



Stephanie A. Cuello
SENIOR COUNSEL

May 9, 2022

VIA ELECTRONIC FILING

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

Re: *2022 Ten-Year Site Plan Data Request #2; Undocketed*

Dear Mr. Teitzman:

Please find enclosed for filing, Duke Energy Florida, LLC's Response to Staff's Data Request #2, issued on April 11, 2022 regarding the 2022 TYSP.

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

Sincerely,

s/ Stephanie A. Cuello

Stephanie A. Cuello

SAC/mw
Attachments

cc: Donald Phillips, Division of Engineering, FPSC

**DEF's Response to Staff's Second Data Request
Regarding the 2022 Ten Year Site Plan;
Questions 1-18**

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.

RESPONSE:

The NERC Level 2 Alert has 3 recommendations: review seasonal plans, communicate updates to unit performance to ECCs, and conduct dual fuel assessments. Duke Energy generation stations currently have cold weather preparation procedures in place for all assets. To help ensure fleet sharing of lessons learned, we incorporated a standing agenda item on seasonal preparations (to cover both summer and winter) to our internal Operations Working Team meetings, which are every-other-month meetings with station Operations personnel. Duke Energy has an internal Operations Protocol document that defines our communications with the Energy Control Centers and requires Operations personnel to communicate any changes in unit capabilities. And finally, we recently developed a liquid fuel operating standard that requires periodic testing/operations on liquid fuel for those units that are dual fuel capable.

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.

RESPONSE:

Please see response #1

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.

RESPONSE:

Yes, Duke Energy is a participating member. Duke Energy has a representative on the drafting team representing the Duke Energy Transmission organization.

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.

- a. Identify and protect cold-weather critical components.
- b. Build all new and retrofit existing units to operate during extreme weather conditions, which include the impact of wind and precipitation.
- c. Perform annual training on winterization plans. If already incorporated, please provide the most recent winterization plan.
- d. Develop Corrective Action Plans for any affected generating units.
- e. Provide the balancing authority the percentage of generating capacity that can be relied upon during forecasted cold weather.
- f. Account for wind and precipitation when providing temperature data to the balancing authority.

RESPONSE:

Following the polar vortex events of 2014 and 2015 Duke Energy completed a fleetwide review of cold weather preparedness including units in DEF. As a result, DEF units were found to be well prepared for the 2021 NERC Alert recommendations.

- a. DEF does not plan any changes to the installed protection systems. All DEF generation assets (except solar) have cold weather protection systems including insulation and heat trace.
- b. DEF does not plan any additional changes. All generation assets (except solar) are designed for the full range of anticipated ambient conditions in which they are operated and include appropriate cold weather protection systems.
- c. DEF conducts simulated grid exercises each year, including training on winter impacts to generation. Additional winter weather responses/actions are included as part of our Emergency Response Plans for each generating asset.
- d. DEF does not plan any changes. Plant personnel would follow our internal Corrective Action Program, if needed.
- e. DEF does not plan any changes to our current operating procedures. DEF has established protocols to communicate any changes to unit capabilities per NERC requirements (as indicated in Duke Energy RRE's Operating Protocol).
- f. As both the BA and the generation operator, DEF personnel communicate closely regarding operating conditions including all aspects of the ambient and forecast weather. DEF generation assets are designed for the full range of ambient conditions in which they are operated and include cold weather protection systems (except solar).

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.

RESPONSE:

DEF's capacity shortage plan is one of several operating plans to mitigate operating emergencies that DEF uses to comply with the requirements of NERC Standard EOP-011.

DEF is currently in the process of reviewing these operating plans to determine what changes will need to be made to comply with the revisions to the NERC Reliability Standards that will go into effect in April 2023. The changes to be made to DEF procedures may include changes to one or more of these existing procedures or the development of a new procedure. The changes to be made to DEF's capacity shortage plan have not been determined at this time.

DEF's existing capacity shortage plan contains provisions that are consistent with the cold weather and extreme weather requirements in EOP-011-2. These provisions enable DEF to determine and mitigate the reliability impacts of cold weather events. During the winter season the schedule for performing capacity assessments is changed to complete the capacity assessment for the following day by 1100 AM of the current day to allow adequate time to prepare for and mitigate the impact of cold weather conditions during the morning peak of the following day. The winter capacity assessment process also includes pre-defined cold weather temperature triggers used to initiate FRCC cold weather alerts and response plans. The DEF capacity shortage plan also includes provisions to implement freeze protection as needed in preparation for cold weather events. These provisions specifically address preparations for cold weather events. However, the entire capacity shortage plan is designed to determine and mitigate reliability impacts due to any cause, including those related to cold weather events.

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.
 - b. Identify any generating unit that still requires winterization and describe the winterization activities to be completed for each.
 - c. Identify any generating units the Utility does not intend to winterize and explain why.

RESPONSE:

- a. All generation assets are designed for the ambient conditions in which they are operated and include cold weather protection systems. Each station has an Emergency Response Plan for various abnormal conditions, including cold weather.
- b. None
- c. The only generating units that do not have specific winterization systems are our solar assets. These units do not require any winterization based on their design, which can handle snow loads (unlikely in FL) and cold ambient temperatures.

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.

RESPONSE:

DEF owns and operates only limited lengths of natural gas piping, which is almost entirely located within the boundaries of the generating plant facilities. The natural gas piping does not require heat trace as it typically operates at very cool temperatures (due to the pressure drops it sees at the generating stations) and is buried underground.

8. Please identify any generating units that have 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.

RESPONSE:

DEF has not identified any generating unit forced outages due to cold weather or cold weather-related conditions. Some minor derates have occurred due to cold weather impact on ancillary components like pressure transmitters, level indicators, or temperature gauges.

- a. Corrective actions included adding preventive maintenance activities to confirm functionality of heat trace systems to prevent future cold weather problems. Review of these systems during each seasonal preparedness review is now a standard procedure.
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.
 - 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.

RESPONSE:

Data to answer items a – d in this question are taken from the 2022 TYSP and shown in the table below.

- e. DEF plans its liquid fuel inventory to support a minimum of 72 hours of oil-fired operation for each station.
 - f. DEF's CT peakers can switch to liquid fuel generally within an hour. Combined Cycle units can switch in a few hours. DEF forecasts the need to switch fuels 24 hours or more ahead.

DUKE ENERGY FLORIDA													
LIQUID FUEL CAPABLE GENERATING FACILITIES													
AS OF DECEMBER 31, 2021													
PLANT NAME	UNIT NO.	LOCATION (COUNTY)	UNIT TYPE	FUEL		FUEL TRANSPORT		ALT. FUEL DAYS USE	COMPL IN-SERVICE MO./YEAR	EXPECTED RETIREMENT MO./YEAR	GEN. MAX. NAMEPLATE KW	NET CAPABILITY	
				PRL	ALT.	PRL	ALT.					SUMMER MW	WINTER MW
COMBINED-CYCLE													
P L BARTOW	4	PINELLAS	CC	NG	DFO	PL	TK	*	6/09		1,254,200	1,112	1,259
HINES ENERGY COMPLEX	2	POLK	CC	NG	DFO	PL	TK	*	12/03		548,250	532	549
HINES ENERGY COMPLEX	3	POLK	CC	NG	DFO	PL	TK	*	11/05		561,000	523	555
HINES ENERGY COMPLEX	4	POLK	CC	NG	DFO	PL	TK	*	12/07		610,500	516	544
											CC Total	2,683	2,907
COMBUSTION TURBINE													
BARTOW	P2	PINELLAS	CT	NG	DFO	PL	WA	*	6/72		55,400	41	50
BARTOW	P4	PINELLAS	CT	NG	DFO	PL	WA	*	6/72		55,400	45	58
BAYBORO	P1	PINELLAS	CT	DFO		WA		*	4/73	12/2025 **	56,700	44	58
BAYBORO	P2	PINELLAS	CT	DFO		WA		*	4/73	12/2025 **	56,700	41	55
BAYBORO	P3	PINELLAS	CT	DFO		WA		*	4/73	12/2025 **	56,700	43	57
BAYBORO	P4	PINELLAS	CT	DFO		WA		*	4/73	12/2025 **	56,700	43	56
DEBARY	P2	VOLUSIA	CT	DFO		TK		*	12/75-4/76	6/2027 **	73,440	45	57
DEBARY	P3	VOLUSIA	CT	DFO		TK		*	12/75-4/76	6/2027 **	73,440	45	59
DEBARY	P4	VOLUSIA	CT	DFO		TK		*	12/75-4/76	6/2027 **	73,440	46	59
DEBARY	P5	VOLUSIA	CT	DFO		TK		*	12/75-4/76	6/2027 **	73,440	45	58
DEBARY	P6	VOLUSIA	CT	DFO		TK		*	12/75-4/76	6/2027 **	73,440	46	59
DEBARY	P7	VOLUSIA	CT	NG	DFO	PL	TK	*	10/92		103,500	74	93
DEBARY	P8	VOLUSIA	CT	NG	DFO	PL	TK	*	10/92		103,500	75	94
DEBARY	P9	VOLUSIA	CT	NG	DFO	PL	TK	*	10/92		103,500	76	94
DEBARY	P10	VOLUSIA	CT	DFO		TK		*	10/92		103,500	72	88
INTERCESSION CITY	P1	OSCEOLA	CT	DFO		PL,TK		*	5/74		56,700	45	61
INTERCESSION CITY	P2	OSCEOLA	CT	DFO		PL,TK		*	5/74		56,700	46	60
INTERCESSION CITY	P3	OSCEOLA	CT	DFO		PL,TK		*	5/74		56,700	46	61
INTERCESSION CITY	P4	OSCEOLA	CT	DFO		PL,TK		*	5/74		56,700	46	62
INTERCESSION CITY	P5	OSCEOLA	CT	DFO		PL,TK		*	5/74		56,700	45	59
INTERCESSION CITY	P6	OSCEOLA	CT	DFO		PL,TK		*	5/74		56,700	47	60
INTERCESSION CITY	P7	OSCEOLA	CT	NG	DFO	PL	PL,TK	*	10/93		103,500	78	95
INTERCESSION CITY	P8	OSCEOLA	CT	NG	DFO	PL	PL,TK	*	10/93		103,500	77	95
INTERCESSION CITY	P9	OSCEOLA	CT	NG	DFO	PL	PL,TK	*	10/93		103,500	77	95
INTERCESSION CITY	P10	OSCEOLA	CT	NG	DFO	PL	PL,TK	*	10/93		103,500	74	94
INTERCESSION CITY	P11	OSCEOLA	CT	DFO		PL,TK		*	1/97		148,500	140	161
INTERCESSION CITY	P12	OSCEOLA	CT	NG	DFO	PL	PL,TK	*	12/00		98,260	69	89
INTERCESSION CITY	P13	OSCEOLA	CT	NG	DFO	PL	PL,TK	*	12/00		98,260	71	91
INTERCESSION CITY	P14	OSCEOLA	CT	NG	DFO	PL	PL,TK	*	12/00		98,260	70	90
SUWANNEE RIVER	P1	SUWANNEE	CT	NG	DFO	PL	TK	*	10/80		65,999	48	65
SUWANNEE RIVER	P2	SUWANNEE	CT	DFO		TK		*	10/80		65,999	48	64
SUWANNEE RIVER	P3	SUWANNEE	CT	NG	DFO	PL	TK	*	11/80		65,999	49	65
											CT Total	1,857	2,362
CONTRACTED RESOURCES													
CONTRACT EXPIRATION													
GE - SHADY HILLS	P1	PASCO	CT	NG	DFO	PL	TK	*		Apr-24		160	174
GE - SHADY HILLS	P2	PASCO	CT	NG	DFO	PL	TK	*		Apr-24		160	174
GE - SHADY HILLS	P3	PASCO	CT	NG	DFO	PL	TK	*		Apr-24		160	174
NSG - VANDOLAH	P1	HARDEE	CT	NG	DFO	PL	TK	*		May-24		163	174
NSG - VANDOLAH	P2	HARDEE	CT	NG	DFO	PL	TK	*		May-27		163	174
NSG - VANDOLAH	P3	HARDEE	CT	NG	DFO	PL	TK	*		May-27		163	174
NSG - VANDOLAH	P4	HARDEE	CT	NG	DFO	PL	TK	*		May-27		163	174
											PPA Total	1,135	1,221
TOTAL RESOURCES (MW)												5,675	6,490

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.

RESPONSE:

There have been four (4) Alerts issued during three (3) events due to cold weather within the last ten-year period as follows:

(1) Event on 2/20/2015: Issued Load Management Phase 1 Alert (start 0653 hours, end 0806 hours). Actual system temperature reached 37 degrees and DEF generation units were called to maximum load to meet high system load conditions. No interruptible/curtailable customers were interrupted.

(2) Event on 12/18/2020: Issued Load Management Phase 1 Alert (start 0725 hours, end 0852 hours). Issued Load Management Phase 2 Alert (start 0730 hours, end 0829 hours). Actual system temperature reached 40 degrees and DEF reserves fell to 485 MW. No interruptible/curtailable customers were interrupted.

(3) Event on 1/24/2022: Issued Yellow Alert (start 0751 hours, end 1100 hours). Actual system temperature reached 38 degrees and DEF issued Yellow Alert due to high load conditions at 7,881 MW at hour ending 0800 on 1/24/2022. No interruptible/curtailable customers were interrupted.

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.

RESPONSE:

DEF has not experienced any events when it had to perform rolling blackouts within the last ten-year period.

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.

RESPONSE:

The total number of megawatts that can be controlled during a rotating blackout on the DEF system is 5,597 MW of eligible Rotating Load Shed Program load (approximately 63% of system load). This amount was determined by excluding critical feeders consisting of 3,241 MW (37% system load) from Rotating Load Shed. Critical feeders are feeders that supply critical loads such as hospitals and medical facilities, governmental facilities, medical essential load, water pumping and treatment, and emergency shelters. The classification of all DEF feeders is reviewed and updated annually as part of the maintenance of the FRCC Under-Frequency Load Shed Program for the FRCC region.

The 2022 update of Under Frequency Load Shed data for the DEF system was submitted to the FRCC System Protection and Control Subcommittee on 1/31/2022.

The priorities for interrupting firm load are described in Duke Energy Florida's Retail Tariff, General Rules and Regulations Governing Electric Service, subsection IV(4.04)(1) Priority of Curtailment: "In an emergency, the Company may interrupt, curtail, or suspend electric service to all or some of its Customers; provided the Company is acting in good faith and exercising reasonable care and diligence, the selection by the Company of the customers to be interrupted, curtailed, or suspended shall be conclusive on all parties concerned, and the Company shall not be held liable with respect to any such interruption, curtailment, or suspension."

During a Rotating Load Shed event the eligible load to be interrupted and the duration/rotation of interruption for any specific load would be determined by a pre-defined algorithm based on the scope of the event. The scope of the event would be determined based on the total MW required to be interrupted, the duration of the interruption, and the area of the system required to participate in the load shed event (entire system or only load in a specific region of the system).

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.

RESPONSE:

GLRP coordination steps:

At Grid Alert, Large Account Management, DSM, and Energy Efficiency Services organizations will contact cogeneration facilities and request or confirm that these facilities are maximizing unit output (page 7)

Page 14 – At Grid Alert Regulated Portfolio Management will contact cogeneration facilities to request maximum output

Page 21 – Grid Alert the GSO will request cogenerators to maximize output during the period of the expected capacity shortage, contact DEF primary and backup cogeneration contacts listed in plan

Page 21 – Grid Alert – Large Account Management representative will contact cogeneration facilities to request or confirm that these facilities are maximizing unit output

Page 26 – At EEA-2 condition notify customers per DEF's General Service Load Management Standby Generation Agreement to operate standby generation up to 12 hours per agreement and may request voluntary operation for periods longer than 12 hours depending on system conditions.

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.

RESPONSE:

Duke Energy has an extensive General Load Reduction Plan (GLRP) which can be adaptable to a variety of scenarios. It includes the use of phone calls, texts, the duke-energy.com website, mass, and social media. The plan is proactive dependent upon the grid status and specific need. This press release is an example of a soft appeal to customers. Additionally, here is an example of texts, emails and phone calls sent to our interruptible customers in expectation of a potential event:

Type	Date_Time	Notification
Phone	24-36 Hours Ahead	From Duke Energy Florida, Chance for Standby Generation for the week of xx/xx/yyyy is possible. To unsubscribe, call 888-282-9757
Text	24-36 Hours Ahead	From Duke Energy Florida, Chance for Standby Generation for the week of xx/xx/yyyy is possible. To unsubscribe, call 888-282-9757
Email	24-36 Hours Ahead	From Duke Energy Florida, Chance for Standby Generation for the week of xx/xx/yyyy is possible. To unsubscribe, call 888-282-9757
Phone	24-36 Hours Ahead	From Duke Energy Florida, Chance for Standby Generation for the week of xx/xx/yyyy is possible. To unsubscribe, call 888-282-9757
Text	24-36 Hours Ahead	From Duke Energy Florida, Chance for Standby Generation for the week of xx/xx/yyyy is possible. To unsubscribe, call 888-282-9757
Email	24-36 Hours Ahead	From Duke Energy Florida, Chance for Standby Generation for the week of xx/xx/yyyy is possible. To unsubscribe, call 888-282-9757
Phone	Day of Potential Operation	Duke Energy has issued a capacity alert and interruption is possible by Group A B C
Text	Day of Potential Operation	Duke Energy has issued a capacity alert and interruption is possible by Group A B C
Email	Day of Potential Operation	Duke Energy has issued a capacity alert and interruption is possible by Group A B C
Phone	Day of Potential Operation	From Duke Energy Florida, Chance for Standby Generation for the week of 5/3/2021 is likely. To unsubscribe, call 888-282-9757
Text	Day of Potential Operation	From Duke Energy Florida, Chance for Standby Generation for the week of 5/3/2021 is likely. To unsubscribe, call 888-282-9757
Email	Day of Potential Operation	From Duke Energy Florida, Chance for Standby Generation for the week of 5/3/2021 is likely. To unsubscribe, call 888-282-9757
Phone	Day of Potential Operation	From Duke Energy Florida, Chance for Interruption for the week of 5/3/2021 is likely. To unsubscribe, call 888-282-9757
Text	Day of Potential Operation	From Duke Energy Florida, Chance for Interruption for the week of 5/3/2021 is likely. To unsubscribe, call 888-282-9757
Email	Day of Potential Operation	From Duke Energy Florida, Chance for Interruption for the week of 5/3/2021 is likely. To unsubscribe, call 888-282-9757

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

RESPONSE:

Please Refer to the table below for the answers to items a-c.

Day	DEF BA Day Ahead Peak Load Forecast @ 7:00 AM	DEF BA Actual Peak Load	DA Operating Reserves (Without DSM / With DSM) MWs	*Estimated Actual Operating Reserves (Without DSM / With DSM) MWs
01/29/2022	6511 MW	6931 MW	4173 / 4930	3527 / 4294
01/30/2022	7960 MW	8402 MW	2017 / 2974	1303 / 2217
01/31/2022	8279 MW	8030 MW	1479 / 2365	2295 / 3220

- d. No customer outages due to cold weather were reported.
 - e. No DEF owned unit outages or derates due to cold weather occurred during this period. DEF units experienced a low level of derates due to fuel and instrument issues resulting in less than 100MW of derate.
 - f. No demand side management programs were activated during this period.
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.

RESPONSE:

No additional winterization plans were enacted besides DEF’s normal season preparation activities.

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.

RESPONSE:

The load forecast and generation data supplied to NERC was supplied from the data prepared for the DEF 2021 Ten-Year Site Plan (TYSP) and supplied to SERC as part of the Long-Term Reliability Assessment data collection. SERC aggregates this data with other entities in the SERC subregion (FRCC) and supplies that data to NERC for use in different assessments including the Winter Reliability Assessment. The assumptions used to prepare the data are the same as those detailed in the 2021 TYSP and associated response to data requests from Commission Staff in 2021.

The specific data supplied by DEF to the SERC data collection portal is shown in the attached files:

- *Actual_and_Forecast_Annual_Demand_and_Energy_2021_LTRA_Duke_Energy_FloridaLLC - As Submitted 3 31 2021*
 - *Plant_and_Generator_Summary_2021_LTRA_Duke_Energy_FloridaLLC - As Submitted 3 31 2021*
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.

This form was Submitted by Philip Beard (Philip.Beard@duke-energy.com) on 03/31/2021

Reporting Entity: Duke Energy Florida, LLC

* Required Field

Peak Demand, Summer (MW)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Unrestricted Non-Coincident Peak Demand**	9,647	9,453	9,990	9,693	9,821	9,702	9,729	9,827	9,948	10,049	10,150	10,166
Energy Efficiency	0	0	0	0	0	0	0	0	0	0	0	0
Conservation	0	19	48	76	104	131	157	182	206	230	253	275
Standby Demand Under Contract	0	80	80	80	80	80	80	80	80	80	80	80
Total Internal Demand*	9,647	9,514	10,022	9,697	9,797	9,651	9,652	9,725	9,822	9,899	9,977	9,971
Controllable And Dispatchable Demand Response - Total *	0	842	850	860	868	872	877	881	885	889	893	856
Controllable And Dispatchable Demand Response - Available	0	842	850	860	868	872	877	881	885	889	893	856
Total Installed Non-Utility Photovoltaic*	0	0	0	0	0	0	0	0	0	0	0	0
Non-Utility Photovoltaic On-Peak*	0	0	0	0	0	0	0	0	0	0	0	0
Net Internal Demand**	9,647	8,672	9,172	8,837	8,929	8,779	8,775	8,844	8,937	9,010	9,084	9,115

* Data entered in these lines will not be used to adjust net internal demand.
 ** Shaded rows indicate calculated values.

Peak Demand, Winter (MW)

	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
Unrestricted Non-Coincident Peak Demand**	8,358	10,583	10,344	10,489	10,335	10,463	10,549	10,058	10,145	10,138	10,128	10,229
Energy Efficiency	0	0	0	0	0	0	0	0	0	0	0	0
Conservation	0	19	37	54	72	89	105	121	139	157	175	192
Standby Demand Under Contract	0	80	80	80	80	80	80	80	80	80	80	80
Total Internal Demand*	8,358	10,644	10,387	10,515	10,343	10,454	10,524	10,017	10,086	10,061	10,033	10,117
Controllable And Dispatchable Demand Response - Total *	0	1,182	1,194	1,202	1,206	1,212	1,216	1,222	1,227	1,152	1,121	1,126
Controllable And Dispatchable Demand Response - Available	0	1,182	1,194	1,202	1,206	1,212	1,216	1,222	1,227	1,152	1,121	1,126
Total Installed Non-Utility Photovoltaic*	0	0	0	0	0	0	0	0	0	0	0	0
Non-Utility Photovoltaic On-Peak*	0	0	0	0	0	0	0	0	0	0	0	0
Net Internal Demand**	8,358	9,462	9,193	9,313	9,137	9,242	9,308	8,795	8,859	8,909	8,912	8,991

* Data entered in these lines will not be used to adjust net internal demand.
 ** Shaded rows indicate calculated values.

Net Energy for Load, Annual (GWhr)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Net Energy For Load (GWhr)*	44,814	43,102	44,980	44,424	45,010	44,623	44,886	45,252	45,751	46,125	46,483	45,801

This form was Submitted by Philip Beard (Philip.Beard@duke-energy.com) on 03/31/2021

Reporting Entity: Duke Energy Florida, LLC

This form should include all existing and planned generating units located within the Balancing Authority Area that meet these criteria at the time of data submittal: 1) nameplate rating over one (1) megawatt, and 2) ability to synchronize to the grid.

* Required Field

Existing Capacity		Summer		Winter		Operating Status	
Unit	Unit Type	Rating	Available On Peak	Rating	Available On Peak	Status	Return To Service
<u>ANCLOTE - 1</u>	Steam-Gas	508.00	508.00	521.00	521.00	Operating	
<u>ANCLOTE - 2</u>	Steam-Gas	505.00	505.00	514.00	514.00	Operating	
<u>BAYBORO - P1</u>	CT-Oil	44.00	44.00	58.00	58.00	Operating	
<u>BAYBORO - P2</u>	CT-Oil	41.00	41.00	55.00	55.00	Operating	
<u>BAYBORO - P3</u>	CT-Oil	43.00	43.00	57.00	57.00	Operating	
<u>BAYBORO - P4</u>	CT-Oil	43.00	43.00	56.00	56.00	Operating	
<u>CENTRAL ENERGY PLANT - 1</u>	CC-Gas	54.00	54.00	54.00	54.00	Operating	
<u>CITRUS - 1GTA</u>	CT-Gas	243.00	243.00	300.00	300.00	Operating	
<u>CITRUS - 1GTB</u>	CT-Gas	242.00	242.00	299.00	299.00	Operating	
<u>CITRUS - 2GTA</u>	CT-Gas	241.00	241.00	300.00	300.00	Operating	
<u>CITRUS - 2GTB</u>	CT-Gas	242.00	242.00	301.00	301.00	Operating	
<u>CITRUS - CC1ST</u>	CC-Gas	322.00	322.00	342.00	342.00	Operating	
<u>CITRUS - CC2ST</u>	CC-Gas	320.00	320.00	342.00	342.00	Operating	
<u>COLUMBIA RANCH SOLAR - 04</u>	Solar	74.90	74.90	74.90	74.90	Operating	
<u>CRYSTAL RIVER - 4</u>	Steam-Coal	712.00	712.00	721.00	721.00	Operating	
<u>CRYSTAL RIVER - 5</u>	Steam-Coal	698.00	698.00	709.00	709.00	Operating	
<u>DEBARY - P10</u>	CT-Oil	72.00	72.00	88.00	88.00	Operating	
<u>DEBARY - P2</u>	CT-Gas	45.00	45.00	57.00	57.00	Operating	
<u>DEBARY - P3</u>	CT-Gas	45.00	45.00	59.00	59.00	Operating	
<u>DEBARY - P4</u>	CT-Gas	46.00	46.00	59.00	59.00	Operating	
<u>DEBARY - P5</u>	CT-Gas	45.00	45.00	58.00	58.00	Operating	
<u>DEBARY - P6</u>	CT-Oil	46.00	46.00	59.00	59.00	Operating	
<u>DEBARY - P7</u>	CT-Gas	74.00	74.00	93.00	93.00	Operating	
<u>DEBARY - P8</u>	CT-Gas	75.00	75.00	94.00	94.00	Operating	
<u>DEBARY - P9</u>	CT-Gas	76.00	76.00	94.00	94.00	Operating	
<u>DEBARY SOLAR POWER PLANT - 05</u>	Solar	74.50	74.50	74.50	74.50	Operating	
<u>FL SOLAR 5 LLC - 1</u>	Solar	50.00	21.00	50.00	22.00	Operating	
<u>HAMILTON SOLAR - PV1</u>	Solar	74.90	74.90	74.90	74.90	Operating	
<u>HARVEST POWER DIGESTER - 1</u>	Biomass	1.20	1.20	1.20	1.20	Operating	
<u>HINES ENERGY COMPLEX - 1GT1</u>	CT-Gas	161.00	161.00	174.00	174.00	Operating	
<u>HINES ENERGY COMPLEX - 1GT2</u>	CT-Gas	167.00	167.00	177.00	177.00	Operating	

Existing Capacity		Summer		Winter		Operating Status	
Unit	Unit Type	Rating	Available On Peak	Rating	Available On Peak	Status	Return To Service
<u>HINES ENERGY COMPLEX - 1ST</u>	CC-Gas	162.00	162.00	170.00	170.00	Operating	Q17
<u>HINES ENERGY COMPLEX - 2GT1</u>	CT-Gas	176.00	176.00	179.00	179.00	Operating	
<u>HINES ENERGY COMPLEX - 2GT2</u>	CT-Gas	174.00	174.00	183.00	183.00	Operating	
<u>HINES ENERGY COMPLEX - 2ST</u>	CC-Gas	182.00	182.00	187.00	187.00	Operating	
<u>HINES ENERGY COMPLEX - 3GT1</u>	CT-Gas	171.00	171.00	184.00	184.00	Operating	
<u>HINES ENERGY COMPLEX - 3GT2</u>	CT-Gas	176.00	176.00	185.00	185.00	Operating	
<u>HINES ENERGY COMPLEX - 3ST</u>	CC-Gas	176.00	176.00	186.00	186.00	Operating	
<u>HINES ENERGY COMPLEX - 4GT1</u>	CT-Gas	171.00	171.00	179.00	179.00	Operating	
<u>HINES ENERGY COMPLEX - 4GT2</u>	CT-Gas	171.00	171.00	179.00	179.00	Operating	
<u>HINES ENERGY COMPLEX - 4ST</u>	CC-Gas	174.00	174.00	186.00	186.00	Operating	
<u>INTERCESSION CITY - P1</u>	CT-Oil	45.00	45.00	61.00	61.00	Operating	
<u>INTERCESSION CITY - P10</u>	CT-Gas	74.00	74.00	94.00	94.00	Operating	
<u>INTERCESSION CITY - P11</u>	CT-Oil	140.00	140.00	161.00	161.00	Operating	
<u>INTERCESSION CITY - P12</u>	CT-Gas	69.00	69.00	89.00	89.00	Operating	
<u>INTERCESSION CITY - P13</u>	CT-Gas	71.00	71.00	91.00	91.00	Operating	
<u>INTERCESSION CITY - P14</u>	CT-Gas	70.00	70.00	90.00	90.00	Operating	
<u>INTERCESSION CITY - P2</u>	CT-Oil	46.00	46.00	60.00	60.00	Operating	
<u>INTERCESSION CITY - P3</u>	CT-Oil	46.00	46.00	61.00	61.00	Operating	
<u>INTERCESSION CITY - P4</u>	CT-Oil	46.00	46.00	62.00	62.00	Operating	
<u>INTERCESSION CITY - P5</u>	CT-Oil	45.00	45.00	59.00	59.00	Operating	
<u>INTERCESSION CITY - P6</u>	CT-Oil	47.00	47.00	60.00	60.00	Operating	
<u>INTERCESSION CITY - P7</u>	CT-Gas	78.00	78.00	95.00	95.00	Operating	
<u>INTERCESSION CITY - P8</u>	CT-Gas	77.00	77.00	95.00	95.00	Operating	
<u>INTERCESSION CITY - P9</u>	CT-Gas	77.00	77.00	95.00	95.00	Operating	
<u>LAKE PLACID SOLAR POWER PLANT - 03</u>	Solar	45.00	45.00	45.00	45.00	Operating	
<u>MULBERRY - GT1</u>	CT-Gas	82.00	75.00	75.00	75.00	Operating	
<u>MULBERRY - ST1</u>	CC-Gas	43.30	40.00	40.00	40.00	Operating	
<u>ORANGE COGEN (CFR-BIOGEN) - 1</u>	CC-Gas	104.00	104.00	104.00	104.00	Operating	
<u>ORLANDO COGEN - 1</u>	CC-Gas	115.00	115.00	115.00	115.00	Operating	
<u>OSCEOLA SOLAR - PV1</u>	Solar	3.80	3.80	3.80	3.80	Operating	
<u>P. L. BARTOW - 4AGT</u>	CT-Gas	181.00	181.00	216.00	216.00	Operating	
<u>P. L. BARTOW - 4BGT</u>	CT-Gas	165.00	165.00	214.00	214.00	Operating	
<u>P. L. BARTOW - 4CGT</u>	CT-Gas	181.00	181.00	197.00	197.00	Operating	
<u>P. L. BARTOW - 4DGT</u>	CT-Gas	183.00	183.00	203.00	203.00	Operating	
<u>P. L. BARTOW - 4ST</u>	CC-Gas	402.00	402.00	429.00	429.00	Operating	
<u>P. L. BARTOW - P1</u>	CT-Oil	41.00	41.00	48.00	48.00	Operating	
<u>P. L. BARTOW - P2</u>	CT-Gas	41.00	41.00	50.00	50.00	Operating	
<u>P. L. BARTOW - P3</u>	CT-Oil	41.00	41.00	53.00	53.00	Operating	

Existing Capacity		Summer		Winter		Operating Status	
Unit	Unit Type	Rating	Available On Peak	Rating	Available On Peak	Status	Return To Service
P. L. BARTOW - P4	CT-Gas	45.00	45.00	58.00	58.00	Operating	Q17
PASCO COUNTY RES. RECOV. - 1	Biomass	23.00	23.00	23.00	23.00	Operating	
PERRY SOLAR - PV1	Solar	5.10	5.10	5.10	5.10	Operating	
PINELLAS COUNTY RES. RECOV. - 1	Biomass	40.00	40.00	40.00	40.00	Operating	
PINELLAS COUNTY RES. RECOV. - 2	Biomass	14.80	14.80	14.80	14.80	Operating	
Santa Fe Solar - PV1	Solar	74.90	74.90	74.90	74.90	Operating	
Shady Hills - 1	CT-Gas	160.00	160.00	174.03	174.03	Operating	
Shady Hills - 2	CT-Gas	160.00	160.00	174.03	174.03	Operating	
Shady Hills - 3	CT-Gas	160.00	160.00	174.03	174.03	Operating	
SHADY HILLS GENERATING STATION - 1	CT-Gas	160.00	160.00	174.30	174.30	Operating	
SHADY HILLS GENERATING STATION - 2	CT-Gas	160.00	160.00	174.03	174.03	Operating	
SHADY HILLS GENERATING STATION - 3	CT-Gas	160.00	160.00	174.03	174.03	Operating	
SUWANNEE RIVER - P1	CT-Gas	48.00	48.00	65.00	65.00	Operating	
SUWANNEE RIVER - P2	CT-Gas	48.00	48.00	64.00	64.00	Operating	
SUWANNEE RIVER - P3	CT-Gas	49.00	49.00	65.00	65.00	Operating	
SUWANNEE RIVER - PV1	Solar	8.80	8.80	8.80	8.80	Operating	
TIGER BAY - 1GT	CT-Gas	130.00	130.00	160.00	160.00	Operating	
TIGER BAY - 1ST	CC-Gas	63.00	63.00	64.00	64.00	Operating	
TRENTON SOLAR POWER PLANT - 02	Solar	74.90	74.90	74.90	74.90	Operating	
Twin Rivers Solar - PV1	Solar	74.90	74.90	74.90	74.90	Operating	
UNIVERSITY OF FLORIDA - P1	CT-Gas	44.00	44.00	50.00	50.00	Operating	
Vandolah - 1	CT-Gas	160.00	160.00	170.30	170.30	Operating	
Vandolah - 2	CT-Gas	160.00	160.00	170.30	170.03	Operating	
Vandolah - 3	CT-Gas	160.00	160.00	170.03	170.03	Operating	
Vandolah - 4	CT-Gas	160.00	160.00	170.03	170.03	Operating	
WALT DISNEY WORLD SOLAR FACILITY - 1	Solar	2.10	2.10	2.20	2.20	Operating	

Changes to Existing Capacity

Unit	Unit Type	Summer	Winter	Change Date	Description
No Plant Generator Summary 'Existing Changes' Records Selected					

Future Capacity

Unit	Unit Type	Summer		Winter		In-Service Date	Current Status
		Rating	Available On Peak	Rating	Available On Peak		
No Plant Generator Summary 'Future' Records Selected							

