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September 23, 2019

**VIA ELECTRONIC FILING**
Mr. Adam Teitzman
Commission Clerk
Florida Public Service Commission
Betty Easley Conference Center
2540 Shumard Oak Boulevard, Room 110
Tallahassee, FL 32399-0850

Re: Docket No. 20190061-EI

Dear Mr. Teitzman:

Pursuant to Order No. PSC-2019-0272-PCO-EI, Florida Power & Light Company submits the attached rebuttal testimony and exhibits of witnesses Matthew Valle, William F. Brannen, Juan E. Enjamio, Scott R. Bores, Terry Deason and Lon M. Huber in support of its Petition for approval of FPL SolarTogether Program and Tariff.

Please contact me if you or your Staff has any questions regarding this filing.

Sincerely,

*s/ Maria Jose Moncada*
Maria Jose Moncada

Attachments

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

**FLORIDA POWER & LIGHT COMPANY**

**REBUTTAL TESTIMONY OF MATTHEW VALLE**

**DOCKET NO. 20190061-EI**

**SEPTEMBER 23, 2019**

## I. INTRODUCTION

**Q. Please state your name and business address.**

A. My name is Matthew Valle. My business address is Florida Power & Light Company, 700 Universe Boulevard, Juno Beach, Florida 33408.

**Q. Did you previously submit 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:

- MV-2 – STR – Revised Tariff No. 8.932 in Legislative and Proposed Formats

**Q. What is the purpose of your rebuttal testimony?**

A. The purpose of my rebuttal testimony is to respond to and address the positions and recommendations presented by Office of Public Counsel ("OPC") witness Dauphinais, Vote Solar witness Cox, Walmart witness Chriss, Southern Alliance for Clean Energy ("SACE") witness Jacob and Florida Public Service Commission ("Commission") Staff witness Hinton. In addition, I describe the FPL SolarTogether Program's ("Program") design changes based on the updated economic analysis performed in response to questions raised by Staff, described in detail by FPL witness Enjamio, and in response to some of the concerns raised by witnesses who have submitted testimony in this proceeding.

**Q. Please summarize your rebuttal testimony.**

A. Commission Staff witness Hinton suggests in his testimony that FPL SolarTogether is different in terms of cost recovery and the manner in which generation is added. He

is right, in part. But its uniqueness lies not in the foundational principles of resource planning or even in adoption of voluntary programs to encourage solar participation. To the contrary, my rebuttal testimony explains that FPL SolarTogether features elements the Commission previously has seen and approved. First, it is a voluntary tariff through which customers can choose to contribute directly to solar development in Florida. Second, the Program enables construction of cost-effective solar using the same resource planning standard FPL has for years presented to the Commission. And, yes, FPL SolarTogether is also new. The economics of solar energy have advanced over the past decade, and, seizing on that progress, FPL now presents the Commission, its customers and the state of Florida a Program that allows participants and the general body of customers to share program costs and benefits. This concept not only satisfies an increasing level of customer demand for expanded access to solar energy but as I later explain in my testimony, it creates benefits for the general body of customers that might not otherwise exist.

In addition, my rebuttal testimony describes certain program enhancements in response to questions and concerns that have been raised, which enhancements are enabled as a result of an updated economic analysis showing that the benefits generated by FPL SolarTogether are even greater than originally estimated. In short, the program changes will allow the general body of customers to share in even more of the benefits of this initiative. My testimony also explains that, contrary to the testimony of intervenor witnesses, FPL SolarTogether expands access to solar for all customers, not just a few. Finally, I explain that using Purchase Power Agreements

("PPA") would have introduced significant uncertainties that could jeopardize the Program's ability to meet customer demands.

## II. PROGRAM DESIGN

**Q. Commission witness Hinton observes that FPL SolarTogether seems to differ in structure from the manner in which generation has been added historically in Florida. What is FPL's response?**

A. While it is true that the use of a voluntary tariff as the mechanism to enable the addition of generation is structurally different from our historical approach, the Program's design is simply the latest innovation in the ongoing logical evolution of how solar resources are being incorporated into Florida's generation mix. FPL SolarTogether recognizes solar's unique benefits and the growing desire among Floridians to participate in the advancement of solar, but it is also firmly rooted in the Commission's long-standing commitment to ensuring cost-effectiveness and protecting customers.

**Q. Please explain the evolution to which you refer.**

A. The manner in which solar has grown in Florida has evolved over the years. In 2008, FPL sought approval for the first large-scale solar generation ever built in Florida, pursuant to legislation passed that year that recognized the value to the public of investing in renewable energy despite its relatively higher cost at the time. The Commission approved FPL's proposal to add 110 MW of solar – which cost

approximately $5,600 per kW to build – for recovery through the Environmental Cost Recovery Clause.

In 2014, the Commission approved SolarNow, a voluntary solar program that provides FPL customers the opportunity to participate in the construction of small-scale, community-based solar projects by contributing $9 per month. Customer participation in the program reached 26,670 by 2017 and has grown to more than 50,000 today.

During 2016, FPL built approximately 224 MW of new solar generation across three sites to serve its customers – essentially tripling the amount of solar in the state. For the first time, solar had been built cost-effectively in Florida, and the costs were included in rate base.

In late 2016, the Commission approved FPL's base rate settlement agreement, which included a new mechanism authorizing FPL to construct up to 300 MW a year of new solar generation for inclusion in rate base as long as the projects were determined to be cost-effective. That Solar Base Rate Adjustment ("SoBRA") mechanism facilitated the addition of 894 MW of solar resources that are currently serving FPL customers and another 298 MW on track to be placed in service in 2020. The average projected price for FPL SoBRA Projects has been $1,413/kW$_{AC}$ – dramatically lower than it had been just a decade ago. Subsequently, the Commission approved similar SoBRA mechanisms for Duke Energy Florida and Tampa Electric Company. In total,

the SoBRA approach is providing the impetus for the cost-effective addition of roughly 2,500 MW of solar across Florida.

**Q. What should the Commission glean from this history?**

A. A few things:

- The cost recovery mechanisms through which solar generation has been introduced have varied over the years: clause recovery; a voluntary tariff; rate base with change in rates at the time of a rate case; and a discrete base rate adjustment mechanism.
- FPL and Florida have not been afraid to innovate and lead in the development of cost-effective solar, and the Commission's regulatory policies supporting innovation (e.g., the SoBRA mechanism) have benefitted not only FPL's customers but the state of Florida as a whole.
- Floridians' interest in and support for reliable, cost-effective solar energy is very real, and it continues to grow. Thus, FPL SolarTogether is important because it offers a new choice for customers.
- The cost of solar has decreased substantially over the last decade, creating even better opportunities for customers to directly participate in advancing reliable, cost-effective solar.

**Q. In response to Commission witness Hinton, you noted that the FPL SolarTogether Program is rooted in the Commission's long-standing commitment to ensuring cost-effectiveness and protecting customers. What aspects of the Program align with Commission precedent?**

A. Most fundamentally, the FPL SolarTogether solar energy centers, like those built in 2016 and those constructed pursuant to the SoBRA mechanism, are projected to be cost-effective for all of FPL's customers. As explained by FPL witness Enjamio, the methodology employed to measure the cost-effectiveness of the Program's generation additions is the same one FPL has presented to the Commission for many years. Also, the general body of customers will receive the projected benefits of the Program's generation additions just like they receive the projected benefits of any generation addition approved by the Commission. Finally, similar to the Commission-approved SolarNow offering, FPL SolarTogether would be an optional tariff pursuant to which customers can choose to make voluntary payments that directly support the construction of solar in Florida.

**Q. Commission witness Hinton testifies that the manner in which the Program allocates the costs and benefits of the generation departs from traditional cost recovery. What is your response?**

A. Yes, Witness Hinton is correct; however, FPL views this difference as a step forward, rather than as a negative. First, as I stated earlier, cost recovery for solar generation has taken different forms over the past decade, evolving as Florida has sought to increase the amount of solar generation in its generation mix. Second, as explained by FPL witnesses Deason and Huber, the innovative structure of the program creates

benefits for the general body of customers that might not otherwise exist. In short, if FPL can create a program that provides for voluntary subscriptions by customers very interested in a particular form of generation, while providing the general body of customers with projected benefits in the same way that generation planning has been modeled for years, the result is an innovative program that benefits all FPL customers.

**Q. Staff witness Hinton observes that a utility is not required to obtain prior approval from the Commission to construct certain facilities. Could new solar generation be added to FPL's system without a tariff offering?**

A. Yes, but that would ignore the primary purpose served by this program, which is to help meet a growing customer demand for more direct involvement in the advancement of solar and to offer customers more choices. Customers have requested that FPL, as their electric service provider, afford them options for participation. Tens of thousands of residential and small business customers have expressed interest in participating, and an impressive cross-section of FPL's largest customers – ranging from counties to corporations – have already pre-registered for Program. FPL SolarTogether uniquely serves a segment of customers' interest in participating in solar energy and receiving direct bill benefits while also sharing some of those benefits with the general body of customers.

**Q. Witness Dauphinais expresses concern that FPL SolarTogether is "involuntary for non-participants." Do you agree?**

A. No. Because FPL SolarTogether is cost-effective, both participants and the general body of customers are projected to receive benefits. Witness Dauphinais's

observation that projections involve risk ignores the way in which the generation under this program in particular, like FPL's generation in general, is planned for the benefit of all our customers. All generation planning is inherently subject to fluctuations in fuel and emission costs.

Mr. Dauphinais also fails to acknowledge that, from the perspective of the general body of customers, FPL SolarTogether compares very favorably to private customer-owned solar. Under the state's net metering rule, utilities are required to compensate owners of customer-owned private solar installations at the full retail rate for excess energy delivered to the grid. This results in each utility's general body of customers paying private solar owners more than the actual value of the energy their systems provide to a grid, resulting in a cross-subsidy. Today, FPL estimates that this cross-subsidization has an annual impact of $13 million on its general body of customers. If private customer-owned solar systems totaling 1.49 GW – the amount of solar generation proposed under FPL SolarTogether – were to be installed and net-metered in FPL's service area, the resulting cross-subsidy would be estimated to grow to $121 million by 2022. Over the 30-year life of the generating assets, this would accumulate to a present value of more than $1 billion without taking into account any changes in electricity rates or net metering rules. Contrast this to the projections for FPL SolarTogether that show $112 million of savings for the general body of customers over the same 30-year period.

## III. UPDATED PROGRAM ECONOMICS

**Q. OPC witness Dauphinais asserts that the general body of customers bears all of the risks associated with FPL SolarTogether's costs and benefits. Please explain whether the Program reasonably allocates benefits and costs for participants and the general body of customers.**

A. Witness Dauphinais's contention is not correct. As originally filed, the program was designed such that participants and the general body of customers shared in both the costs and benefits of the program. In exchange for contributing four percent of the revenue requirements, the general body was to share in 20% of the benefits. While I believe this allocation of benefits between participants and the general body was reasonable, an updated economic analysis was performed, and the results are even more favorable for both groups.

**Q. Please describe the updated FPL SolarTogether economic analysis and the resulting changes to the Program's benefit sharing feature.**

A. There are two improvements to the Program cost-effectiveness – an overall reduction to the project costs and an update to the non-fuel benefits. FPL witness Enjamio explains that the Company updated the FPL SolarTogether economic analysis to incorporate inputs that Commission Staff requested in the discovery process and to account for the elimination of allowance for funds used during construction ("AFUDC"). FPL witness Bores explains why Projects 3, 4 and 5 no longer will qualify for AFUDC. These updates improve the CPVRR benefit by $110 million, from $139 million to $249 million.

With more benefits to share, FPL is able to adjust the net benefit sharing allocations. Under the original economic analysis, FPL had based the Program's pricing structure on an 80%-20% allocation of the $139 million in projected net benefits in the base case. This meant that participants would have received approximately $111 million of the net benefits and the general body of customers would have received $28 million. Under the updated economic analysis, FPL proposes to base the Program's pricing structure on a 55%-45% allocation of the $249 million in net benefits. This results in $137 million for participants and $112 million for the general body of customers. In other words, the economics for both the general body and the participants have improved significantly.

Under updated pricing and allocation, the general body of customers will not pay for any of the cost of the solar centers, but now will receive 45% of the net benefits under the base case. Conversely, the participants are paying all of the costs while receiving just over half of the benefits. While there may be a range of different percentages that could be drawn, any one of which might be found to be reasonable, certainly this proposed allocation should be considered reasonable from the standpoint of the general body of customers.

**Q. Does FPL also propose any changes to cost sharing under the Program?**

A. Yes. FPL proposes that, based on the new analysis, contributions from the participants will total 104.5% of the Program base revenue requirements. This means the general body of customers is not expected to contribute to the Program costs and are expected to receive approximately $56 million in fixed base benefits that are not

subject to fluctuations in fuel or emissions costs. As explained by FPL witness Bores and reflected in Exhibit MV-2, the updated pricing reflects a slight decrease in the subscription cost per kilowatt of capacity, a reduction in the first-year benefit rate per kilowatt hour and an increase in the annual benefit escalation rate.

These adjustments maintain an estimated seven-year simple payback and allow the Program to continue to meet the principles laid out in my direct testimony while incorporating additional protections for the general body of customers. The bases for the updated economic analysis are described by FPL witnesses Enjamio and Bores. For ease of reference, side-by-side comparisons of the cost and benefit sharing are provided below in Tables 1 and 2. Table 3 shows the updated sensitivity analysis under the new pricing.

**Table 1 – CPVRR ($MM)**

| | Petition Filing | | | Updated Analysis | | |
|---|---|---|---|---|---|---|
| | Costs | Benefits | Net (Fav)/Unfav | Costs | Benefits | Net (Fav)/Unfav |
| Participants | $1,321 | $1,432 | ($111) | $1,315 | $1,452 | ($137) |
| General Body of Customers | $49 | $77 | ($28) | ($56) | $56 | ($112) |
| **Total** | **$1,370** | **$1,509** | **($139)** | **$1,259** | **$1,508** | **($249)** |

**Table 2 – Pricing**

| | Petition Pricing | Updated Pricing |
|---|---|---|
| **Subscription Rate** | $6.76 per kW | $6.73 per kW |
| **Benefit Rate** | $0.034288 per kWh | $0.033910 per kWh |
| **Benefit Rate Escalation** | 1.45% annually | 1.70% annually |
| **Simple Payback** | 7 years | 7 years |

**Table 3 – Sensitivity Analysis ($MM)**

| Fuel Cost Forecast | Environmental Compliance Cost Forecast | Net Difference (Fav)/Unfav |
|---|---|---|
| High Fuel Cost | Low $CO_2$ | ($323) |
| High Fuel Cost | Mid $CO_2$ | ($414) |
| High Fuel Cost | High $CO_2$ | ($563) |
| Mid Fuel Cost | Low $CO_2$ | ($159) |
| Mid Fuel Cost | Mid $CO_2$ | ($249) |
| Mid Fuel Cost | High $CO_2$ | ($401) |
| Low Fuel Cost | Low $CO_2$ | $8 |
| Low Fuel Cost | Mid $CO_2$ | ($82) |
| Low Fuel Cost | High $CO_2$ | ($232) |

## IV. PROGRAM CAPACITY ALLOCATION

**Q. Please respond to Vote Solar witness Cox's concern that FPL's right to reallocate could prevent participation by any customer group.**

A. The reason for FPL to have the ability to reallocate is that it provides operational flexibility to meet customer needs that could vary over the life of the Program. When there is unsubscribed capacity, if appropriate, adjustments will be made to accommodate waitlisted customers. Any potential future reallocation would be premised on historical behavior and trends among the customer groups. Contrary to Vote Solar witness Cox, the point would be to match – not counter – customers' expressed desire to participate. For additional transparency, FPL would have no objection to reporting allocation changes.

**Q. How accurate is Vote Solar witness Cox's assessment of the outreach FPL performed to different customer classes?**

A. Vote Solar witness Cox's claim that the "interests of small business and residential customers don't seem to have been a major concern for FPL in program design or customer engagement" is not accurate. In reality, FPL SolarTogether's development and design has incorporated residential and small business customers from its inception and has incorporated customer input in order to better serve them. For example, one of the Program's features designed specifically in response to residential customer feedback is the detailed online calculator that will allow potential participants to truly understand the Program's economics. Although witness Cox misperceives this offering as a threat to private customer-owned solar, the reality is

that the calculator will provide customers what they have been asking for: the ability to examine solar economics in a way that private solar companies often do not provide. Certainly, there is no single right way to design a customer solar offering that satisfies all interests, but FPL SolarTogether builds on other solar programs, particularly in terms of inclusivity and economics.

**Q. Has the Company seen interest in the Program from residential and small business customers?**

A. Yes, the interest from residential and small business customers has been very strong. In the last few months, FPL's outreach to residential and small business customers so far has generated affirmative interest from more than 55,000 residential and nearly 2,500 small and medium business customers. In addition, FPL has received interest from a number of commercial, industrial and governmental customers that were not pre-registered. Of course, FPL does not expect all current leads to actually sign up for the program once enrollment commences; however, the Company does believe there will be a high conversion rate – and FPL receives additional interest in the program nearly every day.

**Q. SACE witness Jacob and Vote Solar witness Cox recommend that the Program facilitate low-income customer participation. Does the Program enhance low-income customers' opportunity to participate in solar?**

A. Yes. Today residential customers can participate in solar in two ways – through private customer-owned solar and FPL's SolarNow program. Private customer-owned solar options, including cash purchase, leasing or loans, are limited by a variety of factors such as home ownership, roof viability and a customer's financial

and credit circumstances. For these reasons, private solar simply is not an option for many people, including low-income customers. FPL's SolarNow program enables customers to support community-based solar installations by contributing $9 per month, but because it does not provide a monthly bill credit, participation can be out of reach for low-income customers.

Through the proposed FPL SolarTogether Program, FPL removes most of the traditional barriers for low-income participation in solar. For example, there are no upfront costs, no long-term commitment and no penalty for leaving. The program's direct bill benefits, over time, result in a favorable payback. In addition, although there is a net premium to participate in FPL SolarTogether in the early years, it equates to an average monthly impact of less than $2 a month for a typical residential customer who wants to be 100% solar.

**Q. Does FPL believe that access to the Program for low-income customers could be enhanced?**

A. Potentially, yes. FPL supports the idea of providing opportunities for participation in solar programs to as many customers as possible. As suggested by Vote Solar witness Cox and SACE witness Jacob, if a future FPL SolarTogether phase is warranted, FPL would consider introducing a component to the Program that reserves capacity for low-income customers.

## V. PROJECT DEVELOPMENT & PROCUREMENT

**Q. Some intervenor witnesses suggest that FPL should examine competitive solicitations of solar power, such as PPAs. Explain why FPL did not use PPAs as part of the Program.**

A. As a threshold matter, these witnesss have overlooked the fact that the generation FPL proposes to build as part of the Program boasts the lowest-cost solar the Company has ever constructed and is expected to generate among the highest CPVRR benefits per site for customers.

Contrary to the intervenors' suggestion, PPAs were not suitable for the Program. The use of PPAs would require FPL to significantly alter the cost and benefit structure of the Program to account for the different manner in which costs are realized compared to a solar site constructed and operated by FPL. Combined with varying cost and production levels across PPA projects, using PPAs would have altered the Program's economic profile and potentially would reduce customer satisfaction.

Additionally, FPL had to balance price, risk, and terms with timing necessary to meet customer demand under the Program. Outsourcing the design, development, construction, ownership, and operations of a set of the Program's generation assets through a PPA presented too many challenges and risks. The actions of a third party developer are rationally governed by the terms of their PPA, not by the overall value or customer impact. Economic decisions by the solar developer regarding such things

as in-service timing, outage responses or production expectations could have a significant negative impact on the implementation of the Program, or satisfaction of those enrolled in it. If FPL were instead to negotiate stronger "non-market" terms and conditions to protect the integrity of the Program, this would be reflected in higher PPA prices with longer times to negotiate which would likewise put the Program at risk.

**Q. Do PPAs present risks aside from their structure and terms?**

A. Yes. In addition to cost structure and terms, many developers seek PPAs with no intent of long-term ownership. Their intent is to sell the PPA to another party and move on to "flipping" their next project. This introduces another element of uncertainty. Direct development and ownership of the solar projects included in the Program eliminates many of these issues and allows FPL to properly balance project decisions aimed at promoting the overall Program's success. The competitive economics and the flexible terms that generated such a favorable customer response simply could not have been offered if the Program were underpinned by PPAs.

## VI. RENEWABLE ENERGY CERTIFICATES

**Q. Walmart witness Chriss recommends that the tariff clearly articulate the program's renewable energy certificate ("REC") retirement feature in order to avoid participants misrepresenting their participation and consumption of renewable energy. What is FPL's intent with respect to the RECs produced by the FPL SolarTogether Projects?**

A. The intent of the Program was to retire RECs at the participant's request. To provide clarity as suggested by Walmart witness Chriss, FPL has revised Tariff 8.932, which is attached as Exhibit MV-2.

**Q. Does this conclude your rebuttal testimony?**

A. Yes.

**FLORIDA POWER & LIGHT COMPANY** **Original Sheet No.8.932**

FPL SOLARTOGETHER RIDER
(OPTIONAL PROGRAM)

RATE SCHEDULE: STR

AVAILABLE:

The FPL SolarTogether$^{SM}$ Rider ("FPL SolarTogether" or "the Program") is available in all territory served, subject to subscription availability. This optional program allows FPL customers to subscribe to a portion of universal solar capacity built for the benefit of the Program and receive a credit for the actual solar production associated with their subscription.

APPLICATION:

In conjunction with the otherwise applicable metered rate schedule. All rates and charges under the customers' otherwise applicable metered rate schedule shall apply.

MONTHLY SUBSCRIPTION:

The Monthly Subscription shall be equal to the sum of the ***Monthly Subscription Charge + Monthly Subscription Credit*** as follows:

| Monthly Subscription | |
|---|---|
| Subscription Charge $/kW-Month | Subscription Credit ¢/kWh |
| See Sheet No. 8.934 | See Sheet No. 8.934 |

LIMITATION OF SERVICE:

Any customer taking service under a metered rate schedule who has no delinquent balances with FPL is eligible to participate. Eligible customers may elect a subscription level in 1 kW units representing up to 100% of their previous 12-month total kWh usage. Increases in number of units purchased will be limited to once per year and subject to program availability.

BILLING:

Participants are subject to the minimum bill on their otherwise applicable rate schedule. The FPL SolarTogether Monthly Subscription Charge and offsetting Monthly Subscription Credit will appear as separate line items on a participant's bill during every month of enrollment, and are subject to all applicable taxes and fees.

Monthly Subscription Credit amounts may not result in a total bill less than zero ($0). Any excess credit amounts will be applied in subsequent months to ensure participant total bill amounts meet this requirement.

TERMS OF SERVICE:

Not less than one (1) billing cycle. Participants may, at any time following their first billing cycle, terminate their participation ("Voluntary Termination") or reduce the number of subscribed units purchased. Participants may be terminated from the program by FPL if the customer becomes delinquent on the customer's electric service account or for failure to satisfy eligibility requirements ("Involuntary Termination"). Upon either Voluntary or Involuntary Termination, the account is prohibited from re-enrolling for a twelve (12) month period.

(Continued on Sheet No. 8.933)

**Issued by: Tiffany Cohen, Director, Rates and Tariffs**
**Effective:**

**FLORIDA POWER & LIGHT COMPANY** **Original Sheet No. 8.933**

(Continued from Sheet No. 8.932)

SPECIAL PROVISIONS:

If the customer moves within FPL's service territory, program participation may continue at a new service address with no impact the customer's program enrollment date subject to the limitations and terms outlined above. Notification to transfer participation must be made by the customer to the Company and the Company will have 45 days to complete the transfer.

Upon customer request, FPL will retire the renewable energy certificate (RECs) associated with the customer's subscription. Notification to retire RECs must be made by the customer to the Company. The accumulation of RECs associated with the participant's subscription will begin following notification and FPL will provide participants with REC retirement summary reports periodically throughout the year.

RULES AND REGULATIONS:

Service under this rider is subject to orders of governmental bodies having jurisdiction and to the currently effective "General Rules and Regulations for Electric Service" on file with the Florida Public Service Commission. In case of conflict between any provisions of this schedule and said "General Rules and Regulations for Electric Service" the provisions of this rider shall apply. The participant subscription is neither a security nor an ownership interest in the solar asset and therefore no owned interest is to be surrendered, sold, or traded.

(Continued on Sheet No. 8.934)

**Issued by: Tiffany Cohen, Director, Rates and Tariffs**
**Effective:**

**FLORIDA POWER & LIGHT COMPANY** **Original Sheet No. 8.934**

(Continued from Sheet No. 8.933)

MONTHLY SUBSCRIPTION
FPL SOLARTOGETHER PARTICIPANT RATES

| Phase 1 | | |
|---|---|---|
| Participant Program Year | Subscription Charge $/kW-Month | Subscription Credit ¢/kWh |
| 1 | $6.73 | (3.39101) |
| 2 | $6.73 | (3.44866) |
| 3 | $6.73 | (3.50728) |
| 4 | $6.73 | (3.56691) |
| 5 | $6.73 | (3.62755) |
| 6 | $6.73 | (3.68921) |
| 7 | $6.73 | (3.75193) |
| 8 | $6.73 | (3.81571) |
| 9 | $6.73 | (3.88058) |
| 10 | $6.73 | (3.94655) |
| 11 | $6.73 | (4.01364) |
| 12 | $6.73 | (4.08187) |
| 13 | $6.73 | (4.15127) |
| 14 | $6.73 | (4.22184) |
| 15 | $6.73 | (4.29361) |
| 16 | $6.73 | (4.36660) |
| 17 | $6.73 | (4.44083) |
| 18 | $6.73 | (4.51633) |
| 19 | $6.73 | (4.59310) |
| 20 | $6.73 | (4.67119) |
| 21 | $6.73 | (4.75060) |
| 22 | $6.73 | (4.83136) |
| 23 | $6.73 | (4.91349) |
| 24 | $6.73 | (4.99702) |
| 25 | $6.73 | (5.08197) |
| 26 | $6.73 | (5.16836) |
| 27 | $6.73 | (5.25622) |
| 28 | $6.73 | (5.34558) |
| 29 | $6.73 | (5.43645) |
| 30 | $6.73 | (5.52887) |

**Issued by: Tiffany Cohen, Director, Rates and Tariffs**
**Effective:**

**FLORIDA POWER & LIGHT COMPANY** **Original Sheet No. 8.932**

FPL SOLARTOGETHER RIDER
(OPTIONAL PROGRAM)

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| Monthly Subscription | |
|---|---|
| Subscription Charge<br>$/kW-Month | Subscription Credit<br>¢/kWh |
| See Sheet No. 8.934 | See Sheet No. 8.934 |

LIMITATION OF SERVICE:

Any customer taking service under a metered rate schedule who has no delinquent balances with FPL is eligible to participate. Eligible customers may elect a subscription level in 1 kW units representing up to 100% of their previous 12-month total kWh usage. Increases in number of units purchased will be limited to once per year and subject to program availability.

BILLING:

Participants are subject to the minimum bill on their otherwise applicable rate schedule. The FPL SolarTogether Monthly Subscription Charge and offsetting Monthly Subscription Credit will appear as separate line items on a participant's bill during every month of enrollment, and are subject to all applicable taxes and fees.

Monthly Subscription Credit amounts may not result in a total bill less than zero ($0). Any excess credit amounts will be applied in subsequent months to ensure participant total bill amounts meet this requirement.

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SPECIAL PROVISIONS:

If the customer moves within FPL's service territory, program participation may continue at a new service address with no impact the customer's program enrollment date subject to the limitations and terms outlined above. Notification to transfer participation must be made by the customer to the Company and the Company will have 45 days to complete the transfer.

Upon customer request, FPL will retire the renewable energy certificate (RECs) associated with the customer's subscription. Notification to retire RECs must be made by the customer to the Company. The accumulation of RECs associated with the participant's subscription will begin following notification and FPL will provide participants with REC retirement summary reports periodically throughout the year.

RULES AND REGULATIONS:

Service under this rider is subject to orders of governmental bodies having jurisdiction and to the currently effective "General Rules and Regulations for Electric Service" on file with the Florida Public Service Commission. In case of conflict between any provisions of this schedule and said "General Rules and Regulations for Electric Service" the provisions of this rider shall apply. The participant subscription is neither a security nor an ownership interest in the solar asset and therefore no owned interest is to be surrendered, sold, or traded.

(Continued on Sheet No. 8.934)

**Issued by: Tiffany Cohen, Director, Rates and Tariffs**
**Effective:**

**FLORIDA POWER & LIGHT COMPANY** **Original Sheet No. 8.934**

(Continued from Sheet No. 8.933)

MONTHLY SUBSCRIPTION
FPL SOLARTOGETHER PARTICIPANT RATES

| Phase 1 | | |
|---|---|---|
| Participant Program Year | Subscription Charge $/kW-Month | Subscription Credit ¢/kWh |
| 1 | $6.73 | (3.39101) |
| 2 | $6.73 | (3.44866) |
| 3 | $6.73 | (3.50728) |
| 4 | $6.73 | (3.56691) |
| 5 | $6.73 | (3.62755) |
| 6 | $6.73 | (3.68921) |
| 7 | $6.73 | (3.75193) |
| 8 | $6.73 | (3.81571) |
| 9 | $6.73 | (3.88058) |
| 10 | $6.73 | (3.94655) |
| 11 | $6.73 | (4.01364) |
| 12 | $6.73 | (4.08187) |
| 13 | $6.73 | (4.15127) |
| 14 | $6.73 | (4.22184) |
| 15 | $6.73 | (4.29361) |
| 16 | $6.73 | (4.36660) |
| 17 | $6.73 | (4.44083) |
| 18 | $6.73 | (4.51633) |
| 19 | $6.73 | (4.59310) |
| 20 | $6.73 | (4.67119) |
| 21 | $6.73 | (4.75060) |
| 22 | $6.73 | (4.83136) |
| 23 | $6.73 | (4.91349) |
| 24 | $6.73 | (4.99702) |
| 25 | $6.73 | (5.08197) |
| 26 | $6.73 | (5.16836) |
| 27 | $6.73 | (5.25622) |
| 28 | $6.73 | (5.34558) |
| 29 | $6.73 | (5.43645) |
| 30 | $6.73 | (5.52887) |

**Issued by: Tiffany Cohen, Director, Rates and Tariffs**
**Effective:**

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

**FLORIDA POWER & LIGHT COMPANY**

**REBUTTAL TESTIMONY OF WILLIAM F. BRANNEN**

**DOCKET NO. 20190061-EI**

**SEPTEMBER 23, 2019**

**Q. Please state your name and business address.**

A. My name is William F. Brannen. My business address is NextEra Energy Resources, LLC ("NEER"), 700 Universe Boulevard, Juno Beach, Florida, 33408.

**Q. Did you previously submit direct testimony in this proceeding?**

A. Yes.

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

A. No.

**Q. What is the purpose of your rebuttal testimony?**

A. The purpose of my rebuttal testimony is to address the testimony of Office of Public Counsel ("OPC") witness James R. Dauphinais regarding affiliate-related work and asset transfers and to address Vote Solar witness Matt Cox's testimony related to the competitive bid process used for FPL SolarTogether Projects. In addition, I provide an update on the contracting structure for the engineering and construction of certain FPL SolarTogether Project sites.

**Q. Please explain who is performing the development and construction of the FPL SolarTogether sites.**

A. Contrary to the speculation offered by OPC witness Dauphinais, the development and construction of the FPL SolarTogether Projects are being managed and directed by Florida Power & Light Company ("FPL" or the "Company"). The vast majority of the individuals working on the FPL SolarTogether Projects are FPL employees or contract personnel working under the direction of FPL. A small number of individuals working on the

projects, such as myself, are employed by NEER but bring our knowledge and experience to both NEER and FPL projects. When NEER employees work on FPL projects, we do so on behalf of FPL – not on behalf of NEER or any other affiliate. FPL provides instructions on the requirement that we direct charge our time and expenses in order to correctly and accurately account for the actual costs of constructing each project. This ensures comprehensive compliance with Florida Public Service Commission ("Commission") and Federal Energy Regulatory Commission affiliate rules and regulations.

**Q. Have there been any affiliate asset transfers involved in the development and construction of the FPL SolarTogether sites?**

A. No. There is no basis for OPC witness Dauphinais's conjecture related to possible affiliate asset transfers. With respect to FPL SolarTogether Projects 1 and 2, which currently are in the execution phase, there have been no affiliate asset transfers. There likewise will be no affiliate asset transfers involved in Projects 3, 4 and 5.

**Q. Please address the transparency of the FPL's competitive bid process, specifically with respect to FPL SolarTogether.**

A. Vote Solar witness Cox's suggestion that FPL has not been transparent in its competitive bid process is either misinformed or intentionally disparaging. In reality, FPL has been extremely transparent about its competitive bid process, which is applicable to 98% of the construction costs for the FPL SolarTogether Projects. In addition to the detailed description of the process provided in my direct testimony filed on July 29, 2019, FPL made all

documents associated with any offers, proposals or commitments related to the FPL SolarTogether Project or any components of the FPL SolarTogether Project available to OPC and Commission Staff. In total, more than 2,800 files comprising 18 gigabytes of information were made available for examination, including all requests for proposal ("RFP"), all RFP responses, the associated bid evaluations, and the resulting executed contracts and purchase orders. Additionally, FPL has explained in detail the process it used to evaluate solar module bids and select the lowest-cost suppliers. Because of these effective processes, FPL has established a proven record of obtaining highly competitive pricing on behalf of its customers, particularly for solar projects.

**Q. FPL witness Bores explains in his rebuttal testimony that since filing the Petition, the Company has determined that allowance for funds used during construction ("AFUDC") will not accrue for FPL SolarTogether Projects 3, 4 and 5 because the Company was not able to award a single engineering, procurement and construction ("EPC") agreement for all the sites in those Projects. Can you explain why FPL was not able to use a single EPC agreement?**

A. Yes. When FPL initially developed the cost estimates for the five FPL SolarTogether Projects, it expected the work for the sites that comprise each Project would be performed pursuant to a single EPC agreement. FPL SolarTogether Projects 1 and 2 are being completed under a single EPC agreement. Over time, however, contractor resources have become constrained due to high demand for 2019 and 2020 solar construction.

Accordingly, when evaluating and securing contracts for Project 3, FPL determined that it could obtain the lowest EPC costs only by awarding construction contracts on an individual site basis and providing the contractors greater flexibility on schedule and in-service dates.

At this time, FPL expects the same contracting structure will be utilized to secure the lowest costs for the sites that comprise FPL SolarTogether Projects 4 and 5.

**Q. Does this conclude your rebuttal testimony?**

A. Yes.

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

**FLORIDA POWER & LIGHT COMPANY**

**REBUTTAL TESTIMONY OF JUAN E. ENJAMIO**

**DOCKET NO. 20190061-EI**

**SEPTEMBER 23, 2019**

## I. INTRODUCTION

**Q. Please state your name and business address.**

A. My name is Juan E. Enjamio. My business address is Florida Power & Light Company ("FPL"), 700 Universe Boulevard, Juno Beach, Florida 33408.

**Q. Did you previously submit direct testimony in this proceeding?**

A. Yes.

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

A. Yes. I am sponsoring the following rebuttal exhibits:

- JE-5 Need Without New Generation Resources
- JE-6 Resource Plans
- JE-7 CPVRR
- JE-8 System Average Rate Impact
- JE-9 Sensitivity Analysis
- JE-10 Sensitivity Analysis – General Body of Customers

**Q. What is the purpose of your rebuttal testimony?**

A. My rebuttal testimony addresses a number of statements and recommendations made by three intervenor witnesses who filed testimony in this docket: Vote Solar witness Cox, Office of Public Counsel ("OPC") witness Dauphinais and Florida Public Service Commission ("Commission") Staff witness Hinton, from a resource planning perspective.

## II. RESOURCE NEED ADDRESSED BY FPL SOLARTOGETHER

**Q. On page 21, lines 12-13, OPC witness Dauphinais contends that FPL has not demonstrated that it needs to make resource additions in 2020 and 2021. Please address this contention.**

A. Witness Dauphinais is not correct. At the same time that FPL's SolarTogether Program ("Program") was designed to satisfy customer demands, as explained in the testimony of FPL witness Valle, the Program also addresses need. Specifically, these cost-effective resource additions ensure that FPL meets its summer reserve margin criteria for 2020 and 2021. As shown in Exhibit JE-5, FPL has a need for additional capacity of approximately 20 MW in 2020 and more than 250 MW in 2021. This need continues to grow to more than 4,700 MW by 2030. As described in my direct testimony, the Program adds 735 MW of firm capacity, 220 MW in 2020 and 515 MW of firm capacity in 2021, meeting FPL's need for additional resources in those years in order to meet the approved reserve margin criteria. Witness Dauphinais might not have reviewed all the information that FPL provided in response to Staff Interrogatories.

## III. UPDATED COST-EFFECTIVENESS ANALYSIS

**Q. Has Staff asked FPL to reevaluate the economics of FPL's SolarTogether Program using updated assumptions?**

A. Yes. Staff's Interrogatory No. 190 requested that FPL prepare an economic analysis that includes the projection of incremental demand-side management ("DSM") based on FPL's proposed DSM goals as well as assuming that the 2020 Solar Base Rate Adjustment ("SoBRA") projects are included in both the No SolarTogether base case ("No ST Plan") and the SolarTogether Resource Plans. The results of that analysis confirm that the Program is cost-effective for all customers, not just participants, and provide further support in contradiction to the claims of witness Dauphinais that there is "nearly an equal likelihood" that FPL SolarTogether results in a loss or benefit to customers.

**Q. Did FPL apply the same assumptions as were used in the analysis reflected in your direct testimony?**

A. Yes, all assumptions, including the load forecast, fuel price forecast and carbon cost forecast, remain the same, other than changes suggested by Staff. In addition, the revenue requirements for the Program were reduced due to the removal of allowance for funds used during construction ("AFUDC") for Projects 3, 4 and 5 as described by witness Bores. Accordingly, in the updated economic analysis, the "SolarTogether Plan" does not include AFUDC for those projects.

**Q. Did FPL apply the same methodology described in your direct testimony to determine the cost-effectiveness of the FPL SolarTogether Program?**

A. Yes. As was done in the cost-effectiveness analysis whose results are reflected in Exhibit JE-7, FPL used the EGEAS optimization model to develop a resource plan for both the "No ST Plan" and the "SolarTogether Plan." The EGEAS model was given a set of resource options that included solar generation in the FPL SolarTogether Project, 100 MW batteries, combined-cycle units and simple-cycle combustion turbines. The resource options available were unchanged from those used in the 2019 Ten Year Site Plan process, with the sole exception that new solar projects beyond the 2020 SoBRA and the FPL SolarTogether Project were removed as future resource options. For each of the two plans the EGEAS model determined the resource plan which resulted in the lowest cumulative present value revenue requirement ("CPVRR"), while meeting the reliability requirements of a minimum of 20% total reserve margin and 10% generation-only reserve margin. The EGEAS optimization may result in resource plans with annual reserve margins greater than the required reserve margin minimum levels if it was more cost-effective to do so.

Once developed with the use of the EGEAS model, FPL modeled the two resource plans in the UPLAN production-costing model. UPLAN is an hourly-chronological model with a more accurate representation of solar generation and in general a more detailed commitment and dispatch logic.

The results of the UPLAN model were used to determine the variable system benefits (fuel, variable operations and maintenance, and emission costs) for both the "No ST Plan" and the "SolarTogether Plan

**Q. Can you explain why the resource plans FPL used to evaluate cost-effectiveness did not include future solar additions beyond the proposed 2020 SoBRA and FPL SolarTogether installations?**

A. Yes. In this docket, FPL is requesting approval for only the solar projects in the Program. To isolate the benefits of the solar project under study, FPL must do a comparison of two resource plans: one with, and one without the FPL SolarTogether Projects. The nature of all solar generation is that several of its characteristics such as firm capacity, effects on load shape, and reduction in the amount of required firm gas transportation are affected by solar generation projects that are constructed later, with the earlier solar projects having more value. Including future solar projects beyond 2021 would result in understating the benefits of the FPL SolarTogether Program. It is simply not sensible to include solar generation additions beyond the FPL SolarTogether and the 2020 SoBRA projects in the cost-effectiveness analysis of FPL's SolarTogether Projects as the future solar distorts the economics of the decision at hand.

**Q. Please describe the resource plans used in this analysis.**

A. The resulting resource plans are shown on Exhibit JE-6. The "No ST Plan" meets the 2020 and 2021 need of 250 MW by adding 100 MW of batteries in 2020 and 200 MW of batteries in 2021. The rest of this resource plan, through

2030, consists of two combustion turbines in 2022 and another two combustion turbines in 2023, as well as combined-cycle units in 2025 and 2028.

The "SolarTogether Plan" shows the changes in the plan when the generation from FPL SolarTogether is added to the system. The FPL SolarTogether sites with their firm solar capacity of 735 MW eliminate the need for the 300 MW of batteries in 2020 and 2021. They also reduce the total number of combustion turbines added in 2022 and 2023 by one combustion turbine. Finally, the in-service date of the combined-cycle unit selected in 2028 was deferred by one year.

**Q. Please describe the results of the updated economic analysis.**

A. The updated cost-effectiveness analysis includes incremental DSM, adds the 2020 SoBRA Project and reduces AFUDC as described above. The results of the updated analysis show that the FPL SolarTogether Program will result in savings of $249 million CPVRR as shown in Exhibit JE-7. This is an increase in customer savings of $110 million CPVRR compared to the analysis in my direct testimony.

**Q. Did FPL compute a system average rate impact for the FPL SolarTogether Program?**

A. Yes. FPL performed a system average rate impact calculation for the Program using the updated cost-effectiveness analysis. This calculation shows that the system average rate starts to decline in 2027. Please see Exhibit JE-8.

**Q. Did FPL perform a fuel and carbon costs sensitivity analysis using the updated presumptions?**

A. Yes. FPL completed a sensitivity analysis using three fuel forecasts and three $CO_2$ price scenarios, for a total of nine sensitivity cases, including the base analysis. Exhibit JE-9 shows the results of the sensitivity analysis on a system basis. As shown in this exhibit, the Program would be cost-effective in eight of the nine sensitivity cases. Only in one of the nine scenarios, the scenario which assumes low gas costs and zero $CO_2$ costs through 2051 (*i.e.*, Low $CO_2$ case), is the Program projected to be marginally uneconomic, but just by $8 million CPVRR. Exhibit JE-10 shows the results of the same sensitivity cases, but provides the impact to the general body of customers. As shown in this exhibit, the only two scenarios in which the general body of customers could see an unfavorable CPVRR are based on a low fuel cost forecast – in which case, customers would be benefitting from those low fuel costs overall. Moreover, in four of the nine scenarios, the projected net benefits to the general body significantly exceed the baseline scenario.

**Q. Vote Solar witness Cox states that other stakeholder benefits will only materialize if a series of FPL forecasts materialize. Is he correct?**

A. Witness Cox was primarily addressing FPL's fuel and $CO_2$ price forecasts. It is necessary to base any economic analysis on the best assumptions available at the time the analysis is conducted. FPL based its analysis on the latest available $CO_2$ price forecast developed by ICF which is widely recognized as a leading expert in this field. For its fuel forecast, FPL used its long-term fuel

forecasting methodology which has been used in numerous dockets in front of the Commission. The $CO_2$ and fuel price forecast, and the corresponding sensitivities, used in the FPL SolarTogether Program are reasonable and can be relied upon by the Commission in its evaluation for approval.

**Q. Witness Dauphinais contends that, given that the indicators point to abundant natural gas for the foreseeable future and that no $CO_2$ emission regulation is in place today, FPL should rely only on the results of its four cases involving low and medium price assumptions for natural gas and $CO_2$ emissions. Is this correct?**

A. No, witness Dauphinais's analysis is based on what FPL is experiencing today and is an improper and shortsighted approach to planning. Simply put, it fails to take into consideration the full planning horizon. This methodology has been approved in numerous dockets by the Commission and has served FPL's customers well. The results of all nine sensitivity cases using high, medium and low natural gas and $CO_2$ prices forecasts should be taken into consideration. Natural gas prices have declined since 2007 but this price decline and its causes are already reflected in the mid-band forecast of natural gas prices. $CO_2$ forecasts have significantly declined since FPL started using $CO_2$ price forecast from ICF in 2007. But again this price decline and its causes are reflected in ICF's mid-band $CO_2$ price forecast. High-band forecasts for both natural gas and $CO_2$ prices reflect a real possibility that prices will be higher than the projected mid-band values. As an example, higher prices for both natural gas and $CO_2$ could be driven by new federal

laws and regulations that could become a reality based on the outcome of future congressional and presidential elections. All nine sensitivity cases represent realistic scenarios and should be taken into consideration.

## IV. INADEQUACY OF LEVELIZED COST OF ELECTRICITY TO DETERMINE COST-EFFECTIVENESS OF SOLAR

**Q. In his testimony, Vote Solar witness Cox refers to a number of analyses that show solar as the least-cost source of new generation in Florida. Is he correct?**

A. FPL's economic analyses, as shown in this docket and in previous solar energy dockets, as well as in FPL's 2019 Ten Year Site Plan, have shown that solar generation is a cost-effective part of FPL's future resource mix. However, witness Cox incorrectly relies on studies based on a faulty methodology for determining the cost-effectiveness of generation resources when integrated into a utility system. The analyses that witness Cox refers to are based on a methodology that compares the levelized cost of electricity ("LCOE") of different generation technologies. This method is inadequate to determine the cost-effectiveness of a generation resource plan as it ignores the interaction of the given resource to the overall generation system of a given utility.

An LCOE calculation looks at the projected $/MWh, or cents/kWh, cost of an individual resource option to either generate electricity or to reduce electricity use. However, the perspective taken is solely of the individual resource option and assumes that the resource option is completely isolated from the utility system. In other words, an LCOE calculation is based on a starting point assumption that the generator has no connection or interaction to a utility system. The LCOE calculation then develops a cost of operating only that resource.

**Q. Is the LCOE calculation realistic?**

A. No. The starting point assumption for LCOE is clearly illusory because any resource option must be and will be connected to the utility system. As a result, the addition of the resource option will have a number of impacts on the operation of other existing resources on the utility system. These are termed "system impacts" and are accounted for in IRP analyses, but are not considered in LCOE calculations.

LCOE calculations (also commonly called "screening curve" analyses) may be useful only in screening applications where similar resources are being compared. In fact, LCOE calculations can only provide meaningful screening results when the resources in question are identical, or nearly identical, in regard to at least four characteristics:

(1) resource capacity (MW);

(2) the percentage of the resource's capacity (MW) that is firm capacity;

(3) the ability (or inability) to generate at all hours of the day; and

(4) the projected life of the resource

If all these characteristics of competing resources are identical, or nearly identical, the system impacts of the individual resources will be similar and can be ignored in a simple screening such as LCOE.

**Q. Do the generation resource options available to FPL share the minimal characteristics necessary to warrant an LCOE calculation?**

A. No. The future technologies available to FPL are solar projects, batteries, natural-gas fired combustion turbines and combined-cycle units. These resource options are very dissimilar in nature and share few, if any, of these four characteristics. Therefore, use of an LCOE calculation to compare these very dissimilar resource options cannot provide meaningful results. Most importantly, because an LCOE calculation fails to account for a number of system cost impacts that must be known before the complete cost profile of competing resource options is known, LCOE calculations should never be used to make a final resource decision for a utility.

## V. FPL'S PROGRAM DOES NOT CAPTURE ALL COST-EFFECTIVE SOLAR

**Q. On page 10, lines 4-14, of his testimony, Vote Solar witness Cox alleges that FPL's SolarTogether Program is not sized to capture all cost-effective incremental solar available to FPL through 2030, and instead is sized to service the needs of a particular set of customers. Is this accurate?**

A. Vote Solar witness Cox is in part correct. The FPL SolarTogether Program was sized to meet a particular customer demand, as described in the testimony of FPL's witness Valle. This does not imply, however, that FPL is not planning to construct additional solar generation beyond the FPL SolarTogether Program.

Vote Solar witness Cox's suggestion that FPL should be, as part of this docket, seeking approval for a significantly larger amount of solar generation, at this time, is incorrect. As shown in its 2019 Ten Year Site Plan, FPL has identified additional cost-effective solar generation through 2030 beyond the solar generation that is part of the FPL SolarTogether Program. However, FPL is not before the Commission requesting approval of all of the projects that comprise its long-term resource plan projects, including solar projects contemplated well into the future. FPL will continue to study the timing of

cost-effectiveness of future solar generation and will plan for construction at the appropriate time.

## VI. COST-EFFECTIVENESS METHODOLOGY

**Q. Does FPL's methodology for evaluating cost-effectiveness differ between solar projects installed pursuant to its 2016 Rate Settlement Agreement and other generation resources?**

A. No. OPC witness Dauphinais claims that the cost-effectiveness for solar projects constructed pursuant to the SoBRA mechanism does not apply to any other resource proposals. But FPL does not interpret the SoBRA cost-effectiveness language to establish any different cost-effectiveness standard from that which FPL uses in other resource planning decisions. FPL consistently applies the same cost-effectiveness methodology for all its solar analyses regardless of the cost-recovery mechanism that applies to a given project. Therefore, FPL has used the same methodology for FPL SolarTogether than it has used for all its solar projects to date, including SoBRA projects, rate-based solar and now the FPL SolarTogether Program.

**Q. OPC witness Dauphinais contends that it is not fair that FPL does not take payback time into consideration in its cost-effectiveness analysis. Is he correct?**

A. No, witness Dauphinais's contention would inject an entirely new standard in Florida utility resource planning. Such a standard would upend the way in

which utilities plan for the long-term reliability of their systems and would potentially result in customers forfeiting millions or even billions of dollars in system savings. FPL believes that the longstanding approach to resource planning continues to be the right approach. In short, the costs and benefits of a resource planning addition should be considered over the life of the proposed project. Using the standard of lowest levelized electric rate impact, or CPVRR in the case where DSM levels are fixed, over the life of a project has been used by FPL in every resource decision analysis presented to the Commission. Applying this standard consistently over time will ensure lowest electric rates to the customers and current customers are benefiting from the fact that this approach has been consistently applied over time. The results of that planning approach have been exceptionally positive for FPL's customers in terms of the FPL system's performance, providing high reliability at low cost.

**Q. Witness Dauphinais states that FPL has not shown that its proposed construction of all of the Phase 1 projects is the most cost-effective option to reliably add 1,490 MW of new solar generation for either participants or the general body of customers. Is he correct?**

A. No, he is not correct. The cost-effectiveness analyses FPL performed for the FPL SolarTogether Program are based on reasonable assumptions including all viable resource options and utilize the same economic analysis methodology that FPL has used in all its solar analyses to date including solar projects to be recovered through base rates, solar projects whose costs are

recovered through the SoBRA mechanism, and this FPL SolarTogether project. In fact, other than recognizing the characteristics particular to solar generation, FPL's cost-effectiveness used in this docket is the same methodology that it uses in all its resource planning analyses brought in front of the Commission. FPL's original analysis as included in my direct testimony, the updated analysis as described in this rebuttal testimony and the majority of sensitivity analyses of the FPL SolarTogether Program show that adding 1,490 MW of solar is solidly cost-effective.

**Q. Does this conclude your rebuttal testimony?**

A. Yes.

## Need Without New Generation Resources

**Summer Peak - Through 2030**

| Year | Total Reserve Margin % without unit additions | Summer MW Needed to Meet 20% Reserve Margin | Total Generation-only Reserve Margin % without unit additions | GRM MW Needed to Meet 10% Reserve Margin |
|---|---|---|---|---|
| 2020 | 19.1% | 19 | 10.0% | -180 |
| 2021 | 18.9% | 252 | 9.7% | 79 |
| 2022 | 18.2% | 400 | 8.9% | 253 |
| 2023 | 16.7% | 764 | 7.5% | 625 |
| 2024 | 14.8% | 1,216 | 5.8% | 1,079 |
| 2025 | 13.3% | 1,603 | 4.3% | 1,472 |
| 2026 | 11.4% | 2,092 | 2.6% | 1,960 |
| 2027 | 9.3% | 2,640 | 0.7% | 2,501 |
| 2028 | 7.3% | 3,195 | -1.1% | 3,049 |
| 2029 | 4.8% | 3,929 | -3.4% | 3,761 |
| 2030 | 2.2% | 4,708 | -5.7% | 4,514 |

**Note:**
FPL generating unit capability values shown above assume the following major changes to the FPL system.
No new generation resources are added in this computation, other than those listed below:

- Okeechobee Clean Energy Center (OCEC) unit in-service April 2019
- Retirement of the Manatee 1 and 2 units by the end of 2021 and replaced, in part, with a 469 MW Battery
- Dania Beach Clean Energy Center (DBEC) in-service in June 2022
- 2020 298 MW SoBRA
- FPL's proposed DSM goals for Summer MW.

## Resource Plans

| Year | No ST Plan | FPL SolarTogether Plan |
|---|---|---|
| 2020 | 100 MW 2-Hour Battery ; 2020 298 MW SoBRA | 447 MW FPL SolarTogether; 2020 298 MW SoBRA |
| 2021 | 200 MW 2-Hour Battery | 1,043 MW FPL SolarTogether |
| 2022 | Dania Beach Energy Center; Greenfield 469 MW CT Unit; 469 MW Manatee Battery; Manatee 1&2 retire | Dania Beach Energy Center; 469 MW Manatee Battery; Manatee 1&2 retire |
| 2023 | Greenfield 469 MW CT | Greenfield 704 MW CT Unit |
| 2024 | --- | --- |
| 2025 | Greenfield 1,886 MW CC Unit | Greenfield 1,886 MW CC Unit |
| 2026 | --- | --- |
| 2027 | --- | --- |
| 2028 | Greenfield 1,886 MW CC Unit | --- |
| 2029 | --- | Greenfield 1,886 MW CC Unit |
| 2030 | --- | --- |
| 2031 | Equalizing 333 MW CC Unit | Equalizing 142 MW CC Unit |

* MW values shown above for solar projects are nameplate AC. MW values for fossil units are based on summer MW ratings.

## CPVRR

| | Solar Revenue Requirements | | | | Non-Solar Generation Costs Avoided | | | | | System Costs Avoided | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Program Admin. Costs (Millions) | Generation Capital (Millions) | Transmission Interconnection (Millions) | Fixed O&M (Millions) | Land (Millions) | Generation Capital (Millions) | Fixed O&M (Millions) | Transmission Interconnection (Millions) | Capital Replacement (Millions) | Incremental Gas Transport (Millions) | System Net Fuel (Millions) | Startup + VOM (Millions) | Emission (Millions) | Total CPVRR (Millions) |
| $11 | $1,376 | $174 | $106 | $136 | ($415) | ($58) | ($19) | ($27) | ($368) | ($1,049) | ($25) | ($91) | **($249)** |

* Negative ( ) indicates savings to FPL customers

| Year | System Average Rate Impact $/1,000 kWh |
|---|---|
| 2020 | 0.45 |
| 2021 | 1.10 |
| 2022 | 0.93 |
| 2023 | 0.60 |
| 2024 | 0.55 |
| 2025 | 0.44 |
| 2026 | 0.37 |
| 2027 | (0.19) |
| 2028 | (1.38) |
| 2029 | (0.80) |
| 2030 | (0.15) |
| 2031 | (0.51) |
| 2032 | (0.49) |
| 2033 | (0.48) |
| 2034 | (0.57) |
| 2035 | (0.66) |
| 2036 | (0.71) |
| 2037 | (0.74) |
| 2038 | (0.88) |
| 2039 | (0.95) |
| 2040 | (0.74) |
| 2041 | (0.97) |
| 2042 | (1.09) |
| 2043 | (1.14) |
| 2044 | (1.16) |
| 2045 | (1.29) |
| 2046 | (1.33) |
| 2047 | (1.25) |
| 2048 | (1.46) |
| 2049 | (1.43) |
| 2050 | (1.53) |

## Sensitivity Analysis

**CPVRR**

| Fuel Cost Forecast | Environmental Compliance Cost Forecast | No SolarTogether Plan ($ Millions) | FPL SolarTogether Plan ($ Millions) | Net Difference ($ Millions) | |
|---|---|---|---|---|---|
| High Fuel Cost | Low CO2 | $50,936 | $50,613 | ($323) | |
| High Fuel Cost | Mid CO2 | $54,342 | $53,928 | ($414) | |
| High Fuel Cost | High CO2 | $59,688 | $59,124 | ($563) | |
| Mid Fuel Cost | Low CO2 | $45,472 | $45,313 | ($159) | |
| Mid Fuel Cost | Mid CO2 | $48,851 | $48,603 | ($249) | Base Scenario |
| Mid Fuel Cost | High CO2 | $54,183 | $53,781 | ($401) | |
| Low Fuel Cost | Low CO2 | $39,972 | $39,980 | $8 | |
| Low Fuel Cost | Mid CO2 | $43,341 | $43,259 | ($82) | |
| Low Fuel Cost | High CO2 | $48,666 | $48,434 | ($232) | |

- Negative ( ) Indicates Savings to FPL Customers.
- Low CO2 has a cost of $0/ton annually.

## Sensitivity Analysis - General Body of Customers

**CPVRR**

| Fuel Cost Forecast | Environmental Compliance Cost Forecast | Net Difference SolarTogether -No SolarTogether Plans ($ Millions) | Participant Net Benefit (Payment) ($ Millions) | Benefit to General Body of Customers ($ Millions) | |
|---|---|---|---|---|---|
| High Fuel Cost | Low CO2 | ($323) | $137 | ($186) | |
| High Fuel Cost | Mid CO2 | ($414) | $137 | ($277) | |
| High Fuel Cost | High CO2 | ($563) | $137 | ($427) | |
| Mid Fuel Cost | Low CO2 | ($159) | $137 | ($22) | |
| Mid Fuel Cost | Mid CO2 | ($249) | $137 | ($112) | Base Scenario |
| Mid Fuel Cost | High CO2 | ($401) | $137 | ($265) | |
| Low Fuel Cost | Low CO2 | $8 | $137 | $145 | |
| Low Fuel Cost | Mid CO2 | ($82) | $137 | $54 | |
| Low Fuel Cost | High CO2 | ($232) | $137 | ($96) | |

- Negative ( ) Indicates Savings to FPL Customers.
- Low CO2 has a cost of $0/ton annually.

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

**FLORIDA POWER & LIGHT COMPANY**

**REBUTTAL TESTIMONY OF SCOTT R. BORES**

**DOCKET NO. 20190061-EI**

**SEPTEMBER 23, 2019**

**Q. Please state your name and business address.**

A. My name is Scott R. Bores. My business address is Florida Power & Light Company ("FPL" or "the Company"), 700 Universe Boulevard, Juno Beach, Florida 33408.

**Q. Did you previously submit 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 SRB-2 Updated CPVRR Analysis for FPL SolarTogether Phase I

**Q. What is the purpose of your rebuttal testimony?**

A. The purpose of my rebuttal testimony is to explain the updates made to the FPL SolarTogether Program (or "the Program") that result in the projected cumulative present value of revenue requirements ("CPVRR") benefits improving from $139 million to $249 million. In addition, I will explain the revisions to the overall FPL SolarTogether pricing that result in the projected $249 million CPVRR benefits being allocated 55% to participants and 45% to the general body of customers. Finally, I will explain why the Florida Public Service Commission ("Commission") should reject the claims by Office of Public Counsel ("OPC") witness James R. Dauphinais that the general body of customers bears all Program risks and is not being provided a reasonable allocation of the benefits.

**Q. Please describe the updates made to the FPL SolarTogether CPVRR analysis.**

A. FPL made two updates to the CPVRR analysis that resulted in an increase in the projected CPVRR benefit to $249 million. First, FPL removed allowance for funds used during construction ("AFUDC") from Projects 3, 4 and 5 as they are no longer expected to qualify for AFUDC under FPL's accounting policy. This change reduced FPL's overall construction cost and increased the projected CPVRR benefit by $45 million. Second, at the request of Commission staff, FPL included in its FPL SolarTogether cost-effectiveness analysis the 2020 SoBRA projects and the latest projection of incremental demand-side management ("DSM") based on FPL's proposed DSM goals. These updates increased the CPVRR benefit by $65 million and are described in greater detail by FPL witness Enjamio.

**Q. How does FPL evaluate whether a project qualifies for AFUDC?**

A. In assessing a project, FPL utilizes Rule 25-6.0141, Florida Administrative Code ("F.A.C.") to ensure it meets all of the required criteria to qualify for AFUDC. Specifically, the project: (1) involves gross additions to plant in excess of 0.5 percent of the sum of the total balance in Account 101 – Electric Plant in Service, and Account 106, Completed Construction not Classified, at the time the project commences; and (2) is expected to be completed in excess of one year after commencement of construction. FPL SolarTogether Projects 3, 4 and 5, as contemplated in FPL's petition, each satisfied these criteria.

**Q. What criteria does FPL use under its accounting policy to determine whether grouping multiple sites meet the definition of a project?**

A. FPL uses several criteria, but among the most important are: a) all sites grouped as a project must have the same Engineering, Procurement and Construction ("EPC") contractor to manage the project; and b) all sites have a defined start of construction and single scheduled in-service date.

**Q. Why do Projects 3, 4 and 5 no longer qualify for AFUDC (as previously assumed) under FPL's accounting policy?**

A. As described in further detail by FPL witness Brannen, in assessing the EPC bids received for Project 3, FPL determined it would be more economical for customers to utilize multiple EPC contractors rather than awarding all sites in that group to a single EPC contractor. In addition, to allow for the lowest cost of construction, the EPC contractors have requested and FPL has granted maximum construction flexibility, thereby allowing the sites to have different schedules and in-service dates. Although contracts have not yet been finalized, FPL expects it also will provide lower construction costs for customers to have multiple EPC contractors construct Projects 4 and 5. As such, the construction of the solar sites comprising Projects 4 and 5 no longer meet the definition of a "project" as required under Rule 25-6.0141, F.A.C., because of the flexibility awarded to the multiple EPC contractors. To allow for the lowest planned construction cost, there is no longer a defined construction start date and single scheduled in-service date for the "project," and therefore they no longer qualify for AFUDC. This reduces the overall

installed cost of the solar sites and increases the FPL SolarTogether Program's projected CPVRR benefit for customers by $45 million.

**Q. What other changes to FPL SolarTogether result from the increase in projected CPVRR benefits?**

A. FPL witness Valle explains that FPL has changed several of the design features of the Program as a result of the increase in CPVRR benefits. First, as discussed later in my testimony, the Program's voluntary participants will now contribute more than 100% of the FPL SolarTogether base revenue requirements, including all administrative costs associated with the Program. Second, under the base case, $249 million in CPVRR benefits will be shared between participants and the general body of customers, with participants receiving $137 million or 55% of the overall projected benefits and the general body of customers receiving $112 million or 45% of the projected benefits. Finally, the above changes in the design result in changes to the Program's subscription rate, subscription benefit and escalation rate. I provide more details on the updated allocations and calculations in this testimony.

**Q. Please describe the updated total base revenue requirements for FPL SolarTogether.**

A. As demonstrated by Exhibit SRB-2, the total base revenue requirements, including administrative costs, is $4.165 billion in nominal terms, which results in a CPVRR equivalent of $1.804 billion. This amount represents the revenue requirements associated with constructing and operating the 20 solar

energy centers ("Centers") proposed under the Program.

**Q. What base system benefits are expected to arise as a result of the construction of the solar energy centers proposed for the FPL SolarTogether Program?**

A. As noted on Exhibit SRB-2, FPL expects to realize $1.470 billion in nominal base system benefits, with a CPVRR equivalent of $545 million. These system benefits relate to the avoidance of generation capital and operations and maintenance ("O&M"), transmission interconnection costs, start-up costs, as well as variable O&M costs.

**Q. What is the resulting net CPVRR for the base revenue requirements after accounting for the base system benefits?**

A. The resulting net CPVRR of the base revenue requirements is $1.259 billion.

**Q. How does the $1.259 billion CPVRR translate into the monthly Subscription Rate and corresponding Subscription Charge?**

A. The updated pricing for FPL SolarTogether is designed to recover 104.5% of the Program base revenue requirements from the participants through a levelized Subscription Rate ("Subscription Rate"). By allocating more than 100% of the base revenue requirements to participants, this allows some of the benefits that accrue to the general body of customers to be fixed. These fixed base benefits will not be subject to future fuel or emissions cost fluctuations, a feature that will continue through the life of the Program. As a result, participants will contribute $1.315 billion in equivalent CPVRR cost. FPL divided the $1.315 billion by the present value of the available nameplate

$MW_{AC}$ over the 30-year period (16,289 $MW_{AC}$) to develop a levelized annual rate of $80.76 per kW-year. The annual rate of $80.76 per kW-year is divided by 12 to get the monthly Subscription Rate of $6.73 per kW. The Subscription Rate will be multiplied by a participant's subscription level to produce the total charge ("Subscription Charge") that will appear on the participant's bill.

**Q. What is the amount of the base revenue requirement CPVRR benefit for the general body of customers under the new pricing proposed by FPL?**

A. FPL projects that the general body of customers will receive $56 million of base revenue requirement CPVRR benefit over the life of the Program.

**Q. Please describe the total clause system benefits expected to arise as a result of FPL SolarTogether.**

A. As depicted on Exhibit SRB-1, FPL expects to realize nominal clause system benefits of $5.181 billion, which results in a CPVRR equivalent of $1.508 billion. These benefits primarily relate to avoided fuel, emissions and gas transportation costs.

**Q. How does FPL propose to allocate the updated total projected CPVRR benefit of $249 million?**

A. As described earlier in my testimony, as part of the overall Program design, FPL made the determination to allocate 45% of the total CPVRR net benefit ($112 million) to the general body of customers. The remaining 55% of the total CPVRR net benefit ($137 million) will be allocated to participants in the Program.

**Q. How did FPL calculate the amount of clause system benefits to be allocated to participants in FPL SolarTogether?**

A. The amount of clause system benefits allocated to participants was determined based on allocating 55% of the overall CPVRR net benefit and targeting the seven-year payback. This resulted in approximately 96.3% or $1.452 billion of the clause system benefits being allocated to participants.

**Q. How are the system benefits translated into a Benefit Rate and corresponding monthly Subscription Credit?**

A. Utilizing the expected annual generation from the 20 Centers included within the system impact analysis and described by FPL witness Enjamio, FPL calculated the dollars per kWh benefit ("Benefit Rate") that allowed for 55% of the expected total CPVRR net benefit to be allocated to participants, while allowing participants to achieve the target seven-year simple payback. The Benefit Rate will be multiplied by the actual generation associated with the participant's subscription level, resulting in the total credit ("Subscription Credit") that will appear on the participant's bill.

**Q. What is the resulting Benefit Rate being offered to FPL SolarTogether participants?**

A. In the first year of enrollment, participants would receive a Benefit Rate of $0.033910 for every kWh produced by their subscribed capacity. The Benefit Rate will then escalate at 1.70% annually.

**Q. Please explain how the escalation rate of 1.70% for the Benefit Rate was determined.**

A. The escalation rate for the Benefit Rate was determined through an iterative process performed to ensure that the Subscription Credit allowed participating customers to achieve a target seven-year simple payback, based on the projected kWh output for the 20 Centers and allocating to participants 55% of the total Program CPVRR benefit.

**Q. Do the total system savings resulting from FPL SolarTogether exceed the Subscription Credit?**

A. Yes. FPL projects that the total system savings will exceed the Subscription Credit being paid to participants and lead to the expected $56 million of CPVRR clause benefits being allocated to the general body of customers. The amount of the Subscription Credit being paid to participants is projected to exceed the actual system savings during the early years; however, the actual annual clause system savings are projected to be greater than the credit paid to participants over the life of the Program, as shown on Exhibit SRB-2.

**Q. Does the Program provide a reasonable allocation of the benefits between participants and the general body of customers?**

A. Yes. OPC witness Dauphinais's claims are incorrect with regard to the originally proposed design and even more so with regard to the updated program design. In particular, as explained above, FPL has updated the Program such that the general body of customers receives 45% of the overall projected CPVRR benefit. In addition, roughly half of that projected CPVRR

benefit is in the form of base rate savings, thereby substantially mitigating the risk associated with volatility in fuel and emissions prices.

**Q. Does this conclude your rebuttal testimony?**

A. Yes.

| *($ millions)* | | CPVRR | Nominal Total | 2019 | 1<br>2020 | 2<br>2021 | 3<br>2022 | 4<br>2023 | 5<br>2024 | 6<br>2025 | 7<br>2026 | 8<br>2027 | 9<br>2028 | 10<br>2029 | 11<br>2030 | 2031-2051 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Discount Factor | | | | 1.01 | 0.93 | 0.87 | 0.80 | 0.75 | 0.69 | 0.64 | 0.60 | 0.55 | 0.51 | 0.48 | 0.44 | |
| **Base Revenue Requirements** | | | | | | | | | | | | | | | | |
| FPL SolarTogether Capital, O&M | | $1,792.4 | $4,144.6 | $3.5 | $71.7 | $202.2 | $210.8 | $199.6 | $190.8 | $183.0 | $176.9 | $171.9 | $167.3 | $162.2 | $157.3 | $2,247.4 |
| Program Administrative Costs | | 11.5 | 20.3 | 2.3 | 2.1 | 1.8 | 1.7 | 1.1 | 0.7 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 8.5 |
| Total FPL SolarTogether Costs | | 1,803.9 | 4,164.9 | 5.8 | 73.8 | 204.0 | 212.4 | 200.7 | 191.5 | 183.4 | 177.2 | 172.2 | 167.6 | 162.5 | 157.6 | 2,256.0 |
| System Impacts (Avoided Generation Capital, O&M) | | (544.6) | (1,470.2) | - | (2.0) | (14.8) | (38.2) | (60.4) | (48.3) | (47.0) | (44.5) | (37.4) | (176.3) | (111.1) | (28.0) | (862.1) |
| **Total Base RevReq's (fav) unfav** | | **$1,259.2** | **$2,694.6** | **$5.8** | **$71.7** | **$189.3** | **$174.3** | **$140.3** | **$143.2** | **$136.5** | **$132.6** | **$134.7** | **($8.7)** | **$51.4** | **$129.6** | **$1,393.8** |
| **Clause Revenue Requirements** | | | | | | | | | | | | | | | | |
| System Net Fuel | | ($1,049.4) | ($3,313.8) | $0.0 | ($19.6) | ($60.6) | ($65.6) | ($69.8) | ($78.8) | ($84.2) | ($88.3) | ($96.4) | ($97.6) | ($87.9) | ($86.6) | ($2,478.4) |
| Incremental Gas Transport | | (367.9) | (1,352.4) | - | - | - | - | - | - | - | - | (59.6) | (59.2) | (58.9) | (58.6) | (1,116.0) |
| Emissions | | (90.6) | (514.4) | - | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) | (0.0) | (0.7) | (1.2) | (2.4) | (2.6) | (3.6) | (503.7) |
| **Total Clause RevReq's (fav) unfav** | | **($1,507.9)** | **($5,180.6)** | **$0.0** | **($19.6)** | **($60.7)** | **($65.6)** | **($69.9)** | **($78.9)** | **($84.2)** | **($89.0)** | **($157.1)** | **($159.3)** | **($149.5)** | **($148.8)** | **($4,098.1)** |
| **Net Revenue Requirements (fav) unfav** | | **($248.6)** | **($2,486.0)** | **$5.8** | **$52.2** | **$128.6** | **$108.6** | **$70.4** | **$64.4** | **$52.3** | **$43.6** | **($22.4)** | **($168.0)** | **($98.1)** | **($19.1)** | **($2,704.3)** |
| **Participant Subscription Charge and Credit** | % of Total | | | | | | | | | | | | | | | |
| Subscription Charge (Revenue) | | ($1,315.5) | ($3,610.0) | $0.0 | ($33.1) | ($108.3) | ($120.3) | ($120.3) | ($120.3) | ($120.3) | ($120.3) | ($120.3) | ($120.3) | ($120.3) | ($120.3) | ($2,385.6) |
| Subscription Credits | | 1,452.2 | 4,288.0 | - | 31.6 | 104.8 | 117.9 | 119.6 | 121.5 | 122.9 | 124.6 | 126.4 | 128.5 | 129.9 | 131.7 | 3,028.6 |
| **Participant Net Distribution (Payment)** | 55.0% | **$136.8** | **$678.0** | **$0.0** | **($1.5)** | **($3.5)** | **($2.4)** | **($0.8)** | **$1.2** | **$2.6** | **$4.3** | **$6.0** | **$8.1** | **$9.6** | **$11.4** | **$643.0** |
| **Revenue Requirements** | | | | | | | | | | | | | | | | |
| **Base** | % of Total | | | | | | | | | | | | | | | |
| Total Base RevReq's | | $1,259.2 | $2,694.6 | $5.8 | $71.7 | $189.3 | $174.3 | $140.3 | $143.2 | $136.5 | $132.6 | $134.7 | ($8.7) | $51.4 | $129.6 | $1,393.8 |
| Participant Subscription (Revenue) | 104.47% | (1,315.5) | (3,610.0) | - | (33.1) | (108.3) | (120.3) | (120.3) | (120.3) | (120.3) | (120.3) | (120.3) | (120.3) | (120.3) | (120.3) | (2,385.6) |
| **Net Base RevReq's (fav) unfav** | -4.47% | **($56.2)** | **($915.3)** | **$5.8** | **$38.7** | **$81.0** | **$53.9** | **$20.0** | **$22.9** | **$16.1** | **$12.3** | **$14.4** | **($129.0)** | **($68.9)** | **$9.3** | **($991.7)** |
| **Clause** | % of Total | | | | | | | | | | | | | | | |
| Total Clause RevReq's (fav) unfav | | ($1,507.9) | ($5,180.6) | $0.0 | ($19.6) | ($60.7) | ($65.6) | ($69.9) | ($78.9) | ($84.2) | ($89.0) | ($157.1) | ($159.3) | ($149.5) | ($148.8) | ($4,098.1) |
| Participant Credits | 96.31% | 1,452.2 | 4,288.0 | - | 31.6 | 104.8 | 117.9 | 119.6 | 121.5 | 122.9 | 124.6 | 126.4 | 128.5 | 129.9 | 131.7 | 3,028.6 |
| **Net Clause RevReq's (fav) unfav** | 3.69% | **($55.6)** | **($892.6)** | **$0.0** | **$12.0** | **$44.1** | **$52.3** | **$49.7** | **$42.7** | **$38.7** | **$35.6** | **($30.8)** | **($30.8)** | **($19.6)** | **($17.0)** | **($1,069.6)** |
| **Total Net RevReq's (fav) unfav** | 45.0% | **($111.9)** | **($1,807.9)** | **$5.8** | **$50.7** | **$125.1** | **$106.2** | **$69.7** | **$65.6** | **$54.8** | **$47.9** | **($16.4)** | **($159.8)** | **($88.5)** | **($7.7)** | **($2,061.3)** |

Docket No. 20190061
Updated CPVRR Analysis for FPL SolarTogether Phase 1
Exhibit SRB-2, Page 1 of 1

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

**FLORIDA POWER & LIGHT COMPANY**

**REBUTTAL TESTIMONY OF TERRY DEASON**

**DOCKET NO. 20190061-EI**

**SEPTEMBER 23, 2019**

**Q. Please state your name and business address.**

A. My name is Terry Deason. My business address is 301 S. Bronough Street, Suite 200, Tallahassee, Florida 32301.

**Q. By whom are you employed and in what capacity?**

A. I am employed by Radey Law Firm as a Special Consultant specializing in the fields of energy, telecommunications, water and wastewater, and public utilities generally.

**Q. Please describe your educational background and professional experience.**

A. I have more than 40 years of experience in the field of public utility regulation spanning a wide range of responsibilities and roles. I served a total of seven years as a consumer advocate in the Florida Office of Public Counsel ("OPC") on two separate occasions. In that role, I testified as an expert witness in numerous rate proceedings before the Florida Public Service Commission ("Commission"). My tenure of service at OPC was interrupted by six years as Chief Advisor to Florida Public Service Commissioner Gerald L. Gunter. I left OPC as its Chief Regulatory Analyst when I was first appointed to the Commission in 1991. I served as Commissioner on the Commission for 16 years, serving as its chairman on two separate occasions. Since retiring from the Commission at the end of 2006, I have been providing consulting services and expert testimony on behalf of various clients, including public service commission advocacy staff, county and municipal

governments, and regulated utility companies. I have also testified before various legislative committees on regulatory policy matters. I hold a Bachelor of Science Degree in Accounting, summa cum laude, and a Master of Accounting, both from Florida State University.

**Q. For whom are you appearing as a witness?**

A. I am appearing as a witness for Florida Power & Light Company ("FPL" or the "Company").

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

A. No.

**Q. Are you sponsoring any rebuttal exhibits?**

A. Yes. I am sponsoring Exhibit JTD-1, which is my curriculum vitae.

**Q. What is the purpose of your rebuttal testimony?**

A. The purpose of my rebuttal testimony is to respond to some of the positions and recommendations contained in the testimony of OPC witness James R. Dauphinais. I also respond to the policy issues raised by Commission Staff witness Cayce Hinton.

**Q. How is your rebuttal testimony organized?**

A. My rebuttal testimony is organized into three sections. Section I addresses the broad policy considerations of FPL's SolarTogether community solar program. Section II addresses some of the specific criticisms of FPL SolarTogether raised by witness Dauphinais. Section III is my conclusion.

## I. POLICY CONSIDERATIONS

**Q. Does Florida have a policy on the provisioning of renewable energy?**

A. Yes, the Legislature has made a finding that it is in the public interest to promote the development of renewable energy and has recognized the potential for renewable energy to increase fuel diversity, lessen dependence on natural gas, minimize fuel cost volatility, improve environmental conditions, and encourage investment within Florida. This can be found in Section 366.92 (1), Florida Statutes.

**Q. What is the Commission's policy?**

A. The Commission has a policy to promote the development of renewable energy in Florida, consistent with Section 366.92 (1), Florida Statutes, and appropriately considers the benefits of renewable energy as well as potential impacts on the costs of power supply to electric utilities and their customers. The Commission's policy is also appropriately evolving as the relevant technologies, especially solar-based technologies, continue to develop along with customers' desires for solar generation to comprise a growing portion of electric power generation within Florida.

**Q. How has the Commission's policy evolved thus far?**

A. In the early years of implementing its policy, the Commission gave emphasis to customer-owned renewable generation and the adoption of

net-metering rules to facilitate customer-owned renewable generation. As the cost of solar generation continued to decline, especially for large-scale universal solar generation, the Commission recognized the importance and the inherent cost, environmental, and fuel diversity advantages of utilities making significant solar additions to their systems for the benefit of all of their customers. Thus, the Commission's implementation of legislative policy and the promotion of renewables has evolved to appropriately recognize the role of large-scale universal solar. This evolution has and continues to be driven by the strong desire of customers to see more solar generation generally and for some customers to gain the advantages of solar generation who cannot or choose not to invest in their own private solar facilities. As a corollary to this evolution, the Commission appropriately considers the overall cost-effectiveness of large-scale universal solar facilities and their potential impacts on the general body of customers.

**Q. Do you believe that the cost-effectiveness of FPL's SolarTogether Program and its potential impact on the general body of customers to be relevant considerations?**

A. Yes. The cost-effectiveness of the proposed solar facilities planned for the FPL SolarTogether Program is a first-step consideration to determine if the Program is in the public interest. If the planned facilities were not cost-effective to build, operate, and maintain, they would not be pursued.

**Q. Does witness Hinton take issue with the cost-effectiveness of the facilities planned for the FPL SolarTogether Program?**

A. No. My reading of his testimony is that he does not express an opinion one way or the other on the Program's cost-effectiveness. Rather, for his purposes, he assumes the cost-effectiveness to be a given in order to raise other policy issues that he identifies in his testimony.

**Q. What is the essence of the issues raised by witness Hinton?**

A. Witness Hinton acknowledges that the proposed FPL SolarTogether Program has elements that are different from other solar programs approved in the past. Given these differences, he outlines certain questions centered on protecting all customers and preventing any undue preference or harm.

**Q. Do you agree with the policy issues identified by witness Hinton?**

A. I agree that the issues raised are relevant. And because witness Hinton takes no stated positions on the issues he raises, I cannot say that I either agree or disagree. I do take some minor exceptions to some of his implications and suggest that his issues be considered within the context of other broad policy considerations beyond those he identifies.

**Q. What are these broad policy considerations to which you refer?**

A. There are four broad policy considerations that I believe need to be part of the discussion when considering the issues raised by witness Hinton and some of the intervenor witnesses as well. First, regulation needs to be open to new and innovative ways to capture benefits for customers.

This is particularly true when technologies, economics and customer expectations change. The FPL SolarTogether Program is indeed new and innovative and is designed to meet customer expectations that did not exist in the past to the extent they do today. Accordingly, there are elements designed to make the program successful that have not been previously implemented in a Florida PSC-approved program. However, this should not eliminate the proposal from due consideration and appropriate scrutiny. After all, the Commission is to regulate in the public interest and is to liberally construe its statutory jurisdiction to achieve that purpose. As such, the ultimate test is whether the FPL SolarTogether Program, taken in its entirety, is in the public interest. There are other broad policy considerations that can and should be used to assist the Commission to make a determination as to whether the FPL SolarTogether Program is in the public interest.

Second is the broad policy of protecting customers from cross subsidizations and undue preferences. This is achieved by designing rates to recover costs allocated to customers based on their cost responsibility. The standard is that no customer or group of customers be harmed by the rates charged to or offerings made to other customers, *i.e.*, a "do no harm" standard. In the case of the FPL SolarTogether Program, not only is there no harm, there are substantial benefits for all customers. Thus, the FPL SolarTogether Program exceeds this

standard and provides additional assurances to the general body of customers.

Third is the policy to promote renewable energy. While a strict cost-effectiveness test and a proper allocation of costs are essential, there are important considerations that go beyond those considerations. As I earlier identified, the Commission should weigh the benefits to customers of increased fuel diversity, a lessened dependence on natural gas, minimization of fuel cost volatility, improved environmental conditions, and increased investment in Florida. The FPL SolarTogether Program would be a means both to achieve these goals and help ensure a significant increase of solar generation in Florida.

And fourth is the need for regulation to be responsive to the needs of customers and to provide options where appropriate. This is particularly true and relevant for customers wanting to ensure additional solar generation. There was a time when customers looked at electricity as a commodity with little or no regard for where the electrons originated and by what technology they were generated. This has greatly changed, and many customers now desire, and perhaps expect, that their electrons should be from a renewable source. If regulation can enable this expectation to be met in a way that protects all customers, or even shares the benefits with them, it would be

incumbent on regulation to do so. The FPL SolarTogether Program is a means to achieve this result.

**Q. What are the specific policy questions raised by witness Hinton?**

A. There are three specific questions, and I will briefly address the first two together before I address the third. First, witness Hinton asks: "If generating facilities are being built to meet the desires of a certain portion of customers, should all the benefits and costs of the program be allocated to those customers as the cost causer?" He then follows with the second question: "In addition, if solar additions are now a cost-effective generation addition to all customers, is it appropriate to implement a voluntary program that allocates the majority of benefits to a small group of customers?" These two questions are closely related and appear to be contrasting the FPL SolarTogether Program with the traditional approach of assigning costs to cost causers when there are net incremental costs being imposed on the system. However, this is not the situation with FPL SolarTogether. There are not net incremental costs; rather, FPL SolarTogether would help ensure that net incremental benefits are being generated for all customers. In essence, the customers wishing to receive more solar generation by participating in the FPL SolarTogether Program are not "cost causers" as that term is traditionally used. Rather these customers are better described as "benefit facilitators."

So, while it may be theoretically possible to assign all benefits and costs to the FPL SolarTogether Program, it would not be wise to do so for at least two reasons. First, the FPL SolarTogether Program, achieves a reasonable balancing of benefit sharing and cost allocation. Witness Hinton's questions appear to imply a judgment that the sharing of benefits is skewed in favor of the FPL SolarTogether participants. This is an assertion that the ultimate facts in this case will address. So, I will temporarily place that assertion aside. Suffice it to say that if the balance of cost responsibility and benefit sharing is materially altered, it may place the entire proposal in jeopardy. And secondly, any attempt to place all benefits and costs on one subset of customers, while well intentioned, will most likely not achieve its intended purpose of completely shielding all customers from any potential cost impacts. It is very possible that any such attempt would have the unintended consequence of denying the general body of customers any opportunity to share in the benefits, while still exposing them to potential cost impacts. So, in a situation where there are no net new costs, but rather net new benefits, would it not be better to allow the general body of customers an opportunity to share in those benefits? I answer that question in the affirmative. This would actually provide a greater level of protection than an attempt to isolate them from all costs and all benefits.

**Q. Can you provide an example of the Commission's traditional approach of assigning costs to cost causers when there are net incremental costs being imposed on the system?**

A. Yes, and it is in sharp contrast to what is being proposed in the FPL SolarTogether Program. A good example is the Commission's decision to allow customers the choice of opting out of receiving advanced or smart meters. As utilities rolled out smart meter technology, the Commission recognized the strong desire of a segment of customers to retain their existing meters. The Commission decided to allow customers to choose to opt out of smart meters and approved a rate rider to recover the net incremental costs of providing this optional service. As there were no benefits and only net incremental costs of this optional service, the Commission simply estimated the net incremental costs and spread them over the customers choosing the optional service. While this was an appropriate outcome to protect the general body of customers, it does not fit the economics or the design of the FPL SolarTogether Program.

**Q. Does the smart meter opt-out rate rider protect the general body of customers?**

A. That is what it is designed to do, and I believe that it does so in great measure. However, it does not guarantee that there is no impact on the general body of customers. The general body of customers is the backstop and may be called upon to make up the difference, to the

extent the rate rider does not cover all of the net incremental costs. Likewise, to the extent that the rate rider provides revenues that exceed the net incremental costs, the general body of customers would benefit until the rate rider is reset, either as part of a rate case or a tariff-specific filing. The point is that there are no projected net benefits to the general body of customers of the option to not have a smart meter, and when customers choose this option, the general body of customers is placed at risk. This is not the case for the FPL SolarTogether Program, which does project net incremental benefits to the general body of customers.

**Q. What is the third question posed by witness Hinton?**

A. Witness Hinton's third question reads: "Finally, does this allocation of costs and benefits between participants and non-participants represent undue discrimination or preference?" I answer this question in the negative. Recall that the participants in the FPL SolarTogether Program are not cost causers. Rather they are better described as benefit facilitators. The benefits they facilitate are then shared with all customers. Thus, the general body of customers is not harmed, which is generally understood to be required before there is a finding of undue discrimination or preference. I do acknowledge that the Commission has the discretion to judge whether the sharing of costs and benefits are apportioned fairly. However, I do not agree that the FPL SolarTogether Program can be determined to be unduly discriminatory on its face.

**Q. Before posing his three questions, witness Hinton states that the FPL SolarTogether Program seems to represent a departure from least-cost planning principles. Do you agree with this assertion?**

A. No. I do acknowledge that the FPL SolarTogether Program contains elements that have never been implemented before. In large part, this is necessitated by the strong desire of some customers to be responsible for an increase solar generation and to eliminate or substantially reduce their reliance on fossil-fuel generation. Nevertheless, I believe that the FPL SolarTogether Program is consistent with least-cost planning principles as they are generally understood.

**Q. How is the FPL SolarTogether Program consistent with least-cost planning principles?**

A. To some extent, the term least-cost planning is a misnomer. It is possible that the best generation expansion plan is not the least-cost plan, as there are a number of other strategic considerations that could result in the best or preferred plan not being the least-cost plan. I like to look at it as "best cost" planning. Nevertheless, to the extent the term least cost implies that a generation expansion plan should be cost-effective, the FPL SolarTogether Program certainly meets this criterion and is based on achieving the lowest electric rates.

**Q. What are some of the other strategic considerations in judging whether a generation expansion plan is appropriate?**

A. Witness Hinton correctly notes that the traditional means of granting a

need determination for generating units of 75 megawatts or more is set forth in Florida's Power Plant Siting Act (PPSA). While the proposed solar facilities to be constructed as part of the FPL SolarTogether Program are less than 75 megawatts per site and are not required to come before the Commission in a need determination proceeding, the PPSA does provide some guidance to the Commission. In addition to cost-effectiveness, the PPSA also requires the Commission to consider fuel diversity and whether renewable generation is being utilized to the extent reasonably available. Given that the planned solar facilities will help to ensure the increase in fuel diversity and are indeed from a renewable energy source, the FPL SolarTogether facilities would meet these planning criteria. In addition to the PPSA, the Legislature has declared that it is in the public interest to promote renewable energy. In Sections 366.91 and 366.92, Florida Statutes, the Legislature identifies a number of benefits of Florida-based renewable energy. Among these benefits are measures to minimize fuel cost volatility, improve environmental conditions and increase investments within Florida. These would certainly be benefits derived from the solar facilities planned as part of the FPL SolarTogether Program.

## II. DAUPHINAIS CRITICISMS

**Q. What are the criticisms arising from OPC witness Dauphinais's testimony that you will address?**

A. There are essentially four: the shape of the curves depicting the forecasted cumulative present value of revenue requirement (CPVRR) savings; his assertion that generational cross subsidies would result; his assertion that certain sensitivity assumptions are inapplicable; and his assertion that the costs, benefits, and risks of the FPL SolarTogether Program are not being fairly allocated.

**Q. Please comment on the shape of the curves depicting the forecasted CPVRR savings.**

A. The overall shape of the forecasted CPVRR savings, showing significant net costs in the early years followed by a gradual increase in savings until the curve turns positive in the later years, is not surprising and should be expected. This is a natural result of how revenue requirements are determined to set rates. The initial capital investment associated with new generation facilities is incurred on the front end and has an almost immediate and significant impact on revenue requirements. This is in contrast with the savings the new generation facilities produce over the useful life of the generating facilities. In the case of new solar facilities, these savings include both lower operating and maintenance costs and much lower fuel costs, as the fuel for solar is

free. Witness Dauphinais implies that this delay in the curve becoming positive is indicative of the risks of the proposed solar facilities on the general body of customers and on a subset of customers he labels non-participants. However, planning for cost-effective generation that has a life of 30 years or more inherently involves risk. It is a natural factor of planning for the longer term as opposed to skewing outcomes by placing too much emphasis on facilities that may turn positive sooner but that do not produce as much total savings. Witness Dauphinais's calculations show that the timeframe for the non-participants curve becoming positive is four years later than the curve for all customers. Assuming his calculations are correct, I do not find that the four-year extension is that significant enough to conclude that the general body of customers is placed in a scenario of too much risk. This is particularly true given the strategic advantages offered by solar generation. The important point is that the net savings are positive, which benefits all customers.

**Q. Please comment on witness Dauphinais's assertion that there would be generational cross subsidies.**

A. This is a classic example of a "red herring" argument that has no basis in determining the merits of the FPL SolarTogether Program or any other proposal that requires an economic analysis of long-lived assets to cost-effectively serve customers. It inappropriately attempts to pit the interests of one group (generation) of customers against another. It is

also inconsistent with the way that rates are set and cross subsidies avoided for the benefit of all customers. Policy should be driven by what benefits all customers over the long run and not by divisive approaches which focus on the short run.

**Q. Please explain.**

A. Regulation in Florida is focused on the general body of customers and goes to great lengths to set rates that are fair, just and reasonable and that do not foster cross-subsidies among customers. This is apparent in both the nature of and the extent to which costs are recognized in rates, as well as in the structure of the rates themselves. The Commission has rules dealing with cost-of-service studies and many years of precedent to ensure that rates are set equitably and on a non-discriminatory basis. This entire regulatory approach is based on the fact that benefits to all customers are maximized when decisions are made for the benefit of all customers over a continuum of time. This is simply axiomatic. Conversely, if decisions were made to protect only one generation of customers, as witness Dauphinais suggests, outcomes would be focused on the short term and the maximization of benefits for all customers over the long run could not be achieved.

**Q. Witness Dauphinais asserts that today's customers would be subsidizing customers 20 years from now. Do you agree with this assertion?**

A. No. Witness Dauphinais simply loses focus on how regulation works to

protect customers as a whole and to maximize benefits to them over the long term. Even if one were to attempt to stratify customers by age – a truly untenable and unworkable approach – it would not be possible to conclude that one generation of customers is being treated unfairly. For example, the existing customers, who witness Dauphinais asserts will be subsidizing a future generation of customers, are indeed the beneficiaries of previous investments made decades ago that continue to provide them with service. Under witness Dauphinais's logic, they would now be subsidized by a previous generation of customers. Such overly broad conclusions are not appropriate and, if attempted, could lead to inappropriate decision making that would jeopardize the maximum benefit for all customers over the long term.

**Q. Please describe witness Dauphinais's assertions concerning certain sensitivity analyses' assumptions.**

A. FPL performed eight sensitivity analyses in addition to its base case analysis of the CPVRR of net savings associated with the FPL SolarTogether Program. The eight sensitivity analyses used different combinations of assumptions for fuel costs (high, medium and low) and carbon dioxide compliance costs (high, medium and low). As would be expected, the scenarios with higher fuel costs and higher carbon dioxide compliance costs showed higher cost-effectiveness for the FPL SolarTogether Program.

Witness Dauphinais opined that the sensitivity analyses with combinations of medium and low fuel costs and medium and low carbon dioxide compliance costs (showing lower or no net savings) should receive greater weight. He states that there are now no carbon dioxide compliance requirements and that there is currently an abundance of natural gas. He opines that these are justifiable reasons to place greater emphasis on the scenarios tending to show lower or no net savings.

**Q. Do you agree with witness Dauphinais's opinion?**

A. No, for three reasons. First, it defeats the fundamental purpose of a sensitivity analysis to give greater weight to a select few scenarios. The fundamental purpose of a sensitivity analysis is to provide unbiased information to a decision maker on the effect on results from the full array of potential changes in the underlying assumptions. Cherry picking which scenarios to emphasize could lead to distorted conclusions. Second, the reasons given by witness Dauphinais are too narrowly focused on present conditions and do not recognize significant changes from present conditions which could happen over the 30-year time horizon of the CPVRR analyses.

Simply because there are not presently carbon dioxide compliance requirements does not mean that this situation will continue. Likewise, an abundance of natural gas, largely due to advanced extraction

technologies like fracking, does not mean that this will persist over 30 years. It should be noted that most, if not all, of the leading Democrats seeking their party's nomination to run for President, have stated firm support for initiatives to combat global warming and have come out in opposition to fracking. While I am not a political prognosticator, I do believe it is evident that concerns over carbon dioxide emissions and fracking are growing in the American consciousness. As a consequence, I believe it would be short-sighted and ill advised to emphasize those sensitivity analyses which tend to discount these changing dynamics. And third, the sensitivity analyses witness Dauphinais suggests be de-emphasized are the very ones that give useful information on the reasons that Florida has a policy of promoting renewable energy. As I previously stated, the foundation of this policy includes: the need for increased fuel diversity; a lessened dependence on natural gas; minimization of fuel cost volatility; and improvement of environmental conditions.

**Q. What is witness Dauphinais's ultimate conclusion and recommendation concerning the FPL SolarTogether Program?**

A. He concludes that the costs, benefits, and risks of the FPL SolarTogether Program are not being fairly allocated and recommends that the FPL SolarTogether Program not be approved by the Commission.

**Q. Do you agree with his conclusion and recommendation?**

A. No, for a number of reasons. First, planning for and deploying assets with lives of 30 or more years, like those envisioned as part of the FPL SolarTogether Program, is an inherently risky undertaking. However, if benefits are to be maximized and the interests of customers met over the long term, it is an undertaking that must take place. This is an undertaking that the Commission has successfully accomplished and effectively regulated over many decades. The tools utilized by the Commission to make these decisions are effective and can be applied to the FPL SolarTogether Program. When applied, they reveal that the FPL SolarTogether Program is cost-effective for all customers. The simple fact is that should witness Dauphinais's recommendation be accepted, all customers will miss out on this innovative and cost-effective program.

Second, Florida and the Commission have a policy of promoting renewable energy. The FPL SolarTogether Program is an innovative approach to furthering the development of renewable energy on a large scale and in a cost-effective manner. And by approving the FPL SolarTogether Program, Florida and its rate-paying citizens will have assurance to obtain the strategic benefits I previously identified, such as: increased fuel diversity; a lessened dependence on natural gas; minimization of fuel cost volatility; improvement of environmental

conditions; and an increased investment in Florida.

Third, the Commission has a policy of meeting the earnest desires of customers, as long as it can be done cost-effectively or in a manner that does not cause harm to the general body of customers. The FPL SolarTogether Program is designed to cost-effectively ensure additional renewable generation to customers who have this earnest desire, whether it be because of their inability to deploy customer-owned solar, or because of their social consciousness, or a combination of the two. The FPL SolarTogether Program not only meets the needs of these customers, it does so in a manner that creates and shares benefits with all customers. In essence, customer choice would be expanded while preserving the protections of Commission regulation. This approach actually provides more protection to the general body of customers than trying to isolate the program only to participants.

And fourth, witness Dauphinais has not considered a degree of risk that would likely result, should the FPL SolarTogether Program not be approved. It should be recognized that there is a large and growing number of customers who believe it is imperative that their energy needs be met largely, if not entirely, from renewable sources. Should the opportunities afforded them by the FPL SolarTogether Program be denied to them, they would likely seek other alternatives outside of the

advantages provided by large-scale universal solar. Among the many advantages of large-scale universal solar is the retention of the loads of these customers and their contributions toward the fixed costs of all customers. A significant loss of load would be harmful to the remaining general body of customers and would constitute a significant risk factor on a going forward basis.

**Q. Witness Dauphinais's conclusion is driven largely by risk factors. Are there any other risk factors which should be part of the Commission's deliberations in this proceeding?**

A. Yes, and I have identified it generally as part of my discussion on Florida's renewable energy policy. However, I believe it needs to be put in proper context based on personal experience.

**Q. Please explain.**

A. During my sixteen-year tenure on the Commission, I experienced first-hand the risk on customers from fuel price volatility. The large increases in natural gas prices and the associated extreme price volatilities caused great disruptions to customers. Whether it was impacts on large industrial customers and their abilities to successfully manage their operations and remain competitive or families struggling to budget their household expenses, the impacts were large. They caused great concern, anxiety, and angst for customers. And it needs to be stressed that natural gas generation now comprises a larger portion of generation than it did during those times. Fortunately, gas prices are

now stable and are relatively low compared to historical levels. This is a good thing. However, I fear that these good times may have resulted in a certain degree of complacency or even a false sense of security when it comes to risks associated with potential price spikes. It is for these reasons that I feel it is important to consider the risk of fuel price volatility and potential ways to mitigate that risk. Even as large as the FPL SolarTogether Program is, it will not eliminate this risk. However, it is a meaningful step in the right direction. It is a new and innovative tool being proposed to equip the Commission to better protect all customers. This fact should not be lost when the Commission considers the risks and benefits of the FPL SolarTogether Program and whether FPL SolarTogether, taken in its entirety, is in the public interest.

## III. CONCLUSION

**Q. What is your conclusion?**

A. Regulation needs to be open to new and innovative ways to capture benefits for customers. This is particularly true when technologies, economics, and customer expectations change. The FPL SolarTogether Program is indeed new and innovative and is designed to capture these changes and meet customer expectations by establishing a balance of the costs and benefits provided to all customers. As such, there are elements designed to make the program successful which have not been

so structured in the past. Nevertheless, this structure is consistent with Commission policies on protecting all customers and preventing any undue preference or harm. And while not subject to the PPSA, the solar facilities envisioned are consistent with the planning criteria for new generating units of 75 megawatts or higher.

When the FPL SolarTogether Program is adequately scrutinized and evaluated, it is shown to be a cost-effective approach which benefits all customers and enables large deployments of solar generation which is consistent with Florida's policy of promoting renewable energy, including efforts to minimize fuel price volatility. In addition, the FPL SolarTogether Program meets the needs of customers desiring greater generation from renewable sources and does so in a manner that creates and shares benefits with all customers. This approach actually provides more protection to the general body of customers than trying to isolate the program only to participants.

**Q. Does this conclude your rebuttal testimony?**

A. Yes, it does.

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**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

**FLORIDA POWER & LIGHT COMPANY**

**REBUTTAL TESTIMONY OF LON M. HUBER**

**DOCKET NO. 20190061-EI**

**SEPTEMBER 23, 2019**

## I. Introduction and Background

**Q. Please state your name and business address.**

A. My name is Lon M. Huber. My business address is 101 S Tryon St #2820, Charlotte, NC 28280.

**Q. By whom are you employed and in what capacity?**

A. I am employed by Navigant Consulting, Inc. as a Director in the energy practice.

**Q. Please describe your educational background and professional experience.**

A. My career in the energy industry began in 2007 when I started work at a solar energy research institute housed within the University of Arizona. From 2010 to 2013, I held positions in the solar industry working on matters both local to Arizona and across the U.S. Subsequently, I served as a consultant for Arizona's consumer advocate, the Residential Utility Consumer's Office (RUCO), on energy related issues. I then joined RUCO as a full-time employee. At RUCO, I was the staff lead on significant dockets involving net metering, resource procurement, and utility solar programs. I decided to rejoin the consulting space in 2015 where I have since worked for numerous consumer advocates, state utility commissions, and energy companies. A major topic of my work has been on pricing and community solar programs. For example, I developed Hawaii's Community Based Renewable Energy (CBRE) program on behalf of the Hawaii Public Utilities Commission; I

helped shape Maryland's community solar program on behalf of the Office of People's Counsel; and I represented the Coalition for Community Solar Access in New York on a few community solar matters. My work on community solar, through the above examples and more – including my efforts in Massachusetts, New Hampshire, Arizona, and Maine – helped me garner Utility Dive's 2018 Innovator of the Year award. My other professional focus revolves around pricing and rate design for customer facing programs across the U.S., with a particular specialty in time-varying rates and subscription-based pricing. I am a regular instructor at the Financial Research Institute (FRI) Transformational Pricing course held at the University of Washington, and I currently consult for entities such as the New York Public Service Commission and the Office of Consumer Counsel in Connecticut on pricing for renewable energy. Finally, I have extensive experience with resource planning, both past and present, particularly in regard to grid-scale renewable energy and energy storage.

In terms of educational background, I obtained a Bachelor of Science degree in Public Policy and Management from the University of Arizona in 2009. I also received a Master of Business Administration from the Eller College of Management at the same university. I completed NARUC rate school in 2014.

**Q. For whom are you appearing as a witness?**

A. I am appearing as a witness for Florida Power & Light Company ("FPL").

**Q. What is the purpose of your rebuttal testimony?**

A. The purpose of my rebuttal testimony is to respond to the testimony of Office of Public Counsel ("OPC") witness John R. Dauphinais and Vote Solar witness Matt Cox. I will address their contentions and discuss the reasonableness of FPL's proposed SolarTogether Program, highlight best practices of community solar programs, and discuss, generally, how community solar programs expand access to renewable energy.

## II. Assessment of the proposed FPL SolarTogether Program

**Q. Have you reviewed the direct testimony of those opposed to the FPL SolarTogether Program?**

A. Yes. My general reaction is that opponents to the FPL SolarTogether Program have not adequately considered or valued the significance of this program to the needs of customers. I believe that customer needs and interest in this program should be at the forefront of the relevant considerations and discussion regarding whether FPL SolarTogether should be approved.

**Q. In general, how do community solar programs address the needs of customers?**

A. Community solar programs, like FPL SolarTogether, perform a dual function of giving customers who may not otherwise have access to or the ability to invest in solar the opportunity to do so, while allowing those customers to remain customers of the utility, which supports the grid and benefits the entire

customer base.

**Q. For those customers that do not have access to solar power, what are the common barriers they face?**

A. The most common barriers are siting and price. Solar requires adequate, unshaded roof space or clear land available to install the arrays. And while the price of solar continues to fall, some customers may not have the resources to lease or purchase solar PV or businesses may not see a fast enough payback to justify the investment. This is particularly acute on small PV installations that do not possess favorable economies of scale compared to larger installations.

**Q. How do utility-led community solar programs address these two barriers?**

A. In a utility-led community solar program, the utility takes over the siting and resource planning aspects of installing solar arrays. For example, this means that homeowners or businesses with a shaded roof can "buy" a solar array but not have to locate it on their own premises. Also, utilities are better able to site the community solar resources at the locations that are most likely to provide greater benefits to the electric grid and exercise buying power and utilize economies of scale to lower the price of hardware and installation.

Community solar programs offer residential customers access to solar energy regardless of where they live. This is important for renters and occupants of multi-unit buildings who may not have access to the roof to install solar or may be unwilling to make the investment because their occupancy may only

be for a few years at a time. Condominium owners, especially in high-rise buildings, have similar siting barriers to commercial customers due to the low ratio of rooftop to total square footage. Approximately 20-25% of the FPL customer base cannot install rooftop because they rent or live in a condo and would not have roof-right access. Community solar offers the only real chance for these customers to directly contribute to building more solar energy.

Businesses with renewable or sustainability goals may be especially receptive to community solar as a way for them to meet their goals due to the nature of the buildings they occupy. First, many businesses lease space with others in buildings with short-term leases. Second, even those that own their own buildings or are the sole occupant may not have the available roof space to build an array that makes a meaningful contribution to their energy needs. This problem grows for companies that occupy multi-story buildings where the ratio of rooftop square footage to total square footage may be low. According to one recent report, 48% of commercial buildings do not have enough available roof space to host a PV array that would provide more than 20% of the customer's energy need.[1]

**Q. What about the price barrier?**

A. Regarding cost, the utility can leverage its buying power and economies of scale to purchase large-scale universal solar instead of each customer buying multiple, smaller systems. In 2018, the national average price of large-scale

[1] Shared Solar: Current Landscape, Market Potential, and the Impact of Federal Securities Regulation; https://www.nrel.gov/docs/fy15osti/63892.pdf; April 2015.

PV systems was $1.48 per watt (AC) compared to $3.05 per watt (AC) for residential systems.[2]

**Q. What is your general conclusion regarding the proposed FPL SolarTogether program?**

A. In my opinion, FPL SolarTogether is a novel program and represents the next evolution in community solar programs, building upon existing successful community solar programs across the nation. The innovative program design demonstrates how community solar can play a major role in a utility's generation portfolio for jurisdictions where solar energy is a highly competitive form of new generation. Customer segments of the residential and commercial classes seek direct access to renewable energy products; yet meeting this need without undue cross subsidization and in a manner open to all customers has been a challenge for state commissions, utilities, and environmental and industry advocates.

The FPL SolarTogether Program offers a new pathway for all parties, while incorporating many best practices and lessons learned from other programs. Although the FPL SolarTogether offering is big and bold, it is actually a conservative resource selection for the general body of customers with high net benefits over the life of the solar asset. This is accomplished by allocating a significant amount of the forecasted benefits to the entire customer base, while diversifying FPL's energy mix and capacity mix.

[2] *Q4 2018/Q1 2019 Solar Industry Update*; National Renewable Energy Laboratory; May 2019.

## III. Reasonableness of FPL SolarTogether

**Q. Have you reviewed the testimony of OPC witness Dauphinais?**

A. Yes.

**Q. Witness Dauphinais contends that the general body of customers is subsidizing the participating customers. Is this correct?**

A. As support for his contention, witness Dauphinais is focused only in those years in which the annual revenue requirement is greater than the subscription revenues received from participating customers. He is not correct with regard to the overall analysis. It is important to point out that for the remaining years, the subscription revenues are greater than the annual revenue requirement costs, resulting in lower rates to the general body of customers overall. The important thing to keep in mind when evaluating a program like FPL SolarTogether is the difference between traditional ratemaking and levelized pricing.

**Q. Please explain the difference between traditional ratemaking and levelized pricing.**

A. Under traditional ratemaking practice, the revenue requirement and associated costs that customers pay are based on a single test year. However, programs like FPL SolarTogether that use levelized pricing must have a value proposition that encompasses the entire life of the project. While the cost side of the base revenue requirement will start high and trail off as the asset is depreciated, the associated revenues will not change year-to-year. As a result,

a view that takes a single-year snapshot may show a revenue shortfall because the annual revenues are not tied to the annual costs. In this regard, levelized pricing programs should use a standard of review that is commonly used to evaluate construction projects. For this reason, focusing on short-term value and any associated claim of subsidization ignores the total value proposition of the program.

**Q. What does a long-term analysis say about the customer benefits of the FPL SolarTogether program?**

A. As with any forecast and resource decision, there is some uncertainty regarding the level of future benefits as this involves projecting fuel and $CO_2$ prices. Witness Dauphinais's scenarios represent a reasonable range of sensitivities. Using his own range shown in exhibit JRD-5, six of the nine scenarios show positive cumulative present value of revenue requirements (CPVRR) benefits, and the average benefit across all nine models of $47.6 million over the life of the program. When the sensitivity runs are revised with the updated forecast, as shown in exhibit JE-9, eight of the nine models show benefits to customers with an average value of $268 million.

**Q. Witness Dauphinais offers his opinion that in a reasonable community solar program, subscribers pay a premium in both costs and risks over what the general body of customers would pay for solar energy. Do you agree?**

A. I agree that community solar programs have come in many different versions. But as I indicated earlier, FPL's proposal represents an evolution in

community solar programs that will better meet customer needs while providing a cost-effective solar option for all customers. Under older community solar programs in various states, the subscribers often pay more for the solar power, but only because the cost of the solar power is traditionally more expensive than a utility's other generation options. Increasingly, however, with the cost of solar PV coming down, this is no longer the case. The price that a subscriber pays for community solar is solely derived from the cost of the solar generators constructed for the program and the kWh/kW produced by the system. As the cost of solar resources continues to fall, it is perfectly reasonable to expect that the premium paid will fall or result in cost savings in the future. For example, in Arizona, both Arizona Public Service and Tucson Electric Power offer community solar programs that provide savings to participants rather than premiums. A reasonable community solar program is one where the price paid by participating customers is set to recover the costs of the program.

**Q. Provide an example of how such a pricing structure would work.**

A. The most straight-forward pricing model of the kind referenced by witness Dauphinais is the upfront purchase model. In these programs, the subscribing customers pay the all-in cost to acquire or construct their share of the community solar array before they can receive any bill credits for the output of the array. This model involves large upfront payments to the utility in the order of thousands or tens of thousands of dollars to secure a share of the array. Community solar programs that use this pricing method appear to the

customer no different than if the customer were to cash finance their own personal solar system.

**Q. Are there any downsides to such a pricing model?**

A. Yes. First, the high cost of entry would exclude those residential or commercial customers who do not have the cash on hand to participate. Second, while allowing customers who plan to cash finance their own solar systems to take advantage of the utility's buying power, it does not provide a true alternative to how most private solar systems are financed because most customers looking to install solar systems will either lease the system or finance the cost over time.

**Q. Is there another reasonable pricing model for community solar?**

A. A levelized pricing structure, like the one used for FPL SolarTogether, provides a better alternative for customers interested in community solar compared to the upfront pricing model. Instead of requiring customers to pay the entire cost of their shares up front, the levelized pricing effectively finances the cost and allows customers to pay for their shares over time.

**Q. Do you have any examples of other utilities using a levelized pricing structure for community solar?**

A. Yes. Madison Gas & Electric serving south-central Wisconsin has a Shared Solar program, which uses a levelized cost pricing mechanism.[3] In this program, the cost of the utility-owned array is levelized on a per-kWh basis

[3] *See* Final Decision in *Re: Application of Madison Gas and Electric Company, as an Electric Public Utility, Dane County, Wisconsin, for Approval to Provide an Expansion and Modification of its Shared Solar Program*. Docket 3270-TE-104. Issued July 30, 2019.

over 25 years. For all energy produced by each customer's share of the array, customers pay the levelized price for each kilowatt-hour. Westar Energy in Kansas also has a community solar program that uses levelized pricing on either a per-kW or per-kWh basis.[4] The actual monthly charge is determined by the length of the contract, anywhere between five and 20 years.

**Q. Do you agree with the risk assessment for FPL SolarTogether that witness Dauphinais discusses?**

A. No. Witness Dauphinais states that FPL SolarTogether does not reduce the risks faced by the general body of customer compared to FPL constructing the solar facilities on its own. This is not an accurate depiction, and in design it is quite the opposite. Rather than having the entire customer base pay for the solar facilities through base rates, FPL is leveraging some of its customers' willingness to pay to provide clean, renewable energy for all of its customers. Naturally, many of the benefits will flow to the subscribing customers given that they are the ones paying over 100% of the base rate cost of the project. But under FPL's updated program design, 45% of the benefits go to the general body of customers. This does not happen with a traditional community solar program where risk and reward are entirely contained within the subscribing customer class.

[4] *See* Order Approving Stipulation and Agreement in *Re: Application of Westar Energy, Inc. and Kansas City Gas and Electric Company to Make Certain Changes in Their Charges for Electric Service*. Docket 15-WSEE-115-RTS. Issued September 24, 2015.

**Q. What about the risk of undersubscription or customers leaving the program?**

A. This is not a valid concern. The fact of the matter is that the general body of customers still benefit from this program even if it is undersubscribed or customers leave before the full term. Assuming full subscription for the entire program life, the subscribers will pay for over 100% of the cost of the systems. Even if there were undersubscription and attrition such that only 80% of the program was subscribed in the end, the subscribers would still pay over 80% of the cost of the facilities. Compare this to the alternative used by witness Dauphinais where FPL builds the systems on its own and the entire customer base pays for 100% of the cost. In that case, the entire customer base takes on 100% of the risk on the assets, like nearly all traditional generation projects. The breakthrough with the design of FPL SolarTogether is the fact that the capital projects are paid for by the customers who have the willingness to pay for the resource.

**Q. Is there anything else that reduces the risks to the general body of customers?**

A. Yes. First, a well-designed community solar program tries to minimize the risk of undersubscription and attrition. The best way to achieve this is by having anchor customers. An anchor customer is a stable customer, usually commercial, government, or industrial, that can buy a large share of the array on its own. These customers, like anchor tenants in a mall, provide large amounts of stable revenue and give other potential subscribers confidence that

the project will be viable and stable. This attracts more customers, reducing the risk of undersubscription. FPL's pre-registration resulted in several large customer subscriptions and FPL's yearly escalating credit mechanism encourages long-term commitment. The top four pre-registered customers subscribed to a combined 546 MW, or 36.6% of Phase 1, which represents a significant portion of the array that reduces risk to the general body of customers. Second, because of the ownership structure of the FPL SolarTogether assets, risk is further reduced. If in the years ahead, benefits are not being realized at the level forecasted, FPL could add battery storage to the projects to achieve additional value if it was deemed cost-effective. Additionally, at the end of the program the solar assets are essentially paid off and providing zero marginal cost energy, this affords FPL the opportunity to treat these assets as general plant thus benefiting all customers.

## IV. Community Solar Pricing and Public Interest

**Q. Have you reviewed the testimony of Vote Solar witness Cox?**

A. Yes.

**Q. Witness Cox notes that FPL SolarTogether differs from other community solar programs that completely separate participants from the other customers. Do you have a response to this?**

A. Witness Cox is correct that many other community solar programs are designed to keep any risks and rewards self-contained within the program.

**Q. That seems reasonable. Why were those programs designed that way?**

A. In the early days of community solar, the price of solar energy, even for large-scale universal solar, was not competitive with other resources in a utility's fleet. However, utilities wanted to be responsive to growing customer demands for new renewable sources and customers' willingness to pay for those resources. Community solar programs provided a way for the utilities to meet the demands of their customers. Responsible design of those programs, given the cost of solar at the time, required the programs to include safeguards and backstops to ensure that only those customers who wanted to participate would pay for the additional solar energy. In so doing, other customers who were either unwilling or unable to participate would not see any of the extra costs appear on their bills.

**Q. Are the same protections for the general body of customers required if the price of solar energy becomes competitive with other generating sources?**

A. No. As the price of solar energy has come down over time, large-scale universal solar is a cost-effective source of energy for many utilities. As described in the rebuttal testimony of FPL witness Enjamio, the proposed cost of the solar energy in the FPL SolarTogether program shows it to be a cost-effective source of new generation.

**Q. If solar is cost-competitive, how does community solar fit in the utility's portfolio?**

A. Community solar programs effectively create a new subclass of customers,

whose participation in the program helps to increase the amount of renewable energy in the utility's portfolio in 2020 and 2021. As the cost of other generation sources increases over time, the fixed price of the community solar arrays serves to keep costs lower for all customers. The proposed sharing of costs and benefits between the participants and the general body of customers ensures that all customers can reap some of the long-term benefits of this program.

**Q. Witness Cox notes that some utilities are required to submit to prudence reviews if the community solar program is undersubscribed. Is that necessary to protect the general body of customers in this case?**

A. No. As shown in Exhibit SRB-2, the benefits of the solar generation exceed the costs over the projected life of the assets. In the event of undersubscription or customer attrition, it is true that the utility will not receive the forecasted revenue in a given year. However, the utility will not have to pay the credit for that portion as well. This will increase the clause portion of the revenue requirement benefits, which will accrue to all other customers. As discussed above, the general body of customers still benefit in a world where the program is undersubscribed by virtue of not having to pay for the entire cost of the system in base rates.

## V. Expanding Access to Clean Energy

**Q. How does the FPL SolarTogether Program design make community solar available to more customers?**

A. As discussed above, the levelized pricing structure allows customers to finance their participation over time. Rather than having to come up with the cash to pay for the entire subscription at the time the contract is signed, this pricing structure makes the program available to more customers who may not have the resources to make large cash payments. As a result, more customers, both residential and commercial, are able to participate.

**Q. Will FPL SolarTogether increase clean energy access to all customers?**

A. Yes. By leveraging a certain customer class's willingness to pay for renewable energy, community solar programs increase the amount of renewable energy generated for customers. To date, community solar programs are responsible for over 1.3 GW of additional solar capacity.[5] For this particular program, FPL has consciously set aside 45% of the financial benefits for the general body of customers. This includes low-income customers or others who choose not to participate in the program. But more importantly, community solar programs such as FPL SolarTogether help to ensure the increase in the amount of renewable energy generated for customers.

[5] National Renewable Energy Laboratory (NREL), "Community Solar," Market Status, as of July 2019, *available at* https://www.nrel.gov/state-local-tribal/community-solar.html.

**Q. What kinds of customers benefit the most from community solar programs?**

A. As discussed in earlier testimony, community solar programs allow customers, who want to invest in solar energy but are otherwise unable, to contribute to more solar generation. These customers include the 49% of homeowners that do not have suitable roofs for installing their own solar systems, the 35% of households that rent, or the commercial entities that do not have sufficient onsite space to offset their energy load.[6] Community solar programs also make investing in solar more attractive to businesses that may not have the expertise or do not have the same purchasing power on their own as the utility does.

**Q. Do you have any response to the discussion regarding the 25% allocation for residential and small business customers?**

A. FPL witness Valle goes into the allocation in more detail in his testimony. I would like to note that a specified allocation dedicated to residential customers is used by some other community solar programs such as that offered by Alliant Energy.[7] For a program the size of FPL SolarTogether, the relative percentage is not as important as the absolute size of the allocation. For perspective, the residential and small business portion of FPL SolarTogether by itself would be the second largest community solar program in the country, and the total program size of 1.4 GW is greater than the total

[6] Shared Solar: Current Landscape, Market Potential, and the Impact of Federal Securities Regulation; https://www.nrel.gov/docs/fy15osti/63892.pdf; April 2015.

[7] *See* Final Decision in *Application of Wisconsin Power and Light Company, as an Electric Public Utility, to Update its Renewable Energy Tariff*. Docket 6680-TE-104. Issued July 19, 2019.

installed capacity from all other community solar programs combined. [8]

**Q. Does this conclude your rebuttal testimony?**

A. Yes.

[8] Xcel Energy has over 504 MW of community solar in its Minnesota program. *Sharing the Sun: Community Solar Project List*; updated June 2019.