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June 26, 2020

VIA ELECTRONIC FILING

Mr. Adam Teitzman
Division of the Commission Clerk and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Re: Docket No. 20200071-EI, Review of 2020-2029 Storm Protection Plan pursuant to Rule 25-6.030, F.A.C., Florida Power & Light Company
Rebuttal Testimony of FPL Witness Michael Jarro

Dear Mr. Teitzman:

Enclosed for electronic filing on behalf of Florida Power & Light Company in the above-referenced docket, please find the Rebuttal Testimony of FPL witness Michael Jarro. Copies of this filing will be provided as indicated on the enclosed Certificate of Service.

If you or your staff have any question regarding this filing, please contact me at (561) 691-7144.

Respectfully submitted,

/s/Christopher Wright
Christopher T. Wright
Authorized House Counsel No. 1007055

Enclosure

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the Rebuttal Testimony of FPL witness Michael Jarro in Docket No. 20200071 was served by electronic delivery to the following parties of record this 26th day of June, 2020:

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

2020-2029 STORM PROTECTION PLAN

DOCKET NO. 20200071-EI

REBUTTAL TESTIMONY OF

MICHAEL JARRO

JUNE 26, 2020

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Michael Jarro. My business address is Florida Power & Light Company ("FPL" or the "Company"), 15430 Endeavor Drive, Jupiter, FL, 33478.

Q. Did you previously submit direct testimony?

A. Yes. I submitted written direct testimony on April 10, 2020, together with Exhibit MJ-1. I submitted an Errata on May 12, 2020, correcting an inadvertent error on pages 46 and 47 of Exhibit MJ-1.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to respond to certain portions of the direct testimonies of Ralph Smith and Kevin J. Mara submitted on behalf of the Office of Public Counsel ("OPC"), and the direct testimonies of Steve W. Chriss and Lisa V. Perry submitted on behalf of Walmart Inc. ("Walmart"). My rebuttal testimony will respond to the concerns, questions, and recommendations raised by the witnesses of OPC and Walmart in opposition to FPL's 2020-2029 Storm Protection Plan ("SPP") submitted as Exhibit MJ-1 and as corrected by the Errata filed on May 12, 2020. I will address OPC's recommendation that the Florida Public Service Commission ("PSC" or the "Commission") should adopt and implement a brand new resiliency test in this proceeding to evaluate FPL's SPP, and I will explain why such a recommendation is both inappropriate and unnecessary. Similarly, I will demonstrate that OPC's recommendations that the PSC should require further cost-benefit analyses and storm damage assessment modeling for FPL's SPP programs and projects are both inappropriate and unnecessary. I will also address OPC's concerns and recommendations regarding the eight (8) programs included in FPL's SPP. Finally, I will respond to OPC's concerns regarding the economic impact of COVID-19 and its recommendation that FPL should delay certain of its SPP programs and projects.

Q. In preparing your rebuttal testimony, did you collaborate and work with Gulf witness Michael Spoor?

A. Yes. FPL and Gulf are affiliate electric utilities owned by NextEra Energy, Inc. Throughout the process to prepare their respective SPPs, FPL and Gulf have worked very closely to incorporate and implement best practices and common approaches where appropriate and applicable. This collaborative effort has continued throughout the entire SPP proceeding, including the preparation of rebuttal testimony.

Notably, the testimony of OPC witnesses Smith and Mara assert many issues and recommendations that are largely identical for both FPL and Gulf. In responding to such issues and recommendations, my team and I have worked with Gulf witness Michael Spoor and his team to develop common or joint testimony where the FPL and Gulf positions are aligned. As a result of this joint and collaborative effort, some portions of my rebuttal testimony may be similar and/or largely the same as certain portions of the rebuttal testimony of Gulf witness Michael Spoor.

II. GENERAL RESPONSE TO CONCERNS OF INTERVENORS

Q. Before addressing the specific issues and recommendations raised by the Intervenor testimonies, do you have any general observations?

A. Yes. The evaluation of FPL's SPP must be grounded in the fact that FPL has successfully been engaging in Commission-approved storm hardening for the last 14 years. During this time, the Commission, has reviewed and had full transparency into all aspects of FPL's storm hardening activities, and interested parties and stakeholders had the opportunity to participate in these reviews. Indeed, in its report "Review of Florida's Electric Utility Hurricane Preparedness and Restoration Actions 2018", in Docket No. 20170215-EU, the Commission recognized the success of historical storm hardening efforts in Florida. Key findings by the Commission in that report included:

- Florida's aggressive storm hardening programs are working (Section V);
- The length of outages was reduced markedly from the 2004-2005 storm season (Section IV);
- The primary cause of power outages came from outside the utilities' right of way including falling trees, displaced vegetation, and other debris (Section IV);
- Vegetation management outside the utilities' rights of way is typically not performed by utilities due to lack of legal access (Section IV);
- Hardened overhead distribution facilities performed better than non-hardened facilities (Section V);
- Very few transmission structure failures were reported (Section V); and
- Underground facilities performed much better compared to overhead facilities (Section V).

In response to Hurricanes Matthew and Irma, the Florida Legislature passed section 366.96, Florida Statutes ("F.S"), "to mitigate restoration costs and outage times to utility customers" by "strengthen[ing] electric utility infrastructure to withstand extreme weather conditions by promoting the overhead hardening of electrical transmission and distribution facilities, the undergrounding of certain electrical distribution lines, and vegetation management." Section 366.96(1)(c)-(e), F.S. From these facts, one can logically and reasonably conclude that the Legislature did not pass Section 366.96, F.S., to stop or limit storm hardening activity in Florida, nor can one assume that the passage of Section 366.96, F.S., was an indictment or criticism against storm hardening activity that has previously taken place in Florida. Rather, it is reasonable to assume that the Florida Legislature passed this statute to encourage, streamline, and advance storm hardening work in this state.

Q. Having reviewed the testimonies of OPC witnesses Smith and Mara, do you have any general observations or responses?

A. Yes. First and foremost, on page 14, lines 8-17 and lines 18-19 of his direct testimony, OPC witness Mara states that it would not be unreasonable for the Commission to allow FPL to implement the "core programs" that have been in use for many years and approved by the Commission. Indeed, on pages 11 and 12 of his direct testimony, OPC witness Mara acknowledges that FPL's Commission-approved "core programs" have provided benefits in terms of reduced restoration costs and outage times.

In its SPP, FPL has proposed the following 8 programs:

- Pole Inspections – Distribution Program
- Structures/Other Equipment Inspections – Transmission Program
- Feeder Hardening (EWL) – Distribution Program
- Lateral Hardening (Undergrounding) – Distribution Program
- Wood Structures Hardening (Replacing) – Transmission Program
- Substation Storm Surge/Flood Mitigation –Program
- Vegetation Management – Distribution Program
- Vegetation Management – Transmission Program

With the exception of the new Substation Storm/Surge Mitigation Program and the proposal to transition FPL's existing three-year Storm Secure Underground Program Pilot ("SSUP Pilot") to a system-wide Lateral Hardening (Undergrounding) – Distribution Program, each of these storm hardening programs and storm preparedness initiatives (*i.e.*, six out of eight) have been in place since 2007 and have been reviewed and approved as part of FPL's Storm Hardening Plans, storm initiatives, and annual reliability filings. Stated differently, these six SPP programs are long-standing "core programs" that have been previously filed with and reviewed by this Commission. Under Mr. Mara's reasoning, it would not be unreasonable for the

Commission to allow FPL to implement (or continue) these six "core programs." Indeed, the only SPP programs that are addressed in any detail in Mr. Mara's testimony are the Substation Storm Surge/Flood Mitigation – Program and the Lateral Hardening (Undergrounding) – Distribution Program. Therefore, OPC witness Mara essentially agrees that six out of the eight programs included in FPL's SPP should be approved by the Commission.[1]

Further, with respect to the Substation Storm Surge/Flood Mitigation – Program, on pages 15-17 of his direct testimony, OPC witness Mara agrees with FPL's proposal to construct flood protection walls around other substations that are susceptible to storm surge or flooding during extreme weather events since the "flooding of a substation can be a high-risk scenario," and recommends that FPL consider relocating the St. Augustine Substation to a different location as an alternative to raising the equipment at the existing substation site above the flood level. Therefore, OPC essentially agrees with FPL's proposed Substation Storm Surge/Flood Mitigation – Program but recommends that FPL consider a relocation alternative for the St. Augustine Substation, which I will further address later in my testimony.

Based on the testimony of OPC witness Mara, it appears that OPC essentially agrees with seven out of the eight programs included in FPL's SPP. It further appears that the only truly contested program is FPL's proposal to transition the SSUP Pilot during 2021-2029 to a system-wide Lateral Hardening (Undergrounding) – Distribution Program to provide the benefits of underground lateral hardening throughout its system. I will respond to OPC

[1] Although OPC witness Mara opposes FPL's Lateral Hardening (Undergrounding) – Distribution Program, Mr. Mara overlooks that the continuation of the SSUP pilot through the end of 2020 and the transition to a system-wide lateral underground program in 2021 were both approved in FPL's 2019-2021 Storm Hardening Plan. *See In re: Petition for Approval of Florida Power & Light Company's 2019-2021 Storm Hardening Plan pursuant to Rule 25-6.0342, F.A.C.*, Docket No. 20180144-EI, Order No. PSC-2019-0364-CO-EI (Fla. PSC Aug. 27, 2019) (making Order No. PSC-2019-0301-PAA-EI issued on July 29, 2019, effective and final). As provided on page 5 of the Commission-approved 2019-2021 Storm Hardening Plan, FPL stated its plans to underground between 250-500 laterals annually in 2020 and 2021. In Appendix C of Exhibit MJ-1, FPL estimated that it would underground between 300-350 laterals annually in 2020 and 2021 under the SPP, which is consistent with the 2019-2021 Storm Hardening Plan approved by the Commission for 2020 and 2021.

criticisms of the Lateral Hardening (Undergrounding) – Distribution Program later in my testimony.

Q. Do you have any additional general observations about the testimonies of OPC witnesses Smith and Mara?

A. Yes. Other than its specific criticisms of the Lateral Hardening (Undergrounding) – Distribution Program, the OPC witnesses primarily make three general arguments.

First, OPC spends a majority of its testimony discussing the difference between reliability and resilience, arguing that the Commission should apply new resiliency standards when reviewing utility proposed SPP expenditures to ensure that the approved projects meaningfully improve resiliency. Although FPL agrees that the primary and intended purpose of SPPs is to improve storm resiliency of the electric system, there is no need for OPC's proposed new resiliency test because the Florida Legislature and Commission have already defined storm resiliency in Section 366.96, F.S., and Rule 25-6.030, Florida Administrative Code ("F.A.C.") – reduction in restoration costs and outage times associated with extreme weather conditions. As further explained later in my testimony, OPC's proposed new resiliency test is unnecessary and inappropriate given the clear direction and guidance by the Florida Legislature and Commission.

Second, OPC also argues that the Commission should require formulaic cost-benefit justifications before additional investments in grid resiliency are approved for rate recovery. As explained in my direct testimony, FPL's SPP has fully complied with all the requirements of what must be included in a SPP pursuant to Rule 25-6.030, F.A.C. OPC's proposal attempts to add a new requirement to the Rule that does not exist today. For the reasons explained later in my testimony, OPC's proposal is inappropriate and unnecessary for several reasons.

Third, OPC witness Smith makes several arguments regarding recovery of SPP costs, and whether such costs are currently being recovered in base rates. However, as stated in Commission Order No. PSC-2020-0162-PCO-EI, these issues are irrelevant to this SPP

proceeding because they pertain to costs that are directly related to issues that will be addressed in the Storm Protection Plan Cost Recovery Clause proceeding at Docket No. 20200092. Because the Prehearing Officer has already concluded that these issues are not appropriate for the SPP docket, I will not further respond to such issues.

Q. Having reviewed the testimonies of the Walmart witnesses Chriss and Perry, do you have any general observations or responses?

A. Yes. Walmart does not appear to raise any specific issues or have any concerns with the programs and projects included in FPL's SPP pending before the PSC. Walmart witness Perry proposes that the utilities work with large commercial and industrial customers in the future to include customer-sited generation in future SPPs. Walmart witness Perry's proposal is a future proposal and does not impact the programs and projects included in FPL's SPP. Therefore, Walmart's proposal should not hold up or delay the implementation of FPL's SPP if the Commission finds it is in the public interest. That said, FPL is willing to work with Walmart on discussing potential future SPP programs and projects.

Walmart witness Chriss indicates that Walmart does not oppose cost allocations used by FPL, and that FPL has appropriately designed the proposed illustrative SPP cost recovery rates. Although FPL agrees with the statements of Walmart witness Chriss, FPL notes that issues related to the recovery of SPP costs, including cost allocation and rate design, are beyond the scope of this proceeding and will be addressed in the Storm Protection Plan Cost Recovery Clause proceeding at Docket No. 20200092 as further explained in Commission Order No. PSC-2020-0162-PCO-EI issued on May 28, 2020.

III. OPC'S PROPOSED NEW RESILIENCY TEST FOR SPPS IS NOT APPROPRIATE OR NECESSARY FOR FPL'S SPP

Q. OPC spends a majority of its testimony discussing resilience and arguing that the Commission should apply new resiliency standards when reviewing FPL's proposed SPP programs. Before addressing the specifics of OPC's recommendation, do you have any preliminary observations about OPC's proposal?

A. Yes. As stated earlier and as will be explained in greater detail later in my testimony, OPC witness Mara essentially agrees with seven of the eight programs included in FPL's SPP. Therefore, although OPC proposes the adoption of a new resiliency test, OPC essentially agrees that no such test is necessary for, at a minimum, these seven existing SPP programs. Stated differently, in the event OPC's resiliency test is adopted in this proceeding, which it should not for the reasons I explain next, it should only apply to the contested Lateral Hardening (Undergrounding) – Distribution Program.

Q. OPC witnesses Smith and Mara dedicate significant portions of their direct testimonies to discuss the difference between reliability and resiliency, and both OPC witnesses assert that the objective or goal of Section 366.96, F.S., and Rule 25-6.030, F.AC., is to improve the resiliency of the electric system and not day-to-day reliability. Do you agree?

A. Yes. I agree that the intent and purpose of Section 366.96, F.S., is to improve the storm resiliency of the electric system by "[p]rotecting and strengthening transmission and distribution electric utility infrastructure from extreme weather conditions" to "mitigate restoration costs and outage times to utility customers." Rule 25-6.030, F.AC., likewise makes it clear that SPP programs and projects are "undertaken to enhance the utility's existing infrastructure for the purpose of reducing restoration costs and reducing outage times associated with extreme weather conditions." Thus, I agree with the OPC witnesses that the intent and purpose of Section 366.96, F.S., and Rule 25-6.030, F.AC., is to promote and

encourage storm hardening programs and projects that enhance the resiliency of the electric system from extreme weather conditions.

That being said, it should be noted that programs and projects that are designed to strengthen and protect the electric system from extreme weather conditions may also provide a secondary benefit of improving overall day-to-day service reliability. For example, feeders that have been hardened under FPL's existing Feeder Hardening (EWL) – Distribution Program have performed 40% better on day-to-day reliability than non-hardened feeders as demonstrated in Appendix A to Exhibit MJ-1. Importantly, however, this does not mean that such programs and projects are "reliability" projects because their primary purpose is to reduce restoration cost and outage time associated with extreme weather. In fact, both the Statute and Rule contemplate that the programs and projects included in a utility's SPP may "improve overall service reliability for customers."

Q. Both OPC witnesses Mara and Smith argue that the Commission should adopt and apply new resiliency standards and tests to review FPL's SPP to ensure that the programs and projects provide meaningful improvement to resiliency. Do you agree with this recommendation?

A. No. There is no need to develop a new resiliency standard or test because the Florida Legislature and Commission have already defined storm resiliency for purposes of SPP in Section 366.96, F.S., and Rule 25-6.030, F.A.C. As stated previously, both the Statute and Rule define storm resiliency as enhancing the electric infrastructure for the purpose of reducing restoration costs and outage times associated with extreme weather conditions. Therefore, there is no need to develop a new resiliency test as recommended by OPC because the Florida Legislature and Commission have already done so.

Q. Has FPL demonstrated that its SPP programs will improve storm resiliency by reducing restoration costs and outages associated with extreme weather conditions?

A. Yes. FPL has demonstrated in Sections II and IV, and Appendix A of Exhibit MJ-1 that each of its SPP programs will improve storm resiliency by reducing restoration costs and outages associated with extreme weather conditions. Indeed, on pages 11, 15, and 21 of his direct testimony, OPC witness Mara essentially agrees that all eight of FPL's proposed SPP programs will reduce restoration costs and outage times associated with extreme weather conditions. The Company has been implementing most of these programs since 2007, while maintaining some of the lowest rates in the state. As provided in Docket No. 20170215-EU, FPL's restoration efforts during Hurricane Irma saved restoration time and costs as compared to a similar storm, Hurricane Wilma in 2005, in large measure due to the Company's investments in storm hardening and hurricane preparedness initiatives as provided in Appendix A to Exhibit MJ-1.

Q. Do you have concerns with OPC's proposal to adopt and implement a new resiliency test in this proceeding?

A. Yes. My view is that OPC is attempting to re-litigate the Storm Protection Plan Rule 25-6.030, F.A.C., approved by this Commission. OPC is trying to add formulaic and highly prescriptive requirements that were not provided by the Statute or Rule that would tie the Commission's hands when determining whether an SPP is in the public interest. When it adopted Section 366.96, F.S., the Florida Legislature did not prescribe a specific test or set of metrics to be applied when reviewing SPPs to determine if they are in the public interest. Instead, the Florida Legislature left that determination to the discretion of the Commission by directing it to adopt rules necessary to implement the statute. In adopting Rule 25-6.030, F.A.C., the Commission could have prescribed specific metrics, standards, and formulas to determine benefits from SPPs, but it wisely did not because each program is different and, therefore, must be evaluated on its particular facts and merits. The Commission can and should consider all relevant facts and merits when determining if the SPP programs are in the public interest; however, this determination should be based on the requirements prescribed in Rule 25-6.030, F.A.C.

Q. Do you have any additional concerns with the resiliency metrics proposed by OPC witnesses Smith and Mara?

A. Yes. First and foremost, there are no Commission-approved or industry-accepted standards for resiliency. Indeed, both OPC witnesses concede that there are no clear and widely accepted standards to test for resiliency of electric systems. See page 7 of the direct testimony of OPC witness Smith, and pages 9 of the direct testimony of OPC witness Mara. For this reason alone, OPC's proposed resiliency metrics should not be adopted.

Additionally, the four resiliency metrics proposed by OPC witness Mara on pages 10-11 of his direct testimony should be rejected for the following additional reasons: they address matters that utilities already take into account in their extreme weather event restoration efforts; they ignore that all storms are different in path, intensity, level of damage and the number of resources available; they seek to alter existing storm restoration prioritization practices; and in at least one case provides a recommendation that does not pass the common sense test.[2]

Likewise, the twelve "resiliency" metrics proposed on pages 7-9 of the direct testimony of OPC witness Smith should be rejected for the following reasons: Florida's Legislature and this Commission through Rules 25-6.030 F.A.C., and 25-6.031 F.A.C., have already addressed many of these metrics; they are an attempt by OPC to re-litigate the SPP rules approved by this Commission; they aim to arbitrarily limit investments and cost recovery of SPP projects; and, in one instance, basically ask this Commission to never approve for prudency any SPP until some undetermined time at which some arbitrary objectives have been reached.

[2] For example, the "Community Function" metric proposed on page 10 of Mr. Mara's testimony is not a test of resiliency because it does not measure or reflect a reduction in restoration costs or outage times on the utilities' system. Indeed, this metric ignores the fact that the utility still needs to repair all damaged facilities and safely restore all power outages notwithstanding the fact that some customers may have a temporary backup supply of power. Additionally, this metric suggests that the utilities should alter the prioritization of restoration of service based on the type of back-up equipment and fuel reserves of individual customers

IV. OPC'S REQUESTS FOR FURTHER COST-BENEFIT ANALYSES AND STORM DAMAGE ASSESSMENT MODELING FOR FPL'S SPP ARE NOT APPROPRIATE OR NECESSARY

Q. On page 10 of his direct testimony, OPC witness Smith recommends that the Commission should require further cost-benefit analyses for FPL's SPP programs and projects and, on page 13 of his direct testimony, OPC witness Mara recommends that the Commission should require FPL to use its storm damage assessment model to model the future system with the proposed SPP programs. Before addressing the specifics of OPC's recommendations, do you have any preliminary observations about OPC's proposals?

A. Yes. As stated earlier and as will be explained in greater detail later in my testimony, OPC witness Mara essentially agrees with seven of the eight programs included in FPL's SPP. Therefore, although OPC recommends that further cost-benefit analyses and storm damage assessment modeling should be performed for FPL's SPP programs and projects, OPC essentially agrees that no such further analyses or modeling are necessary for, at a minimum, these seven SPP programs. Stated differently, OPC's recommendations that FPL be required to perform further analysis of cost and benefits and modeling only apply to the contested Lateral Hardening (Undergrounding) – Distribution Program.

Q. On page 6 of his direct testimony, OPC witness Mara asserts that the Rule 25-6.030, F.A.C., requires the SPP programs to be cost-effective, and on page 10, OPC witness Smith recommends that Commission should require further cost-benefit analyses for FPL's SPP programs and projects. Do you agree with the OPC's application of Rule 25-6.030, F.A.C., as it pertains to the costs and benefits of the SPP?

A. No. First, Section 366.96, F.S., and Rule 25-6.030, F.A.C., do not prescribe or require a traditional cost-benefit analysis or cost-effectiveness test for the SPP programs and projects. The Statute makes no mention of any such analysis or test and, instead, the Florida Legislature left that determination to the discretion of the Commission by directing it to adopt rules

necessary to implement the statute. In adopting the Rule, the Commission could have directed the utilities to provide a specific cost-benefit analysis or cost-effectiveness test. However, the Commission declined to do so for SPPs. Instead, Rule 25-6.030(3)(d)(4), F.A.C., requires the SPP to include a "comparison" of the estimated costs and estimated benefits for each SPP program, which is provided in the following portions of FPL's SPP: Section II; the "Comparison of Costs and Benefits" included in each SPP program description in Section IV; and Appendix A of Exhibit MJ-1. As such, a cost/benefit analysis or cost-effectiveness test for each major component of the SPP is not required under either the Statute or Rule 25-6.030, F.A.C. My view is that OPC is, once again, attempting to re-litigate the Storm Protection Plan Rule 25-6.030, F.A.C., approved by this Commission.

Second, in Rule 25-6.030, F.A.C., the Commission prescribed specific information and data that must be included with each SPP, including, but not limited to, estimated costs, estimated benefits, criteria to prioritize and select projects, and estimated rate impacts. In its SPP, FPL provided information consistent with Rule 25-6.030, as explained in my direct testimony. The Commission can use and "compare" all of the information it specifically required FPL to provide in the SPP to determine if, pursuant to Section 366.96, F.S., the programs and projects included in the SPP are in the public interest and should be approved, or if the SPP programs should be modified or denied. Each program is different and, therefore, the comparison of costs and benefits must be evaluated on its particular facts and merits.

Third, the analysis of whether the benefits of a SPP program or project justify the estimated costs is not a one-size-fits-all proposition as suggested by OPC. This is clearly demonstrated by the fact that each of the electric utilities took very different approaches to comparing the estimated costs and benefits of their SPP programs. Further, such analyses are necessarily dependent on several highly variable factors that, in large part, are beyond the utility's control and cannot be accurately predicted, including, but not limited to: the number of annual storms; the path of each storm; the strength or category of each storm; the speed or

duration of each storm; the availability of resources to respond to and provide storm restoration services for each storm; and the extent to which the infrastructure has been storm hardened at the time of each projected storm. Moreover, the benefits to be included in such analyses should not be limited to only avoided utility costs as I will explain further.

Q. Besides not being required by the Statute or Rule, do you have additional concerns with the recommendation on page 10 of OPC witness Smith's direct testimony that the Commission should require FPL to provide further cost-justification before additional investments in grid resiliency are approved?

A. Yes. Mr. Smith's recommendation that FPL's SPP programs require further cost-benefit analysis or cost-justification before they can be approved is directly contrary to OPC witness Mara's testimony on pages 11-12 and 15-17 that it would reasonable for the Commission to allow FPL to implement the long-standing "core programs" that have been reviewed by the Commission as I stated earlier and further explain later in my testimony. Either these SPP programs are in the public interest and should be approved, or they are not. The fact that OPC witness Mara, who is an engineer, has essentially agreed that most of these programs should be approved without further cost-justification clearly suggests that OPC believes FPL has provided sufficient information about each of the SPP programs for the Commission to determine if they are in the public interest.

Additionally, storm hardening is not a simple cost-effective proposition as suggested by OPC. OPC's approach focuses only program costs and savings in restoration costs associated with extreme weather conditions (*i.e.*, a strictly quantitative analysis), and completely ignores the qualitative component required by both the Statute and Rule – reduction in outage times associated with extreme weather conditions. Stated differently, OPC's proposed cost-benefit and cost-effectiveness approach ignores half of the benefits side of the equation.

It cannot be reasonably disputed that customers want the extended outage times associated with extreme weather events to be reduced. Indeed, the Florida Legislature concluded that reducing outage times for utility customers, as well as restoration costs, is in the public interest. The Commission can and should compare these factors and determine whether the estimated benefits of the storm hardening programs are justified by the estimated rate impacts. Therefore, for these reasons, I disagree with OPC witness Smith that the further cost-justification of FPL's SPP programs is needed or appropriate.

Q. On pages 13 and 24 of his direct testimony, OPC witness Mara recommends that FPL should be directed to use its storm damage assessment model to model its future system with the proposed SPP programs in place and subjected to the weather conditions of Hurricanes Matthew and/or Irma. Please describe FPL's Storm Damage Model.

A. FPL's Storm Damage Model is a very important tool developed by FPL to prepare for major storms that threaten FPL's service territory. As provided in FPL's response to OPC's Fourth Set of Interrogatories No. 183, the Storm Damage Model is used for major storms with a forecast track provided by the National Hurricane Center to estimate the number of construction man-hours ("CMH") required to restore power to customers based on the forecasted intensity, speed, path of the storm, and the condition (hardened vs. non-hardened) of the infrastructure at the time of the storm. The Model is a planning tool used by the Company to estimate the extent of damage expected from a projected storm, and the number and location of resources that will be needed to quickly and safely restore power outages to the greatest number of customers in the shortest amount of time.

Q. Do you agree with OPC witness Mara's recommendation that FPL should use the Storm Damage Model to model its future system with the proposed SPP programs in place and subjected to the weather conditions of Hurricanes Matthew and/or Irma?

A. No, as provided in Appendix A to Exhibit MJ-1, FPL used its Storm Damage Model to analyze Hurricanes Matthew and Irma and estimate the reduction in CMH, days to restore, and storm

restoration costs that were attributable to the storm hardening projects that were completed and in place at the time of the hurricanes. This analysis was based mainly on the feeders that FPL knew had been hardened versus non-hardened at the time Hurricanes Matthew and Irma occurred, and included the distribution inspection and vegetation management that had been completed at the time Hurricanes Matthew and Irma occurred. OPC witness Mara proposes something different.

OPC witness Mara proposes that FPL use the Storm Damage Model to model the future system with the proposed SPP programs in place for the entire 2020-2029 SPP period. The problem with this approach is that, beyond year one of the SPP (2020), the project level detail has not been determined; meaning FPL does not at this time know which specific projects will be completed each year or where they will be located for the entire 2020-2029 SPP period. The scope and location of the storm hardening projects used in the Storm Damage Model for each year of the SPP will have a significant impact on the results of the analysis. For example, if FPL assumes a storm hardening project in a densely populated urban area as opposed to a rural area, or vice versa, this could change the damage estimated by the Storm Damage Model. Also illustrative is the fact that the estimated length, number of poles, location, and accessibility of the laterals used in the model would change the damage estimated by the Storm Damage Model. Each of these factors, which cannot be reasonably predicted for the entire 2020-2029 SPP period, would impact the estimated CMH, days to restore, and storm restoration costs predicted by the Storm Damage Model. For these reasons, the Storm Damage Model does not readily lend itself to model future SPP programs as proposed by OPC witness Mara.

Even assuming the Storm Damage Model was appropriate to provide an estimate of CMH, days to restore, and storm restoration costs for future SPP programs, FPL's Storm Damage Model is only used for major storms with a forecast track provided by the National Hurricane Center. Thus, the Model would not account for any other types of extreme weather conditions, as well as any associated reductions in restoration costs and outage times. Perhaps

that is why Mr. Mara recommends that the future SPP programs be modeled on Hurricanes Matthew and Irma. However, it is unclear from Mr. Mara's testimony if he is proposing to model a single Hurricane Matthew/Irma event each year of the 2020-2029 SPP or if some other assumption(s) should be used. Florida remains the most hurricane-prone state in the nation and, with the significant coast-line exposure of FPL's system and the fact that the vast majority of FPL's customers live within 20 miles of the coast, FPL's service territory has a high probability of being impacted by multiple extreme weather events every year. Although no one is in a position to know for sure how frequently FPL's service territory will be impacted by extreme weather conditions, the Storm Damage Model estimate of cumulative reductions in restoration costs and outage times associated with the SPP programs will be directly affected by frequency, strength, speed, and path of storms that impact FPL's service territory. As required by the Rule 25-6.030, F.A.C., FPL has provided benefits and cost for all the programs in FPL's SPP, in some cases these benefits are qualitative and in others quantitative, as provided in Sections II and IV and Appendix A to Exhibit MJ-1.

Q. On page 13 of his direct testimony, OPC witness Mara asserts that FPL should provide a net present value ("NPV") analysis of the SPP program revenue requirements to be compared to the savings from the Storm Damage Model. Do you agree with Mr. Mara's recommendation?

A. No. Mr. Mara's NPV proposal is based on his recommendation that FPL should use the Storm Damage Model to model its future system with the proposed SPP program. For the reasons I previously explained, the Storm Damage Model does not lend itself to model future SPP programs as proposed by OPC witness Mara, and it is entirely uncertain what assumptions should be used to model future extreme weather conditions. For this reason alone, Mr. Mara's NPV analysis proposal should be rejected.

Further, as I have previously discussed and as I further discuss in relation to FPL's Lateral Hardening (Undergrounding) – Distribution Program, simply comparing the estimated

cost of a program with the estimated avoided utility cost is not the proper way to analyze SPP programs.

V. FPL'S SPP PROGRAMS ARE IN THE PUBLIC INTEREST AND SHOULD BE APPROVED

A. OPC Essentially Agrees with Seven of the Eight Programs Included in FPL's SPP

Q. You have stated that OPC essentially agrees with seven of the eight programs included in FPL's SPP. Can you please explain how you arrived at that conclusion?

A. Yes. On page 14 of his direct testimony, OPC witness Mara states that the Commission should allow FPL to implement the following SPP programs: (1) Pole Inspections – Distribution Program; (2) Structures/Other Equipment Inspections – Transmission Program; (3) Vegetation Management – Distribution Program; and (4) Vegetation Management – Transmission Program. His reasoning, as provided on pages 11-12, and 14 of his direct testimony, for why these programs should be approved is that these "core programs" have been in use for many years; are part of FPL's approved Storm Hardening Plan; and have provided benefits in terms of reduced restoration costs and outage times as shown in FPL's Third Supplemental Amended Response to Staff's First Data Request in Docket No. 20170215-EI, which is provided as Appendix A to Exhibit MJ-1. The reasons offered by Mr. Mara for why these four existing storm hardening programs should be approved apply equally to the Feeder Hardening (EWL) – Distribution Program and Wood Structures Hardening (Replacing) – Transmission Program. Indeed, Mr. Mara overlooks that both FPL's Feeder Hardening (EWL) – Distribution Program and Wood Structures Hardening (Replacing) – Transmission Program are existing "core programs" that have also been used for many years; have been reviewed by the Commission as part of FPL's Storm Hardening Plans, storm initiatives, and annual reliability filings; and FPL demonstrated that these programs have and will continue to reduce outage times due to extreme weather conditions as provided in Sections II and IV and Appendix A to Exhibit MJ-

1. Therefore, based on Mr. Mara's own reasoning, there should be no real debate in this proceeding regarding the approval of the following six of the eight existing and long-standing storm hardening programs included in FPL's SPP:

Programs Included in FPL's SPP	**FPL's Long-standing "Core Programs"**
1. Pole Inspections – Distribution Program	1. Pole Inspections – Distribution Program
2. Structures/Other Equipment Inspections – Transmission Program	2. Structures/Other Equipment Inspections – Transmission Program
3. Feeder Hardening (EWL) – Distribution Program	3. Feeder Hardening (EWL) – Distribution Program
4. Lateral Hardening (Undergrounding) – Distribution Program[3]	
5. Wood Structures Hardening (Replacing) – Transmission Program	4. Wood Structures Hardening (Replacing) – Transmission Program
6. Substation Storm Surge/Flood Mitigation –Program[4]	
7. Vegetation Management – Distribution Program	5. Vegetation Management – Distribution Program
8. Vegetation Management – Transmission Program	6. Vegetation Management – Transmission Program

[3] FPL's SSUP Pilot was included in FPL's Commission-approved 2019-2021 Storm Hardening Plan. However, this was a limited three-year underground pilot program that is being transitioned as part of FPL's SPP to a system-wide underground program, the Lateral Hardening (Undergrounding) – Distribution Program.

[4] The Substation Storm Surge/Flood Mitigation –Program is the only new program included in FPL's SPP.

In fact, as provided on page 14 of his testimony and in his response to FPL Interrogatory No. 17, the only reason offered by Mr. Mara for why he believes the existing and previously-approved Feeder Hardening (EWL) – Distribution Program and Wood Structures Hardening (Replacing) – Transmission Program should not be approved with the other four existing "core programs" is his assertion that the Commission needs to consider the state of the economy and the affordability of electric service due to the economic impact from the COVID-19 pandemic. For the reasons I explain later in my testimony, Mr. Mara's recommendation to delay these existing and previously approved storm hardening programs should be rejected.

Additionally, as explained above, on pages 15-17 of his direct testimony, OPC witness Mara reflects his agreement with FPL's proposed Substation Storm Surge/Flood Mitigation – Program; the only issue he raises is with regard to a specific project under that program. Mr. Mara recommends that FPL consider a relocation alternative for the St. Augustine Substation, which recommendation I will further address later in my testimony. Therefore, based on the reasoning of OPC witness Mara, OPC essentially agrees that seven of the eight programs included in FPL's SPP should be implemented.

Q. Doesn't Mr. Mara state that he agrees with the "core programs" only if the Commission orders a delay in implementing the other hardening programs until FPL can provide the rate impact of all programs updated with the economic impact of the COVID-19 pandemic?

A. Yes, on pages 14-15, Mr. Mara appears to make his agreement with the existing "core programs" conditional on the Commission's acceptance of his proposal to delay implementation of FPL's Lateral Hardening (Undergrounding) – Distribution Program and order FPL to do an updated total program cost benefit analysis using the Storm Damage Model. Notably, Mr. Mara's conditions have no substantive impact on the other seven SPP programs or whether they are in the public interest. A storm hardening program is either in the public interest as proposed and should be approved, or it is not. Here, Mr. Mara has essentially

conceded that seven of the eight SPP programs provide benefits in terms of reductions in restoration costs and outage times and should be implemented. I will further address the COVID-19 pandemic later in my testimony.

B. OPC's Recommended Alternative to the Substation Storm Surge/Flood Mitigation Program is not Reasonable

Q. You stated that on pages 15-17 of his direct testimony, OPC witness Mara agrees with FPL's proposed Substation Storm Surge/Flood Mitigation – Program but recommends that FPL consider a relocation alternative for the St. Augustine Substation. Will you please describe his proposed alternative?

A. Yes. As part of its Substation Storm Surge/Flood Mitigation Program, FPL proposes to raise the equipment at the St. Augustine substation above the flood level. On page 17, lines 4-10 of his direct testimony, Mr. Mara states that FPL should provide an alternative project that would relocate the substation away from the water's edge to determine whether the Company's proposal is the least cost option.

Q. Do you have a response to Mr. Mara's alternative proposal for the St. Augustine Substation?

A. Yes. First, I disagree with OPC witness Mara's statement that Rule 25-6.030, F.A.C., has a requirement for a least cost option as explained previously. Second, assuming a suitable location can be found, it would be much costlier to relocate the substation than raising the equipment above the flood level at the existing site. To relocate the substation, the only available, large enough, vacant property would be on the west side of the St. Johns River. I submit that the cost of a new property, acquiring new transmission easements, relocating and rebuilding the transmission line, and relocating and rebuilding the six distribution feeders would far exceed FPL's proposal to raise the equipment at the existing site above the flood level. Additionally, the substation would be further from the load center and all but one feeder

would be longer. Finally, the feeders would likely need to be bored under the river, which would be a significantly costly endeavor.

C. FPL's Lateral Hardening (Undergrounding) – Distribution Program

Q. Would you please summarize your view of OPC witness Mara's arguments against FPL's Lateral Hardening (Undergrounding) – Distribution Program?

A. Yes. Mr. Mara has several opinions regarding how laterals should be selected and prioritized for undergrounding, and he also has opinions as to how the program should be deployed relative to the timing of the Company's feeder hardening program. I will address both of those topics after addressing the primary and fundamental challenge that OPC witness Mara makes to undergrounding laterals in general.

Q. What do you believe is OPC witness Mara's primary and fundamental challenge to the Lateral Hardening (Undergrounding) – Distribution Program?

A. Mr. Mara does not believe that FPL should underground any of its laterals because, according to him, "the benefit to cost ratio is so low as to not be justifiable." *See* Mara Direct Testimony, page 23, lines 9-11. To begin with, his position directly contradicts the determination of the Legislature that "[i]t is in the state's interest to strengthen electric utility infrastructure to withstand extreme weather conditions by promoting…the undergrounding of certain electrical distribution lines…." Section 366.96(1)(c), F.S. Notwithstanding the fact that Mr. Mara admits that "undergrounding laterals provides much greater resiliency during extreme weather events," he apparently does not support that program being included in the Company's SPP because he contends it is not cost effective from a purely quantitative basis. *See* Mara Direct Testimony, page 23, lines 9-1.

Q. How do you respond to this argument?

A. Mr. Mara's view of this program is too narrow and it does not capture the intent of storm hardening. Mr. Mara contends that SPP programs in general will not benefit customers unless

they are "cost-effective" from a strict, mathematical view. *See* Mara Direct Testimony, page 6, lines 17-18. In other words, Mr. Mara appears to suggest that unless expected project costs are at least one cent less than the expected monetary savings in FPL's restoration costs, FPL should do nothing in the realm of storm hardening. This, of course, is not how Florida has pursued storm hardening for the last 14 years, nor is it consistent with the stated purpose of Section 366.96, F.S.

Q. Is FPL's proposed Lateral Hardening (Undergrounding) – Distribution Program consistent with your understanding of the intent of Section 366.96, F.S., and how Florida has pursued storm hardening over the last decade?

A. It is. As OPC witness Mara acknowledges in his testimony, Section 366.96, F.S., states that its intent is to promote utility programs that reduce restoration costs; reduce outage times; and improve overall service reliability to customers. *See* Mara Direct Testimony, page 5, lines 1-7. FPL's proposed Lateral Hardening (Undergrounding) – Distribution Program will achieve all three of these objectives, and it appears that Mr. Mara does not dispute these facts, and for good reason. When an above-ground line is placed under the ground where it is not subjected to the impacts of extreme weather (such as flying debris, contact with vegetation, wind shearing, and etc.) then restoration costs are necessarily less because there is no damage to restore; outage times are shorter because the outage never happened; and reliability during extreme weather is therefore improved because adverse events did not effect it. In fact, OPC witness Smith recognizes these logical truths in his testimony where he states that, "[r]esilience is in large part about what does not happen." *See* Smith Direct Testimony, page 4, lines 24-25.

Furthermore, Florida has recognized the inherent benefits of storm hardening as far back as 2004 when the state was ravaged by two consecutive years of devastating hurricanes. Since that time, the Commission has led a comprehensive campaign leading the nation to systematically and effectively harden electric utility assets against extreme weather, and the success of these efforts is undeniable. Throughout this process, it is notable that neither the

Florida Legislature, the Commission, nor any intervenor suggested that Florida should adopt the "save a penny or do nothing" approach that Mr. Mara is suggesting in his testimony.

Q. Are you contending that FPL's SPP costs can be limitless?

A. No. OPC witness Mara states that this is the case in his testimony and he appears to contend that the only way to prevent this so-called "limitless" spending is to apply a strict, mathematical cost savings analysis without any regard to the qualitative benefits of storm hardening, and without regard to the prioritization models that the company has in place for its storm hardening work. As is the case with all of the historical storm hardening programs that the Company has done over the past 14 years, the benefits of those efforts have not and reasonably cannot be measured on restoration cost savings alone. In fact, even if it is the case that the cost of protecting our customers from the impacts of extreme weather for a given program or project does exceed the cost of doing nothing at all, the discussion does not end there. That is why I believe that the Florida Legislature wisely charged the Commission with determining whether a proposed storm protection plan is "in the public interest" and not whether the plan meets any sort of strict, mathematical cost/benefit comparison.

Furthermore, FPL has selected, prioritized, and deployed all of its historical storm hardening programs in a deliberate and cost-effective manner over the past 14 years and FPL is employing this same approach for its lateral undergrounding program. Specifically, FPL is concentrating on undergrounding the most problematic overhead laterals on its system first and, as this program advances and develops over time, FPL may harden its laterals in ways other than undergrounding should the particular facts and circumstances dictate that result. Thus, to suggest that FPL would engage in, or that this Commission would allow, limitless spending on storm hardening efforts without regard to their commensurate benefits ignores the long history that both FPL and this Commission have with protecting this state against the impacts of extreme weather.

Q. Do you agree with OPC witness Mara's assertion on page 18, line 19 of his testimony that the criteria to prioritize and select laterals under FPL's Lateral Hardening (Undergrounding) – Distribution Program has changed the priority for selection used in FPL's 2019 Storm Hardening Plan?

A. No. The priority for selection of laterals remains the same as for its SSUP Pilot, which is to select laterals based on the same criteria of outage experience during the recent Hurricanes Matthew and Irma, the number of vegetation-related outages experienced over the most recent 10 years, and the total number of lateral and transformer outages experienced over the most recent 10 years. Based on lessons learned from the pilot and the goal of driving efficiency and lowering costs, FPL is using a feeder based approach for its deployment of the Lateral Hardening (Undergrounding) – Distribution Program, on which a weighted score is given to feeders based on the individual lateral rankings.

Q. On pages 20 and 21 of his direct testimony, OPC witness Mara states that 195 of the 497 total laterals included in FPL's SSUP Pilot did not experience an outage since 2015. Do you have a response?

A. Yes. Mr. Mara is correct that 195 of the 497 total laterals included in FPL's SSUP Pilot did not experience an outage since 2015 in day-to-day reliability. However, Mr. Mara overlooks that all those laterals were impacted by either Hurricanes Matthew and Irma or both. This fact further illustrates the difference between reliability and resilience, as discussed at length by OPC witnesses Smith and Mara, and the fact that a perfectly reliable lateral may in fact need to be made resilient to extreme weather conditions. Indeed, OPC witness Mara acknowledges on page 8 of his direct testimony that the SPP programs should be focused on resiliency, which he defines as "[i]nfrequent, often unexpected, widespread/long duration power interruptions, generally with significant corollary impacts," and not reliability.

Q. Does OPC's witness Mara disagree with FPL's feeder approach to analyzing laterals?

A. No, on page 21, line 16 of his testimony, OPC's witness Mara states that he agrees "with FPL's starting point of analyzing the laterals on a feeder basis."

Q. Has FPL identified benefits to implementing the Lateral Hardening (Undergrounding) – Distribution Program on a feeder basis?

A. Yes, one of the lessons of the SSUP Pilot is that from an engineering, permitting, and construction standpoint, implementing projects at the feeder level provides a less costly solution (by approximately 12-20%) compared to deploying on a single lateral basis. These benefits are in the areas of construction and materials, engineering, permitting, and restoration.

Q. Can you please explain in more detail the benefits of implementing the Lateral Hardening (Undergrounding) – Distribution Program on a feeder basis?

A. Yes. While some laterals on the selected feeder may not have experienced significant storm or vegetation related outages related to storm or vegetation, benefits of implementing the Lateral Hardening (Undergrounding) – Distribution Program on a feeder basis include the following.

<u>Construction and Materials:</u>

- Projects on a single lateral basis may cost more as you may not be able to engineer the optimum design.
- Being designed with a holistic approach with all the adjacent laterals would reduce the labor costs, material costs and also provide better reliability.
- Crews having to move around from a lateral on one feeder to a lateral on another feeder causes additional mobilization and demobilization costs, *e.g.*, crews incur more drive time, which reduces construction time and efficiency,

<u>Engineering:</u>

- Engineering all laterals on a feeder upfront with all the circuits allows for optimizing the underground route and minimizes underground footage, while providing desired improvements in storm resilience and reliability.
- Having to separately engineer each single lateral project would be costlier than to engineer multiple lateral jobs on one feeder job by integrating all laterals. When engineering single lateral jobs, engineering options may be limited, adding incremental cost and time to design.

Permitting:

- Undergrounding one lateral at a time would require going through permitting multiple times versus once for all laterals on a feeder.
- The volume associated with a single laterals approach puts more burden on city permitting agencies, which are already inundated and sometime overwhelmed with the permit volume due to all types of construction and maintenance occurring in their jurisdiction.
- Permit costs are lower using the feeder approach as opposed to the single lateral approach.

Restoration:

- If all laterals on a feeder are underground, it will allow for quicker restoration of power to all customers served by the feeder and enable us to focus restoration resources on other pending restoration work.
- Not having to stage overhead resources in areas where all laterals are undergrounded allows FPL to place crews closer to where they will be needed, thus improving our ability to restore at the fastest rate possible.

VI. CONCERNS REGARDING COVID-19 SHOULD NOT DELAY APPROVAL OF FPL'S SPP PROGRAMS

Q. On page 13, lines 19-22 of his direct testimony, Mr. Mara states that the uncertainty of the economic impacts of COVID-19 on the Florida economy should be considered by the Commission in reviewing FPL's SPP. Do you have a response?

A. Yes. FPL understands just how disruptive and impactful the coronavirus (COVID-19) pandemic has been and we remain committed to doing the right thing for our customers and the communities we serve. For example, FPL obtained approval from this Commission to provide fuel savings to customers through a one-time bill decrease of nearly 25% in May. FPL also implemented certain policies to further assist customers in a hardship situation, such as providing payment extensions and waiving certain late payment fees for customers.

Importantly, our customers are depending on us now more than ever due to the fact that many customers are working remotely due to the COVID-19 pandemic. While we recognize that the COVID-19 pandemic has caused hardships for customers and the communities we serve, FPL must not delay our efforts and should continue working to improve the resiliency of the energy grid, particularly given that hurricanes will continue to threaten FPL's territory and customers regardless of economic conditions.

Q. Does this conclude your rebuttal testimony?

A. Yes.