

State of Florida



Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: June 16, 2022

TO: Adam J. Teitzman, Commission Clerk, Office of Commission Clerk

FROM: Jacob Imig, Attorney

RE: 20220000 Ten Year Site Plan Workshop

Please add the following document to the 20220000 docket.

June 15, 2022

Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee FL 32399

Re: Southern Alliance for Clean Energy's Ten Year Site Plan Comments; Docket No. 20220000

Dear Chairman Fay, Commissioners Graham, La Rosa, Clark and Passidomo:

Thank you for the opportunity to provide these comments to assist the Commission in determining the suitability of 2022 Ten Year Site Plans (TYSP). Our comments this year focus on the proposed extreme winter peak demand forecast in Florida Power and Light's (FPL) 2022 TYSP.

The Commission, pursuant to statute, is charged with conducting a preliminary study of the TYSPs and to classify them as "suitable" or "unsuitable." As part of its review, it must consider possible alternatives to the proposed plan, and can suggest alternatives¹ FPL's 2022 TYSP provided two distinct forecast methodologies that produce very different planning outcomes. One represents the "business as usual" P50 method historically relied upon by FPL and this Commission. The other is based on a hypothetical extreme winter weather event and associated load forecast that was not developed in a transparent way, nor is consistent with standard industry practice. FPL has put forth the extreme winter event plan as its "preferred plan."

If the preferred plan is found suitable, the plan will lead to almost \$500 million in costs to upgrade FPL's transmission and distribution system alone.² Additionally, FPL will add another 700 MW of fossil gas plant capacity; continue to keep several fossil gas units online that were slated for retirement; and add an extra 1,900 MW of battery storage on its system from 2027 to 2031, compared to its business as usual case and traditional method of forecasting winter peak demand.³ FPL's preferred plan will lead to higher bills through cost recovery in annual cost recovery dockets, such as the Storm Protection Plan Cost Recovery Clause docket (SPPCR), and future base rate increases. For instance, FPL is already planning (even before a Commission suitability determination) to winterize transmission and distribution infrastructure for eventual recovery through the SPPCR for a projected amount of \$215 million.⁴ Moreover, the preferred plan increases FPL's and the state's reliance on fossil gas infrastructure at a time when customers are being pummeled with spiking bills due to this costly and price volatile fossil fuel. FPL's proposal is a step in the wrong direction for the Company, its customers, and the state, and should be rejected.

¹ Section 186.801, Fla. Stat.

² FPL, *Power Delivery Winterization Update* presentation, p.2.

³ FPL, Ten Year Site Plan, April 1, 2022, p. 7.

⁴ FPL, *Direct Testimony of Michael Jarro*, Exhibit MJ-1, April 11, 2022, pp. 52-57.

FPL has indicated in its response to the Commission, and reiterated at the TYSP workshop, that if FPL's business as usual plan is deemed suitable for planning purposes and the preferred plan is found not suitable for planning purposes, absent clear direction to the contrary from the Commission, FPL would interpret such a decision regarding its 2022 TYSP to be a directive from the Commission that FPL should not plan for extreme winter weather.⁵ We urge the Commission, for the reasons provided below, to do just that: find the FPL business as usual plan suitable, and alternatively find the preferred plan, based on a hypothetical extreme winter weather event, unsuitable. The business-as-usual forecasting method does not ignore the potential for winter weather to drive winter peak load.

FPL misapplies the Texas experience to Florida

In its TYSP, FPL cites the Texas extreme winter weather event in February of 2021 as a driver of its extreme winter weather peak demand forecast. Yet, during the Texas winter weather event in 2021, temperatures dropped and stayed below freezing for 5 consecutive days, and some cities recorded lows below zero degrees Fahrenheit. There was significant snowfall, and ice accumulation of up to one half inch in some Texas cities. Much of the problem in Texas stemmed from a number of gas units being offline, freeze-related generation outages, and gas fuel supply lines. A combination of freezing issues (44.2 percent) and fuel issues (31.4 percent) caused 75.6 percent of the unplanned generating unit outages, derates, and failures to start.⁶ The Federal Energy Regulatory Commission (FERC) issued recommendations after the Texas winter weather event. The addition of additional generation capacity, as FPL recommends in its preferred plan, is not one of the FERC recommendations.⁷ It was not the lack of generation capacity in Texas that led to outages, it was the failure of the capacity to generate power that can occur when temperatures reach below approximately 20 degrees Fahrenheit.

FPL additionally cites two winter events in 1989 and 2010 where low temperatures were experienced for a few days that stressed the utility's system. The 1989 event, more than 33 years ago, led to rolling blackouts that were typically 15-30 minutes in duration.⁸ It must be noted that while there was significantly higher load on FPL's system during these two events, it appears FPL's management of its generating resources contributed to an emergency situation that required rolling blackouts in 1989, and to a lesser degree the close call in 2010.

During the 1989 approximately two-day winter event (from Saturday evening December 23rd to Monday morning December 25th) FPL had 2,749 MW of forced outages unrelated to the winter event during the duration of the event.⁹ Both Turkey Point nuclear units, 688 MW each, were forced offline due to corroded terminal boards on steam isolation valves, and Port Everglades gas turbines lost 40% of their 1,458 MW capacity due to fuel issues, while the Manatee 1 Unit's 791 MW capacity was lost to water wall tube leaks. The highest MW firm load that was not met was on Monday morning December 25 of 2,700 MW, which is less than the 2,749 MW of forced outages on FPL's system during the duration of the event.¹⁰

⁵ FPL Response to PSC Staff Third Data Request Nos. 3 and 4, May 24, 2022.

⁶ FERC, *Final Report on February 2021 Freeze Underscores Winterization Recommendations* at: <https://ferc.gov/news-events/news/final-report-february-2021-freeze-underscores-winterization-recommendations>

⁷ *Id.*

⁸ Florida Public Service Commission, *Peninsular Florida Cold Weather Capacity Shortfall Emergency*, February 2, 1990, p. 6.

⁹ *Id.* at 140–144.

¹⁰ *Id.*

During the January of 2010, the second winter weather event cited by FPL, the Company had adequate capacity to meet its customer demand. FPL concedes that it had a “significant amount” of generation offline - 1,980 MW offline - due to “breakage.”¹¹ Moreover, FPL provided 525 MW of capacity to Duke Energy Florida’s predecessor, Progress Energy, during the event, and still had 1,144 MW of reserves available to meet load.¹²

The events cited for support by FPL in its TYSP to overbuild its system, upon closer examination, are not as compelling as FPL characterizes them. Regardless, the method used to estimate temperatures and project load during an even colder future hypothetical extreme event were not derived utilizing standard industry practice, nor are these methods used by any other utility in the country, and should be dismissed by the Commission.

FPL’s extreme weather event forecast and the associated winter peak demand projection is not transparent and does not comport with standard industry practice

FPL TYSP workshop presenters stated that FPL began its analysis by developing a hypothetical extreme winter weather event. It did so by taking the low temperature during the 1989 2 day event (28 degrees in Miami) and the duration of the 2010 event (which had a low of 33 degrees in Miami, but lasted 3 days). Yet it is unclear what temperatures FPL used in its hypothetical winter event in its responses to PSC Staff data requests. For instance, FPL states that it used a temperature of 27 degrees in Miami (recorded in 1917) and in other instances it states that it assumed a Miami temperature of 20 degrees.¹³ The exact iterations of its extreme winter event development have not been presented coherently. In any event, FPL concedes that it did no probabilistic analysis of this hypothetical extreme event taking place, if ever, in Florida. FPL likewise admits that it did not do any analysis of its individual divisions (regions). In other words, it did not analyze an extreme winter event that takes place in Pensacola but not in Miami, or vice versa. The weather variables used are based on composite hourly temps from weather stations in Miami, Ft. Myers, Daytona Beach, and West Palm Beach.¹⁴ Yet at the TYSP workshop, FPL presenter Kim could not recall how the different weather stations were weighted in developing its hypothetical extreme weather event.

Southern Alliance for Clean Energy and Vote Solar presenter, Jim Wilson,¹⁵ indicated that using a three hour temperature window produces a clearer, more accurate perspective on winter weather extremes than using a single hourly low temperature. Moreover, Mr. Wilson states that FPL should not have aggregated very different regions with very different temperatures and performed a regression analysis. Rather the Company should have performed a regression analysis on specific division in its systems, then aggregated the results. FPL’s method ignores the “saturation” of the system during very cold temperatures. At some point, all of the equipment that can be on is turned on, and a drop in temperature by a degree does not result in the same increase in load. The relationship tends to be non-linear. FPL did not appear to do analysis to account for this trend, instead they performed a linear extrapolation from 40

¹¹ Florida Public Service Commission, *Determination of Need for Okeechobee Clean Energy Center, Unit 1 by Florida Power and Light Company*, Docket No. 20150196, Hearing Transcript, December 3, 2015, pp. 552-554.

¹² *Id* at 555.

¹³ See e.g. FPL Response to PSC Staff’s Third Data Request, May 24, 2022, pdf p. 691.

¹⁴ FPL, Ten Year Site Plan, April 1, 2022, p. 57.

¹⁵ Mr. Wilson has significant experience in the Southeast and nationally on load forecasting and resource planning issues. He has engaged as an expert in recent resource planning dockets in Georgia, North and South Carolina and Virginia. See Jim F. Wilson, *Load Forecasting and Resource Planning for Extreme Cold* presentation, June 1, 2022, at http://www.psc.state.fl.us/Files/PDF/Utilities/Electricgas/TenYearSitePlans/2022/VoteSolar_Presentation.pdf.

degrees to 29 degrees.¹⁶ Lastly, in regards to weather, Mr. Wilson identified a minimum temperature trend of a one degree increase in minimum temperatures every five to six years. Therefore, a low temperature of 29 degrees in 1989 would now, according to trends he has observed in FPL's territory, translate to a low temperature of 33 degrees today.¹⁷ These minimum temperature trends were not considered in FPL's hypothetical extreme winter event.

Beyond the deficiency of analysis in the extreme winter weather event assumptions, FPL's load assumption and resource plan response are inconsistent with standard industry practice. This is confirmed by FPL as it states that it is not aware of any other utility in the country that uses an extreme winter weather event for planning purposes.¹⁸

Standard industry practice demands that a generation capacity requirement be set by establishing a peak load forecast plus a reserve margin. Mr. Wilson provided a two-step process in establishing a peak load forecast: 1) establish long term median forecast (P50). The median forecast is one where it is equally likely that temperatures may lower or higher than the P50 forecast; 2) then gather as much weather data as possible around that P50 forecast to see how high the electricity load rises in relation to temperatures. Afterwards, this information goes into a probabilistic simulation to determine the reserve margin over P50 needed to provide an adequate level of capacity. The probabilistic simulation will include a number of important assumptions including power plant outages, and shared resources from other regions. This standard industry process determines if there is enough capacity to meet appropriate resource adequacy criteria such as the "one day in 10 years" metric.¹⁹

FPL simply did not perform this probabilistic determination. Instead, FPL appears to graft the 2010 flat load pattern onto the 1989 spike in minimum temperature to achieve its desired load projection. We say "appears" because we were not able to recreate FPL's method based on information provided. FPL describes its unique approach as a "hybrid-type forecast" where P50 is used for 11 months while an extreme peak is used for the month of January only. It then uses the extreme winter peak load forecast as a capacity target - which would lead the Company to overbuild its system to meet a load projection 43% above the business as usual (P50 methodology). It should be noted that utilities that file TYSPs, based on the P50 methodology, have historically overestimated projected retail electricity sales, although the error rate has declined in recent years.²⁰ In response to a staff question during the TYSP workshop FPL's presenters agreed that its P50 business as usual forecast tends to overstate FPL's actual winter load on its system. FPL presenter Whitely stated at the TYSP workshop that FPL intends to eliminate *any outages* due to an extreme winter weather event. This is wholly inconsistent with standard industry practice and will lead to an absurd overbuilding of its system - or as Mr. Wilson stated: building power additions to meet load on a one day-in-30-years basis.

This absurd overbuilding would add significant and unnecessary costs on customers through their power bills - - many of whom are already energy burdened and struggling to pay power bills. Governor DeSantis has recently expressed his concern over rising prices and bill impacts in his veto HB 741 in stating the following: "[g]iven the United States is experiencing its worst inflation in 40 years and consumers have

¹⁶ FPL Response to PSC Staff's Third Data Request, No.2, Attachment 9, p.14, May 24, 2022

¹⁷ *Id.* at p. 14.

¹⁸ FPL Response to PSC Staff's Third Data Request, Response No. 14k,,May 24, 2022.

¹⁹ Jim F. Wilson, *Load Forecasting and Resource Planning for Extreme Cold* presentation, June 1, 2022, at http://www.psc.state.fl.us/Files/PDF/Utilities/Electricgas/TenYearSitePlans/2022/VoteSolar_Presentation.pdf.

²⁰ Florida Public Service Commission, *Review of 2021 Ten year Site Plans*, October 2021, p. 26.

seen steep increases in the price of gas, groceries and escalating bills, the state of Florida should not contribute to the financial crunch that our citizens are experiencing.”²¹

Demand side options not explored

FPL provides no alternative methods of addressing its hypothetical - once in thirty year - extreme winter event in its TYSP, nor did it at the TYSP workshop. Rather than overbuilding its system and passing on unnecessarily high costs to customers, the Company should increase its focus on demand response and energy efficiency as a planning resource.

FPL’s abysmal achievements on capturing energy savings through energy efficiency programs is well established. The Company effectively proposed zero (1.023 GWh over a ten year period) as an energy savings goal in the 2019 Florida Energy Efficiency and Conservation Act (FEECA) proceedings.²² Its proposed goals were based on the Rate Impact Measure (RIM) test and the 2-year payback screen that eliminate the highest impact, lowest cost measures from a utility’s energy efficiency potential analysis - and are not used by any other state for setting goals. Therefore, FPL’s proposed goals and poor performance on capturing energy savings from energy efficiency programs is predictable. In the TYSP, FPL states that it uses the DSM goals set for the utility in Order No. PSC-2019-0509-FOF-EG. After that time frame, from 2025-2031, the Company says it included additional “cost-effective” DSM for years 2025 through 2031.²³ This “cost effective” DSM is based on its proposed goals in 2019, which represent effectively zero energy savings. When a utility under-invests in demand side measures, it and its customers are forced to rely on more costly supply side resources.

Energy efficiency provides a number of system benefits such as reduced fuel use. It provides system benefits to the utility while insulating customers from volatile fossil gas price spikes and helps lower bills, not only for customers that participate in utility sponsored energy efficiency programs, but all customers due to the system benefits to the utility.

A 2020 American Council for an Energy Efficiency Economy report ranked FPL 51st out of the 52 largest US utilities in capturing energy savings from utility-sponsored energy efficiency programs.²⁴ In the Southern Alliance for Clean Energy 4th annual Energy Efficiency in the Southeast report, FPL continues to drag down the Southeast region on the energy saving metric. FPL captured a mere 0.04% energy savings in 2021 as a percentage of annual sales. This is below the Southeast utility average and well below the national average of 0.72%.²⁵

Pursuant to its proposed extreme winter peak demand forecast, FPL continues to double down on fossil gas reliance and volatile costs. The recent well-publicized FPL bill increases are hitting many families hard – exacerbating already high energy burdens. For instance, higher gas price costs passed on by FPL this year have spiked the fuel portion of power bills by 24% - impacting customers from Miami to Pensacola. FPL has

²¹ Governor Ron DeSantis, An Act Relating to Net Metering veto letter, April 27, 2022

²² FPL, *Commission Review of Numeric Conservation Goals*, Petition, April 12, 2019. See also: Southern Alliance for Clean Energy, George Cavros, *There They Go Again in Florida, Abandoning Customers Who Want to Lower Bills*, at <https://cleanenergy.org/blog/there-they-go-again-in-florida-abandoning-customers-who-want-to-lower-bills/>

²³ FPL, Ten Year Site Plan, April 2021, p. 81.

²⁴ American Council for an Energy Efficiency Economy, *Unrealized Potential: Expanding Energy Efficiency Opportunities for Customers in Florida*, January 2021, p. 2.

²⁵ Southern Alliance for Clean Energy, *Energy Efficiency in the Southeast*, February 2022, p. 10.

already indicated that it is coming to the Commission *again*, to recover additional fuel costs from customers due to higher than projected fossil gas costs.²⁶ The Company, and the other state's utilities, continue to be heavily reliant on fossil fuels for generating electricity. With increasing global geo-political market uncertainty and continued construction of LNG export terminals in the US there is no end in sight, in the near term, to high and volatile fossil gas prices. FPL's proposed move to greater reliance on fossil gas is a step in the wrong direction.

Conclusion

The proposed FPL preferred resource plan is fatally flawed. It is based on extreme weather assumptions that are unlikely, if ever, to occur. The associated projected load of such an extreme event was not developed in a transparent or customary fashion, nor is FPL's plan to overbuild its system based on standard industry practice. Moreover, FPL presents no evidence that it explored demand side management as a resource before proposing to pile on more cost on to customer bills. The preferred plan is the wrong direction for customers and the state and should be deemed unsuitable by the Commission.

Sincerely,

/s/Maggie Shober

Maggie Shober, Research Director

/s/George Cavros

George Cavros, Florida Director & Energy Policy Attorney

²⁶ FPL, Maria Moncada, mid-course correction letter, Docket No. 20220001-EI, April 15, 2022.