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July 9, 2025

VIA ELECTRONIC FILING
Adam Teitzman, Commission Clerk
Division of Commission Clerk and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Docket No. 20250011-EI
Petition by Florida Power & Light Company for Base Rate Increase

Dear Mr. Teitzman:

Attached for filing on behalf of Florida Power & Light Company ("FPL") in the above-referenced docket are the rebuttal testimony and exhibit of FPL witness Andrew W. Whitley.

Please let me know if you have any questions regarding this submission.

Sincerely,

s/ Maria Jose Moncada
Maria Jose Moncada
Assistant General Counsel
Florida Power & Light Company

(Document 16 of 16)

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by Electronic Mail to the following parties of record this 9th day of July 2025:

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BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20250011-EI

FLORIDA POWER & LIGHT COMPANY

REBUTTAL TESTIMONY OF ANDREW W. WHITLEY

Filed: July 9, 2025

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Andrew W. Whitley. My business address is Florida Power & Light Company ("FPL" or "the Company"), 700 Universe Blvd., Juno Beach, Florida 33408.

Q. Have you previously submitted direct testimony in this proceeding?

A. Yes.

Q. Are you sponsoring any rebuttal exhibits in this case?

A. Yes. I am sponsoring the following exhibit:

- Exhibit AWW-9 – Initial Northwest Florida Battery Evaluation

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to address the following four topics raised in intervenor testimony: (1) the validity of the stochastic loss-of-load probability ("LOLP") methodology in deriving FPL's resource plan; (2) FPL's system planning and proposed resource additions, along with FPL's 522 megawatt ("MW") Northwest Florida battery storage sites currently under construction; (3) the monthly incentive payment levels for FPL's Commercial/Industrial Demand Reduction ("CDR") and Commercial/Industrial Load Control ("CILC") programs; and (4) FPL's proposed Large Load Contract Service ("LLCS") tariffs. With regard to FPL's system planning and resource additions, I, along with FPL witness Arne Olson of Energy and Environmental Economics, Inc. ("E3"), rebut the testimonies of Office of Public Counsel ("OPC") witness James R. Dauphinais, Florida Rising/League of United Latin American Citizens of Florida/Environmental Confederation of Southwest Florida (together "FEL") witness Karl R. Rábago, and Florida Retail Federation ("FRF")

witness Tony Georgis. With regard to the CDR and CILC programs, I respond to the testimonies of FEL witness MacKenzie Marcelin, Walmart witness Lisa V. Perry, FRF witness Georgis, and Florida Industrial Power Users Group ("FIPUG") witness Jonathan Ly. Finally, with regard to LLCS, I respond to the testimony of Florida Energy for Innovation Association ("FEIA") witness Mohamed Ahmed.

Q. Please provide a summary of your rebuttal testimony.

A. The testimonies provided by the intervenors misapprehend various aspects and characteristics of FPL's system, which, in turn, leads intervenors to resource planning conclusions that are contrary to the interests of customers and the reliability of FPL's system. Much of the intervenors' protests against FPL's proposed resource additions has to do with FPL's implementation of a more sophisticated methodology calculating FPL's system LOLP to determine system risks through a stochastic study. This methodology, as detailed in my direct testimony, and as further explained in the rebuttal testimony of FPL witness Olson, evaluates FPL's system resource adequacy for each hour of the year, as opposed to the traditional methodology of determining resource adequacy based on system peaks occurring during the year. Were FPL to rely on its old methodologies and discount more modernized tools for system planning, FPL would be blind to potential system risks and, on account of that blindness, leave FPL unable to sufficiently address those risks.

While several intervenors oppose FPL's application of a stochastic methodology to guide the resource adequacy determination, not every intervening party shares such opposition. OPC witness Dauphinais acknowledges in his testimony that, based on the

characteristics of FPL's system, the Company should begin to utilize stochastic LOLP analysis. While my testimony challenges and rebuts many of the resource planning contentions made by OPC witness Dauphinais, FPL acknowledges and appreciates OPC's carefulness in not countering the use of this planning methodology, which will help to enhance resource adequacy for FPL's customers into the future.

A specific area where I do rebut OPC witness Dauphinais and other intervenor witnesses is regarding solar additions. Intervenors perplexingly advocate for the complete elimination of any further photovoltaic ("PV") solar generation additions. To be clear, solar is FPL's most cost-effective generating resource, and it has saved FPL customers over $942 million in fuel cost alone over the last 5 years. Not only that, but solar generation is the only energy resource capable of being sited and constructed within the 2026-2029 timeframe to provide energy to FPL's growing customer base. It is also worth noting that, were FPL to not adopt the stochastic LOLP analysis, solar would still be identified as the optimal resource selection under FPL's traditional generation planning criteria, but in larger quantities than FPL is proposing.

Intervenors' misunderstanding of FPL's system is also apparent from their recommendations concerning the value of CDR/CILC credits. Intervenor positions on the appropriate value of the CDR/CILC credits vary significantly, ranging from elimination of the credits entirely to a 40.7% increase in the current value of the credit. What is common throughout the intervenor testimony on this issue, however, is an inaccurate assessment of the value of the CDR/CILC programs for meeting the resource

needs of FPL's system. The varied positions of intervenors under-value or over-value the benefit of the programs to FPL based largely on the interests of their clients, which, in turn, leads to widely varied views on how the credits should be valued. FPL's proposed credit, for which I provide analysis and support in my direct testimony, remains the most reasonable level for the credit, and appropriately balances the needs of the system and the interests of participating and non-participating customers.

Regarding FPL's proposed LLCS tariffs, I respond to several of the inaccurate statements made by FEIA witness Ahmed in his testimony. Notably, I dispute witness Ahmed's inaccurate portrayal of the planning involved in setting the Incremental Generation Charge ("IGC") in the LLCS tariffs, his use of levelized cost of electricity in projecting costs for incremental generation, his overly optimistic viewpoint on the system benefits of increased data center loads, and his incorrect assumptions regarding batteries serving incremental capacity needs.

II. THE STOCHASTIC LOLP STUDY

Q. What is your response to the intervenors who question the validity of the stochastic LOLP methodology in deriving FPL's resource plan?

A. The stochastic methodology for determining LOLP provides advanced system planning insight and risk assessment that, were it not for the methodology, would leave reliability risks on FPL's system unidentified. Identification of these risks, through a data-intensive study methodology that develops a probabilistic hourly load and supply projection, should not be regarded as an optional resource planning exercise, and the

results should not be discounted. For this reason, among others, the stochastic methodology has been achieving broader and more widespread industry recognition. As detailed in the rebuttal testimony of FPL witness Olson, application of the stochastic methodology for calculating LOLP has become increasingly common in the United States, and is proving more and more to be a valuable tool in ensuring a reliable supply of generation.

It should be noted that, while FEL witness Rábago and FRF witness Georgis attempt to cast doubt on the use of the stochastic methodology, OPC witness Dauphinais does not contest the value of adopting the stochastic methodology for FPL's system. In fact, witness Dauphinais acknowledges the merit in applying it, given the nature of FPL's system. As FPL's generation resource profile continues to evolve and FPL's demand and energy needs continue to grow, FPL should not be waiting for reliability events before adopting resource adequacy analyses that will allow the Company to identify the generation risks that are most pertinent to its system. By definition, these analyses are for planning, not reacting. As reflected in the rebuttal testimony of FPL witness Olson, a utility has an affirmative obligation, upon learning that it may be facing a reliability issue, to act upon that knowledge immediately and to implement cost-effective solutions as quickly as is practicable.

A. *Need for the Stochastic LOLP Analysis*

Q. Several intervenors note the operational reserve concerns experienced by FPL that gave rise to the need for a stochastic LOLP analysis. Can you please describe the concerns being referenced?

A. Yes, I can. Broadly, the operational reserve concerns relate to the level of operating reserves held by FPL to manage times of system constraint. FPL first identified operational needs concerning the level of its reserves in the spring of 2023. Throughout March and April of that year, FPL's system experienced higher than normal temperatures, which remained elevated throughout the evening when FPL's solar output began to decrease. That circumstance, combined with the continuing need to accommodate system growth, led FPL to evaluate the need to maintain an adequate amount of operating reserves that could be called on quickly to meet load in a contingency scenario. FPL continued to evaluate its operational reserve levels throughout 2023 and 2024. While doing so, FPL continued to experience reserve challenges in those years, and nearly missed having to declare an Energy Emergency Alert ("EEA") in August 2024.

Q. FRF witness Georgis contends that FPL has been over-aggressive in adding solar PV resources to its system in recent years. Do you agree?

A. No. Witness Georgis' contention that PV solar installations have been implemented in an "over-aggressive" manner completely discounts the value of the low-cost energy supply solar has provided to FPL's customers. Since 2021, FPL's customers have saved $942 million in fuel costs as a result of these solar installations. Had FPL shied away from implementing this low-cost resource, customers would have paid that

$942 million. Not only have these facilities saved customers fuel cost, FPL has been demonstrably successful in reliably delivering the power produced by FPL's generating fleet (including solar), as is detailed in FPL witness De Varona's direct testimony.

Solar has continuously proven to be a cost-effective generation resource for FPL's customers. All of the solar added since 2021 has been shown to be cost-effective for FPL's customers, including the 2024 and 2025 Solar Base Rate Adjustment additions approved by the Commission. And, not only has solar been a cost-effective resource in prior years, it remains so today. In fact, if FPL were to place reliance on its prior resource planning modeling methodologies (*i.e.*, without a stochastic LOLP analysis), solar would be the sole resource option selected to address FPL's resource needs until 2029 and would be selected in a larger quantity than FPL is proposing. This is demonstrated in Table 1, which is presented later in my rebuttal testimony.

The fact is, solar continues to be a cost-effective resource option for customers that provides a significant amount of energy for FPL's system, despite lower firm capacity values and a shifting of net peak demand to the evening. Were FPL to adopt the recommendations of witnesses Dauphinais and Georgis to halt FPL's solar installations, the result would be an increase in customer rates over the long term, with customers experiencing increased volatility in fuel pricing over the short term.

Q. OPC witness Dauphinais alleges that FPL did not detect in advance any operational challenges using traditional operational and planning modeling tools. Is that true?

A. No, this is incorrect. As I mentioned above, and as shown in FPL's response to OPC's Sixteenth Request for Production of Documents, No. 138, FPL identified a need to address shortfalls in operational reserves as early as spring of 2023. In recognition of this need, FPL incorporated a projected 300 MW per year of batteries into its 2024 Ten Year Site Plan.

Q. FEL witness Rábago refers to the stochastic LOLP as "dubious". What is your response?

A. The assertion by witness Rábago that the stochastic LOLP methodology is "dubious" shows an apparent lack of system planning awareness on his part and represents an unfounded rejection of a now common methodology for system reliability analysis. FPL witness Olson provides further detail in support of the methodology, noting that a majority of utilities and organizations throughout North America have adopted stochastic LOLP analyses.

Also, witness Rábago and the Commission should not be comforted by the fact that FPL's traditional reliability criteria have been successful in the past. The North American Electric Reliability Corporation ("NERC") itself acknowledges that these planning standards must be revised and updated stating in a July 2024 report, titled "Evolving Planning Criteria for a Sustainable Power Grid" as follows:

> LOLE does not adequately account for the growing risk, over all hours, arising from increased variability and uncertainty caused by

> the evolving resource mix and increasing demand levels. A recent Energy Systems Integration Group (ESIG) survey of electric industry professionals… asked whether industry should consider a new resource criterion. Data from the survey overwhelmingly indicated that industry should consider a new approach—beyond the LOLE criterion alone—to resource adequacy modeling that reflects the reliability needs of the rapidly evolving grid. Survey results indicated that there is not just one solution, and supplemental criteria are needed that consider the size, frequency, timing, and duration of energy shortfalls.

The stochastic LOLP modeling performed for this case is intended to serve as the modeling tool to directly address the risks associated with FPL's evolving resource mix and increasing demand levels.

Q. Do you agree with FEL witness Rábago that the stochastic LOLP analysis is not suitable as a reliability-related foundation for the battery investments FPL is proposing?

A. No, I disagree. Despite support for stochastic modeling from utilities and organizations around the U.S., witness Rábago asserts that "It is also not clear what value is added by spending customer dollars on SLOLP modeling when the 20% planning reserve margin has served to ensure that FPL continues to meet or exceed system reliability objectives." Adherence to this perspective would keep FPL using past resource planning criteria until such a time as it experiences a reliability failure. Prudent resource planning must seek to avoid such a failure. As FPL's resource plan evolves to ensure it provides customers with reliable, cost-effective forms of energy, its planning must also evolve. Witness Rábago's mindset appears to be firmly rooted in the past and following his recommendations would leave FPL's customers exposed to system reliability risk.

Q. OPC witness Dauphinais claims that if the stochastic methodology is adopted, it would "cause" a large perfect capacity step increase in FPL's Summer 2027 capacity need versus FPL's capacity need for Summer 2027 under its traditional 20% Planning Reserve Margin ("PRM") resource adequacy criterion. Do you agree with this characterization?

A. No. The purpose of the stochastic methodology is to more clearly decipher and delineate system generation supply needs across all operating periods; it does not "cause" an increase in need. For FPL's system, the stochastic methodology is a needed improvement over traditional LOLP modeling in that it allows identification of potential risk scenarios to a utility system at each hour of the year. Additionally, as I mentioned in my direct testimony, a traditional PRM analysis provides a simplified look at system operation, examining only the peak demand hour at two times of the year – once in the winter and once in the summer – without considering the unique generation attributes of the utility's fleet. The stochastic LOLP analysis therefore addresses an analytical shortcoming that the PRM analysis leaves unaddressed.

B. *Production of the Stochastic LOLP Analysis*

Q. Intervenors insinuate that FPL took a passive role in the production of the stochastic LOLP analysis. Is that accurate?

A. No. The stochastic analysis was an iterative, data-intensive effort involving me and my team, FPL's Power Delivery team, and E3. I, along with the rest of the FPL team, supplied numerous inputs to E3 to enable E3 to model results. Our team was also involved in weekly meetings with E3 to discuss and review inputs, assumptions, and

preliminary results from E3's analysis. These discussions and reviews continued throughout the analysis period until E3's final work product was available in February 2025. There was no part of the modeling process where FPL was uninvolved in supporting and reviewing the analysis.

Q. Was FPL's stochastic LOLP analysis rushed as witness Dauphinais contends?

A. No. The stochastic LOLP study began in October 2024 and concluded in February 2025, making it an approximately four-month process. FPL's typical annual resource planning update, conducted for the purpose of its annual Ten-Year Site Plan, occurs each year over a similar time frame. Had FPL engaged E3 to perform a stochastic LOLP study earlier than October 2024, the study would have needed to be refreshed and reperformed in the latter months of 2024 in order to utilize the updated 2025 planning cycle assumptions.

Q. FEL witness Rábago contends that the stochastic LOLP study was commissioned to support resource planning decisions already made. Is that accurate?

A. No. The adoption of the stochastic LOLP methodology was added in order to assess system need and verify that FPL's identified resource additions would allow the Company to maintain a resource adequate system going forward. While FPL had been conducting review of its operational reserve needs throughout 2023 and 2024, and adjusting its resource planning to address those needs, FPL's ultimate resource selections for its 2025 planning could not be confirmed without having LOLP stochastically modeled. By engaging E3 to initially evaluate operational reserve needs and, later, analyze FPL's resource adequacy, FPL was able to develop and finalize a resource plan to provide both reliability and cost-effectiveness for its customers.

Q. What is your response to OPC witness Dauphinais' complaint that stakeholders were not given an opportunity to provide any input into E3's stochastic LOLP analysis utilized by FPL?

A. The outcome of the stochastic LOLP analysis, and its identification of system resource need, was not dependent on stakeholder coordination. However, FPL has presented the results of the study publicly in this case for the review of the Commission and affected stakeholders. FPL has also presented its proposed resource additions in its Ten-Year Site Plan for the Commission's review, which is ongoing.

C. *Results of the Stochastic LOLP Analysis*

Q. OPC witness Dauphinais estimates that FPL's 2026 and 2027 solar and battery storage additions would produce a perfect capacity surplus of 204 MW rather than a deficit of 273 MW in 2027. What is your response?

A. While FPL witness Olson rebuts OPC witness Dauphinais' analysis, I would add that witness Dauphinais' estimations disregard two important points in relation to the in-service dates of FPL's proposed projects. First, his calculation assumes that all of FPL's 2027 additions would be available near the start of the year. FPL's resource plan, however, sequences the installation of its 2027 additions throughout the year, which impacts how they affect resource adequacy needs. Second, witness Dauphinais does not consider that FPL has ongoing capacity needs in immediate future years, as shown on pages 23-26 of Exhibit AWW-1. Because of this increasing and ongoing capacity need, lessening or forgoing FPL's proposed solar and battery additions in 2026

and 2027 would cause FPL to have a generation shortfall in 2028 and 2029, and would create resource adequacy issues for FPL in the future.

Q. Witness Dauphinais estimates a perfect capacity deficit of only 89 MW without FPL's 2026 and 2027 solar additions and insists this deficit is sufficiently close to a loss of load expectation of 0.1 to be considered resource adequate. What is your response?

A. I have three principal qualms with witness Dauphinais' contention. First, eliminating solar additions would deprive FPL's customers of the tremendous benefits this generating resource provides, as I described earlier in my testimony. Second, the recommendation to remove solar from the proposed resources would remove from FPL's near-term resource plan the only energy-producing resource that is available for FPL to construct prior to 2030, the earliest date at which natural gas generation, which is costlier than PV solar on a CPVRR basis, can be sited and constructed. Third, "sufficiently close" to meeting a reliability criterion still means that the standard is not met. I would submit that FPL should not be planning its system such that it misses widely recognized reliability planning criteria, even by a small degree.

Q. OPC witness Dauphinais recommends that FPL identify the current stochastic LOLP for its system as well as the expected stochastic LOLP for its system in 2026. Should such a recommendation be adopted?

A. For the benefit of witness Dauphinais and the Commission, FPL instructed E3 to calculate a stochastic LOLP for 2026. That analysis, presented in the rebuttal testimony of FPL witness Olson, shows a firm capacity shortfall of 1,829 MW in 2026,

reinforcing the necessity of adding FPL's proposed 1,419.5 MW of battery storage and 894 MW of solar in 2026.

Q. What is your response to witness Dauphinais' claim that, if the LOLP analysis were accurate, then FPL should be experiencing NERC EEAs on its system?

A. Witness Dauphinais' assertion that FPL would already be experiencing some level of EEAs is based on the fallacy that an electric system would have staggered levels of being unable to serve load. In other words, "warning signs" would show up before an electric system is unable to serve load. As FPL witness Olson points out, however, there are recent occasions wherein U.S. electrical systems have been unable to serve load, despite not having any EEA events in years immediately prior. Not only that, as witness Dauphinais references in his testimony, FPL came close to declaring an EEA in August of 2024.

For the avoidance of doubt, the objective of engaging in a resource adequacy study such as the one performed by E3 is to identify resource adequacy issues *before* they occur, not to wait until they occur before taking measures to mitigate those issues. This is among the reasons FPL has already begun construction of battery facilities in its Northwest Florida region, as I detail later in my testimony. Most importantly, identifying areas of concern for resource adequacy in the future allows FPL to be proactive and find the most cost-effective method of addressing those issues, as opposed to being reactive and scrambling to find an immediate stopgap solution at cost to customers.

Q. Witness Dauphinais recommends that the capacity need identified by FPL's stochastic LOLP analysis in this proceeding be limited in its application to FPL's 2026 and 2027 projected test years. What is your response?

A. This recommendation fails to recognize that FPL's planned resource additions, while meeting near-term need, also contribute to FPL's ability to maintain a reliable system beyond 2027. Limiting application of the stochastic LOLP to years 2026 and 2027 would limit FPL's resource planning responsiveness to the increasing need for capacity to reliably serve its customers. As shown in Exhibit AWW-1, the need to add capacity to meet FPL's LOLP requirements does not end in 2027 – there are continually increasing needs in 2028, 2029, 2030 and through 2035. This continuing need highlights the importance of having consistent, stochastically analyzed capacity additions during this time period. Having the ability to timely add capacity to meet these needs in a cost-effective manner is critical to ensuring a reliable generation supply to serve FPL's customers.

Q. Did you review the recommendations of OPC witness Dauphinais pertaining to actions FPL should take in future proceedings where it proposes to use stochastic LOLP analysis to justify resource additions?

A. Yes. Witness Dauphinais recommended the four following actions in such a scenario:

- First, provide all FPL stakeholders a reasonable opportunity, prior to and during the analysis, to provide input with respect to the assumptions being utilized in the analysis;

- Second, coordinate with the other utilities jurisdictional to the Commission to help ensure a consistent approach is used for stochastic LOLP analysis in Florida;
- Third, have the analysis subject to review from an independent third-party not affiliated with either FPL or the contractor who performed the analysis on behalf of FPL; and
- Fourth, provide direct testimony from an expert witness who either performed, or directly supervised the performance of, the analysis.

Q. Should any of these four recommendations be adopted?

A. No. As to OPC witness Dauphinais' first recommendation, having a process where stakeholders of innumerably varied interests – and potentially no resource planning expertise – provide their own viewpoints on stochastic LOLP modeling inputs and assumptions, at multiple points in the resource planning process, would create an impossibly burdensome procedure, and one that would likely not lead to satisfactory results. Further, among the potential stakeholders, FPL alone retains the obligation and bears the responsibility to provide reliable electric service.

Witness Dauphinais' second recommendation would have the same infirmities as his first. Specifically, if FPL were required to coordinate with other jurisdictional investor-owned utilities on LOLP methodology prior to seeking approval of resource additions, there would be a risk of interrupting the resource planning process if a wholly uniform approach could not be timely agreed upon.

Witness Dauphinais' third recommendation creates an added layer of administrative effort that would be of marginal value. Companies, such as E3, that perform stochastic LOLP analyses stake their reputations on providing accurate, verifiable results, and a reputable provider should have a strong ability, and incentive, to self-audit model results, and the utilities relying on those analyses bear the consequence of the decisions made therefrom. Having an audit of stochastic LOLP results by an independent consultant would add a significant administrative undertaking to the resource planning process, requiring an independent review prior to the results being presented as part of a request in a litigated proceeding (at which point they would be re-reviewed by any affected party in the proceeding). Also, an additional third party would need to be contractually bound to some party and may not have had the benefit of the iterative steps underlying the stochastic LOLP analysis performed. In addition, the cost of a second LOLP analysis would likely be borne by customers, and, as I mentioned would likely be of only marginal value.

The fourth recommendation is a legal recommendation that, as a non-lawyer, I cannot opine upon. However, I would note that requiring additional witness testimony would likely increase the costs required to litigate a case – particularly where there is another informed witness who can competently cover the subject matter – and those costs must be paid.

Q. Witness Dauphinais indicates in his testimony that FPL did not provide all of the workpapers for its stochastic LOLP analysis in a timely fashion. What is your response?

A. Under my oversight, FPL timely provided hundreds of workpaper files in support of my direct testimony and exhibits, including the input files FPL provided to E3 along with E3's result files contained in subfolders. In its initial production, FPL provided 39 E3 results subfolders, which included output information on a variety of model runs performed by E3 that fed into the stochastic LOLP analysis. FPL later realized that six subfolders had unintentionally been omitted from the production. Upon realizing this, FPL updated its initial response and distributed the six subfolders to the parties on June 2, 2025.

D. *Stochastic Analysis and Resource Additions*

Q. What is your response to OPC witness Dauphinais' contention that FPL has not shown a need for all of its 2026 and 2027 proposed solar energy center and battery storage facility additions to meet its stochastic LOLP for Summer 2027?

A. The analysis provided in Exhibit AWW-1 clearly demonstrates that FPL has a need for all of its 2026 and 2027 solar and battery additions. This point is further emphasized in the rebuttal testimony of FPL witness Olson, whose testimony shows that FPL's proposed resource additions will only narrowly allow FPL to maintain resource adequacy on a going-forward basis. It is important to note that FPL's resource adequate position is premised on the installation of resource additions in the beginning portion of years 2027-2029 in order to maintain resource adequacy for those years. In short,

FPL is not adding additional resources that are supplemental to its need, which is a point the stochastic analysis clearly demonstrates.

Q. What is your response to witness Dauphinais' questioning of why the amount of FPL's battery storage and PV solar resource totals do not align with those shown on FPL witness Laney's workpapers?

A. Page 22 of Exhibit AWW-1 shows FPL's current resources at the beginning of each year, as opposed to the April dates reflected in FPL witness Laney's workpapers. Exhibit AWW-1 is a resource adequacy document, measuring FPL's resource adequacy by analyzing the need for resources prior to the addition of resources throughout the year, and should not be understood to be a document from which FPL's proposed revenue requirements were derived.

Q. Witness Dauphinais identifies seven reasons why he believes the stochastic LOLP analysis might be overly conservative. Have you reviewed those?

A. Yes, I have. Witness Dauphinais' belief is premised on the following factors and contentions: (1) analysis suggests FPL is currently significantly short of capacity; (2) FPL has not provided any evidence that there is currently a resource adequacy problem; (3) NERC/SERC do not identify issues through 2028; (4) LOLP analysis appears rushed; (5) Assumes FPL is an electrical island; (6) workpapers not produced in timely manner; and (7) stakeholders were not involved in the process.

Q. Are any of these factors or contentions valid?

A. No. As to the first two contentions raised, FPL has recognized an immediate need for available firm capacity on its system, even prior to E3's engagement, which is why it has accelerated battery storage in its 2024 and 2025 resource planning. Also, the fact

that FPL has not experienced a reliability issue on account of generation supply does not mean that the stochastic LOLP analysis is "overly conservative," a point which is further addressed by FPL witness Olson. In addition, having conducted a stochastic LOLP analysis for 2026, the analysis reveals that FPL is justified in further accelerating battery storage and delaying solar build relative to its 2024 resource planning.

As to the third concern raised, NERC's analysis should not be considered a substitute for FPL-specific resource adequacy determinations for the reasons discussed in the rebuttal testimony of FPL witness Olson. Doing so would leave FPL unaware of reliability risks and resource needs specific to its system.

As to the fourth concern raised, FPL, with the assistance of E3, has conducted a thorough resource adequacy analysis over the span of four months. That is not indicative of a "rushed" analysis that would lead to an "overly conservative" result. Further detail on the care taken in ensuring accurate results is provided by FPL witness Olson.

As to the fifth concern raised, FPL's longstanding practice of modeling its system as electrically isolated is appropriate given its geographic placement and the realities of operating its system. FPL's service area encompasses the entire Florida peninsula, with approximately 40% of its load served at the tip of this geographic peninsula. Also, events that drive resource adequacy issues (*e.g.*, significant heat or cold weather events) for FPL are likely to have a similar impact on neighboring utilities, limiting the amount

of assistance these utilities could provide to FPL, whether that assistance is on a firm or non-firm basis. Moreover, as detailed by FPL witness Olson, it is not uncommon for a utility to model itself as electrically isolated, and doing so does not indicate an "overly conservative" analysis.

I addressed the sixth concern raised by OPC witness Dauphinais earlier in my testimony. In short, OPC, along with the other parties admitted to the case, have had access to volumes of output files since March 31, 2025, and several more since June 2, 2025. It is not apparent at all how this can lead to the conclusion that the LOLP study was "overly conservative."

As to the seventh concern raised, stakeholders have received ample opportunity to review and provide feedback on the stochastic LOLP analysis FPL first presented with my direct testimony on February 28, 2025. Again, it is not apparent how this would lead to the conclusion that the results of the study are "overly conservative."

Q. FEL witness Rábago points out several supposed deficiencies in the E3 study related to solar production and demand response. Have you reviewed those?

A. Yes, with regard to solar production and demand response, witness Rábago claims the following with regard to the study:

1) FPL's projected solar output is lower than FPL's historical values;

2) FPL's projected solar has output before sunrise in December;

3) FPL "questionably" derates rooftop PV; and

4) FPL improperly derates demand response.

Q. Were the results of the study compromised by any of these claimed deficiencies?

A. No, not at all. I should note at the outset that witness Rábago does not provide any specific detail regarding the supposed deficiencies, other than pointing to FPL's discovery responses without any context. Regarding the first supposed deficiency, FPL provided E3 with the same P50 solar outputs that FPL uses in its ordinary resource planning. These solar profiles were then stochastically varied as part of E3's analysis, which in some cases showed lower than projected output, and in other cases higher. This stochastic variation of solar is a fundamental aspect of E3's study and instances where solar output varies from a P50 expectation are critical to a stochastic analysis.

With regard to the second point, witness Rábago is mistaken that the profiles show production at a time prior to sunrise (*i.e.,* at 7:00 a.m.). These P50 solar profiles, that witness Rábago appears to be referencing, show solar output from 7 a.m. to 8 a.m. in the month of December, which accurately reflects solar production experienced on FPL's system.

For the third point, E3's methodology examines the contribution of all solar, including projected rooftop PV. The effective load carrying capability of rooftop PV is subject to the same limitations as utility-scale PV in the stochastic study. As such, it has the same deration for capacity that it provides to FPL's system.

For the fourth point, E3's study also examined how the constraints around operation of demand response affect its load-carrying capability. This was appropriately measured in the analysis and accurately reflected the contribution of these resources.

III. FPL'S RESOURCE SELECTION

A. *Analysis Supporting Resource Additions*

Q. OPC witness Dauphinais contends that FPL has not demonstrated that its combination of 2026 and 2027 solar generation and battery storage resources is the most cost-effective way of meeting its capacity need. What is your response?

A. FPL's proposed resource additions for 2026 and 2027 are the most cost-effective way of achieving resource adequacy. As I discussed in my direct testimony, prior to late 2029, FPL can only construct PV solar and battery storage facilities to meet its near-term capacity needs, which are demonstrated in Exhibit AWW-1. FPL is proposing to add battery storage in amounts that are sufficient to address its identified firm capacity need in each year. These additions allow FPL *only to meet* its generation planning reliability criteria in the near term. As shown by the capacity shortfalls in Exhibit AWW-1 (page 20), new facilities must be constructed in the beginning portion of years 2027-2030 to remain resource adequate. Said another way, FPL is constructing nearly the least amount of battery storage required to reach its firm capacity needs and remain resource adequate.

Alongside FPL's battery storage additions in 2026 and 2027 are PV solar additions, which represent FPL's most cost-effective generation option. Solar is so cost-effective

that under FPL's prior resource planning methodologies, no battery storage would be selected until 2029; and, instead, 894 MW of solar would be added in 2026, 1,192 MW in 2027, and 2,235 MW in 2028. For comparative purposes, Table 1 below shows FPL's proposed resource additions for 2026-2029 compared to those that would have been selected under its prior planning methodologies.

Table 1

Year	FPL 2025 Resource Plan	FPL Resource Plan - No Stochastic LOLP
2026	522 MW Battery NWFL 894 MW Solar 1,419.5 MW Battery	522 MW Battery NWFL 894 MW Solar
2027	1,192 MW Solar 819.5 MW Battery	1,192 MW Solar
2028*	1,490 MW Solar 596 MW Battery	2,235 MW Solar
2029	1,788 MW Solar 596 MW Battery	2,235 MW Solar 224 MW Battery

* Excludes effect of Vandolah Generating Facility, discussed later in my testimony.

Acceptance of the plan that does not incorporate FPL's proposed 2026 and 2027 battery storage, however, would leave FPL without sufficient capacity and in a resource inadequate position based on stochastic LOLP analysis. For that reason, FPL has not proposed it and is instead proposing to accelerate installation of the firm capacity provided by battery storage.

FPL has also demonstrated the cost-effectiveness of its proposed additions through a CPVRR analysis contained in my Exhibits AWW-5 and AWW-6. Witness Dauphinais' contention that FPL has not demonstrated the cost-effectiveness of these

resources completely ignores the results of these exhibits, which show billions of dollars in CPVRR savings for FPL's customers by adding these resources.

Q. Witness Dauphinais insinuates that FPL should have provided economic analyses for its 2026 proposed facilities and 2027 facilities separately, as well as its proposed 2026 and 2027 battery storage facilities without the addition of any of the proposed 2026 and 2027 solar facilities. What is your response?

A. Witness Dauphinais' allusion to analysis being missing is based on the faulty premise that FPL is targeting individual years of resource need. FPL has identified a continual resource need over the next five years and beyond (as shown in Exhibit AWW-1), and the 2026 and 2027 additions address these needs as an overall "package." In regard to evaluating solar and battery facilities separately, FPL is adding these facilities together to provide the most cost-effective and reliable system for FPL's customers. FPL's solar additions provide energy and continue to drive down fuel costs that are passed on to FPL's customers, while the battery additions add firm capacity throughout the year to ensure system resource adequacy in the most cost-effective manner, as shown in Exhibits AWW-5 and AWW-6.

Q. What is your response to OPC witness Dauphinais' contention that FPL's "perfect" capacity need for summer 2027 can be fully satisfied with FPL's 2026 and 2027 battery storage facilities alone and there is no need for its solar additions?

A. Although the marginal level of "firm" or "perfect" capacity from solar facilities is diminishing on FPL's system, solar is still a cost-effective generating resource that can be added in the near-term to help satisfy energy needs. These solar additions have

continually been identified as optimal resource additions in the 2023 Ten Year Site Plan, the 2024 Ten Year Site Plan, and the resource plan derived through FPL's prior resource planning process provided in Table 1 above. All of these plans considered the diminishing effect of firm capacity from solar and, nonetheless, were still identified as the optimal resource selections.

Q. OPC witness Dauphinais indicates that for FPL's solar additions to be found prudent, reasonable and cost effective, FPL needs to demonstrate a "robust" economic case for them. What is your response?

A. I question what more "robust" analysis could be required beyond what I have previously provided in Exhibit AWW-5, which demonstrates FPL's proposed resources for 2026 and 2027 will produce over $2 billion in CPVRR savings for customers. This economic analysis was assembled using the same inputs and evaluative methodologies as have been provided in multiple prior CPVRR analyses presented to the Commission. In short, the combination of FPL's solar and battery additions in 2026 and 2027 provide significant savings to customers while ensuring resource adequacy.

Q. How do you respond to FRF witness Georgis' recommendation that FPL curtail its solar PV investments in years 2026 and 2027, along with the solar that may be included in FPL's proposed solar and battery base rate adjustment ("SOBRA")?

A. As I mentioned earlier, were witness Georgis' recommendation to halt FPL's solar installations be adopted, the result would be an increase in customer rates over the long term, with customers experiencing increased volatility in fuel pricing over the short term. Additionally, as for 2028 and 2029, these projects will only be constructed upon

the showing of an economic or resource need, as discussed in the direct and rebuttal testimonies of FPL witness Bores.

Q. OPC witness Dauphinais argues that any economic analysis justifying projects should: (i) exclude off-system sales margins (including any Production Tax Credits ("PTC")); (ii) achieve a CPVRR benefit to cost ratio of at least 1.15; and (iii) provide the projected CPVRR benefit to customers no later than half-way through the life of the investment and no longer than 10 years after the investment enters service, as additional restrictions should be applied to "elective" projects. What is your response?

A. Witness Dauphinais' suggestions are arbitrary restrictions that should not be considered, nor have they ever been considered or required by this Commission, in a cost-effectiveness analysis. Regarding the exclusion of the effect of off-system sales, FPL already does this in its analysis. In fact, this suggestion seems to be counter to witness Dauphinais' arguments that FPL is incorrectly modeling its system as electrically isolated.

Witness Dauphinais' other arguments regarding the benefit to cost ratio and breakeven time of the CPVRR analysis are based on arbitrary standards that the Midcontinent Independent System Operator ("MISO") uses when evaluating cost-effectiveness of "elective" projects. There are several reasons why this particular proposal from witness Dauphinais should be rejected. First, MISO is an Independent System Operator ("ISO"), not an electric utility. Therefore, its decision-making concerning new generating resources accounts for circumstances that are unique to an ISO, such as

separate operating utilities and competitive generation. Second, FPL's proposed solar projects are not "elective." These projects provide energy to FPL's system and greatly reduce system costs to customers. Finally, Dauphinais' arguments that the benefits for these projects should be "front-loaded" to avoid weighting impacts in the later years of analysis are already accounted for in FPL's analysis. The use of present value allows the impacts of a project in early years to have significantly more weight than those in the latter years of the analysis.

Q. Have there been any recent changes in tax law that have changed FPL's identified resource additions for the 2026-2029 period?

A. No. While FPL continues to assess the impacts of the "One Big Beautiful Bill" ("OBBB") signed into law on July 4, 2025, FPL currently projects it meets all requirements for its 2026-2029 solar and battery storage projects to maintain projected tax credits.

B. *AURORA Modeling*

Q. Is OPC witness Dauphinais accurate in saying that OPC is unable to run AURORA simulations?

A. While I do not know whether or not other parties have the ability to run the AURORA model, I can indicate that these files have been confidentially provided to the parties consistent with FPL's discovery obligations in this case. Also, FPL indicated with its response to OPC's First Request for Production of Documents, No. 15, where the confidential AURORA files were provided, that "Upon request, FPL can detail and demonstrate, under appropriate confidentiality protections, how the confidential

AURORA files were used in deriving FPL's proposed resource additions." To date, no parties have requested this offered demonstration.

Q. Is OPC witness Dauphinais correct in his assertion that FPL's current AURORA modeling may be unable to identify all the costs FPL incurs for its existing and future solar generation investments?

A. No. FPL's modeling in AURORA includes all applicable costs associated with solar. Witness Dauphinais provides no detailed context of what other "solar costs" should be included, but FPL's analyses all factor in the capital and O&M costs of solar units, the variable cost benefits that solar provides, and the cost of batteries to meet FPL's resource adequacy needs.

Q. OPC witness Dauphinais alleges that FPL did not use AURORA to determine the most cost-effective way for it to make solar generation and battery storage additions in 2026 and 2027 to meet its capacity need in 2027. Is his allegation correct?

A. No. There are no more cost-effective "mixes" of solar and battery that would both meet FPL's near-term resource adequacy needs in 2027 and beyond. FPL's AURORA modeling has shown that adding cost-effective solar in 2026 and 2027 that drives down customer rates while adding batteries in the same timeframe is the optimal solution to meeting the Company's resource adequacy needs.

Q. FEL witness Rábago contends that the Commission should not authorize any capital spending driven by FPL's stochastic LOLP analysis and should require a full cost effectiveness analysis, including evaluation of all generation, storage, and demand-side alternatives. What is your response?

A. FPL has already conducted such an analysis for its proposed solar and battery additions and has presented that analysis in this case. Further, FPL also has already incorporated into its 2025 planning all demand-side options reflected in FPL's Commission-approved 2024 DSM Goals, which were established as part of a settlement that was agreed to by the parties on whose behalf witness Rábago is testifying. In terms of including all generation options in the analysis, FPL already incorporated all available resources into its AURORA modeling for this case. The fact is, PV solar and battery storage have consistently been the most cost-effective resource options for the past several years and continue to be so during this planning cycle. And, as I mentioned earlier, solar and batteries are the only new generation options that can come online before 2030. In summary, the study that witness Rábago is requesting has already been performed.

C. *Vandolah*

Q. Please detail Project Commodore, as it is referenced in the testimony of OPC witness Dauphinais.

A. Project Commodore refers to FPL's now-public pursuit of the acquisition of the Vandolah Generating Facility ("Vandolah"), a natural gas/oil-fired electric generation facility in Wauchula, Florida with a summer net capacity of approximately 660 MW.

Vandolah is currently interconnected only to the transmission facilities of Duke Energy Florida ("DEF"), and all of the Vandolah site's capacity and energy are fully and exclusively committed for sale to DEF under a long-term tolling agreement that remains in effect through May 31, 2027.

Q. Has FPL entered into an agreement to acquire Vandolah?

A. Yes. On April 9, 2025, FPL entered into a purchase and sale agreement to acquire Vandolah, the first step toward deployment of the facility for use in serving FPL's customers.

Q. When is the Vandolah transaction anticipated to close?

A. The transaction is not expected to close until June 1, 2027, following the expiration of the DEF tolling agreement. The closing of the agreement is conditioned on approval from the Federal Energy Regulatory Commission ("FERC").

Q. OPC witness Dauphinais indicates in his testimony that FPL's acquisition of Vandolah, previously referred to as Project Commodore, could change FPL's resource needs. Would the acquisition of Vandolah change FPL's proposed resource additions in the 2026 through 2027 timeframe?

A. No. The capacity provided by Vandolah will be available to FPL by no earlier than June 2027, assuming contingencies and approvals are met and the transaction closes. Given this timing and the uncertainty on FERC approval, FPL's need for its proposed solar and battery storage additions in 2026 and 2027 have not changed. To ensure a reliable generation supply throughout 2027, FPL must have its planned additions in 2026 and 2027 and cannot rely on the hope that the Vandolah transaction will close on the anticipated timeline.

Q. Would acquisition of Vandolah change FPL's anticipated resource needs after 2027?

A. Yes. The capacity provided by Vandolah will displace 400 MW of four-hour batteries scheduled to enter service in 2028 and 475 MW of gas combustion turbines scheduled to enter service in 2032, unless there is additional demand to serve that would necessitate installation of this capacity based on an additional resource need.

IV. 2025 NORTHWEST FLORIDA BATTERY STORAGE

Q. Both FEL witness Rábago and OPC witness Dauphinais reference FPL's 2025 Northwest Florida ("NWFL") battery storage facilities in their testimonies. Can you please describe these battery storage facilities?

A. The NWFL battery storage facilities are 522 MW of battery storage units currently under construction in FPL's NWFL region. They are scheduled to enter service by December 2025. There are two principal purposes for these additions. First, the NWFL battery facilities provide needed capacity for that region to address times of winter peaks in the near-term. Were these facilities to not be installed in 2025, FPL's system would be left susceptible to capacity shortfalls in the Northwest region as early as the winter months of 2025-2026. Second, the facilities also serve as a long-term capacity solution for FPL's customers, providing both regional capacity in the NWFL region as well as capacity for FPL's system as a whole. As an additional benefit, these facilities are being sited at existing solar sites, which will reduce solar curtailment in the NWFL region and provide variable cost savings via energy arbitrage.

Q. Are the 522 MW of NWFL battery facilities cost-effective for FPL's customers?

A. Yes. FPL initially identified a need for winter capacity specific to the NWFL region in 2023 and began to evaluate several resource options to meet this need. These options included battery sites and gas-fired combustion turbines. Of all the resource options evaluated, adding battery storage was the most cost-effective for customers, and the decision to proceed with the project was made in March 2024. The cost-effectiveness (CPVRR) analysis upon which the go-forward decision was based is included with my rebuttal testimony as Exhibit AWW-9. The CPVRR analysis shown in Exhibit AWW-9 was assembled under my direction and completed in late 2023. It has been previously provided in discovery in FPL's response to OPC's Seventeenth Request for Production of Documents, No. 142.

Q. Were the 2025 NWFL battery facilities rushed to construction, as FEL witness Rábago contends?

A. No. As I referenced earlier, FPL identified a need for additional capacity based on actual winter loads in the Northwest region in 2023 and began evaluating potential solutions following that time. After FPL had sufficiently evaluated options to address the NWFL capacity need, the decision was made to go forward with the most cost-effective solution, which are the 2025 NWFL battery storage facilities currently under construction.

Q. FEL witness Rábago also claims that FPL is using the NWFL battery facilities to address interim needs until the North Florida Resiliency Connection ("NFRC") transmission line is more available in January 2027. Is his claim correct?

A. Not entirely. While the 2025 NWFL battery storage facilities do help to address an elevated capacity need prior to the completion of transmission line upgrades by other utilities that will alleviate constraint on the NFRC transfers, that is only part of the project's purpose. As I mentioned, the NWFL battery project is intended to both meet a short-term need for capacity (while other utilities complete their remaining work related to the NFRC project transfers) and provide a long-term capacity solution for the NWFL region and FPL's system as a whole. To be clear, just because the project helps to address a near-term need, that does not diminish the value that the project provides over the longer term in meeting FPL's continuing capacity needs. In fact, FPL's demonstration of a need for 1,419.5 MW of battery storage capacity in 2026 to maintain its LOLP standard assumes installation of the NWFL battery facilities, and further reflects the need for their capacity. The absence of the 522 MW of battery storage capacity from FPL's system would elevate FPL's system need for firm capacity in both the near- and long-term.

Q. Witness Rábago contends that power purchase agreements ("PPAs") are meeting FPL's interim need for capacity. Is FPL able to rely on PPAs to meet near-term capacity needs?

A. No. Using PPAs as an interim solution would leave FPL capacity resource constrained on a continuing basis. Moreover, unlike PPAs, the NWFL batteries will provide capacity to FPL's system and defer future resource additions over their life.

Additionally, as I mentioned above, the batteries will also reduce solar curtailment in the NWFL region and provide variable cost savings via energy arbitrage – neither of which would occur if FPL were to choose a short-sighted interim solution that leverages PPAs.

Q. Do you agree with witness Rábago's contention that three-hour batteries are less supportive than four-hour batteries in meeting a winter reliability need?

A. No. Regardless of a battery's capability to serve longer duration loads, a three-hour battery is sufficient to serve the period of time in winter when load is largest (typically around 7:00 a.m. to 8:00 a.m.). While maintaining the same MW hour capacity as the four-hour batteries, these three-hour batteries give the Company more flexibility to meet higher demands of load at a lower cost than a four-hour battery option. This is particularly beneficial in NWFL where these 3-hour batteries have more inverters, which allows more power to be delivered quickly to the grid. If there are sustained loads for a longer period of time, existing generation can be utilized to meet that load.

V. CDR/CILC

Q. Please summarize the assertions of intervenor witnesses concerning the value of the CDR and CILC programs.

A. Intervenor witnesses have widely varied views of the value that the CDR and CILC programs provide for FPL's system. At one end, FEL witness Marcelin argues that the programs barely provide any system value at all and that the credits associated with the programs should be eliminated. On the other hand, FRF witness Georgis and FIPUG witness Ly argue that, given the value the programs provide, the credits are currently

undervalued at $8.76/kW, and recommend increasing the credit to $10.07/kW and $12.32/kW, respectively. Walmart witness Perry also weighs in on the value of the programs, recommending that the CDR program credit be left at the current level.

Q. How do you interpret these contrary views of the intervenor witnesses?

A. My understanding based on my reading of the testimonies is that on one hand there is a perception that the programs, due to their limited historical use, are merely causing an unnecessary expense to be incurred by customers who cannot or do not participate in the programs. The contrary view is that the programs, though not often called upon, provide a flexible, dependable capacity resource that can be reliably called on by FPL when needed.

Q. Do you believe FPL's proposal fairly represents the appropriate balance of these interests?

A. Yes, I do. With my direct testimony, I provided an analysis that assessed the continued value of the programs and how they should be credited based on the value they provide to customers and the system. My recommended credit level of $6.22/kW, which is supported by a cost-effectiveness analysis that takes into account the system contribution of the programs, is an appropriate level that reflects the value the programs provide without requiring unnecessary contributions from customers who do not participate in the programs. Further details in support of my position are provided in the following subsections of this testimony.

A. *Value of CDR and CILC Programs to FPL*

Q. Do you agree with FRF witness Georgis' contention that the value of the CDR/CILC programs is heightened due to the limited capacity resource alternatives that are available to FPL?

A. No. FPL fully accounts for the value of these programs in both the near-term and long-term by comparing FPL's resource needs and system costs of a plan without these programs to a plan with these programs. This evaluation takes into consideration the availability of replacement resources, as well as the effect those replacement resources would have on the system. While witness Georgis is correct that FPL has limited capacity resource alternatives available, that constraint is already factored into the analysis and is *favorable* for the value of the programs. In fact, the analysis grants a favorable assumption that all CDR and CILC MWs will go away starting January 2026, and capacity will need to be added immediately to meet this need. This assumption forces capacity additions earlier in the resource plan as shown in Exhibit AWW-7, leading to higher costs in the plan without the programs and correspondingly attributing more value to the programs.

Q. How do you respond to witness Georgis' contention that the reliability value of the programs' interruptible load will increase as FPL incorporates more intermittent supply resources?

A. Again, FPL's analysis of the value of CDR and CILC includes projections for the future price of capacity, which is demonstrated in Exhibits AWW-7 and AWW-8. These exhibits also already factor in FPL's planned resources, including additional intermittent supply resources. The inclusion of these variables in FPL's analysis of the

value of the programs shows that FPL's analysis directly addressed the considerations raised by witness Georgis and did not undervalue the programs.

Q. Do you agree with witness Georgis that the proposed reduced incentive for CILC and CDR understates the value provided by those customers?

A. No. As I mentioned previously, FPL's analysis accurately and appropriately included the necessary assumptions and inputs to determine the value of the programs to FPL. In addition, the proposed incentive is still larger than the incentive when 75% of customers originally enrolled in the program.

B. *FPL's CDR and CILC Analysis*

Q. FIPUG witness Ly contends that FPL's analysis should not have modeled FPL on a standalone basis for the CDR/CILC analysis. What is your response?

A. For resource planning analysis, FPL has consistently modeled its system as a stand-alone system. This is similarly true for its analyses of resource options, whether those are supply-side or demand-side options. Modeling FPL's system in this way ensures that the analysis will not be skewed by an unreasonable assumption that neighboring utilities and systems could potentially have excess power during times of extreme need. FPL has no control over its neighboring utilities and therefore cannot ensure that these entities would have sufficient resources.

Additionally, the analysis supporting Exhibit AWW-7 was designed to measure the benefits to FPL's system of having CDR and CILC MW available – it did not model the operational effects of dispatching any form of load control. Therefore, modeling

FPL as a stand-alone system had no bearing on the calculated benefits of these programs.

Q. Do you agree with witness Ly's assertion that reliance on internal resources is contrary to the Commission's rules regarding load management and would defeat the purpose of having integrated electric utility systems?

A. No. I disagree with witness Ly that FPL can simply rely on other utilities to assist FPL with its resource adequacy issues. As I explained in my direct testimony, the supply of wholesale power available in the Florida market is limited and may become increasingly more so as utilities in the Southeast continue to anticipate (and potentially recognize) significant load growth. Given the potential lack of availability of external resources, each utility must plan to ensure its own resource adequacy.

Q. FIPUG witness Ly contends that FPL should not have assumed load control periods of six hours in its analysis and that doing so resulted in an assumption that the programs provided a lower percentage of the total program capacity. Is the six-hour assumption appropriate?

A. Yes. FPL's assumption of a six-hour limit of load control dispatch is consistent with the terms of the tariffed agreements for the CDR and CILC programs. It should also be noted that for the calculations in Exhibit AWW-7, FPL assumed 100% of the capacity for CDR and CILC in determining future resource needs. This assumption was favorable for the capacity benefits of the programs, as it excluded the six-hour dispatch limitation.

Q. How do you respond to witness Ly's contention that FPL did not consider the effect of customers switching from non-firm to firm service due to the credit reduction?

A. Customers switching from non-firm to firm (*i.e.*, dropping out of CDR/CILC) was a consideration in FPL's analysis, which is why FPL: (1) proposed setting the incentive level at a level higher than what it was when customers first entered the program; and (2) assumed that dispatch of the load control will abide by the terms set forth in the CDR/CILC tariff agreements, and not dispatch CDR and CILC under conditions reserved for extreme or emergency conditions. Intervenors have painted the picture of CDR/CILC being a form of "perfect capacity" that can be dispatched with few restrictions, but simultaneously disregard the likelihood that customers will be prone to exit the programs if FPL continually calls upon them for load control. The intervenors' picture is not in touch with the reality of the voluntary nature of these programs.

Q. To derive his recommendation for the CDR/CILC credit, FRF witness Georgis determines the value of capacity by incorporating SERC-SE capacity cost forecasts. Is such an approach sound?

A. No. FPL's analysis supporting its recommended CDR/CILC incentive is based on an FPL-specific projection of future new generation costs and incorporates how replacement generation options affect FPL's system. Using a representative capacity cost and growth rate from a generalized area is a broad and imprecise method of analyzing future generation costs and should be rejected. Likewise, witness Georgis'

recommendation that historical capacity prices be considered is also irrelevant – avoiding past capacity has absolutely no impact on future customer rates.

C. *Appropriate CDR/CILC Credit Level*

Q. Walmart witness Perry insists that lessening the credits is shortsighted and jeopardizes the benefits provided by the program. What is your response?

A. FPL's grid needs flexible, responsive resources that can be dispatched daily, if needed. The CDR and CILC programs lack that capability – if they were to be dispatched regularly, that would likely incite customers to drop out of the program, further compromising the ability to call upon those resources in the future. The intervenor witnesses present contradictory positions on this issue; namely, that a modest decrease in incentive level will undermine participation, but dispatching load control on a regular basis will not. FPL's proposed incentive, however, is targeted at maintaining participation in the programs and providing participants with value that is reflective of their benefit to the system.

Q. How do you respond to FRF witness Georgis' recommendation that the CILC/CDR credits be increased by 10% to $10.07/kW, or at a minimum to a 1.0 RIM ratio?

A. Based on FPL's analysis using specific data from FPL's system, setting the CDR/CILC credit incentive higher than $9.24/kW would result in a subsidy among participants in the program and FPL's general body of customers. Any recommendation to set the incentive higher than this level should be rejected outright.

Q. How do you respond to FIPUG witness Ly's recommendation that the CILC/CDR incentive level be increased in an amount equivalent to the increase in FPL's production plant in service since its last rate case?

A. The capacity prices of generation already installed on FPL's system have no bearing on the future rates of customers. FPL's method of calculating CILC/CDR incentive levels correctly examines future capacity and its effect on FPL's system and how the CILC and CDR programs help to avoid this capacity need.

VI. LARGE LOAD CONTRACT SERVICE

Q. What is your response to FEIA witness Ahmed's conclusion that FPL has not provided relevant technical studies to substantiate its proposed battery storage solution as the most cost-effective option for meeting data center energy demands?

A. FPL's planning over the past several years has continually shown battery storage to be the most cost-effective capacity option to meet its resource needs, whether these resource needs are driven by its existing load growth or by the addition of data center load. FPL's generation studies around the load growth in its LLCS tariffs was provided in discovery in the non-confidential response to FEL's Tenth Request for Production of Documents, No. 82.

Q. Is FEIA witness Ahmed correct that, excluding hydrogen, battery storage is the highest cost energy resource available in today's market on a Levelized Cost of Energy ("LCOE") basis?

A. Witness Ahmed's suggestion that batteries are the highest cost resource is incorrect and shows several very evident resource planning oversights on his part. First, the LCOE

is a fundamentally flawed approach to use when determining the cost-effectiveness of future resource options. LCOE offers a simplistic view of the cost of generation options – simply put, it effectively assumes that a generator is operating by itself without being connected to a utility system. Therefore, all the system effects on both fixed and variable costs are not considered in an LCOE calculation. Second, he provides no comparison of how much more "expensive" batteries are. Even if one were to accept LCOE, witness Ahmed provides no context concerning how it compares to other resource options. Third, he disregards the fact that other resource options (like combustion turbines) would not even be available. Lastly, recent updates to Lazard's LCOE projections – upon which witness Ahmed relies – show significant decreases in the cost of battery storage systems. So, even using an inappropriate metric like LCOE/levelized cost of storage would show that battery storage systems are a cost-competitive option for serving resource needs.

Q. Is FPL's proposal to deploy 6.1 GW of battery energy storage systems to serve 3.0 GW of data center load reasonable?

A. Yes. FPL's proposed additional battery resources are designed to meet FPL's reliability criteria for its entire system, even with additional load from data centers being added. The amount of batteries needed to do this is consistent with FPL's planning processes, but will ultimately be dependent on the final amount of large load added to the system over the four-year period.

FPL's "battery-to-load" ratio is based on extensive planning efforts that calculate the amount of firm capacity. The large amounts of load potential from data centers would

lead to large amounts of batteries being added – as these batteries are added to the system, the amount of firm capacity from each incremental battery decreases.

Q. Is FPL proposing 2-hour batteries, as FEIA witness Ahmed alleges?

A. No. FPL's battery storage resource options all have a 4-hour duration.

Q. What is your response to FEIA witness Ahmed's contention that FPL has not demonstrated that short-duration batteries are suitable for serving high-load, high-availability customers?

A. FPL's usage of batteries to determine the IGC for LLCS is based on its established resource planning principles to determine resource needs for its entire system, which are intended to ensure that FPL can reliably serve its customers with a cost-effective generation supply. Application of these principles leads to the selection of battery storage resources – which most cost-effectively provide stable dispatchable capacity – to meet incremental system capacity needs created through the addition of a high-load, high-availability customer.

Q. What is your response to FEIA witness Ahmed's contention that, if tax incentives disappear, the financial justification for battery solutions would no longer be supportable?

A. FPL's planning assumptions are made on the basis of current tax law and its application of investment tax credits ("ITC") to batteries. The OBBB, and its treatment of tax credits, now represents the current law. Based on FPL's review of the OBBB's impact, FPL currently projects that its 2026-2029 solar and battery additions will maintain their projected tax credits. Therefore, FPL's pricing for batteries to serve potential data center load is anticipated to maintain the previously projected tax benefits.

Q. What is your response to FEIA witness Ahmed's claim that the load profile of data centers can offer FPL additional benefits to the dispatch of its generation resources?

A. FPL considered the impact of data center load on the dispatch of its fossil fleet, and incorporated these effects into its calculation of the IGC. With regard to FEIA witness Ahmed's claim that data centers offer additional justification for extending FPL's nuclear fleet, FPL currently projects that its nuclear fleet will run at its maximum available capacity without the addition of data center load. Therefore, there are no additional "benefits" to FPL's nuclear units from data center load.

Q. Does this conclude your rebuttal testimony?

A. Yes.

Exhibit AWW-9: Initial Northwest Florida Battery Evaluation

Common to all Plans Retirements / Additions	Year	{Base Case} 2024 Preliminary TYSP 9-1-23 Fuel Forecast 11-1-23 Load Scenario	Summer RM%	{Case 1} 2024 Preliminary TYSP 9-1-23 Fuel Forecast 11-1-23 Load Scenario 250 MW Battery (NW FL)	Summer RM%	{Case 2} 2024 Preliminary TYSP 9-1-23 Fuel Forecast 11-1-23 Load Scenario 238 MW 1x0 CT (NW FL)	Summer RM%	Year
+97 MW GE Upgrades, +15 MW OCEC Rotor Upgrade Shell PPA (885 MW)	2023	745 MW Solar 447 MW SolarTogether Extension	21.2	745 MW Solar 447 MW SolarTogether Extension	21.2	745 MW Solar 447 MW SolarTogether Extension	21.2	2023
+72 MW GE Upgrades Daniel 1&2 (502 MW)	2024	894 MW SoBRA 745 MW SolarTogether Extension	22.5	894 MW SoBRA 745 MW SolarTogether Extension	22.5	894 MW SoBRA 745 MW SolarTogether Extension	22.5	2024
+6 MW GE Upgrades +29 MW OCEC Rotor Upgrade Pea Ridge (12 MW) Crist 4 (75MW)	2025	894 MW SoBRA 596 MW Solar Together Extension	23.1	894 MW SoBRA 596 MW Solar Together Extension	23.1	894 MW SoBRA 596 MW Solar Together Extension	23.1	2025
---	2026	2,235 MW Solar	23.8	2,235 MW Solar **250 MW Battery (NW FL)**	23.8	2,235 MW Solar **238 MW 1x0 CT (NW FL)**	23.8	2026
+20 MW GE Upgrades Broward South (4 MW) Crist 5 (75 MW)	2027	2,235 MW Solar	23.3	2,235 MW Solar	24.3	2,235 MW Solar	24.2	2027
Lansing Smith 3A (32 MW)	2028	2,235 MW Solar	22.2	2,235 MW Solar	23.1	2,235 MW Solar	23.1	2028
Scherer 3 (215 MW)	2029	2,235 MW Solar	20.3	2,235 MW Solar	21.2	2,235 MW Solar	21.1	2029
Perdido 1&2 (3 MW)	2030	2,235 MW Solar 400 MW Battery	20.0	2,235 MW Solar 100 MW Battery	20.0	2,235 MW Solar 100 MW Battery	20.0	2030
---	2031	2,235 MW Solar 800 MW Battery	20.0	2,235 MW Solar 500 MW Battery	20.0	2,235 MW Solar 500 MW Battery	20.0	2031
---	2032	2,235 MW Solar 900 MW Battery	20.0	2,235 MW Solar 1,200 MW Battery	20.0	2,235 MW Solar 1,100 MW Battery	20.0	2032
Manatee 1-2 (1,590 MW)	2033	2,235 MW Solar 1,800 MW Battery	20.0	2,235 MW Solar 1,300 MW Battery	20.0	2,235 MW Solar 2,900 MW Battery	20.7	2033
CPVRR ($M, 2023-2070):		**87,296**		**87,109**		**87,529**		
CPVRR Differential from Base Case:				**(187)**		**233**		
CPVRR Differential - Battery vs. CT:				**(420)**		**---**		

WACC = 8.20%

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Initial Northwest Florida Battery Evaluation
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