



FLORIDA
PUBLIC
SERVICE
COMMISSION

Annual Status Report on Storm Protection Plan Activities of Florida Investor-Owned Utilities

As Required by Section 366.96(10), Florida Statutes



OCTOBER 2021

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Acronyms

DEF	Duke Energy Florida, LLC
EWL	Extreme Wind Loading
F.A.C.	Florida Administrative Code
FPL	Florida Power & Light Company
FPUC	Florida Public Utilities Company
F.S.	Florida Statutes
GULF	Gulf Power Company
IOU	Investor-Owned Electric Utility
NESC	National Electric Safety Code
OPC	Office of Public Counsel
SPP	Storm Protection Plan
SPPCRC	Storm Protection Plan Cost Recovery Clause
TECO	Tampa Electric Company

Executive Summary

In 2019, the Florida Legislature passed Senate Bill 796 to enact Section 366.96, Florida Statutes (F.S.), entitled “Storm Protection Plan Cost Recovery.” Section 366.96, F.S., requires each investor-owned electric utility (IOU) to file a transmission and distribution storm protection plan (SPP) that covers the immediate 10-year planning period. The plans are required to be filed with the Commission every three years and must explain the systematic approach the utility will follow to achieve the objectives of reducing restoration costs and outage times associated with extreme weather events and enhancing reliability. Pursuant to Section 366.96(7), F.S., the Commission shall conduct an annual proceeding to determine the utility’s prudently incurred SPP costs. In addition, Section 366.96(10), F.S., requires that the Commission submit an annual report to the Governor, President of the Senate, and Speaker of the House, on the status of the utilities’ storm protection activities and costs which is the purpose of this report. The Commission’s rules implementing this new statute became effective on February 18, 2020.

As required by Section 366.96(10), F.S., this report includes a summary of:

- Planned and completed SPP programs and projects in the previous year
- Actual costs and rate impacts associated with completed SPP programs compared to the estimated costs and rate impacts for the same activities
- Estimated costs and rate impacts associated with SPP programs planned for the next year

Sections 3 through 6 of this report summarize the information required pursuant to Section 366.96(10) F.S. A majority of these SPP programs are a continuation of the utility’s Storm Hardening Plan previously approved by the Commission.¹ Table A below provides a summary of each utility’s reported estimated and actual total storm protection expenditures.² While most of these expenditures are being recovered through current utility base rates, all utilities are in various stages of transferring these expenditures to the annual cost recovery mechanism as contemplated by the new legislation.

Table A
Summary of SPP Costs

Utility	2020 Estimated (Millions)	2020 Actual (Millions)	2021 Estimated (Millions)
Duke Energy Florida	\$242.5	\$239.3	\$409.3
Florida Power & Light	\$964.7	\$1,037.2	\$1,090.6
Gulf Power Company	\$32.0	\$36.6	\$100.8
Tampa Electric Company	\$41.6	\$36.9	\$136.9
Totals	\$1,280.8	\$1,350.0	\$1,737.6

¹ Docket No. 20180144-EI (FPL), Docket No. 2018045-EI (TECO), Docket No. 20180146-EI (DEF), Docket No. 20180147-EI (Gulf) and Docket No. 20180148-EI (FPUC), *In re: Review of 2019-2021 storm hardening plan.*

² The Commission is not drawing any conclusions or making any findings in this report. Any findings about current or future storm protection program cost recovery will be considered as part of a docketed proceeding and subsequent Commission order.

Section 1 – Background

In order to implement the new statute, the Commission staff held two rule development workshops, on June 25, 2019, and August 20, 2019, to obtain stakeholder comments on the draft rules. Representatives from each IOU, Florida Retail Federation, Florida Industrial Power Users Group, and the Office of Public Counsel (OPC) participated at the workshops and submitted post-workshop comments. Additionally, representatives from Florida Electric Cooperatives Association, Inc., and Florida Municipal Electric Association submitted post-workshop comments.

The Commission proposed the adoption of Rules 25-6.030, Florida Administrative Code (F.A.C.), Storm Protection Plan, and 25-6.031, F.A.C., Storm Protection Plan Cost Recovery Clause, at its October 3, 2019, Commission Conference.³ However, the rules were challenged and an administrative hearing was held on December 20, 2019, at the Department of Administrative Hearings.⁴ The Administrative Law Judge issued a final order on January 21, 2020, deeming the rules as valid and the rules became effective on February 18, 2020.

On April 10, 2020, Duke Energy Florida, LLC (DEF), Florida Power & Light Company (FPL), Gulf Power Company (Gulf), and Tampa Electric Company (TECO) each filed for approval of their 2020-2029 Storm Protection Plans.⁵ These plans are largely a continuation of the IOUs' Commission-approved Storm Hardening Plans with the addition of some newly proposed programs. Florida Public Utilities Company (FPUC) filed a Motion requesting to defer filing its SPP and refrain from participating in the Storm Protection Plan Cost Recovery Clause (SPPCRC) proceeding due to circumstances affecting the utility as a result of Hurricane Michael. The Motion was granted and FPUC continues to operate under its current Storm Hardening Plan.⁶ As such, this report does not include any data from FPUC.

The Commission scheduled a formal technical hearing to be held on August 10-13, 2020, to address the four remaining dockets. However, Gulf, FPL, DEF, and TECO entered into Settlement Agreements with intervening parties prior to the hearing. On August 10, 2020, the Commission held a hearing on each Settlement Agreement and voted to approve the Agreements. The IOUs are scheduled to file their next SPPs in 2022, and FPUC will file its first SPP at that time.

On March 13, 2020, the Commission opened Docket No. 20200092-EI, to evaluate the IOU's SPP costs. A hearing was scheduled; however, prior to the hearing Gulf, FPL, DEF, and TECO entered into Settlement Agreements with intervening parties. The Commission held hearings on August

³ Docket No. 20190131-EU, *In re: Proposed adoption of Rule 25-6.030, F.A.C., Storm Protection Plan and Rule 25-6.031, F.A.C., Storm Protection Plan Cost Recovery Clause.*

⁴ Case No. 19-006137RP, *In re: Petitioner and Intervenor had standing to challenge the proposed rules, but the evidence showed that the proposed rules are not invalid exercises of delegated legislative authority.*

⁵ Docket No. 20200067-EI (TECO), Docket No. 20200069-EI (DEF), Docket No. 20200070-EI (Gulf), and Docket No. 20200071-EI (FPL), *In re: Review of 2020-2029 Storm Protection Plan pursuant to Rule 25-6.030, F.A.C.*

⁶ Docket No. 20200068-EI, *In re: Review of 2020-2029 Storm Protection Plan pursuant to Rule 25-6.030, F.A.C., Florida Public Utilities Company.*

10, September 1, and October 6, 2020, to consider the Settlement Agreements. The Commission found the Settlements fairly and reasonably balance the interests of the customers and the utility and are consistent with the stated purpose and intent of Section 366.96, F.S.⁷ As such, the Commission voted to approve the Settlements and the charges went into effect on January 1, 2021. Later in 2021, FPL (in combination with Gulf), DEF and TECO each filed petitions for recovery of costs through the SPPCRC. On August 3, 2021, the Commission conducted an administrative hearing to consider these petitions. At the hearing, all parties waived post-hearing briefs and proposed stipulations on all issues identified in the Prehearing Order. The Commission voted to approve the stipulations at the conclusion of the hearing and these charges will go into effect in January 2022.⁸

Pursuant to Section 366.96(8), F.S., and Rule 25-6.031, F.A.C., SPP costs that are being recovered through the SPPCRC cannot be recovered through base rates or any other cost recovery method. On April 27, 2020, TECO filed a petition to approve a settlement, which contained provisions to move recovery of certain SPP costs from base rates to the SPPCRC. On June 30, 2020, the Commission approved TECO's Settlement.⁹ On January 14, 2021, DEF filed a petition to approve a settlement, which included moving certain SPP costs from base rates to the SPPCRC. The Commission approved that Settlement on June 4, 2021.¹⁰ Jointly, FPL¹¹ and Gulf,¹² filed a rate case in 2021 which includes the transfer of costs from base rates to the SPPCRC for their SPP programs. FPL and Gulf entered into a Settlement Agreement with some intervening parties for the pending rate case proceeding. A technical hearing was held during the fall of 2021 for the pending rate case and Settlement Agreement, and the Commission is scheduled to make a final decision on this docket by the end of the year.

⁷ Order Nos. PSC-2020-0293-AS-EI (TECO), issued August 28, 2020; PSC-2020-0409-S-EI (FPL/Gulf), issued October 27, 2020; PSC-2020-0410-AS-EI (DEF), issued October 27, 2020, in Docket No. 20200092-EI, *In re: Storm Protection Plan Cost Recovery Clause*.

⁸ Order No. PSC-2020-0410-AS-EI, issued October 27, 2020, in Docket No. 20200092-EI, *In re: Storm Protection Plan Cost Recovery Clause*.

⁹ Docket No. 20200145-EI, *In re: Petition to approve the 2020 settlement agreement by Tampa Electric Company*.

¹⁰ Docket No. 20210016-EI, *In re: Petition for limited proceeding to approve 2021 settlement agreement, including general base rate increases, by Duke Energy Florida, LLC*.

¹¹ Docket No. 20210015-EI, *In re: Petition for rate increase by Florida Power & Light Company*.

¹² *Ibid*

Section 2 - Summary of Filings

On June 1, 2021, DEF, FPL, Gulf, and TECO filed their annual status reports regarding their SPP programs.¹³ As required by Section 366.96(10), F.S., these status reports include:

- A description of all planned and completed SPP programs and projects in 2020
- Actual costs and rate impacts associated with completed SPP programs compared to the estimated costs and rate impacts for the same activities
- Estimated costs and rate impacts associated with SPP programs planned for 2021

Each section below contains a brief description of each utility's SPP programs. A majority of these programs are a continuation of the utility's Storm Hardening Plan previously approved by the Commission. The tables contained within each section summarize the information required pursuant to Section 366.96(10), F.S. Additional details of the programs are also contained in each utility's annual status report and its filings in the annual SPPCRC proceeding.

¹³ [http://www.floridapsc.com/ElectricNaturalGas/StormProtectionPlans Annual Status Reports](http://www.floridapsc.com/ElectricNaturalGas/StormProtectionPlans%20Annual%20Status%20Reports)

Section 3 - Duke Energy Florida, LLC

Program Descriptions

Below are the programs that DEF implemented in 2020 or will implement in 2021. A majority of these programs are a continuation of DEF's Storm Hardening Plan. Further details of the programs are in DEF's SPP ¹⁴ or its annual SPP report.¹⁵

Distribution Self-Optimizing Grid

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

Distribution Targeted Underground

Existing overhead distribution lines are converted to underground in order to reduce tree and debris-related outages in heavily vegetated neighborhoods. DEF selects and prioritizes locations based on a ten-year reliability assessment and outage history.

Distribution Deteriorated Conductor

The primary purpose of this program is to replace overhead conductors that are prone to outages due to brittle composition, small load capacity, and reduced connection quality. The selected areas will have all of the copper and smaller aluminum conductors brought up to the current aluminum equivalent. In addition, poles, transformers, other primary equipment, and vegetation will be brought up to DEF's current standards.

Distribution Pole Replacements and Inspections

DEF inspects wood poles on an eight-year cycle to determine the extent of pole decay and any associated loss of strength. The information gathered from the inspections is used to determine if the pole needs to be replaced or if treatment and reinforcement will extend the life of the pole. DEF completes a loading analysis on joint-use poles in its system over an eight-year cycle.

Distribution Feeder Hardening

By incorporating pole inspection and replacement activities, existing feeder circuits can be strengthened to better withstand extreme weather events. This includes strengthening or replacing structures, updating basic insulation levels and conductors to current standards, and relocating difficult to access facilities. All new structures will meet the National Electric Safety Code (NESC) 250C extreme wind load standard.

¹⁴ Docket No. 20200069-EI, *In re: Review of 2020-2029 Storm Protection Plan pursuant to Rule 25-6.030, F.A.C., Duke Energy Florida, LLC.*

¹⁵<http://www.floridapsc.com/Files/PDF/Utilities/Electricgas/StormProtectionPlans/2020/2020%20Duke%20Energy%20Florida,%20Inc.%20SPP%20Annual%20Status%20Report.pdf>

Distribution Submersible Underground

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

Distribution Vegetation Management

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

Transmission Pole/Tower Inspections

Ground-line inspections determine the extent of pole decay and any associated loss of strength. The transmission wood poles are inspected on a four-year cycle and the transmission non-wooden poles and towers are inspected on a six-year cycle.

Transmission Pole Replacements

This program's activities are based on the results of the inspections of transmission wood poles. These inspections determine the extent of pole decay and any associated loss of strength. The information gathered from the inspections is used to determine pole replacements or pole treatments.

Transmission Tower Upgrades

This program focuses on the replacement of metal towers that failed during Hurricane Irma. In addition, towers will be inspected by ground and drone. This program will strengthen towers by eliminating damage from corrosion.

Transmission Overhead Ground Wire

This program targets lines to improve lightning protection. The program prioritizes the replacement of deteriorated overhead ground wires by targeting lines with frequent lightning events, outage histories, structure design types, overhead ground wire materials, and inspection results.

Transmission Cathodic Protection

This program mitigates active ground level corrosion on the steel lattice tower system. This will be done by installing passive cathodic protection systems comprised of anodes on each leg of the lattice towers. The anodes serve as sacrificial assets that corrode in place of the structural steel, preventing loss of structure strength due to corrosion.

Transmission Substation Hardening

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

Transmission Vegetation Management

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

Table 3-1 provides a list of the projects and activities planned and completed for 2020 and the projects and activities planned for 2021. In addition, the table includes a comparison of the estimated and actual costs of the projects and activities for 2020 and the estimated costs for 2021.

Table 3-1
DEF's SPP Projects and Activities Planned and Completed for 2020 and 2021

Program name	Projects/ Activities Planned for 2020	Estimated Cost for 2020 (Millions)	Projects/ Activities Completed in 2020	Actual Cost for 2020 (Millions)	Projects/ Activities Planned for 2021	Estimated Cost for 2021 (Millions)
Dist. Self-Optimizing Grid	156	\$ 56.5	410	\$ 66.4	741	\$ 75.3
Dist. Targeted Underground	214	\$ 42.5	205	\$ 29.4	204	\$ 65.2
Dist. Deteriorated Conductor	24	\$ 14.6	22	\$ 13.5	17	\$ 28.2
Dist. Pole Inspections (poles)	100,000	\$ 3.9	86,357	\$ 4.1	153,573	\$ 6.3
Dist. Pole Replacements (poles)	2,668	\$ 23.6	2,696	\$ 18.3	3,433	\$ 25.1
Dist. Feeder Hardening	0	\$ 0.0	0	\$ 0.0	17	\$ 59.5
Dist. Submersible Underground	1	\$ 0.3	0	\$ 0.0	0	\$ 0.0
Dist. Vegetation Management (miles)	5,208	\$ 45.9	5,322	\$ 45.4	4,361	\$ 46.5
Trans. Pole/Tower Inspections/Drone Inspections	10,959	\$ 0.4	12,438	\$ 0.4	13,900	\$ 0.5
Trans. Pole Replacements (poles)	642	\$ 34.3	766	\$ 39.5	1,495	\$ 69.7
Trans. Tower Upgrades	1	\$ 0.8	1	\$ 0.8	3	\$ 1.8
Trans. Overhead Ground Wire	3	\$ 1.8	4	\$ 0.6	2	\$ 1.5
Trans. Cathodic Protection	2	\$ 0.4	0*	\$ 0.0	3	\$ 1.2
Trans. Substation Hardening	5	\$ 5.0	5	\$ 4.9	15	\$ 5.5
Trans. Vegetation Management (miles)	380	\$ 12.5	252	\$ 16.0	335	\$ 23.0
Totals		\$242.5		\$239.3		\$409.3

Source: DEF's 2020 SPP Annual Report and responses to staff's data requests.

*Note: The two Transmission Cathodic Protection projects were deferred to 2021 due to a contractor issue.

Note: Trans = Transmission Dist. = Distribution.

Table 3-2 provides the typical residential customer’s bill impact for the implementation of DEF’s SPP programs. These values represent the total costs of DEF’s SPP activities, some of which are recovered through base rates and others through the SPPCRC. Once the costs of the SPP projects are moved to the SPPCRC, DEF’s base rates will be reduced accordingly.

Table 3-2
DEF’s Actual and Projected Bill Impacts (in dollars)

2020 Estimated		2020 Actual		2021 Estimated	
Total Costs (Millions)	Residential Bill Impact (\$/1,000 kWh)	Total Costs (Millions)	Residential Bill Impact (\$/1,000 kWh)	Total Costs (Millions)	Residential Bill Impact (\$/1,000 kWh)
\$242.5	\$2.11	\$239.3	\$2.05	\$409.3	\$2.64

Source: DEF’s 2020 SPP Annual Report and responses to staff’s data requests.

Section 4 - Florida Power & Light

Program Descriptions

Below are the programs that FPL implemented in 2020. A majority of these programs are a continuation of FPL's Storm Hardening Plan. Further details of the programs are in FPL's SPP¹⁶ or in its annual SPP report.¹⁷

Pole Inspection – Distribution Program

This program includes an eight-year pole inspection cycle for all distribution wood poles. FPL established nine inspection zones to ensure inspection coverage throughout its service area. In addition, joint-use audits are conducted as part of the Pole Inspection - Distribution Program.

Structure/Other Equipment Inspections – Transmission Program

This program ensures that transmission wood, steel, and concrete structures are visually inspected from the ground on an annual basis. Transmission circuits and substations will be inspected on a six-year cycle. Climbing or bucket truck inspections on wood structures will be on a six-year cycle and climbing or bucket truck inspections on steel and concrete structures will be on a ten-year cycle.

Feeder Hardening Extreme Wind Loading – Distribution Program

Feeders are hardened as a result of FPL's Priority Feeder Initiative which is a reliability program that targets feeders experiencing the highest number of interruptions and/or customers interrupted. This includes FPL's initiative of design and construction practices to meet the NESC Extreme Wind Loading (EWL) criteria.

Lateral Hardening (Undergrounding) – Distribution Program

FPL originally started this program as a pilot program in 2018 and has continued the program as part of its SPP. This program targets certain overhead laterals, which were impacted by recent storms and have a history of vegetation-related outages and other reliability issues, for conversion from overhead to underground.

Wood Structures Hardening (Replacing) – Transmission Program

This program replaces all wood transmission structures with steel or concrete structures. As of year-end 2019, FPL reported that 96 percent of its transmission system is steel or concrete; therefore, less than 2,900 (4 percent) wood transmission structures need to be replaced.

¹⁶ Docket No. 20200071-EI, *In re: Review of 2020-2029 Storm Protection Plan pursuant to Rule 25-6.030, F.A.C., Florida Power & Light Company.*

¹⁷<http://www.floridapsc.com/Files/PDF/Utilities/Electricgas/StormProtectionPlans/2020/2020%20Florida%20Power%20and%20Light%20Company%20SPP%20Annual%20Status%20Report.pdf>

Vegetation Management – Distribution Program

To maintain current cycles, FPL plans to trim, on average, approximately 11,400 miles of feeders and 3,800 miles of laterals, which is consistent with historically recorded miles. This program includes a three-year trim cycle for feeders, mid-year targeted trim maintenance cycle for certain feeders, six-year trim cycle for laterals, and continued customer education through FPL's Right Tree, Right Place initiative.

Vegetation Management – Transmission Program

FPL plans to inspect and maintain, on average, approximately 7,000 miles of its transmission lines annually, which is comparable to the historically maintained miles. This program includes inspecting the rights-of-way of transmission infrastructure, documenting vegetation inspection results and findings, and prescribing and executing a work plan.

Substation Storm Surge/Flood Mitigation Program

The Substation Storm Surge/Flood Mitigation program is a new program included in FPL's SPP. Damage to substations that are susceptible to storm surge and flooding during extreme weather events can be eliminated by raising the equipment at certain substations above flood level and construct flood protection walls around other substations.

Table 4-1 provides a list of the projects and activities planned and completed for 2020 and the projects and activities planned for 2021. In addition, the table includes a comparison of the estimated and actual costs of the projects and activities for 2020 and the estimated costs for 2021.

**Table 4-1
FPL's SPP Projects and Activities Planned and Completed for 2020 and 2021**

Program Name	Projects/ Activities Planned for 2020	Estimated Cost for 2020 (Millions)	Projects/ Activities Completed in 2020	Actual Cost for 2020 (Millions)	Projects/ Activities Planned for 2021	Estimated Cost for 2021 (Millions)
Pole Inspection – Dist. (poles)	150,000	\$ 54.5	147,003	\$ 38.5	150,000	\$ 57.9
Structure/Other Equipment Inspections – Trans.	68,000	\$ 35.8	68,962	\$ 28.4	69,000	\$ 32.2
Feeder Hardening (Extreme Wind Loading) – Dist.	350	\$628.1	302	\$ 681.7	350	\$ 664.9
Lateral Hardening (Undergrounding) – Dist.	230	\$120.4	216	\$ 129.3	350	\$ 212.5
Wood Structures Hardening (Replacing) – Trans.	1,100	\$ 52.9	942	\$ 86.0	822	\$ 42.9
Vegetation Management – Dist. (miles)	15,200	\$ 61.1	15,269	\$ 60.7	15,200	\$ 61.3
Vegetation Management – Trans. (miles)	7,000	\$ 8.9	7,278	\$ 9.4	7,000	\$ 8.9
Substation Storm Surge/Flood Mitigation	1	\$ 3.0	0*	\$ 3.2	10*	\$ 10.0
Totals		\$964.7		\$1,037.2		\$1,090.6

Source: FPL's 2020 SPP Annual Report and responses to staff's data requests.

*Note: FPL began working on eight substations in 2020 and will continue to work on them in 2021 in addition to two other substation being initiated in 2021.

Note: Trans = Transmission Dist. = Distribution.

Table 4-2 provides the typical residential customer’s bill impact for the implementation of FPL’s SPP programs. These values represent the total costs of FPL’s SPP activities, some of which are recovered through base rates and others through the SPPCRC. Once the costs of the SPP projects are moved to the SPPCRC, FPL’s base rates will be reduced accordingly.

**Table 4-2
FPL’s Actual and Projected Bill Impacts (in dollars)**

2020 Estimated		2020 Actual		2021 Estimated	
Total Costs (Millions)	Residential Bill Impact (\$/1,000 kWh)	Total Costs (Millions)	Residential Bill Impact (\$/1,000 kWh)	Total Costs (Millions)	Residential Bill Impact (\$/1,000 kWh)
\$964.7	\$1.30	\$1,037.2	\$1.29	\$1,090.6	\$1.36

Source: FPL’s 2020 SPP Annual Report and responses to staff’s data requests.

Section 5 - Gulf Power Company

Program Descriptions

Below are the programs that Gulf implemented in 2020. A majority of these programs are a continuation of Gulf's Storm Hardening Plan. Further details of the programs are in Gulf's SPP¹⁸ or in its annual SPP report.¹⁹

Distribution Inspection Program

Distribution inspections consist of feeder patrols, infrared patrols, wood pole inspections and wood pole remediation and/or replacement. This inspection program aims to achieve reductions of wood pole failures, fewer storm-related outages, and a reduction in storm restoration time and costs. As part of this program, Gulf performs load analysis on its joint-use poles.

Transmission Inspection Program

The inspections of distribution and transmission substations and structures is achieved through a prescribed set of processes and procedures. This program includes conducting annual aerial patrols to inspect transmission lines, structures, and circuits.

Distribution Feeder Hardening Program

This program includes hardening options such as applying EWL for design and construction, storm guying, equipment relocation, and utilization of distribution automation. The utility has approximately 269 feeders remaining to be hardened and expects to complete approximately 12 to 18 feeder projects annually.

Distribution Hardening Lateral Undergrounding Program

The Lateral Undergrounding program is a new program included in Gulf's SPP. The program targets certain overhead laterals impacted by recent storms and a history of vegetation-related outages and other reliability issues.

Transmission Hardening Program

The three components of this program are: substation flood monitoring and hardening, transmission and substation resiliency, and transmission structure replacement. Projects contained within this program include flood monitoring on vulnerable substations, reviewing switch house construction standards, and replacement of transmission wood structures and poles.

¹⁸ Docket No. 20200070-EI, *In re: Review of 2020-2029 Storm Protection Plan pursuant to Rule 25-6.030, F.A.C., Gulf Power Company.*

¹⁹<http://www.floridapsc.com/Files/PDF/Utilities/Electricgas/StormProtectionPlans/2020/2020%20Gulf%20Power%20Company%20SPP%20Annual%20Status%20Report.pdf>

Vegetation Management – Distribution Program

Gulf will clear vegetation in areas surrounding its distribution facilities and equipment. The vegetation management cycles are as follows: three-year cycle for feeders, mid-year cycle inspections and maintenance for feeders, and four-year cycle for laterals. Additionally, this program encompasses Gulf’s Right Tree, Right Place initiative, which aims to educate customers on choosing the appropriate locations for planting trees in efforts to prevent future outages.

Vegetation Management – Transmission Program

The key elements of this program are vegetation management on right-of-way ground floors, annual ground inspections of transmission right-of-ways, document vegetation inspections results and findings, and prescribe a work plan and execute the work plan. Gulf plans to maintain, on average, approximately 1,675 miles of Gulf’s transmission system on an annual basis.

Table 5-1 provides a list of the projects and activities planned and completed for 2020 and the projects and activities planned for 2021. In addition, the table includes a comparison of the estimated and actual costs of the projects and activities for 2020 and the estimated costs for 2021.

Table 5-1
Gulf’s SPP Projects and Activities Planned and Completed for 2020 and 2021

Program name	Projects/ Activities Planned for 2020	Estimated Cost for 2020 (Millions)	Projects/ Activities Completed in 2020	Actual Cost for 2020 (Millions)	Projects/ Activities Planned for 2021	Estimated Cost for 2021 (Millions)
Dist. Inspection (poles)	26,000	\$ 3.4	25,542	\$ 4.6	26,000	\$ 3.0
Trans. Inspection	2,400	\$ 3.5	2,275	\$ 0.7	2,400	\$ 3.6
Dist. Feeder Hardening	6*	\$12.3	0	\$16.1	21*	\$ 35.9
Dist. Hardening Lateral Undergrounding	0**	\$ 0.0	0	\$ 0.0	8	\$ 5.2
Trans. Hardening	83	\$ 5.3	74	\$ 8.3	386	\$ 45.5
Vegetation Management – Dist. (miles)	2,000	\$ 5.0	1,765	\$ 4.8	2,000	\$ 4.7
Vegetation Management – Trans. (miles)	1,675	\$ 2.5	1,675	\$ 2.1	1,675	\$ 2.9
Totals		\$32.0		\$36.6		\$100.8

Source: Gulf’s 2020 SPP Annual Report and responses to staff’s data requests.

*Note: The six feeders were started in 2020 and will be finalized during first quarter of 2021.

**Note: In 2020, Gulf was in the initial planning and research phase of this program. The program began during the fourth quarter of 2020.

Note: Trans = Transmission Dist. = Distribution.

Table 5-2 provides the typical residential customer’s bill impact for the implementation of Gulf’s SPP programs. These values represent the total costs of Gulf’s SPP activities, some of which are recovered through base rates and others through the SPPCRC. Once the costs of the SPP projects are moved to the SPPCRC, Gulf’s base rates will be reduced accordingly.

Table 5-2
Gulf’s Actual and Projected Bill Impacts (in dollars)

2020 Estimated		2020 Actual		2021 Estimated	
Total Costs (Millions)	Residential Bill Impact (\$/1,000 kWh)	Total Costs (Millions)	Residential Bill Impact (\$/1,000 kWh)	Total Costs (Millions)	Residential Bill Impact (\$/1,000 kWh)
\$32.0	\$1.11	\$36.6	\$0.98	\$100.8	\$1.44

Source: Gulf’s 2020 SPP Annual Report and responses to staff’s data requests.

Section 6 - Tampa Electric Company

Program Descriptions

Below are the programs that TECO implemented in 2020. A majority of these programs are a continuation from TECO's Storm Hardening Plan. Further details of the programs are in TECO's SPP²⁰ or in its annual SPP report.²¹

Distribution Lateral Undergrounding

TECO's Distribution Lateral Undergrounding program is a new program included in its SPP that strategically undergrounds existing overhead laterals. The primary factor in prioritizing laterals to be underground is based on reliability performance during extreme weather events.

Vegetation Management

TECO's distribution and transmission vegetation management activities are both addressed in this program. TECO's distribution tree trimming program includes circuit tree trimming activities, mid-cycle trimming activities, customer requested work, and work orders associated with circuit improvement processes. TECO's distribution system is on a four-year cycle and the transmission system is on three-year cycle.

Transmission Asset Upgrades

TECO plans to replace its remaining transmission wood poles with non-wood material. This is a continuation of TECO's existing pole replacement program, which includes replacing poles based on preventative, corrective or project-driven assessments.

Substation Extreme Weather Hardening

Hardening existing substations to minimize outages, reduce restoration times and enhance emergency response during extreme weather events is a new program included in TECO's SPP. No projects were planned or completed for 2020 under this program as TECO is still conducting studies on the substations.

Distribution Overhead Feeder Hardening

TECO's distribution system will be hardened to withstand increased wind-loading and harsh environmental conditions associated with extreme weather events by increasing the resiliency and sectionalizing capabilities of the system.

²⁰ Docket No. 20200067-EI, *In re: Review of 2020-2029 Storm Protection Plan pursuant to Rule 25-6.030, F.A.C., Tampa Electric Company.*

²¹<http://www.floridapsc.com/Files/PDF/Utilities/Electricgas/StormProtectionPlans/2020/2020%20Tampa%20Electric%20Company%20SPP%20Annual%20Status%20Report.pdf>

Transmission Access Enhancements

In order to have continuous access to its transmission facilities for restoration, TECO implemented this new program in its SPP to maintain the access roads and bridges leading to its facilities. TECO did not plan or complete any projects in 2020. However, the utility plans to complete 20 road projects and 17 bridge projects during the 2020-2029 time frame.

Infrastructure Inspections

TECO's distribution wood pole inspections and transmission structure inspections, and the joint use pole attachment audit are combined into one program. The distribution wood pole inspections are on an eight-year cycle program consisting of visual inspections, sound and bore inspections, and excavations at least 18 inches below ground line. The transmission structure inspections include a range of inspections from ground to aerial infrared patrols with a range of cycles from annual to eight years. The joint use pole attachment audit is a comprehensive loading analysis to ensure TECO's poles with joint use attachments are not overloaded and meet the NESC standards. This audit will be performed every four to five years.

Table 6-1 provides a list of the projects and activities planned and completed for 2020 and the projects and activities planned for 2021. In addition, the table includes a comparison of the estimated and actual costs of the projects and activities for 2020 and the estimated costs for 2021.

Table 6-1
TECO's SPP Projects and Activities Planned and Completed for 2020 and 2021

Program name	Projects/ Activities Planned for 2020	Estimated Cost for 2020 (Millions)	Projects/ Activities Completed in 2020	Actual Cost for 2020 (Millions)	Projects/ Activities Planned for 2021	Estimated Cost for 2021 (Millions)
Dist. Lateral Undergrounding	139	\$ 8.0	1	\$ 7.2	520	\$ 79.5
Dist. Vegetation Management (miles)	1,965	\$16.5	2,071	\$17.0	2,314	\$ 19.8
Trans. Vegetation Management (miles)	594	\$ 2.6	518	\$ 1.8	554	\$ 3.7
Trans. Asset Upgrades (poles)	305	\$ 5.6	296	\$ 5.0	46	\$ 15.2
Substation Extreme Weather Hardening*	0	\$ 0.0	0	\$ 0.0	0	\$ 0.3
Dist. Overhead Feeder Hardening	1,175	\$ 6.7	216	\$ 3.8	33	\$ 15.4
Trans. Access Enhancements	0	\$ 0.0	0	\$ 0.0	18	\$ 1.4
Dist. Infrastructure Inspections (pole and structures)	22,500	\$ 0.7	25,606	\$ 0.2	19,650	\$ 0.6
Trans. Infrastructure Inspections (poles and structures)	3,934	\$ 0.5	4,262	\$ 0.3	4,478	\$ 0.6
SPP Planning & Common	N/A	\$ 1.0	N/A	\$ 1.6	N/A	\$ 0.4
Totals		\$41.6		\$36.9		\$136.9

Source: TECO's 2020 SPP, 2020 SPP Annual Report, 2021 SPPCRC True-up, and responses to staff's data requests.

*Note: TECO is performing a study to evaluate hardening options for 24 existing transmission and distribution substations.

Note: Trans = Transmission Dist. = Distribution.

Table 6-2 provides the typical residential customer’s bill impact for the implementation of TECO’s SPP programs. These values represent the total costs of TECO’s SPP activities, some of which are recovered through base rates and others through the SPPCRC. Once the costs of the SPP projects are moved to the SPPCRC, TECO’s base rates will be reduced accordingly.

Table 6-2
TECO’s Actual and Projected Bill Impacts (in dollars)

2020 Estimated		2020 Actual		2021 Estimated	
Total Costs (Millions)	Residential Bill Impact (\$/1,000 kWh)	Total Costs (Millions)	Residential Bill Impact (\$/1,000 kWh)	Total Costs (Millions)	Residential Bill Impact (\$/1,000 kWh)
\$41.6	\$1.50	\$36.9	\$1.03	\$136.9	\$2.39

Source: TECO’s 2020 SPP Annual Report and responses to staff’s data requests.