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March 10, 2025

VIA: ELECTRONIC FILING

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

Re: Tampa Electric Company's Petition for Approval of 2026-2035 Storm Protection Plan
Dkt. No.: 20250016-EI

Dear Mr. Teitzman:

Attached for filing in the above-captioned docket are revised Bates Pages 10, 14, 33, 42, 44, and 85 in the Direct Testimony of Kevin Palladino and Exhibit KEP-1 (DN 00267-2025). A description of these changes is included below:

(1) Tampa Electric is revising Bates Pages 10 and 42 to correct the number of Gang-Operated Air Brake transmission switches that the company will evaluate for replacement under this program from 250 to 153.
(2) Tampa Electric is revising Bates Pages 14 and 44 to reflect that the flooding that occurred at the company's Double Branch Substation was freshwater flooding, not saltwater intrusion.
(3) Tampa Electric is revising Bates Page 33 of Exhibit KEP-1 to reflect an update to the company's calculation of overhead system outages during Hurricane Helene.
(4) Tampa Electric is revising Bates Page 85 of Exhibit KEP-1 to reflect the correct ASCE standard.

Thank you for your assistance in connection with this matter.

Sincerely,

Malcolm N. Means

Attachments
cc: All parties of record

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing revisions to the Direct Testimony of Kevin Palladino, filed on behalf of Tampa Electric Company, has been furnished by electronic mail on this 10th day of March 2025 to the following:

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ATTORNEY

require a technician to go to the site and manually operate the switch.

The Transmission Switch Hardening Program is a four-year initiative to evaluate the upgrade of 153~~250~~ transmission switch locations with modern switches enabled with Supervisory Control and Data Acquisition ("SCADA") communication and remote-control capabilities. Operating these switches from a control center and avoiding sending technicians to the switch sites will allow for faster isolation of trouble spots on the transmission system and more rapid restoration following line faults, thereby increasing the resiliency of the transmission system. Additional information regarding this Program is provided in Tampa Electric's proposed 2026-2035 Plan.

Q. Please describe the new Distribution Storm Surge Hardening Program.

A. Tampa Electric has approximately 520 pad-mounted live front distribution switchgears and 12,000 pad-mounted transformers located in flood evacuation zones A, B, and C. Distribution switchgears serve as the primary junction point for the underground distribution system, and each switchgear is capable of serving hundreds of homes. During

Can you describe the impact of those storms on Tampa Electric's proposed 2026-2035 SPP?

A. Yes. The impacts of Hurricanes Helene and Milton affected the development of the company's proposed 2026-2035 SPP in several ways. First, as I previously explained, the company is proposing two new programs to address issues the company faced during those storms. Second, Tampa Electric modified the Substation Extreme Weather program based on impacts experienced during Hurricanes Helene and Milton. During these hurricanes, several of Tampa Electric's substations sustained damage. ~~and s~~Saltwater intrusion occurred at facilities such as Port Sutton, ~~Double Branch,~~ and Jackson Road. The~~is~~ saltwater intrusion damaged 17 circuit breakers (13kV) at Port Sutton and Jackson Road substations and freshwater rain flooded junction boxes and cabinets at the Double Branch substation. Based on this first-hand experience, the company determined that it should proceed with hardening all 24 substations evaluated as a part of Tampa Electric's proposed 2026-2035 SPP.

Q. Did the company consider any changes to the Vegetation Management programs?

A. Yes, Tampa Electric and Accenture completed an updated

In addition to the many benefits that should be realized from distribution lateral undergrounding during extreme weather events, it will also provide additional "blue-sky" benefits such as:

- Reducing the number of momentary and prolonged unplanned outages;
- Reducing the number of customer complaints from outages; and
- Improving customer reliability and power quality.

The key metrics for Tampa Electric's Distribution System are:

- Total Circuit Miles: 12,858
- Total Overhead Miles: 6,053 (47%)
- Total Underground Miles: 6,805 (53%)
- Total Overhead Lateral Miles: 4,197
- Total Overhead Feeder Miles: 1,856
- Total Underground Lateral Miles: 6,043
- Total Underground Feeder Miles: 761
- Customers served off Laterals: 95%
- Customers served off Feeders: 5%

Tampa Electric's customers were substantially impacted by Hurricanes Irma (2017), Ian (2022), Helene (2024) and Milton (2024). The following table reflects Tampa Electric's distribution system Overhead versus Underground percentage of outage comparisons across "day-to-day," Major Event Days, and these recent Hurricanes.

Tampa Electric's Distribution System
Overhead versus Underground
Outage Comparison (in Percent)

	Distribution System	Day-to-Day Outages	Major Event Day Outages	Irma Outages	Ian Outages	Helene Outages
Overhead	47	81	96	100	97	89
Underground	53	19	4	0	3	~~11~~ 24

Note: Outage data for Hurricane Milton was not available at the time of this filing.

These metrics demonstrate that the underground system is proving to be much stronger and more resilient during extreme weather events, as evidenced by the reduction in outages due to the work of this Program. This Program is also expected to provide similar

Tampa Electric's Transmission Asset Upgrades Program Projects by Year and Projected Costs (in millions)		
	Projects	Costs
2026	11	$18.0
2027	14	$17.4
2028	10	$17.4

Project = Circuit

The full detail of the supporting Transmission Asset Upgrades Projects, as required by Rule 25-6.030(3)(d)1-5, is included as Appendix "D."

4.4 Transmission Switch Hardening

During Hurricane Milton in October 2024, 55 of the company's transmission circuits experienced a lock-out. Of those 55 circuits, 27 had Gang Operated Air Break ("GOAB") switches which require a technician to go to the site and manually operate the switch. This necessary activity is known as switching. Switching is used to section portions of the transmission system to perform equipment maintenance, reroute power from substation to substation or isolate trouble spots to minimize impacts to customers.

Tampa Electric has approximately 250 GOAB switches on its transmission system. Based on the company's experience with Hurricane Milton, Tampa Electric is proposing the replacement of the GOAB switches with automated, remotely controlled switches that will greatly improve isolation and restoration times following extreme weather events. The Transmission Switch Hardening Program is a four-year initiative that aims to evaluate the upgrade of ~~250~~ 153 switch locations with modern switches enabled with Supervisory Control and Data Acquisition("SCADA") communication and remote-control capabilities. This upgrade will allow for switches to be operated from a control center and avoid

and are a mix of both transmission and distribution stations. The greatest risk to these substations is from water intrusion due to storm surge into the substation control houses and equipment. As a part of the development of Tampa Electric's 2022-2031 SPP, the company commissioned an engineering study for these 24 substations that produced the company's initial prioritization.

During Hurricanes Helene and Milton, several of Tampa Electric's substations sustained damage. Saltwater intrusion occurred at facilities such as Port Sutton, ~~Double Branch,~~ and Jackson Road. The~~is~~ saltwater intrusion damaged 17 circuit breakers (13kV) at Port Sutton and Jackson Road substations and freshwater rain flooded junction boxes and cabinets at the Double Branch substation. Based on this experience, the company determined that it should proceed with hardening all 24 substations evaluated as a part of the proposed 2026-2035 SPP.

The images below depict the flooding at the Port Sutton and Double Branch Substations.

approximately 116 mph. According to the NESC, Grade B wind loading criteria must be applied when constructing facilities less than 60 feet in height when crossing railroads, bridges, and highways.

Figure 2: NESC General loading map of United States with respect to loading of overhead lines.

2.1 Extreme Wind Loading Criteria

The NESC also specifies an extreme wind pole loading criterion for all facilities constructed that are 60 feet in height or greater. The NESC provides a wind loading map that indicates the wind speed criteria for each area of the country. These same criteria and regional boundaries, developed by the American Society of Civil Engineers ("ASCE"), are used by the state of Florida and Hillsborough County for building code requirements. Tampa Electric's service territory is divided into two wind regions (see Figure 3 below). The western half is in the 120-mph zone and the eastern half is in the 110-mph zone.

Figure 3: ASCE 7~~4~~-10 Eastern Gulf of Mexico and Southeastern U.S. Hurricane Coastline