6,748	6,173	5,553	4,844
10/12/2022	4,258	3,949	3,752	3,643	3,657	3,850	4,185	4,492	4,687	5,100	5,563	6,017	6,363	6,816	6,982	6,932	6,925	6,713	6,612	6,515	6,141	5,828	5,399	4,841
10/13/2022	4,470	4,117	3,819	3,691	3,671	3,915	4,252	4,330	4,465	4,846	5,236	5,601	5,803	5,992	6,206	6,319	6,452	6,525	6,428	6,470	6,145	5,629	5,013	4,402
10/14/2022	3,936	3,638	3,460	3,331	3,338	3,535	3,950	4,335	4,544	4,894	5,448	5,638	6,189	6,663	7,069	7,328	7,511	7,357	6,936	6,570	6,276	5,911	5,520	4,994
10/15/2022	4,451	3,983	3,690	3,497	3,451	3,502	3,610	3,955	4,363	4,901	5,434	6,009	6,318	6,588	6,897	7,065	7,026	6,879	6,639	6,371	5,996	5,640	5,243	4,603
10/16/2022	4,280	3,799	3,441	3,233	3,165	3,153	3,272	3,570	4,048	4,426	4,864	5,192	5,722	6,359	6,889	7,170	7,388	7,328	7,066	6,787	6,206	5,634	5,220	4,550
10/17/2022	4,033	3,693	3,442	3,338	3,379	3,565	3,913	4,206	4,366	4,711	5,137	5,511	6,204	6,513	6,785	7,286	7,254	6,930	6,677	6,564	6,285	5,805	5,265	4,690
10/18/2022	4,087	3,746	3,477	3,410	3,424	3,652	4,137	4,516	4,731	5,023	5,260	5,459	5,701	5,938	6,098	6,218	6,233	6,114	5,959	5,945	5,565	5,093	4,412	3,579
10/19/2022	3,233	2,962	2,809	2,739	2,780	3,096	3,612	4,039	4,193	4,297	4,258	4,028	3,834	3,787	3,813	3,855	4,061	4,293	4,465	4,629	4,544	4,247	3,787	3,299
10/20/2022	3,037	2,909	2,853	2,854	3,108	3,441	4,075	4,578	4,650	4,471	4,190	3,972	3,889	3,867	3,894	3,986	4,220	4,381	4,486	4,741	4,615	4,272	3,793	3,288
10/21/2022	2,992	2,842	2,776	2,757	2,847	3,227	3,861	4,360	4,447	4,316	4,132	4,010	3,960	3,963	4,092	4,293	4,541	4,688	4,768	4,823	4,637	4,401	4,139	3,650
10/22/2022	3,234	3,004	2,942	2,889	2,974	3,224	3,358	3,801	4,118	4,185	4,180	4,208	4,212	4,323	4,529	4,849	5,130	5,219	5,097	5,055	4,838	4,583	4,303	3,773
10/23/2022	3,267	2,963	_,, , ,	2,683	2,674	2,709	2,836	3,308	3,621	3,933	4,207	4,434	4,711	5,024	5,330	5,605	5,829	5,894	5,746	5,660	5,399	5,020	4,488	3,762
10/24/2022	3,407	2,999	2,861	2,826	2,881	3,158	3,696	4,268	4,466	4,616	4,859	5,115	5,459	5,727	6,018	6,247	6,415	6,470	6,288	6,132	5,864	5,378	4,879	4,331
10/25/2022	3,736	3,340	3,130	3,012	3,030		3,860	4,053	4,246	4,480	4,732	4,990	5,275	5,619	6,029	6,337	6,525	6,596	6,384	6,213	5,785	5,327	4,773	4,079
10/26/2022	3,614	3,234	3,085	2,983	3,005	3,170	3,686	4,092	4,310	4,518	4,816	5,194	5,559	6,012	6,373	6,650	6,972 7,123	6,988	6,726	6,571	6,255	5,824	5,328	4,559
10/27/2022	3,963	3,564	3,371	3,340	3,356	3,537 3,542	4,030 3,900	4,458	4,527	4,596	4,926	5,414	5,993	6,372	6,720	6,962	7,123	6,970 6,501	6,728	6,543 5,957	6,227 5,564	5,750	5,115	4,377
10/28/2022 10/29/2022	3,969 3,796	3,698 3,513	3,475 3,295	3,345 3,208	3,387 3,211	3,542 3,293	3,900	4,225 3,676	4,459 3,924	4,750 4,452	5,203 4,864	5,761 5,258	6,170 5,668	6,388 6,071	6,474 6,365	6,637 6,578	6,661 6,663	6,501 6,557	6,202 6,311	5,957 5,980	5,564 5,538	5,143 5,160	4,650 4,715	4,135 4,215
10/29/2022	3,796	3,513	3,295	3,208 3,318	3,211		3,389	3,676	3,924 3,949	4,452	4,864	5,258 5,544	5,668	6,071	6,365 6,604	6,578 6,812	6,663	6,557 6,885	6,311 6,672	5,980 6,416	5,538 6,106	5,160	4,715	4,215
10/31/2022	3,880	3,380	3,214	3,129	3,144	3,255	3,507	4,035	4,267	4,408	5,024	5,544 5,670	6,220	6,648	6,963	7,377	6,935 7,765	0,885 7,725	0,072 7,170	6,505	6,100	5,873	4,998	4,104
11/1/2022	3,879	3,576		3,331	3,325		3,912	4,033	4,207	4,009	5,116	5,624	6,176	6,778	7,219	7,588	7,703	7,766	7,363	7,087	6,559	5,957	5,292	4,430
11/2/2022	4,120	3,875	3,637	3,559	3,628		4,164	4,234	4,515	4,792	5,427	5,845	6,440	6,929	7,343	7,588	7,725	7,556	7,303	7,087	6,656	6,088	5,423	4,550
11/3/2022	4,120	3,886	3,679	3,528	3,541	3,693	4,043	4,488	4,616	4,847	5,397	5,928	6,306	6,547	6,620	6,793	6,855	6,759	6,540	6,348	6,030	5,544	4,870	4,018
11/3/2022	3,676	3,446		3,117	3,119	3,289	3,585	3,929	4,114	4,307	4,627	4,988	5,349	5,738	6,099	6,390	6,561	6,452	6,163	5,871	5,505	5,042	4,610	4,199
11/5/2022	3,804	3,445	3,218	3,095	3,072	3,129	3,253	3,503	3,826	4,359	4,796	5,238	5,752	6,052	6,264	6,463	6,568	6,501	6,286	6,050	5,785	5,442	4,872	4,346
11/6/2022	4,173	7,205	3,373	3,215	3,189	3,270	3,401	3,777	4,538	5,182	5,872	6,334	6,707	6,966	7,032	7,101	6,987	6,745	6,653	6,375	5,987	5,540	4,914	4,280
11/7/2022	3,748	3,370	3,240	3,152	3,233	3,596	3,983	4,289	4,742	5,213	5,612	5,901	6,130	6,369	6,487	6,613	6,580	6,375	6,375	6,039	5,581	5,100	4,637	4,219
11/8/2022	3,927	3,390		3,043	3,096		3,937	4,307	4,633	4,927	5,419	5,761	5,996	6,052	6,046	6,043	5,959	5,948	6,033	5,788	5,421	4,985	4,521	3,921
11/9/2022	3,591	3,338		3,158	3,200	3,405	3,689	4,104	4,304	4,459	4,647	4,789	4,838	4,845	4,847	4,776	4,798	4,977	5,045	4,993	4,761	4,488	4,096	3,616
11/10/2022	3,175	3,062	2,966	2,923	2,950		3,426	3,814	4,138	4,503	4,650	4,762	4,589	4,490	4,472	4,898	4,939	5,150	5,313	5,151	4,869	4,678	4,302	3,756
11/11/2022	3,449	3,166		2,960	3,024	3,202	3,574	4,218	4,773	5,177	5,501	5,718	5,939	5,933	5,922	5,875	5,858	5,843	5,815	5,540	5,302	5,014	4,553	
11/12/2022	3,523	3,224	3,067	2,980	2,982		3,135	3,513	4,059	4,520	5,068	5,342	5,585	5,818	6,053	6,137	6,101	5,821	5,626	5,359	5,118	4,797	4,472	3,985
11/13/2022	3,452	3,138	2,922	2,854	2,828	2,840	2,982	3,326	3,867	4,372	4,749	4,937	5,098	5,229	5,252	5,265	5,212	5,249	5,308	5,123	4,797	4,398	3,961	3,438
11/15/2022		,				2,980	3,523	3,961	4,138	4,217	4,377	4,534	4,885	5,232	5,517	5,706	5,851	5,845	5,906	5,657	5,304	4,808	4,232	3,622
11/13/2022	3,010	2,864	2,753	2,714	2,754	2,900	5,525	2,201	.,100	1,217	4,577	ч,554	1,005	5,252	5,517	5,700	5,051	5,0151	5,700	5,057	5,504	4,000	4,232	3,022
	3,010 3,309	2,864 3,066	2,753 2,941	2,714 2,883	2,754	3,148	3,568	3,959	4,177	4,402	4,893	5,289	5,434	5,529	5,675	5,701	5,739	5,843	5,949	5,804	5,522	5,235	4,232	4,291
11/14/2022	<u> </u>	-		-			-	-			-	-	-	-		-		-	-		-	-	-	

11/17/2022	3,300	3,037	2,916	2,904	2,948	3,322	3,915	4,364	4,447	4,421	4,378	4,290	4,237	4,271	4,241	4,316	4,582	4,846	5,084	5,008	4,866	4,622	4,236	3,748
11/18/2022	3,447	3,233	3,180	3,209	3,370	3,813	4,501	4,862	4,867	4,729	4,592	4,363	4,204	4,062	4,082	4,164	4,350	4,649	4,804	4,693	4,566	4,302	3,998	3,656
11/19/2022	3,518	3,402	3,324	3,299	3,380	3,551	3,895	4,264	4,585	4,500	4,387	4,159	4,111	4,053	4,128	4,179	4,332	4,560	4,678	4,474	4,255	4,055	3,808	3,424
11/20/2022	3,044	2,898	2,832	2,836	2,884	2,966	3,231	3,578	4,164	4,636	4,880	4,929	5,010	5,096	5,073	5,057	5,169	5,346	5,400	5,197	4,997	4,716	4,287	3,808
11/21/2022	3,501	3,218	3,071	3,091	3,227	3,589	4,144	4,488	4,636	4,521	4,387	4,346	4,319	4,358	4,449	4,487	4,672	4,884	5,092	4,967	4,721	4,317	3,854	3,452
11/22/2022	3,170	2,943	2,769	2,766	2,798	3,012	3,362	3,763	4,063	4,334	4,516	4,664	4,788	4,881	4,970	4,964	5,027	5,240	5,360	5,185	5,007	4,562	4,082	3,596
11/23/2022	3,267	2,986	2,876	2,805	2,839	3,051	3,413	3,696	3,994	4,231	4,479	4,605	4,579	4,737	4,949	5,031	5,138	5,331	5,249	5,268	5,040	4,708	4,263	3,792
11/24/2022	3,407	3,096	2,933	2,842	2,803	2,842	3,019	3,426	4,048	4,620	5,196	5,634	5,850	5,885	5,880	5,846	5,700	5,445	5,189	4,787	4,505	4,203	3,816	3,434
11/25/2022	3,177	2,994	2,858	2,774	2,771	2,843	2,977	3,278	3,640	4,036	4,482	5,101	5,625	5,830	5,985	6,071	6,052	5,937	5,815	5,583	5,262	4,925	4,429	4,036
11/26/2022	3,627	3,257	3,078	2,984	2,958	3,042	3,160	3,453	3,912	4,254	4,620	5,016	5,275	5,519	5,664	5,729	5,708	5,644	5,645	5,255	4,944	4,607	4,231	3,806
11/27/2022	3,527	3,300	3,126	3,007	3,015	3,077	3,190	3,442	3,854	4,393	4,889	5,379	5,842	6,076	6,243	6,327	6,287	6,318	6,168	5,916	5,577	5,030	4,430	3,843
11/28/2022	3,349	3,063	2,917	2,871	2,907	3,133	3,707	4,135	4,417	4,540	4,607	4,731	4,861	5,071	5,228	5,358	5,465	5,517	5,531	5,356	4,983	4,542	4,073	3,571
11/29/2022	3,083	2,861	2,736	2,691	2,756	2,977	3,465	3,848	4,001	4,019	4,171	4,299	4,478	4,837	5,130	5,516	5,687	5,708	5,785	5,565	5,242	4,795	4,221	3,619
11/30/2022	3,227	3,000	2,884	2,856	2,917	3,125	3,638	3,965	4,157	4,433	4,810	5,219	5,672	5,804	5,962	6,016	5,880	5,745	5,731	5,519	5,177	4,719	4,241	3,657
12/1/2022	3,377	3,066	2,875	2,862	2,911	3,159	3,671	4,081	4,199	4,306	4,424	4,297	4,492	4,628	4,777	4,933	5,188	5,329	5,489	5,305	5,068	4,672	4,187	3,636
12/2/2022	3,339	3,074	2,894	2,841	2,953	3,221	3,744	4,173	4,310	4,250	4,382	4,538	4,743	4,861	5,012	5,191	5,330	5,321	5,405	5,219	4,761	4,503	4,022	3,590
12/3/2022	3,165	2,988	2,894	2,802	2,795	2,883	3,063	3,358	3,650	3,964	4,234	4,548	4,891	5,206	5,412	5,544	5,553	5,421	5,335	4,832	4,638	4,327	3,853	3,439
12/4/2022	3,169	2,963	2,828	2,726	2,653	2,728	2,855	3,131	3,551	3,896	4,182	4,458	4,767	5,073	5,362	5,498	5,524	5,580	5,633	5,473	5,202	4,743	4,103	3,554
12/5/2022	3,147	2,928	2,841	2,806	2,852	3,164	3,599	3,977	4,058	4,205	4,461	4,734	4,985	5,214	5,479	5,519	5,529	5,662	5,767	5,551	5,149	4,833	4,172	3,727
12/6/2022	3,320	3,004	2,891	2,861	2,916	3,252	3,715	3,938	4,016	4,169	4,398	4,571	4,799	5,277	5,620	5,676	5,751	5,842	5,962	5,680	5,426	4,925	4,272	3,861
12/7/2022	3,185	2,991	2,872	2,818	2,877	3,221	3,692	4,067	4,044	4,255	4,396	4,728	5,161	5,381	5,794	5,961	6,015	6,054	6,100	5,745	5,469	5,090	4,431	3,768
12/8/2022	3,226	3,045	2,934	2,896	2,908	3,131	3,539	3,885	3,933	4,096	4,333	4,666	5,028	5,411	5,792	5,971	6,012	5,953	5,949	5,675	5,306	4,933	4,418	3,791
12/9/2022	3,203	2,985	2,868	2,825	2,856	3,061	3,451	3,817	4,007	4,176	4,377	4,667	5,010	5,420	5,645	5,805	5,745	5,708	5,653	5,245	4,888	4,489	4,091	3,541
12/10/2022	3,218	2,968	2,844	2,788	2,810	2,895	3,073	3,403	3,780	4,081	4,292	4,496	4,816	5,135	5,322	5,465	5,479	5,436	5,384	5,076	4,770	4,413	4,007	3,503
12/11/2022	3,244	3,059	2,915	2,865	2,834	2,863	2,962	3,236	3,627	3,986	4,213	4,326	4,502	4,600	4,608	4,621	4,686	4,924	5,143	5,039	4,810	4,430	3,904	3,329
12/12/2022	3,048	2,848	2,761	2,721	2,787	3,039	3,492	3,865	4,082	4,250	4,259	4,279	4,327	4,450	4,568	4,743	4,903	5,110	5,345	5,262	4,971	4,496	3,932	3,362
	2,990	2,890	2,773	2,753	2,819	3,107	3,675	4,045	4,285	4,304	4,371	4,531	4,723	4,893	4,942	5,011	5,117	5,311	5,515	5,401	5,193	4,859	4,308	3,618
12/14/2022	3,280	2,977	2,880	2,882	2,939	3,224	3,808	4,226	4,283	4,361	4,510	4,716	4,984	5,255	5,452	5,575	5,686	5,759	5,917	5,718	5,434	4,971	4,445	3,913
12/15/2022	3,570	3,264	3,036	2,978	2,996	3,277	3,783	4,187	4,480	4,855	5,183	5,235	5,214	5,142	5,006	4,956	4,974	5,161	5,296	5,245	5,005	4,672	4,163	3,689
12/16/2022	3,319	3,013	2,901	2,860	2,944	3,223	3,822	4,365	4,490	4,489	4,430	4,274	4,187	4,196	4,181	4,223	4,421	4,709	4,889	4,894	4,752	4,559	4,267	3,819
	3,630	3,398	3,329	3,424	3,538	3,758	4,067	4,424	4,698	4,689	4,582	4,476	4,321	4,283	4,340	4,409	4,559	4,796	4,913	4,798	4,628	4,278	3,984	3,663
	3,303	3,026	2,920	2,839	2,834	2,993	3,352	3,769	4,272	4,580	4,525	4,393	4,106	3,935	3,847	3,878	4,098	4,557	4,939	4,984	5,089	4,972	4,732	4,380
	4,087 3,493	3,985 3,140	3,986 3,058	4,094 3,095	4,253 3,303	4,813 3,597	5,379 4,123	5,841 4,463	5,870 4,598	5,503 4,727	5,062 4,752	4,598 4,725	4,251 4,726	4,076	3,985	4,047 4,730	4,272	4,671	5,129 5,365	5,082 5,224	4,943	4,652 4,744	4,312 4,313	3,826 3,853
	3,335	3,140	3,058	3,093	3,151	3,439	4,125	4,463	4,598	4,727	4,732	4,723	4,720	4,726 4,655	4,711 4,601	4,730	4,914 4,536	5,240 4,840	5,068	4,956	5,060 4,747	4,744	4,012	3,599
	3,322	3,121	3,000	3,009	3,116	3,321	3,757	4,403	4,082	4,809	4,000	4,640	4,790	4,033	4,001	4,482	4,550	4,840	5,008	4,930	4,747	4,445	3,996	3,593
	3,324	3,052	2,958	2,914	2,944	3,096	3,348	3,646	3,915	4,202	4,453	4,514	4,515	4,291	4,139	4,198	4,391	4,951	5,404	5,497	5,743	5,820	5,850	5,823
	5,530	5,497	5,610	5,930	6,137	6,465	7,058	7,847	8,164	7,993	7,686	7,181	6,668	6,245	6,101	6,154	6,544	7,057	7,432	7,484	7,529	7,510	7,355	7,191
	7,113	7,231	7,250	7,422	7,649	8,102	8,504	8,901	9,157	9,100	8,658	8,013	7,252	6,656	6,261	6,119	6,203	6,711	6,994	7,209	7,279	7,228	7,014	6,805
	6,422	6,340	6,391	6,479	6,773	7,056	7,420	7,840	8,114	7,993	7,594	6,981	6,415	5,770	5,510	5,501	5,705	6,167	6,647	6,874	6,921	6,653	6,342	5,933
	5,826	5,726	5,800	5,924	6,268	6,797	7,351	8,008	7,718	7,183	6,446	5,776	5,334	4,992	4,567	4,450	4,617	5,217	5,880	6,035	5,870	5,655	5,330	5,069
	5,082	5,074	5,157	5,356	5,647	6,153	6,587	7,017	6,810	6,046	5,114	4,463	4,042	3,882	3,781	3,845	3,990	4,243	4,536	4,470	4,377	4,198	3,938	3,686
	3,606	3,498	3,450	3,483	3,612	3,941	4,544	4,848	4,787	4,482	4,204	3,968	3,991	3,997	4,078	4,168	4,288	4,495	4,770	4,689	4,450	4,140	3,819	3,493
	3,237	3,059	2,962	2,928	3,004	3,189	3,519	3,921	4,137	4,168	4,201	4,165	4,162	4,320	4,274	4,292	4,431	4,564	4,837	4,805	4,519	4,180	3,920	3,562
	-,	2,999	2,849	2,756	2,759	2,856	3,024	3,222	3,536	4,013	,	4,509	4,614			4,630	,	4,943	5,144	4,812	4,499	4,274	4,034	3,784

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Year	Month	Actual Peak Demand	Demand Response Activated	Estimated Peak Demand	Day	Hour	System- Average Temperature
	1	(MW) 9240	(MW) 0	(MW) 9240	30	8	(Degrees F) 45.12
	2	7539	0	7539	1	8	43.12 57.81
	3	7003	0	7003	18	18	73.65
	4	7905	0	7905	6	18	79.37
	5	8743	0	8743	23	17	81.55
5	6	9977	0	9977	15	17	84.79
2022	7	9799	0	9799	29	17	83.96
	8	9848	0	9848	1	17	84.13
	9	9306	0	9306	6	17	84.17
	10	7956	0	7956	11	17	78.48
	11	7811	0	7811	1	17	77.58
	12	9157	0	9157	25	9	38.36
	1	7052	0	7052	19	8	45.2
	2	8,308	0	8,308	4	8	43.05
	3	7,565	0	7,565	31	17	86.25
	4	7,871	0	7,871	29	18	86.9
	5	8,735	0	8,735	5	18	87.5
21	6	9,147	0	9,147	11	17	92.55
2021	7	9,452	0	9,452	22	17	89.7
	8	9,681	0	9,681	19	17	94.1
	9	8,770	0	8,770	13	17	87.55
	10	8,701	0	8,701	7	17	87.95
	11	6,198	0	6,198	3	17	81.4
	12	6,210	0	6,210	31	17	79
	1	8,407	0	8407	22	8	34.80
	2	6,312	0	6312	13	17	80.05
	3	8,090	0	8090	30	18	83.10
	4	8,146	0	8146	13	17	85.30
	5	8,592	0	8592	22	17	89.05
2020	6	9,647	0	9647	25	17	91.00
Ä	7	9,393	0	9393	14	17	87.75
	8	9,623	0	9623	25	17	88.85
	9	9,533	0	9533	3	17	89.35
	10	8,468	0	8468	7	16	86.60
	11	6,943	0	6943	15	16	76.10
	12	7,551	0	7551	27	9	40.45
Notes (Include Notes Here)							

TYSP Year	2023
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Part	b

	Cumulative Customer Owned/Leased Renewable Generation											
Year	Residential Summer Demand (MW)	Residential Winter Demand (MW)	Commercial Summer Demand (MW)	Commercial Winter Demand (MW)	Industrial Summer Demand (MW)	Industrial Winter Demand (MW)	Total Summer Demand (MW)	Total Winter Demand (MW)				
2023	(27)	(0)	(0)	(0)	(0)	0	(28)	(0)				
2024	(71)	(2)	(1)	(0)	(0)	(0)	(72)	(2)				
2025	(116)	(4)	(2)	(0)	(0)	(0)	(118)	(4)				
2026	(162)	(6)	(3)	(0)	(0)	(0)	(165)	(6)				
2027	(197)	(8)	(3)	(0)	(0)	(0)	(201)	(8)				
2028	(220)	(9)	(4)	(0)	(1)	(0)	(224)	(9)				
2029	(242)	(10)	(4)	(0)	(1)	(0)	(247)	(10)				
2030	(265)	(11)	(5)	(0)	(1)	(0)	(271)	(11)				
2031	(290)	(12)	(5)	(0)	(1)	(0)	(295)	(12)				
2032	(315)	(13)	(5)	(0)	(1)	(0)	(321)	(13)				
Notes												
The negative values indicate	e that customer of	owned PV is a re	duction to proje	ected load								

	Cumulative C	Customer Owned/	Leased Renewab	le Generation
Year	Residential Energy Impact (MWh)	Commercial Energy Impact (MWh)	Industrial Energy Impact (MWh)	Total Energy Impact (MWh)
2023	(151,323)	(2,542)	(364)	(154,229)
2024	(461,368)	(8,002)	(1,046)	(470,417)
2025	(783,385)	(13,539)	(1,723)	(798,647)
2026	(1,113,695)	(19,061)	(2,398)	(1,135,154)
2027	(1,387,028)	(23,381)	(3,069)	(1,413,479)
2028	(1,557,737)	(26,118)	(3,745)	(1,587,600)
2029	(1,711,619)	(28,718)	(4,402)	(1,744,739)
2030	(1,877,413)	(31,365)	(5,063)	(1,913,841)
2031	(2,050,418)	(33,998)	(5,721)	(2,090,137)
2032	(2,233,685)	(36,701)	(6,390)	(2,276,777)
Notes				
The negative values indicate	e that customer of	owned PV is a re	eduction to proje	ected load

TYSP Year	2023
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Part	с

	Cumulative	Customer Owned/Leased H	Renewable Generation Co	ounts
Year	Residential Customers	Commercial Customers	Industrial Customers	Total Customers
2023	90,115	692	3	90,810
2024	114,007	764	5	114,776
2025	137,914	836	7	138,757
2026	161,955	908	9	162,872
2027	175,263	948	11	176,222
2028	186,944	984	13	187,941
2029	199,281	1,020	15	200,316
2030	212,319	1,056	17	213,392
2031	225,817	1,092	19	226,928
2032	239,758	1,128	21	240,907
Notes				
(Include Notes Here)				

TYSP Year	2023
Staff's Data Request #	1
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	Number of	Number of Public	Number of Public	Cumulativ	e Impact of PEVs			
Year	PEVs	PEV Charging Stations	DCFC PEV Charging Stations.	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		
Notes								

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

TYSP Year	2023
Staff's Data Request #	1
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	[Demand F	Response Sou	rce or All De	mand Respon	se Sourc	es]			
Year	Beginning Year: Number of Customers	Available Capacity (MW)		New Customers Added	Customers (MW)		Customers Lost	Lost Capacity (MW)	
	Sum Win Sum Win			Sum	Win				
2013	406,194	681	1,035	4,337	16	20	839	DNA	DNA
2014	409,689	724	1,014	3,156	23	27	1,977	DNA	DNA
2015	410,855	752	1,055	6,372	29	35	1,375	DNA	DNA
2016	415,838	714	1,014	8,782	79	88	1,569	DNA	DNA
2017	424,246	756	1,065	9,592	34	43	2,559	DNA	DNA
2018	429,750	783	1,090	6,478	42	51	2,545	DNA	DNA
2019	432,277	786	1,098	6,862	69	76	2,058	DNA	DNA
2020	435,224	875	1,136	2,758	97	85	1,983	DNA	DNA
2021	435,102	908	1,161	1,613	9	10	2,709	DNA	DNA
2022	433,981	924	1,172	772	5	5	1,215	DNA	DNA
Notes									
(Include Notes Here)									

		Residen	tial Load Mar	agement					
Year	Beginning Year: Number of Customers	Available Capacity (MW)		New Customers Added	ners (MW)		Customers Lost	Lost Capacity (MW)	
	Customers	Sum	Win		Sum	Win		Sum	Win
2013	405,737	341	652	4,321	5	9	831	1	4
2014	409,227	355	654	3,145	3	7	1,976	2	4
2015	410,396	357	656	6,345	7	13	1,372	2	3
2016	415,369	366	669	8,634	10	19	1,300	1	6
2017	423,900	382	694	9,561	11	20	2,553	3	4
2018	429,403	388	698	6,424	7	13	2,542	3	4
2019	431,862	396	711	6,847	7	14	2,046	2	4
2020	434,807	394	671	2,735	3	6	1,980	2	4
2021	434,663	392	667	1,604	2	3	2,704	4	5
2022	433,563	390	665	767	1	1	1,181	2	2
Notes									
A transition from CSS to SAP b	egan Nov 1 2021. T	he residential t	ransition is ong	oing and many o	of the repo	rts have n	ot been compl	eted	

		Commer	rcial Load Ma	nagement					
Year	Beginning Year: Number of Customers	Available Ca	pacity (MW)	New Added Capacity Customers (MW) Added		Customers Lost	Lost Capacity (MW)		
	Customers	Sum			Sum	Win		Sum	Win
2013	65	4	0	0	0	0	0	2	0
2014	65	4	0	0	0	0	0	2	0
2015	64	4	0	0	0	0	1	0	0
2016	63	4	0	0	0	0	0	0	0
2017	63	4	0	0	0	0	0	0	0
2018	63	4	0	0	0	0	0	0	0
2019	63	4	0	0	0	0	0	0	0
2020	63	4	0	0	0	0	0	0	0
2021	63	4	0	0	0	0	4	0	0
2022	59	4	0	0	0	0	1	0	0
Notes									
The program closed to new part	icipants in 2000 and	several particip	oants have close	ed their accounts					

Standby Generation

Year	Beginning Year: Number of Customers	Available Ca	pacity (MW)	New Customers Added	Added Capacity (MW)		Customers Lost	Lost Capacity (MW)	
	Customers	Sum	Win	Tuucu	Sum	Win		Sum	Win
2013	253	98	98	12	5	5	4	DNA	DNA
2014	259	103	104	10	5	5	1	DNA	DNA
2015	260	108	109	25	20	20	2	DNA	DNA
2016	269	68	68	147	68	68	269	DNA	DNA
2017	145	77	77	28	7	7	5	DNA	DNA
2018	147	82	82	12	3	3	1	DNA	DNA
2019	178	83	83	1	0	0	3	DNA	DNA
2020	175	80	80	5	2	0	1	DNA	DNA
2021	179	81	80	5	2	2	3	1	1
2022	183	83	82	3	1	1	0	0	0
Notes									
See note below									

		Int	erruptible Ser	vice					
Year	Beginning Year: Number of Customers	Available Ca	pacity (MW)	New Customers Added	omers (MW)		Customers Lost	Lost Capacity (MW)	
	Customers	Sum	Win	Tuucu	Sum	Win		Sum	Win
2013	135	233	278	4	7	7	3	DNA	DNA
2014	134	256	249	1	15	15	0	DNA	DNA
2015	131	277	283	2	3	3	1	DNA	DNA
2016	133	270	270	1	1	1	0	DNA	DNA
2017	134	287	287	3	16	16	1	DNA	DNA
2018	133	303	303	42	32	34	2	DNA	DNA
2019	170	297	297	14	62	62	5	DNA	DNA
2020	175	389	376	18	92	79	1	DNA	DNA
2021	193	395	381	4	6	6	2	2	2
2022	172	398	384	2	3	3	34	5	5
Notes									
34 accounts no longer qualified	for Interruptible Serv	vice beginning.	Jan 1 2022 and	were removed f	rom the pr	ogram.			

		Cı	Irtailable Serv	<i>v</i> ice					
Year	Beginning Year: Number of Customers	Available Capacity (MW)		New Customers Added	Added Capacity (MW)		Customers Lost	Lost Capacity (MW)	
	Customers	Sum	Win	muutu	Sum	Win		Sum	Win
2013	4	5	7	0	0	0	0	DNA	DNA
2014	4	6	7	0	0	0	0	DNA	DNA
2015	4	6	7	0	0	0	0	DNA	DNA
2016	4	6	7	0	0	0	0	DNA	DNA
2017	4	6	7	0	0	0	0	DNA	DNA
2018	4	6	7	0	0	0	0	DNA	DNA
2019	4	6	7	0	0	0	0	DNA	DNA
2020	4	8	9	0	0	0	0	DNA	DNA
2021	4	36	33	0	0	0	0	DNA	DNA
2022	4	49	41	0	0	0	0	DNA	DNA
Notes									
As shown it was discovered in 2	2020 that one large ac	count was not	included in the	CSS reports. Th	ne increase	e in report	ed MW is due	e to that.	

Table Footnotes:

(1) Total available capacity may change as a result of multiple factors including changes in participation,

changes in contribution from existing participants, and periodic evaluation of system response.

Thus, changes in total available capacity do not directly correlate to changes in participation.

- (2) Added capacity corresponds to the addition of new participants and those converted from suspended accounts.
- (3) Data is Not Available (DNA) on lost capacity for certain source programs and therefore is listed as DNA in their specific table and for the aggregated ALL Source Table.
- (4) Nov 1 2021, the customer accounting system CSS was moved to Customer Connect (SAP)
- (5) The transiton has resulted in reporting errors affecting all programs, especially residential DR reporting
- (6) The Interruptible Tariff was revised January 1 2022 resulting in 34 participants no longer qualifying for the program
- (7) In 2021 it was discovered that a large Curtailable customer load was not being reported and corrected accounting for additional reported load.
- (8) The Commerical Load Management program was closed to new participants in 2000 and participation is slowly diminishing
- (9) During 2016 the Emergency Stand-by Tariff was closed and the customers were removed from the program.
 - The Standby Generation Tariff was modified and the program renewed as non-Emergency Standby Tariff.

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			[Demand Resp	onse Source o	r All Demand Ro	esponse Source	es]			
			Summer					Winter		
Year	Number of	Average Event Size		Maximu	Maximum Event Size		Average	Event Size	Maximum Event Size	
	Events	MW	Number of Customers	MW	Number of	Events	MW	Number of Customers	MW	Number of Customers
2013	0	0	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	1	48	174	79	180
2021	0	0	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0	0	0
Notes										
The last reported event wa contributions	us on 12/18/2020) which involv	ved Standby Generat	ion and Water	Heaters for appro	eximately an ho	ur. It was diff	icult to separate re	esidential and S	SBG

				Residential Lo	oad Manageme	nt					
			Summer			Winter					
Year	Number of	Average Event Size		Maximum Event Size		Number of	Average	e Event Size	Maximum Event Size		
	Events	(MW)	Number of Customers	(MW)	Number of Customers	Events	(MW)	Number of Customers	(MW)	Number of Customers	
2013	0	0	0	0	0	0	0	0	0	0	
2014	0	0	0	0	0	0	0	0	0	0	
2015	0	0	0	0	0	0	0	0	0	0	
2016	0	0	0	0	0	0	0	0	0	0	
2017	0	0	0	0	0	0	0	0	0	0	
2018	0	0	0	0	0	0	0	0	0	0	
2019	0	0	0	0	0	0	0	0	0	0	
2020	0	0	0	0	0	0	0	0	0	0	
2021	0	0	0	0	0	0	0	0	0	0	
2022	0	0	0	0	0	0	0	0	0	0	
otes								•			

The last reported event was on 12/18/2020 which involved Standby Generation and Water Heaters for approximately an hour. It was difficult to separate residential and SBG contributions.

			C	Commercial L	oad Manageme	ent						
			Summer				Winter					
Year	Number of	Average Event Size		Maximur	Maximum Event Size		Average	e Event Size	Maximum Event Size			
	Events	(MW)	Number of Customers	(MW)	Number of Customers	Events	(MW)	Number of Customers	(MW)	Number of Customers		
2013	*	*	*	*	*	*	*	*	*	*		
2014	*	*	*	*	*	*	*	*	*	*		
2015	*	*	*	*	*	*	*	*	*	*		
2016	*	*	*	*	*	*	*	*	*	*		
2017	*	*	*	*	*	*	*	*	*	*		
2018	*	*	*	*	*	*	*	*	*	*		
2019	*	*	*	*	*	*	*	*	*	*		
2020	*	*	*	*	*	*	*	*	*	*		
2021	*	*	*	*	*	*	*	*	*	*		
2022	*	*	*	*	*	*	*	*	*	*		
Notes					- 							
Commercial Demand Resp	onse is include	d in Residenti	al Table Above									

			Summer	1		Winter					
Year	Number of	Average Event Size		Maximum Event Size		Number of	Average	Event Size	Maximum Event Size		
	Events	(MW)	Number of Customers	(MW)	Number of Customers	Events	(MW)	Number of Customers	(MW)	Number of Customers	
2013	0	0	0	0	0	0	0	0	0	0	
2014	0	0	0	0	0	0	0	0	0	0	
2015	0	0	0	0	0	0	0	0	0	0	
2016	0	0	0	0	0	0	0	0	0	0	
2017	0	0	0	0	0	0	0	0	0	0	
2018	0	0	0	0	0	0	0	0	0	0	
2019	0	0	0	0	0	0	0	0	0	0	
2020	0	0	0	0	0	1	48	174	79	180	
2021	0	0	0	0	0	0	0	0	0	0	
2022	0	0	0	0	0	0	0	0	0	0	

The last reported event was on 12/18/2020 which involved Standby Generation and Water Heaters for approximately an hour. It was difficult to separate residential and SBG contributions

	Interruptible Service										
			Summer			Winter					
Year	Number of	Average Event Size		Maximum Event Size		Number of	Average Event Size		Maximum Event Size		
	Events	(MW)	Number of Customers	(MW)	Number of Customers	Events	(MW)	Number of Customers	(MW)	Number of Customers	
2013	0	0	0	0	0	0	0	0	0	0	
2014	0	0	0	0	0	0	0	0	0	0	
2015	0	0	0	0	0	0	0	0	0	0	
2016	0	0	0	0	0	0	0	0	0	0	
2017	0	0	0	0	0	0	0	0	0	0	
2018	0	0	0	0	0	0	0	0	0	0	
2019	0	0	0	0	0	0	0	0	0	0	
2020	0	0	0	0	0	0	0	0	0	0	
2021	0	0	0	0	0	0	0	0	0	0	
2022	0	0	0	0	0	0	0	0	0	0	
Notes											
(Include Notes Here)											

				Curtaila	ble Service							
			Summer				Winter					
Year	Number of Avera		ge Event Size	Maximur	n Event Size	Number of	Average Event Size		Maximum Event Size			
	Events	(MW)	Number of Customers	(MW)	Number of Customers	Events	(MW)	Number of Customers	(MW)	Number of Customers		
2013	0	0	0	0	0	0	0	0	0	0		
2014	0	0	0	0	0	0	0	0	0	0		
2015	0	0	0	0	0	0	0	0	0	0		
2016	0	0	0	0	0	0	0	0	0	0		
2017	0	0	0	0	0	0	0	0	0	0		
2018	0	0	0	0	0	0	0	0	0	0		
2019	0	0	0	0	0	0	0	0	0	0		
2020	0	0	0	0	0	0	0	0	0	0		
2021	0	0	0	0	0	0	0	0	0	0		
2022	0	0	0	0	0	0	0	0	0	0		
Notes	Notes											
(Include Notes Here)												

TYSP Year	2023
Staff's Data Request #	1
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	[Demand Response Source or All Demand Response Sources]								
			Summer Peak	Winter Peak					
Year	Average Number of Customers	Activated During Peak?	Number of Customers Activated	Capacity Activated	Activated During Peak?	Number of Customers Activated	Capacity Activated		
		(Y/N)		(MW)	(Y/N)		(MW)		
2013	406,194	Ν	0	0	Ν	0	0		
2014	409,689	Ν	0	0	Ν	0	0		
2015	410,855	Ν	0	0	Ν	0	0		
2016	415,839	Ν	0	0	Ν	0	0		
2017	424,246	Ν	0	0	Ν	0	0		
2018	429,750	Ν	0	0	Ν	0	0		
2019	432,277	Ν	0	0	Ν	0	0		
2020	435,224	Ν	0	0	Ν	0	0		
2021	435,102	Ν	0	0	Ν	0	0		
2022	433,981	Ν	0	0	Ν	0	0		
Notes	Notes								
No events occurred									

		Resid	ential Load Ma	nagement				
			Summer Peak		Winter Peak			
Year	Average Number of Customers	Activated During Peak?	Number of Customers Activated	Capacity Activated	Activated During Peak?	Number of Customers Activated	Capacity Activated	
		(Y/N)		(MW)	(Y/N)		(MW)	
2013	405,737	N	0	0	Ν	0	0	
2014	409,227	Ν	0	0	Ν	0	0	
2015	410,396	Ν	0	0	Ν	0	0	
2016	415,369	Ν	0	0	Ν	0	0	
2017	423,900	Ν	0	0	Ν	0	0	
2018	429,403	Ν	0	0	Ν	0	0	
2019	431,862	Ν	0	0	Ν	0	0	
2020	434,807	Ν	0	0	Ν	0	0	
2021	434,663	Ν	0	0	Ν	0	0	
2022	433,563	Ν	0	0	Ν	0	0	
Notes	Notes							
(Include Notes Here)								

			nercial Load M Summer Peak	8	Winter Peak			
Year	Average Number of Customers	Activated During Peak?	Number of Customers Activated	Capacity Activated	Activated During Peak?	Number of Customers Activated	Capacity Activated	
		(Y/N)		(MW)	(Y/N)		(MW)	
2013	65	*	*	*	*	*	*	
2014	65	*	*	*	*	*	*	
2015	64	*	*	*	*	*	*	
2016	64	*	*	*	*	*	*	
2017	63	*	*	*	*	*	*	
2018	63	*	*	*	*	*	*	
2019	63	*	*	*	*	*	*	
2020	63	*	*	*	*	*	*	
2021	63	*	*	*	*	4	*	
2022	59	*	*	*	*	*	*	
otes	-							

Standby Generation								
			Summer Peak	Winter Peak				
Year	Average Number of Customers	Activated During Peak?	Number of Customers Activated	Capacity Activated	Activated During Peak?	Number of Customers Activated	Capacity Activated	
		(Y/N)		(MW)	(Y/N)		(MW)	
2013	253	Ν	0	0	Ν	0	0	
2014	259	Ν	0	0	Ν	0	0	
2015	260	Ν	0	0	Ν	0	0	
2016	269	N	0	0	Ν	0	0	
2017	145	Ν	0	0	Ν	0	0	
2018	147	Ν	0	0	Ν	0	0	
2019	178	Ν	0	0	Ν	0	0	
2020	175	Ν	0	0	Ν	0	0	
2021	179	Ν	0	0	Ν	0	0	
2022	183	Ν	0	0	Ν	0	0	
Notes	Notes							
(Include Notes Here)								

]	Interruptible So	ervice				
			Summer Peak		Winter Peak			
Year	Average Number of Customers	Activated During Peak?	Number of Customers Activated	Capacity Activated	Activated During Peak?	Number of Customers Activated	Capacity Activated	
		(Y/N)		(MW)	(Y/N)		(MW)	
2013	135	Ν	0	0	Ν	0	0	
2014	134	Ν	0	0	Ν	0	0	
2015	131	Ν	0	0	Ν	0	0	
2016	133	Ν	0	0	Ν	0	0	
2017	134	Ν	0	0	Ν	0	0	
2018	133	Ν	0	0	Ν	0	0	
2019	170	Ν	0	0	Ν	0	0	
2020	175	Ν	0	0	Ν	0	0	
2021	193	Ν	0	0	Ν	0	0	
2022	172	Ν	0	0	Ν	0	0	
Notes	Notes							
(Include Notes Here)								

Curtailable Service								
			Summer Peak		Winter Peak			
Year	Average Number of Customers	Activated During Peak?	Number of Customers Activated	Capacity Activated	Activated During Peak?	Number of Customers Activated	Capacity Activated	
		(Y/N)		(MW)	(Y/N)		(MW)	
2013	4	N	0	0	Ν	0	0	
2014	4	Ν	0	0	Ν	0	0	
2015	4	Ν	0	0	Ν	0	0	
2016	4	Ν	0	0	Ν	0	0	
2017	4	Ν	0	0	Ν	0	0	
2018	4	Ν	0	0	Ν	0	0	
2019	4	Ν	0	0	Ν	0	0	
2020	4	Ν	0	0	Ν	0	0	
2021	4	Ν	0	0	Ν	0	0	
2022	4	Ν	0	0	Ν	0	0	
Notes	Notes							
(Include Notes Here)								

TYSP Year	2023
Staff's Data Request #	1
Question No.	31

Loss of Load Probability, Reserve Margin, and Expected Unserved Energy Base Case Load Forecast								
		Annual Isolated	Annual Assisted					
	Loss of Load	Reserve Margin (%)) Expected	Loss of Load	Reserve Margin (%) Expected		
Year	Probability	(Including Firm	Unserved Energy	Probability	(Including Firm	Unserved Energy		
	(Days/Yr)	Purchases)	(MWh)	(Days/Yr)	Purchases)	(MWh)		
2023								
2024								
2025								
2026								
2027	Duke Er	nergy Florida is	required to main	ntain a 20% F	Reserve Margin, f	herefore no		
2028			LOLP study	was conducte	ed			
2029								
2030								
2031								
2032								

TYSP Year	2023
Staff's Data Request #	1
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		Ex Planned Ou	Average N	et Operating					
			•		tage Factor		ailability Factor	-	
		(P(OF)	(F)	OF)	(E	AF)	Heat Rate	(ANOHR)
	Unit								
Plant Name	No.	Historical	Projected	Historical	Projected	Historical	Projected	Historical	Projecte
ANCLOTE	1 2	4.13 7.55	4.13 7.55	1.59 3.92	1.59 3.92	84.27 77.43	84.27 77.43	11,615 11,231	11,615 11,231
BARTOW	2 P1	3.85	3.85	3.60	3.60	75.57	75.57	13,974	13,974
B, attow	P2	5.21	5.21	0.35	0.35	74.25	74.25	15,593	15,593
	P3	4.46	4.46	20.74	20.74	61.93	61.93	13,313	13,313
	P4	4.77	4.77	15.22	15.22	65.67	65.67	14,954	14,954
BARTOW CC	4A 4B	4.94 6.49	4.94 6.49	9.63 3.63	9.63 3.63	76.35 77.16	76.35 77.16	12,208 11,305	12,208 11,308
	4D 4C	2.43	2.43	20.86	20.86	71.72	71.72	10,328	10,328
	4D	9.29	9.29	2.77	2.77	79.95	79.95	11,702	11,70
							1 1		
	4S	7.34	7.34	1.80	1.80	81.90	81.90	583	583
BAYBORO	P1	1.21	1.21	5.11	5.11	78.28	78.28	16,645	16,64
	P2	1.22	1.22	1.38	1.38	78.55	78.55	15,449	15,449
	P3	1.21	1.21	3.16	3.16	79.25	79.25	17,747	17,747
	P4	1.22	1.22	2.41	2.41	80.27	80.27	15,535	15,53
CITRUS CC	1A 1B	10.34 10.70	10.34 10.70	2.81 1.38	2.81 1.38	77.43 77.31	77.43 77.31	10,485 10,541	10,48 10,54
	1B 1S	9.09	9.09	1.30	1.38	77.85	77.85	669	669
	2A	10.33	10.33	0.79	0.79	77.31	77.31	10,411	10,41
	2B	10.05	10.05	2.08	2.08	84.48	84.48	10,447	10,44
	2S	8.10	8.10	0.62	0.62	85.73	85.73	595	595
CRYSTAL RIVER	4 5	16.40 9.41	16.40 9.41	10.82 2.03	10.82 2.03	64.84 82.56	64.84 82.56	15,862 10,766	15,86
DEBARY	ə P2	9.41 8.99	9.41 8.99	1.43	1.43	69.98	69.98	10,766	10,76 14,72
DEDART	P3	3.37	3.37	4.16	4.16	68.26	68.26	15,124	15,12
	P4	8.52	8.52	4.61	4.61	66.07	66.07	15,763	15,76
	P5	3.25	3.25	9.24	9.24	64.26	64.26	15,172	15,17
	P6	5.10	5.10	6.59	6.59	68.75	68.75	14,650	14,65
	P7	5.28	5.28	2.88	2.88	76.70	76.70	13,751	13,75
	P8 P9	5.61 0.58	5.61 0.58	19.60 10.75	19.60 10.75	62.26 62.11	62.26 62.11	13,034 14,216	13,034 14,210
	P10	6.18	6.18	6.49	6.49	60.60	60.60	13,508	13,508
HINES	1A	8.28	8.28	3.66	3.66	82.56	82.56	11,225	11,22
	1B	8.50	8.50	4.35	4.35	83.16	83.16	11,304	11,304
	1S	8.37	8.37	2.11	2.11	83.31	83.31	0	0
	2A	11.43	11.43	1.38	1.38	83.39	83.39	11,777	11,77
	2B 2S	11.38 11.24	11.38 11.24	0.93 0.36	0.93 0.36	80.01 82.05	80.01 82.05	<u>11,820</u> 0	11,82 0
	3A	12.08	12.08	2.67	2.67	85.06	85.06	11,392	11,392
	3B	11.83	11.83	2.30	2.30	77.42	77.42	11,287	11,28
	3S	11.90	11.90	1.27	1.27	84.07	84.07	0	0
	4A	8.71	8.71	2.70	2.70	81.41	81.41	11,153	11,15
	4B	8.12	8.12	10.82	10.82	82.77	82.77	11,255	11,25
INTERCESSION CITY	4S P1	8.02 8.88	8.02 8.88	2.11 0.00	2.11 0.00	81.18 72.62	81.18 72.62	0 14,358	0 14,35
	P1 P2	0.00 11.14	0.00	11.65	11.65	58.96	58.96	14,358	14,35
	P3	6.61	6.61	0.71	0.71	73.93	73.93	15,439	15,43
	P4	6.30	6.30	0.61	0.61	55.88	55.88	14,710	14,71
	P5	8.02	8.02	1.54	1.54	74.85	74.85	14,180	14,18
	P6	9.00	9.00	0.27	0.27	74.47	74.47	16,140	16,14
	P7	2.44	2.44	0.25	0.25	77.42	77.42	13,084	13,08
	P8 P9	0.00	0.00	2.13 2.86	2.13 2.86	72.03 73.82	72.03 73.82	<u>13,722</u> 13,242	13,72 13,24
	P10	8.24	8.24	0.51	0.51	69.57	69.57	13,640	13,64
	P11	1.95	1.95	2.79	2.79	85.78	85.78	12,548	12,54
	P12	23.67	23.67	0.86	0.86	62.88	62.88	13,468	13,46
	P13	6.55	6.55	0.42	0.42	77.91	77.91	14,738	14,73
OSPREY	P14 1A	7.74 12.74	7.74 12.74	0.65 2.82	0.65 2.82	76.47 76.76	76.47 76.76	13,880 11,569	13,88
USPRET	1A 1B	12.74	12.74	3.73	3.73	76.76	76.76	11,569	11,56 11,59
	1B 1S	12.74	12.74	1.48	1.48	71.88	71.88	1,022	1,022
SUWANNEE	P1	3.24	3.24	3.67	3.67	64.76	64.76	14,043	14,04
	P2	7.28	7.28	0.09	0.09	72.62	72.62	16,341	16,34
	P3	3.83	3.83	0.97	0.97	72.95	72.95	13,973	13,97
TIGER BAY	1A	7.75	7.75	12.54	12.54	68.02	68.02	11,986	11,98
	1S	3.99	3.99	12.72	12.72	73.07	73.07	0	0
UNIV. OF FLA.	P1							-	-
	H.I	11.87	11.87	1.39	1.39	81.36	81.36	8,170	8,170

NOTE: Historical - average of past three years (2020, 2021 and 2022) Projected - average of past three years (2020, 2021 and 2022)

TYSP Year	2023
Staff's Data Request #	1
Question No.	33

Facility Name	Unit No.	County Location	Unit Type	Primary Fuel	Commercia	ll In-Service	Gross Cap	acity (MW)	Net Capa	city (MW)	Firm Capa	acity (MW)	Capacity Factor
					Мо	Yr	Sum	Win	Sum	Win	Sum	Win	(%)
ANCLOTE	1	PASCO	ST	NG	October	1974	522	534	508	521	508	521	27.0
ANCLOTE	2	PASCO	ST	NG	October	1978	520	527	505	514	505	514	22.6
CRYSTAL RIVER	4	CITRUS	ST	BIT	December	1982	769	778	712	721	712	721	30.3
CRYSTAL RIVER	5	CITRUS	ST	BIT	October	1984	755	778	698	721	698	721	39.0
P L BARTOW	4	PINELLAS	CC	NG	June	2009	1132	1279	1112	1259	1112	1259	59.9
CITRUS COUNTY COMBINED CYCLE	PB1	CITRUS	CC	NG	October	2018	825	959	807	925	807	925	69.7
CITRUS COUNTY COMBINED CYCLE	PB2	CITRUS	CC	NG	November	2018	821	961	803	929	803	929	69.8
HINES ENERGY COMPLEX	1	POLK	CC	NG	April	1999	495	534	490	521	490	521	73.2
HINES ENERGY COMPLEX	2	POLK	CC	NG	December	2003	540	563	532	549	532	549	56.7
HINES ENERGY COMPLEX	3	POLK	CC	NG	November	2005	531	564	523	555	523	555	68.4
HINES ENERGY COMPLEX	4	POLK	CC	NG	December	2007	524	552	516	544	516	544	59.8
OSPREY ENERGY CENTER POWER PLANT	1	POLK	CC	NG	May	2004	597	612	583	600	245	245	35.2
TIGER BAY	1	POLK	CC	NG	August	1997	202	231	199	230	199	230	62.8
BARTOW	P1	PINELLAS	GT	DFO	May	1972	41	50	41	50	41	50	0.5
BARTOW	P2	PINELLAS	GT	NG	June	1972	41	53	41	53	41	53	2.1
BARTOW	P3	PINELLAS	GT	DFO	June	1972	41	51	41	51	41	51	0.4
BARTOW	P4	PINELLAS	GT	NG	June	1972	45	58	45	58	45	58	2.0
BAYBORO	P1	PINELLAS	GT	DFO	April	1973	44	58	44	58	44	58	0.2
BAYBORO	P2	PINELLAS	GT	DFO	April	1973	41	55	41	55	41	55	0.2
BAYBORO	P3	PINELLAS	GT	DFO	April	1973	43	57	43	57	43	57	0.1
BAYBORO	P4	PINELLAS	GT	DFO	April	1973	43	56	43	56	43	56	0.2
DEBARY	P2	VOLUSIA	GT	DFO	December	1975	45	57	45	57	45	57	0.6
DEBARY	P3	VOLUSIA	GT	DFO	December	1975	45	59	45	59	45	59	0.5
DEBARY	P4	VOLUSIA	GT	DFO	December	1975	46	59	46	59	46	59	0.5
DEBARY	P5	VOLUSIA	GT	DFO	December	1975	45	58	45	58	45	58	0.2
DEBARY	P6	VOLUSIA	GT	DFO	December	1975	46	59	46	59	46	59	0.3
DEBARY		VOLUSIA	GT		October	1992	74	93	74	93	74	93	6.3
DEBARY	P8	VOLUSIA	GT	NG	October	1992	75	94	75	94	75	94	1.7
DEBARY	P9	VOLUSIA	GT	NG	October	1992	76	94	76	94	76	94	4.2
DEBARY	P10	VOLUSIA	GT	DFO	October	1992	72	88	72	88	72	88	0.7
INTERCESSION CITY	P1	OSCEOLA	GT	DFO	May	1974	45	61	45	61	45	61	0.3
INTERCESSION CITY	P2	OSCEOLA	GT	DFO	May	1974	46	60	46	60	46	60	0.2
INTERCESSION CITY	P3	OSCEOLA	GT	DFO	May	1974	46	61	46	61	46	61	0.3
INTERCESSION CITY	P4	OSCEOLA	GT	DFO	May	1974	46	62	46	62	46	62	0.1
INTERCESSION CITY	P5	OSCEOLA	GT	DFO	May	1974	45	59	45	59	45	59	0.3
INTERCESSION CITY	P6	OSCEOLA	GT	DFO	May	1974	47	60	47	60	47	60	0.3
INTERCESSION CITY	P7	OSCEOLA	GT	NG	October	1993	78	90	78	90	78	90	6.4
INTERCESSION CITY	P8	OSCEOLA	GT	NG	October	1993	77	88	77	88	77	88	6.3
INTERCESSION CITY	P9	OSCEOLA	GT	NG	October	1993	77	88	77	88	77	88	1.6
INTERCESSION CITY	P10	OSCEOLA	GT	NG	October	1993	74	86	74	86	74	86	4.5
INTERCESSION CITY	P11	OSCEOLA	GT	DFO	January	1997	140	161	140	161	140	161	0.5
INTERCESSION CITY	P12	OSCEOLA	GT	NG	December	2000	73	89	73	89	73	89	5.7
INTERCESSION CITY	P13	OSCEOLA	GT	NG	December	2000	73	91	73	91	73	91	10.8
INTERCESSION CITY	P14	OSCEOLA	GT	NG	December	2000	73	90	73	90	73	90	10.0
SUWANNEE RIVER	P1	SUWANNEE		NG	October	1980	48	65	48	65	48	65	4.6
SUWANNEE RIVER	P2	SUWANNEE		DFO	October	1980	48	64	48	64	48	64	3.9
SUWANNEE RIVER	P3	SUWANNEE	GT	NG	November	1980	49	65	49	65	49	65	5.3

SO WARNEL RIVER	15	50 WARNEL	01	nu	November	1700	ر ۲	05	72	05		05	5.5
UNIVERSITY OF FLORIDA	P1	ALACHUA	GT	NG	January	1994	44	50	44	50	44	50	85.8
Notes													
(Include Notes Here)													

TYSP Year	2023
Staff's Data Request #	1
Question No.	34

Facility Name	Unit No.	County Location	Unit Type	Primary Fuel	Commercial In-Service		Gross Capacity (MW)		Net Capacity (MW)		Firm Capacity (MW)		Projected Capacity Factor
					Mo	Yr	Sum	Win	Sum	Win	Sum	Win	(%)
Notes													
(Include Notes Here)													

TYSP Year	2023
Staff's Data Request #	1
Question No.	35

Facility Name	Unit No.	County Location	Unit Type	Primary Fuel	Commerci	al In-Service	Gross Capacity (MW)		Net Capacity (MW)		Firm Capacity (MW)		Capacity Factor
		2000000			Мо	Yr	Sum	Win	Sum	Win	Sum	Win	(%)
Econolockhatchee Photovoltaic Array	1	Volusia	PV	SO	1	1989	0.007	0.007	0.007	0.007	0	0	13
Osceola	1	Osceola	PV	SO	5	2016	3.8	3.8	3.8	3.8	1.7	0	17
Perry	1	Taylor	PV	SO	7	2016	5.1	5.1	5.1	5.1	2.3	0	18
Suwannee	1	Suwannee	PV	SO	12	2017	8.8	8.8	8.8	8.8	4.0	0	22
Hamilton	1	Hamilton	PV	SO	12	2018	74.9	74.9	74.9	74.9	42.7	0	26
Lake Placid	1	Highlands	PV	SO	12	2019	45.0	45.0	45.0	45.0	25.7	0	20
Trenton	1	Gilchrist	PV	SO	12	2019	74.9	74.9	74.9	74.9	42.7	0	25
St. Petersburg Pier	1	Pinellas	PV	SO	12	2019	0.35	0.35	0.35	0.35	0.2	0	19
Columbia	1	Columbia	PV	SO	3	2020	74.9	74.9	74.9	74.9	42.7	0	27
DeBary	1	Volusia	PV	SO	5	2020	74.5	74.5	74.5	74.5	33.5	0	22
Sante Fe	1	Columbia	PV	SO	3	2021	74.9	74.9	74.9	74.9	42.7	0	24
Twin Rivers	1	Hamilton	PV	SO	3	2021	74.9	74.9	74.9	74.9	42.7	0	25
Duette	1	Manatee	PV	SO	10	2021	74.5	74.5	74.5	74.5	42.5	0	25
Sandy Creek	1	Bay	PV	SO	5	2022	74.9	74.9	74.9	74.9	42.5	0	26
Ft Green	1	Hardee	PV	SO	6	2022	74.9	74.9	74.9	74.9	33.5	0	20
Charlie Creek	1	Hardee	PV	SO	8	2022	74.9	74.9	74.9	74.9	42.7	0	19
Bay Trail	1	Citrus	PV	SO	9	2022	74.9	74.9	74.9	74.9	42.7	0	23
Dolphin Solar	1	Pinellas	PV	SO	8	2022	0.25	0.25	0.25	0.25	0	0	21
Notes	•	-	-			•		-			•	•	
**Solar CFs are from: Schee	dule A-4s or DE	F's year-end Sol	ar Plant Operat	ion Status Repor	t filed as requ	ested under dock	et #20230007.						

TYSP Year	2023
Staff's Data Request #	1
Question No.	36

Facility Name	Unit No.	County Location	Unit Type	Primary Fuel		ercial In- rvice		Capacity W)	Net Capa	city (MW)	Firm Cap	acity (MW)	Projected Capacity Factor
		2000000		1 401	Мо	Yr	Sum	Win	Sum	Win	Sum	Win	(%)
Hildreth	1	Suwannee	PV	SO	5	2023	74.9	74.9	74.9	74.9	42.7	0	~28%
Hardeetown	1	Levy	PV	SO	5	2023	74.9	74.9	74.9	74.9	42.7	0	~28%
High Spring	1	Alachua	PV	SO	7	2023	74.9	74.9	74.9	74.9	42.7	0	~28%
Mule Creek	1	Bay	PV	SO	2	2024	74.9	74.9	74.9	74.9	42.7	0	~28%
Winquepin	1	Madison	PV	SO	2	2024	74.9	74.9	74.9	74.9	42.7	0	~28%
Falmouth	1	Suwannee	PV	SO	3	2024	74.9	74.9	74.9	74.9	42.7	0	~28%
Renewable Energy Center #27	1	Unknown	PV	SO	1	2025	74.9	74.9	74.9	74.9	18.5	0	~28%
Renewable Energy Center #28	1	Unknown	PV	SO	1	2025	74.9	74.9	74.9	74.9	18.5	0	~28%
County Line	1	Gilchrist	PV	SO	2	2025	74.9	74.9	74.9	74.9	42.7	0	~28%
Renewable Energy Center #29	1	Unknown	PV	SO	8	2025	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #30	1	Unknown	PV	SO	8	2025	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #31	1	Unknown	PV	SO	8	2025	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #32	1	Unknown	PV	SO	8	2025	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #33	1	Unknown	PV	SO	12	2026	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #34	1	Unknown	PV	SO	12	2026	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #35	1	Unknown	PV	SO	12	2026	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #36	1	Unknown	PV	SO	12	2026	74.9	74.9	74.9	74.9	18.75	0	~28%
Renewable Energy Center #37	1	Unknown	BA	N/A	1	2027	100	100	100	100	90	90	~10%
Renewable Energy Center #38	1	Unknown	PV	SO	12	2027	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #39	1	Unknown	PV	SO	12	2027	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #40	1	Unknown	PV	SO	12	2027	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #41	1	Unknown	PV	SO	12	2027	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #42	1	Unknown	PV	SO	12	2028	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #43	1	Unknown	PV	SO	12	2028	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #44	1	Unknown	PV	SO	12	2028	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #45	1	Unknown	PV	SO	12	2028	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #46	1	Unknown	PV	SO	12	2029	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #47	1	Unknown	PV	SO	12	2029	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #48	1	Unknown	PV	SO	12	2029	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #49	1	Unknown	SPS	SO	12	2029	74.9	74.9	74.9	74.9	9.5	33.5	~34%
Renewable Energy Center #50	1	Unknown	SPS	SO	12	2029	74.9	74.9	74.9	74.9	9.5	33.5	~34%
Renewable Energy Center #51	1	Unknown	PV	SO	12	2030	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #52	1	Unknown	PV	SO	12	2030	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #53	1	Unknown	PV	SO	12	2030	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #54	1	Unknown	PV	SO	12	2030	74.9	74.9	74.9	74.9	9.25	0	~28%
Renewable Energy Center #55	1	Unknown	SPS	SO	12	2030	74.9	74.9	74.9	74.9	9.5	33.5	~34%
Renewable Energy Center #56	1	Unknown	SPS	SO	12	2030	74.9	74.9	74.9	74.9	9.5	33.5	~34%
Renewable Energy Center #57	1	Unknown	PV	SO	12	2030	74.9	74.9	74.9	74.9	9.4	0	~28%
Renewable Energy Center #58	1	Unknown	PV	SO	12	2031	74.9	74.9	74.9	74.9	9.4	0	~28%
Renewable Energy Center #59	1	Unknown	PV	SO	12	2031	74.9	74.9	74.9	74.9	9.4	0	~28%
Renewable Energy Center #60	1	Unknown	PV	SO	12	2031	74.9	74.9	74.9	74.9	9.4	0	~28%
Renewable Energy Center #61	1	Unknown	PV	SO	12	2031	74.9	74.9	74.9	74.9	9.4	0	~28%
Renewable Energy Center #62	1	Unknown	SPS	SO	12	2031	74.9	74.9	74.9	74.9	8.5	33.5	~34%
Renewable Energy Center #63	1	Unknown	SPS	SO	12	2031	74.9	74.9	74.9	74.9	8.5	33.5	~34%
Renewable Energy Center #64	1	Unknown	BA	N/A	6	2031	150	150	150	150	135	135	~17%
Renewable Energy Center #65	1	Unknown	PV	SO	12	2032	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #66	1	Unknown	PV	SO	12	2032	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #67	1	Unknown	PV	SO	12	2032	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #68	1	Unknown	PV	SO	12	2032	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #69	1	Unknown	PV	SO	12	2032	74.9	74.9	74.9	74.9	9.3	0	~28%
Renewable Energy Center #70	1	Unknown	PV	SO	12	2032	74.9	74.9	74.9	74.9	9.3	0	~28%
Notes	· ·			~~				,,		,,			2070

Bay Ranch, Hildreth and Hardeetown are under construction and are expected to be in service Q2-2023. High Spring is also under construction and expected to be in service Q3-2023. Mule Creek, Winquepin, and Falmouth are expected to be in service early 2024. The rest of the units are still in the development or planning stages. *DEF modeling derives an equivalent summer non-coincident, but on-peak-hour capacity value equal to 25% of the facility's nameplate rating for planned PV installations from 2025 to 2026 and 12.5% for 2027 and beyond.

TYSP Year	2023
Staff's Data Request #	1
Question No.	38

Year		As-Available Energy (\$/MWh)	On-Peak Average (\$/MWh)	Off-Peak Average (\$/MWh)
	2013	34.35	38.29	31.02
	2014	37.68	42.97	33.21
	2015	26.03	28.74	23.74
	2016	25.97	29.79	22.73
Actual	2017	28.97	32.44	26.03
Act	2018	30.84	34.80	27.49
	2019	23.71	27.22	20.73
	2020	18.57	21.22	16.33
	2021	34.45	40.53	29.30
	2022	61.67	73.74	51.45
	2023	56.34	64.82	49.17
	2024	46.82	54.19	40.59
	2025	40.83	46.33	36.17
-	2026	39.67	44.89	35.26
ecte	2027	38.36	42.72	34.67
Projected	2028	40.09	45.17	35.79
L	2029	39.23	43.70	35.45
	2030	37.75	40.83	35.14
	2031	36.40	39.14	34.08
	2032	35.42	37.91	33.30
Notes				

This year, both the Actuals and the Projected As-Available payment rates shown reflect all components but for the delivery voltage adjustment (because the generator's interconnection level is unknown) defined under rule 25-17.0825(2)(a). These components include: identifiable variable operating and maintenance expenses, start up costs, and a reasonable as-available block size of solar QF generation for appropriate customer protections. The Projected values are only valid and effective as of December 31, 2022 due to the volume of potential solar QF activity. DEF also anticipates that at some point, the system will have increasing amounts of time when the required DEF system resources along with potential solar QF generation may exceed DEF load levels and that excess generation is not fully captured in the Projected values herein.

TYSP Year	2023
Staff's Data Request #	1
Question No.	39

Commentione Unit Name	Summer Capacity	Certification Dates (i	if Applicable)	In-Service Date				
Generating Unit Name	(MW)	Need Approved (Commission) PPSA Certified		(MM/YY)				
	Nuclear Unit Additions							
Combustion Turbine Unit Additions								
		Combined Cycle Unit Addition	15					
		Steam Turbine Unit Additions	S					
Notes								
(Include Notes Here)								

TYSP Year	2023
Staff's Data Request #	1

Start's Data Request #1Question No.41

	Unit	Unit	Fuel	Capacity Factor (%)										
Plant	No.	Туре	Туре	Actual	Actual Projected									
				2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Anclote	1-2	Steam	Gas	24.8	18.6	20.4	8.7	14.6	13.8	13.3	10.1	8.6	6.0	6.2
Crystal River	4-5	Steam	Coal	34.6	10.3	12.5	12.9	11.1	11.4	16.7	16.1	22.3	32.7	29.4
Bartow CC	4	Combined Cycle	Gas	59.9	63.5	59.5	60.5	59.5	55.4	56.1	59.8	59.9	60.5	60.1
Citrus CC	1-2	Combined Cycle	Gas	69.7	83.9	86.0	83.1	83.6	86.1	75.8	82.1	80.7	73.5	75.8
Hines Energy Complex	1-4	Combined Cycle	Gas	64.4	61.8	64.3	58.7	56.8	56.8	56.5	53.3	49.9	46.6	44.7
Osprey CC	1	Combined Cycle	Gas	35.2	58.2	71.0	78.4	75.5	70.5	76.0	66.8	65.0	63.1	55.9
Tiger Bay	1	Combined Cycle	Gas	62.8	61.4	57.5	49.1	55.6	48.8	51.9	43.2	37.9	26.2	28.2
Bartow Peaker	1-4	Gas Turbine	Gas/Oil	1.3	0.4	0.7	0.7	0.7	0.6	0.8	1.1	0.7	0.7	0.6
Bayboro	1-4	Gas Turbine	Oil	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DeBary	2-10	Gas Turbine	Gas/Oil	1.9	2.3	2.8	2.7	2.4	1.8	2.3	2.1	2.2	1.8	1.8
Intercession City	1-14	Gas Turbine	Gas/Oil	3.7	2.0	2.8	2.3	1.9	1.4	1.7	1.8	1.7	1.3	1.2
Suwannee Peaker	1-3	Gas Turbine	Gas/Oil	4.6	1.9	2.5	2.5	2.8	1.9	2.3	2.4	2.7	2.1	2.0
University of Florida	1	Gas Turbine	Gas	85.8	78.1	78.1	77.6	77.2	78.8	0.0	0.0	0.0	0.0	0.0
Solar Bay Ranch	1	PV	SO	0.0	28.9	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar Bay Trail	1	PV	SO	18.3	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.5
Solar Charlie Creek	1	PV	SO	16.7	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.0
Solar Columbia	1	PV	SO	27.0	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.0	25.7	23.6
Solar County Line	1	PV	SO	0.0	0.0	0.0	29.3	28.7	28.7	28.7	28.7	28.7	28.7	28.4
Solar Debary	1	PV	SO	21.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.4	22.0	20.4
Solar Duette	1	PV	SO	24.5	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.0	25.7	23.7
Solar Falmouth	1	PV	SO	0.0	0.0	29.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar Fort Green	1	PV	SO	18.1	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.4
Solar Hamilton	1	PV	SO	26.3	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.1	25.8	23.8
Solar Hardeetown	1	PV	SO	0.0	28.9	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar High Spring	1	PV	SO	0.0	27.0	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar Hildreth	1	PV	SO	0.0	28.9	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar Lake Placid	1	PV	SO	19.7	27.0	27.0	27.1	27.0	27.0	27.0	27.0	26.9	25.7	23.9
Solar Mule Creek	1	PV	SO	0.0	0.0	29.3	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar Osc Perry Suw	1	PV	SO	22.2	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.3	22.1	20.2
Solar Sandy Creek	1	PV	SO	23.4	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.0
Solar Santa Fe	1	PV	SO	26.6	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.0	25.8	23.7
Solar St Pete Pier	1	PV	SO	0.0	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.3	22.1	20.4
Solar Trenton	1	PV	SO	27.6	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.0	25.7	23.8
Solar Twin Rivers	1	PV	SO	27.7	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.1	25.8	23.7
Solar Winquepin	1	PV	SO	0.0	0.0	29.3	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7
Solar Generic	1-36	PV	SO	0.0	0.0	0.0	26.3	27.2	27.4	27.3	27.4	27.4	27.4	27.2
Solar plus Storage Gener	1-6	PV-Storage	SO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.6	33.1	33.5	33.4
Battery 2 Hours	1-2	Storage	SO	0.0	0.0	0.0	0.0	0.0	9.9	10.1	10.3	10.7	10.0	10.5
Battery 4 Hours	1-3	Storage	SO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.9
Notes														
(Include Notes Here)														

TYSP Year	2023
Staff's Data Request #	1
Question No.	43

	(MW)	Date (MM/YYY)	Potential Conversion	Potential Issues
NG	508	10/74	CC	Project Development
NG	505	10/78	CC	Project Development
BIT	712	12/82	CC/IGCC	Project Development
BIT	698	10/84	CC/IGCC	Project Development
	NG BIT	NG 508 NG 505 BIT 712	NG 508 10/74 NG 505 10/78 BIT 712 12/82	NG 508 10/74 CC NG 505 10/78 CC BIT 712 12/82 CC/IGCC

TYSP Year	2023
Staff's Data Request #	1
Question No.	44

Plant Name	Fuel Type	Summer Capacity (MW)	In-Service Date (MM/YYY)	Potential Conversion	Potential Issues
Crystal River	BIT	712	12/82	CC/IGCC	Project Development
Crystal River	BIT	698	10/84	CC/IGCC	Project Development
Notes					
(Include Notes Here)					

TYSP Year	2023
Staff's Data Request #	1
Question No.	45

Transmission Line	Line Length	Nominal Voltage	Date Need	Date TLSA	In-Service Date
	(Miles)	(kV)	Approved	Certified	
N/A	N/A	N/A	N/A	N/A	N/A
Notes					
	1, •		• • • • • • • • • • • • • • • • • • • •	•	

DEF has no proposed transmission lines for the current planning period that require certification under the Transmission Line Siting Act, nor are there any that have already been approved, but are not yet inservice.

2023 TYSP - Data Request #1.Excel Tables

TYSP Year	2023
Staff's Data Request #	1
Question No.	46

Nominal, Firm Purchases						
	Firm Purchases					
Year	\$/MWh	Escalation %				
HISTORY:						
2020	138.66					
2021	156.92	13.2%				
2022	179.25	14.4%				
FORECAST:						
2023	213.15					
2024	183.98	-13.7%				
2025	135.52	-26.3%				
2026	114.16	-15.8%				
2027	75.89	-33.5%				
2028	50.29	-33.7%				
2029	51.94	3.3%				
2030	49.44	-4.8%				
2031	42.63	-13.8%				
2032	41.32	-3.1%				

TYSP Year	2023
Staff's Data Request #	1
Question No.	47

Seller Name	Facility Name	Unit No.	County Location	Unit Type	Primary Fuel	Gross C (M	Capacity W)	Net Capa	city (MW)		ted Firm zy (MW)		Ferm Dates I/YY)
						Sum	Win	Sum	Win	Sum	Win	Start	End
Northern Star Generation	Mulberry	1	Polk	CC	NG	115	115	115	115	115	115	12/1/1994	8/8/2024
Northern Star Generation	Orange Cogen	1	Polk	CC	NG	104	104	104	104	104	104	12/16/1995	12/31/2025
Northern Star Generation	Orlando Cogen	1	Orange	CC	NG	115	115	115	115	115	115	1/7/1994	12/31/2023
General Electric Financial Services	Shady Hills	1-3	Pasco	GT	NG	482	523	482	523	482	523	4/1/2007	4/30/2024
Northern Star Generation	Vandolah Power	1-4	Hardee	GT	NG	657	701	657	701	657	701	6/1/2012	5/31/2027
Notes													
(Include Notes Here)													

TYSP Year	2023
Staff's Data Request #	1
Question No.	48

Seller Name	Facility Name	Unit No.	•	Unit Type	•	Gross Cap	acity (MW)	Net Capa	city (MW)		ted Firm ty (MW)	Contract T (MM	Cerm Dates Z/YY)
				• •		Sum	Win	Sum	Win	Sum	Win	Start	End
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Notes													
(Include Notes Here)													

TYSP Year	2023
Staff's Data Request #	1
Question No.	49

Seller Name	Facility Name	Unit No.	County Location	Unit Type	Primary Fuel	Gross Cap	acity (MW)	Net Capa	city (MW)		ted Firm y (MW)		Ferm Dates I/YY)
			Location		Fuer	Sum	Win	Sum	Win	Sum	Win	Start	End
Pasco County	Pasco County Resource Recovery	ST	Pasco	ST	MSW	23	23	23	23	23	23	1/1/1995	12/31/2024
Pinellas County	Pinellas County Resource Recovery	ST	Pinellas	ST	MSW	55	55	55	55	55	55	1/1/1995	12/31/2024
				А	s Available								
Lake County	Lake County Resource Recovery	ST	Lake	ST	MSW	13	13	13	13	N/A	N/A	7/1/2014	N/A
Dade County	Metro-Dade County Resource Recovery	ST	Dade	ST	MSW	43	43	43	43	N/A	N/A	1/1/2014	N/A
Lee County	Lee County Resource Recovery	ST	Lee	ST	MSW	40	40	40	40	N/A	N/A	1/1/2017	N/A
PCS Phosphate	Swift Creek	ST	WH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1/1/1980	N/A
Notes													
(Include Notes Here)													

TYSP Year	2023
Staff's Data Request #	1
Question No.	50

Seller Name	Facility Name	Unit No.	County Location	I nit I vno	Primary Fuel	Gross Capacity (MW)		Net Capacity (MW)		Contracted Firm Capacity (MW)		Contract Term Dates (MM/YY)	
						Sum	Win	Sum	Win	Sum	Win	Start	End
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
otes													
nclude Notes Here)													

TYSP Year	2023
Staff's Data Request #	1
Question No.	52

Buyer Name	Facility Name	Unit No.	County Location	Unit Type	Primary Fuel	Gross Cap	acity (MW)	Net Capa	city (MW)		Tirm Capacity W)		「erm Dates I/YY)	Description	Status (Expired / Modified /
						Sum	Win	Sum	Win	Sum	Win	Start	End		Same)
Seminole	N/A	N/A	N/A	N/A	Nat Gas	N/A	N/A	N/A	N/A	200-500	200-500	6/1/2016	12/31/2024	Partial Reqs	Same
Seminole	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	0.014	0.014	6/1/1987	Evergreen	Partial Reqs	Same
Seminole	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	0	50-600	1/1/2021	3/31/2027	Partial Reqs	Same
Seminole	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	50-400	50-400	1/1/2021	12/31/2030	Partial Reqs	Same
Seminole	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	50-400	50-400	1/1/2021	12/31/2035	Partial Reqs	Same
Seminole	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	150	0	6/1/2022	9/30/2022	Partial Reqs	Modified
Reedy Creek	N/A	N/A	N/A	N/A	Nat Gas	N/A	N/A	N/A	N/A	141	81	1/1/2016	12/31/2024	Partial Reqs	Modified
Tampa Electric	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	0-515	0-515	1/26/2019	12/31/2023	Partial Reqs	Modified
Notes	-	-	-	-						-					

The Seminole agreements have optionality. The agreements with 50-400 MW listed have a combined maximum of 450 MW through 2030.

A Seminole system average product was added for summer of 2022

Tampa Electric was extended through the end of 2023

Reedy Creek Natural Gas was extended through the end of 2024

TYSP Year	2023
Staff's Data Request #	1
Question No.	53

	Buyer Name	Unit No.		County Location	Unit Type	Primary Fuel	Gross Capa	acity (MW)	Net Capacity (MW)		Contracted Firm Capacity (MW)		Contract Term Dates (MM/YY)		Description	Status (Expired / Modified /
					J I -		Sum	Win	Sum	Win	Sum	Win	Start	End		Same)
Sen	inole	N/A	N/A	N/A	N/A	System	N/A	N/A	N/A	N/A	250	0	6/1/2023	9/30/2023	Partial Reqs	New
Not	es															
File	l with FERC 3/29/2023	, but not yet ap	proved as o	f March 31,	2023											

TYSP Year	2023
Staff's Data Request #	1
Question No.	55

	Annual Renewable Generation (GWh)										
Renewable Source	Actual	Projected									
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Utility - Firm	1,581	2,554	3,345	4,178	4,663	5,363	6,074	6,767	7,723	8,797	9,955
Utility - Non-Firm	0	0	0	0	0	0	0	0	0	0	0
Utility - Co-Firing	0	0	0	0	0	0	0	0	0	0	0
Purchase - Firm	620	522	531	527	0	0	0	0	0	0	0
Purchase - Non-Firm	25	118	188	242	601	667	755	819	904	969	1,057
Purchase - Co-Firing	0	0	0	0	0	0	0	0	0	0	0
Customer - Owned	787	1,028	1,345	1,672	2,009	2,287	2,462	2,619	2,788	2,964	3,151
Total	3,012	4,222	5,409	6,618	7,273	8,317	9,290	10,204	11,415	12,730	14,162
Notes	-			-							
(Include Notes Here)											

TYSP Year	2023
Staff's Data Request #	1
Question No.	64

Project Name	Pilot Program (Y/N)	In-Service/ Pilot Start Date (MM/YY)	Max Capacity Output (MW)	Max Energy Stored (MHh)	Conversion Efficiency (%)
USF Microgrid Energy Storage Pilot	Y	7/8/2018	0.25	0.48	88.0%
Trenton	Y	12/21/2021	11.00	15.60	83.2%
Lake Placid BESS	Y	12/9/2021	17.28	50.60	83.5%
Cape San Blas	Y	2/10/2022	5.50	20.50	83.5%
Jennings	Y	4/5/2022	5.50	8.50	84.0%
Duke / UCF Long-Duration Energy Storage Project	Y	7/27/2022	0.01	0.04	75.0%
Micanopy	Y	8/5/2022	8.25	18.20	83.5%
Notes					
(Include Notes Here)					

TYSP Year	2023
Staff's Data Request #	1
Question No.	65

Project Name	Pilot Program (Y/N)	In-Service/ Pilot Start Date (MM/YY)	Projected Max Capacity Output (MW)	Projected Max Energy Stored (MHh)	Projected Conversion Efficiency (%)
John Hopkins Microgrid	Y	3Q 2022	2.475	23.5	83.5%
Notes					
(Include Notes Here)					

TYSP Year	2023
Staff's Data Request #	1
Question No.	71

Year		Estimated Cost of Standards of Performance for Greenhouse Gas Emissions Rule for New Sources Impacts (Present-Year \$ millions)										
	Capital Costs	O&M Costs	Fuel Costs	Total Costs								
2021	0	0	0	0								
2022	0	0	0	0								
2023	0	0	0	0								
2024	0	0	0	0								
2025	0	0	0	0								
2026	0	0	0	0								
2027	0	0	0	0								
2028	0	0	0	0								
2029	0	0	0	0								
2030	0	0	0	0								
Notes												
(Include Notes Here)												

TYSP Year	2023
Staff's Data Request #	1
Question No.	73

	Unit	Unit Fuel		Estimated EPA Rule Impacts: Operational Effects								
TT .*4	Туре	Туре	Capacity				CSAPR/		CCR			
Unit			(MW)	ELGS	ACE or replacement	MATS	MATS CAIR		Non-Hazardous	Special		
									Waste	Waste		
Anclote 1	Steam	NG	508	NA	NA	Convert to NG	Convert to NG	Impacted	NA	NA		
Anclote 2	Steam	NG	505	INA	n A	convert to NG	Convert to Ive	Impacted	INA	INA		
P L Bartow	CC	NG	1,112	NA	NA	NA	Dispatch Changes	Impacted	NA	NA		
Citrus Combined Cycle	CC	NG	1,610	NA	NA	NA	NA	Compliant as Constructed	NA	NA		
Crystal River 4	Steam	Coal	712	Income etc. 1	Incore etc. 1	Reagent,	ECD SCR Dimetal	Increased a 1	Increased a	NIA		
Crystal River 5	Steam	Coal	698	Impacted	Impacted	CEMS	FGD, SCR, Dispatch	Impacted	Impacted	NA		
Osprey	CC	NG	245	NA	NA	NA	NA	NA	NA	NA		
Hines PB1-4	CC	NG	2,061	NA	NA	NA	Dispatch Changes	NA	NA	NA		
Notes												
(Include Notes Here)												

TYSP Year	2023
Staff's Data Request #	1
Question No.	74

	Unit	Fuel	Net Summer	er Estimated EPA Rule Impacts: Cost Effects (CPVRR \$ millions)									
Unit	Туре	Туре	Capacity				CSAPR/		CO	CR			
			(MW)	ELGS	ACE or replacement	MATS	CAIR	CWIS	Non- Hazardous Waste	Special Waste			
Anclote 1	Steam	NG	508	NT A	NA	0	0	15-130	NA	NA			
Anclote 2	Steam	NG	505	NA		0	0		NA	NA			
P L Bartow	CC	NG	1112	NA	NA	0	0	10-170	NA	NA			
Crystal River 4	Steam	Coal	712	TBD	TBD	0	0	1-5	TDD	0			
Crystal River 5	Steam	Coal	698	IBD	тыр	0	0		TBD	0			
Notes													
(Include Notes Here)													

TYSP Year	2023
Staff's Data Request #	1
Question No.	75

	Unit	Fuel	Net Summer	7						
Unit	Туре	Туре	Capacity (MW)	ELGS	ACE or replacement	MATS	CSAPR/ CAIR	CWIS	CC Non-	CR Special
				ELGS					Hazardous Waste	Waste
Anclote 1	Steam	NG	508	NA	NA	NA	NA	TBD	NA	NA
Anclote 2	Steam	NG	505	NA	NA	NA	NA	TBD	NA	NA
P L Bartow	CC	NG	1,112	NA	NA	NA	NA	TBD	NA	NA
Citrus Combined Cycle	CC	NG	1,610	NA	NA	NA	NA	NA	NA	NA
Crystal River 4	Steam	Coal	712	TBD	TBD	NA	NA	NA	TBD	NA
Crystal River 5	Steam	Coal	698	TBD	TBD	NA	NA	NA	TBD	NA
Osprey	CC	NG	245	NA	NA	NA	NA	NA	NA	NA
Hines 1-4	CC	NG	2,061	NA	NA	NA	NA	NA	NA	NA
Notes										
(Include Notes Here)										

2023
1
77

Year		Uranium		Coal		Natural Gas		Residual Oil		Distillate Oil		Hydrogen	
		GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU
	2013	-	0	10,577	3.94	23,061	5.63	127.000	12.93	93	21.13	-	0.00
	2014	-	0	11,729	3.98	22,953	5.66	-	0.00	76	21.97	-	0.00
	2015	-	0	9,718	3.72	25,227	4.67	-	0.00	73	22.30	-	0.00
	2016	-	0	8,885	3.62	24,807	4.09	-	0.00	77	18.66	-	0.00
Actual	2017	-	0	8,722	3.44	27,307	4.26	-	0.00	62	16.43	-	0.00
Act	2018	-	0	8,422	3.20	28,687	4.52	-	0.00	90	19.80	-	0.00
	2019	-	0	4,322	3.66	35,170	3.93	-	0.00	33	20.36	-	0.00
	2020	-	0	3,287	3.66	36,327	3.37	-	0.00	33	22.28	-	0.00
	2021	-	0	5,042	3.03	34,517	5.28	-	0.00	61	20.27	-	0.00
	2022	-	0	4,375	4.58	36,423	8.50	-	0.00	146	22.63	-	0.00
	2023	-	0	1,233	7.52	36,532	6.52	-	0.00	1	21.33	-	0.00
	2024	-	0	1,567	6.22	37,880	5.40	-	0.00	1	19.26	-	0.00
	2025	-	0	1,609	5.49	36,684	5.16	-	0.00	2	18.29	-	0.00
p	2026	-	0	1,388	5.65	37,140	5.08	-	0.00	3	19.08	-	0.00
ecte	2027	-	0	1,404	5.71	36,429	5.15	-	0.00	1	20.39	-	0.00
Projected	2028	-	0	2,096	5.50	35,245	5.28	-	0.00	4	18.75	-	0.00
Ч	2029	-	0	1,983	4.99	34,840	5.28	-	0.00	12	16.92	-	0.00
	2030	-	0	2,789	4.50	33,346	5.16	-	0.00	8	15.65	-	0.00
	2031	-	0	4,025	3.99	30,575	5.18	-	0.00	3	15.17	-	0.00
	2032	-	0	3,642	4.07	30,086	5.33	-	0.00	1	15.53	-	0.00
Notes													
(Include Notes Here)													

TYSP Year	2023
Staff's Data Request #	1
Question No.	80

Year		Co	bal	Natur	al Gas	Distill	ate Oil
Ital		GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU
Projected	2022	4,986	3.83	33,638	4.43	4	17.45
Actual	2022	4,375	4.58	36,423	8.50	146	22.63
Notes							
(Include Notes Here)							

DUKE ENERGY FLORIDA TYSP Forecast Error Evaluation Form Data is NOT weather adjusted

Sys Year (G 2002 42 2003 43 2004 45 2005 46 2006 46 2007 47 2008 47 2009 44 2010 46 2011 42 2012 41 2013 40 2014 40 2015 42 2016 42	(GWH) 2 42,567 42 43,911 42 45,268 43 46,878 44 46,041 45 47,633 45 44,124 48 46,160 45	43,223 44,148 45,280 45,944 46,943 48,123 49,284 50,437	45,206 46,521 47,413 48,348 49,399 50,467 51,583 52,722	TYSP 2004 45,161 45,745 47,120 48,044 49,047 50,147 51,263 52,356 53,478 54,608	TYSP 2005 46,722 46,993 48,329 49,446 50,299 51,998 53,052 54,278	TYSP 2006 46,167 47,759 49,076 50,148 52,006 53,219	TYSP 2007 48,194 49,468 50,609 52,516	TYSP 2008 48,734 49,768	TYSP 2009	TYSP 2010	Load (NEL TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018	TYSP 2019	TYSP 2020	TYSP 2021	TYSP 2022
Year (G 2002 42 2003 43 2004 45 2005 46 2006 46 2007 47 2008 47 2009 44 2010 46 2011 42 2012 41 2013 40 2014 40 2015 42 2016 42	(GWH) 2 42,567 42 43,911 42 45,268 43 46,878 44 46,041 45 47,658 46 47,658 46 44,124 48 46,160 45 42,490 50 41,214 48 40,772 40,975 40,975 42,280 42,854 44	2002 42,200 42,440 43,223 44,148 45,280 45,944 46,943 48,123 49,284 50,437	2003 43,108 43,962 45,206 46,521 47,413 48,348 49,399 50,467 51,583 52,722	2004 45,161 45,745 47,120 48,044 49,047 50,147 51,263 52,356 53,478	2005 46,722 46,993 48,329 49,446 50,299 51,998 53,052	2006 46,167 47,759 49,076 50,148 52,006	2007 48,194 49,468 50,609	2008 48,734														
2003 43 2004 45 2005 46 2006 46 2007 47 2008 47 2009 44 2010 46 2011 42 2012 41 2013 40 2014 40 2015 42 2016 42	43,911 42 45,268 43 46,878 44 46,041 45 47,633 45 47,658 46 44,124 48 46,160 45 42,490 50 41,214 40,772 40,975 42,280 42,854 42,854	42,440 43,223 44,148 45,280 45,944 46,943 48,123 49,284 50,437	43,962 45,206 46,521 47,413 48,348 49,399 50,467 51,583 52,722	45,745 47,120 48,044 49,047 50,147 51,263 52,356 53,478	46,993 48,329 49,446 50,299 51,998 53,052	47,759 49,076 50,148 52,006	49,468 50,609															
2003 43 2004 45 2005 46 2006 46 2007 47 2008 47 2009 44 2010 46 2011 42 2012 41 2013 40 2014 40 2015 42 2016 42	43,911 42 45,268 43 46,878 44 46,041 45 47,633 45 47,658 46 44,124 48 46,160 45 42,490 50 41,214 40,772 40,975 42,280 42,854 42,854	42,440 43,223 44,148 45,280 45,944 46,943 48,123 49,284 50,437	43,962 45,206 46,521 47,413 48,348 49,399 50,467 51,583 52,722	45,745 47,120 48,044 49,047 50,147 51,263 52,356 53,478	46,993 48,329 49,446 50,299 51,998 53,052	47,759 49,076 50,148 52,006	49,468 50,609															
2004 45 2005 46 2006 46 2007 47 2008 47 2009 44 2010 46 2011 42 2012 41 2013 40 2014 40 2015 42 2016 42	45,268 43 46,878 44 46,041 45 47,633 45 47,658 46 44,124 48 46,160 45 42,490 56 41,214 40,772 40,975 42,280 42,854 42,854	43,223 44,148 45,280 45,944 46,943 48,123 49,284 50,437	43,962 45,206 46,521 47,413 48,348 49,399 50,467 51,583 52,722	45,745 47,120 48,044 49,047 50,147 51,263 52,356 53,478	46,993 48,329 49,446 50,299 51,998 53,052	47,759 49,076 50,148 52,006	49,468 50,609															
2005 46 2006 46 2007 47 2008 47 2009 44 2010 46 2011 42 2012 41 2013 40 2014 40 2015 42	46,878 44 46,041 45 47,633 45 47,658 46 44,124 48 46,160 45 42,490 56 41,214 48 40,772 56 40,975 42,280 42,854 42,854	44,148 45,280 45,944 46,943 48,123 49,284 50,437	45,206 46,521 47,413 48,348 49,399 50,467 51,583 52,722	45,745 47,120 48,044 49,047 50,147 51,263 52,356 53,478	46,993 48,329 49,446 50,299 51,998 53,052	47,759 49,076 50,148 52,006	49,468 50,609															
2006 46 2007 47 2008 47 2009 44 2010 46 2011 42 2012 41 2013 40 2014 40 2015 42 2016 42	46,041 45 47,633 45 47,658 46 44,124 48 46,160 45 42,490 50 41,214 40,772 40,975 42,280 42,854 42,854	45,280 45,944 46,943 48,123 49,284 50,437	46,521 47,413 48,348 49,399 50,467 51,583 52,722	47,120 48,044 49,047 50,147 51,263 52,356 53,478	46,993 48,329 49,446 50,299 51,998 53,052	47,759 49,076 50,148 52,006	49,468 50,609															
2007 47 2008 47 2009 44 2010 46 2011 42 2012 41 2013 40 2014 40 2015 42	47,633 48 47,658 46 44,124 48 46,160 49 42,490 50 41,214 40,772 40,975 42,280 42,854	45,944 46,943 48,123 49,284 50,437	47,413 48,348 49,399 50,467 51,583 52,722	48,044 49,047 50,147 51,263 52,356 53,478	48,329 49,446 50,299 51,998 53,052	47,759 49,076 50,148 52,006	49,468 50,609															
2008 47 2009 44 2010 46 2011 42 2012 41 2013 40 2014 40 2015 42	47,658 46 44,124 48 46,160 49 42,490 56 41,214 40,772 40,975 42,280 42,854	46,943 48,123 49,284 50,437	48,348 49,399 50,467 51,583 52,722	49,047 50,147 51,263 52,356 53,478	49,446 50,299 51,998 53,052	49,076 50,148 52,006	49,468 50,609															
2009 44 2010 46 2011 42 2012 41 2013 40 2014 40 2015 42 2016 42	44,124 48 46,160 49 42,490 50 41,214 40,772 40,975 42,280 42,854	48,123 49,284 50,437	49,399 50,467 51,583 52,722	50,147 51,263 52,356 53,478	50,299 51,998 53,052	50,148 52,006	50,609															
201046201142201241201340201440201542201642	46,160 49 42,490 50 41,214 40,772 40,975 42,280 42,854	49,284 50,437	50,467 51,583 52,722	51,263 52,356 53,478	51,998 53,052	52,006		43.700	48,556													
2011 42 2012 41 2013 40 2014 40 2015 42 2016 42	42,490 50 41,214 40,772 40,975 42,280 42,854	50,437	51,583 52,722	52,356 53,478	53,052		52,510	51,615	48,765	43,819												
201241201340201440201542201642	41,214 40,772 40,975 42,280 42,854		52,722	53,478			53,776	52,913	49,846	42,750	42,047											
201340201440201542201642	40,772 40,975 42,280 42,854				J.,	54,434	55,017	54,695	52,485	44,443	44,253	41,534										
2015 42 2016 42	42,280 42,854			54,000	55,516	55,704	56,321	56,045	53,647	45,877	45,637	40,973	40,786									
2016 42	42,854				56,999	56,948	57,732	56,905	52,759	46,458	46,367	42,552	41,565	39,801								
						58,211	59,074	58,166	53,117	46,815	46,794	43,633	42,549	40,490	41,426							
2017 42	42,919						60,460	59,448	53,644	46,477	46,176	43,596	43,421	41,098	41,947	41,277						
	,							60,836	54,612	46,343	46,128	43,823	43,824	41,375	42,365	41,932	41,475					
2018 44	44,224								55,614	46,932	46,674	44,533	44,452	41,995	42,779	42,417	41,887	43,060				
2019 44	44,801									47,922	47,814	45,854	45,037	43,013	43,572	43,044		43,331	43,206			
	44,814										48,390	46,576	45,654	43,998	44,069	43,559		44,063	43,620	43,645		
	45,064											47,180	46,179	44,419	44,322	43,895		44,555	43,949	43,939	43,103	
	46,141											_	46,689	44,870	44,681	44,289	43,751	45,088	44,519	44,591	44,980	43,440
	Actual NEL 1	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP		F System I TYSP	Net Energy TYSP	For Load Y TYSP				TYED	TYSP	TYSP	TYSP	TYSP	TVOD	TYSP	TVOD
		2002	2003	2004	2005	2006	2007	TYSP 2008	2009	2010	2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	2016	2017	2018	2019	TYSP 2020	2021	TYSP 2022
	40 505	0.001																				
		0.9%	4.00/																			
		3.5%	1.9%	0.00/																		
		4.7%	3.0% 3.7%	0.2% 2.5%	0.3%																	
		6.2% 1.7%	-1.0%	-2.3%	-2.0%	-0.3%																
		3.7%	0.5%	-0.9%	-1.4%	-0.3%	-1.2%															
			-1.4%	-2.8%	-3.6%	-2.9%	-3.7%	-2.2%														
				-12.0%	-12.3%	-12.0%	-12.8%	-11.3%	-9.1%													
				-10.0%	-11.2%	-11.2%	-12.1%	-10.6%	-5.3%	5.3%												
				-18.8%	-19.9%	-20.2%	-21.0%	-19.7%	-14.8%	-0.6%	1.1%											
	41,214			-22.9%	-24.1%	-24.3%	-25.1%	-24.6%	-21.5%	-7.3%	-6.9%	-0.8%										
	40,772			-25.3%	-26.6%	-26.8%	-27.6%	-27.3%	-24.0%	-11.1%	-10.7%	-0.5%	0.0%									
2014 40	40,975				-28.1%	-28.0%	-29.0%	-28.0%	-22.3%	-11.8%	-11.6%	-3.7%	-1.4%	2.9%								
2015 42	42,280					-27.4%	-28.4%	-27.3%	-20.4%	-9.7%	-9.6%	-3.1%	-0.6%	4.4%	2.1%							
	42,854						-29.1%	-27.9%	-20.1%	-7.8%	-7.2%	-1.7%	-1.3%	4.3%	2.2%	3.8%						
	42,919							-29.5%	-21.4%	-7.4%	-7.0%	-2.1%	-2.1%	3.7%	1.3%	2.4%	3.5%					
	44,224								-20.5%	-5.8%	-5.3%	-0.7%	-0.5%	5.3%	3.4%	4.3%	5.6%	2.7%				
	44,801									-6.5%		-2.3%	-0.5%	4.2%	2.8%	4.1%		3.4%	3.7%			
											-7.4%										1.001	
	44,814											-4.5%	-2.4%	1.5%	1.7%	2.7%	3.7%	1.1%	2.5%	2.6%	4.6%	
2022 46	45,064												-1.2%	2.8%	3.3%	4.2%	5.5%	2.3%	3.6%	3.5%	2.6%	6.2%
201844201944202044	44,224 44,801							20.070				-0.7%	-0.5%	5.3% 4.2% 1.9%	3.4%	4.3%			3.7% 2.7% 2.5%	2.7% 2.6%	4.6%	

DUKE ENERGY FLORIDA **TYSP Forecast Error Evaluation Form**

										DEE Ourt	om Custor											
	Actual	71/00	T)(0.D	T)(0.D	T)(0.D	71/00	T)(0.D	7.00	T \(0.D	-		er Forecas		T)(0.D	T)(0.D	T)(0.D	71/00	T)(0.D	71/00	71/00	TYOD	TYOD
Year	System Customers	TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018	TYSP 2019	TYSP 2020	TYSP 2021	TYSP 2022
rear	Customers	2002	2000	2004	2000	2000	2007	2000	2000	2010	2011		2010	2014	2010	2010	2017	2010	2010	2020	2021	LVLL
2002	1,475,773																					
2003	1,510,526																					
2004	1,548,617																					
2005	1,583,387																					
2006					1,603,600																	
2007						1,639,122																
2008						1,669,301																
2009						1,699,499		1,694,687														
2010						1,729,379			1,649,751													
2011		1,686,942				1,758,708																
2012	1,695,713		1,733,663								1,663,023	1,651,398										
2013	1,671,220			1,788,650		1,816,528							1,673,018									
2014	1,695,711				1,833,114																	
2015	1,721,551					1,873,800	1,908,680															
2016	1,748,131						1,940,633								1,745,429		4 770 000					
2017	1,775,472							1,947,284							1,772,592			4 000 000				
2018	1,802,714								1,871,706						1,800,353				4 000 000			
2019	1,831,269									1,848,690					1,828,216					4 050 700		
2020	1,863,385										1,874,295				1,855,717					1,856,728	1 002 004	
2021	1,878,278 1,933,061											1,094,032			1,882,508 1,908,539					1,883,227 1,910,532	1,893,024 1,923,069	1 026 224
2022	1,955,001												1,915,012	1,009,404	1,900,009	1,910,504	1,920,509	1,922,333	1,915,022	1,910,552	1,923,009	1,936,334
	Actual								DEE	System Cus	stomer Fore	ecast Variar	ces - %									
	Actual System	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP		-		cast Variar TYSP		TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP
Year	Actual System Customers	TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	DEF S TYSP 2009	System Cus TYSP 2010	tomer Fore TYSP 2011	ecast Variar TYSP 2012	ces - % TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018	TYSP 2019	TYSP 2020	TYSP 2021	TYSP 2022
	System Customers	2002							TYSP	TYSP	TYSP	TYSP	TYSP									
2002	System Customers 1,475,773	2002 0.5%	2003						TYSP	TYSP	TYSP	TYSP	TYSP									
2002 2003	System Customers 1,475,773 1,510,526	2002 0.5% 1.4%	2003 0.7%	2004					TYSP	TYSP	TYSP	TYSP	TYSP									
2002 2003 2004	System Customers 1,475,773 1,510,526 1,548,617	2002 0.5% 1.4% 2.6%	2003 0.7% 1.6%	2004 0.6%	2005				TYSP	TYSP	TYSP	TYSP	TYSP									
2002 2003 2004 2005	System Customers 1,475,773 1,510,526 1,548,617 1,583,387	2002 0.5% 1.4% 2.6% 3.6%	2003 0.7% 1.6% 2.4%	2004 0.6% 1.0%	2005 0.6%	2006			TYSP	TYSP	TYSP	TYSP	TYSP									
2002 2003 2004 2005 2006	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354	2002 0.5% 1.4% 2.6% 3.6% 4.4%	2003 0.7% 1.6% 2.4% 3.2%	2004 0.6% 1.0% 1.6%	2005 0.6% 1.0%	2006 0.7%	2007		TYSP	TYSP	TYSP	TYSP	TYSP									
2002 2003 2004 2005 2006 2007	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5%	2003 0.7% 1.6% 2.4% 3.2% 2.2%	2004 0.6% 1.0% 1.6% 0.6%	2005 0.6% 1.0% 0.0%	2006 0.7% -0.4%	2007 -0.8%	2008	TYSP	TYSP	TYSP	TYSP	TYSP									
2002 2003 2004 2005 2006 2007 2008	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359 1,638,929	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9%	2004 0.6% 1.0% 1.6% 0.6% -0.8%	2005 0.6% 1.0% 0.0% -1.4%	2006 0.7% -0.4% -1.8%	-0.8% -2.4%	2008 -1.4%	TYSP 2009	TYSP	TYSP	TYSP	TYSP									
2002 2003 2004 2005 2006 2007 2008 2009	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359 1,638,929 1,630,166	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2% 0.0%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9% -1.3%	2004 0.6% 1.0% 1.6% 0.6% -0.8% -3.0%	2005 0.6% 1.0% 0.0% -1.4% -3.6%	2006 0.7% -0.4% -1.8% -4.1%	-0.8% -2.4% -4.8%	2008 -1.4% -3.8%	TYSP 2009 -0.6%	TYSP 2010	TYSP	TYSP	TYSP									
2002 2003 2004 2005 2006 2007 2008 2009 2010	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359 1,638,929 1,630,166 1,634,191	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2% 0.0% -1.4%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9% -1.3% -2.7%	2004 0.6% 1.0% 1.6% 0.6% -0.8% -3.0% -4.4%	2005 0.6% 1.0% 0.0% -1.4% -3.6% -5.0%	2006 0.7% -0.4% -1.8% -4.1% -5.5%	-0.8% -2.4% -4.8% -6.3%	2008 -1.4% -3.8% -5.4%	TYSP 2009 -0.6% -0.9%	TYSP 2010 0.3%	TYSP 2011	TYSP	TYSP									
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359 1,638,929 1,630,166 1,634,191 1,642,376	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2% 0.0%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9% -1.3% -2.7% -4.0%	2004 0.6% 1.0% 1.6% 0.6% -0.8% -3.0% -4.4% -5.4%	2005 0.6% 1.0% 0.0% -1.4% -3.6% -5.0% -6.1%	2006 0.7% -0.4% -1.8% -4.1% -5.5% -6.6%	-0.8% -2.4% -4.8% -6.3% -7.6%	-1.4% -3.8% -5.4% -6.7%	TYSP 2009 -0.6% -0.9% -1.7%	TYSP 2010 0.3% 0.0%	TYSP 2011 0.0%	TYSP 2012	TYSP									
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359 1,638,929 1,630,166 1,634,191 1,642,376 1,695,713	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2% 0.0% -1.4%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9% -1.3% -2.7%	2004 0.6% 1.0% 1.6% 0.6% -0.8% -3.0% -4.4% -5.4% -3.8%	2005 0.6% 1.0% 0.0% -1.4% -3.6% -5.0% -6.1% -4.6%	2006 0.7% -0.4% -1.8% -4.1% -5.5% -6.6% -5.1%	-0.8% -2.4% -4.8% -6.3% -7.6% -6.3%	-1.4% -3.8% -5.4% -6.7% -5.4%	TYSP 2009 -0.6% -0.9% -1.7% 0.0%	TYSP 2010 0.3% 0.0% 2.0%	TYSP 2011 0.0% 2.0%	TYSP 2012 2.7%	TYSP 2013									
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359 1,638,929 1,630,166 1,634,191 1,642,376 1,695,713 1,671,220	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2% 0.0% -1.4%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9% -1.3% -2.7% -4.0%	2004 0.6% 1.0% 1.6% 0.6% -0.8% -3.0% -4.4% -5.4%	2005 0.6% 1.0% 0.0% -1.4% -3.6% -5.0% -6.1% -4.6% -7.4%	2006 0.7% -0.4% -1.8% -4.1% -5.5% -6.6% -5.1% -8.0%	-0.8% -2.4% -4.8% -6.3% -7.6% -6.3% -9.3%	-1.4% -3.8% -5.4% -6.7% -5.4% -8.4%	TYSP 2009 -0.6% -0.9% -1.7% 0.0% -3.2%	TYSP 2010 0.3% 0.0% 2.0% -1.0%	TYSP 2011 0.0% 2.0% -1.0%	TYSP 2012 2.7% 0.1%	TYSP 2013 -0.1%	2014								
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359 1,638,929 1,630,166 1,634,191 1,642,376 1,695,713 1,671,220 1,695,711	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2% 0.0% -1.4%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9% -1.3% -2.7% -4.0%	2004 0.6% 1.0% 1.6% 0.6% -0.8% -3.0% -4.4% -5.4% -3.8%	2005 0.6% 1.0% 0.0% -1.4% -3.6% -5.0% -6.1% -4.6%	2006 0.7% -0.4% -1.8% -4.1% -5.5% -6.6% -5.1% -8.0% -8.1%	-0.8% -2.4% -4.8% -6.3% -7.6% -6.3% -9.3% -9.6%	-1.4% -3.8% -5.4% -6.7% -5.4% -8.4% -8.7%	TYSP 2009 -0.6% -0.9% -1.7% 0.0% -3.2% -3.5%	TYSP 2010 0.3% 0.0% 2.0% -1.0% -1.2%	TYSP 2011 0.0% 2.0% -1.0% -1.2%	TYSP 2012 2.7% 0.1% -0.1%	TYSP 2013 -0.1% 0.0%	2014 0.2%	2015							
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359 1,638,929 1,630,166 1,634,191 1,642,376 1,695,713 1,671,220 1,695,711 1,721,551	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2% 0.0% -1.4%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9% -1.3% -2.7% -4.0%	2004 0.6% 1.0% 1.6% 0.6% -0.8% -3.0% -4.4% -5.4% -3.8%	2005 0.6% 1.0% 0.0% -1.4% -3.6% -5.0% -6.1% -4.6% -7.4%	2006 0.7% -0.4% -1.8% -4.1% -5.5% -6.6% -5.1% -8.0%	-0.8% -2.4% -4.8% -6.3% -7.6% -6.3% -9.3% -9.6% -9.8%	-1.4% -3.8% -5.4% -6.7% -5.4% -8.4% -8.7% -8.8%	TYSP 2009 -0.6% -0.9% -1.7% 0.0% -3.2% -3.5% -3.7%	TYSP 2010 0.3% 0.0% 2.0% -1.0% -1.2% -1.3%	TYSP 2011 0.0% 2.0% -1.0% -1.2% -1.3%	TYSP 2012 2.7% 0.1% -0.1% -0.4%	TYSP 2013 -0.1% 0.0% -0.1%	2014 0.2% 0.2%	2015 0.1%	2016						
2002 2003 2004 2005 2006 2007 2008 2010 2010 2011 2012 2013 2014 2015 2016	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359 1,638,929 1,630,166 1,634,191 1,642,376 1,695,713 1,671,220 1,695,711 1,721,551 1,748,131	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2% 0.0% -1.4%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9% -1.3% -2.7% -4.0%	2004 0.6% 1.0% 1.6% 0.6% -0.8% -3.0% -4.4% -5.4% -3.8%	2005 0.6% 1.0% 0.0% -1.4% -3.6% -5.0% -6.1% -4.6% -7.4%	2006 0.7% -0.4% -1.8% -4.1% -5.5% -6.6% -5.1% -8.0% -8.1%	-0.8% -2.4% -4.8% -6.3% -7.6% -6.3% -9.3% -9.6%	-1.4% -3.8% -5.4% -6.7% -5.4% -8.4% -8.7% -8.8% -8.9%	TYSP 2009 -0.6% -0.9% -1.7% 0.0% -3.2% -3.5% -3.5% -3.7% -3.8%	TYSP 2010 0.3% 0.0% 2.0% -1.0% -1.2% -1.3% -1.3%	TYSP 2011 0.0% 2.0% -1.0% -1.2% -1.3% -1.3%	TYSP 2012 2.7% 0.1% -0.1% -0.4% -0.6%	TYSP 2013 -0.1% 0.0% -0.1% -0.1%	2014 0.2% 0.2% 0.2%	2015 0.1% 0.2%	2016 0.0%	2017					
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359 1,632,359 1,630,166 1,634,191 1,642,376 1,695,713 1,671,220 1,695,711 1,721,551 1,748,131 1,775,472	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2% 0.0% -1.4%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9% -1.3% -2.7% -4.0%	2004 0.6% 1.0% 1.6% 0.6% -0.8% -3.0% -4.4% -5.4% -3.8%	2005 0.6% 1.0% 0.0% -1.4% -3.6% -5.0% -6.1% -4.6% -7.4%	2006 0.7% -0.4% -1.8% -4.1% -5.5% -6.6% -5.1% -8.0% -8.1%	-0.8% -2.4% -4.8% -6.3% -7.6% -6.3% -9.3% -9.6% -9.8%	-1.4% -3.8% -5.4% -6.7% -5.4% -8.4% -8.7% -8.8%	TYSP 2009 -0.6% -0.9% -1.7% 0.0% -3.2% -3.5% -3.5% -3.7% -3.8% -3.8%	TYSP 2010 0.3% 0.0% 2.0% -1.0% -1.2% -1.3% -1.3% -1.2%	TYSP 2011 0.0% 2.0% -1.0% -1.2% -1.3% -1.3% -1.2%	TYSP 2012 2.7% 0.1% -0.1% -0.4% -0.6% -0.6%	TYSP 2013 -0.1% 0.0% -0.1% -0.1% -0.1%	2014 0.2% 0.2% 0.2% 0.2%	2015 0.1% 0.2% 0.2%	2016 0.0% -0.1%	2017	2018				
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018	System Customers	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2% 0.0% -1.4%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9% -1.3% -2.7% -4.0%	2004 0.6% 1.0% 1.6% 0.6% -0.8% -3.0% -4.4% -5.4% -3.8%	2005 0.6% 1.0% 0.0% -1.4% -3.6% -5.0% -6.1% -4.6% -7.4%	2006 0.7% -0.4% -1.8% -4.1% -5.5% -6.6% -5.1% -8.0% -8.1%	-0.8% -2.4% -4.8% -6.3% -7.6% -6.3% -9.3% -9.6% -9.8%	-1.4% -3.8% -5.4% -6.7% -5.4% -8.4% -8.7% -8.8% -8.9%	TYSP 2009 -0.6% -0.9% -1.7% 0.0% -3.2% -3.5% -3.5% -3.7% -3.8%	TYSP 2010 0.3% 0.0% 2.0% -1.0% -1.2% -1.3% -1.3% -1.2% -1.1%	TYSP 2011 0.0% 2.0% -1.0% -1.2% -1.3% -1.3% -1.2% -1.1%	TYSP 2012 2.7% 0.1% -0.1% -0.4% -0.6% -0.6% -0.6%	TYSP 2013 -0.1% 0.0% -0.1% -0.1% -0.1% -0.1%	2014 0.2% 0.2% 0.2% 0.2% 0.2% 0.3%	2015 0.1% 0.2% 0.2% 0.1%	2016 0.0% -0.1% -0.1%	2017 -0.2% -0.4%	2018	2019			
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359 1,638,929 1,630,166 1,634,191 1,642,376 1,695,713 1,671,220 1,695,711 1,721,551 1,748,131 1,775,472 1,802,714 1,831,269	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2% 0.0% -1.4%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9% -1.3% -2.7% -4.0%	2004 0.6% 1.0% 1.6% 0.6% -0.8% -3.0% -4.4% -5.4% -3.8%	2005 0.6% 1.0% 0.0% -1.4% -3.6% -5.0% -6.1% -4.6% -7.4%	2006 0.7% -0.4% -1.8% -4.1% -5.5% -6.6% -5.1% -8.0% -8.1%	-0.8% -2.4% -4.8% -6.3% -7.6% -6.3% -9.3% -9.6% -9.8%	-1.4% -3.8% -5.4% -6.7% -5.4% -8.4% -8.7% -8.8% -8.9%	TYSP 2009 -0.6% -0.9% -1.7% 0.0% -3.2% -3.5% -3.5% -3.7% -3.8% -3.8%	TYSP 2010 0.3% 0.0% 2.0% -1.0% -1.2% -1.3% -1.3% -1.2%	TYSP 2011 0.0% 2.0% -1.0% -1.2% -1.3% -1.2% -1.2% -1.1% -0.9%	TYSP 2012 2.7% 0.1% -0.1% -0.4% -0.6% -0.6% -0.6% -0.6% -0.5%	TYSP 2013 -0.1% 0.0% -0.1% -0.1% -0.1% -0.1%	2014 0.2% 0.2% 0.2% 0.2% 0.2% 0.3% 0.5%	2015 0.1% 0.2% 0.2% 0.2%	2016 0.0% -0.1% -0.1% -0.1%	-0.2% -0.4% -0.5%	2018 -0.2% -0.2%	2019 0.0%	2020		
2002 2003 2004 2005 2006 2007 2008 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359 1,638,929 1,630,166 1,634,191 1,642,376 1,695,713 1,671,220 1,695,711 1,721,551 1,748,131 1,775,472 1,802,714 1,831,269 1,863,385	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2% 0.0% -1.4%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9% -1.3% -2.7% -4.0%	2004 0.6% 1.0% 1.6% 0.6% -0.8% -3.0% -4.4% -5.4% -3.8%	2005 0.6% 1.0% 0.0% -1.4% -3.6% -5.0% -6.1% -4.6% -7.4%	2006 0.7% -0.4% -1.8% -4.1% -5.5% -6.6% -5.1% -8.0% -8.1%	-0.8% -2.4% -4.8% -6.3% -7.6% -6.3% -9.3% -9.6% -9.8%	-1.4% -3.8% -5.4% -6.7% -5.4% -8.4% -8.7% -8.8% -8.9%	TYSP 2009 -0.6% -0.9% -1.7% 0.0% -3.2% -3.5% -3.5% -3.7% -3.8% -3.8%	TYSP 2010 0.3% 0.0% 2.0% -1.0% -1.2% -1.3% -1.3% -1.2% -1.2% -1.1%	TYSP 2011 0.0% 2.0% -1.0% -1.2% -1.3% -1.3% -1.2% -1.1%	TYSP 2012 2.7% 0.1% -0.1% -0.4% -0.6% -0.6% -0.6% -0.6% -0.5% -0.2%	TYSP 2013 -0.1% 0.0% -0.1% -0.1% -0.1% -0.1% 0.1%	2014 0.2% 0.2% 0.2% 0.2% 0.3% 0.5% 1.0%	2015 0.1% 0.2% 0.2% 0.1% 0.2% 0.4%	2016 0.0% -0.1% -0.1% 0.1%	-0.2% -0.4% -0.5% -0.4%	2018 -0.2% -0.2% -0.1%	2019 0.0% 0.3%	2020	2021	
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019	System Customers 1,475,773 1,510,526 1,548,617 1,583,387 1,620,354 1,632,359 1,638,929 1,630,166 1,634,191 1,642,376 1,695,713 1,671,220 1,695,711 1,721,551 1,748,131 1,775,472 1,802,714 1,831,269	2002 0.5% 1.4% 2.6% 3.6% 4.4% 3.5% 2.2% 0.0% -1.4%	2003 0.7% 1.6% 2.4% 3.2% 2.2% 0.9% -1.3% -2.7% -4.0%	2004 0.6% 1.0% 1.6% 0.6% -0.8% -3.0% -4.4% -5.4% -3.8%	2005 0.6% 1.0% 0.0% -1.4% -3.6% -5.0% -6.1% -4.6% -7.4%	2006 0.7% -0.4% -1.8% -4.1% -5.5% -6.6% -5.1% -8.0% -8.1%	-0.8% -2.4% -4.8% -6.3% -7.6% -6.3% -9.3% -9.6% -9.8%	-1.4% -3.8% -5.4% -6.7% -5.4% -8.4% -8.7% -8.8% -8.9%	TYSP 2009 -0.6% -0.9% -1.7% 0.0% -3.2% -3.5% -3.5% -3.7% -3.8% -3.8%	TYSP 2010 0.3% 0.0% 2.0% -1.0% -1.2% -1.3% -1.3% -1.2% -1.2% -1.1%	TYSP 2011 0.0% 2.0% -1.0% -1.2% -1.3% -1.2% -1.2% -1.1% -0.9%	TYSP 2012 2.7% 0.1% -0.1% -0.4% -0.6% -0.6% -0.6% -0.6% -0.5%	TYSP 2013 -0.1% 0.0% -0.1% -0.1% -0.1% -0.1%	2014 0.2% 0.2% 0.2% 0.2% 0.2% 0.3% 0.5%	2015 0.1% 0.2% 0.2% 0.2%	2016 0.0% -0.1% -0.1% -0.1%	-0.2% -0.4% -0.5%	2018 -0.2% -0.2%	2019 0.0%	2020		

| TYSP |
|------|------|------|------|------|------|------|
| 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |

DUKE ENERGY FLORIDA

TYSP Forecast Error Evaluation Form

Data is NOT	weather adjusted	

											ather adju			Activate	4							
	Actual Retail								DEF	Retail Su	nimer Pe	<mark>ak Foreca</mark>	St, NO DR	Activated	u							
	Summer Peak	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP
Year	(MW)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2002	7,842	7,365	7 004																			
2003 2004	7,593	7,567	7,684 7,853	7 0 4 2																		
2004	8,058 8,565	7,689 7,817	7,855 8,002	7,942 8,122	8,154																	
2005	8,432	7,962	8,164	8,303	8,357	8,352																
2007	8,861	8,115	8,334	8,486	8,554	8,576	8,816															
2008	8,524	8,279	8,510	8,672	8,727	8,786	9,044	8,746														
2009	8,643	8,448	8,691	8,863	8,899	8,986	9,247	8,953	8,631													
2010	8,328	8,624	8,879	9,047	9,089	9,181	9,453	9,138	8,687	8,428												
2011	8,343	8,800	9,070	9,224	9,278	9,376	9,661	9,340	8,837	8,461	8,488											
2012	7,946		9,259	9,395	9,465	9,568	9,864	9,544	9,021	8,562	8,564	8,536										
2013	8,195			9,561	9,651	9,759	10,069	9,747	9,267	8,723	8,705	8,611	8,732									
2014	8,404				9,836	9,946	10,270	9,941	9,465	8,822	8,791	8,759	8,871	8,705								
2015	8,446					10,142		10,146	9,667	8,905	8,870	8,972	9,038	8,944	8,843	0.046						
2016	8,779						10,698	10,326	9,813	8,956	8,933	9,146	9,199	9,207	9,073	9,018	0.000					
2017	8,520							10,506	9,991	9,042	9,027	9,330	9,381	9,477	9,235	9,140	8,866	0.004				
2018	8,492								10,163	9,137	9,120	9,503	9,561	9,626	9,387	9,315	8,992	8,691	0 701			
2019 2020	8,985 8,746									9,238	9,215 9,314	9,689 9,872	9,756 9,950	9,806 9,959	9,576 9,775	9,485 9,615	9,107 9,244	8,813 8,907	8,791 8,858	8,781		
2020	8,671										9,314	9,072 10,050	9,930 10,136	9,959 9,952	9,773 9,934	9,746	9,244 9,336	9,000	8,917	8,820	8,693	
2022	8,932											10,000	10,310	10,067	10,090	9,874	9,427	9,094	8,993	8,893	8,862	8,746
	Actual														10,000	0,011	0,121	0,001	0,000	0,000	0,002	0,1 10
	Actual								DE	F Retail S	Summer P	eak Fored	cast Varia	nces - %								
	Retail Summer	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	DE TYSP	F Retail S TYSP	<mark>Summer P</mark> TYSP	eak Fored TYSP	cast Varia TYSP	nces - % TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP
Year		TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008							TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018	TYSP 2019	TYSP 2020	TYSP 2021	TYSP 2022
	Retail Summer Peak (MW)	2002							TYSP	TYSP	TYSP	TYSP	TYSP	TYSP								
Year 2002 2003	Retail Summer Peak (MW) 7,842		2003						TYSP	TYSP	TYSP	TYSP	TYSP	TYSP								
2002	Retail Summer Peak (MW)	2002 6.5%							TYSP	TYSP	TYSP	TYSP	TYSP	TYSP								
2002 2003	Retail Summer Peak (MW) 7,842 7,593	2002 6.5% 0.3%	2003 -1.2%	2004					TYSP	TYSP	TYSP	TYSP	TYSP	TYSP								
2002 2003 2004	Retail Summer Peak (MW) 7,842 7,593 8,058	2002 6.5% 0.3% 4.8%	2003 -1.2% 2.6%	2004 1.5%	2005	2006			TYSP	TYSP	TYSP	TYSP	TYSP	TYSP								
2002 2003 2004 2005	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2%	2003 -1.2% 2.6% 7.0% 3.3% 6.3%	2004 1.5% 5.4% 1.5% 4.4%	2005 5.0% 0.9% 3.6%	2006	2007 0.5%		TYSP	TYSP	TYSP	TYSP	TYSP	TYSP								
2002 2003 2004 2005 2006 2007 2008	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2%	2004 1.5% 5.4% 1.5% 4.4% -1.7%	2005 5.0% 0.9% 3.6% -2.3%	2006 1.0% 3.3% -3.0%	2007 0.5% -5.7%	2008 -2.5%	TYSP 2009	TYSP	TYSP	TYSP	TYSP	TYSP								
2002 2003 2004 2005 2006 2007 2008 2009	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,524 8,643	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5%	2005 5.0% 0.9% 3.6% -2.3% -2.9%	2006 1.0% 3.3% -3.0% -3.8%	0.5% -5.7% -6.5%	2008 -2.5% -3.5%	TYSP 2009 0.1%	TYSP 2010	TYSP	TYSP	TYSP	TYSP								
2002 2003 2004 2005 2006 2007 2008 2009 2010	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,643 8,328	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3% -3.4%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5% -6.2%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5% -8.0%	2005 5.0% 0.9% 3.6% -2.3% -2.9% -8.4%	2006 1.0% 3.3% -3.0% -3.8% -9.3%	0.5% -5.7% -6.5% -11.9%	2008 -2.5% -3.5% -8.9%	TYSP 2009 0.1% -4.1%	TYSP 2010 -1.2%	TYSP 2011	TYSP	TYSP	TYSP								
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,643 8,524 8,643 8,328 8,343	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5% -6.2% -8.0%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5% -8.0% -9.6%	2005 5.0% 0.9% 3.6% -2.3% -2.9% -8.4% -10.1%	2006 1.0% 3.3% -3.0% -3.8% -9.3% -11.0%	2007 0.5% -5.7% -6.5% -11.9% -13.6%	2008 -2.5% -3.5% -8.9% -10.7%	TYSP 2009 0.1% -4.1% -5.6%	TYSP 2010 -1.2% -1.4%	TYSP 2011 -1.7%	TYSP 2012	TYSP	TYSP								
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,861 8,524 8,643 8,328 8,343 7,946	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3% -3.4%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5% -6.2% -8.0%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5% -8.0% -9.6% -15.4%	2005 5.0% 0.9% 3.6% -2.3% -2.9% -8.4% -10.1% -16.0%	2006 1.0% 3.3% -3.0% -3.8% -9.3% -11.0% -17.0%	2007 0.5% -5.7% -6.5% -11.9% -13.6% -19.4%	-2.5% -3.5% -8.9% -10.7% -16.7%	TYSP 2009 0.1% -4.1% -5.6% -11.9%	TYSP 2010 -1.2% -1.4% -7.2%	TYSP 2011 -1.7% -7.2%	TYSP 2012 -6.9%	TYSP 2013	TYSP								
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2012 2013	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,643 8,524 8,643 8,328 8,343 7,946 8,195	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3% -3.4%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5% -6.2% -8.0%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5% -8.0% -9.6% -15.4%	2005 5.0% 0.9% 3.6% -2.3% -2.9% -8.4% -10.1% -16.0% -15.1%	2006 1.0% 3.3% -3.0% -3.8% -9.3% -11.0% -17.0% -16.0%	0.5% -5.7% -6.5% -11.9% -13.6% -19.4% -18.6%	2008 -2.5% -3.5% -8.9% -10.7% -16.7% -15.9%	TYSP 2009 0.1% -4.1% -5.6% -11.9% -11.6%	TYSP 2010 -1.2% -1.4% -7.2% -6.1%	TYSP 2011 -1.7% -7.2% -5.9%	TYSP 2012 -6.9% -4.8%	TYSP 2013 -6.2%	TYSP 2014								
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,643 8,328 8,343 7,946 8,195 8,404	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3% -3.4%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5% -6.2% -8.0%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5% -8.0% -9.6% -15.4%	2005 5.0% 0.9% 3.6% -2.3% -2.9% -8.4% -10.1% -16.0% -15.1%	2006 1.0% 3.3% -3.0% -3.8% -9.3% -11.0% -17.0% -16.0% -15.5%	2007 0.5% -5.7% -6.5% -11.9% -13.6% -19.4% -18.6% -18.2%	2008 -2.5% -3.5% -8.9% -10.7% -16.7% -15.9% -15.5%	TYSP 2009 0.1% -4.1% -5.6% -11.9% -11.6% -11.2%	TYSP 2010 -1.2% -1.4% -7.2% -6.1% -4.7%	TYSP 2011 -1.7% -7.2% -5.9% -4.4%	-6.9% -4.8% -4.1%	TYSP 2013 -6.2% -5.3%	TYSP 2014 -3.5%	2015							
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,643 8,328 8,343 7,946 8,195 8,404 8,446	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3% -3.4%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5% -6.2% -8.0%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5% -8.0% -9.6% -15.4%	2005 5.0% 0.9% 3.6% -2.3% -2.9% -8.4% -10.1% -16.0% -15.1%	2006 1.0% 3.3% -3.0% -3.8% -9.3% -11.0% -17.0% -16.0% -15.5%	2007 0.5% -5.7% -6.5% -11.9% -13.6% -19.4% -18.6% -18.2% -19.4%	2008 -2.5% -3.5% -8.9% -10.7% -16.7% -15.9% -15.5% -16.8%	TYSP 2009 0.1% -4.1% -5.6% -11.9% -11.6% -11.2% -12.6%	TYSP 2010 -1.2% -1.4% -7.2% -6.1% -4.7% -5.2%	TYSP 2011 -1.7% -7.2% -5.9% -4.4% -4.8%	-6.9% -4.8% -4.1% -5.9%	TYSP 2013 -6.2% -5.3% -6.6%	TYSP 2014 -3.5% -5.6%	2015 -4.5%	2016						
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,643 8,328 8,343 7,946 8,343 7,946 8,195 8,404 8,446 8,446 8,779	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3% -3.4%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5% -6.2% -8.0%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5% -8.0% -9.6% -15.4%	2005 5.0% 0.9% 3.6% -2.3% -2.9% -8.4% -10.1% -16.0% -15.1%	2006 1.0% 3.3% -3.0% -3.8% -9.3% -11.0% -17.0% -16.0% -15.5%	2007 0.5% -5.7% -6.5% -11.9% -13.6% -19.4% -18.6% -18.2% -19.4%	-2.5% -3.5% -8.9% -10.7% -16.7% -15.9% -15.5% -16.8% -15.0%	TYSP 2009 0.1% -4.1% -5.6% -11.9% -11.6% -11.2% -12.6% -10.5%	TYSP 2010 -1.2% -1.4% -7.2% -6.1% -4.7% -5.2% -2.0%	TYSP 2011 -1.7% -7.2% -5.9% -4.4% -4.8% -1.7%	TYSP 2012 -6.9% -4.8% -4.1% -5.9% -4.0%	TYSP 2013 -6.2% -5.3% -6.6% -4.6%	TYSP 2014 -3.5% -5.6% -4.6%	2015 -4.5% -3.2%	2016	2017					
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,643 8,328 8,343 7,946 8,195 8,404 8,446	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3% -3.4%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5% -6.2% -8.0%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5% -8.0% -9.6% -15.4%	2005 5.0% 0.9% 3.6% -2.3% -2.9% -8.4% -10.1% -16.0% -15.1%	2006 1.0% 3.3% -3.0% -3.8% -9.3% -11.0% -17.0% -16.0% -15.5%	2007 0.5% -5.7% -6.5% -11.9% -13.6% -19.4% -18.6% -18.2% -19.4%	-2.5% -3.5% -8.9% -10.7% -16.7% -15.9% -15.5% -16.8% -15.0%	TYSP 2009 0.1% -4.1% -5.6% -11.9% -11.6% -11.2% -12.6%	TYSP 2010 -1.2% -1.4% -7.2% -6.1% -4.7% -5.2%	TYSP 2011 -1.7% -7.2% -5.9% -4.4% -4.8%	-6.9% -4.8% -4.1% -5.9%	TYSP 2013 -6.2% -5.3% -6.6%	TYSP 2014 -3.5% -5.6%	2015 -4.5%	2016						
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,643 8,328 8,343 7,946 8,195 8,404 8,195 8,404 8,446 8,779 8,520	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3% -3.4%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5% -6.2% -8.0%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5% -8.0% -9.6% -15.4%	2005 5.0% 0.9% 3.6% -2.3% -2.9% -8.4% -10.1% -16.0% -15.1%	2006 1.0% 3.3% -3.0% -3.8% -9.3% -11.0% -17.0% -16.0% -15.5%	2007 0.5% -5.7% -6.5% -11.9% -13.6% -19.4% -18.6% -18.2% -19.4%	-2.5% -3.5% -8.9% -10.7% -16.7% -15.9% -15.5% -16.8% -15.0%	TYSP 2009 0.1% -4.1% -5.6% -11.9% -11.6% -11.2% -12.6% -10.5% -14.7%	TYSP 2010 -1.2% -1.4% -7.2% -6.1% -4.7% -5.2% -2.0% -5.8%	TYSP 2011 -1.7% -7.2% -5.9% -4.4% -4.8% -1.7% -5.6%	TYSP 2012 -6.9% -4.8% -4.1% -5.9% -4.0% -8.7%	TYSP 2013 -6.2% -5.3% -6.6% -4.6% -9.2%	TYSP 2014 -3.5% -5.6% -4.6% -10.1%	2015 -4.5% -3.2% -7.7%	2016 -2.7% -6.8%	-3.9%	2018				
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,643 8,328 8,343 7,946 8,343 7,946 8,195 8,404 8,195 8,404 8,446 8,779 8,520 8,492	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3% -3.4%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5% -6.2% -8.0%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5% -8.0% -9.6% -15.4%	2005 5.0% 0.9% 3.6% -2.3% -2.9% -8.4% -10.1% -16.0% -15.1%	2006 1.0% 3.3% -3.0% -3.8% -9.3% -11.0% -17.0% -16.0% -15.5%	2007 0.5% -5.7% -6.5% -11.9% -13.6% -19.4% -18.6% -18.2% -19.4%	-2.5% -3.5% -8.9% -10.7% -16.7% -15.9% -15.5% -16.8% -15.0%	TYSP 2009 0.1% -4.1% -5.6% -11.9% -11.6% -11.2% -12.6% -10.5% -14.7%	TYSP 2010 -1.2% -1.4% -7.2% -6.1% -4.7% -5.2% -2.0% -5.8% -7.1%	TYSP 2011 -1.7% -7.2% -5.9% -4.4% -4.8% -1.7% -5.6% -6.9%	TYSP 2012 -6.9% -4.8% -4.1% -5.9% -4.0% -8.7% -10.6%	TYSP 2013 -6.2% -5.3% -6.6% -4.6% -9.2% -11.2%	-3.5% -5.6% -4.6% -10.1% -11.8%	2015 -4.5% -3.2% -7.7% -9.5%	2016 -2.7% -6.8% -8.8%	2017 -3.9% -5.6%	2018	2019			
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,643 8,328 8,343 7,946 8,195 8,404 8,195 8,404 8,195 8,404 8,446 8,779 8,520 8,492 8,985 8,746 8,671	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3% -3.4%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5% -6.2% -8.0%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5% -8.0% -9.6% -15.4%	2005 5.0% 0.9% 3.6% -2.3% -2.9% -8.4% -10.1% -16.0% -15.1%	2006 1.0% 3.3% -3.0% -3.8% -9.3% -11.0% -17.0% -16.0% -15.5%	2007 0.5% -5.7% -6.5% -11.9% -13.6% -19.4% -18.6% -18.2% -19.4%	-2.5% -3.5% -8.9% -10.7% -16.7% -15.9% -15.5% -16.8% -15.0%	TYSP 2009 0.1% -4.1% -5.6% -11.9% -11.6% -11.2% -12.6% -10.5% -14.7%	TYSP 2010 -1.2% -1.4% -7.2% -6.1% -4.7% -5.2% -2.0% -5.8% -7.1%	TYSP 2011 -1.7% -7.2% -5.9% -4.4% -4.8% -1.7% -5.6% -6.9% -2.5%	TYSP 2012 -6.9% -4.8% -4.1% -5.9% -4.0% -8.7% -10.6% -7.3%	TYSP 2013 -6.2% -5.3% -6.6% -4.6% -9.2% -11.2% -7.9% -12.1% -12.1% -14.5%	TYSP 2014 -3.5% -5.6% -4.6% -10.1% -11.8% -8.4% -12.2% -12.9%	-4.5% -3.2% -7.7% -9.5% -6.2% -10.5% -12.7%	2016 -2.7% -6.8% -8.8% -5.3%	2017 -3.9% -5.6% -1.3%	2018 -2.3% 2.0%	2019 2.2% -1.3% -2.8%	2020	2021	
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,643 8,328 8,343 7,946 8,343 7,946 8,195 8,404 8,495 8,404 8,446 8,779 8,520 8,492 8,985 8,746 8,671 8,932	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3% -3.4%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5% -6.2% -8.0%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5% -8.0% -9.6% -15.4%	2005 5.0% 0.9% 3.6% -2.3% -2.9% -8.4% -10.1% -16.0% -15.1%	2006 1.0% 3.3% -3.0% -3.8% -9.3% -11.0% -17.0% -16.0% -15.5%	2007 0.5% -5.7% -6.5% -11.9% -13.6% -19.4% -18.6% -18.2% -19.4%	-2.5% -3.5% -8.9% -10.7% -16.7% -15.9% -15.5% -16.8% -15.0%	TYSP 2009 0.1% -4.1% -5.6% -11.9% -11.6% -12.6% -10.5% -14.7% -16.4%	TYSP 2010 -1.2% -1.4% -7.2% -6.1% -4.7% -5.2% -2.0% -5.8% -7.1% -2.7%	TYSP 2011 -1.7% -7.2% -5.9% -4.4% -4.8% -1.7% -5.6% -6.9% -2.5% -6.1%	-6.9% -4.8% -4.1% -5.9% -4.0% -8.7% -10.6% -7.3% -11.4% -13.7%	TYSP 2013 -6.2% -5.3% -6.6% -4.6% -9.2% -11.2% -7.9% -12.1% -14.5% -13.4%	TYSP 2014 -3.5% -5.6% -4.6% -10.1% -11.8% -8.4% -12.2% -12.9% -11.3%	-4.5% -3.2% -7.7% -9.5% -6.2% -10.5%	-2.7% -6.8% -8.8% -5.3% -9.0%	-3.9% -5.6% -1.3% -5.4%	2018 -2.3% 2.0% -1.8%	2019 2.2% -1.3%	2020	2021	
2002 2003 2004 2005 2006 2007 2008 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021	Retail Summer Peak (MW) 7,842 7,593 8,058 8,565 8,432 8,861 8,524 8,643 8,328 8,343 7,946 8,195 8,404 8,195 8,404 8,195 8,404 8,446 8,779 8,520 8,492 8,985 8,746 8,671	2002 6.5% 0.3% 4.8% 9.6% 5.9% 9.2% 3.0% 2.3% -3.4%	2003 -1.2% 2.6% 7.0% 3.3% 6.3% 0.2% -0.5% -6.2% -8.0%	2004 1.5% 5.4% 1.5% 4.4% -1.7% -2.5% -8.0% -9.6% -15.4%	2005 5.0% 0.9% 3.6% -2.3% -2.9% -8.4% -10.1% -16.0% -15.1%	2006 1.0% 3.3% -3.0% -3.8% -9.3% -11.0% -17.0% -16.0% -15.5%	2007 0.5% -5.7% -6.5% -11.9% -13.6% -19.4% -18.6% -18.2% -19.4%	-2.5% -3.5% -8.9% -10.7% -16.7% -15.9% -15.5% -16.8% -15.0%	TYSP 2009 0.1% -4.1% -5.6% -11.9% -11.6% -12.6% -10.5% -14.7% -16.4%	TYSP 2010 -1.2% -1.4% -7.2% -6.1% -4.7% -5.2% -2.0% -5.8% -7.1% -2.7%	TYSP 2011 -1.7% -7.2% -5.9% -4.4% -4.8% -1.7% -5.6% -6.9% -2.5% -6.1%	-6.9% -4.8% -4.1% -5.9% -4.0% -8.7% -10.6% -7.3% -11.4%	TYSP 2013 -6.2% -5.3% -6.6% -4.6% -9.2% -11.2% -7.9% -12.1% -14.5% -13.4%	TYSP 2014 -3.5% -5.6% -4.6% -10.1% -11.8% -8.4% -12.2% -12.9% -11.3%	-4.5% -3.2% -7.7% -9.5% -6.2% -10.5% -12.7%	-2.7% -6.8% -5.3% -9.0% -11.0%	-3.9% -5.6% -1.3% -5.4% -7.1%	2018 -2.3% 2.0% -1.8% -3.7%	2019 2.2% -1.3% -2.8%	-0.4% -1.7%	2021	2022

Year	(MW)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022	8,590 8,974 7,585 8,627 8,679 7,607 8,454 9,085 10,686 8,909 7,817 7,201 7,671 8,438 7,649 6,837 9,249 6,707 7,794 7,629 8,202	8,147 8,413 8,581 8,695 8,818 8,957 9,101 9,260 9,419 9,603	8,397 8,577 8,726 8,880 9,042 9,195 9,355 9,516 9,705 9,890	8,676 8,842 9,009 9,171 9,336 9,506 9,677 9,839 9,995 10,145	8,865 9,035 9,214 9,386 9,556 9,723 9,890 10,049 10,208 10,367	9,066 9,252 9,456 9,632 9,810 9,984 10,149 10,312 10,477 10,641	10,601 10,781	9,447 9,578 9,754 9,931 10,102 10,282 10,450 10,616 10,783 10,939	9,371 9,345 9,427 9,561 9,761 9,927 10,087 10,217 10,378 10,531	9,159 9,122 9,203 9,343 9,523 9,571 9,641 9,737 9,836	9,173 9,247 9,379 9,464 9,542 9,604 9,695 9,785 9,877 9,971	9,045 9,056 9,141 9,316 9,488 9,650 9,815 9,984 10,148 10,312	9,224 9,309 9,443 9,585 9,739 9,904 10,086 10,261 10,434 10,598	9,070 8,881 9,133 9,385 9,654 9,807 9,926 10,029 10,143	9,222 9,399 9,517 9,630 9,782 9,942 10,064 10,184	9,227 9,353 9,460 9,608 9,764 9,886 10,005	8,941 9,063 9,174 9,313 9,411 9,507	8,985 9,118 9,211 9,435 9,508	8,949 9,054 9,157 9,229	9,191 9,322 9,419	8,720 8,912	8,889
	Actual								DI		Winter Pe	ak Foreca	ast Variar	ices - %								
Year	Retail Winter Peak (MW)	TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018	TYSP 2019	TYSP 2020	TYSP 2021	TYSP 2022
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022	8,590 8,974 7,585 8,627 8,679 7,607 8,454 9,085 10,686 8,909 7,817 7,201 7,671 8,438 7,649 6,837 9,249 6,707 7,794 7,629 8,202	-0.8% -1.6% -15.1% -7.1% -1.9%	12.3% -8.2%	-2.4% -3.7% -17.1% -9.4% -4.4% 10.4% -9.5% -21.8%	-9.9% -4.9% 9.9% -9.9% -22.2% -29.5%	-10.6% -5.7% 8.9% -10.8% -23.0% -30.2% -26.8%	-12.9% -8.1% 6.2% -13.0% -25.0% -32.1% -28.8% -22.9%	-5.2% 9.6% -10.3% -22.6% -30.0% -26.6% -20.5% -29.1%	-26.2%		-2.9% -15.5% -23.2% -18.9% -11.6% -20.4% -29.5% -5.5% -32.1% -21.8%	-13.6% -20.5% -16.1% -9.4% -19.4% -29.2% -5.8% -32.8% -23.2% -26.0%	-21.9% -17.6% -10.6% -20.2% -29.8% -6.6% -33.5% -24.0% -26.9% -22.6%	-15.4% -5.0% -16.2% -27.2% -4.2% -31.6% -21.5% -23.9% -19.1%		-17.1% -26.9% -2.2% -30.2% -20.2% -20.2% -22.8% -18.0%	-23.5% 2.1% -26.9% -16.3% -18.9% -13.7%	2.9% -26.4% -15.4% -19.1% -13.7%	-25.1% -13.9% -16.7% -11.1%	-15.2% -18.2% -12.9%	-12.5% -8.0%	-7.7%

DUKE ENERGY FLORIDA TYSP Forecast Error Evaluation Form Data is NOT weather adjusted

	Act System							D	EF System	<mark>ı Summer</mark>	Peak Fore	ecast. No	DR Activa	ted								
	Summer Pk	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP
Year	(MW)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022	9,034 8,476 9,125 9,681 9,689 10,449 10,036 10,261 9,600 9,277 9,026 8,776 9,218 9,218 9,218 9,218 9,218 9,218 9,218 9,218 9,218 9,218 9,218 9,218 9,218 9,218 9,218 9,218	8,524 8,305 8,402 8,580 8,757 8,915 9,153 9,397 9,616 9,866	8,371 8,533 8,666 9,013 9,250 9,414 9,579 9,750 9,943 10,131	8,716 8,812 9,193 9,414 9,576 9,711 9,899 10,047 10,187 10,356	9,102 9,350 9,617 9,820 9,962 10,302 10,496 10,695 10,902 11,106	9,458 9,758 10,008 10,187 10,538 10,748 10,964 11,165 11,375 11,589	10,137 10,382 10,439 10,722 10,948 11,160 11,389 11,739 11,962 12,196	10,089 10,144 10,402 10,622 10,983 11,210 11,403 11,621 11,817 12,016	10,242 10,220 10,358 10,713 10,983 11,000 11,225 11,400 11,602 11,801	9,715 9,571 9,841 10,025 9,915 10,004 10,161 10,301 10,452 10,859	9,436 9,610 9,761 9,766 9,848 9,762 9,859 9,954 10,301 10,403	9,629 9,415 9,464 9,677 9,701 9,986 10,159 10,595 10,778 10,856	9,669 9,742 9,911 10,176 10,275 10,455 10,650 10,844 10,930 11,104	9,509 9,750 9,865 10,064 10,213 10,643 10,796 10,823 10,948	9,655 9,720 9,986 10,139 10,580 10,780 10,689 10,845	9,533 9,770 9,893 10,319 10,450 10,098 10,234	9,617 9,745 10,111 10,209 10,051 10,142	9,497 9,817 9,872 9,816 9,911	9,770 9,797 9,880 9,956	9,731 9,783 9,856	9,434 9,942	9,650
	Actual								DEF Syste													
Year	Summer Peak (MW)	TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018	TYSP 2019	TYSP 2020	TYSP 2021	TYSP 2022
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022	9,034 8,476 9,125 9,681 9,689 10,449 10,036 10,261 9,600 9,277 9,026 8,776 9,218 9,218 9,218 9,218 9,646 9,293 9,271 9,647 9,681 9,977	6.0% 2.1% 8.6% 12.8% 10.6% 9.6% 9.2% -0.2% -6.0%	1.2% 6.9% 11.7% 7.5% 13.0% 6.6% 7.1% -1.5% -6.7% -10.9%	4.7% 9.9% 5.4% 11.0% 4.8% 5.7% -3.0% -7.7% -11.4% -15.3%	6.4% 3.6% 8.7% 2.2% 3.0% -6.8% -11.6% -15.6% -19.5% -17.0%	2.4% 7.1% 0.3% 0.7% -8.9% -13.7% -17.7% -21.4% -19.0% -20.5%	3.1% -3.3% -1.7% -10.5% -15.3% -19.1% -22.9% -21.5% -22.9% -20.9%	-0.5% 1.2% -7.7% -12.7% -17.8% -21.7% -19.2% -20.7% -18.4% -22.7%	0.2% -6.1% -10.4% -15.7% -20.1% -16.2% -17.9% -15.4% -19.9% -21.4%	-1.2% -3.1% -8.3% -12.5% -7.0% -7.9% -5.1% -9.8% -11.3% -8.2%	-1.7% -6.1% -10.1% -5.6% -6.4% -1.2% -5.7% -6.9% -3.2% -7.3%	-6.3% -6.8% -2.6% -4.7% -0.6% -6.9% -8.7% -5.9% -10.5% -10.8%	-9.2% -5.4% -7.0% -5.2% -9.6% -11.3% -6.4% -11.0% -11.4% -10.1%	-3.1% -5.5% -2.2% -7.7% -9.2% -6.3% -10.6% -10.6% -8.9%	-4.5% -0.8% -6.9% -8.6% -5.8% -10.5% -9.4% -8.0%	1.2% -4.9% -6.3% -3.4% -7.7% -4.1% -2.5%	-3.4% -4.9% -1.4% -5.5% -3.7% -1.6%	-2.4% 1.6% -2.3% -1.4% 0.7%	2.0% -1.5% -2.0% 0.2%	-0.9% -1.0% 1.2%	2.6% 0.4%	3.4%
	Act System	TVOD	T)/00	TVOD	TVOD	TVOD	TVOD		DEF Syster						TVOD	TVOD	TVOD	TVOD	TVOD	TVOD	TVOD	TVOD
	Winter Peak	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP

Year	(MW)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2021 2022	10,202 10,507 8,748 10,226 10,146 9,182 10,282 11,313 12,860 10,534 8,722 8,032 8,329 9,473 8,513 7,538 10,320 7,248 8,407 8,308 9,240	9,749 9,773 9,774 9,961 10,139 10,358 10,549 10,808 11,035 11,318	9,796 9,890 10,060 10,277 10,746 10,871 11,050 11,239 11,455 11,675	10,084 10,350 10,446 10,885 11,007 11,155 11,373 11,531 11,689 11,876	10,636 10,537 11,021 11,211 11,412 11,772 11,996 12,214 12,438 12,662	10,479 10,992 11,190 11,526 11,898 12,096 12,340 12,565 12,791 12,999	11,137 11,490 11,608 12,071 12,326 12,663 12,978 13,237 13,499 13,813	11,482 11,293 11,753 12,004 12,484 12,800 12,898 13,154 13,411 13,655	11,388 11,445 11,604 11,989 12,325 12,240 12,486 12,704 12,951 13,189	11,009 10,895 11,222 11,496 11,093 11,182 11,235 11,410 11,561 11,716	10,798 10,919 11,080 11,113 11,243 11,359 11,352 11,495 11,889 12,037	10,437 10,249 9,946 10,621 10,794 10,806 10,971 11,390 11,554 11,718	10,133 10,251 10,888 11,032 11,133 11,298 11,480 11,655 11,828 11,992	9,965 10,257 10,511 10,473 10,742 10,895 11,264 11,367 11,466	10,603 10,743 10,714 10,828 10,980 11,390 11,363 11,483	10,571 10,550 10,658 10,806 11,172 10,894 11,013	10,138 10,261 10,372 10,721 10,070 10,166	10,236 10,316 10,619 10,154 10,317	10,174 10,435 9,870 10,243	10,577 10,035 10,433	9,376 10,564	9,938
	Actual								DEF Syst	em Winte	r Peak For	ecast Var			,	,	,	,	,	,	,	-,
Veen	Winter	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP
Year 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022	Peak (MW) 10,202 10,507 8,748 10,226 10,146 9,182 10,282 11,313 12,860 10,534 8,722 8,032 8,329 9,473 8,513 7,538 10,320 7,248 8,407 8,308 9,240	2002 4.6% 7.5% -10.5% 2.7% 0.1% -11.4% -2.5% 4.7% 16.5% -6.9%	2003 7.3% -11.5% 1.6% -1.3% -14.6% -5.4% 2.4% 14.4% -8.0% -25.3%	2004 -13.2% -1.2% -2.9% -15.6% -6.6% 1.4% 13.1% -8.6% -25.4% -32.4%	-3.9% -3.7% -16.7% -8.3% -0.9% 9.2% -12.2% -28.6% -35.4% -34.2%	-3.2% -16.5% -8.1% -1.8% 8.1% -12.9% -29.3% -36.1% -34.9% -27.1%	2007 -17.6% -10.5% -2.5% 6.5% -14.5% -31.1% -38.1% -37.1% -29.8% -38.4%	2008 -10.5% 0.2% 9.4% -12.2% -30.1% -37.3% -35.4% -28.0% -36.5% -44.8%	-0.7% 12.4% -9.2% -27.2% -34.8% -32.0% -24.1% -33.0% -41.8% -21.8%	2010 16.8% -3.3% -22.3% -30.1% -24.9% -15.3% -24.2% -33.9% -10.7% -38.1%	-2.4% -20.1% -27.5% -25.1% -15.7% -25.1% -33.6% -10.2% -39.0% -30.2%	-16.4% -21.6% -16.3% -10.8% -21.1% -30.2% -5.9% -36.4% -27.2% -29.1%	2013 -20.7% -18.7% -13.0% -22.8% -32.3% -8.7% -36.9% -27.9% -29.8% -22.9%	2014 -16.4% -7.6% -19.0% -28.0% -3.9% -33.5% -25.4% -26.9% -19.4%	2015 -10.7% -20.8% -29.6% -4.7% -34.0% -26.2% -26.9% -19.5%	-19.5% -28.5% -3.2% -24.7% -23.7% -16.1%	2017 -25.6% 0.6% -30.1% -21.6% -17.5% -9.1%	0.8% -29.7% -20.8% -18.2% -10.4%	2019 -28.8% -19.4% -15.8% -9.8%	-20.5% -17.2% -11.4%	2021 -11.4% -12.5%	-7.0%

2017	2018	2019	2020	2021	2022