

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for determination of need for  
Dania Beach Clean Energy Center Unit 7, by  
Florida Power & Light Company

Docket No. 20170225-EI

DATE: January 29, 2018

**SIERRA CLUB'S POST-HEARING ISSUE STATEMENT AND BRIEF**

Respectfully submitted this 29th day of January, 2018.

*/s/ Julie Kaplan*

Julie Kaplan  
Senior Attorney  
Sierra Club  
50 F St. NW, Suite 800  
Washington, DC 20001  
(202) 548-4592  
Julie.Kaplan@SierraClub.org

Michael Lenoff  
Legal Fellow  
Sierra Club  
50 F St. NW, Suite 800  
Washington, DC 20001  
(202) 650-6065  
Michael.Lenoff@SierraClub.org

Nathan Taylor  
Legal Fellow  
Sierra Club  
50 F St. NW, Suite 800  
Washington, DC 20001  
(202) 650-6072  
Nathan.Taylor@SierraClub.org

*Qualified Representatives for Sierra Club*

## TABLE OF CONTENTS

Introduction.....	1
Statement of Issues and Positions.....	4
Argument.....	6
I.    FPL Has the Burden to Prove Need By a Preponderance of Evidence.....	6
II.   There Is No Reliability Need for DBEC.....	7
A. FPL’s ample reserve margins do not support a need for DBEC.....	7
B. The projected imbalance between generation and load in Southeast Florida in 2025 or later does not support a need for DBEC.....	10
C. A decision so far in advance of any projected reliability issue is likely to be wrong.....	10
D. FPL ignored many alternatives with the potential to meet projected reliability issues and exceed the reliability benefits of DBEC.....	12
E. FPL imposes a “four year window” assumption that is arbitrary, inconsistent, and unreasonable, and belatedly offers testimony in purported support that is arbitrary, inconsistent, unreasonable, and bereft of documentation.....	14
1. The four year window constraint and purported supporting testimony are arbitrary, inconsistent, unreasonable, and bereft of documentary support.....	14
2. Mr. Sanchez’s testimony is untimely.....	19
III.  DBEC Is Not the Most Cost-Effective Alternative.....	20
A. Delaying DBEC by two years is proven to be cheaper than FPL’s proposed project.....	21
B. FPL failed to examine many other reasonable alternatives that could be cheaper than its proposed project.....	23
1. Delaying DBEC by one year, or by more than two years, could be even cheaper than both FPL’s proposed project and a two year delay, but FPL never examined these alternatives.....	23
2. Power purchase options could be even cheaper than both FPL’s proposed project and a two year delay, but FPL ignored these alternatives.....	25
3. A plan with solar resources outside Southeast Florida could be even cheaper than both FPL’s proposed project and a two year delay, but FPL never examined such a plan.....	27
C. FPL’s Meager Alternative Plans Are Not Reasonable Alternatives; “Plan 3” is Riddled with Arbitrary Constraints that Falsely Augment the Costs of Renewable Alternatives.....	28
1. FPL’s design of Plan 3 to mimic its preferred project is uneconomic, illogical, and adds spurious costs.....	29
2. FPL’s Plan 3 unreasonably adds solar and storage between 2018 and 2022.....	30
3. FPL unreasonably restricted consideration of large-scale solar to 74.5 MW.....	31
IV.  FPL Failed to Use Reasonably Available Renewable Energy Sources, Technologies, and Conservation Measures.....	33
V.   DBEC Would Worsen FPL’s Dire Need for Fuel Diversity.....	35
VI.  Municipal, Community, and Individual Pledges to Transition to Renewable Energy, and Related Opposition to DBEC, Further Support Denying FPL’s Petition.....	37
Conclusion.....	40

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for determination of need for  
Dania Beach Clean Energy Center Unit 7, by  
Florida Power & Light Company

Docket No. 20170225-EI

DATE: January 29, 2018

**SIERRA CLUB’S POST-HEARING ISSUE STATEMENT AND BRIEF**

Sierra Club, by and through its undersigned counsel, and pursuant to Order No. PSC-2018-0037-PHO-EI, hereby submits its Post-Hearing Issue Statement and Brief.

**INTRODUCTION**

The Florida Public Service Commission (Commission) cannot approve Florida Power & Light Company’s (FPL’s) request for a determination of need for the proposed new “Dania Beach Clean Energy Center” (DBEC or Dania plant) under section 403.519(3), Florida Statutes. FPL has not, because it cannot, meet its burden to demonstrate that building a 1,163 MW gas-burning plant in 2022 is needed. To make such a demonstration, FPL would have to identify a clear reliability need, and then provide an analysis of reasonable alternatives that shows that building the massive Dania plant in 2022 is the most cost effective means of meeting that need. Moreover, FPL would need to prove the impossible—that ladening its already heavy over reliance on gas-burning generation with another massive gas-burning generator promotes fuel diversity, as compared to turning to reasonably available renewable options that FPL neglected to investigate. And, a vocal and large number of FPL’s customers recognize this truth. A groundswell of municipalities to community groups to individuals are voicing their pledges to renewable energy and opposition to the massive new gas-burning plant. It is these voices, not FPL, that heed the clear direction of the Florida Legislature that the state’s fuel diversity be enhanced, its dependence on gas decreased, and reliance on renewable energy prioritized. §§ 403.502, 366.92(1), 403.519(3), Fla. Stat.

Precisely because FPL cannot meet its burden to prove, in accordance with the statutory factors, the wisdom of its proposal to add a massive new gas-burning plant, it repeats its strategy of presenting a skewed set of alternatives that FPL preselected to lead to a “build Dania now” conclusion. However, the basic facts weigh against FPL. FPL admits that its existing and planned generation assets exceed its 20% reserve margin for the next six years, at least until 2024, when FPL’s own modeling shows that it has at most a 54 MW shortfall. The public clearly does not need a decision today allowing FPL to build a 1,163 MW plant to meet a 54 MW shortfall six years away, in 2024. Nor has FPL shown that the public needs to pay for the massive excess capacity that DBEC will create for three years or more, depending on how much FPL has overforecast load this time around. Indeed, FPL’s own modeling, conducted at the request of Commission’s staff, confirms the conclusion reached by Sierra Club’s expert: delaying the Dania plant for even a couple years will save the public at least tens of millions of dollars.

Moreover, FPL’s skewed alternatives analysis refused to investigate and consider obvious, common sense alternatives. Nowhere, for example, did FPL evaluate building new generation in an incremental fashion, such as building a smaller number of megawatts of renewable energy to meet the 54 megawatt shortfall that FPL’s modeling identifies in 2024. Nor did FPL meaningfully analyze how rapidly the industry has changed over the last 7 years, with plummeting wind, solar and storage prices, and how rapidly it will continue to change over the next 7 years. And since FPL’s load grows incrementally beyond 2024, the flexibility of renewable generation can help FPL address reliability needs as they arise. Instead, FPL’s alternatives analysis only considers building out—today—1,163 MW of gas-burning generation, or an equivalent amount of renewable energy, resulting in multiple years of capacity far beyond the amount needed to meet its 20% reserve margin.

Locking FPL’s customers into a massive, exorbitantly expensive gas-burning plant today robs them of the benefits of clean energy—precisely when utilities across the country and across the world are reducing cost and risk by rapidly moving into a renewable energy future. To tap into this potential, one need look no further than the 15 to 17 solar businesses who are very interested in signing a power purchase agreement (PPA) with FPL but, because FPL failed to investigate this potential, those solar businesses were not given the opportunity. What’s more right in Florida’s backyard in Georgia, this year’s winning solar procurement PPAs were signed at an average of \$36 per megawatt hour, and more recently, in Colorado, Xcel receive median RFPs bid for that same amount, for solar with energy storage.

Further emblematic of FPL’s skewed alternatives analysis is its fundamentally flawed “Plan 3”—its only purported alternative that includes solar and storage. Instead of taking advantage of the inherent flexibility of solar and storage, and their undisputed falling costs, FPL designed Plan 3 to mimic its preferred plan, DBEC. Divorced from any reliability issues, Plan 3 improperly magnifies the costs of a renewable energy alternative. So too does FPL’s approach of front-loading the most expensive resources many years before a reliability issue arises and refusing to consider more than 74.5 MW of solar at any one site. Accordingly, FPL is wrong to suggest that its examination of Plan 3 suffices to meet its burden to establish either that DBEC is the most cost effective, or that it has identified reasonably available renewable energy sources and technologies.

In a last ditch effort to evade the basic economic facts underlying this case, FPL has introduced “system operator guidance” and an “area reliability margin” in rebuttal testimony to supposedly justify adding DBEC in 2022 and reject any other possibility. However, that guidance is arbitrary, inconsistently applied, and unreasonable. For instance, FPL’s system operators are okay with DBEC going into service four years after retiring FPL’s existing units, but not a longer period, because that is the length of time that it takes to add DBEC. The system

operators have not done any independent analysis to support that position. Thus, if FPL's preferred project took longer to achieve, there is no reason to believe that the system operators would not be okay with that too. The "area reliability margin," in turn, calls for maintaining capacity that goes well beyond Florida's established, well-documented, and Commission approved reliability requirements that are already more protective than the 15% reserve margin set by the Florida Reliability Coordinating Council. Further, the testimony that purportedly supports the guidance and area reliability margin is inconsistent, unreasonable, and bereft of documentary support. FPL and its witnesses take contrary positions on these issues. Indeed, Mr. Sanchez, who reputedly gave the guidance and contrived the area reliability margin, actually undermines FPL's entire Petition, since FPL's proposed plan would result in conditions that Mr. Sanchez considers unacceptable in 2018-2021. Accordingly, FPL's arguments and assumptions are unreasonable and do not suffice to meet its burden to show that DBEC is needed in 2022.

In sum, the basic facts in the record demonstrate that FPL has not met its burden to establish that Dania is needed now. The record establishes that FPL has a window to wait. And, despite FPL's determination to move forward without testing the market for more cost effective options, before any decision compliant with section 403.519 requirements can be made, FPL must fairly investigate the promise of cleaner, cheaper, common sense alternatives. These include simply delaying the Dania plant, or building out new generation in an incremental fashion. Therefore, the Commission must deny FPL's request in this case.

### **Statement of Issues and Positions**

**Issue 1:** Is there a need for the proposed Dania Beach Clean Energy Center Unit 7, taking into account the need for electric system reliability and integrity, as this criterion is used in Section 403.519(3), Florida Statutes?

**Sierra Club:** \*No. There is no reliability need for DBEC to come into service in June 2022 because—assuming that FPL retires the existing Lauderdale 4 and 5 units in 2018—FPL's own projections show 2022 is two years before any projected reserve margin shortfall, three years before any projected system balance issue, and five years before the full 1,163 MW capacity of the project is forecast to be needed for reserve margin.\*

**Issue 2:** Are there any renewable energy sources and technologies or conservation measures taken by or reasonably available to Florida Power & Light, which might mitigate the need for the proposed Dania Beach Clean Energy Center Unit 7?

**Sierra Club:** \*Sierra Club objects to the premise that DBEC is needed in 2022. Renewable energy sources, technologies, and conservation measures are reasonably available to FPL and could be deployed incrementally to delay, or potentially entirely forestall, any need for new gas generation, and would likely reduce financial burdens on customers. FPL has not fairly evaluated these alternatives. FPL’s “Plan 3”, purportedly evaluating solar and storage options, constitutes a single, poorly-conceived alternative rife with artificial, cost-inflating constraints.\*

**Issue 3:** Is there a need for the proposed Dania Beach Clean Energy Center Unit 7, taking into account the need for adequate electricity at a reasonable cost, as this criterion is used in section 403.519(3), Florida Statutes?

**Sierra Club:** \*No. More cost-effective options exist. Customers will save money if FPL adds capacity commensurate with the timing and size of a projected reserve margin deficit or Southeastern regional imbalance. Locking DBEC in now, nearly a decade before a projected shortfall of so much additional capacity, would rob customers of wide-ranging benefits of investing in alternatives. Florida’s Legislature has mandated utilities pursue such alternatives “to the extent reasonably available,” § 403.502 Fla. Stat.\*

**Issue 4:** Is there a need for the proposed Dania Beach Clean Energy Center Unit 7, taking into account the need for fuel diversity and supply reliability, as this criterion is used in Section 403.519(3), Florida Statutes?

**Sierra Club:** \*No. DBEC will prolong potentially until 2061 FPL’s dangerous over-reliance on one fuel: gas, which currently represents 71% of FPL’s generation. Fuel efficiency does not remedy adding gas burning generation to an already overburdened system, where, despite dual fuel capability, DBEC is designed primarily to burn gas. Conversely, investing in alternatives, especially solar and demand-side energy efficiency, would provide much needed fuel diversity, including protection from gas price and supply risks and pollution abatement costs.\*

**Issue 5:** Will the proposed Dania Beach Clean Energy Center Unit 7 provide the most cost-effective alternative available, as this criterion is used in Section 403.519(3), Florida Statutes?

**Sierra Club:** \*No. Less costly alternatives include delaying DBEC until 2024—the earliest date when FPL projects a reliability issue. FPL did not adequately consider other potential cost-saving alternatives, such as forestalling the need for DBEC by adding incremental, renewable, or demand-side alternatives. As Dr. Hausman explained, FPL’s Plan 3 is unreliable and obscures the cost-effectiveness of alternatives. See Reply to Issues 2. 3.\*

**Issue 6:** Based on the resolution of the foregoing issues and other matters within its jurisdiction which it deems relevant, should the Commission grant Florida Power & Light’s petition to determine the need for the proposed Dania Beach Clean Energy Center Unit 7?

**Sierra Club:** \*No. FPL has not met its burden to demonstrate that DBEC is needed. Potential alternatives exist to satisfy future needs at less cost, and with wide-ranging benefits of

alternatives, including greater fuel diversity. Moreover, to avoid the material risk of DBEC becoming a stranded asset, the Commission needs more information on the pledges to transition to renewable energy by local governments and customers in FPL's service area well before 2061.\*

**Issue 7:** Should this docket be closed?

**Sierra Club:** \*This docket should be closed consistent with the above positions, and with instructions for FPL to undertake the competitive bidding process identified in docket 20170122-EI. Only at the conclusion of such a process, supplemented by a Commission request for information on solar and solar/storage projects, would it have the evidence needed to render the requisite independent, record-based decision under section 403.519, Florida Statutes on what constitutes the "most cost-effective alternative." \*

### **ARGUMENT**

As demonstrated below, FPL has failed to meet its burden to show a need for DBEC.

Therefore, its petition must be denied.

#### **I. FPL Has the Burden to Prove Need By a Preponderance of Evidence.**

As the petitioner for an affirmative determination of need to add DBEC in June 2022, FPL has the burden to prove such a need by the preponderance of evidence. § 120.57(1)(j), Fla. Stat.; Fla. Admin. Code R. 25-22.081(1); Order No. PSC-2017-0358-PCO-EI at 4-5 (2017); Order No. PSC-92-0002-FOF-EI at 15 (1992). Preponderance of the evidence, as applied to the Commission, is determined by the "greater weight of the evidence," not "merely something more than half." Wells Fargo Armored Serv. Corp. v. Mason, 196 So. 2d 419, 420-21 (Fla. 1966). The following definition of the preponderance standard, according to the Florida Supreme Court, is consistent with Florida law:

The greater weight of the evidence, not necessarily established by the greater number of witnesses testifying to a fact but by evidence that has the most convincing force; superior evidentiary weight that, though not sufficient to free the mind wholly from all reasonable doubt, is still sufficient to incline a fair and impartial mind to one side of the issue rather than the other.

S. Fla. Water Mgmt. v. RLI Live Oak, LLC, 139 So. 3d 869, 872 n.1 (Fla. 2014) (quoting Black's Law Dictionary 1301 (9th ed. 2009)). In addition, all the assumptions underlying FPL's petition are tested for reasonableness and certainty. Order No. PSC-07-0557-FOF-EI at 3 (2007).



Therefore, FPL must demonstrate that the greater weight of the evidence in the record—the evidence with the most convincing force—supports each factor applicable to the need determination, and must employ reasonable and certain assumptions.

## **II. There Is No Reliability Need for DBEC.**

FPL’s petition alleges two reliability issues: (i) a projected reserve margin shortfall and (ii) a projected imbalance between load and generation in Southeast Florida. Petition at ¶¶ 1, 3, 23-24. Neither of the alleged reliability issues supports an affirmative need determination for FPL’s proposed project—adding<sup>1</sup> DBEC in June 2022.

### **A. FPL’s ample reserve margins do not support a need for DBEC.**

FPL’s own projections are perhaps the best evidence that FPL has not, and cannot, prove its need to add the 1,163 MW DBEC in 2022. Those projections yield no reserve margin shortfall until 2024, and in that year, the shortfall is a mere 54 MW, assuming the retirement of Lauderdale Units 4 and 5 in 2018. Exh. 3 (“2017 Projection of FPL’s Resource Needs Utilizing FPL’s Two Reserve Margin Criteria”). Commission precedent rejects the need for additional capacity two years before a projected capacity shortfall. See Order No. 25808 at 7 (1992). In fact, FPL’s petition is worse than the project addressed in that Order: the full capacity of DBEC is not required to address FPL’s projected reserve margin shortfalls until five years after FPL’s proposed in-service date, whereas the full capacity of the project addressed in Order No. 25808 would have been required two years after FPL’s proposed in-service date. See Exh. 3; Order No. 25808 at 7.

Adding DBEC in 2022 would result in reserve margins far in excess of FPL’s 20% reserve margin. These excesses range from 26.7% to 24.7% during 2022-2024, then 22.9% to 21.1% during 2025-2026.<sup>2</sup> See Exh. 3. The Commission has already held that a project that

---

<sup>1</sup> For brevity, this brief will generally use the term “add” to convey bringing new generation into service.

<sup>2</sup> Sierra Club’s discussion focuses on the 20% reserve margin, as opposed to the generation-only reserve margin, and the figures presented in the top half of Exhibit 3. Still, the reliability analysis is not materially

would create such reserve margins is not needed for reliability. See Order No. PSC-02-1743-FOF-E at 6 (2002) (holding that a project which would increase reserve margins from 19.92% to 24.1% for one year is not needed for reliability). Thus, just as the Commission held in that case, here “electric system reliability would not be harmed by deferring the in-service date . . . to more closely meet FPL’s projected load growth.” Order No. PSC-02-1743-FOF-EI at 6 (2002).

Moreover, exceeding FPL’s 20% reserve margin criterion provides little to no reliability benefit. It is undisputed that, all else being equal, additional generation yields diminishing reliability benefits. Sierra Club’s expert, Dr. Hausman, explains that the likelihood of additional capacity beyond FPL’s 20% reserve margin actually serving a reliability benefit is vanishingly small. T. 290:8-291:1 (Hausman); T. 371:1-17 (Hausman). Dr. Hausman’s conclusion is corroborated by Mr. Sanchez, FPL’s director of system operations, who is unable to identify a single instance where increased generation in a particular area would have avoided the loss of power to customers arising from a hurricane. T. 441:25-442:23 (Sanchez). Dr. Sim also recognizes the diminishing reliability benefits of increased generation. Exh. 34, 18:9-15 (Sim).

FPL’s implication that it is justified in habitually maintaining reserve margins of 26% or greater, see T. 124:4-15, 147:23-154:8 (Sim), is unsubstantiated and unjustified. Any such implication is defied by the authority on reliability in FPL’s service area, the Florida Reliability Coordinating Council (FRCC), which has consistently maintained that a 15% reserve margin is ample. See Fla. Admin Code R. 25-6.035; T. 290:8-291:1, 326:18-21 (Hausman). As the Commission is aware, the FRCC is charged with establishing and enforcing reliability standards for FPL’s bulk power system. Likewise, FPL’s excessive reserve margins far exceed the industry

---

different under the generation-only reserve margin, as Dr. Sim admitted. T. 84:21-85:2 (Sim); Exh. 34, 16:25-17:14 (Sim) (stating that the generation-only reserve margin is a minor player in this docket). Furthermore, Dr. Hausman has advised the Commission why the generation-only reserve margin is inappropriate. T. 289:16-19 (Hausman) (stating that the generation-only reserve margin is inefficient because it “arbitrarily discounts the reliability attributes of demand-side resources, thereby skewing FPL’s analysis toward additional supply-side resources even when those resources may provide little to no incremental reliability benefit”).

standard for reliability—sufficient reserves to achieve a loss of load probability of one day in ten years. T. 290:8-291:1 (Hausman). Sierra Club does not ask the Commission to change FPL’s 20% reserve margin in this docket. Cf. Order No. PSC-16-0032-FOF-EI at 11-12 (2016) (declining to change FPL’s 20% reserve margin in need determination docket). Rather, Sierra Club emphasizes FPL’s admitted practice under that reserve margin—consistent excess above 20% and habitual excess of 26% or greater. T. 124:4-15, 147:23-154:8 (Sim). This result is predictable, as explained by Dr. Hausman, T. 290:8-291:1 (Hausman) (explaining that FPL’s 20% reserve margin misleads FPL to over-procure capacity), but unacceptable because it wastes FPL’s customers’ money. See T. 370:15-372:25 (Hausman) (explaining that reserve margins greater than 20% add only marginal reliability benefits and are outweighed by the associated cost).

Moreover, FPL presents no empirical support for the supposed reliability benefits of the reserve margin excesses it seeks beyond the 20% margin. Dr. Sim offers no support other than supposed “common sense” that “the higher the reserve margin, the greater the reliability.” T. 123:25-124:2 (Sim). This quip is no substitute for empirical support FPL would need to overcome this Commission’s established precedent that 20% is ample. Nor, for that matter, given the diminishing reliability benefits of increased generation capacity, Exh. 34, 14:9-15 (Sim), has Dr. Sim offered any meaningful approach to how the Commission should now all of a sudden measure those purported benefits. For that matter, neither FPL nor Dr. Sim has even sought to analyze how diminishing reliability benefits from increased generation apply to FPL’s system. T. 124:8-9 (Sim).

Therefore, FPL has failed to meet its burden to show that DBEC is needed to meet projected reserve margin shortfalls.

B. The projected imbalance between generation and load in Southeast Florida in 2025 or later does not support a need for DBEC.

FPL would add DBEC at least three years before any projected imbalance between load and generation in Southeast Florida. T. 85:15-20 (Sim) (“[T]he Southeastern Florida region is projected to become imbalanced as early as 2025.”). FPL offers no convincing reason to add DBEC in 2022—and ask Floridians to pay \$888 million for construction alone—to meet a potential reliability issue that in FPL’s own judgment may occur eight or more years from now. See Order No. 25808 at 7 (1992).

FPL failed to adduce critical evidence associated with the projected imbalance issue. FPL admits that the imbalance could occur later than 2025, Exh. 36 (FPL’s Response to Sierra Club’s First Set of Interrogatories No. 16), but never analyzed that likelihood or assigned a probability to that occurrence. Exh. 34, 19:18-20:10 (Sim). Commission precedent holds that a project is not needed where uncertainty casts doubt on when and whether a project would benefit customers. See Order No. PSC-07-0557-FOF-E1 at 4 (2007); Order No. PSC-92-1355-FOF-EQ at 14 (1992). In addition, neither FPL’s petition nor its witnesses’ testimony identifies an amount of generation or transmission that is actually needed to resolve the projected imbalance. FPL did not even proffer a witness who oversaw or reviewed the analyses on imbalance. See T. 109:7-18, 110:11-14 (Sim). FPL thus failed to carry its burden to prove a potential future imbalance issue, much less a need for DBEC to resolve that issue.

C. A decision so far in advance of any projected reliability issue is likely to be wrong.

FPL over-forecasted load during most of the last decade. See Order No. PSC-16-0032-FOF-EI at 8 (over-forecasts expressed as positive numbers); Exh. 51 (FPL’s Responses to Staff’s Second Set of Interrogatories Nos. 44 and 45) (over-forecasts expressed as negative numbers). Moreover, the further into the future that FPL forecasts, the worse are its forecasts. T. 216:8-10 (Feldman) (“[T]he further out you go in time, the more uncertainty there is, and in general, the

bigger the forecast variance is.”). For instance, for the years 2005 to 2014, FPL’s average error rate grows as FPL forecasts an additional year into the future. Order No. PSC-16-0032-FOF-EI at 8 (stating absolute average error rates). Even FPL’s recent forecasts made three years into the future are larger, and in one case “much larger,” than forecasts made closer into the future. T. 210:8-211:10 (Feldman); Exh. 51 (FPL’s Responses to Staff’s Second Set of Interrogatories Nos. 44 and 45). Thus, while FPL claims that sometimes it over-forecasts and other times it under-forecasts, the record is clear: FPL routinely over-forecasts, and its error rate when forecasting further into the future is larger than its error rate when forecasting closer into the future. See T. 215:17-22 (Feldman).

Therefore, the decision FPL seeks in this docket—more than five years before any projected capacity shortfall—raises a substantial risk of over-forecasting. Unless a decision must be made more than five years in advance, it is not prudent or reasonable to rush to decide now to build a 1,163 MW plant with no impending reliability shortfall, when FPL’s actual reliability shortfalls more than five years away may well be less than FPL’s current projections. See Order No. PSC-97-0659-FOF-EM at 18-19 (1997) (finding a decision to wait to execute a fuel supply contract “reasonable and prudent due to the many changes in the type and timing of the proposed unit which could occur [before] construction of the proposed unit begins“); Order No. PSC-92-1355-FOF-EQ at 14 (1992) (declining to find need based on uncertain fuel prices and urging FPL to build a flexible, lower capital cost unit to reduce risk). And the evidence in this case does not support a rushed decision now—FPL can retire the Lauderdale units in 2018, wait for its forecast accuracy to improve, and decide on additional capacity in a couple years.

Incredibly, however, FPL does not consider reduced load growth a risk worth considering in choosing a generation resource. T. 135:7-14 (Sim). Indeed, FPL did not even quantify the risk that its load forecasts could change. T. 135:15-21 (Sim). FPL baldly offers that, since Florida is a “growth state,” it will eventually grow into unneeded capacity. T. 135:7-21 (Sim). The

Commission, however, should recognize that FPL’s history of over-forecasting is yet another reason that FPL fails to establish today that its projected reserve margin shortfall of 54 MW in 2024, along with other alleged reliability issues, support a need for DBEC in 2022.

D. FPL ignored many alternatives with the potential to meet projected reliability issues and exceed the reliability benefits of DBEC.

FPL ignored, and hence failed to undertake a meaningful analysis of, many realistic alternatives that could potentially meet its projected reliability needs. FPL’s meager and artificially constrained consideration of alternatives is more fully addressed below regarding cost-effectiveness. See infra § III.B. A brief discussion is included here to emphasize the plethora of alternatives that FPL could have examined, yet failed to consider, to address projected reliability issues.

FPL ignored many plans that use renewable resources or which would delay DBEC. First, FPL never examined a plan that, after 2022, adds solar PV<sup>3</sup> or storage outside Southeast Florida—where FPL already owns enough land to site roughly 3.5 GW of solar PV resources—and imports that power into Southeast Florida via FPL’s new CSQ line, other existing transmission lines, and, if necessary, upgraded transmission lines. See Petition at ¶¶ 27-28 (stating that FPL’s 2016 and 2017 analyses examined solar and storage located inside Southeast Florida); See Exh. 50 (FPL’s Response to Staff’s First Set of Interrogatories No. 16) (stating, in response to interrogatory on transmission alternatives considered by FPL in 2017, that FPL considered transmission alternatives in 2016, decided to add the CSQ line, and took the CSQ line as a given in the subsequent analyses); Exh. 34, 24:10-15 (Sim) (acknowledging FPL’s vast ownership rights to land). Second, FPL failed to examine a plan to site solar PV resources anywhere in Florida, upgrade transmission lines if necessary, and use the existing Lauderdale units to meet capacity or balance shortfalls. See Exh. 4 (“The Three Resource Plans Analyzed in

---

<sup>3</sup> The brief will refer to solar photovoltaic (PV) resources as “solar,” and energy storage resources as “storage.”

2017”) (revealing that FPL’s only plan with solar would retire the Lauderdale units); T. 328 (Hausman). Third, FPL did not investigate using additional demand-side management— beyond its existing plans—to mitigate or forestall its proposal. Petition at ¶ 30. Finally, FPL paid insufficient consideration to a number of plans only because its false “four year window” constraint—further discussed below—made those plans appear less economic. See Petition at ¶ 28; T. T. 92:17-93:12 (Sim); T. 575:15-21 (Sim). Such plans include: (i) siting solar or storage in Southeast Florida later than 2022 and (ii) siting other generation resources in Southeast Florida later than 2022.

The plans discussed above not only have promise to address the reliability issues raised in FPL’s Petition, but in some cases provide promise of greater reliability benefits than DBEC. According to FPL, relative to DBEC, a plan that adds solar and storage in Southeast Florida later than 2022 can increase transmission capability into Southeast Florida by more than 11%. See Exh. 52 (Attachment 1 to FPL’s Response to Staff’s Third Set of Interrogatories No. 62). That additional transmission capability would forestall future load-generation imbalances in Southeast Florida. Thus, although FPL argues in rebuttal that DBEC adds to the import capability into Southeast Florida, T. 410:4-12, a plan that adds solar and storage later than 2022 does so 11% better. Likewise, DBEC would forego reliability improvements from diversification of generation resource type, as Dr. Sim confirmed. Order No. PSC-14-0617-FOF-EI at 27 (“As Witness Sim stated, ‘diversification also improves system reliability.’”); T. 141:7-22 (Sim). In addition, alternatives that can meet reliability shortfalls incrementally as they arise offer multiple benefits. An incremental approach would allow FPL to better tailor its generation additions to updated load projections and FPL’s expected incremental load growth. T. 204:15-20 (Feldman) (expecting load to grow a little over 100 MW per year between now and 2030). This, in turn, would benefit customers by positioning FPL to take advantage of improvements in the performance and cost of generation resources in the future. T. 293:16-18 (Hausman). And, of

course, the incremental approach offers the potential to defer, reduce, or even avoid expensive supply-side generation additions like DBEC. T. 293:9-16 (Hausman).

- E. FPL imposes a “four year window” assumption that is arbitrary, inconsistent, and unreasonable, and belatedly offers testimony in purported support that is arbitrary, inconsistent, unreasonable, and bereft of documentation.

FPL considered delaying the in-service date of DBEC for one or two years beyond 2022, but only if the retirement date of the Lauderdale units is also delayed beyond 2018 by the same number of years. See, e.g., T. 92:17- 93:6 (Sim). As such, the delay scenarios considered by FPL maintain a “four year window” between adding DBEC and retiring the Lauderdale units. Accordingly, FPL’s “Plan 4” would delay the in-service date of DBEC to 2023 and the retirement of Lauderdale units to 2019, while FPL’s “Plan 5” would delay DBEC to 2024 and the retirement of Lauderdale units to 2020. Exh. 59 (FPL’s Responses to Sierra Club’s First Request for Production of Documents No. 18, spreadsheet model entitled “2017 FCSS 4- DBEC - Plan 4 - Mod2023” and spreadsheet model entitled “2017 FCSS 5- DBEC - Plan 5 - Mod2024”). According to FPL and Dr. Sim, this “four year window” assumption is based on guidance from Mr. Hector Sanchez, FPL’s director of system operations. T. 155:17-156:3 (Sim); T. 553:14-22 (Sim); Exh. 57 (FPL’s Response to Staff’s Third Set of Interrogatories No. 57); see also T. 465:3-466:6 (Sanchez) (stating that guidance affected the way that FPL’s resource plans were drawn up and analyzed). Mr. Sanchez, in rebuttal testimony, unveils an “area reliability margin” that purports to support that guidance. See T. 405:1-4 (Sanchez).

1. *The four year window constraint and purported supporting testimony are arbitrary, inconsistent, unreasonable, and bereft of documentary support.*

The origin of the four year window is undisputed: it is the amount of time that FPL thinks it needs to add DBEC in 2022 after retiring the Lauderdale units in 2018. T. 174:7-12 (Sim).

The four year window is arbitrary because, as explained by Dr. Sim, the only reason why FPL’s system operators are okay with four years, but not a longer period, is that four years is the window in which FPL believes it can achieve its preferred project—retire the Lauderdale units



and add DBEC. See Exh. 34, 22:1-22 (Sim). And while FPL's system operators have accepted the four year window, they have performed no independent analysis to reach the conclusion that only a four year window or less is necessary for operational purposes. See T. 464:7-10 (Sanchez) (stating that FPL has neither calculated nor presented to the Commission what it believes the minimum area reliability margin should be); Exh. 34, 23:1-5 (Sim) (stating unawareness of any documented analytical basis for system operators' position). In other words, the system operators merely acceded to FPL's preferred project. Thus, if FPL's preferred project took longer to achieve, there is no reason to believe that the system operators would not be okay with that too. Precisely because the operators performed no independent analysis, when Dr. Sim advises the Commission to ignore cheaper scenarios that do not maintain a four year window, all he can point to is an undocumented phone call he had with Mr. Sanchez and unsubstantiated statements that those scenarios are "unrealistic." Therefore, the Commission should reject FPL's invitation to rule out other cheaper scenarios based on the arbitrary, unproven four year window criterion. See generally Fla. Std. Jury Instr. (Civ.) 601.2(b) (explaining that witness testimony may be rejected based on the reasons given by the witness for the opinion expressed).

Additionally, Mr. Sanchez's testimony is arbitrary because, according to Mr. Sanchez, the only acceptable plan is the one that uses the only resource he considered. The only resource that Mr. Sanchez considered was DBEC, because that is the only resource FPL wanted him to consider. T. 420:10-421:11. Mr. Sanchez did not consider solar or energy efficiency. T. 420:1-9. Thus, Mr. Sanchez did not consider FPL's Plan 3, which uses solar, or the many reasonable alternatives discussed in Dr. Hausman's testimony and this brief. See T. 294:13-300:26 (Hausman); T. 308:17-310:9 (Hausman). As a result, when Mr. Sanchez testifies that adding DBEC in 2022 is the least risky plan, T. 479:21-481:2, that testimony is not even informed by the meager alternatives presented in FPL's petition, much less the scope of alternatives that a responsible utility would consider. Consequently, the weight of Mr. Sanchez's testimony suffers.

See generally Fla. Std. Jury Instr. (Civ.) 601.2(a) (the weight given to witness testimony may diminish based on “the means and opportunity the witness had to know the facts about which the witness testified . . . [and] the reasonableness of the testimony of the witness . . .”).

Further, the four year window is arbitrary and unreasonable because, according to Mr. Sanchez, a six year window would present little to no additional risk. Mr. Sanchez considered two scenarios: (i) retire Lauderdale units in 2020 and add DBEC in 2024 (i.e., a scenario precisely matching FPL’s Plan 5 and its four year window); and (ii) retire Lauderdale units in 2018 and add DBEC in 2024 (i.e., a scenario with a six year window). T. 488:8-491:10 (Sanchez). For the years 2021-2023, Mr. Sanchez conceded that the risks between the two scenarios are identical. T. 488:8-489:12 (Sanchez); T. 489:23-490:4 (Sanchez). Meanwhile, Mr. Sanchez considers the risk in years 2018-2020 to be “lower risk.” T. 491:1-10 (Sanchez). Thus, Mr. Sanchez finds hardly any distinction between FPL’s Plan 5 and a six year window. This identity between the two scenarios confirms that a six year window is realistic. FPL has repeatedly suggested that its Plan 5 is a realistic scenario repudiated only because it allegedly costs more than adding DBEC in 2022, see Petition at ¶ 28; T. 92:17-93:12 (Sim); T. 575:15-21 (Sim), and Mr. Sanchez offers no persuasive reason why a six year window is not similarly realistic. Meanwhile, as Dr. Hausman shows, a six year window is cheaper than adding DBEC in 2022. See infra III.A. Therefore, Mr. Sanchez provides no convincing support to the four year window. See generally Fla. Std. Jury Instr. (Civ.) 601.2(b) (explaining that witness testimony may be rejected based on the reasons given by the witness for the opinion expressed).

FPL’s witnesses are also inconsistent about the four year window. Mr. Sanchez purports to justify the four year window based on a Southeast Florida “area reliability margin.” T. 405:1-4 (Sanchez). According to Mr. Sanchez, an “area reliability margin” is calculated by adding the projected generation in an area and the projected transmission import capability into the area, then subtracting projected load-serving obligations in the area. T. 443:11-444:18. But his

ostensible justification is inconsistent for at least two reasons. First, Mr. Sanchez testified that a sufficient area reliability margin in Southeast Florida is somewhere in the range, or above, 20% and 25% of FPL's load-serving obligations in Southeast Florida, since that would be sufficient to cover the loss of FPL's two largest units. T. 458:23-461:4 (Sanchez). But the area reliability margin in Southeast Florida under "Plan 2"—FPL's proposed plan—would be lower than 20%, and insufficient to cover the loss of FPL's two largest units, during 2018, 2019, 2020, and 2021. See Exh. 61 ("Area Reliability Margin Table"); Exh. 53 (Attachment to FPL's Response to Staff's Fourth Set of Interrogatories No. 76) (identifying FPL's forecasted load obligations). By contrast, under FPL's "Plan 1" and "Plan 3," the area reliability margin is greater than 20% during those same years (and thereafter). See Exhs. 53, 61. If Mr. Sanchez's guidance actually constrained FPL in the way that FPL suggests, then FPL would have to consider its proposed plan to be "unrealistic." See generally Exh. 52 (FPL's Response to Staff's Third Set of Interrogatories No. 57) (stating that plans which are contrary to Mr. Sanchez's guidance are "unrealistic"). Second, Mr. Sanchez claims that, without DBEC, the area reliability margin in Southeast Florida during the years 2022-2024 is too low. T. 406:17- 407:20 (Sanchez); T. 454:3-8 (Sanchez). However, those area reliability margins are larger than the actual and projected 2017 area reliability margins which Mr. Sanchez oversaw as director of system operations and seems to consider "adequate" and "not unacceptable." See T. 453:12-455:24 (Sanchez).

In addition, FPL, Dr. Sim, and Mr. Sanchez gave inconsistent testimony. FPL and Dr. Sim have stated that Plan 4 and Plan 5 are based on Mr. Sanchez's guidance. T. 155:17-156:3 (Sim); T. 553:12-22 (Sim); Exh. 34, 25:24-26:11; Exh. 57 (FPL's Response to Staff's Third Set of Interrogatories No. 57). However, Mr. Sanchez revealed that he "[does not] think Plan 4 and 5 are based on [his] guidance" and that he told Dr. Sim that he was "not in favor of" delaying DBEC. T. 471:16-21 (Sanchez); T. 473:19-24 (Sanchez). Mr. Sanchez claims that he is not even aware if his input on FPL's Plan 4 and Plan 5 occurred last month, T. 472:6-22 ("I don't think it

was in December. I think it may have been before that.”), even though FPL filed its petition on October 20, 2017.

Those apparent inconsistencies between FPL, Dr. Sim, and Mr. Sanchez are reinforced by their substantive positions. FPL and Dr. Sim repeatedly suggested during this proceeding that FPL’s Plan 4 and Plan 5 are realistic plans that FPL rejected because they allegedly cost more than FPL’s preferred plan. See Petition at ¶ 28; T. 92:17-93:12 (Sim); T. 575:15-21 (Sim). Yet Mr. Sanchez testified that FPL’s Plan 5 includes unacceptable risk in 2022 and 2023, T. 473:15-18 (Sanchez), and both Plan 4 and Plan 5 result in area reliability margins that Mr. Sanchez considers too low. T. 406:17-407:20 (Sanchez); T. 454:3-8 (Sanchez). The inconsistencies within Mr. Sanchez’s own testimony, along with the inconsistencies among FPL, Dr. Sim, and Mr. Sanchez, undermine the credibility and persuasiveness of their various positions on the four year window. See generally Fla. Std. Jury Instr. (Crim.) 3.9 (explaining that the finder of fact should consider inconsistent testimony).

Finally, there is practically no documentation to support the four year window, the area reliability margin, or Mr. Sanchez’s guidance. Mr. Sanchez neither consulted documents nor generated documents when he offered his guidance to Dr. Sim. T. 466:10-16 (Sanchez). The guidance occurred in one or more phone calls, of which there is no record. T. 465:3-466:16 (Sanchez). Mr. Sanchez has no documentation of his use of the term “area reliability margin,” even though he claims to have used the term during the last ten years. T. 452:15-453:11. Mr. Sanchez does not even know if that use was documented. T. 461:5-11; 462:6-464:6. FPL has no records of its actual area reliability margins before 2016, so an interrogatory from Commission Staff went mostly unanswered. T. 461:5-464:6 (Sim). When FPL filed its petition, it had no documented analysis for the four year window. T. 116:17-21 (Sim). Until at least the end of November 2017, Dr. Sim was unaware of any documented analytical basis for the four year window. T. 117:10-13 (Sim). For an assumption that FPL trumpets as pivotal to its reliability and

resource planning, and guidance which “should never be ignored,” T. 552:21-22 (Sim), the lack of documentation is confounding. Were the area reliability margin and four year window assumption as pivotal as FPL claims, a responsible utility would have some record so that it can manage and gauge the supposed associated risks. Yet the only documentation of the guidance and area reliability margin in the record are: (i) Mr. Sanchez’s arbitrary, inconsistent, and unreasonable testimony, offered to rebut Dr. Hausman’s testimony submitted December 8, 2017; and (ii) Mr. Sanchez’s workpaper that was prepared by someone not under Mr. Sanchez’s direct supervision, with data provided by FPL’s attorneys that Mr. Sanchez hoped could be clarified by Dr. Sim, and which Mr. Sanchez first saw in late November or early December 2017, well after FPL performed its resource planning analysis and filed its petition. T. 427:10-429:9 (Sanchez); T. 435:8-18 (Sanchez). The paucity of documentation from FPL further diminishes any weight that can be afforded its witnesses’ testimony. See Sunshine Utils. v. Fla. Pub. Serv. Comm’n, 624 So. 2d 306, 309 (Fla. 1st DCA 1993) (explaining, and upholding, Commission finding that utility did not satisfy its burden of proof as a “result of its own inadequate record keeping”).

In sum, contrary to Commission precedent, FPL impermissibly asks the Commission to approve a petition for determination of need based on an arbitrary, inconsistent, and unreasonable assumption, offering testimony in purported support that is arbitrary, inconsistent, unreasonable, and bereft of documentation. See Order No. PSC-07-0557-FOF-E1 at 3.

*2. Mr. Sanchez’s testimony is untimely.*

A petition for determination of need must include “[a] statement of the specific conditions, contingencies or other factors which indicate a need for the proposed electrical power plant including the general time within which the generating units will be needed.” Fla. Admin. Code R. 25-22.081(1)(c).

FPL’s petition failed to comply with this mandate. Not until FPL filed the rebuttal testimony of Mr. Sanchez did it introduce “operational considerations” or “guidance regarding

the importance of constructing [FPL's proposed project] with the present proposed schedule." T. 402:2-12 (Sanchez). Mr. Sanchez's rebuttal testimony also reveals an "area reliability margin" ostensibly required by "operational realities." T. 402:19-20 (Sanchez).

None of those factors are discussed in FPL's petition as required by Rule 25-22.081(1)(c). The closest FPL got on October 20, 2017, to factors disclosed by Mr. Sanchez is the following solitary sentence in Dr. Sim's testimony: "In both [delay] scenarios, the retirement of Lauderdale Units 4 & 5 was also assumed to be delayed by either one or two years, respectively, to maintain the same roughly 4-year period in which a major Southeastern Florida generation component would be missing as is assumed in Plan 2." T. 92:22-93:3 (Sim). Yet that sentence, like FPL's petition, has no discussion of the operational considerations, system operator guidance, or area reliability margin broached in Mr. Sanchez's rebuttal testimony. In fact, Dr. Sim's lone sentence contradicts, or is at least in tension with, the importance alleged by Mr. Sanchez of constructing DBEC on the schedule proposed in FPL's petition. This is because Dr. Sim, like FPL's petition, suggests (wrongly) that delaying DBEC is inadvisable because of costs, not the factors raised by Mr. Sanchez.

FPL's failure to comply with Rule 25-22.081(1)(c) is sufficient grounds to deny FPL's petition. FPL's noncompliance flouts the policy for that rule: to enable the Commission to fulfill its statutory mandate and to ensure that the petitioner, the Commission, and interested parties are on common ground to weigh the merits (or lack thereof) of a petition for determination of need.

### **III. DBEC Is Not the Most Cost-Effective Alternative.**

The evidence is undisputed: simply delaying DBEC by a couple of years is tens of millions of dollars cheaper than adding it in 2022. FPL itself suggests that other delay scenarios, not examined by FPL, are also cheaper than adding DBEC in 2022. Additionally, FPL ignored or erroneously rejected many other alternatives that also may be cheaper than DBEC, but the Commission would not know because FPL refused to examine them and provide the

Commission with the results. These include power purchase options for renewables, adding solar outside of Southeast Florida, and adding large-scale solar greater than 74.5 MW. In addition, the meager alternatives to Plan 2 that FPL did examine—the two delay scenarios and a renewable option bloated with unnecessary expenses—were artificially constrained by inefficient, cost-inflating assumptions. Accordingly, FPL has not met its burden to show that its proposal is the most cost-effective alternative. See Order No. PSC-07-0557-FOF-EI at 3-4 (2007) (denying petition for need determination for project that was not the most economic in some scenarios presented by FPL to Commission); Order No. PSC-92-1355-FOF-EQ at 17 (1992) (denying petition for need determination upon consideration of alternatives not examined by FPL). See generally Order No. PSC-11-0547-FOF-EI at 82 (emphasizing duty to examine “all available options” for a “longterm, complex project”).

A. Delaying DBEC by two years is proven to be cheaper than FPL’s proposed project.

A delay of DBEC until 2024 and retirement of the Lauderdale units in 2018 is more cost-effective than the project for which FPL seeks a determination of need. See T. 156:17-21 (Sim); T. 314:1-317:11 (Hausman); T.327:2-19 (Hausman). This is because—as Dr. Hausman demonstrated based on FPL’s own calculations—delaying DBEC by two years (from 2022 to 2024) results in greater savings than costs. Id.; see also T. 374:19-377:21 (Hausman).<sup>4</sup> Faced with Dr. Hausman’s demonstration, FPL admitted that delaying DBEC to 2024 is cheaper than its proposed project. T. 156:17-21; Exh. 52 (Attachment 1 to FPL’s Response to Staff’s Third Set of Interrogatories No. 58).

In rebuttal, the most that FPL musters is the arbitrary, inconsistently applied, and unreasonable four year window, and associated untimely, arbitrary, inconsistent, and

---

<sup>4</sup> Dr. Hausman’s conclusion was necessarily based on “numerous spreadsheets” produced by FPL in discovery, because FPL’s petition’s only discussion of delay obscured these savings. See Petition at ¶ 28 (“FPL’s analyses also showed that a delay from the planned 2022 in-service date by one year results in a projected \$12 million CPVRR increase and a \$38 million CPVRR increase for a two year delay.”).

unreasonable testimony that is bereft of documentary support discussed above. See supra § II.E. But FPL's defense fails because a petitioner's unreasonable assumptions are not given credence in determinations of need. See Order No. PSC-07-0557-FOF-E1 at 3. Therefore, FPL has failed to meet its burden to show that its proposal is the most cost-effective alternative.

Further, FPL's speculation about selling excess capacity, pondered for the first time during the Commission hearing, shows that FPL's proposal is not the most cost-effective alternative. During the Commission hearing, Commissioner Clark asked FPL's witnesses if, by adding DBEC in 2022, FPL would be able to sell the excess capacity on its system through wholesale sales. T. 169:20-170:7 (Sim); T. 275:25-277:20 (Stubblefield); T. 615:20-616:15 (Sim). FPL's witnesses' speculative responses do not support FPL's petition or the cost-effectiveness of its proposal. First, the record contains no evidence on the potential demand for, revenues from, or feasibility of, such sales. FPL's own witnesses confirmed that assessing the potential to sell excess capacity "would require an evaluation to determine, again, the size of the sale, the term of the sale," as well as the availability of fuel transportation capacity, T. 276:15-25 (Stubblefield), and the existence of a willing buyer. T. 615:8-14 (Sim). In addition, it would be inappropriate to speculatively conclude that wholesale contracts imply an advantage of DBEC over renewable alternatives, since solar and demand-side management are zero-fuel-cost resources that require no fuel transportation capacity, and thus could provide the same or better potential benefit as DBEC. Third, wholesale contracts to sell power would reduce FPL's system-wide reserve margin and, potentially, its load-generation balance in Southeast Florida. See Order No. PSC-14-0557-FOF-EI at 8 (2014) (stating that wholesale contracts to sell power are added to a utility's load-serving obligations). Thus, any such sales would mean that the plans proffered by FPL in its petition are not accurately tailored to FPL's projected reliability issues. Accordingly, any conclusion by FPL or the Commission regarding such wholesale sales would be speculative without further evidentiary development. Hence, rather than supporting FPL's contention that its



proposal is a cost-effective alternative, this inquiry further exposes the deficiencies in FPL's analysis of alternatives.

B. FPL failed to examine many other reasonable alternatives that could be cheaper than its proposed project.

Instead of conducting a meaningful analysis of potentially cheaper alternatives, FPL reviewed only a limited, deficient, scope of alternative plans. In 2017, FPL only considered five plans. Three of them add DBEC, one continues the status quo, and another adds solar and storage in Southeast Florida. Petition at ¶ 28. In 2016, according to FPL, 33 plans were considered, T. 125:11-14 (Sim), but FPL "did not consider any of the 2016 plans in [its] 2017 analysis because [FPL] could not carry them forward. Too many things -- load forecasts, available generation, et cetera, had all changed. . . . So, we had to . . . create new resource plans." T. 609:7-19 (Sim). Based on Dr. Sim's statement that the plans examined in FPL's 2016 analysis could not be carried forward, it is not apparent why the Commission should consider the 2016 plans as alternatives FPL considered for purposes of meeting FPL's statutory and regulatory burden. Yet even including those plans leaves FPL's examination deficient.

1. *Delaying DBEC by one year, or by more than two years, could be even cheaper than both FPL's proposed project and a two year delay, but FPL never examined these alternatives.*

Delaying DBEC by one year to 2023 and retiring the Lauderdale units in 2018 could save customers money, as Dr. Hausman attested. See generally T. 314:12-315:2 (Hausman); T. 327:2-9 (Hausman); 375:2-376:20 (Hausman). Indeed, Dr. Sim "suspect[s] that it would." T. 157:6-15 (Sim). Yet FPL never examined that alternative. See id. Therefore, not only has FPL failed to meet its burden to show that its proposed project is the most cost-effective alternative, but there is no basis in the record to conclude that any alternative is most cost-effective.

FPL also failed to examine any alternative in which DBEC is delayed beyond 2024. See T. 114:11-14 (Sim); T. 156:4-10 (Sim). Yet the evidence suggests that such delays could be cheaper than both FPL's proposed project and a two year delay of DBEC. Dr. Sim testified that,

as time goes by, the percentage increase in the nominal capital cost of DBEC is “more than overcome” by the applicable discount rate. T. 164:16-24 (Sim). In other words, the capital costs of DBEC get cheaper over time. See id. Meanwhile, to meet reliability issues as they arise, FPL can incrementally add solar, storage, or demand-side management. See T. 328:15-23 (Hausman). For example, FPL could add 54 MW of solar anywhere on FPL’s system by 2024, thereby addressing all of the reliability issues raised in FPL’s petition for 2024 and allowing FPL to delay DBEC by at least one more year. FPL never examined that alternative. T. 125:15-18 (Sim). But it should have, as it is undisputed that the already competitive price of solar continues to fall. See T. 23:22-24:14 (M. Clark); T.310:10-313:4 (Hausman); Exh. 59 (FPL’s Response to Sierra Club’s First Request for Production of Documents No. 18, “Summary - Solar Rev Req - Plan 3”). What’s more, FPL could wait until 2021 or 2022 to begin adding that solar—when FPL’s load forecast for 2024 is likely to be more accurate than it is today, see supra § II.C—because FPL can put solar into service a little more than one year from beginning construction. Order No. PSC-2018-0028-FOF-EI at 6-7 (2018) (stating that FPL will put solar into service 14-16 months after beginning construction). The testimony of the representative of solar developers in Florida, emphasizing their interest in entering solar PPAs with FPL, discussed in greater depth below (see infra section III.B.2), further evidences the availability of solar PPAs to meet incremental needs, and that it was incumbent upon FPL to investigate that alternative.

FPL’s admitted ability to save money by delaying DBEC by one year or by more than two years, along with its failure to examine any such plan, means that FPL has failed to meet its burden to show that its proposal is the most cost-effective alternative. Further, because these plans have not been examined, there is no basis in the record to conclude that any alternative is the most cost-effective alternative.

2. *Power purchase options could be even cheaper than both FPL's proposed project and a two year delay, but FPL ignored these alternatives.*

Power purchase agreements, or PPAs, can be significantly cheaper than projects self-built by FPL. This is because the costs of PPAs are generally recovered through FPL's "fuel and purchased power clause," where FPL does not earn a rate of return. See Citizens v. Graham, 191 So. 3d 897, 902 (Fla. 2016). By contrast, FPL expects to earn a generous 10.55% return on the equity invested in DBEC. See Exh. 59 ("Cost of Capital - 2017 WACC summary").

The record—even without the request for proposals (RFP) that FPL bypassed, see Order No. PSC-2017-0287-PAA-EI (2017)—includes ample evidence that PPAs could be more cost-effective than FPL's proposed project. The Commission can consider this evidence. Order No. PSC-92-1355-FOF-EQ at 17 (1992) (Where a fair mechanism such as bidding is not employed by the utility, this Commission may consider other proposed projects in determining cost-effectiveness, whether or not they were previously presented to FPL"). For example, in Georgia, this year's winning solar procurement PPAs were signed at an average price of \$36 per megawatt hour, and more recently, in Colorado, Xcel received median RFP bids of \$36 per megawatt hour for solar PV with energy storage. T. 215: 16-21 (M. Clark). Closer to home, JEA, another Florida utility, recently found that "the price of utility-scale solar PPAs has declined from \$75/MWh on average in 2016 to \$32.50/MWh today." Exh. 23, 2. Unlike FPL, JEA was able to learn of these prices because it issued an RFP. Id. Also, FPL's affiliate NextEra Energy Resources recently signed a PPA that is cost competitive with or superior to new gas-fired resources on a levelized cost basis. T. 297:9-17 (Hausman).

However, FPL failed to investigate and determine whether PPAs are a cost-effective alternative to its proposed project. For example, FPL never solicited a PPA for the distributed solar resources included in its "Plan 3." T. 130:11-23 (Sim). Moreover, FPL successfully bypassed its obligation to issue a request for proposals, ordinarily required by Commission rules.

More broadly, FPL failed to adequately investigate market conditions for purposes of this docket. While FPL contends that the only PPA options of any type available to it since January 1, 2012, are three biomass facility offers, see Exh. 71, Ms. Clark of the Solar Energy Industries Association testified that she represents 15 to 17 companies that are very interested in working in Florida but are not given an opportunity to sign a PPA. T. 27:3-20 (M. Clark). Ms. Clark further explained that “[f]or Florida specifically, my member companies have supplied me with an estimated solar only 25-year PPA range of \$31 to \$34 per megawatt hour.” T. 24:22-24 (M. Clark). Order No. PSC-92-1355-FOF-EQ at 17 (1992) (“Competing providers who believe that their project is more cost-effective may participate in the need hearing, and may attempt to demonstrate that the applicant for need cannot provide the utility with power at the lowest cost.”). During the hearing, Commissioner Brown asked Dr. Sim about FPL’s ability to evaluate solar PPAs, T. 157:25-158:8 (Sim), and while Dr. Sim spoke at length in response, he was not able to confirm or deny the economics of Ms. Clark’s demonstration. T. 159:21-160:23 (Sim).

Dr. Sim’s inability to respond to Ms. Clark is especially noteworthy in light of Ms. Clark’s request that the Commission “issue a formal request for information for utility scaled solar and utility scaled solar plus storage projects to fully realize the prices that solar developers and my members can and are willing to offer in Florida if given a fair opportunity to compete.” T. 25:21-26:2 (M. Clark). The information sought via the process Ms. Clark suggests would reveal important market information not only for FPL, but also for the public and Commission, without which meaningful, conclusive examination of alternatives in this docket is not possible. In response to the PPA options Ms. Clark identified, Dr. Sim noted that he would need more information. T. 159:21-160:23 (Brown), in effect revealing that FPL has no idea what PPA options are available to FPL. The Commission cannot grant FPL’s petition when FPL, who shoulders the burden to establish the most cost effective alternative, has failed to obtain and evaluate such relevant market information.

3. *A plan with solar resources outside Southeast Florida could be even cheaper than both FPL's proposed project and a two year delay, but FPL never examined such a plan.*

In all of the analyses conducted for this docket, FPL never examined adding solar outside of Southeast Florida as an alternative to DBEC. See Petition at ¶¶ 27-28 (stating that FPL's 2016 and 2017 analyses examined solar and storage located inside Southeast Florida). But a plan with solar outside of Southeast Florida could well be cheaper than all of the plans examined by FPL, because FPL already owns enough land to site about 3.5 GW of solar PV resources. Exh. 34, 24:10-15 (Sim). By contrast, FPL would incur land or lease costs in Southeast Florida for the solar examined in Plan 3, which it assumes are "exceedingly high" and "almost in order of magnitude higher." See Exh. 34, 4:2-6 (Sim); Exh. 59 ("Summary - Solar Rev Req - Plan 3").

FPL attempts to mislead this Commission regarding its non-examination of solar outside Southeast Florida as an alternative to DBEC. In response to a question on whether FPL "analyze[d] solar located outside of Southeast Florida as an alternative to DBEC," Dr. Sim responded in the affirmative and discussed the 2,100 MW of solar that is assumed in all of FPL's analyses. T. 129:1-130:6 (Sim). But that 2,100 MW of solar cannot be an alternative to DBEC, since it is included in FPL's DBEC plan and other plans examined in 2017. T. 129:22-24 (Sim). Rather, the 2,100 MW of solar, like FPL's existing units and the planned Okeechobee combined cycle, is part of the baseline that FPL used to examine DBEC and other alternatives. See T. 106:6-14 (Sim) (affirming that Exhibit 3 assumes inclusion of the 2,100 MW of solar); Exh. 3 ("2017 Projection of FPL's Resource Needs Utilizing FPL's Two Reserve Margin Criteria"). Thus, FPL did not examine solar outside of Southeast Florida as an alternative to DBEC.

Solar outside of Southeast Florida can also potentially address the projected reliability issues that FPL discussed in this docket. FPL's projected reserve margin shortfalls would, of course, be addressed by that solar. And the projected imbalance in Southeast Florida could potentially be addressed by the solar, since FPL's new CSQ line and other existing transmission

lines can import the power into Southeast Florida. If necessary, FPL could upgrade transmission lines to import the power. But FPL never examined transmission alternatives in 2017, so there is no way to know whether these approaches would be more cost-effective than DBEC. See Exh. 50 (FPL’s Response to Staff’s First Set of Interrogatories No. 16) (stating, in response to interrogatory on transmission alternatives considered by FPL in 2017, that FPL considered transmission alternatives in 2016, decided to add the CSQ line, and took the CSQ line as a given in the subsequent analyses). Alternatively, notwithstanding transmission, adding solar outside of Southeast Florida opens up other potential ways to address the projected imbalance in Southeast Florida—never examined by FPL—including adding incremental resources in Southeast Florida like demand-side management, solar, and storage.<sup>5</sup> T. 328:15-23 (Hausman).

FPL’s failure to examine solar outside of Southeast Florida is yet another example of its inability to meet its burden to show that DBEC is the most cost-effective alternative.

C. FPL’s Meager Alternative Plans Are Not Reasonable Alternatives; “Plan 3” is Riddled with Arbitrary Constraints that Falsely Augment the Costs of Renewable Alternatives.

The few alternatives FPL examined are not reasonable. FPL’s examination of delaying DBEC—FPL’s Plan 4 and Plan 5—is hobbled by FPL’s arbitrary, inconsistent, and unreasonable “four year window” assumption. See supra § II.E. Similarly, the only alternative to DBEC with renewables that is discussed in FPL’s Petition—FPL’s “Plan 3”—is arbitrarily and unreasonably constrained, as discussed below. Apart from those unreasonable alternatives, the only alternative to DBEC examined by FPL in 2017 is a continuation of the status quo. FPL considered other plans in 2016, but abandoned them in 2016 because it could not carry them forward. T. 609:7-19 (Sim). Once again, because FPL failed to analyze alternatives that are reasonable, it cannot meet its burden to show that its proposal is the most cost-effective alternative.

---

<sup>5</sup> FPL also never examined a plan that would add solar outside of Southeast Florida and use the Lauderdale units as capacity resources to meet peak demand in Southeast Florida. Petition at ¶¶ 27-28 (stating that FPL’s 2016 and 2017 analyses examined solar and storage located inside Southeast Florida). Further, FPL did not examine a plan that would put the existing Lauderdale units in inactive reserve. See T. 107:24-108:6.

*1. FPL's design of Plan 3 to mimic its preferred project is uneconomic, illogical, and adds spurious costs.*

FPL designed Plan 3 to match DBEC “megawatt for megawatt.” Exh. 34, 11:11-19 (Sim). Thus, divorced from any reliability needs, Plan 3 is designed to have the same size, timing, and locational characteristics of DBEC. T. 305:2-20 (Hausman). According to FPL, the purpose of this design was to make Plan 2 and Plan 3 “equal in terms, at least on paper, in regard to both system and regional reliability. . . .” so as to have a meaningful economic comparison. Exh. 34, 11:11-19 (Sim).

There is no need to match two plans “megawatt for megawatt” to have a meaningful economic comparison. FPL itself implicitly admits this. Plans 1, 4, and 5 are not “identical” to Plan 2 in regard to megawatts, annual reserve margins, or regional balance, yet FPL had no problem presenting a meaningful economic comparison between these plans and Plan 2. See T. 305:23-26 (Hausman); Exh. 34, 12:7-13 (Sim).

In reality, FPL’s “megawatt for megawatt” comparison is “an example of how a poorly-conceived plan can be unduly costly for customers.” T. 306:2-3 (Hausman). For example, Dr. Sim affirmed that the only reason that FPL added “a significant amount of storage” to Plan 3 was to mimic the characteristics of DBEC—and not to address any identified reliability need. T. 612:20-613:2 (Sim); T. 619:19-620:14 (Sim); Exh. 34, 11:11-24 (Sim). As a consequence FPL did not examine a plan in 2017 resembling one of the most economic plans examined in its 2016 analysis, which included 983 MW of solar and no storage. T. 612:20-613:2 (Sim); see also Exh. 37, 40-42 (“FPL’s 2016 Southeastern Florida Study: Results to Date”) (selecting an “all solar” resource plan as most economic of five combinations of solar and storage because “[t]he addition of batteries in 4 of these plans contributed to significantly higher net costs”).

FPL should structure its plans to meet exogenous goals, not to match FPL’s proposed DBEC plan. T. 304:13-14 (Hausman). Instead of Plan 3, FPL should devise a plan that meets its reliability needs at the lowest possible cost, including clean-energy resources such as solar,

storage, and demand-side management. T. 308:17-309:2 (Hausman). Dr. Sim recognizes the validity of this reasoning—even though he failed to adhere to it here—explaining that FPL’s integrated resource planning process “first, determine[s] our resource needs,” then “[w]e look at available resource options that could meet those resource needs . . . .” Exh. 34, 2:8-21 (Sim). FPL should also use a resource planning model in a meaningful way—unlike its approach here—to evaluate the economics of alternate resource plans. T. 309:2-7 (Hausman).

Accordingly, FPL’s design of Plan 3 to mimic its preferred project is uneconomic, illogical, and adds spurious costs. Therefore, the weight of evidence offered by FPL is insufficient to meet its burden.

2. *FPL’s Plan 3 unreasonably adds solar and storage between 2018 and 2022.*

FPL’s Plan 3 adds large amounts of solar and storage many years before FPL projects a reliability shortfall. Specifically, even though FPL does not project a reliability shortfall before 2024 or 2025, see supra §§ II.B, II.C, Plan 3 includes the following resource additions: (i) hundreds of megawatts of storage between 2018 and 2021 (100 MW in 2018, then 200 MW per year in 2019-2021); (ii) hundreds of megawatts of distributed solar between 2018 and 2022 (150 MW in 2018, 150 MW in 2019, 125 MW in 2020, 100 MW in 2021, and 75 MW in 2022); and (iii) hundreds of megawatts of large-scale solar in 2022 (433 MW). Exh. 4 (“The Three Resource Plans Analyzed in 2017”). As a consequence, Plan 3 illogically adds large quantities of these resources. T. 304:8-310:9 (Hausman).

Moreover, Plan 3 fails to take advantage of the inherent flexibility of using smaller, incremental resources to cost-effectively meet reliability requirements as they arise. FPL expects load to grow a little bit over 100 MW per year between now and 2030. T. 204:15-20 (Feldman). Thus, beginning in 2024, FPL could add solar and storage each year to address reliability issues. And FPL could decide to do so fewer than two years in advance, since FPL can add solar 14-16



months after beginning construction. See Order No. PSC-2018-0028-FOF-EI at 6-7 (2018).

Since Plan 3 does not do so, its cost is unnecessarily inflated.

Further, Plan 3 front-loads the most expensive resources—distributed solar and storage. T. 304:8-19 (Hausman); T. 309:12-20 (Hausman); see also Exh. 58 (FPL’s Response to Sierra Club’s First Set of Interrogatories No. 4) (stating that universal solar is more cost-effective than distributed solar). FPL’s own analyses confirm that distributed solar and storage are the most expensive resources in Plan 3, Exh. 59 (“Summary - Solar Rev Req - Plan 3”; “Summary - Battery Rev Req - Plan 3”; “2017 FCSS 3- DBEC - Plan 3 - Solar+Batt” worksheet "Gen"), yet FPL adds them before any other resource. Exh. 4 (“The Three Resource Plans Analyzed in 2017”). Thus, the cost of Plan 3 is unreasonably inflated.

In addition, by adding solar and storage in Plan 3 well before they are needed, FPL subverts the opportunity to take advantage of the declining costs of those resources. T. 312:1-313:2 (Hausman). FPL’s own analyses reveal its assumption that the costs of these resources are declining. Exh. 59 (“Summary - Solar Rev Req - Plan 3”; “Summary - Battery Rev Req - Plan 3”). Dr. Hausman reviewed a number of energy industry reports to confirm FPL’s assumption. T. 310:11-313:2 (Hausman). But because Plan 3 would begin adding these resources in 2018, it relinquishes the opportunity to take advantage of those declining costs.

The in-service dates for solar and storage in Plan 3 expose the unnecessary, cost-inflating assumptions FPL adopted. Unreasonable assumptions are not given credence in the Commission’s review of a petition for determination of need. As a consequence, FPL has failed to meet its burden to show that DBEC is the most cost-effective alternative.

*3. FPL unreasonably restricted consideration of large-scale solar to 74.5 MW.*

FPL’s Plan 3 includes some large-scale solar, termed “universal solar” by the utility. Petition at ¶ 27. According to FPL, “universal solar” is only solar solar that is sized at 74.5 MW and 60 MW. Exh. 34, 5:3-11 (Sim); see also T. 128:21-22 (Sim) (stating that FPL has identified,

as a company, that 74.5 MW is the right size for solar). FPL “[does not] look to go beyond 74.5 [MW].” Exh. 34, 13:11-16 (Sim). Seventy four and a half MW “is the maximum amount that [FPL] is interested in pursuing for universal solar.” Exh. 34, 14:5-16 (Sim). FPL does not look to universal solar beyond 74.5 MW because (i) “if you go to 75 megawatts or greater, you’re subject to the Florida bid rule, and you would be required to put the project out for bid,” and (ii) 74.5 MW “falls within this window . . . [in which] you’re gaining the economies of scale.” Exh. 34, 23:14-24:4 (Sim).

FPL’s 74.5 MW assumption is unreasonable. A desire to avoid Florida’s bid rule is an inappropriate consideration in a resource planning process, and suggests that FPL may not be seeking least-cost resources or sufficiently protecting customer interests in either its self-built or its market-based resource options. T. 307:8-12 (Hausman). For example, the amount of universal solar in Plan 3 is constrained by the only six sites identified by FPL that can accommodate 74.5 MW. T. 88:22-89:7 (Sim); Exh. 34, 13:2-8 (Sim). But Dr. Sim admitted that sites in Southeast Florida may be able to accommodate more than 74.5 MW, yet FPL is not interested in pursuing those sites. Exh. 34, 14:5-16 (Sim).

Additionally, FPL asserts that self-built solar of 74.5 MW is cheaper than solar of greater size procured through a bidding process. T. 128:9-15 (Sim). But neither FPL nor the Commission can test that hypothesis, because FPL “[does not] look to go beyond 74.5 [MW].” Exh. 34, 13:11-16 (Sim). FPL’s failure to examine solar beyond 74.5 MW is remarkable, since Dr. Sim implicitly admits that there can be economies of scale for solar greater than 74.5 MW. Exh. 34, 23:14-25 (Sim) (stating that 74.5 MW is within a range where solar has economies of scale). FPL also implicitly admits that there can be economies of scale for solar greater than 74.5 MW, as it operates one such facility. Petition at ¶ 9. Dr. Hausman examined Dr. Sim’s statement, finding that it “confirms that FPL may not be seeking least-cost resources. If 74.5 MW is within a window for economies of scale, FPL should examine other parts of that window too, rather

than focusing its gaze on one point that may be financially profitable for the Company, but not yield least-cost service to customers.” T. 307:16-20 (Hausman).

Therefore, FPL’s 74.5 MW assumption distorts its resource planning process. As a consequence, the 74.5 MW assumption is unreasonable. Hence, the assumption must be jettisoned. See Order No. PSC-07-0557-FOF-E1 at 3 (2007). Since the cost of Plan 3 is arbitrarily inflated by the 74.5 MW assumption, and in light of the other deficiencies set forth above, FPL has not satisfied its burden to show that DBEC is the most cost-effective alternative.

**IV. FPL failed to use reasonably available renewable energy sources, technologies, and conservation measures.**

It is undisputed that renewable energy sources, technologies, and conservation measures are available to FPL, and are in no way limited to the amounts identified in FPL’s 2017 Ten-Year Site Plan. Because FPL nonetheless proposes to maintain those limited amounts, FPL’s petition fails to demonstrate an affirmative need for DBEC in 2022 based on yet another statutory factor. This is a particularly important factor, as the Legislature has reiterated the wide-ranging benefits of transitioning to a clean energy economy. See §§ 403.502, 366.92(1), Fla. Stat.

FPL ignores the Commission’s interpretation of section 403.519 holding that, to “give[] effect to the terms of FEECA,” [Florida Energy Efficiency and Conservation Act] a petitioner must demonstrate “that it has reasonably considered conservation measures that might mitigate the need for this proposed plant.” Order No. PSC-92-0002-FOF-EI at 15 (1992) (emphasis in original). FPL has made no such demonstration. Instead, FPL states that it “has not identified additional cost-effective DSM beyond that already reflected in FPL’s analyses” and “[t]here is no evidence to suggest that additional DSM could provide economic benefits to FPL’s customers that could in any way diminish the unquestionable benefits projected to be provided by DBEC Unit 7 beginning in 2022.” Petition at ¶ 30. But the appropriate question is whether conservation measure can mitigate the alleged need for DBEC, Order No. PSC-92-0002-FOF-EI at 15, not whether conservation measures would diminish the purported benefits of FPL’s preferred

alternative. Similarly, the appropriate question on cost-effectiveness is whether conservation measures can cost-effectively mitigate the alleged need for DBEC, Order No. PSC-92-0002-FOF-EI at 15, not whether conservation measures would be classified as cost-effective in the Commission's DSM proceedings. Thus, FPL failed to make the demonstration required by the Commission.

Moreover, persuasive evidence in the record conveys that FPL failed to reasonably determine whether conservation measures cost-effectively mitigate the needs alleged by FPL. The only reliability issue projected by FPL in 2024 is a reserve margin shortfall in 2024 is 54 MW. Exh. 3. That shortfall is well within FPL's ability to add DSM; it plans to add 53 MW of DSM in 2024. Petition at ¶ 30. Meanwhile, as discussed above in section III.B.1, delaying DBEC until 2025 is likely to be cheaper than adding DBEC in 2022. But FPL has not considered such a plan, nor has it considered variations of such a plan which use solar or delay DBEC beyond 2025. See supra § III.B. And even though Dr. Hausman suggested this approach in his pre-filed testimony, T. 309:21-310:9, FPL's rebuttal testimony lacks any response. Therefore, FPL has not "reasonably considered conservation measures that might mitigate the need for" DBEC, Order No. PSC-92-0002-FOF-EI at 15 (1992), and consequently fails to meet its burden on this factor.

Additionally, in section III.C above, Sierra Club shows the multiple deficiencies in FPL's consideration of renewable energy sources, technologies, and conservation measures. These include: FPL's unreasonable limitation of large-scale solar to 74.5 MW per site; FPL's failure to consider adding solar outside of Southeast Florida; and its failure to consider adding solar incrementally to meet reserve margin needs as they arise, as well as, as noted above, its failure to examine using additional demand-side management beyond what is included in FPL's demand-side management plan. Petition at ¶ 30; T. 301:19-21 (Hausman). Rather than conduct a meaningful analysis of these options, that identifies their true potential, FPL instead designed and evaluated a solar and storage option that is rife with artificial, cost-inflating constraints.

In contrast, Maggie Clark, representative of Solar Energy Industries Association, explained that more than a dozen of her member companies are ready and willing to sign PPAs with FPL but are not given the opportunity to do so. T. 27:3-20 (M. Clark). This too establishes the option for FPL to pursue solar PPAs and FPL's failure to investigate such renewable energy resources for purposes of its petition. See supra §§ III.B, III.C. Finally, the pledges of municipalities in FPL's service territory and groundswell of public expression opposing the new gas-burning generation capacity and supporting renewable energy, see infra § VI, likewise convey the seriousness of FPL's own customer pledges to transitioning to clean energy. Yet, once again, FPL failed to investigate this and its ramifications, including what might be "reasonable" in light of those pledges, leaving the record devoid of how this could impact FPL's future load.

**V. DBEC Would Worsen FPL's Dire Need for Fuel Diversity**

Regarding fuel diversity, which is an acute need in FPL's service area given its extreme over-reliance on gas-burning generation, the last thing customers need is another gas-burning plant that would extend FPL's over-reliance by another four decades. See T. 322:5-323:4 (Hausman); Order No. PSC-08-0237-FOF-E1 at 9 (2008). FPL's contention to the contrary defies common sense, the record, e.g., Exh. 34, 15:11-25 (Sim), and express Legislative direction.<sup>6</sup> The paucity of fuel diversity on FPL's system calls for non-gas alternatives like solar and FPL has not met its burden to show otherwise.

Indeed, since the Legislature added the "need for fuel diversity" as a statutory factor for need determinations in 2006, Chapter 06-230, Laws of Florida, Florida's gas over-reliance has only grown worse. T. 322:9 (Hausman). This has costly consequences. For example, FPL's

---

<sup>6</sup> Reflecting the importance of fuel diversity, Florida's legislature has additionally emphasized its concern with over reliance on gas elsewhere. See § 366.92(1), Fla. Stat. ("It is the intent of the Legislature to . . . diversify the types of fuel used to generate electricity in Florida; lessen Florida's dependence on natural gas and fuel oil for the production of electricity; minimize the volatility of fuel costs; . . . and, at the same time, minimize the costs of power supply to electric utilities and their customers.").

attempt to limit the hazards of gas price volatility with expensive financial hedges cost its customers approximately \$4 billion in the last fifteen years. Order No. SC-15-0586-FOF-EI at 5 (2015).<sup>7</sup> The Commission recognizes that overdependence on gas exposes customers to the uncertainty and volatility of gas prices, along with vulnerability to disruption of transport from out of state. See e.g., Order No. PSC-08-0518-FOF-EI at 7 (2008); Order No. PSC-08-0237-FOF-EI at 8 (2008). This concern is particularly acute for FPL, whose reliance on gas to serve 71% of its load is even worse than the 63% reliance of Florida utilities generally. T. 322:3-7 (Hausman); see also T. 142:20-24 (Sim) (“FPL [is] among those [in the U.S. and Canada] most reliant upon natural gas.”).

Rather than improve this situation, DBEC would both prolong it and decrease fuel diversity on FPL’s grid. A utility’s projected “overall generation mix” is a meaningful quantitative measure of fuel diversity. Order No. PSC-15-0521-FOF-EI at 17 (2015). Fuel diversity is enhanced when a grid moves from “a single fuel and a single technology” to “a more balanced, fuel-diverse portfolio.” Order No. PSC-08-0237-FOF-EI at 8 (2008). By the same token, there is no contribution to fuel diversity by adding a gas-burning plant where “over half of [the utility’s] existing capacity is gas-fired.” Order No. PSC-98-1301-FOF-EM at 4 (1998). The gas-burning DBEC would have 279 MW greater capacity than the existing Lauderdale units, T. 64:19-65:2 (Sim), and run many more hours than the Lauderdale units, T. 169:5-15 (Sim); Exh. 52 (Attachment 1 to FPL’s Response to Staff’s Third Set of Interrogatories No 64). Consequently, as Dr. Sim admitted, DBEC would generate many more megawatt hours than the Lauderdale units. Exh. 34, 15:11-25 (Sim); Exh. 52. Thus, DBEC would increase the

---

<sup>7</sup> While FPL has agreed to a moratorium of its costly hedging program, that expires in 2022 and regardless, that still presents the costly risks of volatile gas prices for the four decades DBEC would operate. See Order No. PSC-16-0560-AS-EI at 4, 27 (2016); Tampa Electric Company’s Motion to Close Docket at 1, Docket No. 20170057-EI (2018).

overwhelming dominance of gas in FPL’s generation mix, T. 322:10-12 (Hausman), and worsen fuel diversity. Order No. PSC-15-0521-FOF-EI at 17 (2015).

FPL points to projected fuel efficiency gains to argue that DBEC meets a need for fuel diversity. T. 578:15-579:5 (Sim). But in 2016 the Commission repudiated that argument. See Order No. PSC-16-0032-FOF-EI at 19-20 (2016). The combined cycle plant at issue in that proceeding, like FPL’s projections for DBEC, would reduce the total amount of gas used by FPL. Id. at 20. Yet the Commission found that the plant “will increase [FPL’s] dependence on natural gas and will not improve its overall fuel diversity.” Id. at 20.

In short, DBEC will not address FPL’s critical need for fuel diversity. At precisely the time that renewable energy prices are dropping, T. 310:19-311:16 (Hausman), when utilities are responding by increasing adoption of cost-effective renewable energy, T. 312:4-13 (Hausman), and when communities in Florida are pushing to adopt renewable energy, T. 136:9-137:7 (Sim), infra section VI, DBEC would lock FPL and its customers into reliance on risky gas for another 40 years. Instead, to address fuel diversity needs, FPL must stop relying on “a single fuel and a single technology” and diversify its generation portfolio with non-gas resources such as solar. See Order No. PSC-08-0237-FOF-EI at 8 (2008); T. 287:2-5 (Hausman).

**VI. Municipal, Community, and Individual Pledges to Transition to Renewable Energy, and Related Opposition to DBEC, Further Support Denying FPL’s Petition.**

The analysis above suffices to demonstrate that FPL has not met its burden to demonstrate a need for DBEC. Beyond that, another relevant factor that further cuts against FPL’s petition is the dissent of its customers. Municipal and community pledges to transition to renewable energy, within FPL’s service area, as shown below, are multiplying. Similarly, opposition to DBEC is on the rise, as individuals in those communities learn that what FPL has touted as a “clean energy center” is in fact another gas-burning power plant, contrary to local pledges to phase out such power plants as rapidly as possible. See, e.g., Documents No’s. 00590-2018, 00427-2018, in Docket No. 20170225.

Section 403.519(3), Fla. Stat, grants the Commission express authority to consider “other matters within its jurisdiction which it deems relevant,” and that language is reflected in Issue 6 in this docket. See Order No. PSC-2017-0447-PCO-EI at 1 (2017). The legislative purpose of granting Commission authority to determine the need for power plants includes protecting the environment, promoting renewables and conservation measures, and avoiding conflict with local plans. § 403.502, Fla. Stat.; Tampa Elec. Co. v. Garcia, 767 So. 2d 428, 433 (Fla. 2000). Specifically, state policy is to ensure that power plants “produce minimal adverse impacts on human health, the environment, the ecology of the land and its wildlife, . . . and not unduly conflict with the goals established by applicable local comprehensive plans.” § 403.502, Fla. Stat. The statute expressly states the Legislature’s intent to balance any need for additional power plants with other broad interests of the public. § 403.502, Fla. Stat.<sup>8</sup>

Accordingly, in evaluating FPL’s petition, local government and the public’s environmental and renewable energy goals are relevant matters within the Commission’s jurisdiction. Municipalities within FPL’s service area have pledged to transition to clean energy. Tamara James, the Mayor of Dania Beach—where FPL proposes to locate DBEC—has signed a pledge to transition to clean energy. T. 138:6-8 (Sim). Likewise, the City of Sarasota passed a resolution to transition to 100 Percent Renewable, Zero Emission Energy sources. See Sierra Club’s Notice of Intent to Seek Official Recognition, Exhibit A (Doc. No. 00299-2018, Jan. 12, 2018) (attached hereto as Attachment A) ; T. 139:2-4 (Sim). The Mayor of South Miami is one of approximately 40 mayors in Florida who have committed to clean energy, and has voiced opposition to approval of DBEC on multiple grounds, including the desire to seek investments in clean, renewable energy. See Exh. 60 (“Letters from concerned citizens of Dania Beach”).

---

<sup>8</sup> Similarly, section 366.92(1), Florida Statutes also states: “ It is the intent of the Legislature to promote the development of renewable energy; protect the economic viability of Florida’s existing renewable energy facilities; diversify the types of fuel used to generate electricity in Florida; lessen Florida’s dependence on natural gas and fuel oil for the production of electricity; minimize the volatility of fuel costs; encourage investment within the state; improve environmental conditions; and, at the same time, minimize the costs of power supply to electric utilities and their customers.”



Nonetheless, Dr. Sim, refuses to take into account municipal pledges to transition to 100% clean energy. T. 138:14-18 (Sim) (“If I had been aware of [the pledge by Dania Beach Mayor to transition to 100% clean energy], I wouldn’t take it into account . . .”). FPL also exhibits little interest in informing itself of these pledges. Dr. Sim first learned of the existence of the municipal pledges, including the pledge from the Dania Beach Mayor, during a deposition in this proceeding (more than a month after FPL filed its petition). T.140:23-141:5 (Sim). Almost two months later, Dr. Sim testified that he was aware of only one additional pledge. T. 138:25-139:4 (Sim). Thus, when asked if he knows that the Mayor of Broward County—the county in which FPL proposes to site DBEC—had signed the Ready For 100 pledge, Dr. Sim answered in the negative. T. 138:25-139:1 (Sim). Broward County is one of two counties that make up 44% of FPL’s summer peak load. Petition at ¶ 7.

FPL’s refusal to account for or further investigate municipal pledges leaves the Commission without the requisite information to factor them into its assessment, and further magnifies the risk that FPL’s customers will be left paying for a stranded asset. Dr. Sim presumes that this Commission would require FPL’s customers to pay for DBEC if it is retired early. T. 136:3-8 (Sim). But in the “same way [Dr. Sim] would not take into account an individual citizen planning on reducing their load through putting solar on the roof, perhaps cutting themselves off from the grid entirely,” Dr. Sim does not account for municipal pledges to transition to 100% clean energy. T. 138:14-21 (Sim).

Beyond these municipal pledges, members of the Dania Beach community themselves travelled to Tallahassee to voice their opposition to DBEC before the Commission. T. 9-28. Similarly, multiple community groups expressed their opposition to DBEC in the record. See Exh. 60 (“Letters from concerned citizens of Dania Beach”). These groups range from Sustainable Miami, to Miami Climate Action, to the League of Women Voters Miami-Dade County, amongst many others. Id. Finally, the docket includes close to nine thousands public

comments voicing opposition to DBEC. See, e.g., Document No's. 00590-2018, 00427-2018, in Docket No. 20170225. This collective swell of opposition to DBEC—from municipalities, community organization, and the thousands and thousands of individual members of the public—and their pledges to transition to clean energy, further support the Commission denying FPL's need determination petition.

### **CONCLUSION**

As set forth above, FPL has failed to meet its burden to establish—based upon any of the statutory factors set forth in section 403.519(3), Florida Statutes—a need for a massive new gas-burning plant in 2022. Accordingly, the Commission should deny FPL's petition.

Respectfully submitted this 29th day of January, 2018.

*/s/ Julie Kaplan*  
Julie Kaplan  
Senior Attorney  
Sierra Club  
50 F St. NW, Suite 800  
Washington, DC 20001  
(202) 548-4592  
Julie.Kaplan@SierraClub.org

Michael Lenoff  
Legal Fellow  
Sierra Club  
50 F St. NW, Suite 800  
Washington, DC 20001  
(202) 650-6065  
Michael.Lenoff@SierraClub.org

Nathan Taylor  
Legal Fellow  
Sierra Club  
50 F St. NW, Suite 800  
Washington, DC 20001  
(202) 650-6072  
Nathan.Taylor@SierraClub.org

*Qualified Representatives for Sierra Club*

**CERTIFICATE OF SERVICE**

**Docket No. 20170225-EI**

**I HEREBY CERTIFY** that a true and correct copy of the foregoing has been furnished by electronic mail on this 29th day of January, 2018, to the following:

Kenneth A. Hoffman  
Florida Power & Light Company  
215 S. Monroe Street, Suite 810  
Tallahassee, FL 32301  
ken.hoffman@fpl.com

William P. Cox  
Florida Power & Light Company  
700 Universe Boulevard  
Juno Beach FL 33408  
will.p.cox@fpl.com

Michael Marcil  
Gunster Law Firm  
450 E. Las Olas Blvd.  
Fort Lauderdale FL 33301  
mmarcil@gunster.com

Charles Murphy, Esq.  
Stephanie Cuello, Esq.  
Division of Legal Services  
Florida Public Service Commission  
2540 Shumard Oak Blvd.  
Tallahassee, Florida 32399-0850  
cmurphy@psc.state.fl.us  
scuello@psc.state.fl.us

Patricia Christensen, Esq.  
Office of Public Counsel  
The Florida Legislature  
111 West Madison Street, Room 812  
Tallahassee, Florida 32399  
christensen.patty@leg.state.fl.us

*/s/ Julie Kaplan*  
\_\_\_\_\_  
Julie Kaplan  
Senior Attorney  
Sierra Club  
50 F St. NW, Suite 800  
Washington, DC 20001  
(202) 548-4592  
julie.kaplan@sierraclub.org

*Qualified Representative for Sierra  
Club*

# Attachment A

RESOLUTION NO. 17R-2648

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF SARASOTA, FLORIDA FOR A TRANSITION TO 100 PERCENT RENEWABLE, ZERO EMISSION ENERGY SOURCES IN ACCORDANCE WITH THE 100 PERCENT RENEWABLE ENERGY INITIATIVE; PROVIDING FOR READING OF THIS RESOLUTION BY TITLE ONLY; AND PROVIDING FOR AN EFFECTIVE DATE.

**WHEREAS**, the City of Sarasota is a coastal community on the front lines of the environmental, economic and public health impacts of climate change stemming from sea level rise, storm surge, flooding, and rising temperatures; and

**WHEREAS**, the City of Sarasota seeks a healthy, sustainable future with less toxic pollution threatening residents and more economic growth opportunities for workers; and

**WHEREAS**, the transition to 100 percent renewable, zero emission energy sources, such as solar power, will improve air and water quality and protect public health, particularly for the most vulnerable across our community; and

**WHEREAS**, 100 percent renewable, zero emission energy sources as well as energy efficiency represent an enormous economic opportunity for City of Sarasota to create jobs in an emerging industry and expand prosperity for residents; and

**WHEREAS**, one out of every 50 new jobs added in the United States in 2016 was created by the solar industry; and

**WHEREAS**, 100 percent renewable, zero emission energy sources and energy efficiency now offer greater economic security, lower electricity costs, and an affordable energy solution for City of Sarasota residents; and

**WHEREAS**, according to the U.S. Department of Energy, solar costs are down between 54 percent and 64 percent from 2008; and

**WHEREAS**, individuals, families, businesses, and institutions throughout the City of Sarasota seek greater energy freedom through the expansion of distributed 100 percent renewable, zero emission energy sources like rooftop solar; and

**WHEREAS**, business analysts have called Florida “the sleeping giant” of the solar industry; and

**WHEREAS**, in November 2016, the City of St. Petersburg became the first city in Florida to commit to transitioning to 100 percent renewable, zero emission energy sources; and

**WHEREAS**, the City of Sarasota has previously established a 35% community-wide greenhouse gas emission reduction goal by 2025, from a 2003 baseline; and

**WHEREAS**, the City of Sarasota has previously established a 35% municipal operations greenhouse gas emission reduction goal by 2025, from a 2003 baseline; and

**WHEREAS**, the City of Sarasota has established fast track permitting for private sector LEED certified buildings; and

**WHEREAS**, the City of Sarasota has entered into a “Renewable Energy, Energy Efficiency, and Energy Sustainability Agreement” with Florida Power and Light, as part of the 2010 Franchise Renewal; and

**WHEREAS**, the City of Sarasota has established that all new City buildings and major renovation projects shall use sustainable measures as outlined in LEED certification or “Alternative Compliance Pathways for Incentives”; and

**WHEREAS**, the City of Sarasota has established that all new urban expansion and infill developments shall use sustainable measures as outlined in LEED certification or “Alternative Compliance Pathways for Incentives”; and

**WHEREAS**, the City of Sarasota comprehensive plan stipulates that the City shall “actively pursue 100 percent renewable energy installations for City facilities”; and

**WHEREAS**, residents of the City of Sarasota and Sarasota County have recently formed a co-op to use their buying power to secure discounted prices for solar panels; and

**WHEREAS**, there is broad support for a just transition to 100 percent renewable, zero emission energy sources from City of Sarasota residents, business and institutions; and

**WHEREAS**, “renewable, zero emission energy” includes energy derived from solar, wind power sited in ecologically responsible ways, existing and low-impact hydroelectric, geothermal, and ocean/wave technology sources.

**NOW THEREFORE BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF SARASOTA, FLORIDA:**

Section 1. The City of Sarasota adopts a community-wide target of powering the City with 100 percent renewable, zero emission energy sources not later than 2045.

Section 2. The City of Sarasota adopts a target of powering municipal operations with 100 percent renewable, zero emission energy sources not later than 2030, including at least 50 percent by 2024.

Section 3. The City Commission of the City of Sarasota direct its Sustainability Manager to incorporate these targets into the City's Climate Change Vulnerability Assessment and Adaptation efforts and planning processes and to work with community stakeholders to devise implementation strategies.

Section 4. The City of Sarasota, in pursuit of these targets, will seek to build inclusive community leadership and policy engagement, promote equity in energy and resource costs and ownership of related technologies, generate sustainable economic and employment opportunities and mitigate related losses; and provide regional leadership to address equity in climate and energy.

Section 5. The City of Sarasota Sustainability Manager will report on progress to the City Commission towards these goals every two years, beginning in 2018.

Section 6. This resolution shall take effect immediately upon adoption.


ADOPTED by the City Commission of the City of Sarasota upon reading by title only, after posting on the bulletin board at City Hall for at least three (3) days prior to adoption, as authorized by the Charter of the City of Sarasota this 19th day of June, 2017.



---

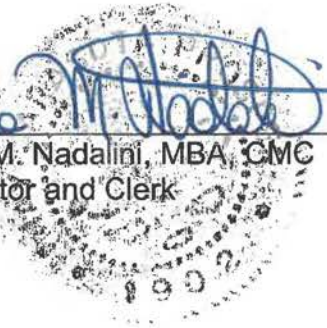
Shelli Freeland Eddie, Mayor

ATTEST:



---

Pamela M. Nadalini, MBA, CMC  
City Auditor and Clerk



- Shelli Freeland Eddie, Mayor
- Liz Alpert, Vice Mayor
- Commissioner Jennifer Ahearn-Koch
- Commissioner Hagen Brody
- Commissioner Willie Charles Shaw