



May 1, 2024

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

Dear Mr. Teitzman:

Pursuant to Staff's email request dated March 19, 2024, Seminole Electric Cooperative, Inc. hereby submits for electronic filing the responses to the 2024 Ten-Year Site Plan – Staff's Data Request #1.

Please do not hesitate to call me if you have any questions or comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "KH", is positioned above the typed name of the sender.

Kevin J. Holmes
Sr. Manager of Resource & Operations Planning
813-739-1265 (office)
kholmes@seminole-electric.com

Enclosure

cc: J. Fuller
L. Johnson

Instructions: Accompanying this data request is a Microsoft Excel (Excel) document titled “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 (2024-2033) in PDF format.
2. Please provide an electronic copy of all schedules and tables in the Company’s current planning period TYSP in Excel format.
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.

Please see Excel tables.

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.
 - Please also describe how loads are calculated for those hours just prior to and following Daylight Savings Time (March 12, 2023, to November 5, 2023).

Not applicable.

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.

Please see Excel tables.

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.

The stations used to calculate Seminole's system-wide temperature are:

- *K40J*
- *KBKV*
- *KBOW*
- *KCTY*
- *KGNV*
- *KJAX*
- *KLEE*
- *KOCF*
- *KSFB*
- *KSGJ*
- *KSRQ*
- *KVDF*
- *KVQQ*
- *KVVG*

Please note that Seminole's system-wide temperature is used for reporting only and is not utilized in the load forecasting process, since each Member Cooperative is forecasted separately. Seminole purchases hourly weather data from AccuWeather for 25 stations in and around the Member service territory. Each Member has a unique combination of weather stations selected to create their weather statistics. The optimal set of weather stations are derived by ranking the predictive power of each station's temperature reading to estimate electricity load and then re-estimating load based on combinatory sets of stations ranked from lowest to highest mean average percentage error (MAPE). The set that achieves the lowest MAPE is chosen as the optimal combination. The analysis is conducted using generalized linear models and combinations are derived by the simple average of hourly station data. Please see Ten-Year Site Plan section 3.3.2. for additional information.

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.

See Ten-Year Site Plan, section 3.1 for general forecasting methodology, and sections 3.1.1, 3.1.2 and 3.1.3 for consumer, energy and demand forecast methodology, respectively.

See Ten-Year Site Plan, section 3.3 for forecast assumptions.

See Ten-Year Site Plan section, 3.2 for forecast data sources.

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.

There are no closed or open FPSC dockets or non-docketed FPSC matters based on the load forecast used in the current planning period TYSP.

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.

- 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.

Not applicable.

- If your response is negative, please explain.

Seminole updated its forecast methodology beginning in 2014 and does not compare errors results of forecasts generated before that period. Seminole has

developed ex-post forecast error analyses on load forecast studies since 2015. Seminole’s “after-the event” evaluation of model error with observed (actual) explanatory variable data removes the error associated with long-term forecasts of weather and economy, providing valuable insight into model improvements. Seminole conducts this analysis with all available information one year after the forecast origin. In other words, we reforecast the model with actual, observed data, rather than the forecast data. This provides an indication of whether load forecast error is due to Seminole’s forecasting methodology or simply due to the fact that weather and economy forecasts are never perfect. Seminole conducts this analysis on a monthly resolution, which provides a higher temporal resolution than focusing on one individual observation such as the winter or summer peak, or annual energy. Since 2015, Seminole has conducted ex-post analyses. Seminole calculates the error between actual load and ex-post load forecasts for each month and the Mean Absolute Percentage Error (MAPE) across all months. MAPE is a widely-used error measure in business forecasting, including load forecasting.

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.

- 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.

Not applicable.

- If your response is negative, please explain why.

Seminole updated its forecast methodology beginning in 2014 and does not compare errors results of forecasts generated before that period. Seminole has developed ex-post forecast error analyses on load forecast studies since 2015. Seminole’s “after-the event” evaluation of model error with observed (actual) explanatory variable data removes the error associated with long-term forecasts of weather and economy, providing valuable insight into model improvements. Seminole conducts this analysis with all available information one year after the forecast origin. In other words, we reforecast the model with actual, observed data, rather than the forecast data. This provides an indication of whether load forecast error is due to Seminole’s forecasting methodology or simply due to the fact that weather and economy forecasts are never perfect. Seminole conducts this analysis on a monthly resolution, which provides a higher temporal resolution than focusing on one individual observation such as the winter or summer peak, or annual energy. Since 2015, Seminole has conducted ex-post analyses. Seminole calculates the error between actual load and ex-post load forecasts for each month and the Mean

Absolute Percentage Error (MAPE) across all months. MAPE is a widely-used error measure in business forecasting, including load forecasting.

11. Please explain any historic and forecasted trends or other information as requested below in each of the following:

- 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.

See Ten-Year Site Plan, section 3.3.1 for economic assumptions.

- 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.

See Ten-Year Site Plan, section 3.3.1 for usage trends.

- 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.

See Ten-Year Site Plan, sections 3.2, 3.3.1 for assumptions.

- Provide a detailed discussion of how the Company's demand-side management program(s) for each customer type (residential, commercial, industrial) impact the observed trends in gigawatt hour sales (Schedule 3.3).

See Ten-Year Site Plan, section 5.9 for assumptions.

12. Please explain any historic and forecasted trends in each of the following components of Summer/Winter Peak Demand:

- 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.

Seminole developed projections of behind-the-meter solar output from future installations for each of its nine Members, and reduced energy and demand forecasts by these results. Outputs from existing behind-the-meter solar installations are reflected in actual energy and demand load history. Therefore, the solar forecasts reflect only future increases in solar output. Existing generation is almost exclusively residential, and forecasts are assumed to reflect residential-scale adoption.

- 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.

See Ten-Year Site Plan, section 5.9 DSM Programs for an explanation of the types of programs Seminole employs with Members to reduce peak demands.

- Total Demand, and identify the major factors (historically, currently, and in the forecasted period) that contribute to the growth/decline in the trends.

See Ten-Year Site Plan, section 3.3.1 for economic assumptions.

- 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.

See Ten-Year Site Plan, section 3.3.1 for economic assumptions.

13. **[FEECA Utilities Only]** Do the Company's energy and demand savings amounts reflected on the DSM and Conservation-related portions of Schedules 3.1, 3.2, and 3.3 reflect the Company's proposed goals in the 2024 FEECA Goalsetting dockets? If not, please explain what assumptions are incorporated within those amounts, and why.

Not applicable.

14. 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:

- Summer Peak Demand.
- Winter Peak Demand.
- Annual Retail Energy Sales.

A former Member of Seminole, Lee County Electric Cooperative (LCEC), discontinued purchasing power from Seminole in 2014 and began purchasing from Florida Power and Light. The first phase of LCEC's withdrawal from the Seminole system began in 2010. The significant reduction in Seminole's load due to LCEC's departure must be considered when interpreting the results of the load forecast with respect to historical figures.

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

- 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.

See Ten-Year Site Plan, section 3.3.2 for weather information.

- Please specify the source(s) of the weather data used in the aforementioned forecasting models.

See Ten-Year Site Plan, section 3.3.2 for source of weather data.

- 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.

See Ten-Year Site Plan, section 3.3.2 for weather information.

- Please specify with corresponding explanations:
 - i. How many years' historical weather data was used in developing each retail energy sales and peak demand model.

See Ten-Year Site Plan, section 3.3.2 for weather information.

- ii. How many years' historical weather data was used in the process of these models' calibration and/or validation.

See Ten-Year Site Plan, section 3.3.2 for weather information.

- 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 2024 – 2033) were derived/obtained for the respective retail sales and peak demand models.

See Ten-Year Site Plan, section 3.3.2 for weather information.

16. **[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:

- Schedule 2.1 – History and Forecast of Energy Consumption and Number of Customers by Customer Class.
- Schedule 2.2 – History and Forecast of Energy Consumption and Number of Customers by Customer Class.
- Schedule 2.3 – History and Forecast of Energy Consumption and Number of Customers by Customer Class.
- Schedule 3.1 – History and Forecast of Summer Peak Demand.
- Schedule 3.2 – History and Forecast of Winter Peak Demand.

- Schedule 3.3 – History and Forecast of Annual Net Energy for Load.
- Schedule 4 – Previous Year and 2-Year Forecast of Peak Demand and Net Energy for Load by Month.

Not applicable.

17. 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.

- Please explain in detail how the Utility’s load forecast accounts for the impact of customer’s renewables and/or storage.

See Ten-Year Site Plan, section 3.1.5 for description of how Seminole accounts for customer-owned generation.

- 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 2024 through 2033.

Annual Solar Impact	
Year	Gwh_ac
2024	114
2025	201
2026	324
2027	402
2028	431
2029	458
2030	484
2031	512
2032	544
2033	575

The annual Solar impact table shows the projection of the incremental increase of behind-the-meter solar generation included in Seminole’s load forecasts. The solar generation associated with existing consumer-owned facilities is not included in this forecast. All the generation is assumed to be in the residential class. Seminole is Winter peaking with the annual peak occurring historically in the morning. Therefore, Solar’s impact on the annual peak is assumed negligible.

- If the Utility maintains a forecast for the planning horizon (2024-2033) of the number of customers with renewables and/or storage, by customer class, please provide.

Seminole does not maintain a forecast of the number of customers with renewables and/or storage by customer class.

Plug-in Electric Vehicles (PEVs)

18. 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?

- 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.

Future PEV loads are not specifically modeled in the demand and energy forecasts for the 2024 Ten-Year Site Plan. However, historical PEVs' load trends are accounted for in the data used to forecast the 2024 Ten-Year Site Plan.

19. Please discuss with detail any changes or modifications from the Company's previous TYSP report regarding the following PEV related topics:

- The major drivers of the Company's PEV growth.

Not applicable.

- 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.

Not applicable.

- The Company's process for monitoring the installation of PEV public charging stations in its service area.

Not applicable.

- 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.

Not applicable.

- 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.

Not applicable.

20. 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.

- Please describe all significant technological, market, regulatory, or other events or announcements since the filing of the Company's 2023 TYSP which have impacted the metrics reported.

Not applicable.

- 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.

Not applicable.

21. 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.

- Of these programs or tariffs, are any designed for or do they include educating customers on electricity as a transportation fuel?

Seminole does not provide service to retail customers. Seminole continues to provide assistance to our Members in educating their consumer-members with respect to the feasibility of electricity as a light- and heavy-duty transportation fuel.

- 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.

While Seminole does not offer any such program at this time, we are working with our Members to determine how they can capture and respond to such sentiments/expectations by their consumer-members.

22. 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.

Seminole established a strategic goal to develop and deliver an electric vehicle education program. To ensure the development of an effective program, Seminole has engaged in research activities with the Electric Power Research Institute (EPRI), participating in their

Electric Transportation Advisory Council and Infrastructure Council meetings. As part of these activities, EPRI has provided Seminole insights in the area of Electric Vehicle (EV) registrations and future projection. The data is provided at a county level, (i.e., it is not specifically tailored to our Members' service territories since some of our Members serve only county fractions). Also, there is no visibility into where the EVs are exactly (non-stationary load). The county-level data is an estimate based on new registrations of electric vehicles and modeling of the number of electric vehicles in operation (including the movement of used electric vehicles and electric vehicles that are retired). The projections are also performed using approximations and several assumptions to simulate low, medium, and high EV penetration scenarios. The localized registration and projections estimates help Seminole and our distribution Members to understand the local adoption of plug-in EVs as part of our education program.

23. 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.

Not applicable.

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

Not applicable.

25. If applicable, please list and briefly describe all PEV pilot programs the Company is currently implementing and the status of each program.

Not applicable.

26. 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.

Not applicable.

Demand Response

27. **[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.

Not applicable.

28. **[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.

Not applicable.

29. **[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.

Not applicable.

30. 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.

Please see Excel tables.

Generation & Transmission

Utility-Owned Generation

31. 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.

Please see Excel tables.

32. 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 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.

Please see Excel tables.

33. 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 in-service 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.

Please see Excel tables.

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

Seminole's capacity expansion plan includes the addition of a new advanced, large-frame one-on-one natural gas combined cycle unit (Shady Hills Energy Center or SHEC) located in Pasco County. The new facility has a winter capacity of 575 MW and construction began in December 2023. The expected commercial in-service date for SHEC is December 2026.

At this time, with respect to the Unnamed Combined Cycle Unit and the Unnamed Combustion Turbine Unit, it has not been determined if the capacity need will be met via self-build, acquisition, and/or purchased power alternatives. The ultimate method, type, size and location (if necessary) will be determined subsequent to the completion of a request for-proposal.

34. 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.

Please see Excel tables.

35. 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 in-service 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.

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

Seminole's long-term planning forecast does not contain planned utility-owned renewable resource.

36. 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?

There were no planned utility-owned renewable resources cancelled, delayed, or reduced in scope within the past year.

37. **[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.

Not applicable.

38. 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.

Please see Excel tables.

39. 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.

Seminole has not determined a drop-dead date for any of their reported planned resources.

40. 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.

Please see Excel tables.

41. **[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.

Not applicable.

42. 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.

Please see Excel tables.

43. 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.

Please see Excel tables.

44. 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.

Please see Excel tables.

Purchases and Sales

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

Please see Excel tables.

46. 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.

Please see Excel tables.

47. 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.

Please see Excel tables.

- For each purchased power agreement in the table, provide a narrative response discussing the current status of the project.

Shady Hills CT 1, 2 & 3 are existing units and Seminole will be the sole off taker of firm capacity and energy from the units for the term listed in the Excel table.

48. 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.

Please see Excel tables.

49. 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.

Please see Excel tables.

- For each purchased power agreement in the table, provide a narrative response discussing the current status of the project.

In December 2019, Seminole executed four separate 74.5 MW power purchase agreements with Florida Renewable Partners ("FRP"). Collectively, these

agreements will provide Seminole with 298 MW of solar photovoltaic energy from four separate sites. All of these facilities are contracted to be commercial and to begin selling energy to Seminole in 2024. The four facilities will be located in different counties within peninsular Florida, with one facility each in Putnam, Gadsden, Columbia, and Gilchrist counties. Seminole will be the sole off-taker for all four facilities and amended the agreements in October 2023 to purchase the associated energy for 25 years.

50. 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?

Seminole has four aforementioned power purchase agreements with FRP for projects located in Putnam, Gadsden, Columbia and Gilchrist counties, and the commercial operational dates for the four projects have been delayed to the fourth quarter of 2024. The primary reason given by FRP for the delay was unanticipated challenges from inflationary commodity pricing and solar panel availability, causing a disruption in the solar industry. The secondary reason given by FRP for the delay was the U.S. Commerce Department's tariff circumvention investigation.

51. 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.

Please see Excel tables.

52. 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.

Please see Excel tables.

- For each power sale agreement in the table, provide a narrative response discussing the current status of the agreement.

53. 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?

There were no long-term power sale and agreements cancelled, expired, or modified within the past year.

Renewable Generation

54. 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.

Please see Excel tables.

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

As reported in Seminole's Standards for the Promotion, Encouragement, and Expansion of the Use of Renewable Energy, Resources and Energy Conservation and Efficiency Measures, filed with the Florida Public Service Commission on 29 March 2024, Seminole maintains a commitment to use renewable energy resources to assist in planning and implementing a diverse power supply portfolio, while ensuring that the addition of new renewable resources does not adversely affect Seminole's wholesale electric rates. Seminole engages in the following strategies to achieve continuing expansion of its renewable energy resource portfolio:

- Member Educational Materials – Seminole provides Members with materials that can be distributed to end-use member-consumers including educational brochures, and a video on Cooperative Solar.*
- Open Door Negotiation Policy – Seminole promotes an open-door policy for arm's-length negotiations with all renewable providers.*
- Competitive Bid – Seminole will continue to utilize competitive bidding as one of the tools for acquiring competitively-priced renewable and conventional resources.*
- Price Point – Seminole will continue to use projected avoided costs as the price point for evaluating proposals for renewable energy.*
- Ease of Contracting – Seminole will continue to offer a standard offer agreement as an option for renewable resource developers to sell their energy output to Seminole, which also includes performance guarantee terms.*
- Seminole will seek state and federal grants, subsidies, and other financial incentives, to the extent such resources are available to reduce the cost of renewable energy resources.*
- Seminole will keep abreast of the development and costs of new renewable energy resources and renewable energy technologies that can be utilized by Seminole and its Members.*
- Consumer and Member-Owned Renewable Resources – Seminole's wholesale power contracts with its nine Members provide for net metering service for the Members' consumer-owned renewable generating resources. In addition, Seminole's Members have the ability under the wholesale power contract to own or lease renewable generation with certain limitations.*

56. **[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.

Not applicable.

57. 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.

For summer, 40% of Seminole's installed solar capacity is included in the calculation of its reserve margin due to the expected time of the peak hour.

For winter, 0% of Seminole's installed solar capacity is included in the calculation of its reserve margin, as the peak hour is expected to occur at a time when there is little to no sunlight.

58. 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.

- Please describe any such programs in development with an anticipated launch date within the current planning period.

Not applicable.

Energy Storage

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

The company established several "technology pods" in early 2021 to investigate various technologies. Technology Pod 1 was focused on Solar and Battery Storage. The team solicited information from a variety of sources on topics relevant to its focus. The only non-lithium-ion based battery storage technology investigated was iron-flow batteries, or redox batteries. The team had a consultant present its current offerings and the benefits of iron-flow over lithium-ion. Given the relatively new state of the technology and the potential cost, the team did not investigate further.

60. 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.

Not applicable.

61. 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).

Seminole has investigated storage technologies. At this time, Seminole does not have energy storage technology on its system.

62. 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.

Seminole does not serve retail customers directly. Seminole remains in contact with Member Distribution Cooperatives and assists them with handling consumer questions about new technologies.

63. 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.

Please see Excel tables.

64. 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.

Please see Excel tables.

65. 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.

Seminole began investigating storage technologies, but does not yet have any energy storage technology pilot programs on its system.

- 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.

Seminole began investigating storage technologies, but does not yet have any energy storage technology pilot programs on its system.

- Please provide a brief assessment of how these benefits, risks, and operational limitations may change over the current planning period.

Seminole began investigating storage technologies, but does not yet have any energy storage technology pilot programs on its system.

- Please identify and describe any plans to periodically update the Commission on the status of your energy storage pilot programs.

Seminole began investigating storage technologies, but does not yet have any energy storage technology pilot programs on its system.

66. 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.

Seminole utilizes solar generation sources in its system portfolio; however, only a portion of the total installed capacity is considered in the calculation of its reserve margins, as noted in the response to Question #57. Seminole does not currently use energy storage technologies to provide firm capacity from its solar generation sources but is considering it.

- 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.

Seminole does not have operational experience with energy storage technologies.

Other

67. 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.

Seminole is not currently involved in the research and development of utility power technologies. Seminole has an efficient electrification program in conjunction with the Members that is currently studying indoor agriculture with the Electric Power Research Institute (EPRI) and the University of Florida (UF) at the UF APHIS-Live Oak Plant Science Center. A second indoor agriculture facility has been located and installed in Citra, Florida in conjunction with EPRI and UF. This research is focused on studying the electric usage of growing plants in shipping containers, and how the lighting and cooling requirements can be scheduled to use electricity in the most efficient manner.

Environmental

68. 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:

- Please identify the year during the current planning period in which CO₂ compliance costs are first assumed to have a non-zero value.

Seminole does not currently assume CO₂ compliance costs in the resource planning process used to generate the resource plan presented in the current planning period TYSP.

- **[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.

Not Applicable.

- **[Investor-Owned Utilities Only]** Please provide a revised resource plan assuming no CO₂ compliance costs.

Not Applicable.

69. 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.

In 2023, Seminole operated in accordance with required regulatory permits and did not experience any material curtailments in operations as a result of existing environmental regulations. Through 2033, Seminole does not anticipate unit dispatch impacts, curtailments or retirements as a result of existing environmental regulations.

70. For the U.S. EPA's Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units Rule:

- Will your Company be materially affected by the rule?

Seminole's newest combined cycle facility (SCCF) along with the combined cycle facility under construction (SHEC) are subject to, and compliant with, the most recently finalized CAA 111(b) standards (2015) for new sources. Accordingly, unless and/or until new generating facilities are planned, Seminole is not expected to be materially affected by revised 111(b) standards anticipated to be finalized in the Spring of 2024.

- What compliance strategy does the Company anticipate employing for the rule?

Not applicable.

- If the strategy has not been completed, what is the Company's timeline for completing the compliance strategy?

Not applicable.

- Will there be any regulatory approvals needed for implementing this compliance strategy? How will this affect the timeline?

Not applicable.

- 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.

Not applicable.

- If the answer to any of the above questions is not available, please explain why.

Not applicable.

71. 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.

- Mercury and Air Toxics Standards (MATS) Rule.

Retirements, curtailments, or other ongoing downtime periods are not expected due to the current MATS Rule. Revised MATS requirements were proposed on April 24, 2023 and are due to be finalized in the 2nd Quarter of 2024. Seminole will more fully assess post-publication of the final rules.

- Cross-State Air Pollution Rule (CSAPR).

As of compliance year 2017, Florida sources are not subject to CSAPR.

- Cooling Water Intake Structures (CWIS) Rule.

Retirements, curtailments, or other ongoing downtime periods were not experienced as a result of the CWIS Rule.

- Coal Combustion Residuals (CCR) Rule.

Retirements, curtailments, or other ongoing downtime periods are not expected due to the current CCR Rule. Revised CCR “Management Unit” revisions were proposed on May 18, 2023 and are due to be finalized during the 2nd Quarter of 2024. Seminole will more fully assess post publication of the final rules.

- Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units.

Seminole’s newest combined cycle facility (SCCF) along with the combined cycle facility under construction (SHEC) are subject to, and compliant with, the most recently finalized CAA 111(b) standards (2015) for new sources. Accordingly, unless and/or until new generating facilities are planned, Seminole is not expected to be materially affected by revised 111(b) standards anticipated to be finalized in the Spring of 2024.

- Affordable Clean Energy Rule or its replacement.

Revised GHG rules for existing sources (111d) to replace the previously proposed ACE rule were proposed on May 18, 2023 and are due to be finalized in the 2nd Quarter of 2024. Seminole will more fully assess post publication of the final rules.

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

Retirements, curtailments, or other ongoing downtime periods are not expected due to current ELGs. Revised ELGs were proposed on March 29, 2023 and are due to be finalized in the 2nd Quarter of 2024. Seminole will more fully assess post publication of the final rules.

72. 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.

Please see Excel tables – (Data for rules in effect 12/31/23)

73. 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 Excel tables – (Data for rules in effect 12/31/23)

74. 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.

Please see Excel tables – (Data for rules in effect 12/31/23)

75. 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.

There are currently no approved costs for environmental compliance investments associated with any finalized or proposed EPA regulations.

Fuel Supply & Transportation

76. 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 type forecasted to be used by the Company in the current planning period.

Please see Excel tables.

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

Seminole utilizes recognized, authoritative independent third-party commodity price forecasts and/or NYMEX natural gas and oil commodity prices as a starting point for projecting the delivered price of fuel to its generating resources. Seminole also utilizes authoritative independent third-party forecasts for escalation or economic market indices to adjust future prices of fuel related service costs, such as transportation or contractual fuel price adjustments. Forecasts are then adjusted to include known and measurable conditions from Seminole's long-term fuel supply, storage, and transportation agreements.

78. 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.

- Coal
- Natural Gas
- Nuclear
- Fuel Oil
- Other (please specify each, if any)

Seminole does not have any significant changes to what was presented on pages 37-39 of its 2024 Ten-Year Site Plan.

79. Please provide a comparison of the Utility’s 2023 actual fuel price forecast and the actual 2023 delivered fuel prices.

Please see table below. Prices are in \$/MMBtu.

	2023 Forecast	2023 Actual	Delta
Natural Gas	\$6.50	\$4.60	-\$1.90
Coal	\$2.78	\$3.07	\$0.29
Distillate Oil	\$20.71	\$22.98	\$2.27

80. Please explain any notable changes in the Utility’s forecast of fuel prices used to prepare the Utility’s current TYSP compared to the fuel process used to prepare the Utility’s prior TYSP.

There were no notable changes in the forecast of fuel prices used in the current TYSP compared to the prior TYSP.

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

Seminole maintains a diverse portfolio of active, industry standard natural gas contracts (GISB/NAESB) with approximately 49 suppliers, marketers and other Florida utilities that provide natural gas commodity and/or may have available transportation capacity for resale. Seminole maintains a balanced portfolio of long-term (1 to 10 years) natural gas supply arrangements for a portion of its projected baseload requirements and relies on shorter-term transactions to obtain the remaining requirements. Seminole has contracted for an aggregate amount of approximately 74,000 dth/day of onshore, upstream pipeline capacity on Transco’s Mobile Bay South Lateral, Sabal Trail Transmission, and Southeast Supply Header to interconnects with the Florida Gas Transmission (“FGT”) and/or Gulfstream Natural Gas System (“Gulfstream”) interstate pipelines that ultimately serve Seminole’s generation facilities. Seminole currently has agreements for 253,000 dth/day of firm natural gas transportation capacity that supply Seminole’s generation facilities. Seminole also contracts for firm gas storage service to provide for year-round storage capacity for 750,000 dth to supplement its supply purchases during periods of scarcity.

For natural gas transportation, aside from those mentioned above, Seminole holds various contracts for interruptible transportation capacity on both FGT and Gulfstream pipelines, as well as interruptible transportation service contracts on the Elba Express Company, and Southern Natural Gas Company pipelines.

82. 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.

There are no existing or planned natural gas pipeline expansion projects identified that would affect Seminole during the current planning period.

83. 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.

In general, LNG imports to the U.S. are expected to be minimal over the period because of global gas market economics. Sufficient domestic natural gas production is expected to keep gas prices too low in the U.S. relative to other global markets to attract cargoes of LNG. Conversely, companies are seeking to export LNG from the U.S. and exports are projected to increase during the period. While the incremental demand for U.S. gas production has resulted in upward pressure on domestic gas prices, Seminole recognizes that a) the export capacity from the U.S. is assumed to increase but the long-term impact on U.S. prices is expected to be marginal or b) continuing increases in production will also serve to partially offset price increases. Seminole has noticed shifts to traditional gas flows throughout the Southeast that will accommodate growing LNG exports, which is bullish in regard to future market prices for natural gas.

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

Seminole has a firm natural gas storage agreement with SG Resources Mississippi LLC for capacity through March 2025. The arrangement provides for storage of natural gas supply year-round and associated daily injection and withdrawal rights. Seminole uses its firm storage capacity to mitigate the risk of supply unavailability and as a tool to balance its daily/monthly gas supply to demand. As Seminole continues to expand the use of natural gas in our power supply portfolio, we will continue to evaluate both the volume and flexibility needed in our natural gas storage portfolio.

85. 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.

Seminole is a "Captive Shipper" to CSX Transportation ("CSXT") for all delivery of Seminole's coal requirements to the Seminole Generating Station. Seminole does not have, nor can we develop, any direct access to water transportation or other economic alternative modes of transportation. We could supply very small quantities of coal in an emergency through truck deliveries from other power stations in Florida which could receive our coal deliveries. There are no active coal terminals in the vicinity of Palatka, Florida to receive supplies through third party transactions.

Currently, Seminole has rail transportation through a CSXT transportation contract for service to our Seminole Generating Station. This contract provides access to multiple supply

regions such as the Illinois Basin, including West Kentucky, Illinois and Indiana mines, and also, to the northern Appalachian region.

86. 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.

During the period from 2024-2033, outside of the planned removal from service of one of our coal units in 2023, Seminole does not have any planned changes and/or construction projects necessitating changes to the coal handling, blending, unloading, and storage at Seminole Generating Station.

87. 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.

Not applicable.

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

Not applicable.

89. **[FPL Only]** Please refer to FPL's Response to Staff's First Data Request (No. 90) for the 2023 Ten-Year Site Plan, received on May 1, 2023. Have FPL's plans to only self-consume the hydrogen produced at the Okeechobee Clean Energy Center changed? Please explain.

Not applicable.

Extreme Weather

90. 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.

Seminole previously had generation Cold Weather Preparedness procedures and plant preventive maintenance work orders. Seminole has made improvements to its existing procedures and has updated weather related preventative maintenance work orders. In addition, Seminole has created generator operator training for cold weather preparedness. Seminole will review all Cold Weather procedures, preventative maintenance work orders and training annually and before the cold winter season.

Seminole is implementing all revised procedures, work orders and training in order to be compliant with the revised NERC Standards effective 10/1/2024.

91. Please identify any future winterization plans, if any, the Company intends to implement over the current planning period.

Seminole will continue to review all Cold Weather procedures, preventative maintenance work orders and training annually and before the cold winter season. Any deficiencies identified will be addressed prior to the winter season. Extreme Cold Weather training will be assigned to personnel on an annual basis to be completed prior to the winter season.

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

Each of Seminole's generating sites were (and remain) licensed through regulatory programs associated with Florida's Power Plant Siting Act. Appropriate siting with respect to federally defined flood zones, along with local government review of applicable requirements are incorporated within the PPSA Certification process. The potential for flooding of a solely-owned transmission substation is evaluated during the design phase.

93. 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.

Seminole's generation and transmission facilities were not materially impacted by a major storm event in 2023.

- 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.

As a generation and transmission cooperative, Seminole does not have retail customers, however some of Seminole's Member distribution cooperatives were impacted by major storm events in 2023 and the impacts are reported independently of Seminole's Ten-Year Site Plan.

- Please explain whether the above discussed impact is include in your company's customer/retail energy sales/demand forecasts.

See Ten-Year Site Plan, section 3.1 for general forecasting methodology, and sections 3.1.1, 3.1.2 and 3.1.3 for consumer, energy and demand forecast methodology, respectively.

- If your response to subpart (b) is affirmative, please explain how this impact is modeled.

See Ten-Year Site Plan, section 3.1 for general forecasting methodology, and sections 3.1.1, 3.1.2 and 3.1.3 for consumer, energy and demand forecast methodology, respectively.

94. 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.

Seminole has developed an internal team to review and evaluate all existing practices to ensure compliance with NERC Reliability Standards addressing extreme weather. No material upgrades were determined necessary at any Seminole generating facilities.

95. **[FEECA Utilities Only]** Please refer to the Excel Tables File (Data Centers). As of today, there are 125 or more data centers located in the state of Florida. For the purpose of better understanding this recent load growth, please complete Tables I and II.

Not applicable.

96. **[FEECA Utilities Only]** With respect to the load forecast included in the Utility's 2024 Ten-Year Site Plan to be filed in April of this year, does the load forecast include projections of annual energy consumption and demand associated with data centers within your service area during the forecasting time horizon (2024-2033)?

Not applicable.

- If any such projections have been made, please provide details of the projections including the type of data centers expected to contribute to such energy/demand, and what factors are driving such energy consumption and demand.

Not applicable.

- If no specific projections have been made, what does the Utility believe is the likely pattern of load growth associated with this industry within its service territory?

Not applicable.

97. **[FEECA Utilities Only]** Please identify the Utility's issues and/or concerns, if any, that are expected to result from the growth in data centers in the Utility's service territory.

Not applicable.

- Please specify how the Utility anticipates responding to such issues or concerns.

Not applicable.

- Please specify how the Utility responded to such issues or concerns in the past.

Not applicable.

98. **[Non-FEECA Utilities Only]** For any data centers operating in the Utility's service territory and receiving electric service from the Utility, please describe the current number of the data

centers, by type (e.g., colocation, enterprise, cloud, edge, and micro data, etc.) and, for each data center, the customer class served as well as the estimated load served (summer/winter demand and energy).

One of Seminole's nine Member Cooperatives has one data center in its service territory. The data center is served under the Large General Service Demand Rate (Commercial class). Its load is not a significant portion of the Member's total load. Therefore, Seminole does not analyze its load separately for forecasting purposes. This data center's load does not fluctuate significantly. Its average summer peak is comparable to its Winter peak at approximately 1.5MW. It has an average of 1 GWH monthly energy consumption.

99. **[Non-FEECA Utilities Only]** With respect to the load forecast included in the Utility's 2024 Ten-Year Site Plan to be filed in April this year, does the load forecast include projections of annual energy consumption and demand associated with data centers within your service area during the forecasting time horizon (2024-2033)?

The load forecast does not include projections of annual energy consumption and demand specifically associated with data centers.

- If any such projections have been made, please provide details of the projections including the type of data centers expected to contribute to such energy/demand, and what factors are driving such energy consumption and demand.

Not applicable.

- If no specific projections have been made, what does the Utility believe is the likely pattern of load growth associated with this industry within its service territory?

At this time, none of Seminole's nine Members signaled a feasible future connection of new data centers in their service territories. To help inform its forecast, Seminole continues to survey its Members regarding future large loads in their service territories, including data centers.

100. **[Non-FEECA Utilities Only]** Please identify the Utility's issues and/or concerns, if any, that are expected to result from the growth in data centers in your utility's service territory. Please also specify how has, and how does, your utility anticipate responding to such issues or concerns.

At this time, none of Seminole's nine Members signaled a feasible future connection of new data centers in their service territories. To help inform its forecast, Seminole continues to survey its Members regarding future large loads in their service territories, including data centers.

Sheet #	DR No.	Tab Name
1	-	Table of Contents
2	3	Financial Assumptions
3	4	Financial Escalation
4	5	Hourly System Load
5	20	Historic Peak Demand
6	20	Electric Vehicle Charging
7	27	DR Participation
8	28	DR Annual Use
9	29	DR Peak Activation
10	30	LOLP
11	31	Unit Performance
12	32	Utility Existing Traditional
13	33	Utility Planned Traditional
14	34	Utility Existing Renewable
15	35	Utility Planned Renewable
16	45	Firm Purchases
17	46	PPA Existing Traditional
18	47	PPA Planned Traditional
19	48	PPA Existing Renewable
20	49	PPA Planned Renewable
21	51	PSA Existing
22	52	PSA Planned
23	54	Annual Renewable Generation
25	63	Existing Energy Storage
26	64	Planned Energy Storage
27	37	As-available Energy Rate
28	38	Planned PPSA Units
29	40	Capacity Factors
30	42	Steam Unit CC Conversion
31	43	Steam Unit Fuel Switching
32	44	Transmission Lines
33	71	Emissions Cost
34	72	EPA Operational Effects
35	73	EPA Cost Effects
36	74	EPA Unit Availability
37	76	Fuel Usage & Price
38	95	Data Centers

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 3

Financial Escalation Assumptions

Year	General	Plant Construction	Fixed O&M	Variable O&M
	Inflation	Cost	Cost	Cost
	%	%	%	%
2024	2.426%	2.426%	2.426%	2.426%
2025	2.045%	2.045%	2.045%	2.045%
2026	2.004%	2.004%	2.004%	2.004%
2027	2.030%	2.030%	2.030%	2.030%
2028	2.093%	2.093%	2.093%	2.093%
2029	2.137%	2.137%	2.137%	2.137%
2030	2.140%	2.140%	2.140%	2.140%
2031	2.133%	2.133%	2.133%	2.133%
2032	2.116%	2.116%	2.116%	2.116%
2033	2.144%	2.144%	2.144%	2.144%

TYSP Year 2024
 Staffs Data Request # 1
 Question No. 4

Date	Hourly System Load (MW)																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1/1/2023	Not Applicable																							
1/2/2023	Not Applicable																							
1/3/2023	Not Applicable																							
1/4/2023	Not Applicable																							
1/5/2023	Not Applicable																							
1/6/2023	Not Applicable																							
1/7/2023	Not Applicable																							
1/8/2023	Not Applicable																							
1/9/2023	Not Applicable																							
1/10/2023	Not Applicable																							
1/11/2023	Not Applicable																							
1/12/2023	Not Applicable																							
1/13/2023	Not Applicable																							
1/14/2023	Not Applicable																							
1/15/2023	Not Applicable																							
1/16/2023	Not Applicable																							
1/17/2023	Not Applicable																							
1/18/2023	Not Applicable																							
1/19/2023	Not Applicable																							
1/20/2023	Not Applicable																							
1/21/2023	Not Applicable																							
1/22/2023	Not Applicable																							
1/23/2023	Not Applicable																							
1/24/2023	Not Applicable																							
1/25/2023	Not Applicable																							
1/26/2023	Not Applicable																							
1/27/2023	Not Applicable																							
1/28/2023	Not Applicable																							
1/29/2023	Not Applicable																							
1/30/2023	Not Applicable																							
1/31/2023	Not Applicable																							
2/1/2023	Not Applicable																							
2/2/2023	Not Applicable																							
2/3/2023	Not Applicable																							
2/4/2023	Not Applicable																							
2/5/2023	Not Applicable																							
2/6/2023	Not Applicable																							
2/7/2023	Not Applicable																							
2/8/2023	Not Applicable																							
2/9/2023	Not Applicable																							
2/10/2023	Not Applicable																							
2/11/2023	Not Applicable																							
2/12/2023	Not Applicable																							
2/13/2023	Not Applicable																							
2/14/2023	Not Applicable																							
2/15/2023	Not Applicable																							
2/16/2023	Not Applicable																							
2/17/2023	Not Applicable																							
2/18/2023	Not Applicable																							
2/19/2023	Not Applicable																							
2/20/2023	Not Applicable																							
2/21/2023	Not Applicable																							
2/22/2023	Not Applicable																							
2/23/2023	Not Applicable																							
2/24/2023	Not Applicable																							
2/25/2023	Not Applicable																							
2/26/2023	Not Applicable																							
2/27/2023	Not Applicable																							
2/28/2023	Not Applicable																							
Leave Row Blank	Not Applicable																							
3/1/2023	Not Applicable																							
3/2/2023	Not Applicable																							
3/3/2023	Not Applicable																							
3/4/2023	Not Applicable																							
3/5/2023	Not Applicable																							
3/6/2023	Not Applicable																							
3/7/2023	Not Applicable																							
3/8/2023	Not Applicable																							
3/9/2023	Not Applicable																							
3/10/2023	Not Applicable																							
3/11/2023	Not Applicable																							
3/12/2023	Not Applicable																							
3/13/2023	Not Applicable																							
3/14/2023	Not Applicable																							
3/15/2023	Not Applicable																							
3/16/2023	Not Applicable																							
3/17/2023	Not Applicable																							
3/18/2023	Not Applicable																							
3/19/2023	Not Applicable																							
3/20/2023	Not Applicable																							
3/21/2023	Not Applicable																							
3/22/2023	Not Applicable																							
3/23/2023	Not Applicable																							
3/24/2023	Not Applicable																							
3/25/2023	Not Applicable																							
3/26/2023	Not Applicable																							
3/27/2023	Not Applicable																							
3/28/2023	Not Applicable																							
3/29/2023	Not Applicable																							
3/30/2023	Not Applicable																							
3/31/2023	Not Applicable																							
4/1/2023	Not Applicable																							
4/2/2023	Not Applicable																							
4/3/2023	Not Applicable																							
4/4/2023	Not Applicable																							
4/5/2023	Not Applicable																							
4/6/2023	Not Applicable																							
4/7/2023	Not Applicable																							
4/8/2023	Not Applicable																							
4/9/2023	Not Applicable																							
4/10/2023	Not Applicable																							
4/11/2023	Not Applicable																							
4/12/2023	Not Applicable																							
4/13/2023	Not Applicable																							
4/14/2023	Not Applicable																							
4/15/2023	Not Applicable																							
4/16/2023	Not Applicable																							
4/17/2023	Not Applicable																							
4/18/2023	Not Applicable																							
4/19/2023	Not Applicable																							
4/20/2023	Not Applicable																							
4/21/2023	Not Applicable																							
4/22/2023	Not Applicable																							
4/23/2023	Not Applicable																							
4/24/2023	Not Applicable																							
4/25/2023	Not Applicable																							
4/26/2023	Not Applicable																							
4/27/2023	Not Applicable																							
4/28/2023	Not Applicable																							
4/29/2023	Not Applicable																							
4/30/2023	Not Applicable																							
5/1/2023	Not Applicable																							
5/2/2023	Not Applicable																							
5/3/2023	Not Applicable																							
5/4/2023	Not Applicable																							

5/5/2023
5/6/2023
5/7/2023
5/8/2023
5/9/2023
5/10/2023
5/11/2023
5/12/2023
5/13/2023
5/14/2023
5/15/2023
5/16/2023
5/17/2023
5/18/2023
5/19/2023
5/20/2023
5/21/2023
5/22/2023
5/23/2023
5/24/2023
5/25/2023
5/26/2023
5/27/2023
5/28/2023
5/29/2023
5/30/2023
5/31/2023
6/1/2023
6/2/2023
6/3/2023
6/4/2023
6/5/2023
6/6/2023
6/7/2023
6/8/2023
6/9/2023
6/10/2023
6/11/2023
6/12/2023
6/13/2023
6/14/2023
6/15/2023
6/16/2023
6/17/2023
6/18/2023
6/19/2023
6/20/2023
6/21/2023
6/22/2023
6/23/2023
6/24/2023
6/25/2023
6/26/2023
6/27/2023
6/28/2023
6/29/2023
6/30/2023
7/1/2023
7/2/2023
7/3/2023
7/4/2023
7/5/2023
7/6/2023
7/7/2023
7/8/2023
7/9/2023
7/10/2023
7/11/2023
7/12/2023
7/13/2023
7/14/2023
7/15/2023
7/16/2023
7/17/2023
7/18/2023
7/19/2023
7/20/2023
7/21/2023
7/22/2023
7/23/2023
7/24/2023
7/25/2023
7/26/2023
7/27/2023
7/28/2023
7/29/2023
7/30/2023
7/31/2023
8/1/2023
8/2/2023
8/3/2023
8/4/2023
8/5/2023
8/6/2023
8/7/2023
8/8/2023
8/9/2023
8/10/2023
8/11/2023
8/12/2023
8/13/2023
8/14/2023
8/15/2023
8/16/2023
8/17/2023
8/18/2023
8/19/2023
8/20/2023
8/21/2023
8/22/2023
8/23/2023
8/24/2023
8/25/2023
8/26/2023
8/27/2023
8/28/2023
8/29/2023
8/30/2023
8/31/2023
9/1/2023
9/2/2023
9/3/2023
9/4/2023
9/5/2023
9/6/2023
9/7/2023
9/8/2023
9/9/2023
9/10/2023
9/11/2023
9/12/2023
9/13/2023

9/14/2023
9/15/2023
9/16/2023
9/17/2023
9/18/2023
9/19/2023
9/20/2023
9/21/2023
9/22/2023
9/23/2023
9/24/2023
9/25/2023
9/26/2023
9/27/2023
9/28/2023
9/29/2023
9/30/2023
10/1/2023
10/2/2023
10/3/2023
10/4/2023
10/5/2023
10/6/2023
10/7/2023
10/8/2023
10/9/2023
10/10/2023
10/11/2023
10/12/2023
10/13/2023
10/14/2023
10/15/2023
10/16/2023
10/17/2023
10/18/2023
10/19/2023
10/20/2023
10/21/2023
10/22/2023
10/23/2023
10/24/2023
10/25/2023
10/26/2023
10/27/2023
10/28/2023
10/29/2023
10/30/2023
10/31/2023
11/1/2023
11/2/2023
11/3/2023
11/4/2023
11/5/2023
11/6/2023
11/7/2023
11/8/2023
11/9/2023
11/10/2023
11/11/2023
11/12/2023
11/13/2023
11/14/2023
11/15/2023
11/16/2023
11/17/2023
11/18/2023
11/19/2023
11/20/2023
11/21/2023
11/22/2023
11/23/2023
11/24/2023
11/25/2023
11/26/2023
11/27/2023
11/28/2023
11/29/2023
11/30/2023
12/1/2023
12/2/2023
12/3/2023
12/4/2023
12/5/2023
12/6/2023
12/7/2023
12/8/2023
12/9/2023
12/10/2023
12/11/2023
12/12/2023
12/13/2023
12/14/2023
12/15/2023
12/16/2023
12/17/2023
12/18/2023
12/19/2023
12/20/2023
12/21/2023
12/22/2023
12/23/2023
12/24/2023
12/25/2023
12/26/2023
12/27/2023
12/28/2023
12/29/2023
12/30/2023
12/31/2023

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 5

Year	Month	Actual	Demand	Estimated	Day	Hour	System-Average
		Peak Demand	Response Activated	Peak Demand			Temperature
		(MW)	(MW)	(MW)			(Degrees F)
2023	1	3503	73	3576	15	9	39
	2	2413	67	2480	24	17	83
	3	2860	74	2934	26	18	85
	4	2944	66	3010	4	18	86
	5	3132	70	3202	20	17	87
	6	3582	83	3665	27	18	91
	7	3723	75	3798	21	18	94
	8	3945	78	4023	13	17	94
	9	3464	69	3533	6	18	90
	10	2959	60	3019	5	17	87
	11	2788	56	2844	29	8	41
	12	2651	61	2712	31	9	48
2022	1	3915	67	3982	30	8	29
	2	3060	68	3128	10	8	39
	3	2487	62	2549	13	10	42
	4	2734	55	2789	26	18	83
	5	3278	64	3342	30	17	88
	6	3648	75	3723	23	17	95
	7	3584	64	3648	31	18	92
	8	3522	61	3583	2	17	91
	9	3406	60	3466	6	17	91
	10	2734	48	2782	16	17	86
	11	2656	46	2702	1	17	86
	12	3886	70	3956	25	9	31
2021	1	3086	55	3141	19	8	37
	2	3546	74	3620	4	8	33
	3	2640	61	2701	27	17	87
	4	2757	54	2811	29	18	85
	5	3213	63	3276	4	18	89
	6	3243	69	3312	11	17	91
	7	3327	56	3383	31	17	91
	8	3435	59	3494	19	17	91
	9	3076	55	3131	6	17	87
	10	2921	50	2971	7	17	86
	11	2392	43	2435	30	8	43
	12	2325	44	2369	23	9	48
Notes							
(Include Notes Here)							

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 20

Year	Number of PEVs	Number of Public PEV Charging Stations	Number of Public DCFC PEV Charging Stations.	Cumulative Impact of PEVs		
				Summer Demand	Winter Demand	Annual Energy
				(MW)	(MW)	(GWh)
2024						
2025						
2026						
2027						
2028						
2029						
2030						
2031						
2032						
2033						
Notes						
(Include Notes Here)						

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 27

[Demand Response Source or All Demand Response Sources]										
Year	Beginning Year: Number of Customers	Available Capacity (MW)		New Customers Added	Added Capacity (MW)		Customers Lost	Lost Capacity (MW)		
		Sum	Win		Sum	Win		Sum	Win	
2014		Not Applicable								
2015										
2016										
2017										
2018										
2019										
2020										
2021										
2022										
2023										
Notes										
(Include Notes Here)										

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 28

[Demand Response Source or All Demand Response Sources]										
Year	Summer					Winter				
	Number of Events	Average Event Size		Maximum Event Size		Number of Events	Average Event Size		Maximum Event Size	
		MW	Number of Customers	MW	Number of Customers		MW	Number of Customers	MW	Number of Customers
2014	Not Applicable									
2015										
2016										
2017										
2018										
2019										
2020										
2021										
2022										
2023										
Notes										
(Include Notes Here)										

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 29

[Demand Response Source or All Demand Response Sources]							
Year	Average Number of Customers	Summer Peak			Winter Peak		
		Activated During Peak?	Number of Customers Activated	Capacity Activated	Activated During Peak?	Number of Customers Activated	Capacity Activated
		(Y/N)		(MW)	(Y/N)		(MW)
2014							
2015							
2016							
2017							
2018							
2019							
2020							
2021							
2022							
2023							
Not Applicable							
Notes							
(Include Notes Here)							

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 30

**Loss of Load Probability, Reserve Margin, and Expected Unserved Energy
 Base Case Load Forecast**

Year	Annual Isolated			Annual Assisted		
	Loss of Load Probability (Days/Yr)	Reserve Margin (%) (Including Firm Purchases)	Expected Unserved Energy (MWh)	Loss of Load Probability (Days/Yr)	Reserve Margin (%) (Including Firm Purchases)	Expected Unserved Energy (MWh)
2024	0.003	35.0%	0	0.003	35.0%	0
2025	0.015	22.7%	10	0.015	22.7%	10
2026	0.016	21.0%	120	0.016	21.0%	120
2027	0.008	24.9%	3420	0.008	24.9%	3420
2028	0.002	24.4%	0	0.002	24.4%	0
2029	0.006	22.7%	0	0.006	22.7%	0
2030	0.003	27.0%	0	0.003	27.0%	0
2031	0.003	26.8%	0	0.003	26.8%	0
2032	0.004	25.3%	0	0.004	25.3%	0
2033	0.005	26.8%	0	0.005	26.8%	0

2024 TYSP - Staff Data Request 1 (Seminole Data)

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 31

Existing Generating Unit Operating Performance

Plant Name	Unit No.	Planned Outage Factor (POF)		Forced Outage Factor (FOF)		Equivalent Availability Factor (EAF)		Average Net Operating Heat Rate (ANOHR)	
		Historical	Projected	Historical	Projected	Historical	Projected	Historical	Projected
SCCF	PLANT	4.52%	5.28%	0.24%	2.50%	90.21%	92.22%	6,324	6,301
SGS	2	15.94%	9.55%	2.76%	4.00%	81.21%	86.45%	10,207	10,257
MGS	PLANT	12.28%	5.06%	3.17%	3.00%	83.92%	91.94%	7,043	7,030
MGS	CT1	5.40%	1.18%	0.75%	2.40%	89.31%	96.42%	11,485	12,915
MGS	CT2	3.08%	1.18%	0.45%	2.40%	81.20%	96.42%	11,485	12,915
MGS	CT3	4.04%	1.18%	0.77%	2.40%	81.89%	96.42%	11,485	12,915
MGS	CT4	3.81%	1.18%	1.66%	2.40%	67.60%	96.42%	11,485	12,915
MGS	CT5	3.44%	1.18%	0.43%	2.40%	83.77%	96.42%	11,485	12,915

NOTE: Historical - average of past three years
 Projected - average of next ten years

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 32

Facility Name	Unit No.	County Location	Unit Type	Primary Fuel	Commercial In-Service		Gross Capacity (MW)		Net Capacity (MW)		Firm Capacity (MW)		Capacity Factor
					Mo	Yr	Sum	Win	Sum	Win	Sum	Win	(%)
MIDULLA GENERATING STATION	4	HARDEE	GT	NG	12	2006	54	62	54	62	54	62	0.08%
MIDULLA GENERATING STATION	5	HARDEE	GT	NG	12	2006	54	62	54	62	54	62	0.25%
MIDULLA GENERATING STATION	6	HARDEE	GT	NG	12	2006	54	62	54	62	54	62	0.08%
MIDULLA GENERATING STATION	7	HARDEE	GT	NG	12	2006	54	62	54	62	54	62	0.00%
MIDULLA GENERATING STATION	8	HARDEE	GT	NG	12	2006	27	31	27	31	27	31	0.00%
MIDULLA GENERATING STATION	CT1	HARDEE	CT	NG	1	2002	165	211	163	209	163	209	59.17%
MIDULLA GENERATING STATION	CT2	HARDEE	CT	NG	1	2002	165	211	163	209	163	209	59.17%
MIDULLA GENERATING STATION	ST	HARDEE	CA	WH	1	2002	190	206	188	204	188	204	59.17%
SEMINOLE GENERATING STATION	2	PUTNAM	ST	BIT	12	1984	680	688	634	640	634	640	35.48%
SEMINOLE CC FACILITY	CTG1	PUTNAM	CT	NG	4	2023	358	375	351	368	351	368	87.03%
SEMINOLE CC FACILITY	CTG2	PUTNAM	CT	NG	4	2023	358	375	351	368	351	368	87.03%
SEMINOLE CC FACILITY	STG3	PUTNAM	CA	WH	4	2023	406	403	397	395	397	395	87.03%
Notes													
(Include Notes Here)													

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 33

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	
Shady Hills Energy Center	1	Pasco	CC	NG	12	2026	546	575	546	575	546	575	69.64%
UNNAMED CC	1	UNKNOWN	CC	NG	12	2032	571	620.8	571.1	620.8	571.1	620.8	37.55%
UNNAMED CT	1	UNKNOWN	CT	NG	12	2029	317	358	317	358	317	358	9.92%
Notes													
(Include Notes Here)													

TYSP Year 2024
 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)		Capacity Factor
					Mo	Yr	Sum	Win	Sum	Win	Sum	Win	(%)
MGS Solar	1	HARDEE	PV	SUN	8	2017	0.9	0	0.9	0	0.9	0	17.55%
Notes													
MGS Solar Facility nameplate rating is 2.2 Mwac and Seminole assumes 40% capacity towards summer reserve margin and 0% capacity towards winter reserve margin. In August 2023 Seminole acquired the facility via a purchase option.													

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 35

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	(%)
Not Applicable													
Notes													
(Include Notes Here)													

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 37

Year		As-Available Energy (\$/MWh)	On-Peak Average (\$/MWh)	Off-Peak Average (\$/MWh)
Actual	2014	Not Applicable		
	2015			
	2016			
	2017			
	2018			
	2019			
	2020			
	2021			
	2022			
	2023			
Projected	2024			
	2025			
	2026			
	2027			
	2028			
	2029			
	2030			
	2031			
	2032			
	2033			
Notes				
(Include Notes Here)				

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 38

Generating Unit Name	Summer Capacity (MW)	Certification Dates (if Applicable)		In-Service Date (MM/YY)
		Need Approved (Commission)	PPSA Certified	
Nuclear Unit Additions				
N/A				
Combustion Turbine Unit Additions				
Unnamed CT	317	NA	NA	12/29
Combined Cycle Unit Additions				
Shady Hills Energy Center	546	05/18	12/18	12/26
Unnamed CC	571	NA	NA	12/32
Steam Turbine Unit Additions				
N/A				
Notes				
(Include Notes Here)				

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 40

Plant	Unit No.	Unit Type	Fuel Type	Capacity Factor (%)										
				Actual	Projected									
				2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
SGS	2	ST	BIT	49.5%	33.0%	38.7%	47.6%	32.5%	32.4%	36.3%	41.1%	33.8%	34.7%	24.8%
MGS CC	Plant	CC	NG	54.4%	67.1%	63.8%	66.6%	49.0%	50.8%	58.6%	64.5%	59.0%	61.1%	51.3%
MGS PW CT	4	CT	NG	8.0%	0.0%	0.2%	0.1%	0.2%	0.1%	0.0%	0.1%	0.0%	0.1%	0.0%
MGS PW CT	5	CT	NG	3.3%	0.3%	0.4%	0.3%	0.4%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%
MGS PW CT	6	CT	NG	8.8%	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
MGS PW CT	7	CT	NG	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MGS PW CT	8	CT	NG	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SCCF	Plant	CC	NG	90.7%	91.3%	91.2%	87.1%	88.5%	88.9%	81.2%	78.5%	89.1%	84.8%	89.8%
Shady Hills CC	Plant	CC	NG	NI Service	NI Service	NI Service	81.7%	66.2%	67.5%	71.3%	68.9%	70.4%	72.2%	70.9%
Generic CC	Plant	CC	NG	NI Service	NI Service	NI Service	NI Service	NI Service	NI Service	NI Service	NI Service	NI Service	17.9%	39.3%
Generic CT	Plant	CT	NG	NI Service	NI Service	NI Service	NI Service	NI Service	NI Service	5.8%	9.4%	11.5%	12.9%	6.2%
MGS Solar	1	PV	Sun	16.6%	17.6%	17.5%	17.5%	17.5%	17.6%	17.5%	17.5%	17.5%	17.6%	17.5%
Notes														
(Include Notes Here)														

TYSP Year 2024
Staff's Data Request # 1
Question No. 42

Plant Name	Fuel Type	Summer Capacity (MW)	In-Service Date (MM/YYYY)	Potential Conversion	Potential Issues
Not applicable.					
Notes					
(Include Notes Here)					

TYSP Year 2024
Staff's Data Request # 1
Question No. 43

Plant Name	Fuel Type	Summer Capacity (MW)	In-Service Date (MM/YYYY)	Potential Conversion	Potential Issues
Not applicable.					
Notes					
(Include Notes Here)					

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 44

Transmission Line	Line Length (Miles)	Nominal Voltage (kV)	Date Need Approved	Date TLISA Certified	In-Service Date
Not applicable.					
Notes					
(Include Notes Here)					

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 45

Nominal, Firm Purchases

Year	Firm Purchases	
	\$/MWh	Escalation %
HISTORY:		
2021	70.23	
2022	91.54	30.34%
2023	63.21	-30.94%
FORECAST:		
2024	89.087	40.93%
2025	84.38	-5.28%
2026	89.795	6.42%
2027	105.86	17.89%
2028	108.11	2.12%
2029	96.834	-10.43%
2030	92.438	-4.54%
2031	98.621	6.69%
2032	91.735	-6.98%
2033	83.046	-9.47%

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 46

Seller Name	Facility Name	Unit No.	County Location	Unit Type	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
Hardee Power Partners	Hardee	CC1	Hardee	CC	NG	222	269	220	267	220.18	220.18	01/13	12/32
Hardee Power Partners	Hardee	CT 2A	Hardee	CT	NG	71	90	70	89	70.87	70.87	01/13	12/32
Hardee Power Partners	Hardee	CT 2B	Hardee	CT	NG	71	90	70	89	70.87	70.87	01/13	12/32
Oleander Power Pr	Oleander CT	2	Brevard	CT	NG	154	183	153	182	169.8	169.8	01/22	12/27
Oleander Power Pr	Oleander CT	3	Brevard	CT	NG	154	183	153	182	169.8	169.8	01/22	12/27
Oleander Power Pr	Oleander CT	4	Brevard	CT	NG	154	183	153	182	169.8	169.8	01/23	12/24
Notes													
(Include Notes Here)													

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 47

Seller Name	Facility Name	Unit No.	County Location	Unit Type	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
Shady Hills Power Company	Shady Hills	1	Pasco	CT	NG	164	176	164	176	164	176	06/24	05/34
Shady Hills Power Company	Shady Hills	2	Pasco	CT	NG	164	176	164	176	164	176	06/24	05/34
Shady Hills Power Comp	Shady Hills	3	Pasco	CT	NG	164	176	164	176	164	176	06/24	05/34
Notes													
(Include Notes Here)													

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 48

Seller Name	Facility Name	Unit No.	County Location	Unit Type	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
Hillsborough County, Florida	Hillsborough WTE		Hillsborough	ST	MSW	38	38	38	38	38	38	03-10	02-25
City of Tampa, Florida	McKay Bay WTE		Hillsborough	ST	MSW	20	20	20	20	20	20	08-11	07-26
Notes													
In addition to the table above, Seminole's existing Renewable Purchase Power Agreements are summarized in Table 1.2 of Seminole's Ten-Year Site Plan.													

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 49

Seller Name	Facility Name	Unit No.	County Location	Unit Type	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
FRP GILCHRIST COUNTY SOLAR, LLC	GILCHRIST		GILCHRIST	PV	SUN	74.5	74.5	74.5	74.5	29.8	0	12/24	12/49
FRP TUPELO SOLAR, LLC	PUTNAM		PUTNAM	PV	SUN	74.5	74.5	74.5	74.5	29.8	0	12/24	12/49
FRP GADSDEN COUNTY SOLAR, LLC	GADSDEN		GADSDEN	PV	SUN	74.5	74.5	74.5	74.5	29.8	0	12/24	12/49
FRP COLUMBIA COUNTY SOLAR, LLC	COLUMBIA		COLUMBIA	PV	SUN	74.5	74.5	74.5	74.5	29.8	0	12/24	12/49
Notes													
Seminole assumes 40% capacity towards summer reserve margin and 0% capacity towards winter reserve margin.													

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 51

Buyer Name	Facility Name	Unit No.	County Location	Unit Type	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
Not Applicable													
Notes													
(Include Notes Here)													

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 52

Buyer Name	Facility Name	Unit No.	County Location	Unit Type	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
Not Applicable													
Notes													
(Include Notes Here)													

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 54

Renewable Source	Annual Renewable Generation (GWh)										
	Actual	Projected									
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Utility - Firm	0	0	0	0	0	0	0	0	0	0	0
Utility - Non-Firm	0	3	3	3	3	3	3	3	3	3	3
Utility - Co-Firing	0	0	0	0	0	0	0	0	0	0	0
Purchase - Firm	420	422	180	85	0	0	0	0	0	0	0
Purchase - Non-Firm	3	40	735	735	735	737	735	735	735	737	735
Purchase - Co-Firing	0	0	0	0	0	0	0	0	0	0	0
Customer - Owned	0	0	0	0	0	0	0	0	0	0	0
Total	423	465	918	823	738	740	738	738	738	740	738
Notes											
(Include Notes Here)											

TYSP Year 2024
Staff's Data Request # 1
Question No. 63

Project Name	Pilot Program (Y/N)	In-Service/ Pilot Start Date (MM/YY)	Max Capacity Output (MW)	Max Energy Stored (MWh)	Conversion Efficiency (%)
Not Applicable					

Notes
(Include Notes Here)

TYSP Year 2024
Staff's Data Request # 1
Question No. 64

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 (%)
Not Applicable					

Notes
(Include Notes Here)

TYSP Year 2024
 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	Not applicable.			
2022				
2023				
2024				
2025				
2026				
2027				
2028				
2029				
2030				
Notes				
(Include Notes Here)				

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 72

Unit	Unit Type	Fuel Type	Net Summer Capacity (MW)	Estimated EPA Rule Impacts: Operational Effects						
				ELGS	ACE or replacement	MATS	CSAPR/CAIR	CWIS	CCR	
									Non-Hazardous Waste	Special Waste
SGS Unit 2	Wall fired boiler	Coal	634	x	x	x	N/A	x	x	x
SCCF Unit 1	Combined Cycle Combustion Turbine	Natural Gas	549.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCCF Unit 2	Combined Cycle Combustion Turbine	Natural Gas	549.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Unit 1	Combined Cycle Combustion Turbine	Natural Gas / Distillate Oil	252	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Unit 2	Combined Cycle Combustion Turbine	Natural Gas / Distillate Oil	252	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Units 4A/4B	Simple Cycle Combustion Turbines	Natural Gas / Distillate Oil	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Units 5A/5B	Simple Cycle Combustion Turbines	Natural Gas / Distillate Oil	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Units 6A/6B	Simple Cycle Combustion Turbines	Natural Gas / Distillate Oil	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Units 7A/7B	Simple Cycle Combustion Turbines	Natural Gas / Distillate Oil	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Unit 8B	Simple Cycle Combustion Turbine	Natural Gas / Distillate Oil	27	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Notes										
(Include Notes Here)										

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 73

Unit	Unit Type	Fuel Type	Net Summer Capacity (MW)	Estimated EPA Rule Impacts: Cost Effects (CPVRR \$ millions)						
				ELGS	ACE or replacement	MATS	CSAPR/CAIR	CWIS	CCR	
									Non-Hazardous Waste	Special Waste
SGS Unit 2	Wall fired boiler	Coal	634	N/A	N/A	<100k/year	N/A	<100k/year	<75k/year	N/A
SCCF Unit 1	Combined Cycle Combustion Turbine	Natural Gas	549.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCCF Unit 2	Combined Cycle Combustion Turbine	Natural Gas	549.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Unit 1	Combined Cycle Combustion Turbine	Natural Gas / Distillate Oil	252	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Unit 2	Combined Cycle Combustion Turbine	Natural Gas / Distillate Oil	252	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Units 4A/4B	Simple Cycle Combustion Turbines	Natural Gas / Distillate Oil	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Units 5A/5B	Simple Cycle Combustion Turbines	Natural Gas / Distillate Oil	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Units 6A/6B	Simple Cycle Combustion Turbines	Natural Gas / Distillate Oil	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Units 7A/7B	Simple Cycle Combustion Turbines	Natural Gas / Distillate Oil	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Unit 8B	Simple Cycle Combustion Turbine	Natural Gas / Distillate Oil	27	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Notes										
(Include Notes Here)										

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 74

Unit	Unit Type	Fuel Type	Net Summer Capacity (MW)	Estimated EPA Rule Impacts: Unit Availability (Month/Year - Duration)						
				ELGS	ACE or replacement	MATS	CSAPR/CAIR	CWIS	CCR	
									Non-Hazardous Waste	Special Waste
SGS Unit 2	Wall fired boiler	Coal	634	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCCF Unit 1	Combined Cycle Combustion Turbine	Natural Gas	549.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCCF Unit 2	Combined Cycle Combustion Turbine	Natural Gas	549.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Unit 1	Combined Cycle Combustion Turbine	Natural Gas / Distillate Oil	252	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Unit 2	Combined Cycle Combustion Turbine	Natural Gas / Distillate Oil	252	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Units 4A/4B	Simple Cycle Combustion Turbines	Natural Gas / Distillate Oil	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Units 5A/5B	Simple Cycle Combustion Turbines	Natural Gas / Distillate Oil	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Units 6A/6B	Simple Cycle Combustion Turbines	Natural Gas / Distillate Oil	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Units 7A/7B	Simple Cycle Combustion Turbines	Natural Gas / Distillate Oil	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MGS Unit 8B	Simple Cycle Combustion Turbine	Natural Gas / Distillate Oil	27	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Notes										
(Include Notes Here)										

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 76

Year		Uranium		Coal		Natural Gas		Residual Oil		Distillate Oil		Hydrogen	
		GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU	GWh	\$/MMBTU
Actual	2014	0	0	8159	3.62	4737	6.17	0	N/A	35	21.94	0	0
	2015	0	0	7803	3.55	5333	4.71	0	N/A	36	15.09	0	0
	2016	0	0	7488	3.53	6015	4.20	0	N/A	37	11.27	0	0
	2017	0	0	7528	3.42	6180	4.6	0	N/A	36	13.19	0	0
	2018	0	0	7623	3.50	6642	4.43	0	N/A	37	16.08	0	0
	2019	0	0	6959	3.3	7510	3.85	0	N/A	31	15.60	0	0
	2020	0	0	6591	3.34	8445	3.29	0	N/A	38	11.3	0	0
	2021	0	0	6508	3.18	8501	4.27	0	N/A	43	14.89	0	0
	2022	0	0	6046	3.23	9797	6.39	0	N/A	24	26.99	0	0
	2023	0	0	4896	3.07	10975	4.60	0	N/A	18	22.98	0	0
Projected	2024	0	0	1827	3.64	14383	4.54	0	N/A	5	31.49	0	0
	2025	0	0	2119	3.65	13955	5.57	0	N/A	6	28.67	0	0
	2026	0	0	2616	3.31	13822	5.89	0	N/A	7	27.05	0	0
	2027	0	0	1766	3.44	15048	5.94	0	N/A	5	25.44	0	0
	2028	0	0	1774	3.55	15373	5.97	0	N/A	5	23.91	0	0
	2029	0	0	1990	3.67	15494	5.83	0	N/A	5	24.09	0	0
	2030	0	0	2266	3.78	15542	5.76	0	N/A	6	24.23	0	0
	2031	0	0	1851	3.90	16274	5.64	0	N/A	5	24.22	0	0
	2032	0	0	1914	4.02	16520	5.63	0	N/A	5	24.33	0	0
	2033	0	0	1366	4.14	17376	5.81	0	N/A	4	24.34	0	0
Notes													
(Include Notes Here)													

TYSP Year 2024
 Staff's Data Request # 1
 Question No. 95

Table I: Current Data Center Information										
Data Centers Currently Located in Utility Service Area										
Total No. of Data Centers	Customer Class Served	Total Energy Usage in 2023 (MWHs)	Impact to Summer Peak Demand (MWs)	Impact to Winter Peak Demand (MWs)	Seasonality Observed, if any	For each of the Data Center				
						Type of Data Center*	Energy Used in 2023 (MWHs)	Hours of Peak Usage**	Impact to Peak Demand (MWs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Not Applicable						1	Not Applicable			
Not Applicable						2	Not Applicable			
Not Applicable						3	Not Applicable			
Not Applicable						...	Not Applicable			

* Examples of the data center types: colocation, enterprise, cloud, edge, and micro data.
 ** Based on military time 1 - 24.

Table II: Planned Data Center Information						
Planned Data Centers in Your Service Area						
Type of Data Center*	Customer Class Served	Expected In-Service Data	Expected Annual Energy Usage (MWHs)	Expected Impact to Summer Peak Demand (MWs)	Expected Impact to Winter Peak Demand (MWs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Not Applicable						
Not Applicable						
Not Applicable						
Not Applicable						

* Examples of the data center types: colocation, enterprise, cloud, edge, and micro data.