

The Florida Public Service Commission's Multi-faceted Approach to Storm Hardening

A Presentation for the
NARUC Critical Infrastructure Committee



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Overview

- Background
- Legislative and Florida Public Service Commission (FPSC) Actions
- FPSC's Multi-faceted Approach to Storm Hardening
- FPSC Outreach
- 2017-18 FPSC Hurricane Review

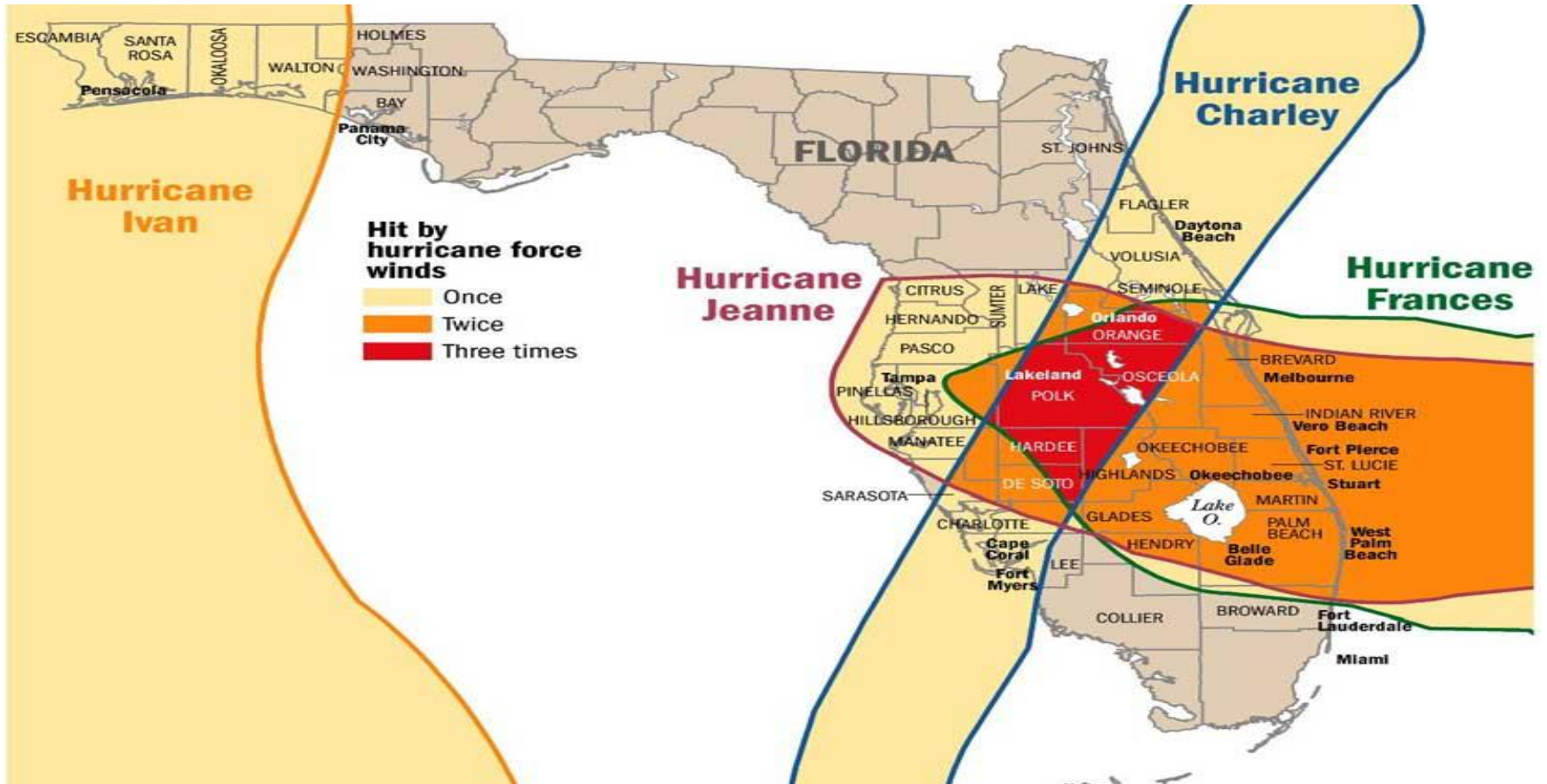


Background

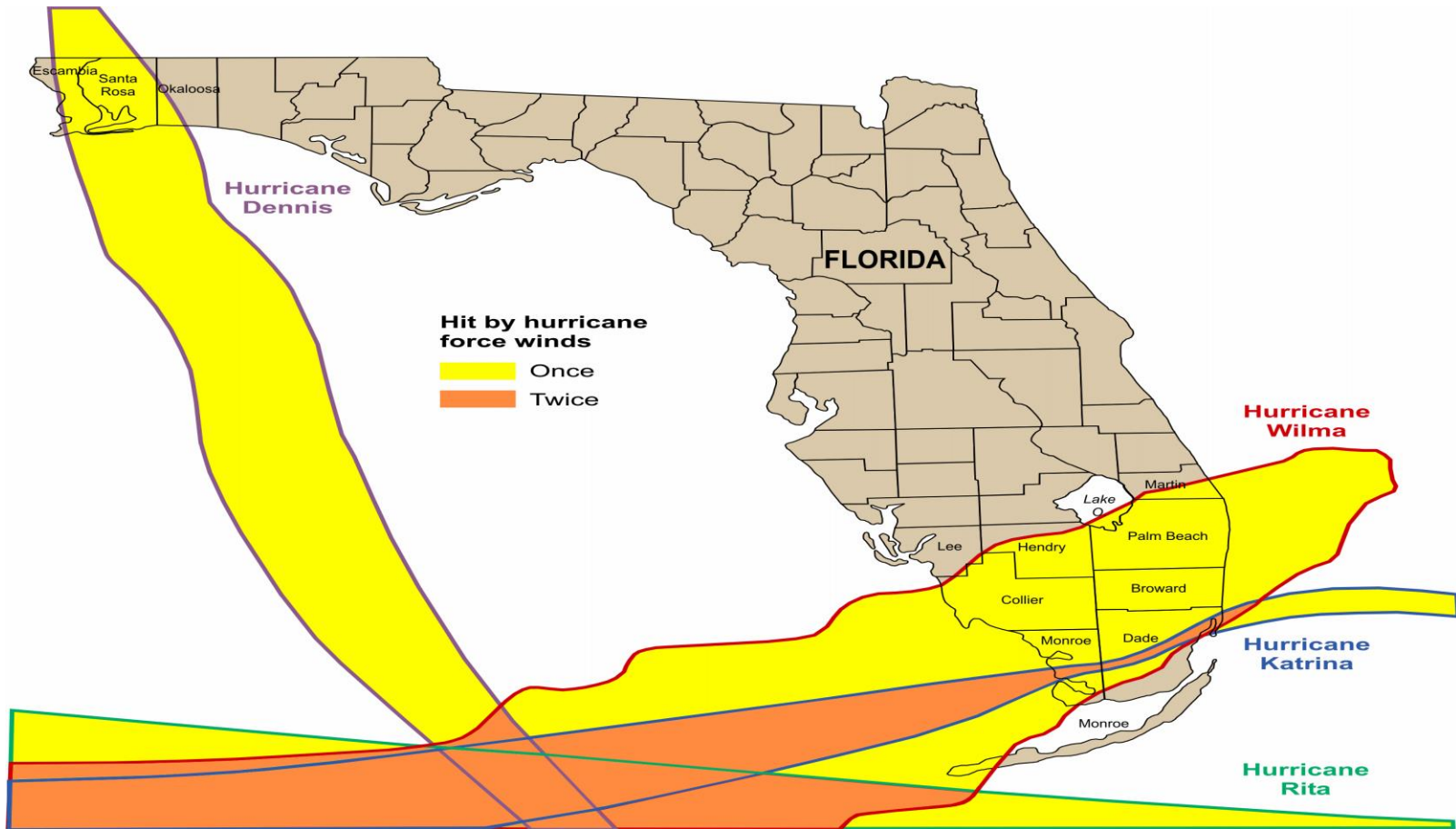
- Reliable electric service is the cornerstone of Florida's economy.
- The Legislature has charged the FPSC with ensuring the provision of adequate electricity at a reasonable cost.
- Damages from the 2004 & 2005 hurricanes resulted in a strong public outcry to strengthen electric utility infrastructure.



2004 Hurricane Paths



2005 Hurricane Paths



Legislative Actions

- In 2006, the Legislature required the FPSC to:
 - ✓ Conduct a review to determine what should be done to enhance the reliability of Florida's transmission and distribution grids during extreme weather events.
 - ✓ The FPSC initiated a multi-faceted approach to hardening the electric infrastructure. The FPSC filed its review with the Legislature on March 1, 2007.

<http://www.floridapsc.com/Files/PDF/Publications/Reports/Electricgas/transmissionreport2007.pdf>



FPSC Actions

- In July 2007, the FPSC filed a second report with the legislature detailing its approach to storm hardening.
- Goal of storm hardening is to balance the desire to minimize storm damage, reduce outages and restoration time while mitigating excessive rate increases to customers.

<http://www.floridapsc.com/Files/PDF/Publications/Reports/Electricgas/stormhardening2007.pdf>



FPSC Actions

- The July, 2007 report concluded that:
 - ✓ Floridians should maintain a high level of storm preparedness.
 - ✓ Strengthening Florida's electric infrastructure should include a wide range of activities that will take years to complete.
 - ✓ A need remains to develop additional planning tools to identify circumstances where undergrounding is appropriate as a means of storm hardening.

<http://www.floridapsc.com/Files/PDF/Publications/Reports/Electricgas/stormhardening2007.pdf>



FPSC's Multi-faceted Approach

- Annual hurricane preparedness briefings.
- Formal pole inspection and reporting.
- Additional distribution reliability reporting for IOUs, Munis, and Coops.



FPSC's Multi-faceted Approach

- Ten storm preparedness initiatives, including:
 - ✓ Enhanced vegetation management.
 - ✓ Forensic data collection.
 - ✓ Collaborative research.
 - ✓ Increased coordination with local governments.



FPSC's Multi-faceted Approach

- New rule to place distribution facilities in readily accessible and safe locations.
- New rules that require IOUs to file storm hardening plans for review every 3 years.
- New rules and tariffs to promote the undergrounding of distribution facilities.



FPSC Outreach

- Since 2006, the FPSC has conducted annual hurricane preparedness meetings with Florida's Investor-Owned Electric Utilities.
 - ✓ Report of inspections, maintenance and repairs completed and scheduled.
 - ✓ Changes made to hurricane drills and to storm preparedness plans.
 - ✓ Status update on storm hardening plans.
 - ✓ Identify any lessons learned if the utility was involved in any relief efforts in other areas.
 - ✓ Current utility outreach programs.



FPSC Outreach

- In 2017, the Presidents and CEOs of the five IOUs provided an overview on their utilities' hurricane preparedness.
- Focus was on customer outreach, storm hardening efforts, and lessons learned from hurricanes Hermine and Matthew.
- The current and past presentations are available on the FPSC's website.

<http://www.floridapsc.com/ElectricNaturalGas/HurricanePreparationWorkshops>



FPSC Outreach

- The FPSC's website contains links to resources to help residents prepare for storm season.

<http://www.floridapsc.com/ConsumerAssistance/HurricaneHouse>

<http://www.floridapsc.com/Files/PDF/Publications/Consumer/Brochure/BePrepared.pdf>

- The FPSC also provides hurricane preparation material to customers during customer meetings and consumer outreach events.



2017-18 FPSC Hurricane Review

- Despite the goal of reducing outages, even storm hardened facilities can suffer damage due to events beyond a utility's control.



2017-18 FPSC Hurricane Review

- On October 3, 2017, the FPSC opened Docket No. 20170215-EU to review electric utility storm preparedness and restoration actions associated with recent hurricanes.
- The objective was to identify potential damage mitigation options and restoration improvements. The FPSC also critically evaluated its rules and processes for potential improvements.



2017-18 FPSC Hurricane Review

- The FPSC collected data from all 57 utilities, customers, and other stakeholders relating to storm preparation and restoration for Hurricane Irma and other storms.
- Over 700 customer comments received through portal on FPSC website. Common themes were frustration with timely communication, cost responsibility for restoration, and support of solar distributed generation.



2017-18 FPSC Hurricane Review

➤ The FPSC's findings included:

- ✓ Florida's aggressive storm hardening programs are working.
- ✓ The primary causes of power outages came from outside the utilities' rights of way including falling trees, displaced vegetation, and other debris.
- ✓ The length of outages was reduced markedly from the 2004-2005 storm season.
- ✓ Hardened overhead distribution facilities performed better than non-hardened facilities.



2017-18 FPSC Hurricane Review

➤ FPSC's findings continued:

- ✓ Very few transmission structure failures were reported.
- ✓ Underground facilities performed much better compared to overhead facilities.
- ✓ Rising customer expectations are that resilience and restoration will have to continually improve.

<http://www.floridapsc.com/Files/PDF/Publications/Reports/Electricgas/UtilityHurricanePreparednessRestorationActions2018.pdf>



2017-18 FPSC Hurricane Review

- The Commissioners directed the staff to collect additional details regarding:
 - ✓ Meetings with local governments regarding vegetation management and the identification of critical facilities.
 - ✓ Alternatives considered before selecting a particular storm hardening project.
 - ✓ The impact of non-electric utility poles on storm recovery.
 - ✓ Electric utility targeted undergrounding projects.



2017-18 FPSC Hurricane Review

- The Commissioners also directed the staff to initiate management audits focused on:
 - ✓ The procedures and processes used by the IOUs to estimate and disseminate outage restoration times following a major storm.
 - ✓ The procedures and processes used by the IOUs to inspect and schedule maintenance on transmission structures.



Questions?

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