

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

Review of Storm Protection Plan ) DOCKET NO. 20220048-EI  
Pursuant to Rule 25-6.030, F.A.C., )  
Tampa Electric Company )  
\_\_\_\_\_ ) FILED: September 6, 2022

**TAMPA ELECTRIC COMPANY'S  
POST-HEARING BRIEF AND STATEMENT OF ISSUES AND POSITIONS**

Tampa Electric Company (“Tampa Electric” or “the company”), pursuant to the Order Establishing Procedure<sup>1</sup> and the Prehearing Order<sup>2</sup> in this docket,<sup>3</sup> submits this Brief and Post-Hearing Statement of Issues and Positions.

**I. BACKGROUND**

This docket is before the Florida Public Service Commission (“Commission”) pursuant to Section 366.96 of the Florida Statutes. The Commission opened Docket No. 20220048-EI to conduct its review of Tampa Electric’s 2022 to 2031 Storm Protection Plan (“2022 SPP”) pursuant to Section 366.96, Florida Statutes, and Rule 25-6.030, Florida Administrative Code. The Office of Public Counsel (“OPC”), the Florida Industrial Power Users Group (“FIPUG”), and Walmart Inc. (“Walmart”) (collectively “Consumer Parties”) intervened in the docket.<sup>4</sup> Tampa Electric filed direct testimony from witnesses David A. Pickles, David L. Plusquellic, Jason D. DeStigter, and Richard J. Latta.<sup>5</sup> OPC filed testimony from witnesses Lane Kollen and Kevin Mara.<sup>6</sup> The other Consumer

<sup>1</sup> Order No. PSC 2022-0119-PCO-EI, issued March 17, 2022 in Docket Nos. 20220048-EI, 20220049-EI, 20220050-EI, and 20220051-EI.

<sup>2</sup> Order No. PSC-2022-0291-PHO-EI, issued August 1, 2022 in Docket Nos. 20220048-EI, 20220049-EI, 20220050-EI, and 20220051-EI.

<sup>3</sup> Pursuant to Section II of the Order Establishing procedure, Docket Nos. 20220048-EI, 20220049-EI, 20220050-EI, and 20220051-EI were consolidated for the purposes of hearing.

<sup>4</sup> See Order No. PSC-2022-0108-PCO-EI, issued March 14, 2022 in Docket No. 20220048-EI (acknowledging intervention by OPC); Order No. PSC-2022-0185-PCO-EI, issued May 20, 2022 in Docket No. 20220048-EI (granting FIPUG’s petition to intervene); Order No. PSC-2022-0215-PCO-EI (granting Walmart’s petition to intervene).

<sup>5</sup> See DN 02064-2022, filed March 24, 2022 in Docket No. 20220048-EI.

<sup>6</sup> See DNs 03308-2022 and 03309-2022, filed May 31, 2022 in Docket No. 2022048-EI.

Parties did not file testimony. Tampa Electric later filed rebuttal testimony from Mr. Pickles, Mr. Plusquellic, and Mr. Latta.<sup>7</sup>

On August 1, 2022, the Commission entered an Order striking portions of the Direct Testimony of OPC witness Kollen. *See* Order No. PSC-2022-0292-PCO-EI, issued August 1, 2022, in Docket No. 20220048-EI. In response, Tampa Electric filed errata to the company's rebuttal testimony to redact portions of its testimony that addressed the stricken portions of Mr. Kollen's direct testimony. *See* DN 05155-2022, filed August 2, 2022.

The Commission held a consolidated hearing in this matter on August 2-4, 2022. The Commission heard the direct testimony of Tampa Electric witnesses Pickles, DeStigter, Latta, and Plusquellic. The Commission also heard the testimony of OPC's two witnesses and the rebuttal testimony of Tampa Electric witnesses Pickles and Plusquellic.<sup>8</sup> OPC proffered the originally-filed version of Mr. Kollen's testimony, and Tampa Electric proffered the company's originally-filed rebuttal testimony in response. This Post-Hearing Brief and Statement of Issues and Positions only addresses the official record in this proceeding and does not address the separate proffered record.

## **II. SUMMARY OF TAMPA ELECTRIC'S POSITION**

The Commission should approve the company's 2022 SPP without modification because it contains the elements required by Rule 25-6.030 and satisfies the criteria set out in Section 366.96(4), Florida Statutes. The company's 2022 SPP is largely a continuation of the company's prior 2020 SPP. It contains the same eight programs and proposes essentially the same level of investment, but with some slight modifications and additions. Tr. 351:21-25; 367:17-19; 584:12-

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<sup>7</sup> *See* DN 04170-2022, filed June 21, 2022 in Docket No. 20220048-EI.

<sup>8</sup> Tampa Electric witness Latta's rebuttal testimony was entirely responsive to portions of OPC witness Kollen's testimony that were stricken. As a result, the company did not enter Mr. Latta's rebuttal testimony into the official record of this proceeding.

13.<sup>9</sup> The 2022 SPP is the product of a sophisticated, thorough, and comprehensive development process. Tr. 351:18-19; 583:16-24. The result is a comprehensive plan to achieve significant storm resiliency and restoration cost benefits while balancing customer rate impacts, the company's ability to execute, and geographic diversity of storm hardening investments. Tr. 371:6-9; 584:4-11.

The 2022 SPP generally proposes levelized spending for each program each year over the ten-year planning horizon, which provides consistency and predictability to the company's customers and to the third-party contractors that will assist the company with implementing the plan. *See* Exhibit 79 (Tampa Electric's Response to Staff's First Set of Interrogatories Nos. 2-3). While the Consumer Parties offer several critiques of the 2022 SPP, these critiques are conclusory in nature and are not based on a detailed engineering or economic study comparable to the one prepared by Tampa Electric. Furthermore, some of these critiques are based on a misunderstanding of Tampa Electric's proposed SPP Programs or a misreading of Section 366.96, Florida Statutes. As a result, the Commission should find that it is in the public interest to approve the 2022 SPP without modification.

### III. STATEMENT OF ISSUES AND POSITIONS

**ISSUE 1A: Does the Company's Storm Protection Plan contain all of the elements required by Rule 25-6.030, Florida Administrative Code?**

**TECO: \*Yes.\***

The competent substantial evidence in the record shows that Tampa Electric's 2022 SPP includes all elements required by Rule 25-6.030(3)(a)-(j), F.A.C. Mr. Pickles testified that the

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<sup>9</sup> References to the transcript of the August 2-4, 2022, hearing are designated as "Tr. 351:21-25," meaning page 351, lines 21-25 of the transcript. Exhibits are referred to by their number on Commission Staff's Comprehensive Exhibit List, and then the relevant page number within that exhibit.

company developed the 2022 SPP to contain each of the required elements. Tr. 341:21-25. His direct testimony also included a chart listing each requirement of the rule and showing where each is addressed in the company's plan. Tr. 342. Mr. Plusquellic's direct testimony elaborated on how the company's 2022 SPP complies with Rule 25-6.030(3)(d) by providing program-level detail. *See* Tr. 523-525. The Consumer Parties do not assert that the 2022 SPP is missing any of the plan components required by Rule 25-6.030.<sup>10</sup> As a result, the Commission should find that Tampa Electric's 2022 SPP meets the requirements of Rule 25-6.030(3)(a)-(j).

**ISSUE 2A:** To what extent is the Company's Storm Protection Plan expected to reduce restoration costs and outage times associated with extreme weather events and enhance reliability?

**TECO:** \*Tampa Electric's SPP is expected to significantly reduce restoration costs and outage times associated with extreme weather events and enhance reliability. The five programs analyzed by 1898 & Co. are expected to reduce restoration costs by \$380-\$531 million and reduce CMI by 29 percent over the next 50 years. The company's Vegetation Management Program is expected to improve SAIFI by 15.3 percent, SAIDI by 9.6 percent, and reduce restoration costs by 22.2 percent.\*

The competent substantial evidence in the record proves that Tampa Electric's 2022 SPP "is expected to reduce restoration costs and outage times associated with extreme weather and enhance reliability." §366.96(4)(a), Fla. Stat. Tampa Electric hired 1898 & Co. to provide an independent, third-party review of the company's Distribution Lateral Undergrounding, Transmission Asset Upgrades, Substation Extreme Weather Hardening, and Distribution Overhead Feeder Hardening Programs. Tr. 526-527. Its review showed that these programs are expected to reduce storm restoration costs by 33 to 35 percent, or approximately \$380 to \$530

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<sup>10</sup> Although OPC contests whether Tampa Electric *properly* prepared the comparison of costs and benefits for each program required by Rule 25-6.030(3)(d)4 (Tr. 966, Kollen direct testimony arguing Tampa Electric's calculation of benefits was "flawed"), its position is conclusory in nature and should not be credited by the Commission. OPC does not, however, assert that the company failed to provide this comparison. *See* Tr. 966 (stating Tampa Electric "used a form of benefit cost/analysis").

million, over the next fifty years depending on the frequency and intensity of future storms. Tr. 451-452. These five programs are also estimated to reduce customer minutes of interruption (“CMI”) by 29 percent over the next 50 years. Tr. 453.

Tampa Electric also engaged Accenture, an outside consultant with expertise in data analysis and utility vegetation management activities, to prepare an analysis of the potential benefits of the company’s Vegetation Management Program. Tr. 546.<sup>11</sup> This analysis shows that this Program is expected to improve SAIFI by 15 percent, SAIDI by 9 percent, and to reduce vegetation-caused outages in storms by 29 percent. *See* Exhibit 11, Doc. No. 3 (Accenture Vegetation Management SPP Analytic Support Report), at 18 of 34.

These estimates are based on conservative assumptions, so the projected benefits of the 2022 SPP are likely understated. For example, the 2022 SPP is expected to provide additional “blue sky” benefits that are not factored into 1898’s analysis. Tr. 458:8-10. Furthermore, the 1898 analysis assumed there would be no benefits from feeder automation and sectionalizing projects during Category 1 or greater hurricanes, even though the company expects resiliency benefits will result from automation in those conditions. *See* Exhibit 82 (Tampa Electric’s Response to OPC’s Third Set of Interrogatories No. 143, at Bates Page 0001645); Tr. 463:9-16. If the company had not made these conservative assumptions, the expected benefits of the plan would likely be higher.

The Consumer Parties did not present an alternative calculation of the expected benefits of Tampa Electric’s 2022 SPP. OPC does offer a few critiques of the company’s benefits assessment, but as explained below, each of these critiques misses the mark.

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<sup>11</sup> While this analysis was performed for the vegetation management activities in company’s 2020 storm protection plan, the company is not proposing any changes to the Vegetation Management Program in this iteration of the SPP.

## **1. Tampa Electric Properly Used Monetized Customer Minutes of Interruption**

OPC witness Kollen asserted that the company's estimated benefits are "excessive" because they include "the societal value of customer interruptions in addition to their estimates of avoided damages and restoration costs." Tr. 966:18-21. This argument reflects a misconception of how monetized CMI was considered in 1898's analysis. The 1898 model first calculated the benefits of each constituent SPP project in terms of reduced restoration costs and reduced minutes of customer interruption. Tr. 408:12-21. After this calculation was performed, the model monetized the estimated CMI savings so that projects could be ranked against each other by one metric – dollars. Tr. 431:24-432:3. The model did not consider "societal value" in estimating restoration cost and outage time benefits, so Mr. Kollen's criticism has no merit.

## **2. Tampa Electric's Estimate of Future Storm Costs is Reasonable**

OPC witness Mara testified that Tampa Electric overestimated restoration cost savings associated with the 2022 SPP by overestimating future storm costs. Mr. Mara compared the company's actual storm restoration costs over the last five years of \$111 million against the company's estimated future costs of \$963 million to \$1.313 billion. Tr. 733:1-7. His analysis, however, offered an apples-to-oranges comparison, as the company estimated total storm restoration costs over the next *50 years*, not the next five. Tr. 434:14-17. To prepare an apples-to-apples comparison, one could reduce the 50-year projected costs to a five-year average. This comparison would show historical restoration costs of \$111 million over the last five years compared to a projected five-year average of \$96.3 to \$133 million over the next fifty years. Mr. Mara's proposed comparison, once corrected, proves the reasonableness of the company's projections.

### **3. Each of Tampa Electric's SPP Programs Challenged by OPC are Designed to Reduce Both Restoration Costs and Outage Times**

OPC witness Mara expressed doubt that several of the company's proposed storm protection activities will produce either reduced restoration costs or reduced outage times. As explained below, these opinions are based solely on unsupported conjecture and the greater weight of the competent substantial evidence in the record shows that the company's programs are designed to achieve both restoration cost and outage time benefits.

#### **a. Mr. Mara Ignores the Risks Addressed by Tampa Electric's Substation Extreme Weather Hardening Program**

Tampa Electric operates 216 substations on its transmission and distribution system. Tr. 552:18. The company commissioned a substation hardening study that evaluated 24 of these substations located in coastal areas for their vulnerability to storm surge flooding, their criticality in maintaining grid stability and reliability of service, and other factors. Tr. 553:12-24; *see also* Exhibit 11 (Exhibit DLP-1), Document No. 5 (Substation Hardening Study). The study recommended hardening nine specific substations against storm surge risk over the next ten years through installation of permanent or temporary barriers, relocation of facilities, and/or elevation of substation equipment. Tr. 553:20-554:12.

Mr. Mara's critiques of the company's Substation Extreme Weather Hardening Program ignored the two primary risks that the program is intended to address – storm surge and the associated loss of service to critical load. He instead recasts this program as Tampa Electric's attempt to recover routine substation maintenance costs through the SPPCRC. These critiques lack merit as shown below.

First, Mr. Mara argued that the substation program is an attempt to recover the costs of maintaining substations in accordance with applicable flooding standards through a storm

protection program. He pointed out that FEMA began issuing flood maps in 1973. Tr. 734:11. He then argued that Tampa Electric should have designed each substation constructed or modified after 1973 to meet applicable flood design standards. Tr. 734:10-735:5. To the contrary, the company builds all substations to meet or exceed the design standards in place at the time the substation is constructed. Tr. 1507:11-14. The company also ensures that substation equipment meets more recent design standards whenever that equipment is upgraded or replaced. Tr. 1507:14-17. These flood design standards, however, were not developed to address storm surge. Tr. 1507:19-20. Tampa Electric selected the nine substations included in this program because they have risk above and beyond the flooding risk addressed in the applicable design standards. Tr. 1507:22-1508:3. If Mr. Mara were to prevail and this program was eliminated from the 2022 SPP, then these substations would remain vulnerable to storm surge risk.

Second, Mr. Mara asserted that any substation with an alternate feed should be excluded from the program because, in the event of flooding, load can be switched to an adjacent substation that is not flooded. Tr. 735-736.<sup>12</sup> The substations selected for inclusion in this program, however, were selected based in part on their criticality to the Tampa Electric system. Tr. 553:12-14; 1508:12-14. Three of the selected substations tie various components of the transmission system together, meaning loss of one of these substations could also trigger the loss of interconnected transmission lines. Tr. 1508:14-18. Several of the other included substations serve critical load such as Tampa International Airport, MacDill Air Force Base, Big Bend Generating Station, and the Port of Tampa. Tr. 1508:21. Continuity of service to these critical sites is even more important in extreme weather. Tr. 1508:22-23. If this program was eliminated as Mr. Mara suggests, then

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<sup>12</sup> Confusingly, Mr. Mara criticized the company's Overhead Feeder Hardening Program on the grounds that adjacent feeders will be unavailable for load switching in extreme weather, Tr. 738, while simultaneously insisting that adjacent substations will remain available for switching in extreme weather. Tr. 735.



these critical facilities would remain vulnerable to loss of service if the load could not be switched to an adjacent substation. Tr. 1508:23-1509:1.

**b. Tampa Electric's Feeder Automation and Sectionalizing Projects are Expected to Reduce Both Restoration Costs and Outage Times**

Tampa Electric's distribution system consists of feeder lines and lateral lines. Tr. 557:20-25. Feeders are the main lines that originate from substations, while laterals are the lines that branch off from the feeders. Tr. 557:20-25. Feeders are critical to ensuring reliable delivery of power to customers. Tr. 557:23-25. The company's distribution system has 1,794 miles of feeder facilities, of which 1,132 miles are overhead. Exhibit 10, at page 30 of 78. One of the primary causes of failed overhead equipment is wind-blown debris such as vegetation. Tr. 343:2-3. The vegetation management component of the company's 2022 SPP will minimize this risk, but cannot eliminate it, since the wind can blow vegetation into a conductor from outside the company's trimming area. Tr. 343:3-8. The company's Overhead Feeder Hardening Program is therefore designed to further mitigate this risk through two methods – feeder strengthening and addition of automation and sectionalizing equipment. Tr. 343:8-16.<sup>13</sup> The strengthening component consists of upgrading poles and ensuring that feeders meet National Electric Safety Code extreme wind loading standards. Tr. 559:16-25. The sectionalizing component involves installation of reclosers, trip savers, and upgraded conductors to enable automatic isolation of faults and automatic reconfiguration of service if feeder segments fail. Tr. 559:7-12.

OPC witness Mara conceded that the feeder strengthening component of this program will reduce restoration costs and outage times in extreme weather. Tr. 723:10-17. However, he argued

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<sup>13</sup> The Overhead Feeder Hardening Program also includes three advanced metering infrastructure software applications, which are addressed below.

that the feeder automation and sectionalizing component of this program will neither reduce restoration costs nor reduce outage times.

Mr. Mara claimed that feeder storm restoration costs will stay the same since Tampa Electric will still need to replace poles and conductor if a feeder outage occurs. Tr. 738:1-2. To the contrary, feeder automation will allow the company to identify and isolate outages faster. Tr. 1511:5-7. This reduces the amount of patrolling necessary to identify outages, which in turn can reduce the time necessary to restore service. 1511:8-10. Faster identification and restoration of damage will allow the company to release foreign crews faster, which means lower overall restoration costs. Tr. 1511:10-12.

Mr. Mara also claimed that feeder automation will not reduce outages because component failures will still occur. Tr. 737:18-738:7. In effect, Mr. Mara appears to argue that SPP programs should be excluded unless they will physically strengthen equipment. *See* Tr. 725 (opinion that an activity that “does not strengthen or harden the system...would not meet the requirements of the statute.”).<sup>14</sup> This approach is inconsistent with Section 366.96. For instance, Mr. Mara’s approach would eliminate vegetation management, which does not physically strengthen equipment yet is a *mandated* component of a utility SPP. *See, e.g.,* §366.96(2)(b), Fla. Stat. (defining a storm protection plan as including vegetation management). It is also inconsistent with Rule 25-6.030, which defines a “storm protection project” as an activity involving “enhancement” of the T&D system, not as an activity involving “physical strengthening” of the system. §25-6.030(2)(b), F.A.C. Furthermore, even if feeder automation does not physically strengthen poles and conductor,

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<sup>14</sup> In contrast to his critique of feeder automation, Mr. Mara supports inclusion of physical strengthening programs such as feeder pole upgrades and lateral undergrounding in the company’s 2022 SPP. *See* Tr. 723:10-17 (supporting pole upgrades because they will reduce pole failures); Tr. 740:15-19 (agreeing that moving laterals underground will reduce restoration costs and outage times).

it will nonetheless help avoid outages. Tr. 457:17-20; 1511:5-6. When an outage does occur on a feeder, such as a tree falling and taking down a span of conductor, the feeder automation equipment will enable the system to reconfigure itself and automatically transfer load to neighboring feeders, thereby avoiding outages entirely for the customers transferred to the adjacent feeder. *See* Exhibit 9 (Tampa Electric 2022-2031 SPP), at 44 of 78. This outage mitigation approach is entirely consistent with the statute. *See* §366.96(1)(e), Fla. Stat. (finding it is in the state’s interest for each utility to “mitigate restoration costs and outage times”).

Finally, Mr. Mara argued that the company’s estimated reductions in outage times associated with feeder automation are overstated by 50-60 percent because adjacent feeders will be unavailable for switching in extreme weather conditions. Tr. 739:5-6. This opinion mischaracterizes the company’s benefits calculation. As mentioned above, the company assumed there would be zero storm resiliency benefit from automation in Category 1 or greater storms. *See* Exhibit 82 (Tampa Electric’s Response to OPC’s Third Set of Interrogatories No. 143, at Bates Page 0001645). Moreover, Mr. Mara did not cite to any studies, data, or Tampa Electric-specific information to support his view. *See* Tr. 739:1-6.

Tampa Electric, on the other hand, did offer data on this point. A company analysis of Hurricane Irma data showed that there was an adjacent feeder that would have been available for switching in approximately 70 percent of the feeder outages if automation had been in place. Tr. 463:9-16.<sup>15</sup> Hurricane Irma predates the company’s SPP feeder strengthening activities and, as Mr. Mara concedes, these efforts will ultimately reduce equipment failures in extreme weather. Tr.

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<sup>15</sup> *See also* Exhibit 86 (Tampa Electric’s Response to OPC’s Third Request for Production of Documents No. 13, Bates Page 0002082) (producing this data to OPC).

723:10-17 (stating that hardened poles will result in “fewer pole failures.”). Consequently, it is possible that an even higher number of adjacent feeders could be available in similar future storms.

**c. Tampa Electric’s Proposed AMI Meter Applications are Expected to Reduce Both Restoration Costs and Outage Times**

Tampa Electric’s Overhead Feeder Hardening Program also includes adding three advanced metering infrastructure (“AMI”) software applications. Tr. 560:4-10. These applications are designed to use the company’s AMI system to reduce restoration costs and outage times associated with extreme weather. Tr. 560:4-10. The locational awareness application determines the electrical connectivity between a meter and a transformer and between a transformer and a feeder, enabling faster identification of outage locations and quicker restoration. Tr. 560:12-16. The vegetation contact detection application identifies feeder sections that experience repeated vegetation contact. Tr. 560:19-20. This will allow the company to target vegetation management activities to the areas most likely to experience vegetation-related outages in extreme weather conditions. Tr. 560:19-24. Finally, the storm mode application prioritizes outage and restoration messages sent by the AMI system during extreme weather. Tr. 561:1-5. This will provide faster and more accurate indication of system operation during widespread outages, which in turn will allow faster identification of outages on the system. Tr. 561:1-5; 1512:23-1513:4.

Like with the feeder automation projects, Mr. Mara asserted that the three AMI meter applications will not reduce restoration costs because the company will still need to repair or replace failed equipment on the system. Tr. 739:15-20. Again, Mr. Mara discounts the restoration cost benefits associated with locating outages more quickly. Tr. 1512:23-1513:4. Faster outage location will allow the company to deploy foreign crews more effectively and to send those crews home sooner, meaning customers will pay less for those crews.

**d. Tampa Electric's Transmission Access Enhancement Program is Expected to Reduce Restoration Costs and Outage Times**

Tampa Electric owns and operates 1,334 miles of transmission overhead facilities, including approximately 26,000 transmission poles. Tr. 326:1-3. The company inspects all wood transmission poles on an eight-year cycle, Tr. 571:6-10, and trims vegetation on all transmission right-of-way on either a two- or three-year cycle, depending on voltage. Tr. 540:17-23. The company can access the transmission right-of-way at many points to complete these inspection and maintenance activities. *See* Tr. 588:16-589:4. Reaching the transmission right-of-way during extreme weather through some of these access points, however, may be challenging. For example, access points without permanent roads or bridges may become difficult to traverse when weather conditions create wet soil or flood conditions. Tr. 586:16-19; 588:13-24. In these areas the company would have to use temporary solutions like matting to achieve right-of-way access when site conditions are poor. Tr. 588:25-589:4. These access challenges do not mean that the company is unable able to perform required inspections and maintenance during normal weather. In blue-sky conditions, where time is not critical, the company can simply take a longer route through a different access point to perform these activities or postpone them until conditions at a given access point improve. Tr. 587:8-16. Following an extreme weather event, however, quick access to all parts of the company's transmission system is critical to restoration of service. The company's Transmission Access Program in the 2022 SPP is designed to provide this quick access through construction of permanent access roads and bridges at critical routes along the company's 1,334 miles of transmission right-of-way. *See* Tr. 564:20-24.

Mr. Mara criticizes the Transmission Access Enhancement Program on the grounds that the company failed to evaluate the alternative of using specialized equipment such as track vehicles

and large tire vehicles to cross difficult terrain and access transmission right-of-way. Tr. 744:3-6. Tampa Electric does, however, own and operate specialized equipment including track vehicles and large tire vehicles. Tr. 1518:17-18. The company did not formally evaluate the use of this equipment as an alternative to construction of roads and bridges because in its experience this equipment does not resolve all access issues. Tr. 1518:18-21.

Mr. Mara also asserted that the company's Transmission Access Program should be eliminated from the company's 2022 SPP because access roads and bridges do not reduce outages. Tr. 724:17-18. Mr. Mara also characterized this program as an "aging infrastructure" program designed to "maintain infrastructure at the same status quo." Tr. 745:5-7. He also opined, however, that storm hardening "is about increasing the integrity of system components beyond what is normally required..." Tr. 745:8-9. This is exactly what the Transmission Access Enhancement Program will do. Tampa Electric has a level of access sufficient to conduct activities in transmission right-of-way in blue sky conditions. Tr. 588:25-589:2. The program will *upgrade* these existing access points by installing new, permanent roads and constructing new or upgraded bridges for improved access during extreme weather events. In other words, the company is not replacing roads and bridges "like for like," Tr. 1519:7-23, but will deliver the type of "increased integrity" that Mr. Mara advocated for in storm hardening activities. These upgraded roads and bridges will provide faster access at more points along the company's 1,334 miles of transmission right-of-way. This will reduce outage times by allowing crews to get to more potential outage locations faster, which in turn will reduce restoration costs by allowing the company to send foreign crews home sooner.

#### **4. OPC's Proposed Cuts to Tampa Electric's 2022 SPP Would Significantly Reduce the Expected Storm Resiliency Benefits of the Plan**

Mr. Mara recommended a 50 percent cut to the overall proposed investment level for Tampa Electric's 2022 SPP. Tr. 729. He stated that he based this proposed cut on the company's "budget optimization chart," or Figure 6-1 as presented in 1898 & Co.'s report on Tampa Electric's 2022 SPP. Tr. 786:11-787:4. Mr. Mara also cited Figure 6-1 as the basis for proposed cuts to the company's Distribution Lateral Undergrounding Program. Tr. 742. Mr. Mara read this chart as stating that a 50 percent cut in investment would only result in an eight percent reduction in expected benefits. Tr. 786:23-24. His position is based on a fundamental misreading and mischaracterization of that chart, and his proposed cuts would result in a 60 percent reduction in expected restoration cost savings and an almost 80 percent reduction in avoided CMI benefits. Tr. 372:13-22.

The budget optimization chart is one of several analyses performed by 1898 & Co. to support the company's proposed 2022 SPP. Tr. 471:12-14. These analyses included: (1) an estimate of the reduction in restoration costs and outage times associated with individual potential SPP projects; (2) an overall plan-level budget optimization analysis; and (3) a recommended prioritization/scheduling list for the potential projects. *See* Tr. 392-395. The budget optimization chart that Mr. Mara pointed to as support for his proposed budget cuts is the output of this second analysis. Tr. 471:15-472:20.

To prepare the budget optimization chart, 1898 ranked all potential SPP projects in the model by their projected cost-benefit ratios. Tr. 472:5-473:5. The analysis is based on "an unconstrained world," meaning it does not account for operational constraints and the company's ability to execute different combinations of projects. Tr. 370:3-18; 472:5-8. For instance, the

ranking might require all undergrounding projects one year and all substations the next. Tr. 473:1-5. Within this “unconstrained world,” 1898 reviewed a range of potential SPP budget levels, and the projects that would be completed within each budget level, to identify the point where additional investment provides very little incremental benefit. Tr. 412-10-15. Tampa Electric’s proposed investment level for the entire 2022 SPP was then compared to the budget optimization analysis to confirm that the investment would not exceed the point of diminishing returns. Tr. 449:1-6. The budget optimization analysis was only an intermediate step in preparing an actual executable plan that accounted for operational constraints such as availability of external resources, scheduling transmission outages, etc. Tr. 474:8-21; 477:20-478:8.

Mr. Mara’s proposed cuts are thus based on the incorrect premise that the budget optimization chart presented the expected benefits associated with actual, executable SPPs at varying budget levels. Tr. 473:20-24. In fact, if his proposed cuts were applied to the company’s proposed executable 2022 SPP, it would result in a 60 percent reduction in expected restoration cost savings and an almost 80 percent reduction in avoided CMI benefits. Tr. 372:13-22. Since the sole basis for Mr. Mara’s proposed plan-level investment reduction is his misinterpretation of the budget optimization chart, and since the actual result of his cut would be a drastic reduction in expected benefits, the Commission should reject his proposed cuts and approve the 2022 SPP without modification.

##### **5. Conclusion – Estimated Storm Resiliency Benefits of the 2022 SPP**

Tampa Electric has shown with competent substantial evidence that the 2022 SPP is expected to achieve material reductions in both restoration costs and outage times associated with extreme weather. Each of OPC’s attempts to discredit these estimated benefits is without merit. OPC witness Kollen suggested that the company improperly included “societal benefits” in these



estimates, but this is based on a misreading of the 1898 & Co. analysis. OPC also suggested that the company over-estimated storm restoration benefits by inflating future storm restoration costs, but Mr. Mara's proposed comparison shows these estimates are reasonable. Mr. Mara also questioned whether several of the company's proposed SPP programs will reduce restoration costs, outage times, or both. These critiques, however, are based largely on conjecture and are outweighed by the competent substantial evidence in the form of detailed analyses presented by Tampa Electric. Finally, OPC witness Mara also opined that a significant budget cut would not significantly reduce the expected benefits of the company's 2022 SPP based on a misreading of the 1898 report. Since none of these critiques accurately describe the company's plan, the Commission should find that it is in the public interest to approve the company's 2022 SPP without modification.

**ISSUE 3A: To what extent does the Company's Storm Protection Plan prioritize areas of lower reliability performance?**

**TECO: \*The company's methodology for prioritizing projects incorporates reliability performance. The projects that are anticipated to deliver the highest customer benefit at the lowest relative cost are prioritized higher. Furthermore, historical outage data and trim data were incorporated into the Vegetation Management Program design.\***

Tampa Electric's methodology for prioritizing projects includes expected reliability performance in extreme weather. The company contracted 1898 & Co. to prepare an estimate of the reductions in restoration costs and outage times that would result from implementation of each potential Distribution Lateral Undergrounding, Transmission Asset Upgrade, Substation Extreme Weather Hardening, and Distribution Overhead Feeder Hardening project. Tr. 526-527. To prepare these estimates, 1898's model used a "storms database" that included the future "universe" of potential storm events that could impact Tampa Electric's service area. Tr. 393:14-16. The model

considered factors such as the vegetation density around each asset, the age and condition of the asset, and the applicable wind speed zone for the area in which the asset is located to determine each asset's "likelihood of failure," or the potential for an asset to fail given different types of storms. Tr. 393-394. The model also calculated the estimated restoration costs and outage time for each asset in each type of storm, as well as the reductions in those expected costs and outage times if the assets were hardened. Tr. 394:2-3. The reductions in outage times were then monetized for project prioritization purposes. Tr. 394:6-9. Potential SPP projects were then prioritized based on the sum of the expected benefits divided by the project cost. Tr. 395:3-12. The prioritization methodology accordingly incorporated the expected reliability performance of each system asset in extreme weather as a factor in determining which projects should be completed first.

OPC witness Mr. Mara criticized Tampa Electric's 2022 SPP by stating that "prioritizing feeders, laterals, poles, and other equipment that is the most vulnerable to extreme storms provides greater impact in the early stages of the program..." Tr. 730:7-9. As explained above, this is precisely how 1898 & Co. prioritized potential SPP Projects. Tampa Electric selected the assets that have the highest likelihood of failure in extreme weather and that would generate the most restoration cost and outage time benefits if hardened given their associated costs. Tr. 393-395. Mr. Mara's critique accordingly lacks merit, and the Commission should find that Tampa Electric's 2022 SPP properly prioritizes areas of lower reliability performance.

**ISSUE 4A:** To what extent is the company's Storm Protection Plan regarding transmission and distribution infrastructure feasible, reasonable, or practical in certain areas of the Company's service territory, including, but not limited to, flood zones and rural areas?

**TECO:** \*There are no areas of the company's service area where it would be impractical, unfeasible, or imprudent to harden. All components of the transmission and distribution system can be hardened to achieve resiliency benefits.\*

The 2022 SPP reflects Tampa Electric belief that it is feasible, reasonable, and practical to harden all components of the company's transmission and distribution system in all areas. Tr. 340:21-22. Furthermore, the company believes that all customers should benefit from storm protection investments, Tr. 340:23-25, so the company took steps to ensure that all parts of the company's service territory will receive storm protection investments. Tr. 352:16-21; 530:17-20. The Consumer Parties did not present any evidence or argument that hardening is in fact unfeasible, unreasonable, or impractical in certain areas of the company's service territory. The competent substantial record evidence on this point thus weighs in favor of approval of Tampa Electric's 2022 SPP.

**ISSUE 5A:** What are the estimated costs and benefits to the Company and its customers of making the improvements proposed in the Storm Protection Plan?

**TECO:** \*Tampa Electric estimates that the total costs for the 2022-2031 SPP are \$2,076 million, resulting in a total revenue requirement of \$1,371 million. The five programs analyzed by 1898 & Co. are expected to reduce restoration costs by \$380-\$531 million and reduce CMI by 29 percent over the next 50 years. The company's Vegetation Management Program is expected to improve SAIFI by 15.3 percent, SAIDI by 9.6 percent, and reduce restoration costs by 22.2 percent.\*

The company's 2022 SPP is estimated to have a capital cost of \$1.698 billion and an operations and maintenance expense cost of \$377.15 million over the ten-year planning horizon. Tr. 727; *see also* Exhibit 9 (Tampa Electric's 2022-2031 SPP), at Page 70 of 78. These costs are

reasonable when compared with the estimated benefits of the 2022 SPP for several reasons. First, as OPC witness Mara acknowledged, Tampa Electric's 2022 SPP presents the lowest capital cost per customer among the four utility SPPs. Tr. 728. Second, the projected restoration cost savings of \$380 to \$531 million over the next 50 years are expected to offset a significant portion of the projected costs of the Plan. Exhibit 9 (Tampa Electric's 2022-2031 SPP), at Appendix F, Page 75 of 82. Third, the net cost of the plan (investment minus restoration cost savings) translates to a cost to reduce a minute of customer interruption of about \$0.65 to \$0.78 per minute. Exhibit 9 (Tampa Electric's 2022-2031 SPP), at Appendix F, at Page 80 of 82. This is below the estimates for the cost per minute of outage in the Department of Energy's "ICE Calculator" and lower than typical "willingness to pay" customer surveys. Exhibit 9 (Tampa Electric's 2022-2031 SPP), at Appendix F, at Page 80 of 82. Finally, as explained above, the 2022 SPP will provide additional benefits such as blue-sky reliability improvements that were not quantified in the 1898 analysis.

OPC witness Kollen conceded that Tampa Electric provided the cost-benefit comparison required by Section 366.96(4) and Rule 25-6.030. Tr. 966 (stating the company "used a form of benefit/cost analysis for the ranking and the magnitude of their programs."). OPC did not present evidence showing that Tampa Electric's estimated costs for implementing the 2022 SPP are inaccurate. Instead, OPC generally implied that Tampa Electric's cost estimates are understated due to the present inflationary environment. *See, e.g.* Tr. 470. This argument, however, assumes that the present trend of high inflation will hold over the 10-year horizon during which the 2022 SPP will be implemented. Tr. 470:20-23. This assumption is not supported by evidence in the record. Moreover, the estimated restoration cost benefits of the plan would also go up if high inflation persisted. Tr. 486:6-9. This would mitigate any potential under-estimation of SPP implementation costs related to high inflation.

OPC witness Kollen also asserted that none of Tampa Electric’s SPP programs are economically justified. Tr. 971:9-10. Mr. Kollen advocated for a standard under which projects would be ineligible for inclusion unless the restoration cost savings of those projects exceed the costs. *See* Tr. 958 (chart comparing program costs in dollars with restoration cost benefits in dollars); Tr. 971:9-10. Section 366.96(4)(c) does not specify that the estimated restoration cost savings of a program or project must exceed its projected costs, but rather, the statute takes a broader view that implicitly recognizes the substantial non-utility costs to customers and Florida associated with extended storm outages and reflects the importance of reducing outage times to customers. Indeed, Mr. Mara’s proposed economic screen for SPP projects completely ignores reductions in customer outage times, which must also be weighed on the benefit side of the ledger. Tr. 1452:6-9; *see also* §366.96(3), Fla. Stat. (SPP must explain the utility’s approach to “achieve the objectives of reducing restoration costs and outage times...”).

Finally, Mr. Kollen asserted that Tampa Electric should have used a cost/benefit analysis as a threshold decision to screen programs and projects for inclusion in the 2022 SPP. Tr. 966:15-17. Tampa Electric did this. The company prioritized projects based on benefit-cost ratios. Tr. 1452:21-24. These project-level cost-benefit ratios can also be rolled up to the program level. Tr. 486:19-24. The company set an overall budget at a point before incremental investment did not deliver additional benefits. Tr. 412:10-15. This means that the company worked to include the highest benefit projects in the plan, subject to operational constraints. Tr. 478:9-14. Moreover, Section 366.96(4)(c) does not set out a specific cost-benefit threshold that the Commission or the utilities must use to screen proposed SPP projects.

**ISSUE 6A:** What is the estimated annual rate impact resulting from implementation of the Company’s Storm Protection Plan during the first 3 years addressed in the plan?

**TECO:** \*The following table shows the full rate impact, regardless of where they are recovered, of the SPP on typical bills:

Tampa Electric's Storm Protection Plan "Total Cost" Customer Bill Impacts (in percent)				
Customer Class				
	Residential 1000 kWh	Residential 1250 kWh	Commercial 1 MW 60 percent Load Factor	Industrial 10 MW 60 percent Load Factor
2022	2.70%	2.70%	1.17%	1.08%
2023	4.13%	4.13%	1.28%	1.19%
2024	5.31%	5.31%	1.37%	1.29%

\*

Tampa Electric prepared this estimate as required by the statute and by Rule 25-6.030(3)(h), F.A.C. The company’s estimates for typical residential, commercial, and industrial customers are set out above, in the Direct Testimony of Mr. Pickles, and in the 2022 SPP itself. *See* Tr. 503; Exhibit 9 (Tampa Electric 2022-2031 SPP), at page 75 of 78. In the settlement agreement that resolved Tampa Electric’s 2020 SPP docket, the company agreed to shift some SPP costs to recovery through the SPP cost recovery clause, while other costs remained in base rates. Tr. 498:6-499:14. The rate impacts presented above thus include both costs recovered through base rates as well as those recovered in the clause. Tr. 504:17-23. It is also important to note that these rate impacts are just *estimates*, and the actual rates will be determined in future SPP cost recovery clause proceedings. *See* Tr. 504:17-505:2.

OPC asserted that the rates were not calculated properly because some of the component SPP programs should be excluded. As explained under Issue 2A above, these arguments are without merit. OPC also implied that the company somehow acted inappropriately by waiting to calculate the estimated rate impacts until after setting the budget for each SPP program. Tr. 31:19-23. To the contrary, it was not possible to calculate the precise estimated rate impact of the entire plan until the SPP program budgets were set. As Tampa Electric witness Latta explained, the first step in preparing the estimated rate impacts was to take the total plan-level revenue requirement and allocate it to the company's rate classes. Tr. 504:3-6. Thus, to prepare the estimated rate impacts, the company needed to first set the budgets for each program and calculate an overall SPP revenue requirement.

This does not mean the company ignored potential rate impacts when preparing the plan, as OPC suggests. The company had an operational team responsible for developing the 2022 SPP. Tr. 1525:6-7. This team understood how the proposed investment levels correlated with potential rate impacts. Tr. 1525:7-9. Since the 2022 SPP is largely a continuation of the prior 2020 SPP, the operational team was aware of the potential rate impacts of the proposed investment level from the beginning. Tr. 367:17-21.

Tampa Electric has shown with competent substantial evidence in the record it complied with Section 366.96(4)(d) and Rule 25-6.030 by providing an estimate of the rate impacts of the 2022 SPP over the first three years of the plan. The company understood the general level of rate impact associated with different possible plan investment levels throughout the SPP development process. Once the company prepared the final rate impact estimates, the company examined those and determined that the costs of implementing Tampa Electric's 2022 SPP were reasonable when

compared with the projected benefits of the Plan. For these reasons, this factor weighs in favor of finding that the 2022 SPP is in the public interest.

**ISSUE 7:**      **Withdrawn.**

**TECO:**        **\*No position.\***

**ISSUE 8:**      **Withdrawn.**

**TECO:**        **\*No position.\***

**ISSUE 9:**      **Should the Commission approve, approve with modification, or deny FPL's new Transmission Access Enhancement Program?**

**TECO:**        **\*No position.\***

**ISSUE 10A:** **Is it in the public interest to approve, approve with modification, or deny the Company's Storm Protection Plan?**

**TECO:**        **\*Yes, it is in the public interest to approve Tampa Electric's 2022-2031 Storm Protection Plan without modification because that Plan meets all of the requirements of, and will further all of the objectives of, Section 366.96 of the Florida Statutes and Rule 25-6.030 of the Florida Administrative Code.\***

When evaluating whether Tampa Electric's 2022 SPP is in the public interest, Section 366.96(4) requires the Commission to consider four factors. §366.96(4)(a)-(d), Fla. Stat. As explained under Issues 2A through 6A above, the competent substantial evidence relevant to each of these factors weighs in favor of a finding that Tampa Electric's 2022 SPP is in the public interest. While the Consumer Parties asserted that several of the company's programs will not result in either restoration cost or outage time benefits, these assertions are largely conclusory and are not based on an analysis or study of the type relied on by Tampa Electric in producing the company's 2022 SPP. Furthermore, OPC's characterizations of the company's programs are contradicted by the greater weight of the competent substantial evidence in the record. As a result,



the Commission should weigh the four factors in Section 366.96(4) and find that it is in the public interest to approve Tampa Electric's 2022 SPP without modification.

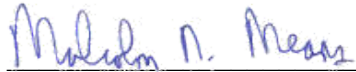
The Commission should resist OPC's efforts to interject other factors into the public interest determination specified by the Legislature. Section 366.96, Florida Statutes, directs the Commission to evaluate a utility's SPP and determine whether it is in the public interest to approve, approve with modifications, or deny the plan, and directs the Commission to consider the four enumerated factors used to frame the issues in this docket. *See* § 366.96(4) and (5), Fla. Stat. OPC's attempts to inject other factors into the determination specified by the Legislature is inconsistent with the plain language of the statute and should be rejected.

### **CONCLUSION**

Tampa Electric's 2022-2031 Storm Protection Plan contains each of the elements required by Rule 25-6.030. The company's plan is also designed to further the objectives of Section 366.96 of the Florida Statutes in a cost-effective manner. Tampa Electric's 2022 SPP is projected to provide significant storm resiliency benefits over the next 50 years while balancing customer rate impacts, the company's ability to execute, and geographic diversity of storm hardening investments. The company proposes a relatively level investment each year over the life of the plan, which will result in predictability for the company's customers and to the third-party contractors that will assist Tampa Electric in implementing the plan. While the Consumer Parties offer several critiques of the 2022 SPP, these critiques are conclusory in nature and are not based on a detailed engineering or economic study comparable to the one performed by Tampa Electric in preparing the 2022 SPP. As a result, the Commission should find that it is in the public interest to approve the 2022 SPP without modification.

DATED this 6<sup>th</sup> day of September, 2022

Respectfully submitted,



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**CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a true and correct copy of the foregoing Post-Hearing Brief, filed on behalf of Tampa Electric Company, has been furnished by electronic mail on this 6th day of September 2022 to the following:

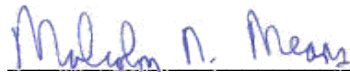
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