NARUC
National Association of Regulatory Utility Commissioners

State Spotlight on Resilience:

The Florida Public Service Commission and Storm Protection Plans

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Key Takeaways

Florida is Vulnerable to Severe Storms: From hurricanes to storm surges, Florida's weather demands robust grid resilience measures. Recent hurricanes like Helene, Irma, and Michael underscore the urgency for strong storm protection.

The Legislative and Regulatory Framework Operates in Tandem: Senate Bill 796 mandates that investor-owned utilities submit 10-year Storm Protection Plans (SPPs) to the Florida Public Service Commission (PSC) every three years. These plans focus on reducing restoration costs, minimizing outage durations, and advancing grid reliability efforts. Common SPP initiatives include distribution pole replacements, vegetation management, undergrounding, and transmission flood mitigation

Cost Management is Specific to Balance Customer Impact: The FPSC has measured the SPPs implementation through the Storm Protection Plan Cost Recovery Clause (SPPCRC), to balance rate impacts on customers while ensuring robust grid hardening.

Section 1: Overview

The State of Florida has taken significant strides in strengthening its infrastructure as its electric grid faces increasing threats from stronger and more frequent storms. Florida experiences a variety of severe weather storms, including[1].

- **Hurricanes and Tropical Storms:** occurring during hurricane season (June to November) bringing strong winds, heavy rainfall, and storm surges.
- **Thunderstorms:** frequent throughout the year, often producing lightning, hail, heavy rain, and gusty winds. Floods and Flash Foods, often triggered by prolonged rainfall, and insufficient drainage in low-lying areas, and
- **Storm Surges:** coastal flooding caused by hurricane-driven seawater pushed ashore, posing major risk to coastal communities. These weather events highlight the importance of Florida's grid resilience efforts in storm infrastructure hardening and flood mitigation.

Florida has endured many historic storms in the last twenty years. 2018's Hurricane Michael caused 1.7 million outages[2] across the southeastern US, in addition to an estimated $25 billion in damage[3]. 2017's Hurricane Irma ranks as the fifth costliest hurricane in US History, with over $50 billion in estimated damages[4] and 6.7 million Floridian utility customers without power[5]. More recently, Florida's insurance losses to Hurricane Milton and Hurricane Helene are estimated to be $2.9 billion and $1.4 billion respectively[6].

Subsequently, Florida has sought to ensure long-term grid protection for residents and utility assets. Florida's Senate Bill 796, passed in 2019, requires investor-owned utilities (IOUs) to submit 10-year Storm Protection Plans (SPPs) to the Florida Public Service Commission (PSC)[7]. These plans, updated at least every three years, focus on reducing storm restoration costs, minimizing outage times, and enhancing overall reliability of utility service. The PSC evaluates and approves these plans based on their ability to meet these objectives.

Section 2: Consequences of Inaction

The failure to fortify the grid against increasingly severe storms could result in intense consequences for Florida. Prolonged outages compromise essential services, including hospitals, emergency response, and communication systems. SPPs provide a streamlined cost recovery route for grid hardening programming from utilities. This ensures that utilities continue grid hardening while managing recovery costs that could otherwise place a heavy financial burden on both utilities and customers. For example, Florida Power & Light, Florida's largest IOU, reported the restoration cost of Hurricane Irma to be $1.3 Billion dollars[8].

Florida's SPPs are designed for the IOUs to reduce restoration costs and outage times associated with extreme weather events, thus improving reliability. The IOUs aim to achieve these objectives through programs in their respective SPPs. The FPSC's 2024 Annual Status Report on Storm Protection Plan Activities of Florida Investor-Owned Utilities lists the specific storm hardening programming that the IOUs reported in their 2023 Annual Status reports. The programs include Distribution Pole Replacements and Inspections, Distribution Feeder and Lateral Hardening, Distribution Vegetation Management, Transmission Substation Flood Mitigation, Transmission Substation Hardening, Transmission Vegetation Management, and Transmission Access Enhancements, among more programs[9].

Senate Bill 796 ensures utilities will strengthen vulnerable areas of the grid, especially in high-risk zones such as flood-prone regions, thereby strengthening Florida's capacity to withstand severe storms. The Florida Public Service Commission (PSC) plays a critical role in ensuring that these plans are robust enough to protect both the infrastructure and promote resilience for all residents, while also balancing the costs of doing so.

Section 3: Policy Origin and Legislative Framework

The signed Senate Bill 796[10], put forth by Florida's Senate Appropriations Committee; Infrastructure and Security Committee; Innovation, Industry, and Technology Committee and Florida State Senators, establishes a framework for Florida's utilities to enhance grid resilience by strategically addressing their approach to achieve the objectives of reducing restoration cost and outage times associated with severe weather events. The bill requires utilities to submit 10-year storm protection plans to the PSC at least every three years, that also includes provisions for a cost-recovery rider, which allows utilities to recover the costs of storm protection investments without affecting their base rates. The Commission was required to adopt rules to specify elements that must be included in the utility's filing. The PSC reviews these plans to ensure they meet the required objectives of cost efficiency and improved reliability, considering the flowing:

- The extent to which the plan is expected to reduce restoration costs and outage times associated with extreme weather events and enhance reliability, including whether the plan prioritizes areas of lower reliability performance;
- The extent to which storm protection of transmission and distribution infrastructure is feasible, reasonable, or practical in certain areas of the utility's service territory, including, but not limited to, flood zones and rural areas;
- The estimated costs and benefits to the utility and its customers of making the improvements proposed in the plan; and
- The estimated annual rate impact resulting from implementation of the plan during the first 3 years addressed in the plan.

Section 4: Interview with the Florida Public Service Commission

NOTE: The following text is a narrative interview, and all responses reflect the work, views and opinions of the individuals interviewed.

1. What is the overview of how the commission evaluates the storm protection plans submitted by utilities?

Section 366.96, Florida Statutes (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 Florida Public Service Commission (FPSC or Commission) at least 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. No later than 180 days after a utility file a plan containing all the elements required by Commission rule, the Commission must determine whether it is in the public interest to approve, approve with modification, or deny the plan.

Upon filing, the Commission establishes an individual docket for each IOU's SPP. Staff from the Commission's Division of Engineering and Office of General Counsel review the plans. Additionally, the dockets containing these plans are publicly accessible on the Commission's website for review; therefore, intervening parties or customers may also review the plans. From the date of submission, the Commission has 180 days to determine whether an SPP is in the public interest.

2. How have the 10-year storm protection plans evolved since their inception, particularly in response to changing weather patterns and storm severity?

A majority of the SPP programs are a continuation of the utility's previously approved Storm Hardening Plan and SPP, such as vegetation management or distribution lateral hardening. Today, the bulk of overall SPP spending is devoted to distribution feeder and lateral hardening. As circumstances change, be it weather or technology, the IOUs may modify their SPPs to continue mitigating outage times and restoration costs.

3. **What challenges has the commission faced in balancing the costs of these storm protection plans with protecting customers' utility bills?**

   Pursuant to Section 366.96,(4)(d), F.S., the Commission shall consider the estimated annual rate impact resulting from implementation of the plan during the first three years addressed in the plan. In doing so, the Commission has the ability to look at the pace of particular programs within a SPP alongside the estimated rate impacts for each customer type. As the level of storm hardening is a discretionary activity for IOUs, the FPSC must balance the need for additional storm hardening with the resulting rate impacts when approving SPPs. Additionally, the IOUs are required to provide a description of any implementation alternatives that could mitigate the resulting rate impact pursuant to Rule 25-6.030(3)(i), Florida Administrative Code (F.A.C.), for the Commission's consideration.

4. **How does the commission ensure that the costs recovered through the Storm Protection Plan Cost Recovery Clause (SPPCRC) do not overlap with costs covered by base rates?**

   Beginning in 2020, the FPSC holds an annual evidentiary hearing for the SPPCRC that features a review of projected costs and a true-up of actual costs to establish SPPCRC factors or rates charged to customers. This recurring, self-correcting process balances cost over-recoveries and under-recoveries to more closely reflect actual costs in any given period. Additionally, the Commission audits the IOUs as part of the SPPCRC and also during rate case proceedings to ensure there is no double-recovery. To provide a sense of the incremental cost of grid hardening activities, the FPSC's Annual Status Report on SPPs provides a summation of the SPPs costs and residential rate impacts for each IOU[11]. For example, Florida Power & Light saw $1.29 per 1,000 kWh residential rate impact while investing $1.037 billion in their SPP activities.

5. **How does the Commission mitigate SPP rate impact? Specifically, for smaller utilities or utilities that may have several programs as part of its SPP.**

   There are common SPP programs amongst each of the IOUs, but the rate and number of activities that make up each of these programs directly contributes to each SPP's total cost and resulting rate impact. When considering each IOU's SPP, the Commission may modify particular programs to ensure a reasonable rate impact given the unique characteristics of each IOU.

7. **Can the FPSC speak to the effectiveness of undergrounding projects versus other storm hardening activities like vegetation management?**

   In July of 2018, the FPSC filed a report that reviewed electric utility storm preparedness and restoration actions, and to identify potential areas where infrastructure damage, outages, and recovery time for customers could be minimized in the future[12]. The key findings included that underground facilities performed much better compared to overhead facilities and Florida's aggressive storm hardening programs are working. For example, page 29 of the report details the Florida Power & Light outage rates for facilities impacted by Hurricane Irma, and reports that Overhead + hardened facilities had a 69% outage rate while underground facilities had an 18% outage rate.

8. **How has the feedback from the Annual Storm Protection Status Reports informed the commission's review of future plans?**

   Each IOU's Annual Storm Protection Plan Status Report informs the Commission how each IOU is managing its approved SPP in terms of activities and costs, on a program level. This level of analysis allows the Commission to track SPP spending and overall bill impact for each IOU from year-to-year.

9. **The FPSC also hosts annual Hurricane Preparedness Workshops. Has the Commission seen the content of these sessions influence the SPP's? Or vice versa?**

   The annual workshop typically covers an overview of storm preparation and restoration, customer/stakeholder outreach and communications, and lessons learned. Many of these topics are also addressed through the

SPPs. For example, vegetation management, is a common program throughout each IOU's SPP. While the SPP gives a larger overall view of the IOU's plans for vegetation management for a 10-year planning period, the workshop allows the FPSC to discuss vegetation management on a much more granular scale, such as the number of miles the Utility trimmed this past year for the upcoming storm season.

10. To conclude, would the Commission like to shed light on other storm hardening activities that weren't discussed thus far, and is relevant to the SPPs?

All of the proceedings and filings that were discussed above can be found on the FPSC's website (floridapsc.com). Additionally, the FPSC publishes a Review of Florida's Investor-Owned Electric Utilities Service Reliability Reports, which takes a deeper analytical dive into the electric distribution reliability data. This report is published annually and can also be found on our website.

Section 5: Conclusion

The Florida Public Service Commission plays a vital role in ensuring that storm protection plans strengthen grid reliability and resilience, all while maintaining customer affordability. Through collaborating with utilities, the Commission underscores its dedication to safeguarding Florida's energy infrastructure against the growing challenges posed by evolving weather patterns.

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Endnotes

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4 "2017 Hurricane Irma Florida", National Weather Service, Accessed November 2024

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7 CS/CS/CS/SB 796 — Public Utility Storm Protection Plans

8 Utility Restoration Workers a Large Factor in Speed—and Cost—of Hurricane Response, Union of Concerned Scientists, September 2019

9 Annual Status Report on Storm Protection Plan Activities of Florida Investor-Owned Utilities, FPSC, November 2024

10 CS/CS/CS/SB 796: Public Utility Storm Protection Plans, The Florida Senate, June 2019

11 Annual Status Report on Storm Protection Plan Activities of Florida Investor-Owned Utilities, pages 2-3. FPSC, November 2024

12 Review of Florida's Electric Utility Hurricane Preparedness and Restoration Actions, FPSC, July 2018