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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Review of Storm Protection Plan, pursuant to Rule 25-6.030, F.A.C., Duke Energy Florida, LLC.	DOCKET NO. 20220050-EI ORDER NO. PSC-2022-0388A-FOF-EI ISSUED: November 14, 2022

The following Commissioners participated in the disposition of this matter:

ART GRAHAM
GARY F. CLARK
MIKE LA ROSA
GABRIELLA PASSIDOMO

AMENDED FINAL ORDER APPROVING, WITH MODIFICATIONS, DUKE ENERGY FLORIDA'S STORM PROTECTION PLAN

APPEARANCES:

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BY THE COMMISSION:

Background

Section 366.96, Florida Statutes (F.S.), requires each investor-owned electric utility (IOU) to file a transmission and distribution storm protection plan (SPP) that covers the immediate 10-year planning period. The plans are required to be filed with the Florida Public Service Commission (FPSC or Commission) at least every three years and must explain the systematic approach the utility will follow to achieve the objectives of reducing restoration costs and outage times associated with extreme weather events and enhancing reliability. No later than 180 days after a utility files its plan that contains all elements required by our rule, we must determine whether it is in the public interest to approve, approve with modification, or deny the plan. Subsection 366.96(7), F.S., states that once a utility's SPP has been approved, proceeding with actions to implement the plan shall not constitute or be evidence of imprudence. Under this section, we are also required to conduct an annual storm protection plan cost recovery clause (SPPCRC) proceeding to determine the utility's prudently incurred SPP costs.

Duke Energy Florida, LLC (DEF or Utility) filed its first SPP on April 10, 2020, in Docket No. 20200069-EI. The Office of Public Counsel (OPC), Walmart, Inc. (Walmart), Florida Industrial Power Users Group (FIPUG), and White Springs Agricultural Chemical, Inc. d/b/a PCS Phosphate (PCS) were granted intervention. The 2020 SPP was pending administrative hearing when DEF entered into a Settlement Agreement with OPC, PCS, and Walmart.[1] An administrative hearing was held on August 10, 2020, where we heard oral

[1] FIPUG took no position on the Joint Motion for Expedited Approval of a Stipulation and Settlement Agreement.

argument from the parties in support of the Settlement Agreement, admitted testimony and documentary evidence into the record, and approved the Settlement Agreement.[2]

Key provisions of the 2020 Settlement were:

- DEF would file an updated SPP for the period 2023-2032, in which DEF would not materially expand the scope of the programs and associated expenditures it sought to recover for the years 2020-2022 beyond those that are included in the estimates provided in specific documents, and as modified in the filing made on July 24, 2020, in the SPPCRC docket.

- DEF would base its requests for cost recovery through the SPPCRC for the years 2023, 2024, and 2025 on the SPP update to be filed in 2022.

On January 1, 2021, DEF filed a petition for limited proceeding to approve another settlement agreement which included general base rate increases (2021 Settlement Agreement). On June 4, 2021, by Order No. PSC-2021-0202-AS-EI, we approved the 2021 Settlement Agreement between DEF, OPC, FIPUG, PCS Phosphate, and Nucor Steel Florida, Inc. Two scrivener's errors were corrected by an amendatory order, Order No. PSC-2021-0202A-AS-EI, issued on June 28, 2021. Paragraph 4 of the 2021 Settlement Agreement states:

> The Parties agree that DEF properly removed all costs associated with the Storm Protection Plan ("SPP") from the costs included in DEF's MFRs, as all such costs spent on approved SPP programs are properly recoverable through the SPP Cost Recovery Clause "SPPCRC."

On April 11, 2022, DEF filed its proposed SPP for our approval for the period of 2023-2032, which included the same ten programs proposed in its 2020 SPP:

- Distribution Feeder Hardening
- Distribution Lateral Hardening
- Distribution Self-Optimizing Grid
- Distribution Underground Flood Mitigation
- Transmission Structure Hardening
- Transmission Substation Flood Mitigation
- Transmission Loop Radially Fed Substations
- Transmission Substation Hardening
- Distribution Vegetation Management
- Transmission Vegetation Management

A more detailed description of the ten programs is provided in Attachment A. FIPUG, Nucor, OPC, PCS Phosphate, and Walmart were granted intervention in this docket. An administrative

[2] Order No. PSC-2020-0293-AS-EI, issued August 28, 2020, in Docket No. 20200069-EI.

hearing was held on August 2-4, 2022.[3] Post hearing briefs were filed on September 6, 2022. OPC, FIPUG, Nucor, and PCS (Joint Parties) filed a joint brief that included a procedural matter, which is addressed below.

Procedural Matter

On pages 28-37 of their post-hearing brief, the Joint Parties unilaterally inserted a "post-hearing legal issue" that was not listed in the Prehearing Order.[4] The Joint Parties argued that we should reverse the prehearing ruling, set forth in Order No. PSC-2022-0292-PCO-EI, wherein the Prehearing Officer granted motions to strike portions of the prefiled testimony of OPC witness Lane Kollen. In our opinion this legal argument does not raise a new substantive issue. The lack of legal relevance of witness Kollen's testimony was addressed in detail by the Prehearing Officer in Order No. PSC-2022-0292-PCO-EI. OPC requested reconsideration of that Order, which we denied. Because we have fully addressed the evidentiary concerns relating to the testimony of witness Kollen on the merits on two previous occasions, we find it is appropriate to discuss the Joint Parties' "post-hearing legal issue" here only to the extent it raises procedural concerns. For the reasons set forth below, we find there is no procedural error.

"The fundamental requirements of due process are satisfied by reasonable notice and a reasonable opportunity to be heard." *Florida Public Service Commission v. Triple "A" Enterprises, Inc.,* 387 So. 2d 940, 943 (Fla. 1980). At the administrative hearing held on August 2-4, 2022, in accordance with sections 120.569 and 120.57, F.S., all parties, including the Joint Parties, were given full opportunity to present argument on all relevant issues and to conduct cross-examination of all witnesses. Neither OPC nor any other party to this proceeding was precluded from making any legal arguments regarding rule interpretation by the exclusion of the testimony. The only effect of our action in striking the testimony was to exclude expert testimony on the ultimate legal issues, which are the sole province of the tribunal.

Many portions of Witness Kollen's prefiled testimony were not stricken. Those portions were moved into the record as though read, and exhibits LK-1 through LK-3 were admitted into evidence. OPC separately proffered the portions of Witness Kollen's testimony subject to the order granting the motion to strike, and the proffered testimony was also moved into the record as though read. On August 3, 2022, Witness Kollen provided a summary and was subject to cross-examination on both the testimony that was not stricken and the proffered testimony that had been stricken. Counsel for OPC also made its legal arguments about the rule interpretation at that time. Although we ultimately decided to strike portions of OPC Witness Kollen's testimony, OPC was provided an opportunity to make its legal argument at the administrative hearing, and in its motion for reconsideration. OPC made its arguments again in its post-hearing brief.

The Joint Parties also argued that a Commission Final Order applying Rule 25-6.030, Florida Administrative Code (F.A.C.), in a manner not consistent with their argument "could be

[3] DEF's docket was consolidated with the SPP dockets for TECO (20220048-EI); FPUC (20220049-EI); and FPL (20220051-EI) for hearing purposes only.
[4] Order No. PSC-2022-0291-PHO-EI, issued August 1, 2022.

seen as the agency interpreting its [statutory] mandate without an effective or complete delegation of authority." The cases cited by the Joint Parties in support of this argument address judicial review of the constitutionality of statutes.[5] As an agency, we have no jurisdiction to declare a statute unconstitutional.

For these reasons, we do not agree with the Joint Parties' arguments that the actions taken with respect to witness Kollen's testimony were procedurally infirmed or negatively impacted the fairness of the proceeding.

We have jurisdiction over the issues set out below pursuant to Section 366.96 and Chapter 120, F.S.

Decision

I. Does DEF's SPP contain all of the required elements of Section 366.96, F.S., and Rule 25-6.030, F.A.C.?

A. Parties' Arguments

DEF argued its proposed 2023 SPP meets all filing requirements of Rule 25-6.030, F.A.C., because the SPP meets the Legislature's intended goals of reducing restoration costs and outage times to customers. DEF stated that its proposed Plan is expected to reduce average annual storm restoration costs by over $50 million, while reducing average annual customer minutes of interruption by close to 400 million minutes. DEF argued that all of its SPP programs reduce restoration costs and outage times and should be approved without modification.

The Joint Parties stated that DEF provided verifiable program costs; however, they argued that DEF's claimed benefits information was not properly presented because societal benefits in the form of restoration cost avoidance are highly subjective estimates of the customer value of avoided outages and should not be used for plan approval determinations. The Joint Parties argued that DEF "superficially addressed" the key elements for program's costs and benefits by presenting fictitious "capital cost savings" in its cost-effectiveness analysis. Walmart adopted the position of OPC.

B. Analysis

The first utility storm hardening programs were filed for our approval in 2007 and were reviewed by us at least every three years thereafter. In 2019, the Florida Legislature emphasized the importance of storm hardening when it enacted Section 366.96, F.S., entitled "Storm Protection Plan Cost Recovery."[6] Subsection 366.96(3), F.S., requires each IOU to file a

[5] Post-Hearing Brief at 23 (*citing Askew v. Cross Key Waterways*, 372 So. 2d 913 (Fla. 1978); *Microtel, Inc. v. Florida Pub. Serv. Comm'n,* 464 So. 2d 1189, 1191 (Fla. 1985); *Microtel, Inc. v. Florida Pub. Serv. Comm'n*, 483 So. 2d 415 (Fla. 1986)).

[6] Subsection 366.96(1), F.S., provides that it is in the state of Florida's interest to strengthen electric utility infrastructure to withstand extreme weather conditions by promoting the overhead hardening of electrical

transmission and distribution SPP for our review and directs us to hold an annual proceeding to determine the IOU's prudently incurred costs to implement the plan and allow recovery of those costs through the SPPCRC.

We promulgated two rules, Rule 25-6.030, F.A.C., Storm Protection Plan, and Rule 25-6.031, F.A.C., Storm Protection Cost Recovery, to implement and administer Section 366.96, F.S.

The Joint Parties argued that the methodology that DEF used to demonstrate its comparison of costs and benefits was flawed. For the reasons set forth below, we find DEF provided adequate information for us to evaluate DEF's SPP.

Subsection 366.96(4), F.S., provides:

> (4) In its review of each transmission and distribution storm protection plan filed pursuant to this section, the commission shall consider:
> (a) The extent to which the plan is expected to reduce restoration costs and outage times associated with extreme weather events and enhance reliability, including whether the plan prioritizes areas of lower reliability performance.
> (b) The extent to which storm protection of transmission and distribution infrastructure is feasible, reasonable, or practical in certain areas of the utility's service territory, including, but not limited to, flood zones and rural areas.
> (c) The estimated costs and benefits to the utility and its customers of making the improvements proposed in the plan.
> (d) The estimated annual rate impact resulting from implementation of the plan during the first 3 years addressed in the plan.

The rule implementing this statute identifies the types of information a utility is to submit for us to consider as part of our SPP review. *See* Rule 25-6.030(3), F.A.C. ("For each Storm Protection Plan, the following information must be provided . . . ."). By its plain language, this rule specifies only the informational content of the SPP filing. It does not establish a substantive standard for our decision on the SPP. We are to apply the considerations specified in Subsection 366.94(4), F.S., in making the ultimate determination whether it is in the public interest to approve, approve with modifications, or deny the SPP.

Under the rule, a utility must provide an estimate and comparison of the costs and benefits of each SPP program.[7] Specifically, Rule 25-6.0303(d), F.A.C., provides as follows:

> (3)(d) A description of each proposed storm protection program that includes:
> 1. A description of how each proposed storm protection program is designed to enhance the utility's existing transmission and distribution facilities including an

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transmission and distribution facilities and the undergrounding of certain electrical distribution lines and vegetation management, and that it is in the state's interest for each utility to mitigate restoration costs and outage times to utility customers when developing transmission and distribution storm protection plans.

[7] Specific elements of Rule 25-6.030, F.A.C., such as area for prioritization and rate impact, are discussed in more detail in Sections II through VI of this Order.

> estimate of the resulting reduction in outage times and restoration costs due to extreme weather conditions;
> 2. If applicable, the actual or estimated start and completion dates of the program;
> 3. A cost estimate including capital and operating expenses;
> 4. A comparison of the costs identified in subparagraph (3)(d)3. and the benefits identified in subparagraph (3)(d)1.

Neither Section 366.96, F.S., nor Rule 25-6030, F.A.C., explicitly require a cost-effectiveness evaluation or quantitative cost-benefit analysis. Rule 25-6.030(3)(d)4., F.A.C., requires "…a comparison of the costs identified in subparagraph (3)(d)3. and the benefits identified in subparagraph 3(d)1." The Joint Parties argued that DEF's data was insufficient for us to make a determination on outage times and reduction of costs. We disagree.

While the nature of cost data is objective, benefits in the context of storm hardening specifically may require various forms of description and analysis to ascertain. Utilities have the flexibility to use a methodology that they find most clearly demonstrates the benefits of their SPP and takes into account the real world nature of storm protection. Creating a SPP is not a traditional utility function required for day-to-day service. Rather, it is an activity that goes above and beyond the basic "sufficient, adequate, and efficient" standard of service to strengthen existing utility infrastructure to withstand potential extreme weather conditions. *See* Section 366.03, F.S. Accordingly, storm hardening costs may or may not produce actual financial benefits that exceed costs during a given time, depending on a particular utility's circumstances.[8]

This is why Subsection 366.96(4)(a), F.S., provides the flexibility for IOUs to submit their SPPs so long as the plans include projects that effectively "reduce restoration costs and outage times associated with extreme weather events and enhance reliability" for customers. For these reasons, we find that a utility has the option to submit what it deems is its most accurate data or analysis of costs or benefits for our consideration.

In this case, DEF's SPP met the filing requirements of Rule 25-6.030, F.A.C., because DEF provided sufficient information to analyze the costs and benefits of its SPP. DEF provided sufficient program information for us to make a determination concerning the potential of the SPP to reduce outages or restoration time, as well as to effectively evaluate the resulting rate impact from the SPP. DEF's SPP is anticipated to reduce storm restoration costs by over $50 million on average per year and reduce customer minutes of interruption by close to 400 million minutes on average per year. Additionally, the reduction in restoration costs and outage times for each proposed program was provided in DEF's SPP. For example, DEF's Feeder Hardening Program is expected to reduce restoration costs by $15 to $18 million annually and reduce customer minutes of interruption by approximately 111 to 139 million minutes annually once the

[8] Consider the following example: a utility spends $10 million to convert wooden poles to concrete poles. Based on the assumption that a Category 3 hurricane would strike the area every three years, the projected benefits are $15 million over 30 years for a net savings to customers of $5 million. However, if the utility does not experience extreme weather in these locations for a period of time (as was the case for the period 2005 through 2017) the customers may nonetheless be receiving qualitative benefits (the system is better prepared for when extreme weather does occur) that are consistent with the public interest requirements of Section 366.96, F.S.

program is complete. This information allows us to evaluate the potential of the SPP to mitigate outages and reduce restoration costs.

C. Conclusion

DEF satisfied the SPP Rule with its filing, and we have sufficient information necessary to make a public interest determination on its SPP.

II. Is DEF's SPP expected to reduce restoration costs and outage times associated with extreme weather events and enhance reliability?

A. Parties' Arguments

After full deployment of its 2023 SPP, DEF projected an average annual reduction in outage times of approximately 399.4 million customer minutes of interruption, as well as an average annual reduction in restoration costs of approximately $56.5 million. DEF stated that there was evidence to support the expectation that all of its proposed SPP programs would reduce storm-related outage times, as well as restoration costs.

The Joint Parties argued that the following programs in DEF's SPP do not reduce restoration costs and outage times: the Underground Flood Mitigation Program, which provided for the replacement of aging infrastructure; the Transmission Structure Hardening Program and its sub-programs; and the Transmission Loop Radial-Fed Substation (LRFS) Program.

The Joint Parties argued that the language within Rule 25-6.030(3)(d), F.A.C., creates a "Two-Prong" test. This "test" does not explicitly exist in the SPP Rule or Statute. The Joint Parties interpret the statute to require an IOU to use quantitative data to demonstrate that each program would result in a reduction in outage times and restoration costs. As part of its argument, the Joint Parties voiced concern that the Utility included general infrastructure work as part of its SPP, which instead should be recovered through base rates as part of normal routine maintenance. Walmart adopted OPC's position.

B. Analysis

Subsection 366.96(4)(a), F.S., states that when reviewing a utility's transmission and distribution storm protection plan, we shall consider the extent to which the plan is expected to reduce restoration costs and outage times associated with extreme weather events and enhance reliability, including whether the plan prioritizes areas of lower reliability performance. Rule 25-6.030(3)(d)1., F.A.C, requires a utility to provide a description of how each proposed storm protection program is designed to enhance the utility's existing transmission and distribution facilities including an estimate of the resulting reduction in outage times and restoration costs due to extreme weather conditions.

DEF presented testimony similar to its 2020 SPP, where modeling and analysis was also utilized to support its 2023 SPP program evaluation and prioritization. The DEF model,

developed by Guidehouse, applied a three-tiered modeling and analysis approach which is comprised of:

- Risk Model
- Prioritization / Benefit-Cost Analysis (BCA) Model
- Decision Analysis

The inputs to the model incorporated locational risk probabilities, outage data, asset data, and detailed program definitions. This information was used to model the locational impacts of extreme weather conditions and the anticipated reduction in restoration costs and outage times. The estimated reductions in outage times and restoration costs were provided in DEF's SPP on a program-level basis. For the outage times, DEF witness Lloyd testified that customer minutes of interruption (CMI) were used as a proxy for duration. DEF estimated that once a program is complete, the reduction in CMI for each program will range between approximately 900,000 to 439 million minutes annually, depending on the program.

DEF presented evidence that its SPP would mitigate the risk of flood damage to vulnerable substations to reduce both restoration costs and outages. Further, DEF presented testimony that its system was built to existing standards at the time of construction and that it continues to assess vulnerable areas by utilizing updated Federal Emergency Management Agency (FEMA) flood plains and over 200 years of storm data.

DEF also presented evidence in support of its Transmission Structure Hardening Program, which showed that the Program provided quantifiable reductions in restoration costs and outage times. DEF presented evidence that each sub-program of the Transmission Structure Hardening Program provided similar benefits. In response to arguments made by the Joint Parties, DEF also presented evidence that the Transmission LRFS Program creates a more networked, resilient system that will reduce customer outages and restoration costs. We discuss the Transmission LRFS Program in further detail in Section VII below. DEF offered testimony that its Transmission Substation Hardening Program targets assets that are more vulnerable to failure by speeding up restoration times and will, therefore, reduce restoration costs in the form of reduced contractor payments.

We do not find support for the imposition of OPC's "Two-Prong" test that would require that an SPP or each program in a SPP provide a quantified showing to reduce both restoration costs and outage times. By utilizing the Guidehouse model to incorporate data specific information about its transmission and distribution facilities, DEF was able to provide estimates of both the reduction in outage times and restoration costs that would result from the implementation of its proposed SPP programs. Based on the results of the model, DEF demonstrated that its proposed programs are projected to reduce restoration costs and outage times associated with extreme weather events and enhance reliability.

C. Conclusion

DEF's SPP is projected to reduce restoration costs and outage times associated with extreme weather events and enhance reliability.

III. Does DEF's SPP prioritize areas of lower reliability performance?

A. Parties' Arguments

DEF noted that the prioritization methodology for each SPP Program includes the "Probability of Damage" from extreme weather events for each major asset component. Historical reliability performance of these assets is correlated with simulated future weather exposure conditions. This technique prioritizes areas of lower reliability performance.

At the hearing, OPC's witness Mara testified that a higher priority should be placed on equipment that is most vulnerable to extreme storms, such as feeders, laterals, and poles, which provides greater benefit in the early stages of implementation. Witness Mara stated that if DEF placed a higher priority on strengthening radial taps, the proposed looped transmission lines (LFRS) were not necessary to achieve storm hardening. Nonetheless, in their joint brief, the Joint Parties do not take significant issue with DEF's geographic prioritization efforts. Walmart adopted this position.

B. Analysis

Subsection 366.96(4)(a), F.S., provides that when reviewing a utility's transmission and distribution storm protection plan, we shall consider whether the plan prioritizes areas of lower reliability performance. Rule 25-6.030(3)(e)1.d., F.A.C., requires a description of the criteria used to select and prioritize proposed SPP projects be provided.

DEF witness Lloyd testified that DEF used the Guidehouse Model described in Section II above to evaluate and prioritize the areas of lower reliability performance. For the risk model and prioritization, a range of information at each location was utilized including asset data, historic outage data, risk data, and National Oceanic and Atmospheric Administration (NOAA) weather station data. Using this information, the Guidehouse Model estimated the probabilistic failures before and after the storm hardening programs were implemented.

The BCA Model uses outputs from the risk model and other information to analyze the benefits and costs for each combination of program and location. The BCA results were used for prioritization and for the deployment plan of the programs. Based on the BCA results, a decision analysis was performed which was a high-level prioritization of projects. However, this high-level prioritization did not account for constraints like work crew availability, site-specific engineering considerations, and other prioritization factors. Therefore, utilizing the results of the model, as well as taking into account factors such as multiple projects in the same area, critical customers, operational knowledge, and resource availability, DEF's subject matter experts were able to optimize the deployment plan.

DEF witness Lloyd testified that DEF first prioritized projects in the most vulnerable areas. Nevertheless, customers who are served by circuits that are less vulnerable can still be impacted by extreme weather events. Witness Lloyd asserted that these types of customers "should have the opportunity for their circuits to be hardened even if the benefits to cost ratio is

lower than higher prioritized projects." Additionally, witness Lloyd testified that the appropriate funding level, which includes the acceptable level of customer bill impact, was an explicit limitation on a program scope.

We find DEF's SPP prioritizes areas of lower reliability performance. DEF described the method and criteria it used to select and prioritize the proposed SPP projects while utilizing its three-tiered modeling and analysis approach. In addition to the results of the Guidehouse Model, DEF also relied on its subject matter experts for further analysis and prioritization of the projects. The Joint Parties did not dispute that DEF's proposed projects prioritized areas of lower reliability. DEF demonstrated its prioritization of SPP projects in areas of lower reliability performance.

C. Conclusion

DEF's SPP prioritized areas of lower reliability performance.

IV. Is DEF's SPP feasible, reasonable, or practical in DEF's service territory?

Parties' Arguments

DEF argued its SPP is feasible, reasonable, and practical throughout the Utility's service territory. The model used to produce DEF's SPP considered the geographic location and characteristics of each asset as part of the analysis of the feasibility and reasonableness of implementing the various SPP Programs at each given location.

The Joint Parties noted a number of proposed programs in DEF's 2023 SPP would absent the 2021 Settlement Agreement,[9] be more appropriately addressed in a base rate case since the programs do not harden the system from extreme storm events. The 2021 Settlement Agreement included provisions that the costs incurred within DEF's SPP are properly recovered through the SPPCRC for cost recovery years 2023-2024, and these costs were removed from base rates. For this reason, witness Mara testified that his recommendations should not be considered for the rate recovery years 2023-2024 where they conflict with the provisions of the 2021 Settlement Agreement. Thus, OPC's witness Mara provided limited testimony on excluding from DEF's SPP any substation where there is an alternate feed to the substation or any substation that has not had a history of flooding or where flooding does not present a threat. Further, the Joint Parties argued that the specific language "feasible, reasonable, or practical" is not a statutory test for determining prudence or public interest of a plan but relates to the "physical viability of plan components." Walmart adopted the position of OPC.

[9] Order No. PSC-2021-0202A-AS-EI, issued June 28, 2021, in Docket Nos. 20190110-EI, *In re: Petition for limited proceeding for recovery of incremental storm restoration costs related to Hurricane Michael and approval of second implementation stipulation, by Duke Energy Florida, LLC*, 20190222-EI, *In re: Petition for limited proceeding for recovery of incremental storm restoration costs related to Hurricane Dorian and Tropical Storm Nestor, by Duke Energy Florida, LLC*, 20210016-EI, *In re: Petition for limited proceeding to approve 2021 settlement agreement, including general base rate increases, by Duke Energy Florida, LLC*.

B. Analysis

Subsection 366.96(4)(b), F.S., states that when reviewing a utility's transmission and distribution storm protection plan, we shall consider the extent to which storm protection of transmission and distribution infrastructure is feasible, reasonable, or practical in certain areas of the utility's service territory, including, but not limited to, flood zones and rural areas. Rule 25-6.030(3)(c), F.A.C, requires a utility to provide a description of the utility's service area, including areas prioritized for enhancement and any areas where the utility has determined that enhancement of the utility's existing transmission and distribution facilities would not be feasible, reasonable, or practical. Integral to this description, the utility must include a general map, the number of customers served within each area, and its reasoning for prioritizing certain areas for enhanced performance and for designating other areas of the system as not feasible, reasonable, or practical.

As a part of its SPP, DEF provided a map of its service territory, which included the number of customers served within each area. Witness Lloyd testified that DEF did not determine any areas of its service territory in which it would not be feasible, reasonable, or practical to execute SPP projects. Further, witness Lloyd testified that DEF utilized a model to estimate the reduction in storm damage and outage duration for potential project locations. The model could then prioritize work by looking at the probability of damage to specific assets and the consequences of that damage, such as the number and/or type of customers served by a particular asset. The model allowed DEF to prioritize the projects over the life of a program, putting the highest-benefit work first. Additionally, the outcome from the model was then evaluated by DEF subject matter experts for further analysis and prioritization.

DEF witness Lloyd provided testimony on the Underground Flood Mitigation Program and the Substation Flood Mitigation Program, which we find to be examples of programs that satisfy the requirements of Subsection 366.96(4)(b), F.S. The witness testified that the focus of the Underground Flood Mitigation Program is to target existing underground distribution facilities in areas that are prone to storm surge during extreme weather events. While the program could include the replacement of aging equipment, that is not the objective of the program. The Underground Flood Mitigation Program instead is replacing existing conventional switchgears with submersible switchgears, which are designed to withstand potential storm surges and flood waters. Minimizing asset damage caused by storm surge will result in reduced customer outages and, according to DEF's SPP, expedite restoration after the storm surge has receded.

DEF witness Howe also testified that the Substation Flood Mitigation Program included all DEF substations built to the existing standards in the year that they were installed. Additionally, the program targets substations at the highest risk of flooding using the most current 100-Year Federal Emergency Management Agency (FEMA) flood plain map, which is reviewed and updated on a continuous basis. Therefore, a substation built with an approved design at the time of construction could be "reclassified" in the future where the design is no longer sufficient for that location. Regarding OPC's witness Mara's assertions on substations without a history of flooding, DEF witness Howe testified that witness Mara only examined

three years of flood data, which is not sufficient to prudently plan for the long-term functionality and service of a substation.

We find DEF's SPP meets the requirements of the SPP Statute and Rule, because DEF provided a map of its service area, the number of customers served within each area, and the methodology of prioritizing projects within its programs. DEF demonstrated that the implementation of the new assets, which are better equipped to withstand extreme weather events, is expected to mitigate outages and reduce restoration times. Witness Lloyd testified that even in low density areas, it is "necessary that those rural customers still get an opportunity to have hardened assets." After a review of the complete record, we find that the information presented in DEF's SPP is feasible, reasonable, or practical in DEF's service territory, which included flood zones and rural areas.

C. Conclusion

DEF's SPP is feasible, reasonable, and practical within the Utility's service territory.

V. What are the estimated costs and benefits of DEF's SPP Programs?

A. Parties' Arguments

The estimated costs of DEF's SPP programs are shown in Table 1 below and include the estimated benefits, characterized by the reduction in CMI. DEF argued that its proposed SPP Programs had benefits that outweighed the costs or were cost-effective. DEF provided a benefit/cost analysis, with the Utility's utilization of the Interruption Cost Estimator (ICE) model to assign a value to the avoided CMI. DEF argued that it did perform a quantification of the benefits and showed the benefits of its SPP exceeded the costs.

The Joint Parties took issue with the methodology DEF employed to estimate program benefits. The Joint Parties argued that the DEF SPP benefits were largely assessed based on societal benefits that were converted to dollar amounts using the ICE model. The Joint Parties further argued that there was a "circular nature of the input and verification process," in DEF's methodology and that the ICE model was used to provide the appearance of cost-effective programs. Walmart adopted this position.

B. Analysis

Subsection 366.96(4)(c), F.S., requires that we consider the estimated costs and benefits to the utility and its customers of making the improvements proposed in the plan. Rule 25-6.030(3)(d)4., F.A.C., requires a utility to provide a comparison of the estimated program costs, including capital and operating expenses, and benefits.

For each SPP program, DEF listed the estimated capital costs and operating expenses, which are summarized in Table 1. The Utility compared these costs with the estimated benefits that could be achieved from the completion of its programs. The benefits included the reduction in outage times (CMI reduction).

Table 1
DEF's 2023-2025 SPP Program Costs

Program	2023 (millions)	2024 (millions)	2025 (millions)
Distribution Feeder Hardening	$163.3	$147.0	$171.5
Distribution Lateral Hardening	$208.4	$243.0	$275.6
Distribution Self-Optimizing Grid	$77.3	$136.7	$136.7
Distribution Underground Flood Mitigation	$1.0	$1.5	$1.5
Transmission Structure Hardening	$142.5	$153.6	$167.7
Transmission Substation Flood Mitigation	$3.8	$3.8	$3.8
Transmission Loop Radially Fed Substations	-	-	$10.3
Transmission Substation Hardening	$9.5	$11.5	$14.0
Distribution Vegetation Management	$47.1	$48.5	$49.9
Transmission Vegetation Management	$21.8	$24.9	$23.2
Total	$674.7	$770.5	$854.2

We disagree with the Joint Parties that DEF's estimated costs and benefits methodology was flawed. DEF estimated the reduction in outage times and restoration costs that could result from the implementation of its proposed SPP programs. The Utility also listed in its plan the program costs, including capital and operating expenses. Because DEF provided the estimated costs and benefits associated with its SPP and it was supported by a reasonable methodology, we find its SPP met the estimated costs and benefits requirements of Section 366.96, F.S.

C. Conclusion

The estimated costs of DEF's SPP programs are shown above in Table 1. The estimated benefits have been characterized by the reduction in CMI.

VI. What is the estimated annual rate impact from the implementation of DEF's SPP for the first three years?

A. Parties' Arguments

DEF argued that there were fairly low levels of capital investment in the 2020 Plan and that if a capital spending comparison was to be made between the common years for the 2020 SPP and the 2023 SPP, the spending decreases. Although the Utility recognized the current economic climate, DEF argued that decreasing the 2023 SPP investment level by an arbitrary amount as suggested by the Joint Parties would also reduce or delay the benefits realized from the plan. DEF argued the residential rates impact related to the 2023 SPP would be roughly one percent per year, which is similar for the commercial and industrial customers. Given the risk of extreme weather events to Florida customers, DEF argued the benefits of its SPP should not be delayed.

The Joint Parties noted that the rate impacts are estimated in DEF's 2023 SPP and argued that the revenue requirements for the 2023 SPP increase significantly from year to year, which is further compounded when taking into account the base rate increases from the 2021 DEF rate case settlement. The Joint Parties argued that DEF supplied its modeling contractor, Guidehouse, with "directional targets" for spending plan options, but the final proposed SPP only considered its own financial objectives rather than customer impacts. The Joint Parties argued the 2023 SPP budget should be held at the 2020 spending levels. Walmart took no position.

B. Analysis

Subsection 366.96(4)(d), F.S., requires that we consider the estimated annual rate impact resulting from implementation of the plan during the first three years addressed in the plan. Rule 25-6.030(3)(h), F.A.C., requires each utility to provide an estimate of the rate impact for each of the first three years of its SPP for the utility's typical residential, commercial, and industrial customers. In addition, Rule 25-6.030(3)(i), F.A.C., requires each utility to provide a description of any implementation alternatives that could mitigate the resulting rate impact. We first will address the annual rate impacts for the first three years of the Utility's SPP and OPC's deployment alternatives that could mitigate rate impacts to customers.

DEF provided the estimated rate impacts for residential, commercial, and industrial customers, which are shown in Table 2 below:

Table 2
SPP Estimated Rate Impacts (2023-2025)

Customer Class	2023	2024	2025
Residential ($/1,000 kWh)	$4.21	$6.52	$8.75
Typical Commercial Percent Increase from Prior Year Bill*	1.0%-1.2%	1.4%-1.6%	1.3%-1.5%
Typical Industrial Percent Increase from Prior Year Bill*	0.8%-1.2%	1.2%-1.7%	1.1%-1.6%

*Commercial & Industrial percent increase incorporates base rate increases set forth in DEF's 2021 Settlement, approved in Order No. PSC-2021-0202A-AS-EI.

The Joint Parties argued that the budgets of several programs should be decreased to reduce the rate impact of the SPP. However, when making this argument, OPC's witness utilized a calculation based on the total program cost for the 10-year period, instead of the 3 year time period prescribed by Section 366.96, F.S. This was not persuasive or practical given that we must review a utility's SPP at least every three years as well as conduct annual cost-recovery proceedings. OPC witness Mara also recommended eliminating the costs related to clearance encroachments. He asserted that DEF has a duty to maintain the appropriate distance from the buildings and other structures; therefore, it is DEF's sole responsibility for correcting encroachment problems.

DEF presented witness testimony to refute OPC's witness testimony. For example, DEF witness Lloyd testified that DEF's 2020 SPP and 2023 SPP should not be compared since 2020 and 2021 were transitional years as the Utility worked to finish other projects and to ramp up engineering and construction. As an example, work for the Distribution Feeder Hardening

Program did not start until 2021, resulting in an appearance of an increase in cost from DEF's 2020 SPP. However, the 2023 SPP is actually a continuation of DEF's previously-approved plan. Addressing the clearance encroachments, witness Lloyd testified that the Utility requires proper clearances for new pole locations, sizes, and guying, which cannot be met with existing overhead structures in the public right-of-way. DEF is also required to maintain clearance to other existing public and privately-owned underground facilities. Witness Lloyd testified that "newly installed facilities should remain open to truck access for maintenance purposes and should be in easements or adjacent to roadways as outlined in Rule 25-6.0341, F.A.C. (Location of the Utility's Electric Distribution Facilities)."

We are persuaded by the testimony DEF presented that reducing certain programs such as the Feeder Hardening Program and the Lateral Undergrounding and the Lateral Hardening Program could delay significant benefits to customers. For this reason, no adjustment to these programs' budgets are required.

C. Conclusion

DEF provided the estimated annual rate impact from implementation of its SPP in Table 2 above.

VII. Is DEF's SPP in the public interest?

A. Parties' Arguments

DEF argued its 2023 SPP is in the public interest and should be approved without modification. In support, DEF argued that its 2023 SPP balances the costs to customers along with the resulting benefits. DEF argued that all of its SPP programs would reduce restoration costs and outages, improve reliability, and are cost-effective. Therefore, DEF argued that we should approve its 2023 SPP without modification, as it complies with the requirements of the SPP Rule and is in the public interest as outlined by the SPP Statute.

The Joint Parties argued that DEF's 2023 SPP should not be approved without the following modifications: to allow the inclusion of the Distribution Feeder Hardening and Distribution Lateral Hardening Programs at the reduced spending levels, and to allow the six remaining programs to be included for the years 2023 and 2024, but for 2025 and beyond, the programs be excluded from DEF's SPP. The Joint Parties take no issue with the Distribution and Transmission Vegetation Management Programs and state they should remain in DEF's SPP as proposed.

Although OPC presented witness testimony at the hearing that characterized six DEF programs as not storm hardening activities (Distribution Self-Optimizing Grid, Distribution Underground Flood Mitigation, Transmission Structure Hardening, Transmission Substation Flood Mitigation, Transmission LRFS, and Transmission Substation Hardening), the Joint

Parties ultimately acknowledged that all of DEF's SPP programs, with the exception of the Transmission LRFS Program, are subject to the 2020 SPP Stipulation and the 2021 Stipulation.[10]

Walmart argued that continued collaboration by interested stakeholders prior to submission of DEF's next SPP would promote the public interest. According to Walmart, this collaboration would result in enhanced customer-sited generation to strengthen the Transmission and Distribution systems and provide customers with lower restoration costs, shorter outage periods, and more reliable electric service overall.

B. Analysis

Subsection 366.96(5), F.S., states that we shall determine, no later than 180 days after a utility files its plan, "whether it is in the public interest to approve, approve with modification, or deny the plan." Unlike the Storm Hardening Plans, Subsection 366.96(7), F.S., states that once a storm protection plan is approved, a utility's "actions to implement the plan shall not constitute or be evidence of imprudence." As discussed above, we find that DEF's filing satisfies the requirements of Rule 25-6.030, F.A.C., and provides us with adequate information in order to satisfy its statutory requirements.

As described by DEF witness Lloyd, the Utility's proposed SPP covers the period of 2023-2032 and uses the same analysis methodology and programs that were included in its previous SPP for the period of 2020-2029. DEF's SPP includes the following 10 programs:

- Distribution Feeder Hardening
- Distribution Lateral Hardening
- Distribution Self-Optimizing Grid
- Distribution Underground Flood Mitigation
- Transmission Structure Hardening
- Transmission Substation Flood Mitigation
- Transmission Loop Radially Fed Substations
- Transmission Substation Hardening
- Distribution Vegetation Management
- Transmission Vegetation Management

We addressed why the Distribution Feeder Hardening and Distribution Lateral Hardening Programs should remain in DEF's SPP in Section VI of this Order. We find DEF's SPP and its programs to be in the public interest overall, with the exception of the Transmission LRFS Program.

We have concerns regarding the Transmission LRFS Program, which is scheduled to start in 2025, because the Transmission LRFS Program is new to DEF's SPP and DEF did not provide

[10] The 2021 Stipulation addresses program cost recovery through the SPPCRC for 2022 and 2023, and the Joint Parties concede that though not expressly discussed, year 2024 would also be encompassed, except the Loop Radially-Fed Substation Program, which was not projected to start until 2025.

the necessary level of project detail on this particular program. The information DEF provided for the Transmission LRFS Program was not sufficient because DEF provided only the scope of the Transmission LRFS Program, noting that it would address approximately 17 sites over 20 years with an estimated the 10-year cost of approximately $82 million. DEF only briefly described the types of assets that would be targeted by this program. Additionally, the Transmission LRFS Program would utilize a practice referred to as "looping," which is a common utility activity that involves the installation of redundant lines to ensure reliable service.

Rule 25-6.030(1)(a), F.A.C., defines a storm protection program as a collection of projects that "enhance the utility's *existing* infrastructure" (emphasis added). Utility storm protection or hardening is a discretionary activity that goes above and beyond the basic standard of service to strengthen a utility's existing infrastructure to withstand the potential for extreme weather. Therefore, we must consider whether a program in a SPP is a common utility activity or meets the intent of Section 366.96, F.S. As proposed in DEF's current SPP, the Transmission LRFS Program involves the construction of new redundant infrastructure, rather than the enhancement or hardening of existing facilities. While we agree that such activity may enhance a utility's transmission system for reliability purposes, it does not strengthen existing transmission facilities for storm hardening purposes. Therefore, this new and redundant infrastructure project should be excluded from its SPP.

For these reasons, we find that DEF's SPP is in the public interest, with the exception of the Transmission LRFS Program. DEF shall file an amended SPP within 30 days of issuance of the final order for administrative approval by Commission staff.

Walmart raised a general comment about SPPs. Walmart provided no witness testimony, but argued in its brief that it would be in the public interest if DEF continued to collaborate with Walmart and other interested stakeholders to develop ways in which customer-sited generation may be utilized to strengthen DEF's system. Although we agree with continuing the collaboration between utilities and interested stakeholders, the SPP Statute does not contemplate customer-sited generation. Subsection 366.96(2)(b), F.S., defines a transmission and distribution storm protection plan as "a plan for the overhead hardening and increased resilience of electric transmission and distribution facilities, undergrounding of electric distribution facilities, and vegetation management." Thus, on-site generation does not meet the definition as laid out in the statute.

C. Conclusion

With the removal of the Transmission LRFS Program, DEF's SPP is approved as in the public interest. DEF shall file an amended SPP within 30 days of issuance of the final order for administrative approval by Commission staff.

Based on the foregoing, it is

ORDERED that with the exception of the Transmission Loop Radially Fed Substations Program, that Duke Energy Florida's Storm Protection Plan meets the requirements of Section 366.96, F.S., and Rule 25-6.030, F.A.C., and is approved as in the public interest. It is further

ORDERED that Duke Energy Florida shall file a modified Storm Protection Plan that reflects the removal of the Transmission Loop Radially Fed Substation Program within 30 days of issuance of the final order for administrative approval by Commission staff. It is further

ORDERED that the docket shall remain open for Commission staff's verification that the amended Storm Protection Plan has been filed and complies with this order and may be closed administratively once these actions are complete.

By ORDER of the Florida Public Service Commission this 14th day of November, 2022.

ADAM J. TEITZMAN
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399
(850) 413-6770
www.floridapsc.com

Copies furnished: A copy of this document is provided to the parties of record at the time of issuance and, if applicable, interested persons.

WLT/JDI

COMMISSIONER PASSIDOMO DISSENTS WITH OPINION:

Commissioner Passidomo dissents with opinion from the Commission's decision to approve the Distribution Lateral Hardening Program at the level requested by the utility in their proposed Storm Protection Plan, as follows:

Section 366.96(4)(d), F.S., requires the Commission to consider "[t]he estimated annual rate impact resulting from implementation of the plan during the first 3 years addressed in the plan." Additionally, Section 366.96(4)(c), F.S., states that the Commission shall consider the estimated costs and benefits to the utility and its customers of making the improvements proposed in the plan.

The benefits of undergrounding are indisputable; however, the proposed cost of the program must be considered. I believe that maintaining the spending levels of the Distribution Lateral Hardening Program at the 2022 level will provide the stated benefits to the utility and customers, while moderating the rate impact to customers. By tempering the pace of these investments, the Commission will have an opportunity to reassess over time how effective this program is in various geographic areas and under different storm conditions.

NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.569(1), Florida Statutes, to notify parties of any administrative hearing or judicial review of Commission orders that is available under Sections 120.57 or 120.68, Florida Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing or judicial review will be granted or result in the relief sought.

Any party adversely affected by the Commission's final action in this matter may request: 1) reconsideration of the decision by filing a motion for reconsideration with the Office of Commission Clerk, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, within fifteen (15) days of the issuance of this order in the form prescribed by Rule 25-22.060, Florida Administrative Code; or 2) judicial review by the Florida Supreme Court in the case of an electric, gas or telephone utility or the First District Court of Appeal in the case of a water and/or wastewater utility by filing a notice of appeal with the Office of Commission Clerk, and filing a copy of the notice of appeal and the filing fee with the appropriate court. This filing must be completed within thirty (30) days after the issuance of this order, pursuant to Rule 9.110, Florida Rules of Appellate Procedure. The notice of appeal must be in the form specified in Rule 9.900(a), Florida Rules of Appellate Procedure.

Duke Energy Florida, LLC
Proposed 2023-2032 Storm Protection Plan Programs

Distribution Feeder Hardening
By incorporating pole inspection and replacement activities, existing feeder circuits can be strengthened to better withstand extreme weather events. This includes strengthening or replacing structures, updating basic insulation levels and conductors to current standards, relocating difficult to access facilities, relocating or undergrounding facilities to address clearance encroachments, and replacing oil filled equipment as appropriate. All new structures will meet the NESC 250C extreme wind load standard.

Distribution Lateral Hardening
This program will enable branch lines to better withstand extreme weather events. The Lateral Hardening Program includes undergrounding of the laterals that are most prone to damage during extreme weather events and overhead hardening of those laterals less prone to damage.

Distribution Self-Optimizing Grid
This program utilizes automated switching which allows most circuits to be restored from alternate sources. In addition, the program provides segmentation such that the distribution circuits have much smaller line segments, thus reducing the number of customers that are affected by outages.

Distribution Underground Flood Mitigation
Underground facilities that are prone to storm surge will be converted to submersible lines and equipment. In some cases, the pad mounted equipment is placed on elevated structures, which raises the equipment two to four feet above grade, to mitigate potential flood impacts.

Distribution Vegetation Management
The program consists of routine maintenance trimming, hazard tree removal, herbicide applications, vine removal, customer requested work, and right-of-way brush mowing. DEF trims its feeders on a three-year cycle and trims its laterals on a five-year cycle.

Transmission Structure Hardening
This program includes wood to non-wood upgrades, tower upgrades, adding cathodic protection, automating gang operated air break switches, overhead groundwire upgrades, and structure inspections.

Transmission Substation Flood Mitigation
This program builds in protection for substations most vulnerable to flood damage using flood plain and storm surge data. It includes a systematic review and prioritization of substations at risk of flooding to determine the proper mitigation solution, which may include elevating or modifying equipment, or relocating substations altogether. New assets could include control houses, relays, or total station rebuilds to increase elevation, etc.

Transmission Substation Flood Mitigation
This program builds in protection for substations most vulnerable to flood damage using flood plain and storm surge data. It includes a systematic review and prioritization of substations at risk of flooding to determine the proper mitigation solution, which may include elevating or modifying equipment, or relocating substations altogether. New assets could include control houses, relays, or total station rebuilds to increase elevation, etc.

Transmission Loop Radially-Fed Substations
This program builds a more resilient and networked transmission system by creating a secondary feed into substations that are more likely to experience long outage durations during extreme weather events. As part of the additional feed construction, other assets could include equipment such as breakers, switches, bus work, structures, insulators, potential transformers, lightning arresters, relays, control houses.

Transmission Substation Hardening
The replacement of electro-mechanical relays with electronic relays is designed to support rapid restoration. Electronic relays are equipped with communication capabilities and microprocessor technology, which enables a quicker recovery from events. Relay upgrades will be matched with breaker replacements when feasible.

Transmission Vegetation Management
DEF trims its transmission system on a three to six-year cycle in order to minimize vegetation related interruptions and ensures adequate conductor-to-vegetation clearances. The program consists of danger tree identification and mitigation, reactive work, herbicide, mowing, and hand cutting brush management.