BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20220048-EI

TAMPA ELECTRIC's 2022-2031 STORM PROTECTION PLAN

REBUTTAL TESTIMONY

OF

DAVID L. PLUSQUELLIC

FILED: June 21, 2022

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INTRODUCTION:

Q. Please state your name, address, occupation, and employer.

A. My name is David L. Plusquellic. I am employed by Tampa Electric Company ("Tampa Electric" or "company") as Director Storm Protection and Support Services. My business address is 820 South 78th Street, Tampa, FL 33619.

Q. Are you the same David L. Plusquellic who filed direct testimony in this proceeding?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony in this proceeding?

A. The purpose of my rebuttal testimony is to address the deficiencies and misconceptions in the direct testimony of Lane Kollen and Kevin J. Mara, both of whom are testifying on behalf of the Office of Public Counsel.

Q. Do you have any general comments regarding the overall direct testimony of Lane Kollen and Kevin J. Mara?

A. Yes. Both witnesses are critical of the processes utilized by the Commission and the company and recommend modifications to the company's proposed 2022-2031 Storm Protection Plan ("SPP""). This criticism principally goes unsupported, and I do not support any modifications to the company's SPP as filed.

In addition, Mr. Mara proposes elimination of Tampa Electric's Substation Program, Transmission Access Enhancement Program, and the automation and software components of the Overhead Feeder Hardening Program on the grounds that they will not reduce both restoration costs and outage times. He also proposes seemingly arbitrary reductions in the proposed capital investment for the

Distribution Lateral Undergrounding Program. As I explain below, Mr. Mara's proposed cuts are based on misunderstandings of Tampa Electric's programs and, if approved, would deprive our customers of storm resiliency benefits.

The company's proposed SPP was prepared as a customer-focused program using rigorous analytical tools and engineering and operational judgment. It strikes a reasonable balance between the costs of the Plan, the restoration cost and outage benefits anticipated from the Plan, the impact of the Plan on customers' bills and the intangible benefits to Florida and its citizens associated with mitigating the impact of extreme weather to our electric grid. I will address the points raised by OPC's witnesses and encourage the Commission to approve the company's SPP as originally proposed.

REBUTTAL TO THE DIRECT TESTIMONY OF LANE KOLLEN

Q. On page 26 of his testimony, Mr. Kollen states that Tampa Electric's SPP warehouse and SPP materials and supplies "should not be included in any company's SPP." Do you agree with this critique?

A. No. At the proposed investment levels, the company's SPP

group anticipates issuing $30-$40 million of materials on an annual basis. None of the company's existing storage locations has enough space to accommodate this volume of materials. Spreading this volume of SPP materials between multiple locations was impractical from a logistics and operations standpoint. A single and separate physical location promotes efficient and cost-effective operations. Disallowing this standalone, dedicated warehouse would likely result in a net cost increase to customers, because the company would need to identify multiple additional company locations and/or a new site to be included for cost recovery in base rates. The company believes that the cost of transporting materials between multiple locations would be more expensive than this more efficient, standalone site.

Q. Mr. Kollen argues on pages 10 and 23 of his testimony that the Commission should require a credit for avoided O&M expenses due to the SPP to plant investments and SPP O&M expenses. Do you agree?

A. The Commission should not adopt Mr. Kollen's proposal to credit the SPP clause to reflect the impact SPP expenditures may have on base rates. Although there may be some savings in the future, the company does not have

enough experience with the SPP or the data needed to prepare a reasonable estimate and any effort to do so now would be speculative. Tampa Electric and certain parties are operating under a base rate settlement agreement that extends until the end of 2024. A mechanism like the one proposed by Mr. Kollen potentially could have been negotiated into the settlement, but it was not. In any event, the Commission will have full authority to assess the level of O&M expenses recoverable through base rates when the company files its next general request for base rate relief.

REBUTTAL TO DIRECT TESTIMONY OF KEVIN J. MARA:

Q. On page 6 of his testimony, Mr. Mara offers an interpretation of Rule 25-6.030 (the "SPP Rule") under which a proposed program must reduce both restoration costs and outage times to be eligible for inclusion in a company's SPP. Do you agree with this proposed two-prong test?

A. No. Although I am not an attorney, I do not read Section 366.96 (the "SPP Statute") or the SPP Rule as setting out this strict two-prong test and I think the Commission should decline to adopt it. Reducing restoration costs and outage times benefit customers, so either type of

benefit should be sufficient to justify a SPP project. Even if the Commission does adopt this test, however, the company's proposed SPP programs would all pass this test since they are all expected to provide both restoration cost reductions and outage time reductions. The company provided these reductions as listed in the table on bates stamped page 103 of the company's proposed 2022-2031 SPP.

Q. On page 8 of his testimony, Mr. Mara uses sectionalizing equipment and replacement of bridges on transmission access roads as examples of projects that would fail his two-pronged test. Do you agree that these types of projects fail Mr. Mara's test?

A. No. First, the company demonstrated both restoration cost and outage time reductions for all of its proposed SPP programs in the table on bates stamped page 103 of the company's 2022-2031 SPP. Second, the company's automation and sectionalizing program will result in both reduced restoration times and restoration costs, as I will explain further below in my rebuttal testimony. Third, Mr. Mara misunderstands the access enhancement program proposed by the company. The company is not replacing bridges "like for like" as stated by witness Mara. As explained on bates stamped page 81 of the company's 2022-

2031 SPP, the company is replacing old bridges that were rated/sized for smaller vehicles with higher rated and bigger bridges that can support the movement of the more current larger trucks and heavy equipment. In addition, the company is installing new bridges for additional access points and more permanent rock roads. The bigger bridges and more permanent roads will withstand nature for a much longer duration than the company's current practices or bridges and access points, so the company's access enhancement program is in effect "hardening" or "strengthening" as contemplated in the SPP statute.

Q. On page 9 of his testimony, Mr. Mara asserts that the company is attempting to include "aging infrastructure" programs in Tampa Electric's 2022-2031 SPP. He considers deployment of automation equipment, reclosers, trip savers, vegetation contact detection software, locational awareness software, access roads, and access bridges to be aging infrastructure programs. Do you concur?

A. Not at all. These are new programs or significant expansions of existing programs, and all provide significant storm protection benefits for customers. As OPC's witness Mr. Kollen concedes on page 11 of his testimony, it is appropriate for the company to include

"new programs and projects or the expansion of existing programs and projects that are not within the scope of its existing base rate programs and cost recoveries in the normal course of business". All of the programs that witness Mara proposes to cut meet one or both of those criteria.

Q. On page 10 of his testimony, Mr. Mara states that Tampa Electric has increased the company's planned capital expenditures by $109 million (or 7 percent) over the new 10-year period when compared to the company's first Plan. Is this an accurate characterization?

A. On the surface the math is correct, but it fails to recognize that the first year of the Plan (2020) was both a partial year (April to December) and it was the first year of the Distribution Lateral Undergrounding Program, which was still ramping up. It also fails to acknowledge that despite unprecedented inflation in both material and labor, the company is projecting essentially flat spending over 10 years. The company anticipates continued efficiency in the execution of the programs and has incorporated that into the 10-year Plan by not escalating costs annually to account for anything more than normal inflation.

Q. On page 12 of his testimony, Mr. Mara states: "In my opinion, the only practical limit to the magnitude of the SPP budgets was the limitation of resources in terms of engineers and construction personnel realistically available to complete the annual goals of the program." Do you agree with this statement?

A. No. While Mr. Mara is correct that the company did consider the ability to obtain and retain labor resources in determining the investment levels that were possible for each program. That was just one of many variables that were included in the discussion on the program and total Plan investment levels. In addition to labor market constraints, the company was also acutely aware of the potential rate impacts of various investment levels. With potential rate impacts in mind, 1898 & Co. ran multiple scenarios to determine the point at which additional levels of investment, and their associated rate impacts, do not result in materially greater benefits. The company then evaluated scenarios for each program that resulted in total investment levels within the ranges identified by the budget optimization analysis. While the exact rate impact was not known at the outset of the budgeting process, the company was aware of estimated rate impacts throughout the entirety of the planning process. The

company's proposed SPP strikes a reasonable balance between storm protection and customer bill impacts. In fact, according to page 6 of Mr. Kollen's testimony, Tampa Electric's proposed Plan has the lowest ten-year investment per customer of the plans being considered by the Commission.

Q. On page 12 of his testimony, Mr. Mara argues that 1898's budget optimization analysis "ignored the rate impact to customers" associated with its proposed SPP investments. Do you agree with this statement?

A. No. This statement is misleading. As Mr. Mara appears to concede, the purpose of 1898's budget optimization analysis was to quantify the expected restoration cost and outage time reduction benefits associated with various levels of investment and to determine the point at which additional levels of investment do not result in materially greater restoration cost and outage time benefits. The company was acutely aware of the potential rate impacts throughout the planning process even though rate impacts were considered separately. It also recognized that reducing outage time provides intangible benefits to customers that are often difficult to quantify in a financial model. Once the proposed budget level was

set, the company calculated the actual rate impact of the Plan to determine whether those rate impacts were reasonable as compared to the expected benefits. The company believes that the rate impacts are reasonable given the benefits anticipated from the proposed Plan.

Q. On pages 13 and 14 of his testimony, Mr. Mara asserts that the company should reduce its proposed investment level in part because the company did not prioritize the equipment "that is the most vulnerable to extreme storms…in the early stages of the program…" Do you agree with this statement?

A. No, this statement is inaccurate. Projects were prioritized based on the highest resiliency benefit cost ratio, where resilience benefits are the sum of the avoided restoration costs and monetized avoided customer outages. Tampa Electric witness Jason De Stigter describes this approach on pages 11-12 of his direct testimony. It should be noted that the company prepared the business justification in alignment with the statute, or in terms of decrease in restoration costs in dollars and decrease in customer outages in customer minutes interrupted ("CMI"). For the purpose of prioritization and establishing levels of total investment, the company

monetized the CMI to calculate the resiliency benefit in dollars to produce a benefit cost ratio.

Q. On page 14 of his testimony, Mr. Mara recommends cutting the company's proposed spending level in half. Do you agree with this analysis and this proposal?

A. No, first the analysis basis is inappropriate. The benefits assessment for the company's proposed 2022-2031 SPP is in alignment with the statute since it calculates the benefits in terms of decrease in restoration costs and customer outages. As described in the Plan, for the purpose of project prioritization and establishing the overall investment level the customer outages were monetized. Mr. Mara uses the budget optimization assessment as the overall benefits for the Plan which is inappropriate and not aligned with the statute. Second, Mr. Mara's analysis and approach isn't wholly customer centric over the arc of time. The company's Plan prioritizes the most beneficial investment early in the period but takes a long-term view to harden the system for as many customers as possible. Mr. Mara's approach would limit the number of customers that could be hardened leaving many customers exposed to major events over the next 50 years.

Q. On page 16 of his testimony, Mr. Mara compares Tampa Electric's historical storm restoration costs of $111 million over the last five years with what he refers to as the "annual avoided restoration costs for the 10-year SPP ranges from $380-$531 million." Is this comparison accurate?

A. No. Mr. Mara incorrectly asserts that the $380-$531 million figure is the projected annual avoided costs. What he is actually comparing is the company's total restoration costs over the last five years with the projected 50-year restoration cost savings resulting from the Plan, which is a mismatched comparison. This is depicted in Figure 7-1 on bates stamped page 204 of the company's 2022-2031 SPP. As Mr. Mara admits, the company's projection estimates restoration costs of $963-$1,313 million over the next 50 years, which would average out to about $19.26-$26.26 million per year. A more reasonable comparison would be the company's actual restoration costs of $111 million over the last five years with the company's projected average restoration costs over five years of $96.3-$131.3 million. This comparison shows that the company's projected amounts are reasonable compared to its historical amounts.

Substation Hardening Program

Q. On pages 18-19 of his testimony, Mr. Mara asserts that the company should have designed all its substations constructed or upgraded after 1973 to meet Standard ASCE-24-14 Flood Resistant Design and Construction and that any substation that is not designed to meet those standards were imprudently designed and should be excluded from the SPP. Does Tampa Electric design its substations to meet this standard?

A. Tampa Electric designs all assets to meet or exceed standards that are in place at the time. Tampa Electric's substations would have been designed to the standard in effect at the time they were constructed. When equipment is replaced or upgraded at a substation, the company brings it up to the current standard at the time when the investment is made. The company does not upgrade the remainder of the substation at that time to keep control of costs. Furthermore, the referenced flooding standard was not developed to address storm surge. One of the purposes of the Substation Hardening program is to mitigate potential outages caused by storm surge. Tampa Electric evaluated storm surge potential using the Sea, Land, and Overland Surges from Hurricanes ("SLOSH") Model and determined that the substations included in this

program have risk over and above the flooding risk that the company must design to under ASCE-24-14. Substations are vital components of the company's distribution system, so protecting the ones that are subject to storm surge risk should be included in the company's SPP.

Q. Do you agree with Mr. Mara's proposed change to this program on pages 19-20 which would exclude any substation with an alternate feed that would allow load to be transferred to an alternative substation?

A. No. I do not. The nine substations included in this program were selected in part because they serve critical load. The Hookers Point, South Gibsonton, and Jackson Road substations tie various components of the transmission system together. Loss of one of these substations could also trigger the loss of interconnected transmission lines. Several of the other substations selected serve critical loads such as downtown Tampa, Tampa International Airport, MacDill Air Force Base, Big Bend Generating Station, and the Port of Tampa. Continuity of service to this critical load is even more important in extreme weather. Mr. Mara's proposal would do nothing to address the risk of a loss of service to critical facilities if that load could not be switched to

another substation. Tampa Electric's proposal addresses this by hardening the primary source of power to these critical interconnection points and critical facilities.

Distribution Overhead Feeder Hardening

Q. What is Mr. Mara's recommendation for the Tampa Electric's Distribution Overhead Feeder Hardening Program?

A. Mr. Mara has separate recommendations for the feeder strengthening, automation, and software components of this Program. All three recommendations should be rejected.

Q. What are his recommendations for the feeder strengthening component of the program?

A. Mr. Mara concedes on page 21 of his testimony that the strengthening component, or building to Grade B with extreme wind loading, will reduce restoration costs and outage times. He nevertheless then goes on to recommend reducing the planned spending for this program to the 2020-2029 SPP level of $10 million per year.

Q. Do you agree with this recommendation for the feeder strengthening component of the Program?

A. No. First, the investment level proposed by Mr. Mara is arbitrary and appears to be based solely on his personal judgment. He has not identified specific projects to be delayed or justified why delaying them would be consistent with the policy goals in the SPP statute.

Second, reducing the investment levels of this or any program will only delay the realization of the benefits anticipated from the company's SPP. For the company's SPP to have the greatest impact for all customers by reducing restoration costs and outage times, a significant portion of the company's system needs to be protected. Limiting the company's proposed spending on this program might still allow all customers to benefit from some restoration cost reductions but would also allow a much smaller number of customers to benefit from reduced outage times. The company has sufficiently demonstrated the benefits of the proposed programs and the investment levels proposed in all Plan filings to date.

Q. Do you agree with Mr. Mara's recommendation on page 21 of his testimony to exclude all sectionalizing and switching projects from the SPP and his assertion that these projects will not reduce restoration costs and outage times?

A. No. I disagree with this assertion for several reasons. First, the company has sufficiently demonstrated that this component of the program will prevent outages for customers. This analysis is contained on bates stamped pages 195-197 of the 1898 report. In addition to preventing outages altogether, these technologies will enable faster identification and isolation of outages. This reduces the amount of patrolling necessary to identify damage thereby reducing restoration time and customer outages. Faster identification and restoration of damage will allow the company to release foreign crews faster, which also means lower overall restoration costs.

Second, Mr. Mara assumes on page 23 that adjacent feeders will not be available for transfer in an extreme weather event due to catastrophic damage and that the company has accordingly overstated the outage reductions by 50-60 percent but presents no analysis or data to support his position. Mr. Mara's unsupported assumption should not be given more weight than the significant analysis and modelling the company performed to support this program.

Finally, Mr. Mara concedes on page 22 that the sectionalizing and automation equipment will "be very effective in reducing outage times" outside of extreme

weather. Tampa Electric did not attempt to quantify these benefits in the SPP but does agree that these benefits are further support for the company's proposed 2022-2031 SPP. Inclusion of these benefits in the analysis would demonstrate even greater benefits for customers from this investment.

Q. Do you agree with Mr. Mara's recommendation to exclude the three software programs from the SPP on the grounds that they will have a "very limited impact on reduction in outages times or restoration costs"?

A. No. Mr. Mara appears to discount the value and application of the information that will be collected from the installation of the software programs. The Vegetation Contact Detection application will identify potential problem vegetation and allow the company to remove it before a storm creates an outage. The Locational Awareness application, used in conjunction with other applications, will allow the company to identify and replace "at risk" equipment. These features will allow the company to proactively mitigate restoration costs and outage times. The Locational Awareness and Storm Mode applications will allow the company to identify embedded outages, or outages downstream of the last protection

device on a lateral. These embedded outages are very hard to identify during a storm event and often go unreported for hours or even days depending on the severity of the storm and restoration efforts. These two applications will also increase the accuracy of the company's Geographic Information System model and ensure the company's Automated Distribution Management System operates more effectively and with more accurate data.

Distribution Lateral Undergrounding

Q. Does Mr. Mara dispute that that Tampa Electric's Distribution Lateral Undergrounding Program will reduce restoration costs and outage times?

A. No. On page 24 of his testimony, Mr. Mara concedes that the program will reduce outage times and restoration costs.

Q. If he does not dispute the benefits of the Distribution Lateral Undergrounding Program, then what is Mr. Mara's critique of that program?

A. Mr. Mara recommends that the Program should be capped at an investment level of $50 million per year. This reduction appears to be based on his opinion, listed on

pages 25-26, that this lower level of spending "better balances the rate impact of the spending with the benefits."

Q. Do you agree with Mr. Mara's recommendation?

A. No. Mr. Mara does not point to any data in the record that would support this judgment. His proposed reduction has no reasoned basis, does not identify specific projects to be denied or delayed, and is arbitrary.

Furthermore, to meaningfully reduce the risk of lateral outages, the company must invest in this program at or above the proposed funding levels. The company was both thoughtful and analytical in determining the proposed funding levels for each program. All customers will benefit from a dollar of avoided restoration costs, so reducing the investment in this program will delay this benefit of the program. Reducing investment levels will also delay the additional benefit of reduced outage times for some customers since fewer laterals will be undergrounded.

Q. On page 12 of his testimony, Mr. Mara states that Tampa Electric determined annual funding levels based on a

"constrained labor market." In addition to the evaluation of the labor market, what other factors did the company consider when establishing funding levels for the lateral underground program?

A. While Mr. Mara correctly states that Tampa Electric considered a constrained labor market, Mr. Mara's statement oversimplifies the work that was done to attempt to identify the investment levels proposed by the company for lateral undergrounding. As is customary when trying to determine appropriate funding levels, the company started with a wide range of potential outcomes. These outcomes were considered for both the proposed total Plan investment levels as well as for the investment levels of each program. That process started with known variables (e.g., the number of overhead distribution lateral miles in the company's service area) and reasonable assumptions (e.g., estimated rate impact at each investment level). While total Plan level ranges were identified using the company's Budget Optimization Tool, investment ranges were identified for each program, including the lateral underground program. In determining the appropriate range of investment levels for this program, the company considered things like the estimated proportion of the system that would likely need to be converted to make an

impact; the speed of those conversions; the ability to execute and manage; the availability of resources; and the willingness of contractor partners to commit to and invest in Tampa Electric. The final proposed investment levels call for reaching approximately 100 miles per year of conversions, which the company believes is reasonable.

As I have previously testified, one of the factors considered was the willingness of contractor partners to commit to Tampa Electric's undergrounding program in the years ahead. The company's proposed level of investment provides sufficient work for 400-500 new jobs added to the Tampa Electric service area, which is sizeable enough for contractor partners to make a long-term commitment to the work. Based on this investment level, nearly all of the company's partners have made commitments to the area by entering into multi-year leases for both office space and operations yards.

Furthermore, none of these economic benefits have been included in the company's cost-benefit analysis. If investment levels for this program in particular are reduced, the company and the Tampa Electric service territory would lose these additional economic benefits. There would also be risk that one or more of our

contractor partners would pull out altogether in favor of other programs in the southeast or large new programs that have been announced in other parts of the country.

Q. What is Tampa Electric's practice for establishing an inventory of designed and permitted undergrounding projects, and what is Mr. Mara's concern with that practice?

A. The company's Plan calls for reaching a steady state operation of designing projects sufficiently ahead of projected construction start in order to accommodate design delays, delays in securing land rights, the application and receipt of permits, materials and other activities that can cause delays in construction starts. One of the lessons the company learned from the implementation of the 2020-2029 SPP was that having an inventory of projects ready to go helps mitigate these delays and promotes a more efficient overall deployment of materials held in inventory and contract labor. At a steady state of operation, the company will have adequate resources to design 75-100 miles of projects in a calendar year while simultaneously constructing the same amount annually.

Mr. Mara's concern is that the completed and approved designs will become outdated and will require re-design after the project and recovery of the initial design costs is approved. The reality is that it is common practice to design projects with an appropriate lag between design and construction starts. The company is confident the time between design and construction is appropriate, aligned with industry standards and will not cause unnecessary or imprudent costs from design changes.

Transmission Access Enhancement Program

Q. Mr. Mara suggests that Tampa Electric could use specialized equipment as an alternative to the company's Transmission Access Enhancement Program. Did you consider this alternative?

A. No. Tampa Electric owns some specialized equipment such as track vehicles and large tire vehicles. The company did not formally evaluate the use of specialized equipment as an alternative to the Transmission Access Program because this equipment does not resolve all access issues.

Q. On page 28 of his testimony, Mr. Mara asserts that maintenance of existing roads and bridges will not reduce restoration costs or outage times in extreme weather. Do

you agree with this assertion?

A. No. The company has provided the value of reduced restoration cost and outage time values for all programs in the table on bates stamped page 103 of the company's proposed 2022-2031 SPP. Mr. Mara misunderstands the access enhancement program proposed by the company. The company is not replacing bridges "like for like" as stated by Mr. Mara. All road projects included in this program involve construction of new roads at points where a permanent road did not exist before. All bridge projects included in this program involve construction of new bridges or upgraded bridges. The company is replacing old bridges rated/sized for smaller vehicles with higher rated and bigger bridges that can support the movement of current larger trucks and heavy equipment. In addition, the company is installing new bridges for additional access points and more permanent rock roads. The bigger bridges and the new permanent roads will withstand nature for a much longer duration than current bridges and access points, so they are in effect being "protected," "hardened," and or "strengthened" as contemplated in the SPP statute.

Q. Does this conclude your rebuttal testimony?

A. Yes.