

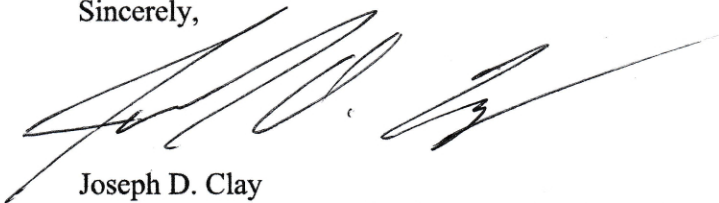
May 2, 2022

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 April 11, 2022, Seminole Electric Cooperative, Inc. hereby submits for electronic filing the response to 2022 Ten-Year Site Plans for Florida's Electric Utilities Supplemental #2.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph D. Clay", is written over a horizontal line.

Joseph D. Clay  
Manager of Resource Planning and Risk Control  
813-739-1435 (office)  
jclay@seminole-electric.com

Enclosure

cc: J. Diazgranados  
J. Fuller  
L. Johnson

1. Please refer to NERC's Level 2 Alert, issued August 18, 2021, titled Cold Weather Preparations for Extreme Weather Events. Please indicate what changes, if any, the Utility has implemented or intends to implement to address the recommendations contained within the alert.
  - *Seminole previously had generation Cold Weather Preparedness procedures and plant preventive maintenance work orders. Seminole is in the process of making improvements to its existing procedures and editing current work orders. In addition, Seminole is in the process of creating 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 in the progress of reviewing Manual and Automatic Firm Load shed plans and Emergency Capacity procedures to address recommendations not previously captured.*
  - *Seminole plans to implement all revised procedures, work orders and training before 9/1/2022 to be compliant with the revised NERC Standards effective 4/1/2023.*
  - *Seminole implemented pre-winter season testing of its dual-fuel capable generation fleet.*
  - *Seminole added a high and low forecast scenario to its short-term load forecasting service for use in Operations Planning*
2. Please refer to FERC Order Approving Cold Weather Reliability Standards, issued August 24, 2021. Please indicate what changes, if any, the Utility has implemented or intends to implement to address the revisions to the NERC Reliability Standards that become effective April 2023.
  - *Seminole previously had generation Cold Weather Preparedness procedures and plant preventive maintenance work orders. Seminole has made improvements to its existing procedures and edited current work orders. In addition, Seminole is in the process of creating generator operator training for cold weather preparedness.*
  - *Seminole will be updating its data specification document to include provisions for notification of BES generating unit(s) status during local forecasted cold weather.*
  - *Seminole is in the progress of reviewing Manual and Automatic Firm Load shed plans and Emergency Capacity procedures.*
  - *Seminole plans to implement all procedures, work orders and training before 9/1/2022 to be compliant with the revised NERC Standards effective 4/1/2023.*
3. Please refer to NERC's Project 2021-07: Extreme Cold Weather Grid Operations, Preparedness, and Coordination. Is the Utility a participant in this project? If so, please explain what way.

*Yes, Seminole is a participant as an Observer on this project.*

4. Please refer to the FERC, NERC, and Regional Entity Staff Report: The February 2021 Cold Weather Outages in Texas and the South Central United States (2021 Cold Weather Report), issued November 2021. Please indicate what changes, if any, the Utility has implemented or intends to implement to address the recommended revisions listed below to the NERC Reliability Standards identified in the 2021 Cold Weather Report.

*The Standards Committee, Executive Committee accepted the SAR on February 25, 2022 for the proposed recommendations listed in the "The February 2021 Cold Weather Outages in Texas and the South Central United States (2021 Cold Weather Report), issued November 2021". (<https://www.nerc.com/pa/Stand/Pages/Project-2021-07-ExtremeColdWeather.aspx>) Seminole will adhere to any new requirements/revisions and implementations once it is approved through the appropriate NERC Standard Revision process.*

a. Identify and protect cold-weather critical components.

- *Seminole Improved upon existing procedures and preventative maintenance work orders to ensure it captured critical components that could be impacted by cold weather.*
- *Seminole plans to implement all procedures, work orders and training before 9/1/2022 to be compliant with the revised NERC Standards effective 4/1/2023*

b. Build all new and retrofit existing units to operate during extreme weather conditions, which include the impact of wind and precipitation.

- *Seminole combine cycle facility that is currently being built is built to operate during extreme cold weather temperatures.*
- *Seminole will adhere to this recommendation in the event of future building or retrofitting units.*

c. Perform annual training on winterization plans. If already incorporated, please provide the most recent winterization plan.

- *Seminole is in the process of creating unit specific training and will be delivering it to all applicable staff. The training will be provided annually as part of the cold weather preparation phase.*
- *Seminole plans to implement training before 9/1/2022*

d. Develop Corrective Action Plans for any affected generating units.

*Seminole has discussed creating a corrective action plan within the Cold Weather preparedness Plan as a corrective action plan is currently not developed. Seminole will wait for final NERC approval and guidance from the revised standards/requirements before proceeding. However, Seminole did not experience any cold-weather-related issues during the period in question.*

- e. Provide the balancing authority the percentage of generating capacity that can be relied upon during forecasted cold weather.

*Seminole is a balancing authority. Seminole's generating units provide capacity on a daily basis regardless of weather conditions.*

- f. Account for wind and precipitation when providing temperature data to the balancing authority.

*Seminole's generating units provide capacity on a daily basis regardless of weather conditions.*

5. Will the Utility's current capacity shortage plan require updating following the revisions to the NERC Reliability Standards that will go into effect April 2023 or the recommended revisions from the 2021 Cold Weather Report? If so, please identify the changes.

- *Based upon the revised NERC Standard EOP-011-2, Seminole will make edits to include "cold weather conditions" instead of the broad term "extreme weather conditions" from the current requirement*
- *Seminole will wait for final NERC approval and guidance from the revised standard(s)/requirements before proceeding on the recommendations regarding capacity and load shedding.*

6. For your generating units, please and provide the following information:

- a. Identify any generating unit that has been winterized and describe the winterization activities that have been completed for each.

*Seminole Generating Units have Cold Weather preparedness plans which covers all systems and generating units onsite. The preparation for cold weather begins in August of every year. This plan and work orders is currently being updated.*

- b. Identify any generating unit that still requires winterization and describe the winterization activities to be completed for each.

*All Seminole's generating units prepare for cold weather in August of each year. Each generating site has their own specific Cold Weather Preparedness procedure to include checklist and training.*

- c. Identify any generating units the Utility does not intend to winterize and explain why.

*Seminole winterizes each and all units beginning of August each year.*

7. Please list and describe all winterization activities the Utility has completed or intends to complete for its natural gas infrastructure. If none, please explain why.

*Seminole Generating Units have a Cold Weather Preparedness plan which covers all systems and generating units onsite. This plan and work orders is currently being updated. However, Seminole's current checklist include some of the following: to verify operation and integrity of heat trace, insulation, drains clear, evaporation cooler*

*drained, thermostats functioning correctly, enclosures sealed, electrical equipment heaters functioning properly, fuel gas drains tank drained, and fuel gas water bath heater glycol percentage is 70/30.*

8. Please identify any generating units that have experienced forced outages or derates due to cold weather conditions within the last ten-year period.

*Seminole Generating Units have not experienced forced outages or derates due to cold weather conditions within the last ten-year period.*

- a. Please explain if these generating units have had corrective action plans developed for the identified equipment. If so, what has been done to evaluate whether the corrective action plan applies to similar equipment for other generating units in the Utility’s generating fleet.

*Not Applicable*

9. Please identify each of the Utility’s generating units that have dual fuel capabilities. As part of this response, please provide the following for each applicable generating unit.

*Table below addresses items a. – f.*

- a. Generating unit name and location.
- b. Net capacity by seasonal peak (Summer/Winter).
- c. Whether fuel switching derates/uprates the unit (and if so, by what amount).
- d. Primary and secondary fuel type and sources.
- e. Number of days the generating unit could operate at full load using the secondary fuel source.
- f. Amount of time required to switch to secondary fuel.

	Plant	Unit No.	Unit Type	Location	Net Capability (MW) - Primary Fuel		Net Capability (MW) - Alternate Fuel		Fuel		Fuel Transportation		# Days Full Load Operation on Alternate Fuel <sup>1</sup>	Time Required for Fuel Switch <sup>2</sup>
					Summer	Winter	Summer	Winter	Primary	Alternate	Primary	Alternate		
Owned Generation	Midulla Generating Station (MGS)	1	CT	Hardee County	160	193	160	193	NG	DFO	PL	TK	3	45 Min.
		2	CT		160	193	NG	DFO	PL	TK	45 Min.			
		3	ST		184	186	184	186	WH	DFO	PL	TK		45 Min.
		4	CT		54	62	54	62	NG	DFO	PL	TK		5 Min.
		5	CT		54	62	54	62	NG	DFO	PL	TK		5 Min.
		6	CT		54	62	54	62	NG	DFO	PL	TK		5 Min.
		7	CT		54	62	54	62	NG	DFO	PL	TK		5 Min.
		8	CT		54	62	54	62	NG	DFO	PL	TK		5 Min.
	Seminole Generating Station (SGS)	1	ST	Putnam County	626	639	N/A	N/A	BIT	N/A	RR	N/A	N/A	N/A
		2	ST		634	640	N/A	N/A	BIT	N/A	RR	N/A	N/A	N/A
Purchased Power Resources	Hardee Power Station (HPS)	1a	CT	Hardee County	72	88	72	88	NG	DFO	PL	TK	2	17 Min.
		1b	CT		72	88	72	88	NG	DFO	PL	TK		17 Min.
		3	ST		76	91	76	91	WH	DFO	PL	TK		17 Min.
		2a	CT		70	89	70	89	NG	DFO	PL	TK		7 Min.
		2b	CT		70	89	72	97	NG	DFO	PL	TK		11 Min.
	Oleander Power Project	2	CT	Brevard County	153	182	153	191	NG	DFO	PL	TK	3	16 Min.
		3	CT		153	182	153	186	NG	DFO	PL	TK		16 Min.
1	Based upon winter capability and alternate fuel inventory as of 4/19/22													
2	From full load on primary fuel													

10. Please identify how many alerts and advisories, due to cold weather, have been issued within the last ten-year period, and describe each event that lead to the issuance of each alert/advisory.

- a. As part of this response, please indicate whether interruptible/curtailable customers were interrupted during each event, and if so, the duration of the interruption.

*Seminole has had no alerts or advisories with-in the last ten-years. Seminole also checked with RC FRCC and Seminole has had no EEA's declared by the RC on its behalf.*

11. Please identify the number of times the Utility has had to perform rolling blackouts within the last ten-year period. As part of this response, please provide the reason for each rolling blackout, how many megawatts were impacted, and the duration of each rolling blackout.

*Seminole has not had to shed firm load (rolling blackout) during the last ten years.*

12. Please identify the total number of megawatts that can be controlled during rolling blackouts. As part of this response, please describe how this amount was determined, the priorities for interrupting firm load, and provide the anticipated duration between rolling blackouts.

*Seminole has nine Member distribution cooperatives. Between the nine Member distribution cooperatives, 1,391MW has been identified as part of the Under Frequency Load Shed (UFLS) schema. With respect to Manual Load Shed, Seminole has coordinated with its Member distribution cooperatives to prioritize circuits for manual load shedding to:*

- *Minimize overlap with the circuits assigned to UFLS,*
- *Identify critical facilities such as Hospitals, Fire Stations, Communications facilities such as cell towers, schools and other facilities deemed critical by the Member.*
- *All load is generally viewed as "available" for firm load shed, based upon the priority of the circuits with critical facilities, with the lowest priority selected first.*

13. Please explain how the Utility coordinates with cogenerators, qualifying facilities, and other non-utility generators during cold weather events to maximize generating capacity. As part of this response, please explain how the Utility determines as-available energy prices if all available Utility assets are already dispatched.

*Seminole has Purchased Power Agreements with two non-utility generators, Hillsborough County Waste-to-Energy (WTE) and City of Tampa – McKay Bay Waste-to-Energy that provide a combined total of 58MW at peak output. The generation capability of these facilities is dependent upon municipal solid waste deliveries and inventory and in the event of expected cold weather events, energy production prior to the event can be reduced in order to stockpile inventory for greater output when it is needed during peak periods. Non-emergency maintenance may also be postponed to ensure the facility is operational during expected cold weather events. As-available energy prices are determined based on Seminole's cost to generate the power or procure the power from another entity.*

14. Please list each form of communication (such as phone calls, text, utility website, social media, etc.) the Utility uses to inform customers of anticipated cold weather events. As part of this response, please provide a sample of such communications.

*Seminole coordinates public cold weather communications with its nine Member distribution cooperatives. Templates have been developed and are maintained that the*



*Member distribution cooperatives use to communicate with their Member consumers through phone calls, texts, utility websites, social media, etc. (see attachment)*

15. Please refer to the Florida cold weather event from January 29-31, 2022, and provide the following for each day during the event.

*Table below addresses items a. – f.*

- a. Anticipated load forecast.
- b. Anticipated operating reserve (with and without demand response).
- c. Actual load, and if available, actual operating reserve.
- d. Amount of customer outages due to cold weather that occurred, if any.
- e. Amount of generating capacity derated or forced offline due to cold weather, if any. If forced outages occurred, identify each generating unit derated or forced offline, and the cause of the derating or forced outage, if known.
- f. Whether demand response and/or interruptible/curtailable assets were activated. If so, please identify which programs, the number of customers interrupted, the amount of capacity interrupted, and the frequency of interruptions.

	Sat - 1/29/22	Sun - 1/30/22	Mon - 1/31/22
a. Anticipated load forecast.	3,143	4,000	3,393
b. Anticipated operating reserve (with/without demand response).	1,215 / 996	400 / 181	1,011 / 792
c. Actual load, and if available, actual operating reserve.	3,025	3,880	3,452
d. Amount of customer outages due to cold weather that occurred, if any.	0	0	0
e. Amount of generating capacity derated or forced offline due to cold weather, if any. If forced outages occurred, identify each generating unit derated or forced offline, and the cause of the derating or forced outage, if known.	0	0	0
f. Whether demand response and/or interruptible/curtailable assets were activated. If so, please identify which programs, the number of customers interrupted, the amount of capacity interrupted, and the frequency of interruptions.	Seminole utilized demand side resources of load management with the Member Cooperatives as well as Member Cooperative Customer Based Generators as a preventative measure in preparation for the forecasted cold weather. No interruptible customers were interrupted.		

16. Please refer to the Florida cold weather event from January 29-31, 2022. Please explain if any winterization plans were enacted during this time. If so, please describe what activities were involved.

- *Seminole enacted all generating unit Cold Weather Preparedness plans.*

- *Teams went through site-specific checklists to prepare*
  - *Seminole met with the task force 48 hours prior to the cold weather event and everyday until the event was over. The daily meetings consisted of unit capacity, preparation and checklist, issues or concerns.*
  - *Communicated with all 9 Member distribution cooperatives and went over preparedness and any concerns.*
  - *At the request of Member distribution cooperatives, met with interruptible Member consumers to discuss Seminole's interruptible consumer process in the event it was required. It was ultimately not required.*
  - *Reviewed fuel inventory and fuel oil resupply procedures for dual-fuel generation resources*
  - *Performed testing on alternate fuel for dual-fuel capable units*
  - *Seminole constantly monitored the temperatures to determine when a potential impact might occur.*
  - *Coordinated with FRCC the RC on capacity updates*
  - *Operators logged all daily events in iTOA*
  - *Reviewed post unit output rated 32F capacity vs. planned capacity*
  - *After the cold weather event Seminole gathered feedback and compiled lessons learned*
  - *Stored all documentation and communication in a central location on the network.*
17. Please refer to the NERC 2021-2022 Winter Reliability Assessment, issued November 2021, for the following questions. Please provide load forecast and generation availability data provided to your regional entity for use in NERC's winter reliability assessment. As part of your response, explain how the data was derived and what assumptions were used.
- Load forecast data provided to Seminole's regional entity for winter 2021-2022 is Seminole's base forecast as shown in Schedule 3.2 of Seminole's 2021 Ten-Year Site Plan. The methodology and assumptions used to derive the base forecast are in Section 3 of Seminole's 2021 Ten-Year Site Plan. The Extreme Winter Peak Demand scenario was developed by a consultant for the FRCC, based on the 90/10 value of the aggregated base load forecasts provided by the FRCC members.*
- Generation capacity data provided to Seminole's regional entity for winter 2021-2022 is shown in Schedule 1 and Table 2 of Seminole's 2021 Ten-Year Site Plan. Seminole assumes all generation resources are available during the winter season, with the exception of solar facilities, which are assumed to be offline during winter peak periods.*
18. **[TECO & FPL Only]** Please identify and describe any actions undertaken to encourage adoption of natural gas heating over electric resistance (strip) heating. If no actions have been taken, please explain why.



*Not applicable.*