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August 2, 2022

VIA: ELECTRONIC FILING

Mr. Adam J. Teitzman
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

In re: Review of Storm Protection Plan pursuant to Rule 26-6.030, F.A.C.
Tampa Electric Company; Docket No. 20220048-EI

Dear Mr. Teitzman:

Tampa Electric Company ("Tampa Electric" or "the company") hereby submits this errata sheet to update the rebuttal testimonies of David A. Pickles, David L. Plusquellic, and Richard J. Latta filed by Tampa Electric Company in this docket on June 21, 2022. *See* DN-04170-2022. Tampa Electric is filing this letter and attachments as a courtesy to the Commission and the parties, and to promote efficiency at the final hearing scheduled to begin August 2, 2022.

The changes specified below are necessary to delete the portions of Tampa Electric's rebuttal testimonies that respond to portions of the testimony of Office of Public Counsel witness Lane Kollen that were stricken by the Commission in Order No. PSC-2022-0292-PCO-EI, issued August 1, 2022.

	Page and Line References	**Change**
Rebuttal Testimony of David A. Pickles	3:14-5:19	Strike
	7:3-11	Strike
	7:13-8:4	Strike
	8:6-9:10	Strike
	9:12-10:23	Strike
	10:25-11:21	Strike
Rebuttal Testimony of David L. Plusquellic	3:20-4:15	Strike
	4:17-5:11	Strike
Rebuttal Testimony of Richard J. Latta	All	Strike

Also enclosed for filing as "Attachment 1" to this letter are strikethrough versions of the rebuttal testimonies of witnesses Pickles and Plusquellic that reflect the above-referenced corrections. Enclosed as "Attachment 2" to this letter are "clean" versions of these testimonies wherein the above-referenced pages and lines are redacted but left blank in place so the remaining page and line references remain the same as the testimonies as originally filed. Mr. Latta's rebuttal testimony is entirely responsive to portions of Mr. Kollen's testimony that was struck, so the company is not submitting a strikethrough or redacted version of his rebuttal testimony. Subject to further action by the Commission or parties related to Order No. PSC-2022-0292-PCO-EI, Tampa Electric intends to offer the "clean" versions of the rebuttal testimony of witnesses Pickles and Plusquellic in Attachment 2 at the appropriate time in the hearing.

Tampa Electric expressly reserves the right to offer the original rebuttal testimony of witnesses Pickles, Plusquellic, and Latta as filed on June 21, 2022, in their entirety, pending further action by the Commission or parties related to Order No. PSC-2022-0292-PCO-EI.

Thank you for your assistance in connection with this matter and please do not hesitate to contact me with any questions.

Sincerely,

Malcolm N. Means

cc: All parties of record (with attachments)

Attachment “1”

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20220048-EI

TAMPA ELECTRIC'S 2022-2031 STORM PROTECTION PLAN

REBUTTAL TESTIMONY

OF

DAVID A. PICKLES

FILED: June 21, 2022

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

REBUTTAL TESTIMONY

OF

DAVID A. PICKLES

TABLE OF CONTENTS

INTRODUCTION

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

A. My name is David A. Pickles. My business address is 702 North Franklin Street, Tampa, Florida 33602. I am employed by Tampa Electric Company ("Tampa Electric" or "the company") as Vice President of Electric Delivery and Asset Management for Electric Delivery/Energy Supply.

Q. Are you the same David A. Pickles 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. The Office of Public Counsel's witnesses generally make three recommendations to the Commission. First, they suggest that the Commission should develop guidelines of general applicability for all four investor-owned utility Storm Protection Plans ("SPPs"). Second, they advocate for the use of a traditional utility cost-benefit analysis in evaluating SPP Programs and Projects. Third, they propose exclusion of some of Tampa Electric's SPP programs and budget reductions for other programs. As I explain in my testimony, the Commission should reject each of these proposals as inconsistent with Section 366.96 of the Florida Statutes (the "SPP Statute") and because these proposals lack a reasoned basis in the record for this docket.

I am confident that the company is managing the SPP program in compliance with the statute and is committed to storm hardening the system. These investments are made in full support of reducing restoration costs and outage times during extreme weather events. Mr. Kollen and Mr. Mara essentially urge the adoption of arbitrary reductions that lack any legitimate basis or foundation, and that appear to be based on a desire simply to slow down the pace of investments, which will further delay realization of benefits from those future investments.

REBUTTAL TO DIRECT TESTIMONY OF LANE KOLLEN:

Q. You previously stated that Mr. Kollen recommends guidelines of general applicability for the Commission's review of utility SPPs. Can you explain what this means?

A. On page 7 of his testimony, Mr. Kollen argues that the Commission should develop "threshold decision criteria for the selection, ranking, and magnitude of the SPP programs and projects." On page 21, he suggests that these should be "specific decision criteria for the selection, ranking, and magnitude of the utilities' SPP programs and projects."

Q. Do you agree with this proposal?

A. I do not, for three reasons.

First, although I am not a lawyer, I do not read the SPP Statute as requiring the Commission to adopt "specific decision criteria." Rather, the SPP Statute directs the utilities to submit plans and directs the Commission to evaluate them. The Commission opened four separate dockets – one for each investor-owned utility – for this purpose. The SPP Statute does include factors that the Commission must consider in evaluating plans, but none of these factors includes "threshold decision criteria" of the type suggested by Mr. Kollen. For example, the SPP Statute directs the Commission to consider the "estimated costs and benefits" of the SPP but does not require the Commission to adopt a universally applicable threshold ratio for costs and benefits.

Second, each of the utilities is unique, so it is unlikely that a one-size-fits-all approach would be appropriate. Tampa Electric's electrical system is different than the systems for Florida Power and Light and Duke Energy Florida. The company has different costs, different proportions of urban and rural areas, differing coast lines, differing areas with and without vegetation, and many other attributes including electrical systems that

contain different equipment. Common criteria would place favoritism on some customers and even the utility, and what works for one utility may be very problematic for another.

Third, although it may be useful to develop guidelines of general applicability at some point, we are still in the first three years of the life of the SPP Statute and, from Tampa Electric's perspective, we do not have enough experience implementing a SPP to adopt such guidelines. For instance, the company has proposed several improvements to the Distribution Lateral Undergrounding Program in the 2022 SPP based on the company's experience with implementing that program over the last two years.

For these reasons, Tampa Electric urges the Commission to evaluate the company's 2022 SPP based on the evidence in the record, the unique characteristics and circumstances of its system, and the SPP Statute.

Q. In addition to his proposal for universal specific decision criteria, Mr. Kollen critiques the company's benefits assessment on page 15 by alleging that it does not include cost-benefit analysis as a "threshold decision criterion" and asserts that the company's

analysis results in “excessive dollar benefits.” He also presents his own cost-benefit analysis on page 7 of his testimony. Do you have any issues with his critiques and his own cost-benefit assessment?

A. Yes, I have several issues. First, his assessment on page 7 ignores the second benefit stream required by the statute, the decrease in customer outages. His assessment only reflects the decrease in storm restoration costs. Major events impact Tampa Electric’s customers in terms of the high cost to restore the system and significant personal impact from being without electrical service for extended periods of time. The statute is rightly customer centric in the benefits requirements. Tampa Electric’s SPP takes both of these benefit streams into consideration and ensures each program and project is aligned to the statute’s customer centric approach.

Second, on page 15 of his testimony, he incorrectly asserts that Tampa Electric did not use a cost benefit analysis to screen projects. 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. Witness De Stigter describes this approach on pages 11-12 of his

direct testimony.

Q. Does Mr. Kollen suggest adoption of a specific cost-benefit ratio?

A. Yes, Mr. Kollen suggests that the Commission should screen any project with a cost-benefit ratio of less than 100 percent. On page 17, he suggests that this ratio should be calculated with benefits defined as avoided restoration costs and avoided O&M costs and cost defined as the sum of annual revenue requirements for the program or project.

Q. What is Mr. Kollen's basis for this proposed cost-benefit screen?

A. On page 21, Mr. Kollen asserts that a specific cost-benefit screening criterion is necessary because SPP programs and projects are "discretionary."

Q. Do you agree with this characterization of the SPP activities as discretionary?

A. No, I do not. The SPP Statute makes it clear that completion of storm protection activities is mandatory. First, it states that each public utility "shall file" a

SPP. Next, it states that this SPP "must explain the systematic approach the utility will follow to achieve the objectives of reducing restoration costs and outage times associated with extreme weather."

Q. Do you agree with the proposed 100 percent cost-benefit ratio screen for SPP programs and projects?

A. No. I generally agree with Mr. Kollen's principles that benefits should outweigh costs in investment decision making, however, restricting that to only a financial metric is not sound in all circumstances. Since SPP activities are mandatory, I think Mr. Kollen and Mr. Mara should look beyond a traditional, financial cost-benefit analysis.

Although I am not a lawyer, my reading of the SPP Statute leads me to believe that the Florida Legislature understood that outages associated with extreme weather have an economic impact on the State of Florida and electric customers that does not show up in a comparison of project costs with avoided restoration costs. For instance, Tampa Electric considered the safety of employees and the general public, the duty to serve, and other factors on top of the financial cost when evaluating

the benefits of investment. For the SPP, the duty to serve benefit stream was quantified based on the avoided outages from storms. While not overtly quantified, it should be noted that decreasing storm outage impact will also decrease safety risk as fewer crews are exposed to dangerous circumstances during storm events. Restricting a benefits assessment for storm protection purposes to only a financial evaluation will drive outcomes that are contrary to the best interest of Tampa Electric's customers and contrary to the intent of the SPP Statute.

R. On Page 9 line 15, Mr. Kollen states that "the utilities did not, with limited exceptions, explicitly exclude the costs presently recovered in base rates or expressly account for any avoided cost saving", do you agree with his assessment?

A. No, Mr. Kollen is incorrect. In Tampa Electric's initial 2020-2029 SPP and in the company's initial SPPCRC projection filing, the Commission approved the company's 2020 Stipulation and Settlement which required the company to reduce the amount of costs charged to the SPPCRC in 2020 by $10.4 Million and to make a reduction to base rates at the beginning of 2021 in the amount of $15.0 Million to shift cost recovery for some existing

storm hardening activities to the SPPCRC going forward and to avoid any type of double recovery. Both of these adjustments were transparently made. In addition, since that time the company has completed a rate case in which all SPPCRC costs were removed as required from base rates, again to ensure there would be no chance of double recovery.

Mr. Kollen also alleges that the company would retain the benefit of any costs avoided by SPP projects. This is inaccurate. One of the main benefits of the SPP will be a reduction in storm restoration costs. Restoration costs during extreme weather events, such as named hurricanes, are not included in base rates. These costs are charged against Tampa Electric's storm reserve. The replenishment of the company's storm reserve occurs in a separate proceeding in which the costs are reviewed and approved by the Commission. In this separate proceeding, the company would request a surcharge be placed on electric bills to recover the storm costs from all customers, so any reduction in outages and restoration costs provided by the company's SPP would benefit all customers.

Q. On Page 14, Mr. Kollen states that utilities should

exclude programs and projects that "are within the scope of their existing base rate programs and base rate recoveries" from their SPPs. Do you agree?

A. No, I do not. Mr. Kollen's statement clearly contradicts the Statute and the Commission's obligations requiring Tampa Electric and the other utilities to files SPPs. In fact, his statement would essentially eliminate any SPP from being developed as the majority of the activities that Tampa Electric performs, at one time or another in its history were recovered in base rates. Furthermore, some of the activities included in the company's SPP are recovered through base rates. This is because the SPP Statute requires the SPP to include the company's comprehensive, "systematic approach" to storm hardening and does not require the company to exclude activities included in base rates from the SPP. As explained above, the costs of these activities included in base rates are excluded from the SPPCRC to avoid double recovery. In addition, his statements are not supported by any rigorous analysis or basis in the record of this proceeding.

REBUTTAL TO DIRECT TESTIMONY OF KEVIN J. MARA:

Q. On Page 6, line 19, Mr. Mara states that there are two criteria that must be central in each SPP program and

project: (1) Reduce restoration costs, and (2) Reduce outage times. Do you agree with this statement?

A. Yes, I do. All of Tampa Electric's proposed SPP programs and projects are designed to reduce restoration costs and to reduce outage times.

Q. On Page 7, line 4, Mr. Mara states that any program can claim to reduce outage costs and outage time; however, the program must be cost-effective for customers to benefit. To summarize, the Rule require a two-prong test for consideration of a program; reduction in outage costs and reduction in outage time. Do you agree with this assessment and summary?

A. As I stated before, I do agree that each SPP program and project should reduce restoration costs and reduce outage times. I do not, however, believe the distinction has been made that these two benefits from each SPP program and project fall into a strict two prong test. I also disagree with what I believe is Mr. Mara's perspective of what is cost-effective. In short, I believe Mr. Kollen and Mr. Mara view cost-effectiveness solely in terms of whether the program pays for itself in terms of avoided restoration costs. As I explained above, the SPP Statute

is clearly taking a much larger view of the benefits to the State as a whole.

Q. On Page 13, Mr. Mara proposes to cut $570 million from Tampa Electric's Distribution Lateral Undergrounding Program. Do you agree with Mr. Mara's proposed limits to this program?

A. No, I do not. Mr. Mara's limits are arbitrary and should be rejected. On page 26, Mr. Mara explains that his proposed cuts to the lateral undergrounding program are based only on his judgment that the proposed cut "better balances the rate impact of the spending with the benefits." The arbitrary nature of this reduction can be seen in several ways. First, he does not identify specific lateral undergrounding projects that he believes should be excluded from the plan. Second, he does not identify specific facts that reflect unique attributes of the Tampa Electric system that would justify the cuts to this program. Third, Mr. Mara fails to recognize that while the company has filed a plan covering 10 years, the Commission will have an opportunity to revisit the company's plan in three years when the company submits a revised plan for review. To propose sweeping 10-year reductions when the statute contemplates a three-year

review seems arbitrary to me.

Q. Also on page 13, Mr. Mara recommends cutting $217 million from the Distribution Overhead Feeder Hardening Program. Do you agree with this proposed cut?

A. No, I do not. On page 21, Mr. Mara explains that he would limit investment in the feeder strengthening component of this program to the budget presented in the company's 2020-2029 SPP. He does not offer any reasoning or justification based on the company's current SPP or the record in this docket to support this cut. In my opinion it is completely arbitrary.

Mr. Mara also proposes elimination of the automation component of this Program. I agree with and support the response to this proposal in the Rebuttal Testimony of David L. Plusquellic.

Q. On page 13 of his testimony, Mr. Mara proposes to exclude the Substation and Transmission Access Programs entirely on the grounds that they do not comply with Rule 25-6.030. Do you agree with these cuts?

A. No, I do not. I agree with the points made by David L.

Plusquellic in his Rebuttal Testimony on this topic.

Q. Does this conclude your rebuttal testimony?

A. Yes.

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

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

REBUTTAL TESTIMONY

OF

DAVID L. PLUSQUELLIC

TABLE OF CONTENTS:

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.

Attachment “2”

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20220048-EI

TAMPA ELECTRIC'S 2022-2031 STORM PROTECTION PLAN

REBUTTAL TESTIMONY

OF

DAVID A. PICKLES

FILED: June 21, 2022

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

REBUTTAL TESTIMONY

OF

DAVID A. PICKLES

TABLE OF CONTENTS

INTRODUCTION

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

A. My name is David A. Pickles. My business address is 702 North Franklin Street, Tampa, Florida 33602. I am employed by Tampa Electric Company ("Tampa Electric" or "the company") as Vice President of Electric Delivery and Asset Management for Electric Delivery/Energy Supply.

Q. Are you the same David A. Pickles 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. The Office of Public Counsel's witnesses generally make three recommendations to the Commission. First, they suggest that the Commission should develop guidelines of general applicability for all four investor-owned utility Storm Protection Plans ("SPPs"). Second, they advocate for the use of a traditional utility cost-benefit analysis in evaluating SPP Programs and Projects. Third, they propose exclusion of some of Tampa Electric's SPP programs and budget reductions for other programs. As I explain in my testimony, the Commission should reject each of these proposals as inconsistent with Section 366.96 of the Florida Statutes (the "SPP Statute") and because these proposals lack a reasoned basis in the record for this docket.

I am confident that the company is managing the SPP program in compliance with the statute and is committed to storm hardening the system. These investments are made in full support of reducing restoration costs and outage times during extreme weather events. Mr. Kollen and Mr. Mara essentially urge the adoption of arbitrary reductions that lack any legitimate basis or foundation, and that appear to be based on a desire simply to slow down the pace of investments, which will further delay realization of benefits from those future investments.

REBUTTAL TO DIRECT TESTIMONY OF LANE KOLLEN:

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

[redacted]

[redacted]

Q. In addition to his proposal for universal specific decision criteria, Mr. Kollen critiques the company's benefits assessment on page 15 by alleging that it does not include cost-benefit analysis as a "threshold decision criterion" and asserts that the company's

analysis results in “excessive dollar benefits.” He also presents his own cost-benefit analysis on page 7 of his testimony. Do you have any issues with his critiques and his own cost-benefit assessment?

A. Yes, I have several issues. First, his assessment on page 7 ignores the second benefit stream required by the statute, the decrease in customer outages. His assessment only reflects the decrease in storm restoration costs. Major events impact Tampa Electric’s customers in terms of the high cost to restore the system and significant personal impact from being without electrical service for extended periods of time. The statute is rightly customer centric in the benefits requirements. Tampa Electric’s SPP takes both of these benefit streams into consideration and ensures each program and project is aligned to the statute’s customer centric approach.

Second, on page 15 of his testimony, he incorrectly asserts that Tampa Electric did not use a cost benefit analysis to screen projects. 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. Witness De Stigter describes this approach on pages 11-12 of his

direct testimony.

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

[redacted]

Q. [redacted]

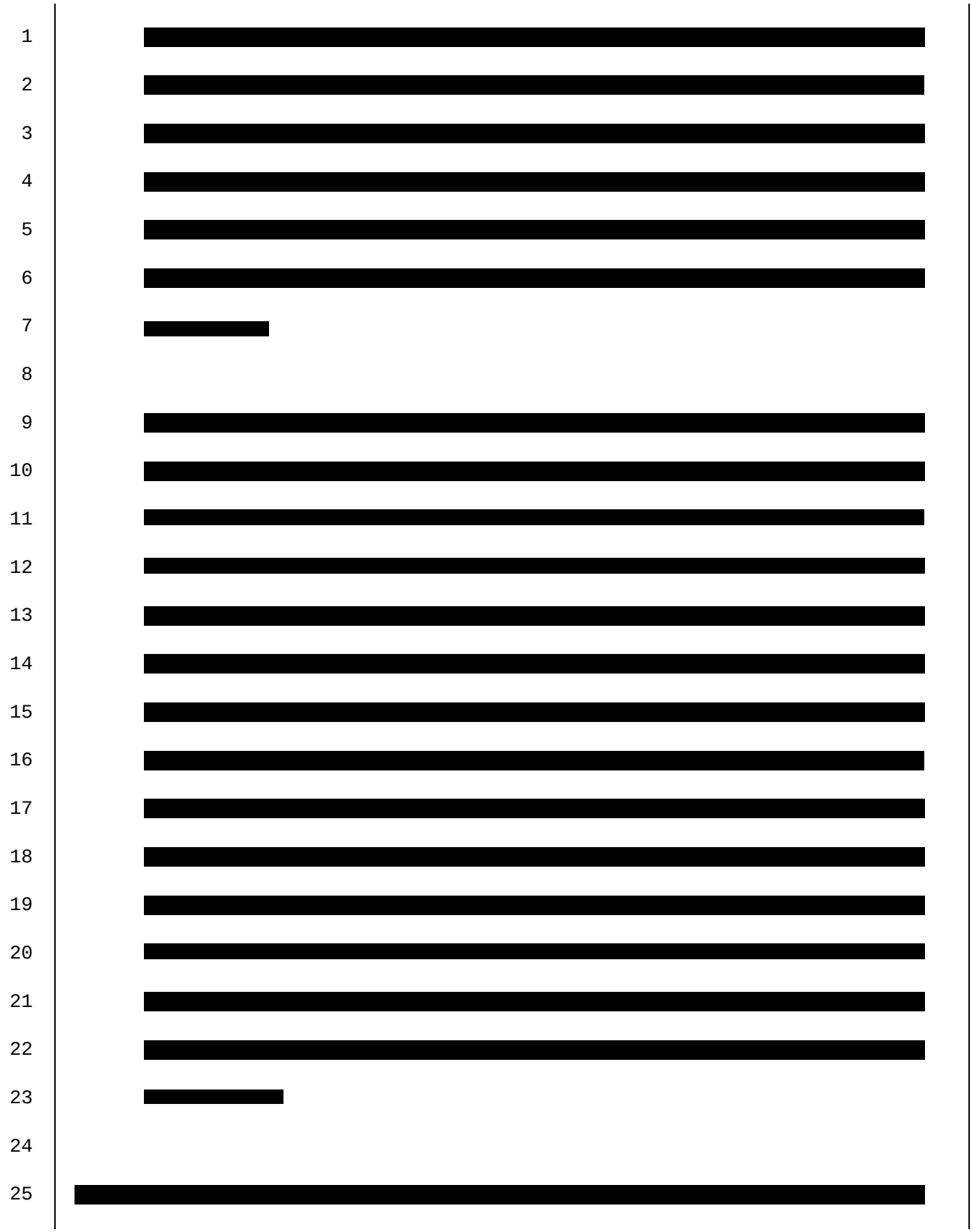
[redacted]

A. [redacted]

[redacted]

R. [redacted]

A. [redacted]



A. [redacted]

REBUTTAL TO DIRECT TESTIMONY OF KEVIN J. MARA:

Q. On Page 6, line 19, Mr. Mara states that there are two criteria that must be central in each SPP program and

project: (1) Reduce restoration costs, and (2) Reduce outage times. Do you agree with this statement?

A. Yes, I do. All of Tampa Electric's proposed SPP programs and projects are designed to reduce restoration costs and to reduce outage times.

Q. On Page 7, line 4, Mr. Mara states that any program can claim to reduce outage costs and outage time; however, the program must be cost-effective for customers to benefit. To summarize, the Rule require a two-prong test for consideration of a program; reduction in outage costs and reduction in outage time. Do you agree with this assessment and summary?

A. As I stated before, I do agree that each SPP program and project should reduce restoration costs and reduce outage times. I do not, however, believe the distinction has been made that these two benefits from each SPP program and project fall into a strict two prong test. I also disagree with what I believe is Mr. Mara's perspective of what is cost-effective. In short, I believe Mr. Kollen and Mr. Mara view cost-effectiveness solely in terms of whether the program pays for itself in terms of avoided restoration costs. As I explained above, the SPP Statute

is clearly taking a much larger view of the benefits to the State as a whole.

Q. On Page 13, Mr. Mara proposes to cut $570 million from Tampa Electric's Distribution Lateral Undergrounding Program. Do you agree with Mr. Mara's proposed limits to this program?

A. No, I do not. Mr. Mara's limits are arbitrary and should be rejected. On page 26, Mr. Mara explains that his proposed cuts to the lateral undergrounding program are based only on his judgment that the proposed cut "better balances the rate impact of the spending with the benefits." The arbitrary nature of this reduction can be seen in several ways. First, he does not identify specific lateral undergrounding projects that he believes should be excluded from the plan. Second, he does not identify specific facts that reflect unique attributes of the Tampa Electric system that would justify the cuts to this program. Third, Mr. Mara fails to recognize that while the company has filed a plan covering 10 years, the Commission will have an opportunity to revisit the company's plan in three years when the company submits a revised plan for review. To propose sweeping 10-year reductions when the statute contemplates a three-year

review seems arbitrary to me.

Q. Also on page 13, Mr. Mara recommends cutting $217 million from the Distribution Overhead Feeder Hardening Program. Do you agree with this proposed cut?

A. No, I do not. On page 21, Mr. Mara explains that he would limit investment in the feeder strengthening component of this program to the budget presented in the company's 2020-2029 SPP. He does not offer any reasoning or justification based on the company's current SPP or the record in this docket to support this cut. In my opinion it is completely arbitrary.

Mr. Mara also proposes elimination of the automation component of this Program. I agree with and support the response to this proposal in the Rebuttal Testimony of David L. Plusquellic.

Q. On page 13 of his testimony, Mr. Mara proposes to exclude the Substation and Transmission Access Programs entirely on the grounds that they do not comply with Rule 25-6.030. Do you agree with these cuts?

A. No, I do not. I agree with the points made by David L.

Plusquellic in his Rebuttal Testimony on this topic.

Q. Does this conclude your rebuttal testimony?

A. Yes.

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

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

REBUTTAL TESTIMONY

OF

DAVID L. PLUSQUELLIC

TABLE OF CONTENTS:

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. [redacted]

A. [redacted]

[redacted]

Q. [redacted]

A. [redacted]

[redacted]

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.