DRAFT 06-15-2023

Review of Florida's Investor-Owned Electric Utilities

2022 Service Reliability Reports

September 2023

State of Florida
Florida Public Service Commission
Division of Engineering

Review of Florida's Investor-Owned Electric Utilities 2022 Service Reliability Reports

September 2023

State of Florida
Florida Public Service Commission
Division of Engineering

DRAFT 06-15-2023

Table of Contents

DRAFT 06-15-2023

List of Tables and Figures

Terms and Acronyms

AMI	Advanced Metering Infrastructure
ANSI	American National Standards Institute
CAIDI	Customer Average Interruption Duration Index
CEMI5	Customers Experiencing More Than Five Interruptions
CI	Customer Interruption
CME	Customer Momentary Events
CMI	Customer Minutes of Interruption
DSM	Demand Side Management
DEF	Duke Energy Florida, LLC
EOC	Emergency Operation Center
F.A.C.	Florida Administrative Code
FEMA	Federal Emergency Management Agency
FPL	Florida Power & Light Company
FPUC	Florida Public Utilities Company
GIS	Geographic Information System
Gulf	Gulf Power Company
IEEE	Institute of Electrical and Electronics Engineers, Inc.
IOU	The Five Investor-Owned Electric Utilities: FPL, DEF, TECO, Gulf, and FPUC
L-Bar	Average of Customer Service Outage Events Lasting A Minute or Longer
MAIFIe	Momentary Average Interruption Event Frequency Index
N	Number of Outages
NWS	National Weather Service
OMS	Outage Management System
RDUP	Rural Development Utility Program
SCADA	Supervisory Control and Data Acquisition
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
TECO	Tampa Electric Company
VMP	Vegetation Management Program

Reliability Metrics

Average Duration of Outage Events (L-Bar) is the sum of each outage event duration for all outage events during a given time period, divided by the number of outage events over the same time within a specific area of service.

Customer Average Interruption Duration Index (CAIDI) is an indicator of average interruption duration, or the time to restore service to interrupted customers. CAIDI is calculated by dividing the total system customer minutes of interruption by the number of customer interruptions. (CAIDI = CMI ÷ CI, also CAIDI = SAIDI ÷ SAIFI).

Customers Experiencing More Than Five Interruptions (CEMI5) is the number of retail customers that have experienced more than five service interruptions. (CEMI5 in this review is a customer count shown as a percentage of total customers.)

Customer Interruptions (CI) is the number of customer service interruptions, which lasted one minute or longer.

Customer Minutes of Interruption (CMI) is the number of minutes that a customer's electric service was interrupted for one minute or longer.

Customer Momentary Events (CME) is the number of customer momentary service interruptions, which lasted less than one minute measured at the primary circuit breaker in the substation.

Momentary Average Interruption Event Frequency Index (MAIFIe) is an indicator of average frequency of momentary interruptions or the number of times there is a loss of service of less than one minute. MAIFIe is calculated by dividing the number of momentary interruption events recorded on primary circuits by the number of customers served. (MAIFIe = CME ÷ C)

Number of Outage Events (N) measures the primary causes of outage events and identifies feeders with the most outage events.

System Average Interruption Duration Index (SAIDI) is a composite indicator of outage frequency and duration and is calculated by dividing the customer minutes of interruptions by the number of customers served on a system. (SAIDI = CMI ÷ C, also SAIDI = SAIFI x CAIDI)

System Average Interruption Frequency Index (SAIFI) is an indicator of average service interruption frequency experienced by customers on a system. It is calculated by dividing the number of customer interruptions by the number of customers served. (SAIFI = CI ÷ C, also SAIFI = SAIDI ÷ CAIDI)

Executive Summary

The Florida Public Service Commission (FPSC or Commission) has jurisdiction to monitor the reliability of electric service provided by Florida's investor-owned electric utilities (IOUs) for maintenance, operational, and emergency purposes.[1] This report is a compilation of the 2022 electric distribution reliability data filed by Florida's IOUs. The data is presented using tables and figures so that trends in each IOU's service reliability may be easily observed. This data may be used during rate cases, show cause dockets, and in resolving customer complaints.

Monitoring service reliability is achieved through a review of service reliability metrics provided by the IOUs pursuant to Rule 25-6.0455, Florida Administrative Code (F.A.C.).[2] Service reliability metrics are intended to reflect changes over time in system average performance, regional performance, and sub-regional performance. For a given system, increases in the value of a given reliability metric denote declining reliability in the service provided. Comparison of the year-to-year levels of the reliability metrics may reveal changes in performance, which indicates the need for additional investigation, or work in one or more areas. Rule 25-6.0455, F.A.C., requires the IOUs to file distribution reliability reports to track adjusted performance that excludes events such as planned outages for maintenance, generation disturbances, transmission disturbances, wildfires, and extreme acts of nature such as tornadoes and hurricanes. This "adjusted" data provides an indication of the distribution system performance on a normal day-to-day basis.

The active hurricane seasons of 2004 and 2005 revealed the importance of collecting reliability data that reflects the total reliability experience from the customer perspective. In June 2006, Rule 25-6.0455, F.A.C., was revised to require each IOU to provide both "actual" and "adjusted" performance data for the prior year. This data provides insight concerning the overall reliability performance of each utility.

Also in 2006 and 2007, the scope of the IOUs' Annual Distribution Service Reliability Report was expanded to include status reports on the various storm hardening and preparedness initiatives required by the Commission.[3] In 2019, the Florida Legislature enacted Section 366.96, Florida Statutes (F.S.). This statute requires each IOU to file a transmission and distribution storm protection plan (SPP) that covers the immediate 10-year planning period. Section 366.96 (10), F.S., requires that the Commission submit an annual report on the status of the utilities' SPP activities to the Legislature by December 1. As such, IOUs are required to submit an annual status report on their SPP programs and projects to the Commission by June 1.[4] Beginning in

---

[1]Sections 366.04(2)c and 366.05, Florida Statutes.

[2]The Commission does not have rules or statutory authority requiring municipal electric utilities and rural electric cooperative utilities to file service reliability metrics.

[3]Wooden Pole Inspection Orders: FPSC Order No. PSC-06-0144-PAA-EI, issued February 27, 2006, in Docket No. 20060078-EI; and FPSC Order Nos. PSC-06-0778-PAA-EU, issued September 18, 2006, PSC-07-0078-PAA-EU, issued January 29, 2007, in Docket No. 20060531-EU.
Storm Preparedness Initiative Orders: FPSC Order Nos. PSC-06-0351-PAA-EI, issued April 25, 2006, PSC-06-0781-PAA- EI, issued September 19, 2006, PSC-06-0947-PAA-EI, issued November 13, 2006, and PSC-07-0468-FOF-EI, issued May 30, 2007, in Docket No. 20060198-EI.

[4] See Rule 25-6.030(4), Storm Protection Plan, F.A.C.

2021, the updates on storm hardening and preparedness initiatives, that were previously included in this report, were included in the Commission's report to the Legislature. Since Section 366.96, F.S. only requires IOU's to file a SPP, the Municipal Electric Utilities and Rural Electric Cooperative Utilities continue to provide updates of their storm hardening efforts as indicated in Appendixes B and C of this report.

The most recent Distribution Reliability Reports of Duke Energy Florida, LLC (DEF), Florida Power & Light Company (FPL),[5] Florida Public Utilities Company (FPUC), and Tampa Electric Company (TECO) and responses to staff's data requests were sufficient to perform the 2022 review.

The following company specific summaries provide highlights of the observed patterns.

[5] While FPL and Gulf merged in 2020, the systems were not fully integrated and therefore, separate reports were filed for the 2020 and 2021 Reliability Reports. 2022 is the first year of consolidated data for FPL. For purposes of this report, FPL or Consolidated FPL refers to the current company which consists of Former FPL and Former Gulf.

Service Reliability of Duke Energy Florida, LLC

The unadjusted data for DEF indicates that its 2022 allowable exclusions accounted for approximately 90 percent of all excluded Customer Minutes of Interruption (CMI). The "Named Storms" category accounted for approximately 89 percent of the total unadjusted CMI. DEF experienced outages associated with seven tornadoes and Hurricanes Ian and Nicole.

On an adjusted basis, DEF's 2022 System Average Interruption Duration Index (SAIDI) was 85 minutes, increasing its adjusted SAIDI by 10 minutes from the 2021 results. The trend for the SAIDI over the five-year period of 2018 to 2022 is trending downward. The System Average Interruption Frequency Index (SAIFI) in 2022 was 0.93 interruptions, indicating an 11 percent increase from 2021. The Customer Average Interruption Duration Index (CAIDI) increased for 2022 compared to 2021. Over the five-year period, the SAIFI and CAIDI are both trending downward.

In **Figure 2-8**, DEF's Top Five Outage Categories, the category "Defective Equipment" is in the top spot representing 30 percent of the total number of outages. The subsequent categories were "Vegetation" (21 percent) and "Other Causes" (17 percent), followed by "Other Weather" (12 percent) and "Animals" (11 percent). The "Animals" category is trending downward for the five-year period of 2018 to 2022, while having a 21 percent decrease in 2022. The "Other Causes" outage category is trending downward for the same period with a 2 percent decrease from 2021 to 2022. The "Defective Equipment" category increased between 2021 and 2022 and is trending downward for the five-year period. The "Vegetation" and "Other Weather" categories had increases in 2022 and are trending downward for the five-year period.

The percentage of reliability complaints compared to the total number of complaints filed with the Commission for DEF decreased to 4.3 percent in 2022 from 9.4 percent in 2021. Over the five-year period from 2018 to 2022, DEF's reliability related complaints have been trending upward.

Service Reliability of Florida Power & Light Company

The unadjusted data for FPL indicates that its 2022 allowable exclusions accounted for approximately 96 percent of the total CMI. The "Named Storms" category accounted for approximately 95 percent of the CMI excluded. In addition, FPL's service area was affected by nineteen tornadoes, Tropical Storm Alex, and Hurricanes Ian and Nicole.

FPL's 2022 metrics on an adjusted basis include SAIDI, which was reported as 46 minutes. The Former FPL's 2021 reported SAIDI was 44 minutes and the Former Gulf's 2021 reported SAIDI was 39 minutes. The 2022 SAIFI for FPL was reported as 0.74 interruptions. For 2021, the SAIFI metrics were 0.70 interruptions and 0.63 interruptions, for Former FPL and Former Gulf, respectively. FPL's 2022 CAIDI was reported as 62 minutes. The 2021 Former FPL's CAIDI was also 62 minutes and the 2021 Former Gulf's CAIDI was 61 minutes.

"Defective Equipment" (35 percent) and "Vegetation" (19 percent) outages were the leading causes of outage events for 2022. The next three outage causes are "Animals" (11 percent), "Unknown Causes" (10 percent), and "Other Causes" (10 percent). Since 2022 is the first year for the Consolidated FPL results, data is not available to determine how the indices are trending.

Complaints related to FPL's reliability decreased from 0.6 percent in 2021 to 0.2 percent in 2022. FPL's reliability related complaints appear to be trending downward as shown in **Figure 3-10**. Since 2022 is the first year for the Consolidated FPL results, there is not enough data to make any overall trend determinations at this time.

Service Reliability of Florida Public Utilities Company

The unadjusted data for FPUC indicates that its 2022 allowable exclusions accounted for approximately 36 percent of the total CMI. The "Named Storms" category accounted for approximately 18 percent of the CMI excluded. FPUC reported that during 2022, the Northwest division was impacted by a tornado and Hurricane Nicole and the Northeast division was impacted by Hurricanes Ian and Nicole.

The 2022 adjusted data for FPUC's SAIDI was 203 minutes, a 48 percent increase from 137 minutes reported in the previous year. The SAIFI increased from 1.36 interruptions in 2021 to 1.70 interruptions in 2022. The CAIDI value in 2022 was 120 minutes, an increase from the 100 minutes in 2021.

FPUC's top five causes of outages included "Vegetation," "Animals," "Lightning," "Unknown," and "Defective Equipment" events. As shown in **Figure 2-21**, "Vegetation" (30 percent) was the number one cause of outages in 2022 followed by "Animals" (16 percent), "Lightning" (16 percent), "Unknown" (15 percent), and "Defective Equipment" (14 percent). "Vegetation" attributed outages decreased in 2022, as "Animals," "Lightning," "Unknown," and "Defective Equipment" caused outages increased.

FPUC's reliability related complaints were minimal. In 2022, the Utility had five reliability related complaint filed with the Commission. When comparing reliability complaints per 10,000 customers, the changes in FPUC's results can be attributed to its small customer base that averages 28,000 or fewer customers. For the last five years, the percentage of reliability related complaints against FPUC appears to be trending downward.

Service Reliability of Tampa Electric Company

The adjusted data for TECO indicates that its 2022 allowable exclusions accounted for approximately 94 percent of the CMI. Hurricanes Ian and Nicole affected TECO's service area during 2022. The "Named Storms" category accounted for approximately 92 percent of the CMI. No tornadoes impacted TECO's service areas in 2022.

The adjusted SAIDI decreased from 85 minutes in 2021 to 69 minutes in 2022 and represents a 19 percent improvement in performance. The SAIFI decreased to 1.03 interruptions from 1.07 interruptions in the previous year. The CAIDI decreased 15 percent, to 67 minutes from 79 minutes reported in 2021. TECO reported the decreases in SAIDI, SAIFI, and CAIDI were attributed to the following: (1) better tracking of reliability performance through more effective reliability dashboards; (2) adding more reclosers and tripsavers on the system; (3) tree trimming; and (4) quicker response and restoration of outages.

"Defective Equipment" (27 percent) "Vegetation" (17 percent), and "Lightning" (17 percent) were the largest contributors to TECO's causes of outage events followed by "Unknown Causes" (12 percent) and "Animals" (11 percent). **Figure 2-37** illustrates the top five outage causes.

"Defective Equipment," the leading cause of outages, has been trending downward since 2018 with a 13 percent decrease in outages when compared to the previous year. "Vegetation," "Lightning," "Unknown Causes," and "Animals" related causes are also trending downward.

TECO's percentage of total service reliability related complaints decreased from 17.2 percent in 2021 to 10.0 percent in 2022. TECO's percentage of service reliability complaints is trending downward over the period of 2018 to 2022.

Review Outline

This review primarily relies on the March 2023 Reliability Reports filed by the IOUs for the 2022 reliability performance data. A section addressing trends in reliability related complaints is also included. Staff's review consists of four sections:

- **Section I:** Each utility's actual 2022 distribution service reliability data and support for each of its adjustments to the actual service reliability data.
- **Section II:** Each utility's 2022 distribution service reliability based on adjusted service reliability data and staff's observations of overall service reliability performance.
- **Section III:** Inter-utility comparisons and the volume of reliability related customer complaints for 2018 to 2022.
- **Section IV:** Appendices containing detailed utility specific data of the IOUs and summaries of the municipal and rural cooperative utilities.

Section I: Actual Distribution Service Reliability

Electric utility customers are affected by all outage and momentary events, regardless of where problems originate. For example, generation events and transmission events, while remote from the distribution system serving a customer, affect the distribution service experience. Actual reliability data is the accumulation of these events.

The actual reliability data includes two subsets of outage data: (1) data on excludable events; and (2) data pertaining to normal day-to-day activities. Rule 25-6.0455(4), F.A.C., explicitly lists outage events that may be excluded:

- Planned service interruptions.
- A storm named by the National Weather Service.
- A tornado recorded by the National Weather Service.
- Ice on lines.
- A planned load management event.
- Any electric generation or transmission event not governed by subsection Rule 25-6.018(2) and (3) F.A.C.
- An extreme weather or fire event causing activation of the county emergency operation center.

This section provides an overview of each IOU's actual 2022 performance data and focuses on the exclusions allowed by the rule.

Duke Energy Florida, LLC: Actual Data

Table 1-1 provides an overview of key DEF metrics: Customer Minutes of Interruption (CMI) and Customer Interruptions (CI) for 2022. Excludable outage events accounted for approximately 90 percent of the minutes of interruption experienced by DEF's customers. DEF experienced outages associated with Hurricane Ian, which impacted its service area on September 28, 2022, through October 3, 2022, and Hurricane Nicole, which impacted its service area on November 9-11, 2022. In addition, seven tornadoes affected the following regions:

- North Coastal on January 16, March 12, May 6, May 31, and December 15, 2022
- South Central on March 12, 2022
- South Coastal on December 15, 2022

The "Planned Service Interruptions" events accounted for approximately 1 percent of the excludable minutes of interruptions. "Planned Service Interruptions" include any outages that were part of any work, new customers/load being added to existing services (new revenue), relocations, or upgrades. DEF stated that the transmission events accounted for approximately less than 1 percent of the minutes of interruptions. DEF asserted that the initiating causes varied from equipment failures to weather. The sustained causes also varied from vegetation to equipment failure.

Table 1-1
DEF's 2022 Customer Minutes of Interruptions and Customer Interruptions

2022	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	**1,698,378,588**		**3,674,197**	
Documented Exclusions				
Planned Service Interruptions	17,927,240	1.06%	360,186	9.80%
Named Storms	1,503,572,695	88.53%	1,210,751	32.95%
Tornadoes	2,329,418	0.14%	18,094	0.49%
Ice on Lines		0.00%		0.00%
Planned Load Management Events		0.00%		0.00%
Generation/Transmission Events	10,067,348	0.59%	292,192	7.95%
Extreme Weather (EOC Activation/Fire)		0.00%		0.00%
Reported Adjusted Data	**164,481,887**	**9.68%**	**1,792,974**	**48.80%**

Source: DEF's 2022 distribution service reliability report.

Florida Power & Light Company: Actual Data

Table 1-2 provides an overview of FPL's CMI and CI figures for 2022. Excludable outage events accounted for approximately 96 percent of the minutes of interruption experienced by FPL's customers. FPL reported 19 tornadoes, and the following named storms: Tropical Storm Alex impacted FPL's service territories on June 3-5, 2022, Hurricane Ian on September 27, 2022, through October 14, 2022, and Hurricane Nicole on November 8-13, 2022. In addition, the EOC in the Panama City region was activated on March 4-5, 2022, due to a fire-related accident. The 19 tornadoes affected the following regions:

- Fort Walton region on January 2, 2022
- Naples and Toledo Blade regions on January 16, 2022
- Panama City region on March 9, 2022
- Treasure Coast region on March 11, 2022
- North Florida and Naples regions on March 12, 2022
- Manasota region on March 16, 2022
- Panama City region on March 18, 2022
- Panama City and Pensacola regions on March 31, 2022
- West Palm region on April 6, 2022
- Naples region on April 29, 2022
- Pensacola region on May 25-26, 2022
- Manasota region on May 31, 2022
- Treasure Coast region on June 6-7, 2022
- Treasure Coast region on June 9, 2022
- Toledo Blade region on June 11-12, 2022
- Treasure Coast region on June 30, 2022
- Naples region on August 4, 2022
- Toledo Blade region on August 8-9, 2022
- Treasure Coast region on October 17-18, 2022

Table 1-2
FPL's 2022 Customer Minutes of Interruptions and Customer Interruptions

2022	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data (1)	**6,651,431,094**		**8,470,837**	
Documented Exclusions				
Planned Service Interruptions	28,030,616	0.42%	304,577	3.60%
Named Storms	6,337,838,769	95.29%	3,695,429	43.63%
Tornadoes	21,216,627	0.32%	221,887	2.62%
Ice on Lines	0	0.00%	0	0.00%
Planned Load Management Events	0	0.00%	0	0.00%
Generation/Transmission Events (2)	7,221,069	0.11%	644,974	7.61%
Extreme Weather (EOC Activation/Fire)	122,689	0.002%	1,299	0.02%
Reported Adjusted Data	**264,222,393**	**3.97%**	**4,247,645**	**50.14%**

Source: FPL's 2022 distribution service reliability report.
Notes: (1) Excludes Generation/Transmission Events per Rule 25-6.0455(2), F.A.C., and (2) Information Only, as reported actual data already excludes Generation/Transmission Events.

Florida Public Utilities Company: Actual Data

Table 1-3 provides an overview of FPUC's CMI and CI figures for 2022. Excludable outage events accounted for approximately 36 percent of the minutes of interruption experienced by FPUC's customers. The "Named Storms" events accounted for approximately 18 percent of the minutes of interruption. The Northeast division was impacted by Hurricane Ian on September 28-30, 2022. The Northwest division experienced a tornado on March 31, 2022. Both divisions were impacted by Hurricane Nicole on November 10-11, 2022.

The Northeast division experienced several transmission outages throughout 2022. One outage impacted all of Amelia Island due to a static wire failure. The other outages were due to a contractor accidentally creating a fault while changing lighting arrestors and equipment failures. Additionally, both divisions had several planned outages that allowed FPUC to perform maintenance to different sections of the distribution system.

Table 1-3
FPUC's 2022 Customer Minutes of Interruptions and Customer Interruptions

2022	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	**9,504,948**		**88,415**	
Documented Exclusions				
Planned Service Interruptions	135,504	1.43%	3,716	4.20%
Named Storms	1,681,718	17.69%	5,743	6.50%
Tornadoes	1,500	0.02%	12	0.01%
Ice on Lines	0	0.00%	0	0.00%
Planned Load Management Events	0	0.00%	0	0.00%
Generation/Transmission Events	1,614,018	16.98%	28,131	31.82%
Extreme Weather (EOC Activation/Fire)	0	0.00%	0	0.00%
Reported Adjusted Data	**6,072,208**	**63.88%**	**50,813**	**57.47%**

Source: FPUC's 2022 distribution service reliability report.

Tampa Electric Company: Actual Data

Table 1-4 provides an overview of TECO's CMI and CI figures for 2022. Excludable outage events accounted for approximately 94 percent of the minutes of interruption experienced by TECO's customers. All of TECO's service area was impacted by Hurricane Ian on September 28, 2022, through October 4, 2022, and Hurricane Nicole on November 9-10, 2022.

The "Planned Service Interruptions" events accounted for approximately 1 percent of the minutes of interruption. TECO reported that when working "Planned Service Interruptions," the affected system is temporarily de-energized to safely complete work that has been requested by customers for various reasons. In addition, "Generation/Transmission Events" accounted for approximately less than 1 percent of the minutes of interruptions. In 2022, TECO reported 7 transmission outages due to equipment failure, vehicle collisions, vegetation, and weather. TECO reported 145 substation outages in 2022. The causes listed included damaged equipment, animals, fallen bird's nests, cut station grounds, lightning, and human error. It appears that all equipment failures were tested, reset, cleaned, repaired and/or replaced.

Table 1-4
TECO's 2022 Customer Minutes of Interruptions and Customer Interruptions

2022	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	**914,445,216**		**2,154,347**	
Documented Exclusions				
Planned Service Interruptions	10,197,008	1.12%	298,651	13.86%
Named Storms	842,767,026	92.16%	802,484	37.25%
Tornadoes	0	0.00%	0	0.00%
Ice on Lines	0	0.00%	0	0.00%
Planned Load Management Events	0	0.00%	0	0.00%
Generation/Transmission Events	3,163,222	0.35%	184,429	8.56%
Extreme Weather (EOC Activation/Fire)	0	0.00%	0	0.00%
Reported Adjusted Data	**58,317,960**	**6.38%**	**868,783**	**40.33%**

Source: TECO's 2022 distribution service reliability report.

Section II: Adjusted Distribution Service Reliability Review of Individual Utilities

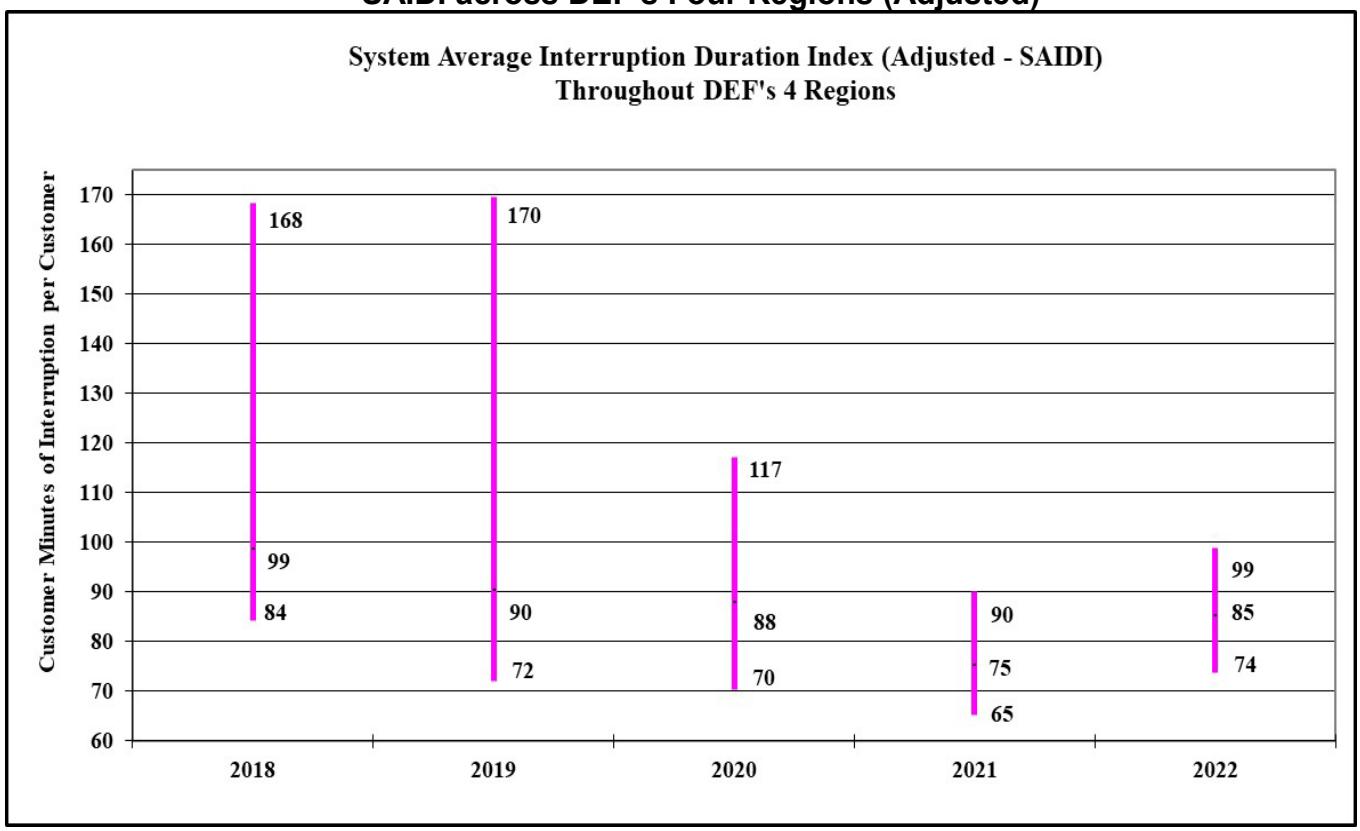
The adjusted distribution reliability metrics or indices provide insight into potential trends in a utility's daily practices and maintenance of its distribution facilities. This section of the review is based on each utility's reported adjusted data.

Duke Energy Florida, LLC: Adjusted Data

Figure 2-1 charts the adjusted SAIDI recorded across DEF's system and depicts increases in the highest, lowest and the average values in 2022. DEF reported that in 2022 it experienced seven tornadoes and two hurricanes. In addition, DEF reported that there were eight non-excluded ~~extra~~ days related to storms and two non-excluded ~~extra~~ days related to extreme cold temperatures that affected DEF's overall indices. The overall impact to DEF from extreme weather was higher than the previous five-year average.

DEF's service territory is comprised of four regions: North Coastal, South Coastal, North Central, and South Central. **Figure 2-1** illustrates that the North Coastal and North Central regions had the poorest SAIDI over the last five years, fluctuating between 90 minutes and 170 minutes. While the South Coastal and South Central regions had the best or lowest SAIDI for the same period. The North Coastal region is predominantly a rural area and has more square miles when compared to the other regions. This region is also served by predominantly long circuits with approximately 7,700 miles of overhead and underground main circuits. DEF explained that these factors result in higher exposure to outage causes and higher reliability indices.

Figure 2-1
SAIDI across DEF's Four Regions (Adjusted)



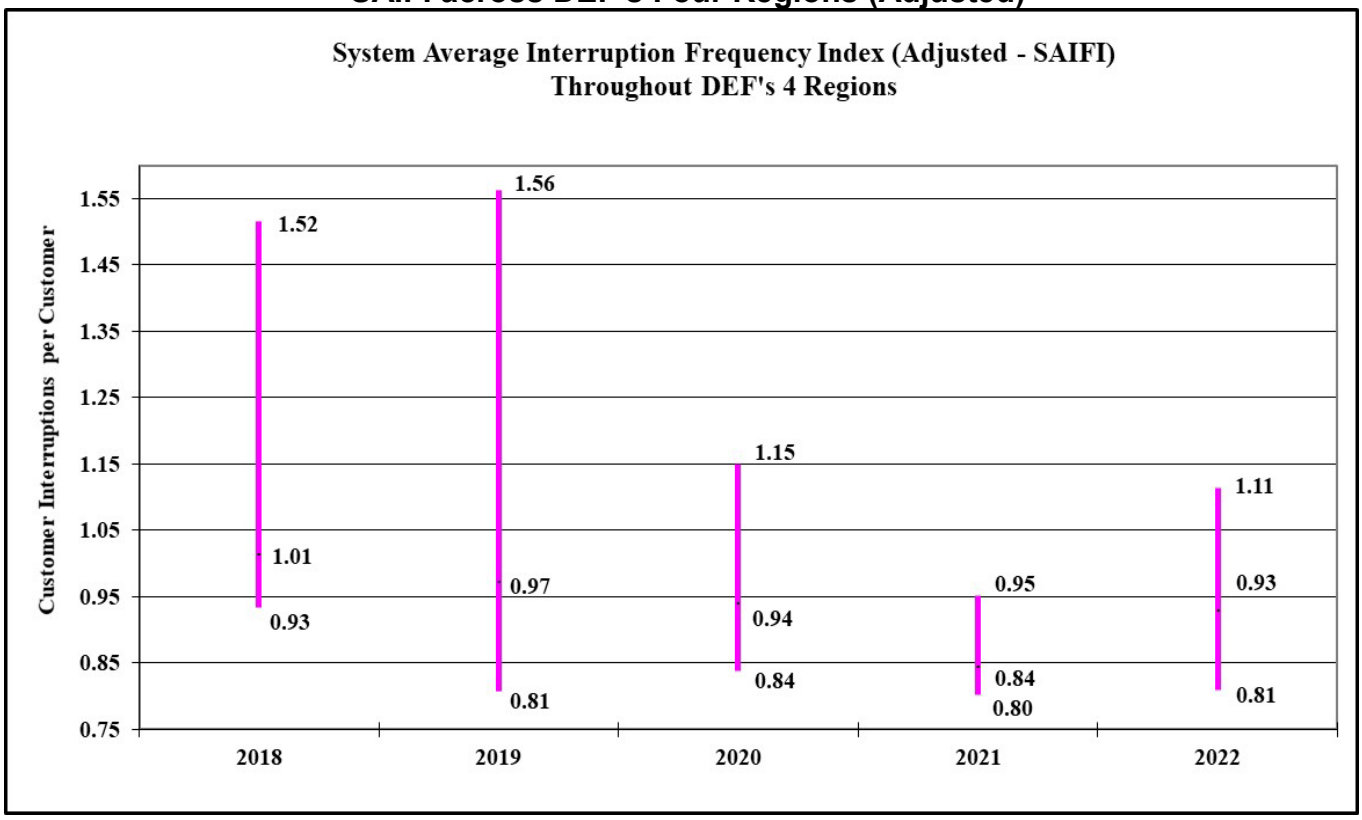
DEF's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2018	2019	2020	2021	2022
Highest SAIDI	North Coastal	North Coastal	North Coastal	North Coastal	North Central
Lowest SAIDI	South Central	South Coastal	South Central	South Central	South Central

Source: DEF's 2018-2022 distribution service reliability reports.

Figure 2-2 shows the adjusted SAIFI across DEF's system. The minimum, average, and maximum SAIFI are trending downward for the five-year period of 2018 to 2022. There was a 1 percent increase for the minimum value, an 11 percent increase for the average value, and a 17 percent increase for the maximum value from 2021 to 2022. The South Central region had the lowest number of interruptions, while the North Coastal region continues to have the highest number of interruptions.

Figure 2-2
SAIFI across DEF's Four Regions (Adjusted)



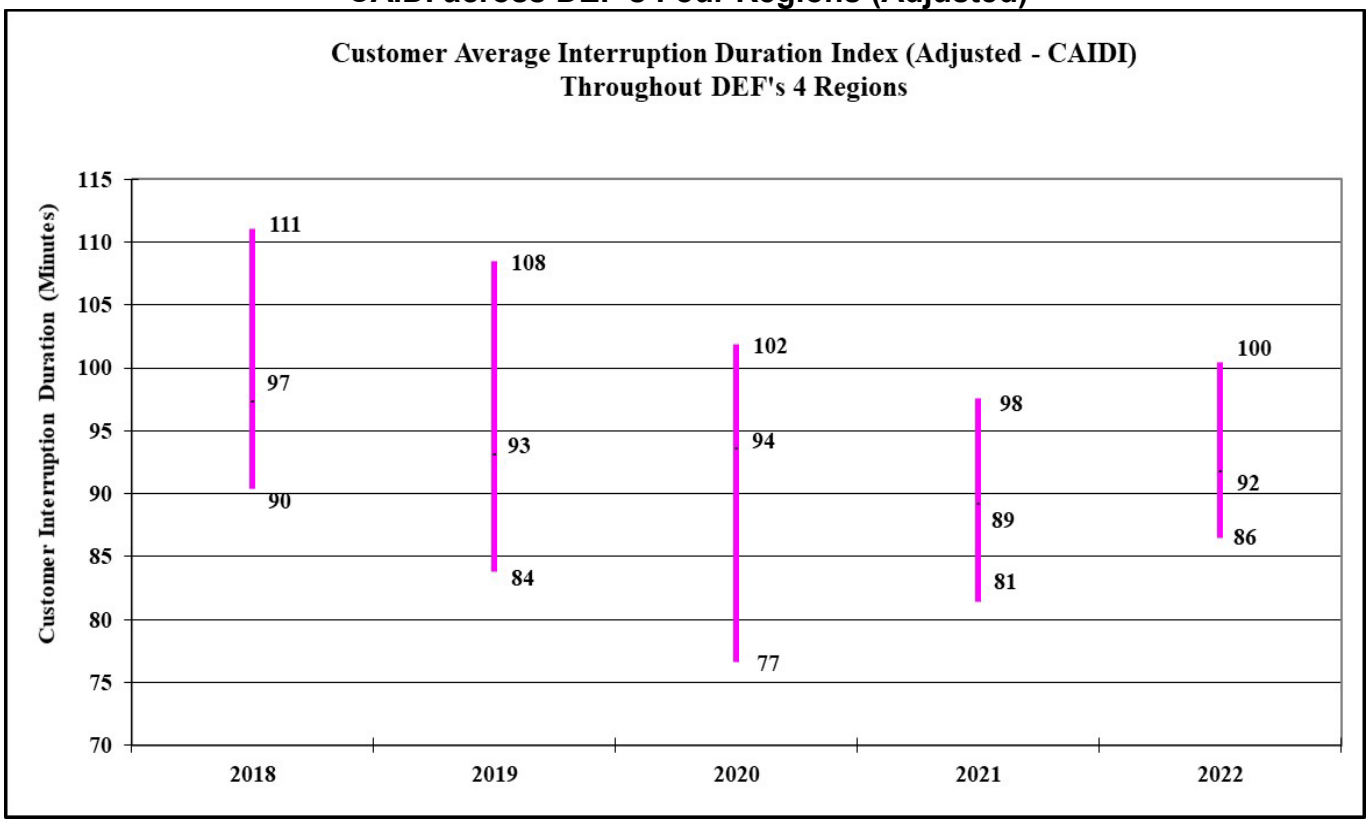
DEF's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2018	2019	2020	2021	2022
Highest SAIFI	North Coastal	North Coastal	North Coastal	North Coastal	North Coastal
Lowest SAIFI	South Central	North Central	North Central	South Central	South Central

Source: DEF's 2018-2022 distribution service reliability reports.

Figure 2-3 illustrates the CAIDI, or the average number of minutes a customer is without power when a service interruption occurs, for DEF's four regions. DEF's adjusted CAIDI is decreasing for a five-year period from 97 minutes in 2018 to 92 minutes in 2022. The North Central region had the highest CAIDI level for 2022, with the maximum CAIDI is trending downward. The North Coastal region had the lowest CAIDI level during the same period with the minimum CAIDI is also trending downward.

Figure 2-3
CAIDI across DEF's Four Regions (Adjusted)



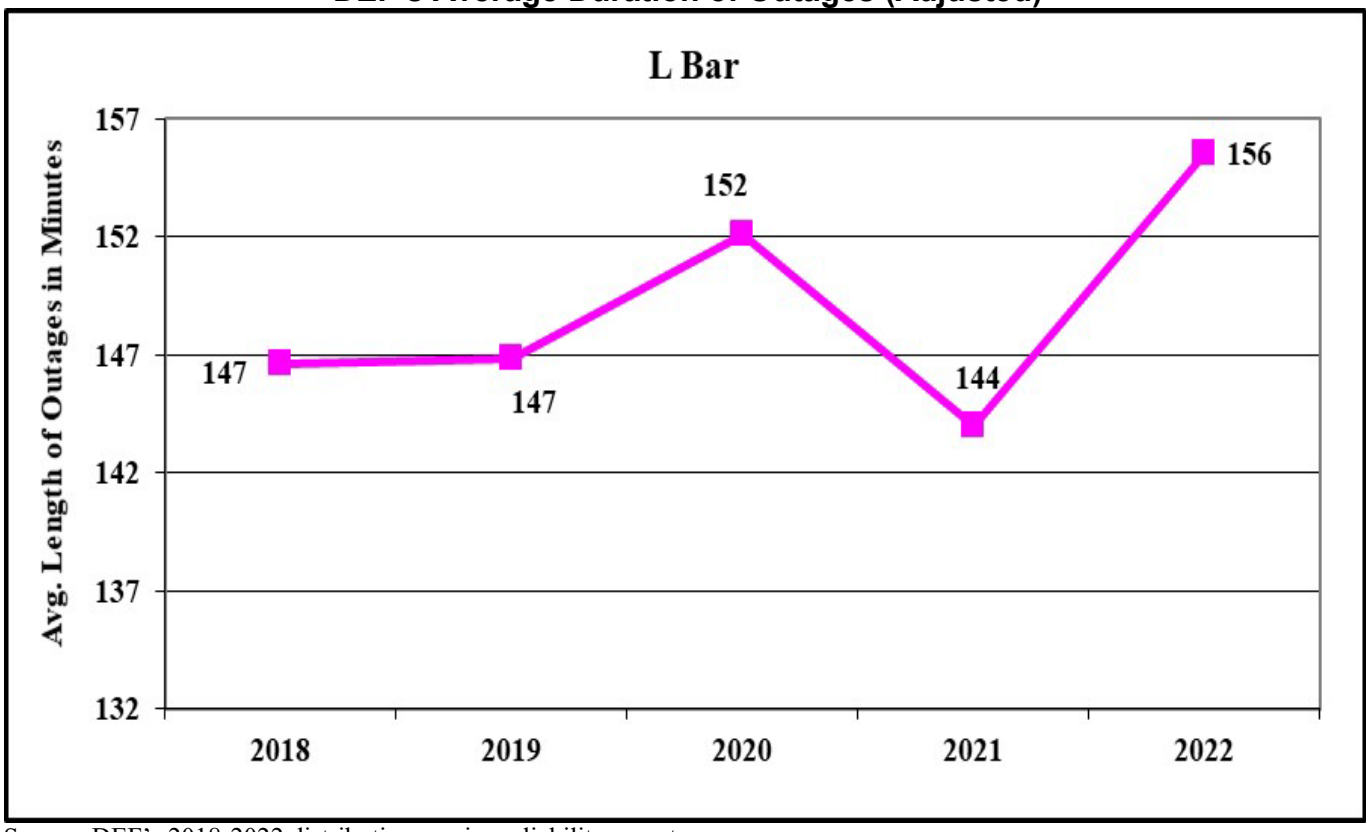
DEF's Regions with the Highest and Lowest Adjusted CAIDI Distribution Reliability Performance by Year

	2018	2019	2020	2021	2022
Highest CAIDI	North Coastal	North Coastal	North Coastal	North Central	North Central
Lowest CAIDI	South Central	South Coastal	South Central	South Central	North Coastal

Source: DEF's 2018-2022 distribution service reliability reports.

Figure 2-4 is the average length of time DEF spends restoring customers affected by outage events, excluding hurricanes and certain other outage events. This is displayed by the index L-Bar in the graph below. The data demonstrates an overall 6 percent increase of outage durations since 2018 with an 8 percent increase from 2021 to 2022. DEF's overall L-Bar index is trending upward, indicating that DEF is spending more time restoring service from outage events.

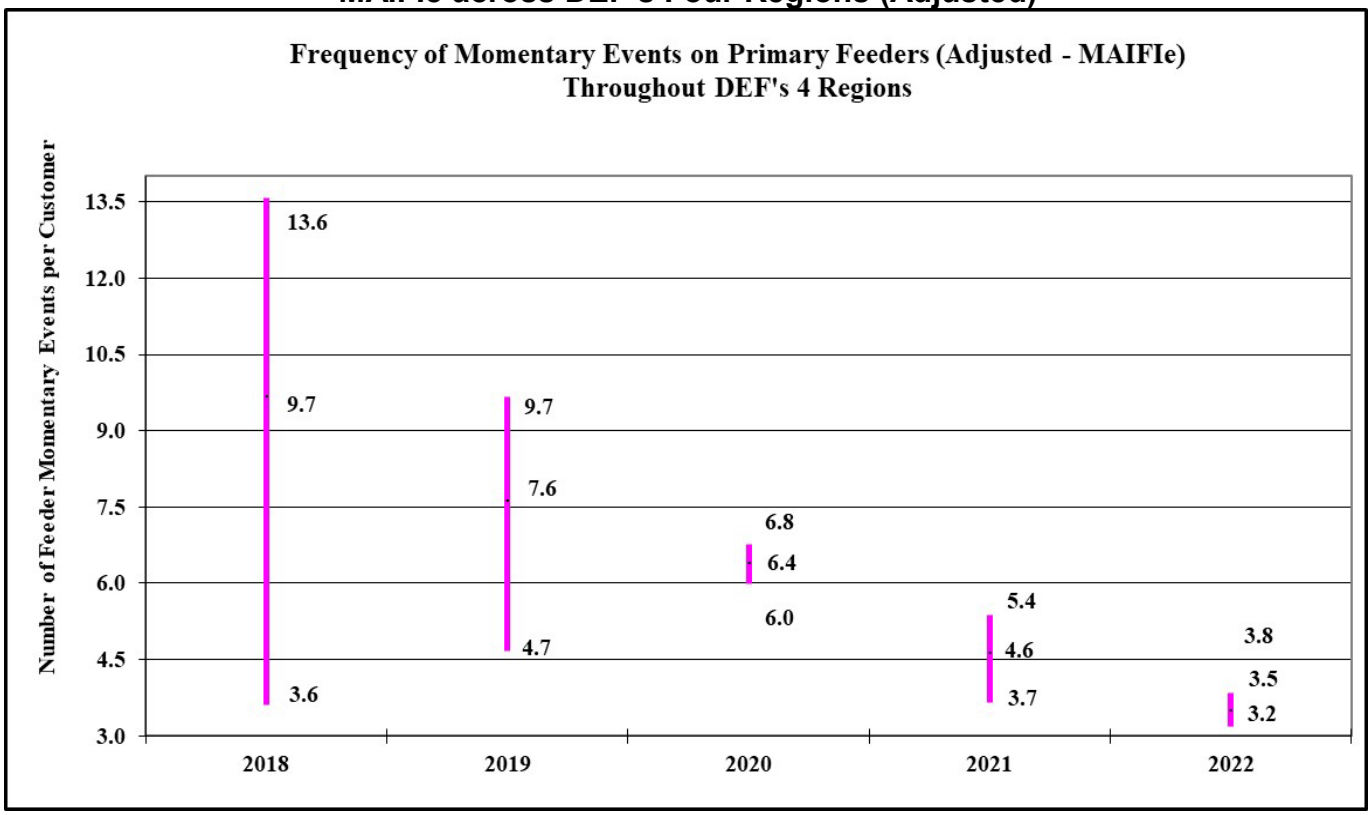
Figure 2-4
DEF's Average Duration of Outages (Adjusted)



Source: DEF's 2018-2022 distribution service reliability reports.

Figure 2-5 illustrates the frequency of momentary events on primary circuits for DEF's customers recorded across its system. These momentary events often affect a small group of customers. A review of the supporting data suggests that the MAIFIe results between 2018 and 2022 appear to be trending downward showing improvement and there was a decrease in the average MAIFIe of 24 percent from 2021 to 2022. The South Coastal and North Central regions appear to fluctuate between having the best (lowest) results and the North Coastal and North Central fluctuate between having the worst (highest) results. From 2021 to 2022, the highest MAIFIe decreased by 30 percent as the lowest MAIFIe decreased by 14 percent.

Figure 2-5
MAIFIe across DEF's Four Regions (Adjusted)



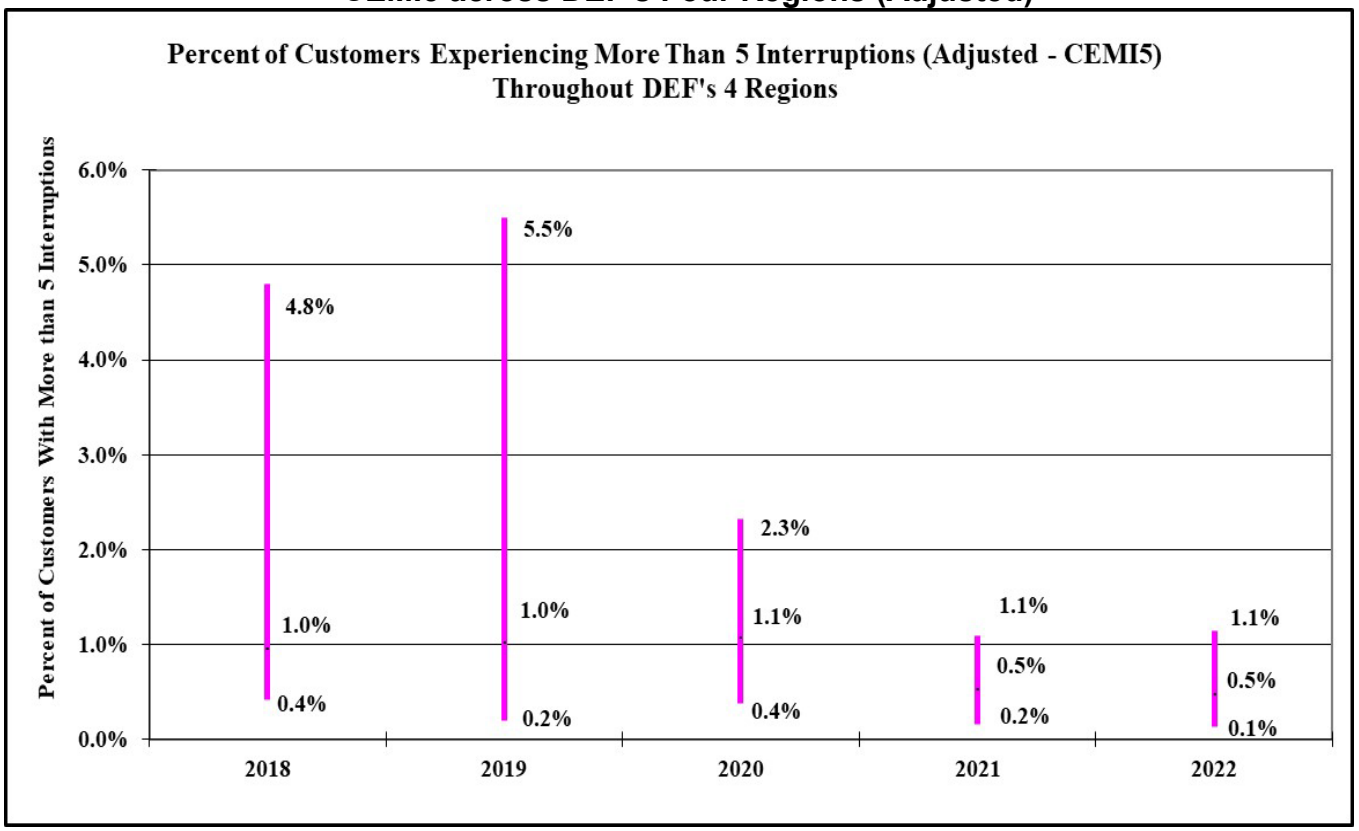
DEF's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

	2018	2019	2020	2021	2022
Highest MAIFIe	North Coastal	North Coastal	North Central	North Coastal	North Central
Lowest MAIFIe	North Central	North Central	South Coastal	South Coastal	South Coastal

Source: DEF's 2018-2022 distribution service reliability reports.

Figure 2-6 charts the percentage of DEF's customers experiencing more than five interruptions over the last five years. DEF reported the average CEMI5 remained the same from 2021 to 2022. The average CEMI5 is trending downward over the past five years. The South Coastal region has the lowest reported percentage for all of DEF's regions and the North Coastal region continues to have the highest reported percentage.

Figure 2-6
CEMI5 across DEF's Four Regions (Adjusted)



DEF's Regions with the Highest and Lowest Adjusted CEMI5 Distribution Reliability Performance by Year

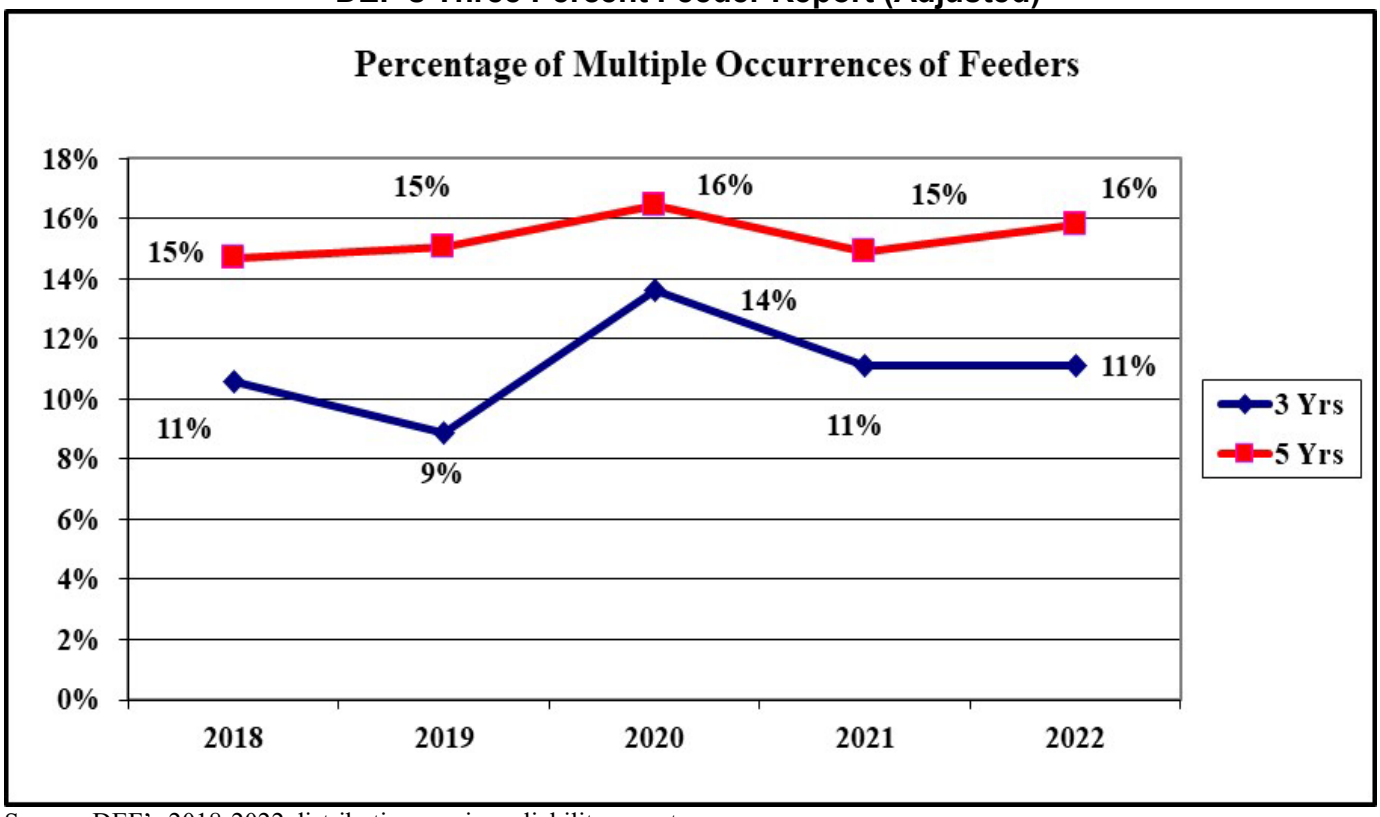
	2018	2019	2020	2021	2022
Highest CEMI5	North Coastal	North Coastal	North Coastal	North Coastal	North Coastal
Lowest CEMI5	North Central	South Coastal	South Coastal	South Coastal	South Coastal

Source: DEF's 2018-2022 distribution service reliability reports.

Figure 2-7 shows the fraction of multiple occurrences of feeders using a three-year and five-year basis. During the period of 2018 to 2022, the five-year fraction of multiple occurrences is trending upward along with the three-year fraction of multiple occurrences. The Three Percent Feeder Report lists the top 3 percent of feeders with the most feeder outage events. The fraction of multiple occurrences is calculated from the number of recurrences divided by the number of feeders reported.

Five of DEF's feeders have been on the Three Percent Feeder Report for the last two years consecutively. The outages varied from weather, defective equipment, vehicle accidents, and vegetation. DEF replaced the damaged poles, repaired equipment, trimmed trees, and performed infrared scans on the feeders. The scan indicted that an inline switch and a capacitor bank switch needed to be replaced. DEF scheduled the replacements in 2023 and will perform another scan on this feeder once the replacements are completed. In total, DEF trimmed 165.72 feeder miles and 120.61 lateral miles on these five feeders between 2018 and 2022.

Figure 2-7
DEF's Three Percent Feeder Report (Adjusted)

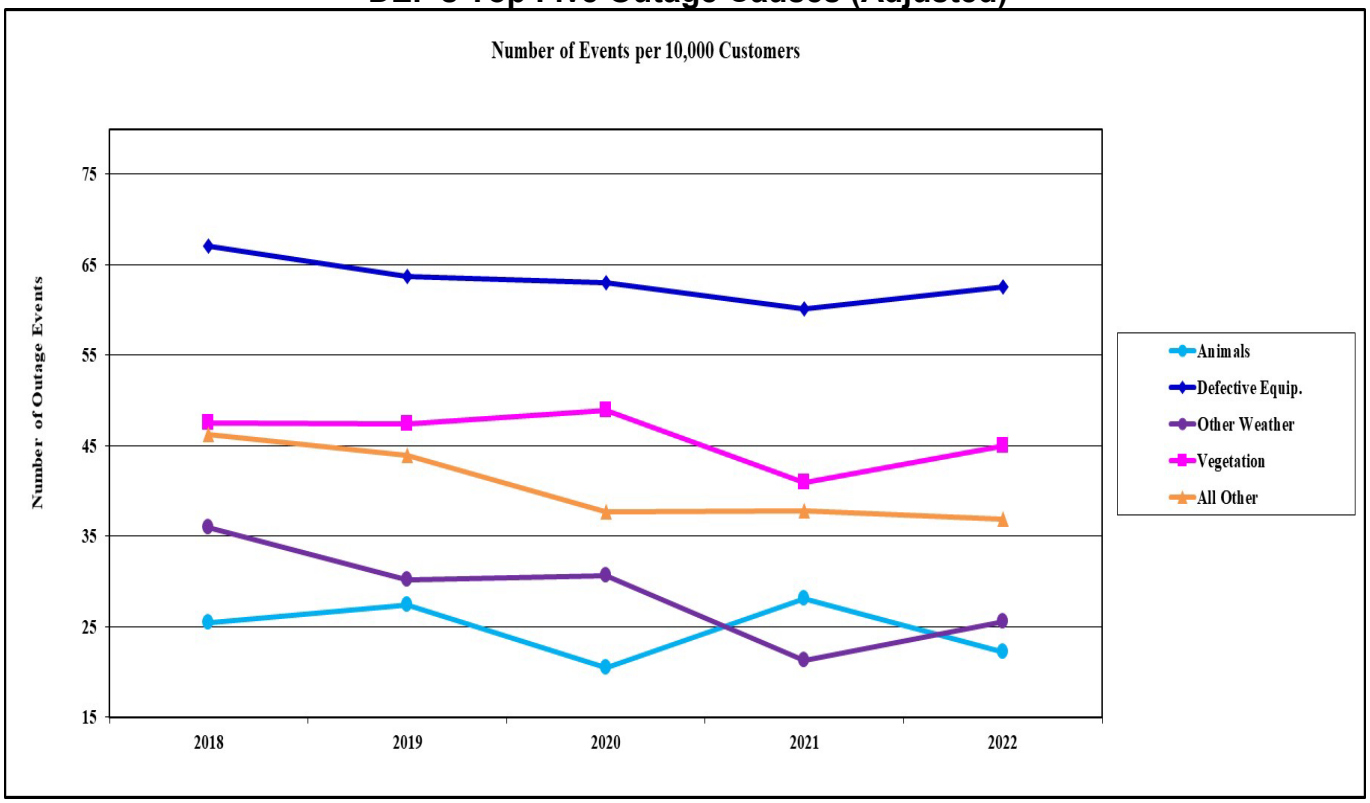


Source: DEF's 2018-2022 distribution service reliability reports.

Figure 2-8 shows the top five causes of outage events on DEF's distribution system normalized to a 10,000-customer base. The figure is based on DEF's adjusted data and represents approximately 91 percent of the top 10 causes of outage events that occurred during 2022. For the five-year period, the top five causes of outage events were "Defective Equipment" (30 percent), "Vegetation" (21 percent), "Other Causes" (17 percent), "Other Weather" (12 percent), and "Animals" (11 percent) on a cumulative basis. The outage events caused by "Defective Equipment," "Vegetation," "Other Causes," "Other Weather," and "Animals" are all trending downward. The "Defective Equipment" category had a 4 percent increase, "Vegetation" category had a 10 percent increase, and "Other Weather" category had a 20 percent increase while the "Other Causes" category had a 2 percent decrease and "Animals" category had a 21 percent decrease in 2022. DEF reported that it prioritizes the reliability improvements action plan by balancing historical and current year performance. In addition, current year performance is monitored monthly to identify emergent and seasonal issues including load balancing for cold weather and the need for foot patrols of devices experiencing multiple interruptions.

DEF will continue several programs that help mitigate outages. The Self-Healing Teams program reduces the impact of all types of outages. The Feeder Hardening, Lateral Hardening, and Substation Optimization Plan programs mitigate the outages caused by "Defective Equipment." The Fuse Replacement Program reduces the impact from "Other Weather," "Vegetation," and "Animals" related outages. In addition, DEF's maintenance programs, such as cable replacements, transformer replacements, recloser replacements, etc., should mitigate outages.

Figure 2-8
DEF's Top Five Outage Causes (Adjusted)



Source: DEF's 2018-2022 distribution service reliability reports.

Observations: DEF's Adjusted Data

DEF's SAIDI, SAIFI, CAIDI, MAIFIe, and CEMI5 are trending downward over the past five years. The L-Bar, the Five-Year Percent and the Three-Year Percent of Multiple Feeder Outage Events are all trending upward over the five-year period. The SAIDI, SAIFI, CAIDI, L-Bar, and the Five-Year Percent of Multiple Feeder Outage Events had increased from 2021 to 2022. The CEMI5 and the Three-Year Percent of Multiple Feeder Outage Events did not change from 2021 to 2022 and the MAIFIe had decreased.

DEF reported that there were eight non-excluded days related to storms and two non-excluded days related to extreme cold temperatures that affected DEF's overall indices. The overall impact to DEF from extreme weather was higher than the previous five years average. DEF will continue to improve its reliability by concentrating on its Grid Investment Plan, its Self-Healing Teams that segments the distribution grid to minimize the number of customers affected by a fault, its Storm Protection Plan, Substation Optimization Plan, and it's Fuse Replacement Program.

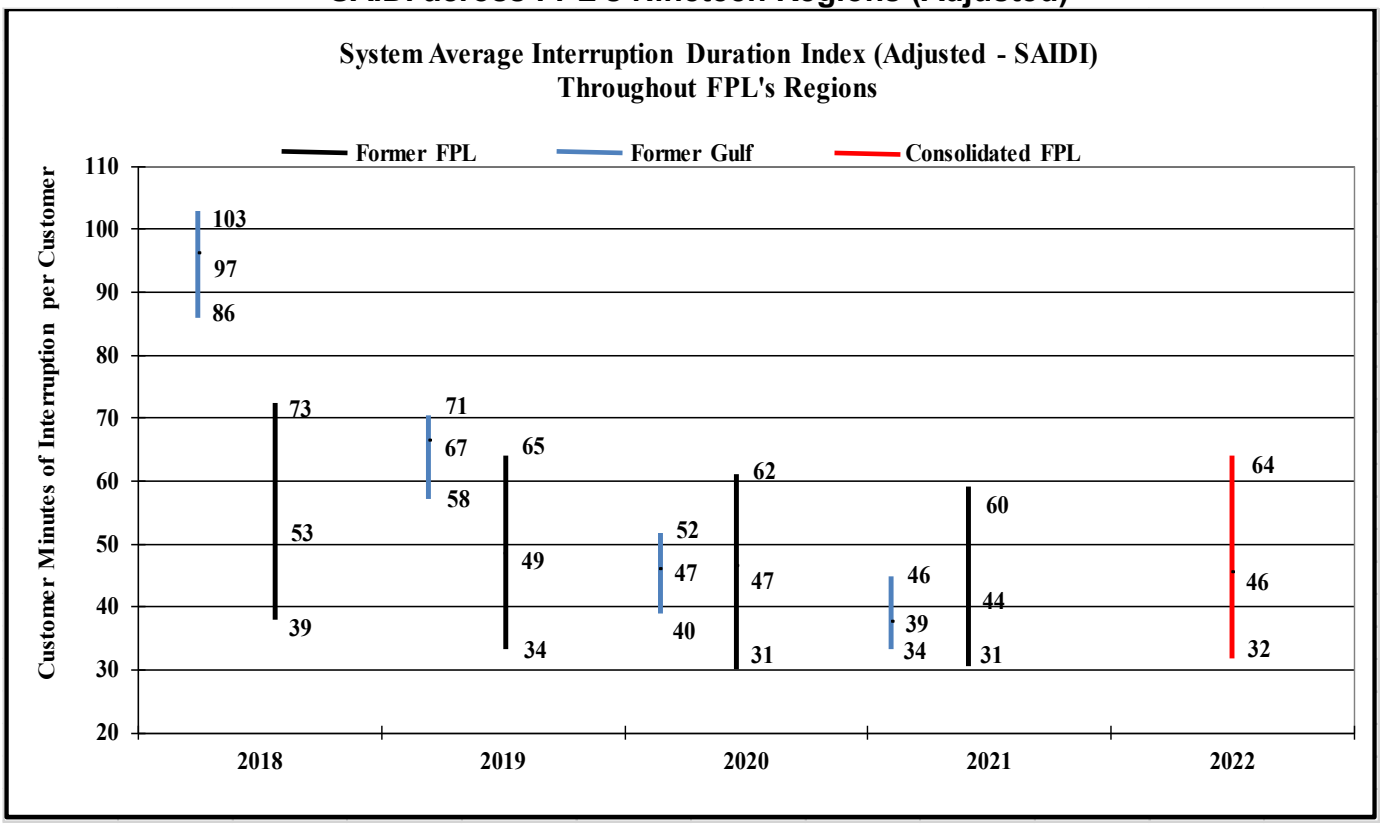
The North Central Region was the highest (poorest) of the four regions in three of the service reliability indices in 2022. In 2021 and 2022, DEF hardened 37 miles of the 10 feeders in the North Central region. In addition, currently, 61 percent of the customers in the North Central region are connected to DEF's Self-Healing Team. In 2023, DEF is planning the following activities in the North Central Region:

- Harden 30 miles on 9 feeders under the Feeder Hardening Program
- Replace 19 feeders under to Fuse Replacement Program
- Harden 31.04 miles under the Lateral Hardening Program
- Add equipment to 37 feeders under the Self Optimizing Grid Program
- Trim 804 miles under the Vegetation Management Program

Florida Power & Light Company: Adjusted Data

Figure 2-9 shows the highest, average, and lowest adjusted SAIDI recorded across FPL's system that encompasses four management regions with 19 service areas (16 regions from the Former FPL and 3 regions from the Former Gulf service area). The highest and lowest SAIDI values are the values reported for a particular service area. FPL's average SAIDI was recorded as 46 minutes in 2022. In 2021, the Former FPL's SAIDI results were 44 minutes and the Former Gulf's 2021 SAIDI results were 39 minutes. The Boca Raton region had the best SAIDI results for 2022.

Figure 2-9
SAIDI across FPL's Nineteen Regions (Adjusted)



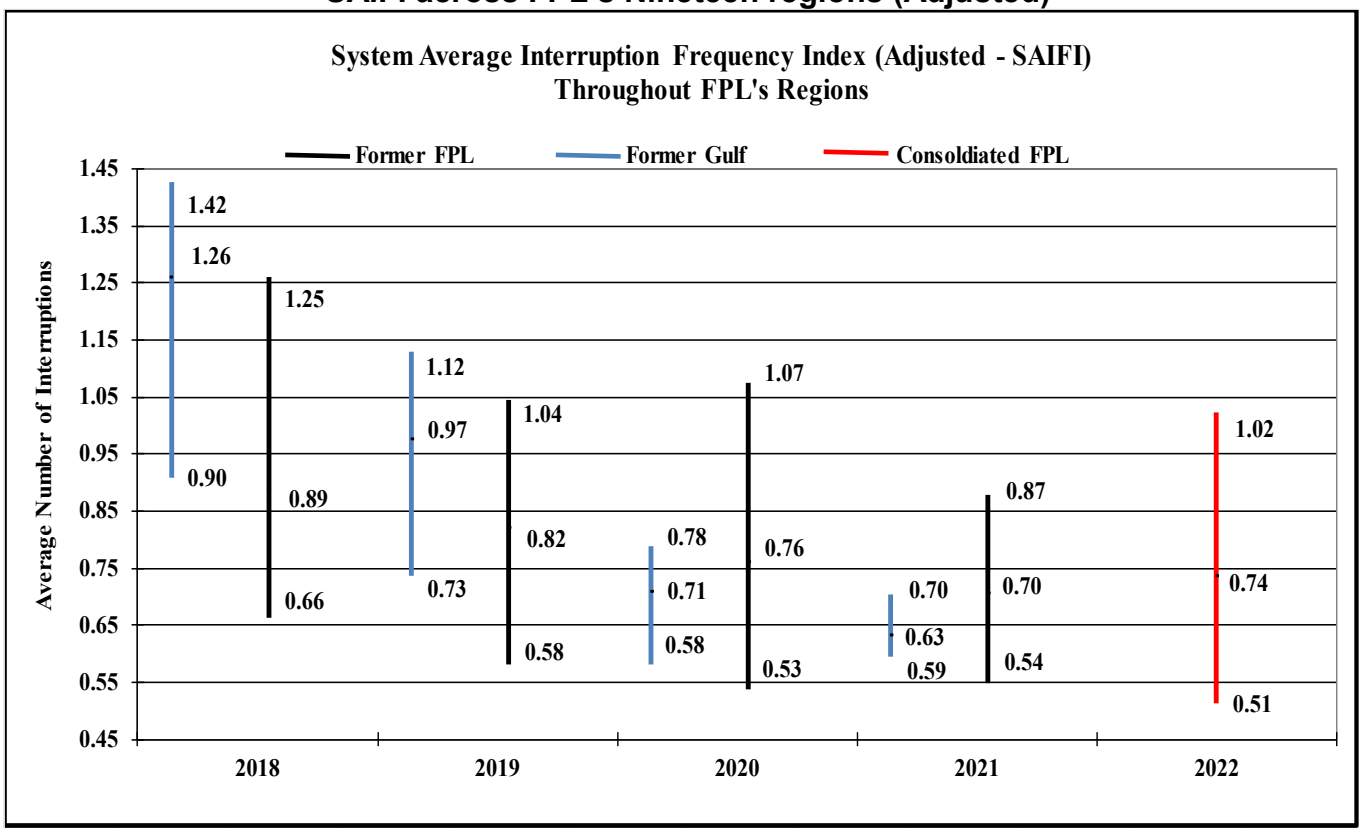
FPL's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

Consolidated FPL	2018	2019	2020	2021	2022
Highest SAIDI					Toledo Blade
Lowest SAIDI					Boca Raton
Former FPL					
Highest SAIDI	North Florida	Central Broward	North Florida	North Dade	
Lowest SAIDI	North Broward	Manasota	North Broward	North Broward	
Former Gulf					
Highest SAIDI	Panama City	Pensacola	Panama City	Panama City	
Lowest SAIDI	Fort Walton	Fort Walton	Fort Walton	Pensacola	

Source: FPL's and Gulf's 2018-2022 distribution service reliability reports.

Figure 2-10 is a chart of the highest, average, and lowest adjusted SAIFI across FPL's system. For 2022, it was reported that FPL's average SAIFI was 0.74 outages. For 2021, the Former FPL's average SAIFI was reported as 0.70 interruptions as the Former Gulf's average SAIFI was reports as 0.63 interruptions. FPL reported 1.02 interruptions for the highest SAIFI in 2022. In 2021 for the highest SAIFI, the Former FPL reported 0.87 interruptions and the Former Gulf reported 0.70 interruptions. The region reporting the lowest adjusted SAIFI for 2022 was North Broward with 0.51 interruptions. In 2021, the regions with the lowest adjusted SAIFI were the Manasota region with 0.54 interruptions for the Former FPL system and the Fort Walton region with 0.59 interruptions for the Former Gulf system.

Figure 2-10
SAIFI across FPL's Nineteen regions (Adjusted)



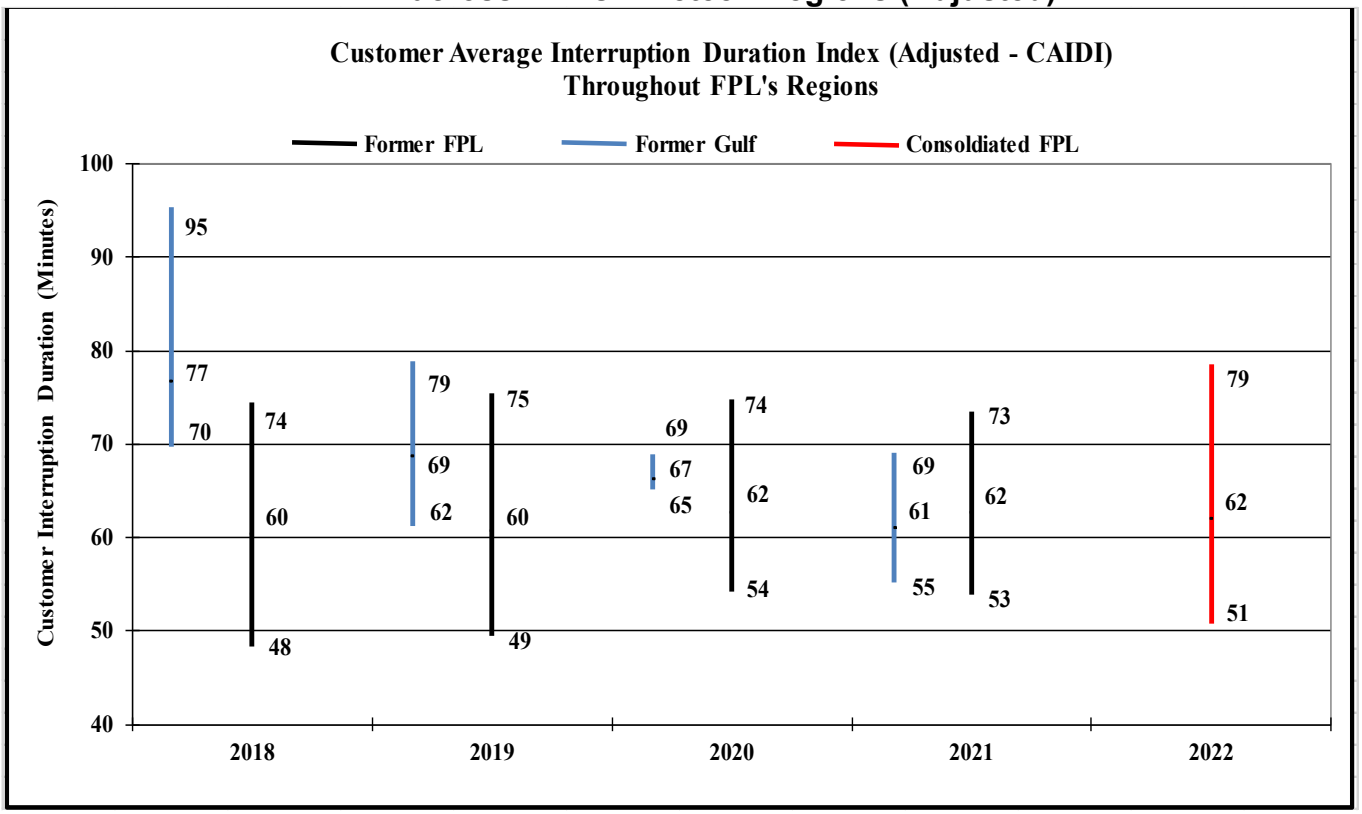
FPL's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

Consolidated FPL	2018	2019	2020	2021	2022
Highest SAIFI					Toledo Blade
Lowest SAIFI					North Broward
Former FPL					
Highest SAIFI	North Florida	North Florida	North Florida	North Florida	
Lowest SAIFI	North Broward	Manasota	North Broward	Manasota	
Former Gulf					
Highest SAIFI	Pensacola	Panama City	Panama City	Panama City	
Lowest SAIFI	Fort Walton	Fort Walton	Fort Walton	Fort Walton	

Source: FPL's and Gulf's 2018-2022 distribution service reliability reports.

Figure 2-11 depicts FPL's highest, average, and lowest CAIDI expressed in minutes. FPL's adjusted average CAIDI was 62 minutes in 2022. The Former FPL 2021 average CAIDI of 62 minutes and the Former Gulf 2021 average CAIDI of 61 minutes. For 2022, the West Palm service area reported the lowest duration of CAIDI at 51 minutes. The service area with the lowest duration of CAIDI in 2021 was Former FPL's Boca Raton service area of 53 minutes and Former Gulf's Pensacola service area of 65 minutes. The highest duration of CAIDI was 79 minutes for the North Florida service area in 2022. The highest duration of CAIDI in 2021 was 73 minutes for the Former FPL's North Dade service area and 69 minutes for the Former Gulf's Fort Walton service area.

Figure 2-11
CAIDI across FPL's Nineteen Regions (Adjusted)



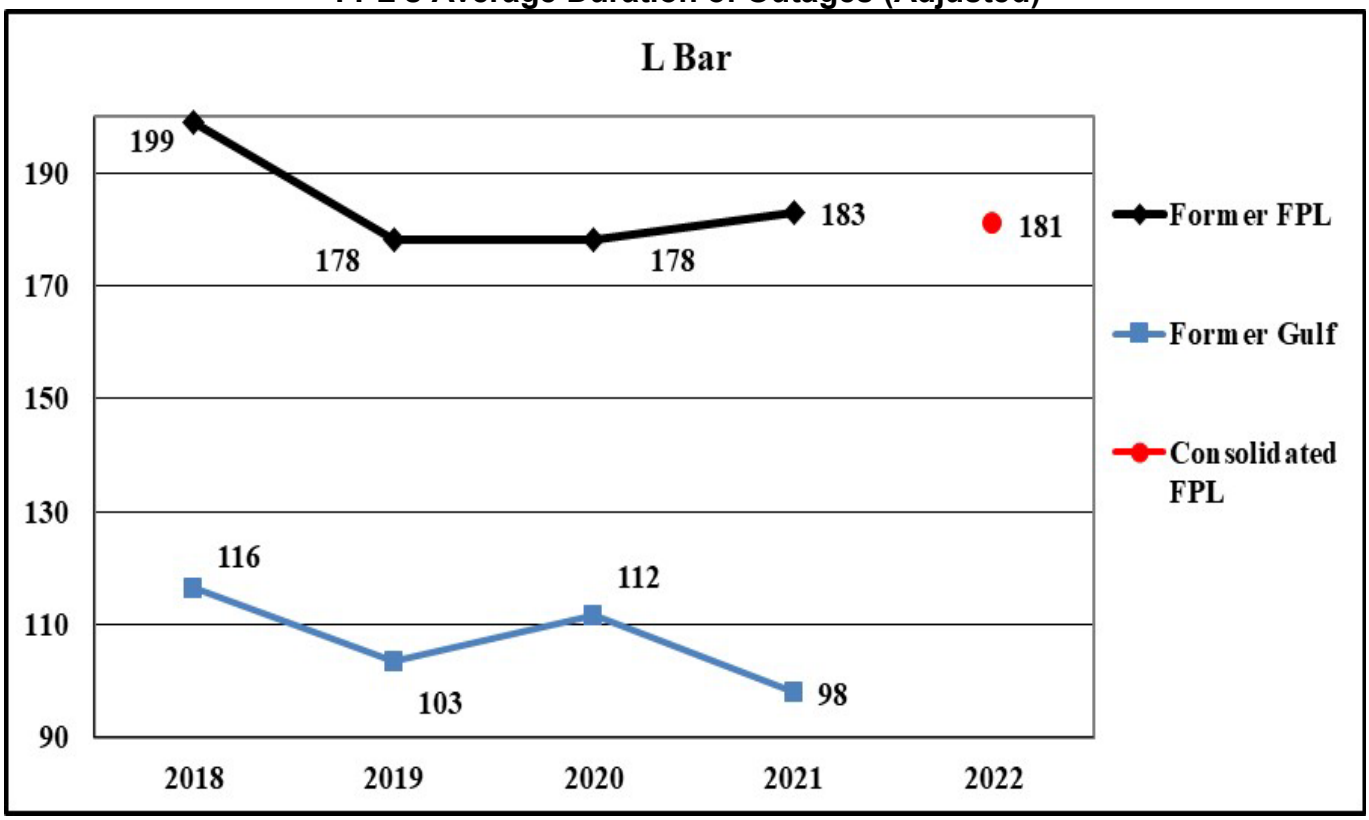
FPL's Regions with the Highest and Lowest Adjusted CAIDI Distribution Reliability Performance by Year

Consolidated FPL	2018	2019	2020	2021	2022
Highest CAIDI					North Florida
Lowest CAIDI					West Palm
Former FPL					
Highest CAIDI	North Dade	South Dade	North Dade	North Dade	
Lowest CAIDI	West Palm	West Palm	Central Florida	Boca Raton	
Former Gulf					
Highest CAIDI	Fort Walton	Fort Walton	Fort Walton	Fort Walton	
Lowest CAIDI	Pensacola	Panama City	Pensacola	Pensacola	

Source: FPL's and Gulf's 2018-2022 distribution service reliability reports.

Figure 2-12 depicts the average length of time that FPL spends recovering from outage events, excluding hurricanes and other extreme outage events and is the index known as L-Bar (Average Service Restoration Time). FPL's L-Bar for 2022 was 181 minutes. The Former Gulf's 2021 L-Bar was 98 minutes and the Former FPL's 2021 L-Bar was 183 minutes.

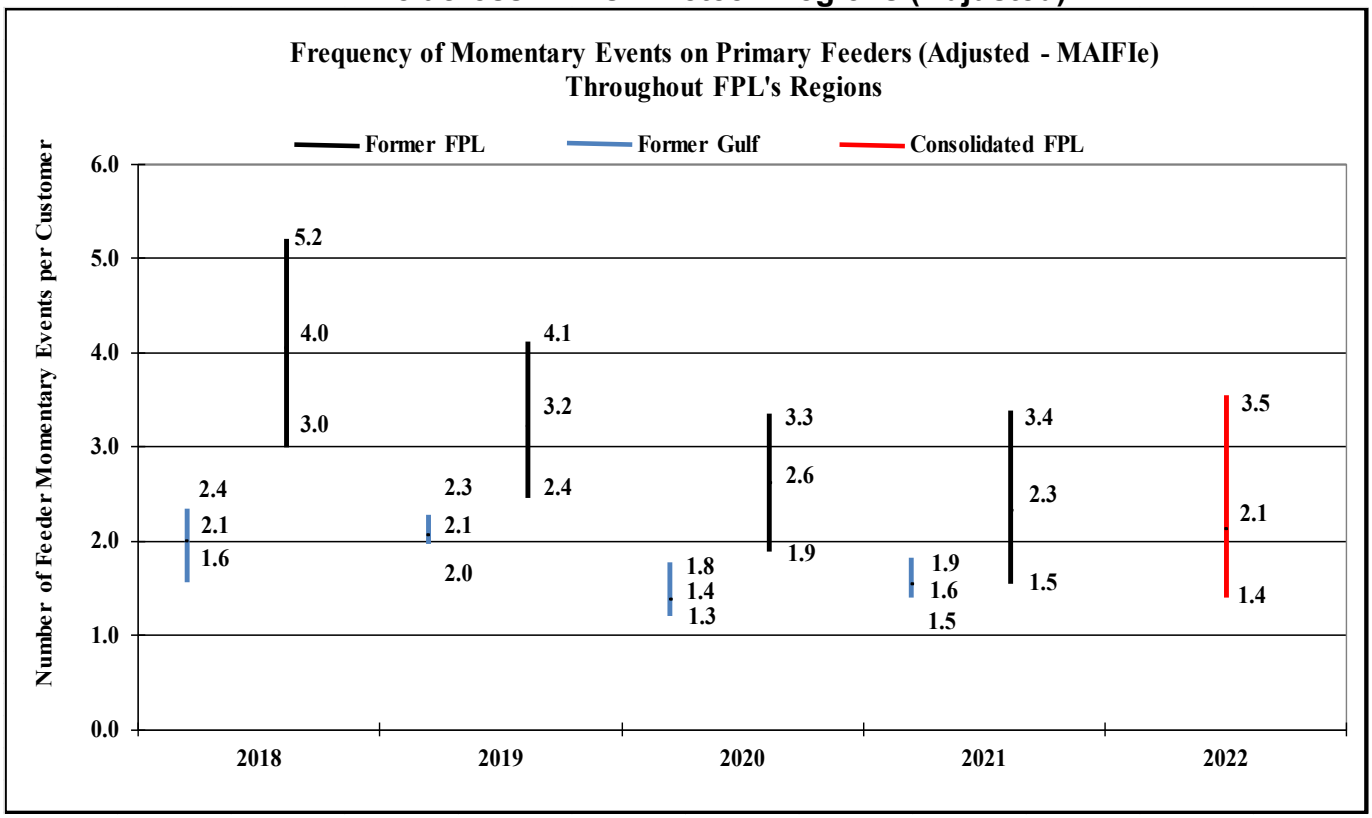
Figure 2-12
FPL's Average Duration of Outages (Adjusted)



Source: FPL's and Gulf's 2018-2022 distribution service reliability reports.

Figure 2-13 is the highest, average, and lowest adjusted MAIFIe recorded across FPL's system. Former FPL's Toledo Blade, West Palm, Boca Raton, and West Dade service areas have experienced the least reliable MAIFIe results of the 16 service areas of Former FPL since 2018. Former FPL's North Broward, Central Dade, and Manasota service areas had the fewest momentary events since 2018. For the Former Gulf's service area, the MAIFIe fluctuated between the three regions. For 2022, the Consolidated FPL results indicated that the Toledo Blade was the region with the highest MAIFIe and Panama City was the region with the lowest MAIFIe. In 2022, FPL's average MAIFI was 2.1 events per customer. The Former FPL's 2021 average MAIFIe was 2.3 events per customer and the Former Gulf's 2021 average MAIFIe was 1.6 events per customers. As a note, FPL calculates MAIFIe differently. Specifically, if a feeder begins in one region and crosses another region, all customers on that feeder are impacted by the MAIFIe event and are counted in the starting region. Therefore, the number of customers per region will be different.

Figure 2-13
MAIFIe across FPL's Nineteen Regions (Adjusted)



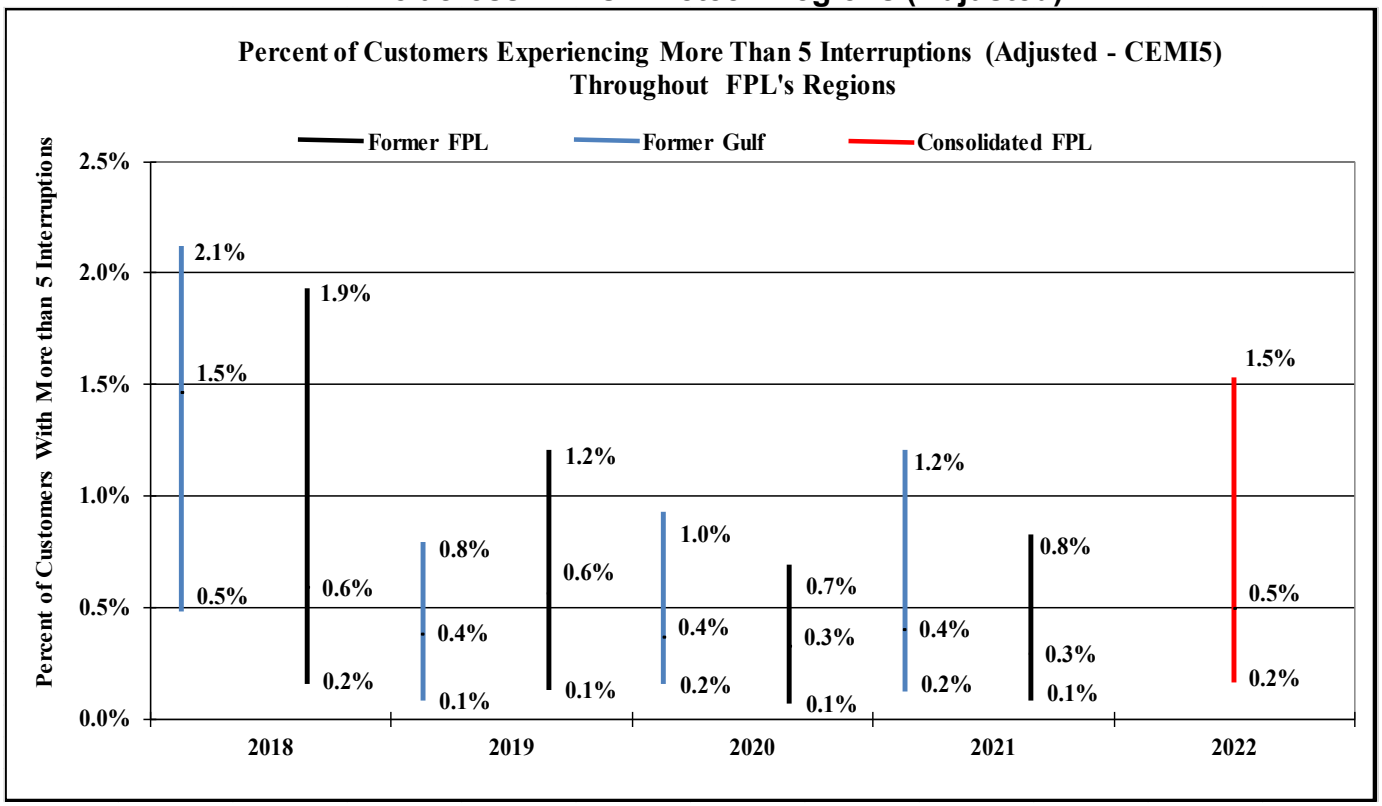
FPL's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

Consolidated FPL	2018	2019	2020	2021	2022
Highest MAIFIe					Toledo Blade
Lowest MAIFIe					Panama City
Former FPL					
Highest MAIFIe	Toledo Blade	West Palm	Boca Raton	West Dade	
Lowest MAIFIe	Central Dade	Manasota	Manasota	North Broward	
Former Gulf					
Highest MAIFIe	Pensacola	Pensacola	Panama City	Fort Walton	
Lowest MAIFIe	Fort Walton	Fort Walton	Pensacola	Pensacola	

Source: FPL's and Gulf's 2018-2022 distribution service reliability reports.

Figure 2-14 shows the highest, average, and lowest adjusted CEMI5. The Former FPL service areas experiencing the highest CEMI5 over the five-year period appear to fluctuate among Brevard, Treasure Coast, Toledo Blade and North Florida. In the Former FPL service area, Manasota, South Broward, Central Dade, and North Broward are reported as having the lowest percentages since 2018. In the Former Gulf service area since 2021, Panama City had the highest CEMI5, and Fort Walton had the lowest CEMI5. In the Consolidated FPL service area for 2022, Central Broward had the highest CEMI5 and West Dade had the lowest CEMI5. FPL's average CEMI5 result for 2022 was 2.1 percent. The Former FPL average CEMI5 for 2021 was 0.3 percent and the Former Gulf average CEMI5 for 2021 was 0.4 percent.

Figure 2-14
CEMI5 across FPL's Nineteen Regions (Adjusted)



FPL's Regions with the Highest and Lowest Adjusted CEMI5 Distribution Reliability Performance by Year

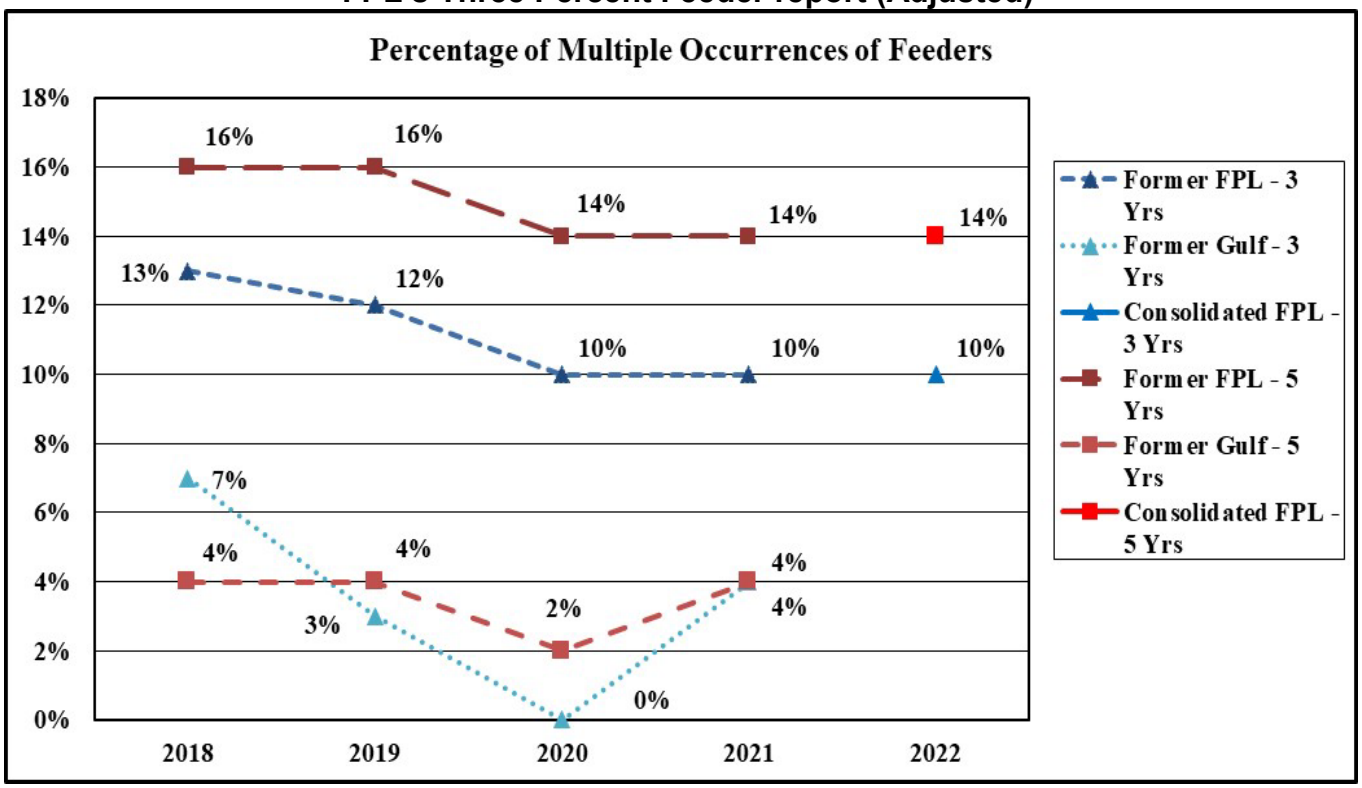
Consolidated FPL	2018	2019	2020	2021	2022
Highest CEMI5					Central Broward
Lowest CEMI5					West Dade
Former FPL					
Highest CEMI5	Toledo Blade	Treasure Coast	North Florida	Brevard	
Lowest CEMI5	South Broward	Central Dade	North Broward	Manasota	
Former Gulf					
Highest CEMI5	Panama City	Panama City	Panama City	Panama City	
Lowest CEMI5	Fort Walton	Fort Walton	Fort Walton	Fort Walton	

Source: FPL's 2017-2021 distribution service reliability reports.

Figure 2-15 is a graphical representation of the percentage of multiple occurrences of FPL's feeders and is derived from The Three Percent Feeder Report, which is a listing of the top three percent of problem feeders reported by the Utility. The fraction of multiple occurrences is calculated from the number of recurrences divided by the number of feeders reported. The consolidated three-year percentage was 10 percent in 2022. In 2021, Former FPL's three-year percentage was 10 percent and Former Gulf's was 4 percent. The consolidated five-year percentage was 14 percent in 2022. In 2021, Former FPL's five-year percentage was 14 percent and Former Gulf's was 4 percent.

Staff notes six feeders were on the Three Percent Feeder Report the last two years. The outages ranged from defective equipment, vegetation, animals, lightning, other weather, and unknown. FPL utilized visual, thermovision, and drone assessments, as well as its CEMI Program to repair feeders. Further, to mitigate future feeder outages, FPL will install automated feeder switches on four feeders in 2022. FPL also reported that in 2022, approximately 140 miles of trimming was performed on five feeders. FPL will continue repairs on the feeders and plans to harden one of the feeders in 2023. Three of the six feeders have already been hardened.

Figure 2-15
FPL's Three Percent Feeder report (Adjusted)

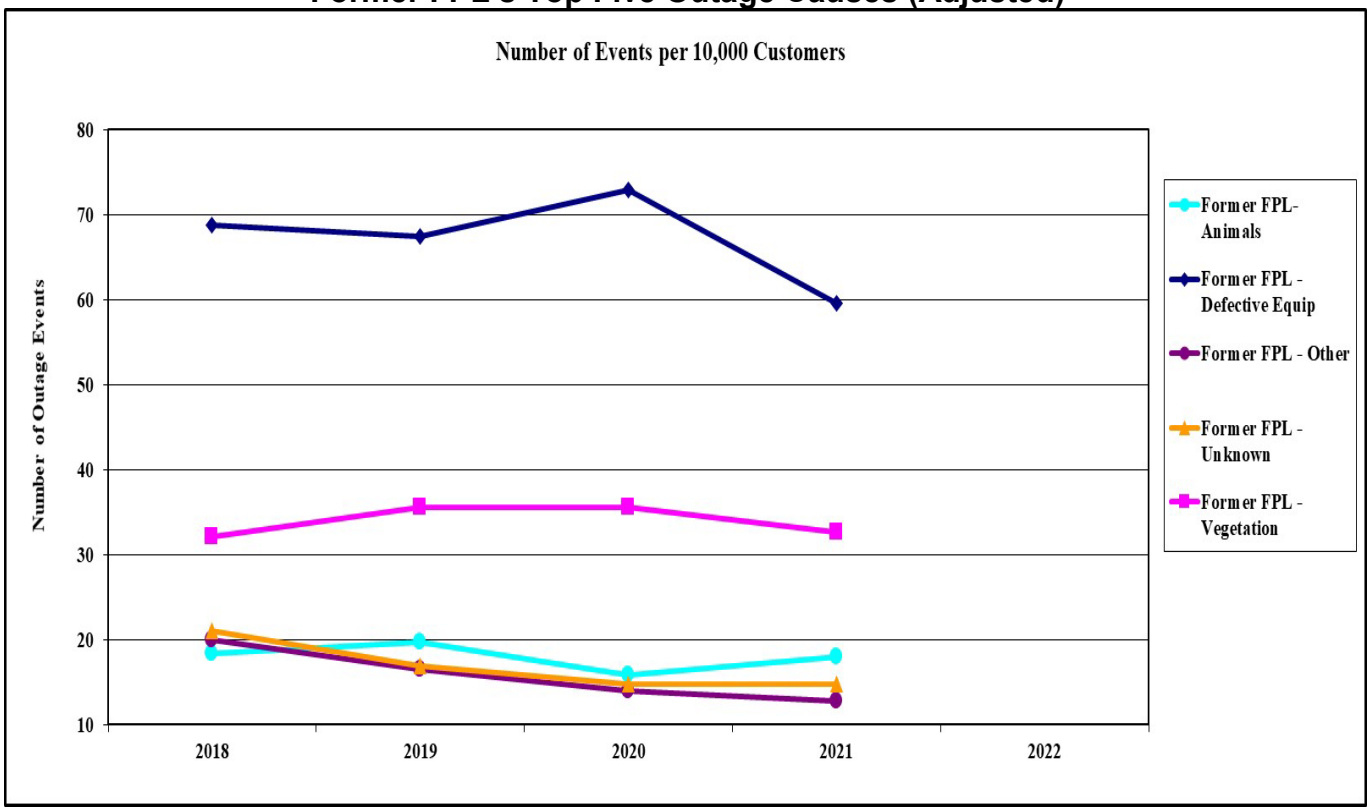


Source: FPL's and Gulf's 2018-2022 distribution service reliability reports.

Figures 2-16, 2-17, and 2-18 depicts the top five causes of outage events on FPL's distribution system normalized to a 10,000-customer base. The graph is based on FPL's adjusted data of the top 10 causes of outage events. For 2022, the five top causes of outage events included "Defective Equipment" (35 percent), "Vegetation" (19 percent), "Animals" (11 percent), "Unknown Causes" (10 percent), and "Other Causes" (10 percent).

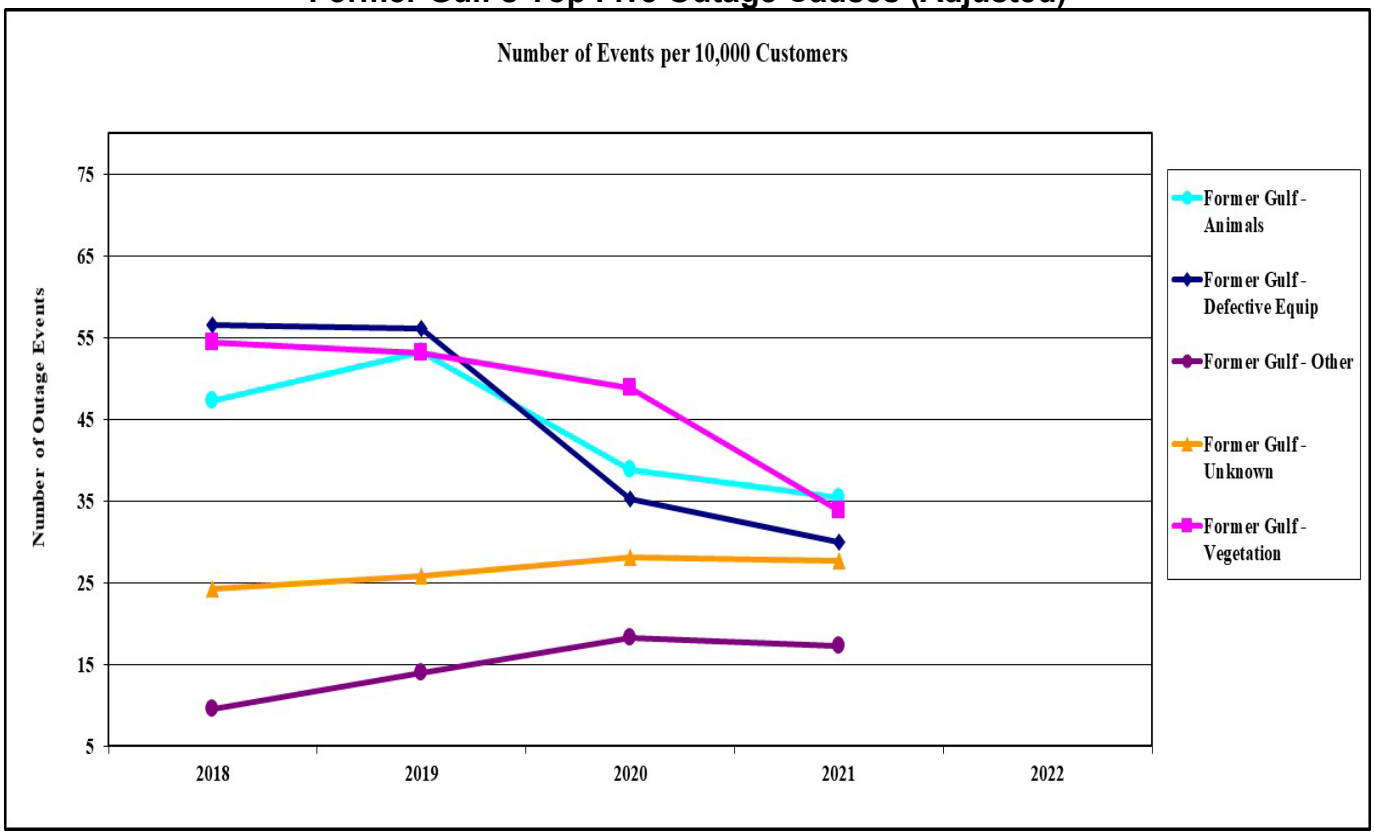
Annually, FPL evaluates its current reliability remediation programs and verifies the program's need and/or existence. In addition, FPL proposes new reliability remediation programs to improve its reliability performance concentrating on the highest cause codes and those cause codes that have shown trends needing attention. FPL has 16 reliability programs listed for its 2023 budget. The programs include; distribution automation, system expansion, reducing the number of direct buried feeder and lateral cables failures, reducing the number of submarine feeder cables failures, and replacing oil circuit reclosers with electronic reclosers.

Figure 2-16
Former FPL's Top Five Outage Causes (Adjusted)



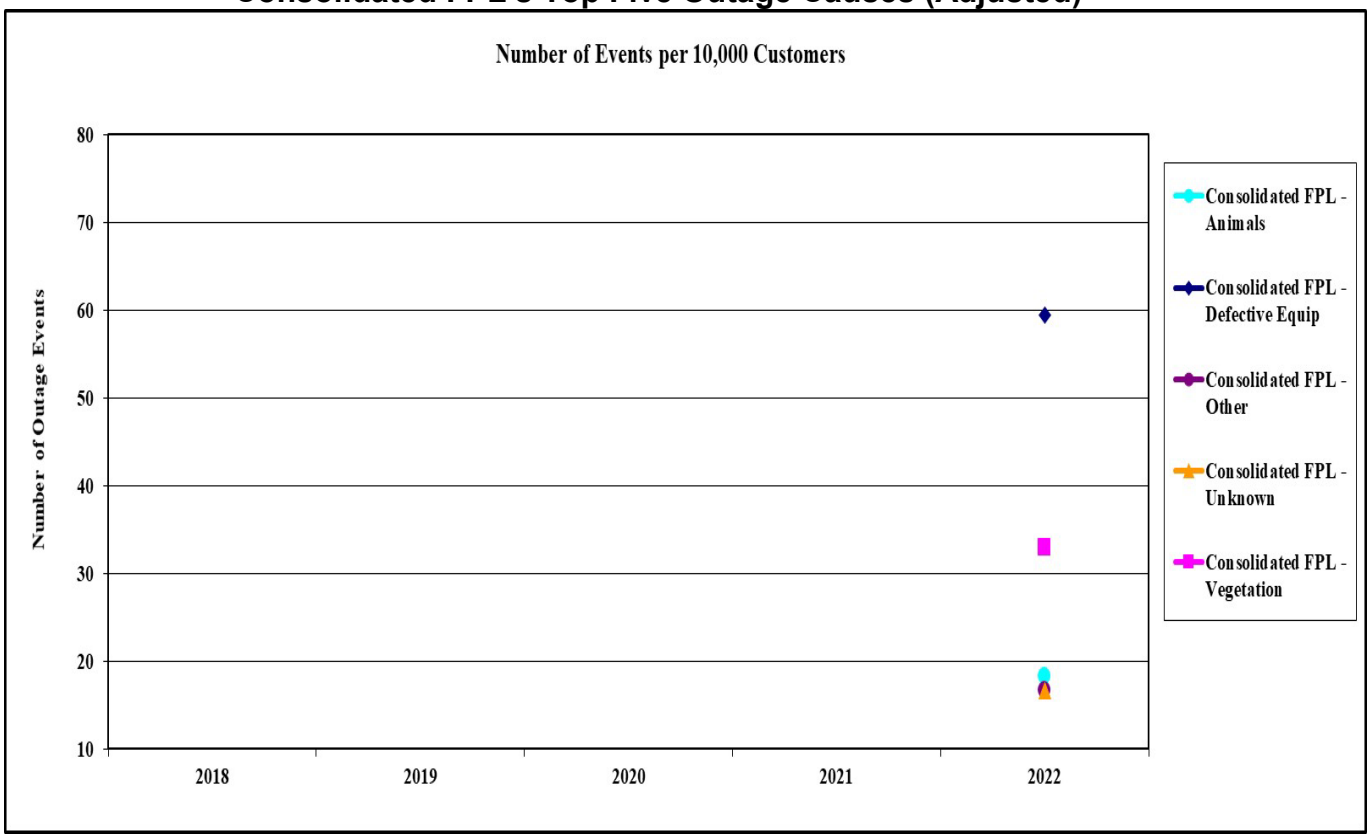
Source: FPL's 2018-2021 distribution service reliability reports.

Figure 2-17
Former Gulf's Top Five Outage Causes (Adjusted)



Source: Gulf's 2018-2021 distribution service reliability reports.

Figure 2-18
Consolidated FPL's Top Five Outage Causes (Adjusted)



Source: FPL's 2022 distribution service reliability report.

Observations: FPL's Adjusted Data

In 2022, FPL's overall adjusted SAIDI was 46.minutes. In 2021, the Former FPL's average SAIDI was 44 minutes and the Former Gulf's average SAIDI was 39 minutes. In 2022, FPL's SAIFI was 0.74 interruptions. The Former FPL's 2021 average SAIFI was 0.70 interruptions and the Former Gulf's 2021 average SAIFI was 0.63 interruptions. FPL's CAIDI was 62 minutes in 2022. In 2021, the Former FPL's average CAIDI was also 62 minutes and the Former Gulf's average CAIDI was 61 minutes. The 2022 MAIFI for FPL was 2.1 events. In 2021, the Former FPL's MAIFIe was 2.3 events per customers and the Former Gulf's MAIFIe was 1.6 events per customers. , which was a decrease from the 2021 Former FPL MAIFI and an increase from 2021 Former Gulf MAIFI. FPL's CEMI5 was 0.5 percent in 2022. The Former FPL's 2021 CEMI5 was 0.3 percent and the Former Gulf's 2021 CEMI5 was 0.4 percent. The highest regions listed for SAIDI, SAIFI, CAIDI and CEMI5 were only listed once for the five-year period. The highest region for MAIFI was listed twice, once in 2018 and again in 2022. FPL explains that it evaluates its current reliability programs annually to verify the program's need and/or existence. In addition, FPL proposes new reliability programs to improve its reliability performance concentrating on the highest cause codes and those cause codes that have shown trends needing attention.

In 2022, Toledo Blade was the highest region in three of the five indices, which FPL attributed to saturated soil, weakened trees, and loose connections in the western and central parts of Florida resulting from Hurricanes Ian, Nicole, and subsequent storms. Toledo Blade also experienced an increase in interruptions due to a cold front that passed through in early 2022 and increased lightning strikes in May and September 2022. FPL reported that these conditions directly impacted the reliability indices for Toledo Blade.

FPL stated that in 2022 the following actions were performed in the Toledo Blade region:

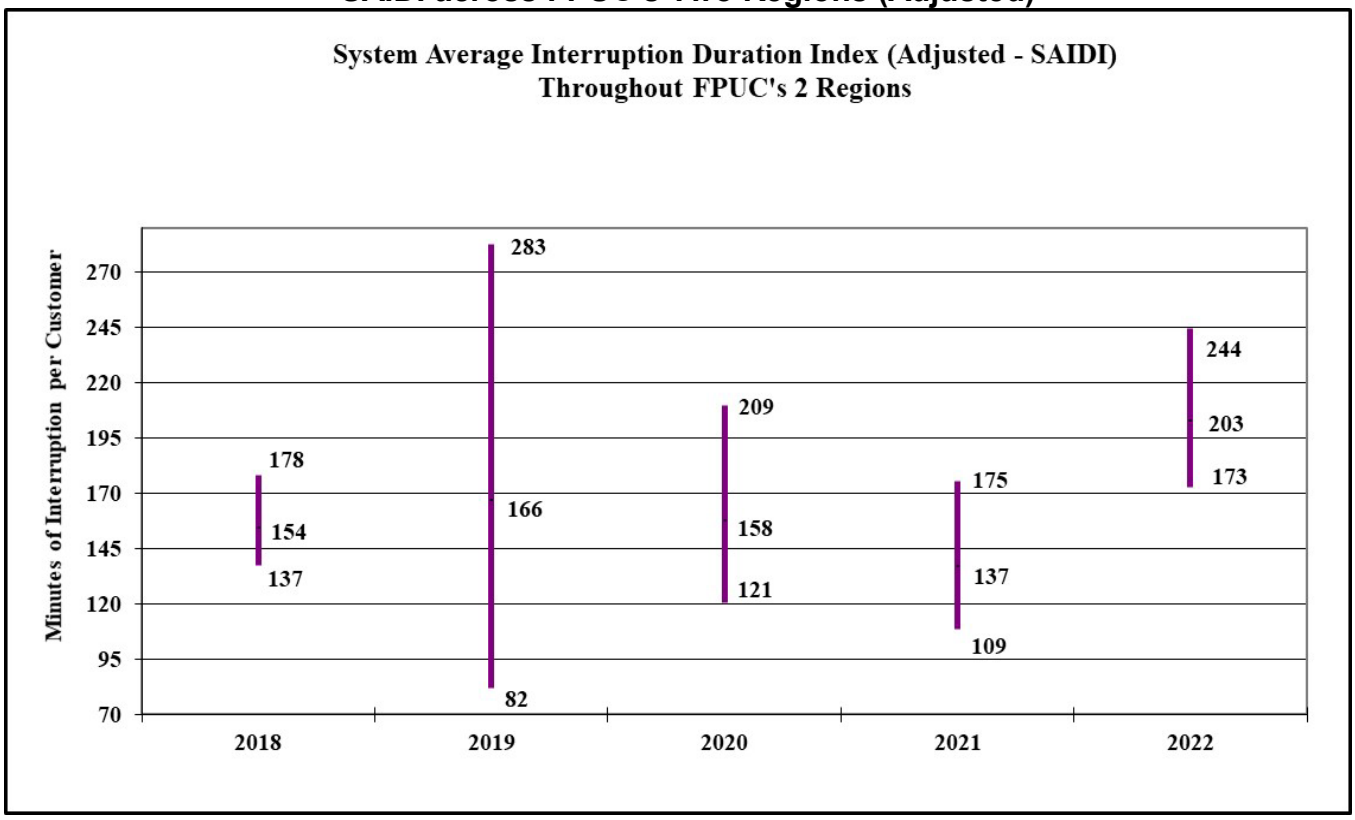
- Vegetation trimming on 392 miles (35 percent) of overhead primary lines, 644 miles (57 percent) mid-cycle trimming, and 845 lateral miles were trimmed
- Commissioned 35 automated feeder switches
- Addressed 23 feeders under the reliability programs
- Completed 36 Immediate Response Jobs (Assess overhead/hybrid feeders visually and perform repairs from the findings)
- Completed 18 CEMI Program Jobs (Conducts trigger based post outage investigation on feeders, which includes thermal and visual assessments, and performs repairs from the findings)
- Completed 113 visual feeder owner assessments

Florida Public Utilities Company: Adjusted Data

FPUC has two electric divisions, the Northwest division, referred to as Marianna (NW) and the Northeast division, referred to as Fernandina Beach (NE). Each division's results is reported separately because the two divisions are 250 miles apart and are not directly interconnected. Although the divisions may supply resources to support one another during emergencies, each division has diverse situations to contend with, making it difficult to compare the division's results and form a conclusion as to response and restoration time.

Figure 2-19 shows the highest, average, and lowest adjusted SAIDI values recorded by FPUC's system. The data shows the average SAIDI index is trending upward for the five-year period of 2018 to 2022 and there was a 48 percent increase from 2021 to 2022.

Figure 2-19
SAIDI across FPUC's Two Regions (Adjusted)



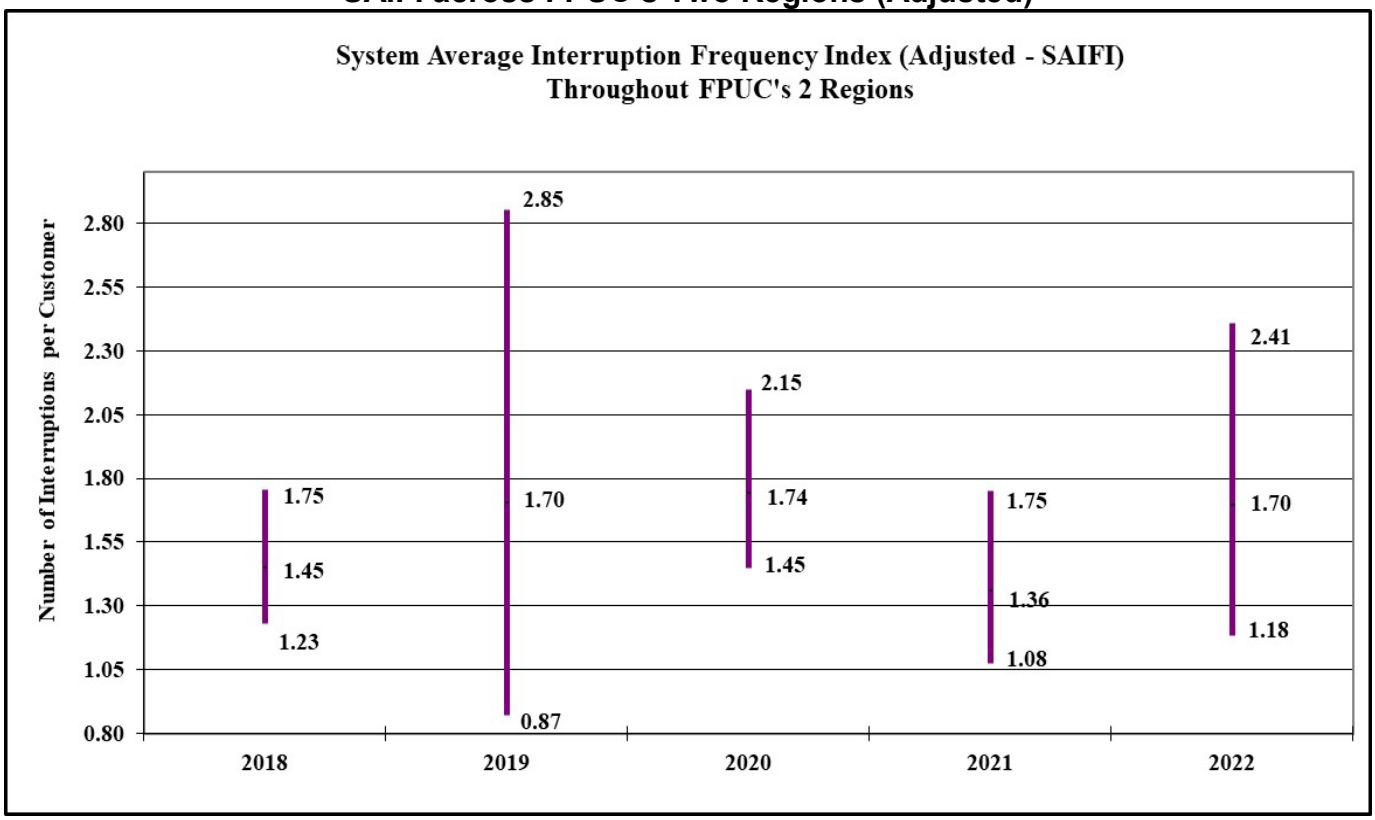
FPUC's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2018	2019	2020	2021	2022
Highest SAIDI	Marianna (NW)	Marianna (NW)	Marianna (NW)	Marianna (NW)	Marianna (NW)
Lowest SAIDI	Fernandina(NE)	Fernandina(NE)	Fernandina(NE)	Fernandina(NE)	Fernandina(NE)

Source: FPUC's 2018-2022 distribution service reliability reports.

Figure 2-20 shows the adjusted SAIFI across FPUC's two divisions. The data depicts a 25 percent increase in the 2022 average SAIFI reliability index from 2021. The data for the minimum, average and maximum SAIFI values are all trending upward over the five-year period of 2018 to 2022.

Figure 2-20
SAIFI across FPUC's Two Regions (Adjusted)



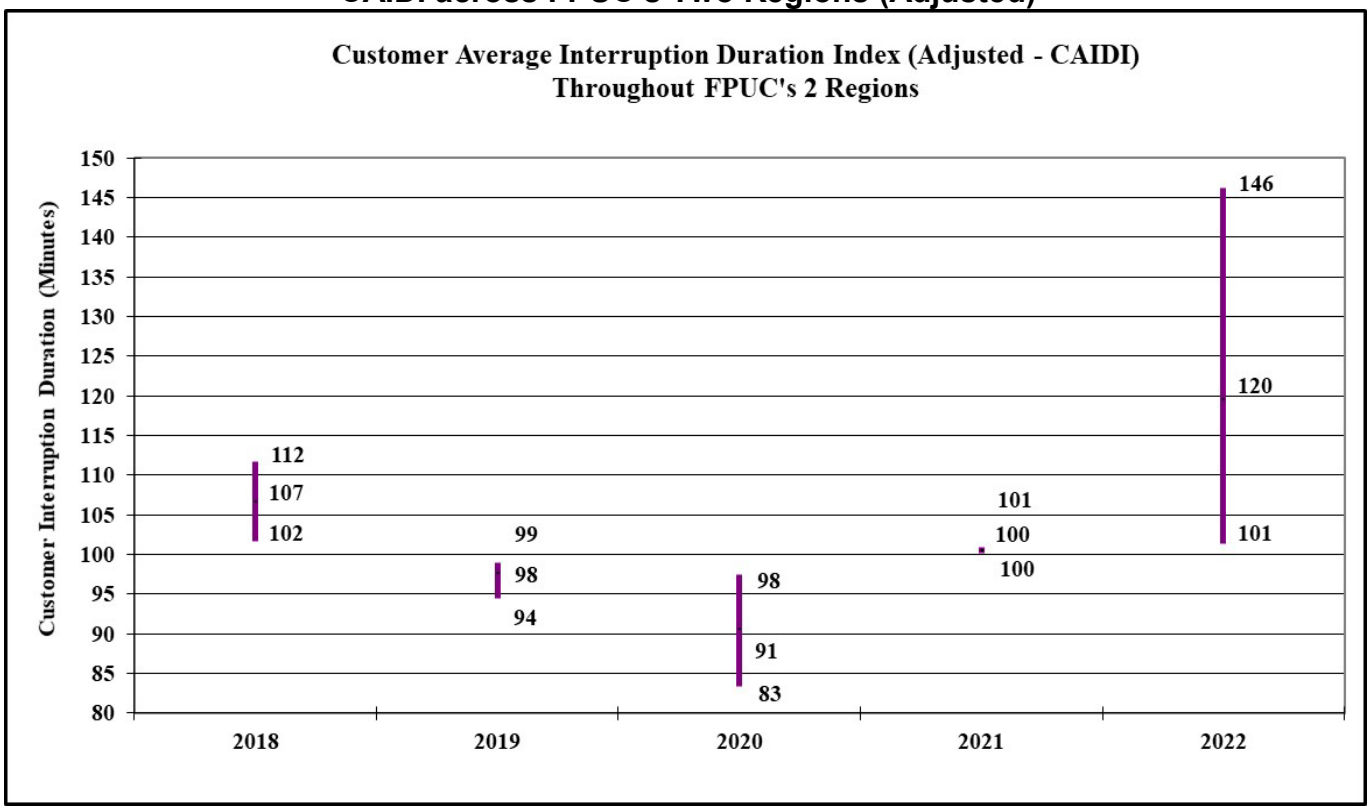
FPUC's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2018	2019	2020	2021	2022
Highest SAIFI	Marianna (NW)	Marianna (NW)	Marianna (NW)	Marianna (NW)	Marianna (NW)
Lowest SAIFI	Fernandina(NE)	Fernandina(NE)	Fernandina(NE)	Fernandina(NE)	Fernandina(NE)

Source: FPUC's 2018-2022 distribution service reliability reports.

Figure 2-21 shows the highest, average, and lowest adjusted CAIDI values across FPUC's system. FPUC's data shows the average CAIDI value increased by 20 percent for 2022 (120 minutes) when compared to 2021 (100 minutes). For the past five years, the minimum, the maximum, and the average CAIDI values are trending upward.

Figure 2-21
CAIDI across FPUC's Two Regions (Adjusted)



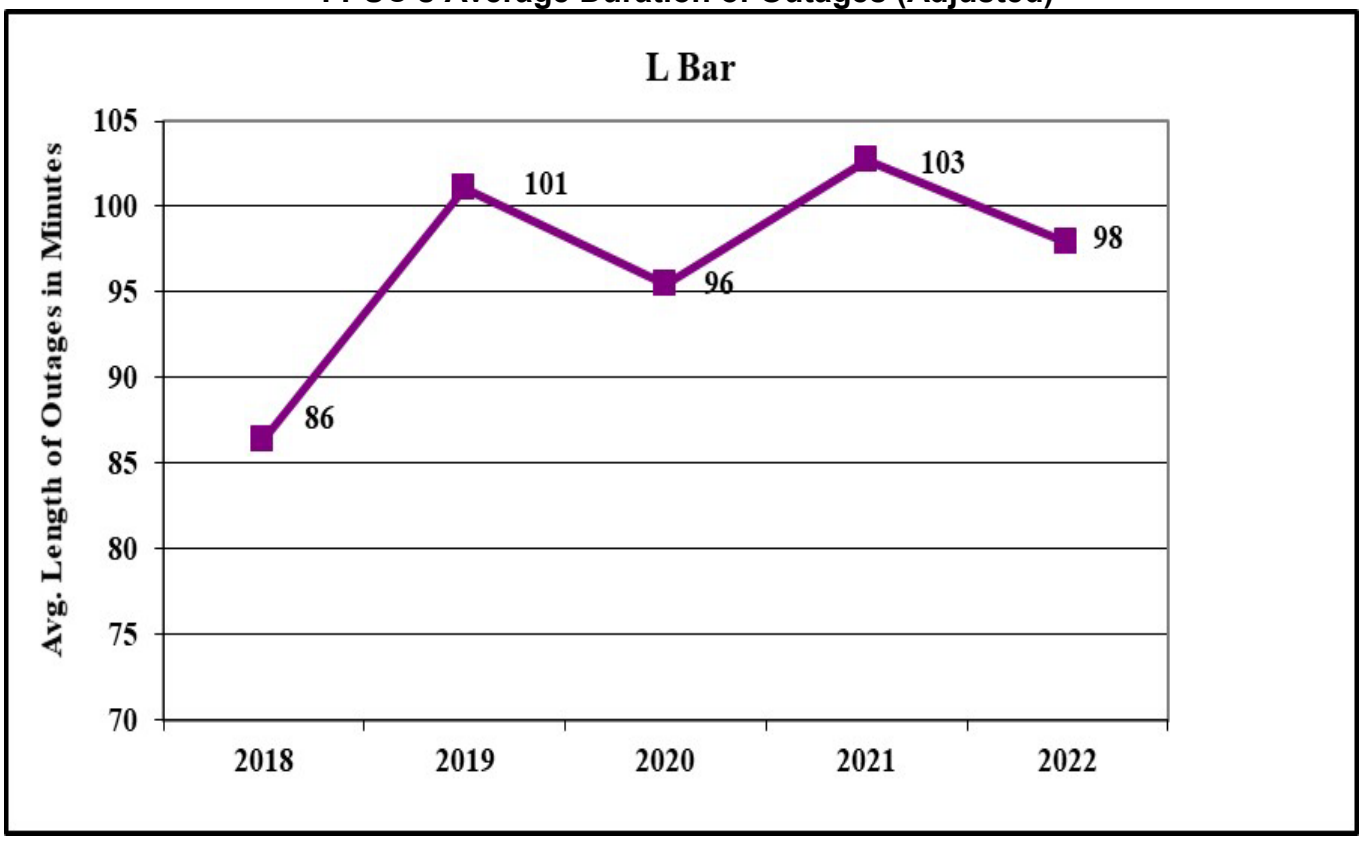
FPUC's Regions with the Highest and Lowest Adjusted CAIDI Distribution Reliability Performance by Year

	2018	2019	2020	2021	2022
Highest CAIDI	Fernandina(NE)	Marianna (NW)	Marianna (NW)	Fernandina(NE)	Fernandina(NE)
Lowest CAIDI	Marianna (NW)	Fernandina(NE)	Fernandina(NE)	Marianna (NW)	Marianna (NW)

Source: FPUC's 2018-2022 distribution service reliability reports.

Figure 2-22 is the average length of time FPUC spends recovering from outage events (adjusted L-Bar). There was a 5 percent decrease in the L-Bar value from 2021 to 2022. However, the data for the five-year period of 2018 to 2022 suggests that the L-Bar index is trending upward indicating FPUC is taking additional time to restore service after an outage event.

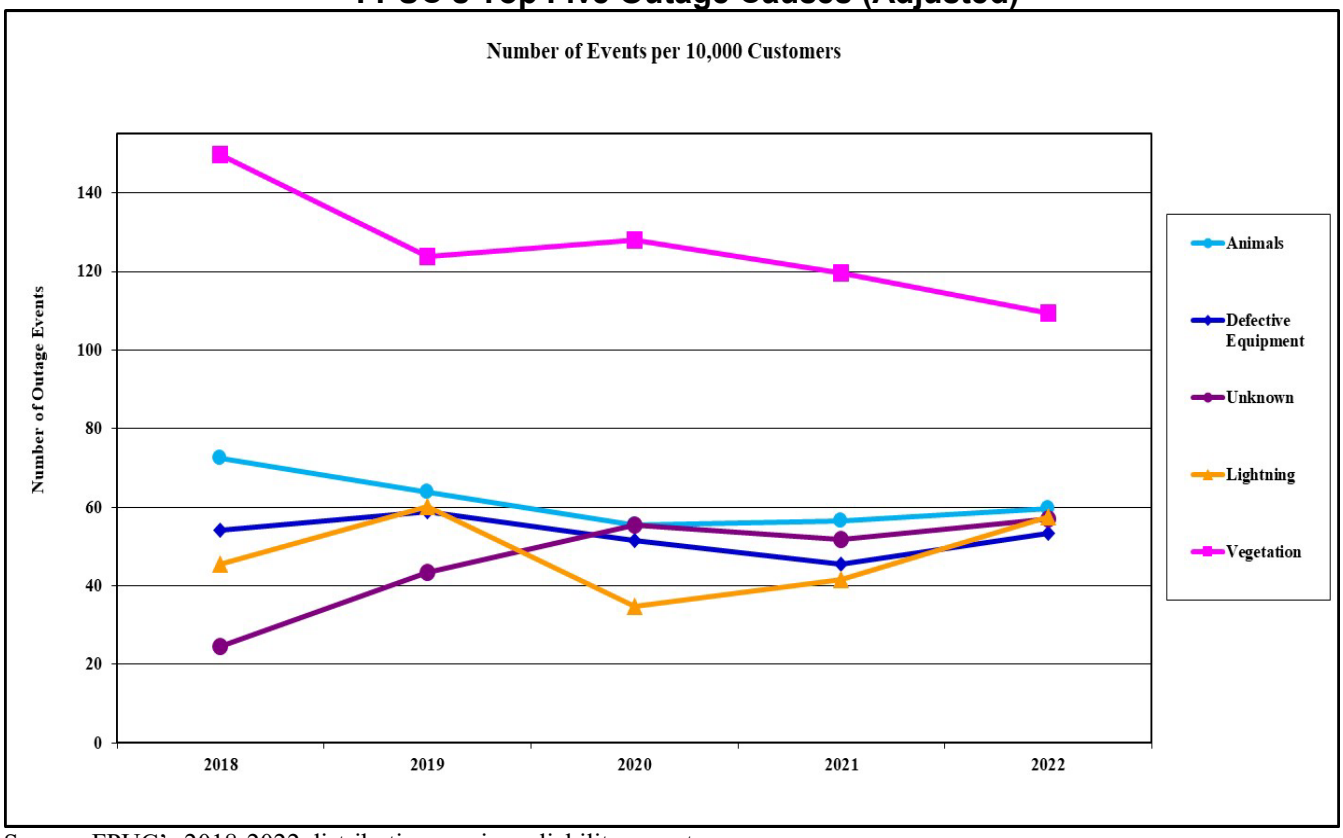
Figure 2-22
FPUC's Average Duration of Outages (Adjusted)



Source: FPUC's 2018-2022 distribution service reliability reports.

Figure 2-23 shows the top five causes of outage events on FPUC's distribution system normalized to a 10,000-customer base. The figure is based on FPUC's adjusted data of the top 10 causes of outages. For 2022, the top five causes of outage events were "Vegetation" (30 percent), "Animals" (16 percent), "Lightning" (16 percent), "Unknown" (15 percent), and "Defective Equipment" (14 percent). These five factors represent 91 percent of the total adjusted outage causes in 2022. The "Vegetation" category is trending downward with a 9 percent decrease from 2021 to 2022. The outage causes by "Animals" is also trending downward. The causes by "Lightning" and "Unknown" are trending upward. "Defective Equipment" is trending downwards notwithstanding an 18 percent increase from 2021 to 2022. The "Lightning" category had a 38 percent increase and the "Unknown" category increased 10 percent during the same time period. The "Animals" category caused outages had a 6 percent increase from 2021 to 2022. In addition, FPUC will continue to install animal guards on overhead transformer bushings and continue to review other overhead devices and configurations where these guards could prevent animal access and associated equipment damage.

Figure 2-23
FPUC's Top Five Outage Causes (Adjusted)



Source: FPUC's 2018-2022 distribution service reliability reports.

FPUC filed a Three Percent Feeder Report listing the top 3 percent of feeders with the outage events for 2022. FPUC has so few feeders that the data in the report has not been statistically significant. There were two feeders on the Three Percent Feeder Report, one in each division. One of these feeders was listed on the report for 2020 and 2022. The other feeder was listed on the report only in 2022.

Observations: FPUC's Adjusted Data

The CAIDI average index has increased compared to 2021. For the five-year period of 2018 to 2022, the average index for SAIDI, SAIFI, CAIDI, and L-Bar are trending upward. FPUC reported that it continues to invest in its storm hardening initiatives, infrastructure improvements, and system upgrades in both divisions. FPUC believes this will generate reliability improvements in the future. The Utility reviewed its five-year reliability indicator trends, averages and outage causes, and determined the reliability indexes continue to be significantly influenced by weather and its small territory size. In addition to the weather, FPUC reported programming issues with some of its TripSaver II reclosers, causing outages. FPUC took the affective TripSaver reclosers offline and reprogrammed them. To further mitigate coordination protection issues, FPUC plans to complete a system protection coordination study in its NE division in 2023.

FPUC reported that its focus in vegetation management helped reduce the number of vegetation related outages from 2021 to 2022. However, FPUC indicated that it is still experiencing the lingering effects of Hurricane Michael, which have extended restoration efforts. FPUC believes that once they are fully transitioned to a four-year feeder and lateral trimming cycle, reliability improvements in vegetation outages will continue. The Commission approved FPUC's four-year trim cycle as part of its Storm Protection Plan.[6]

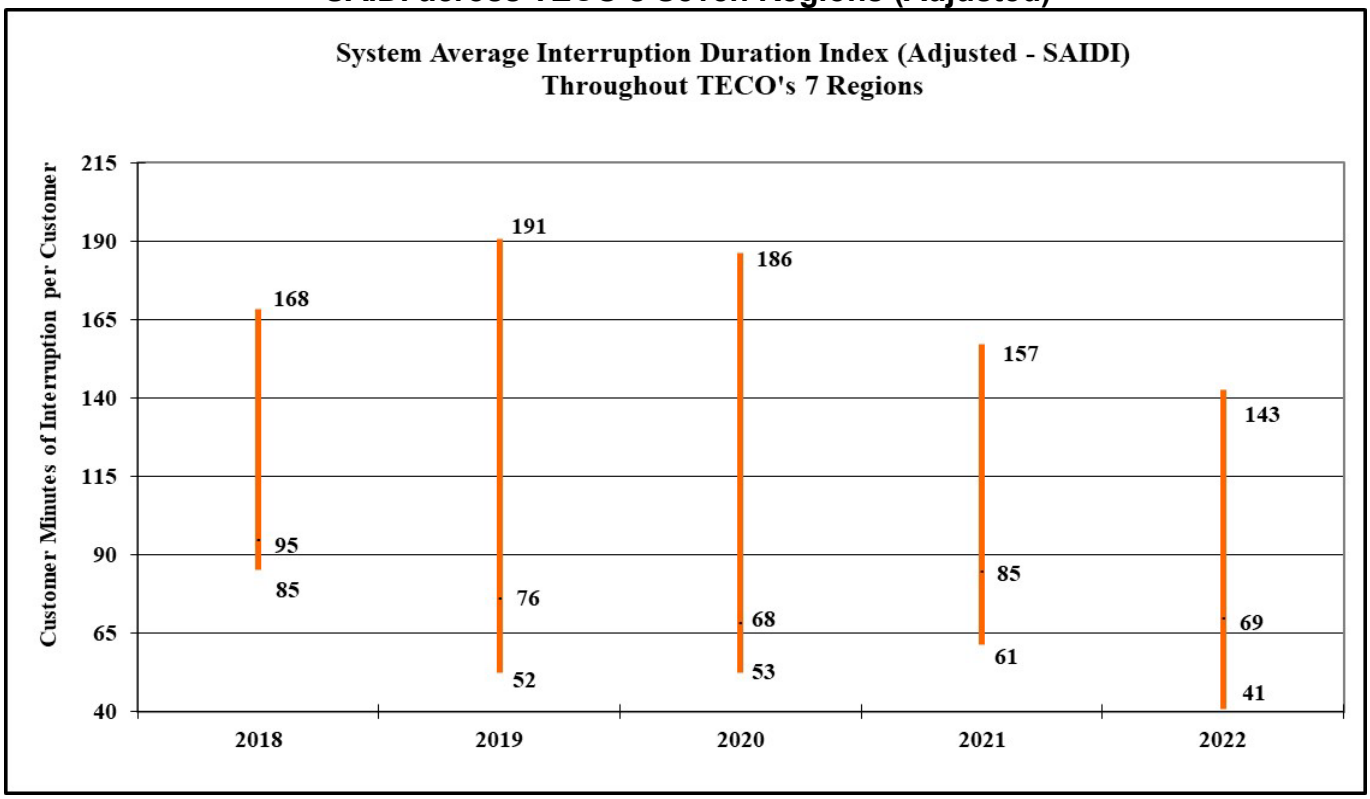
Because of its size, FPUC is not required to report MAIFIe or CEMI5 pursuant to Rule 25-6.0455, F.A.C. The cost for the information systems necessary to measure MAIFIe and CEMI5 has a higher impact on small utilities compared to large utilities on a per customer basis.

[6] Docket No. 20220049-EI, *In re: Review of Storm Protection Plan, pursuant to Rule 25-6030, F.A.C. (FPUC)*

Tampa Electric Company: Adjusted Data

Figure 2-24 shows the adjusted SAIDI values recorded by TECO's system. Two of the seven TECO regions had declining performance in SAIDI during 2022. The Central region had the lowest SAIDI performance results as the Dade City region had the highest. The lowest SAIDI index for the seven regions appears to be trending downward. The average SAIDI index decreased 19 percent from 2021 to 2022. The average SAIDI index appears to be trending downward. The Eastern, South Hillsborough, and Central regions recorded the lowest SAIDI indices for the five-year period. Dade City, Plant City, and South Hillsborough regions have the fewest customers and represent the most rural, lowest customer density per line-mile in comparison to the other four TECO regions.

Figure 2-24
SAIDI across TECO's Seven Regions (Adjusted)



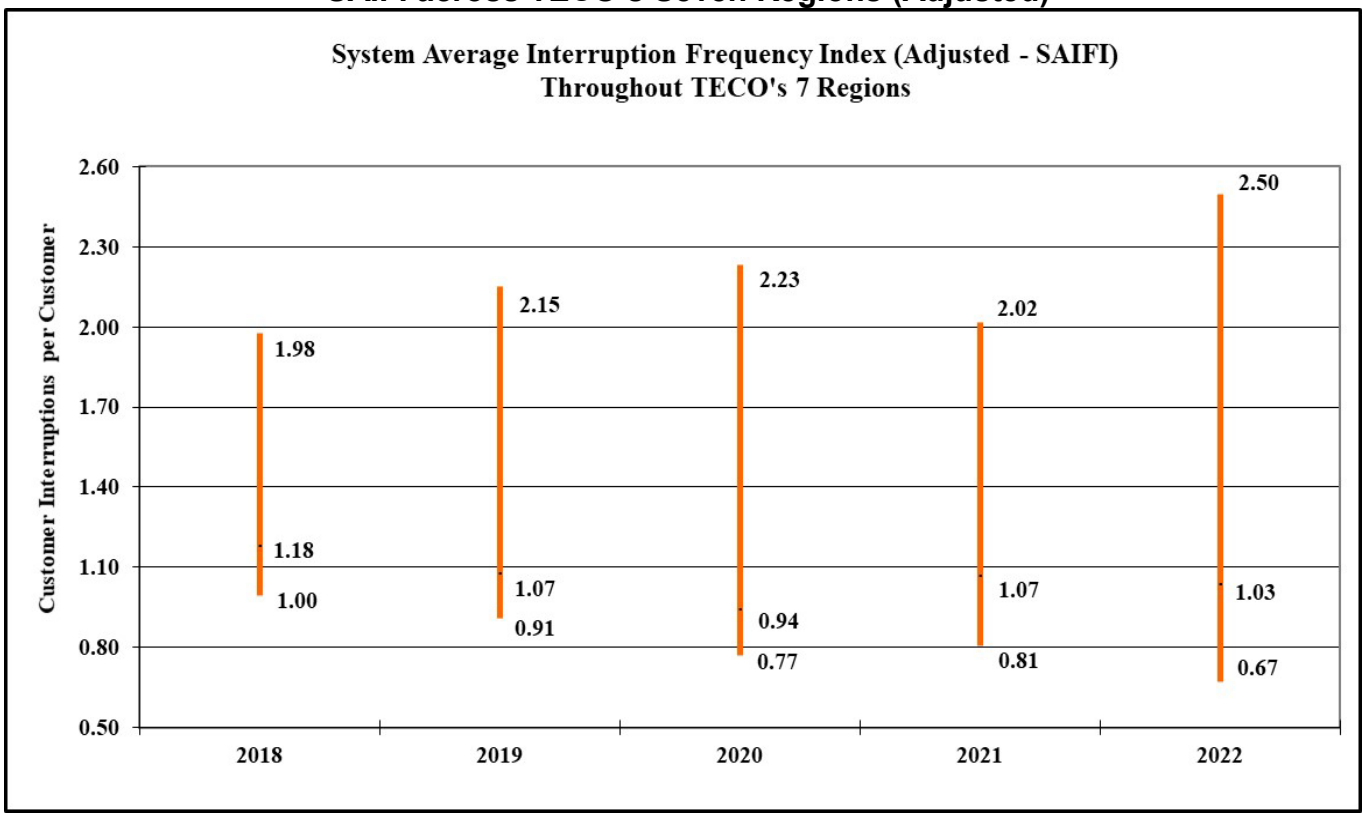
TECO's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2018	2019	2020	2021	2022
Highest SAIDI	Dade City	Dade City	Dade City	Plant City	Dade City
Lowest SAIDI	Eastern	South Hillsborough	South Hillsborough	South Hillsborough	Central

Source: TECO's 2018-2022 distribution service reliability reports.

Figure 2-25 illustrates TECO's adjusted frequency of interruptions per customer reported by the system. TECO's data represent a 4 percent decrease in the SAIFI average from 1.07 interruptions in 2021 to 1.03 interruptions in 2022. TECO's Dade City region continues to have the highest frequency of service interruptions when compared to TECO's other regions. The maximum SAIFI is trending upward as the average and minimum SAIFI are trending downward.

Figure 2-25
SAIFI across TECO's Seven Regions (Adjusted)



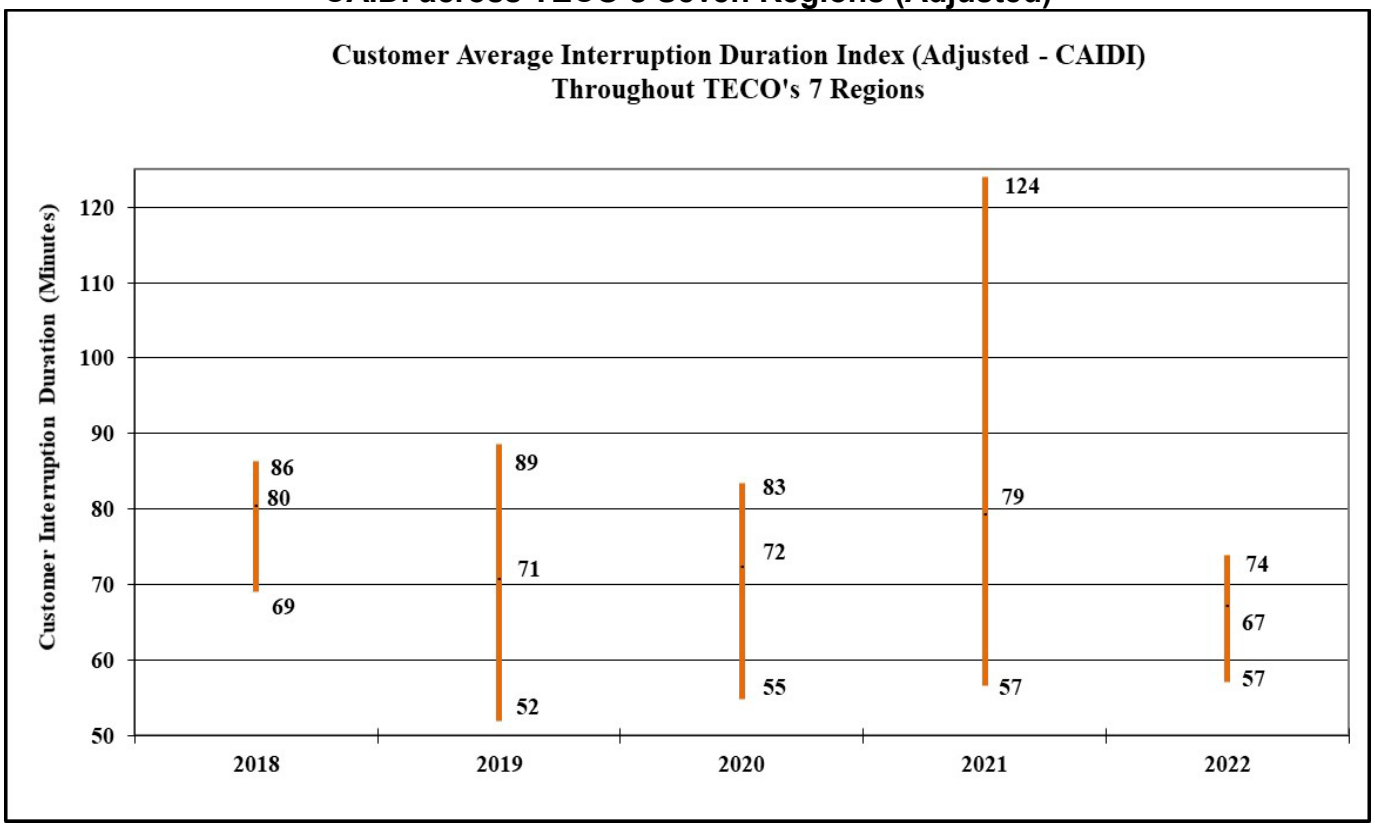
TECO's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2018	2019	2020	2021	2022
Highest SAIFI	Dade City	Dade City	Dade City	Dade City	Dade City
Lowest SAIFI	Eastern	Central	Central	Central	Central

Source: TECO's 2018-2022 distribution service reliability reports.

Figure 2-26 charts the length of time that a typical TECO customer experiences an outage, which is known as CAIDI. The highest CAIDI minutes appear to be confined to the Dade City, Winter Haven, and Western regions. Dade City and South Hillsborough regions have had the lowest (best) results for the last five years. The average CAIDI is trending downward at this time suggesting TECO's customers are experiencing shorter outages, and there was a 15 percent decrease in the average CAIDI when comparing 2021 to 2022.

Figure 2-26
CAIDI across TECO's Seven Regions (Adjusted)



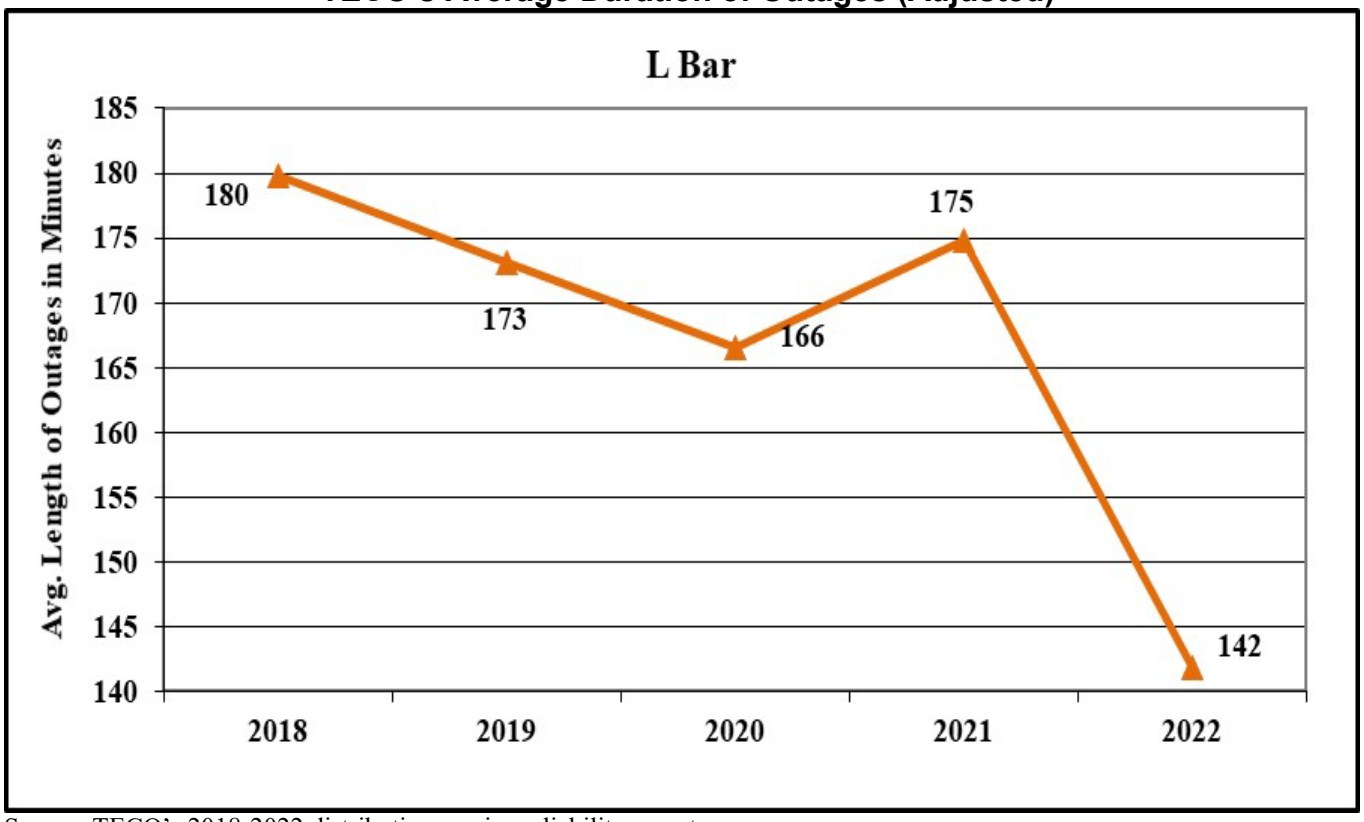
TECO's Regions with the Highest and Lowest Adjusted CAIDI Distribution Reliability Performance by Year

	2018	2019	2020	2021	2022
Highest CAIDI	Western	Dade City	Dade City	Winter Haven	Western
Lowest CAIDI	South Hillsborough	South Hillsborough	South Hillsborough	South Hillsborough	Dade City

Source: TECO's 2018-2022 distribution service reliability reports.

Figure 2-27 denotes a 19 percent decrease in outage durations for the period from 2021 to 2022 for TECO. The average length of time TECO spends restoring service to its customers affected by outage events, excluding hurricanes and other allowable excluded outage events is shown in the L-Bar index. The L-Bar index appears to trend downward for the five-year period of 2018 to 2022, suggesting shorter restoration times.

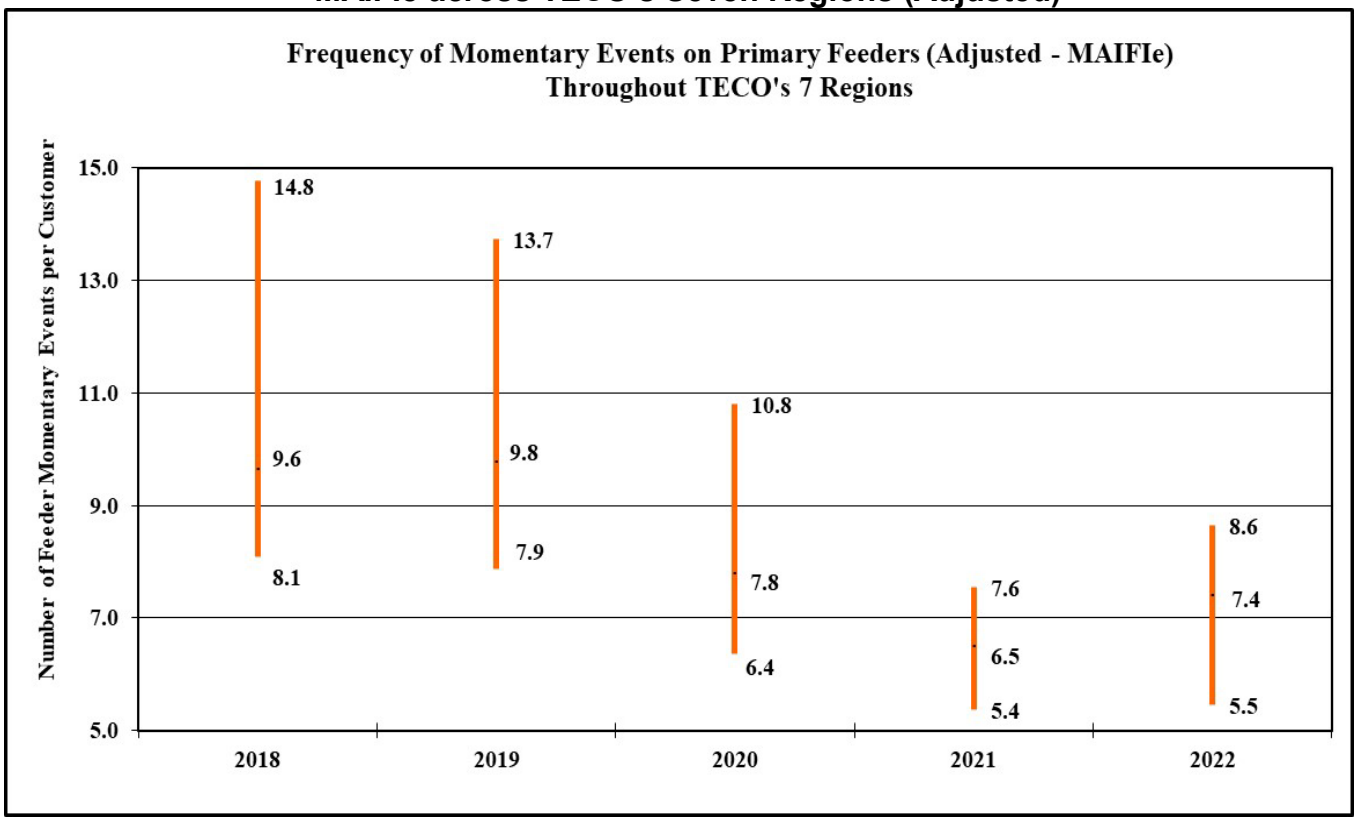
Figure 2-27
TECO's Average Duration of Outages (Adjusted)



Source: TECO's 2018-2022 distribution service reliability reports.

Figure 2-28 illustrates TECO's number of momentary events on primary circuits per customer recorded across its system. In 2022, the MAIFIe performance declined over the 2021 results in all regions. The average MAIFIe increased by 14 percent from 2021 to 2022. Figure 2-28 also indicates that the average MAIFIe is trending downward, which suggests an improvement in performance over the five-year period of 2018 to 2022.

Figure 2-28
MAIFIe across TECO's Seven Regions (Adjusted)



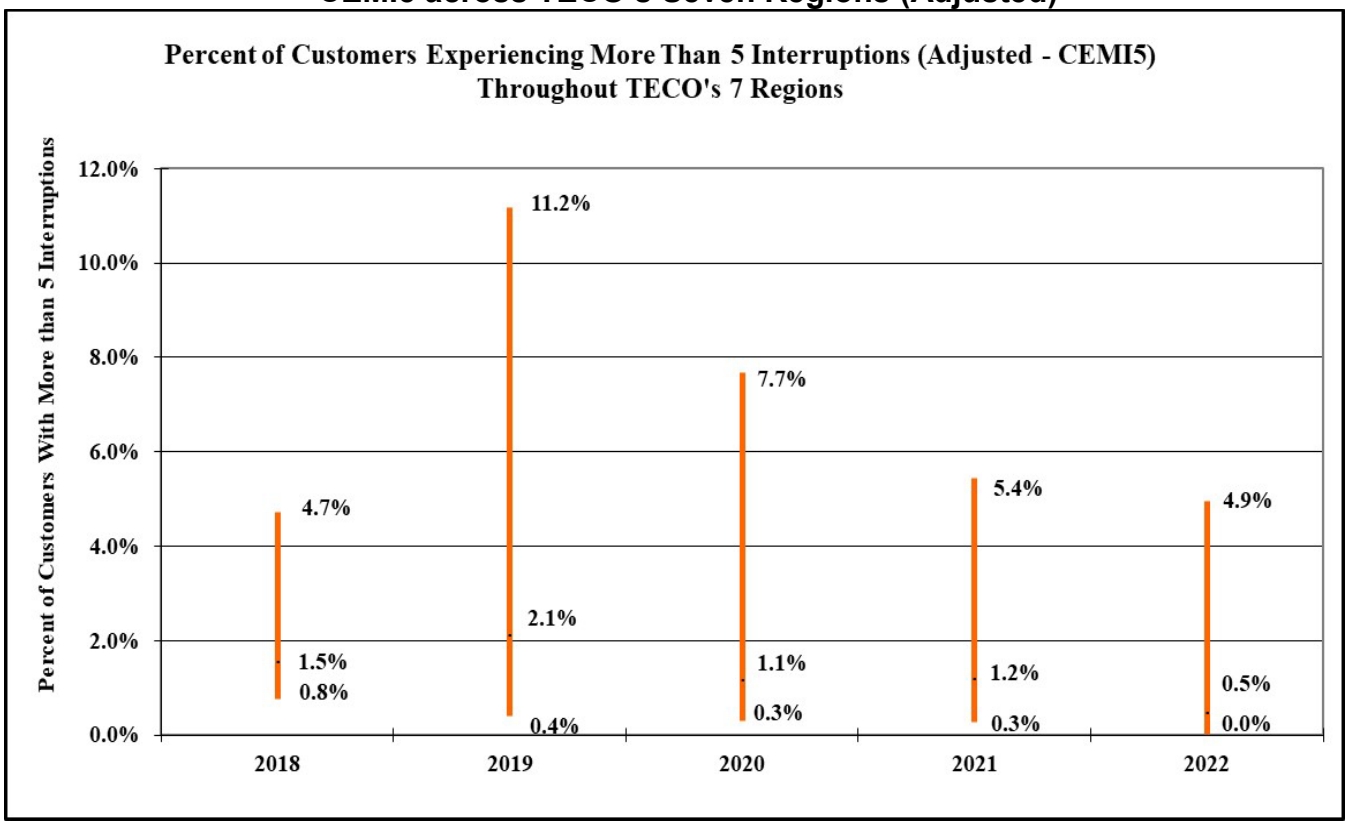
TECO's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

	2018	2019	2020	2021	2022
Highest MAIFIe	Dade City	Plant City	Plant City	Western	Dade City
Lowest MAIFIe	Central	Central	Central	Central	Central

Source: TECO's 2018-2022 distribution service reliability reports.

Figure 2-29 indicates that the percent of TECO's customers experiencing more than five interruptions. Five of the seven regions in TECO's territory experienced a decrease in the CEMI5 results for 2022. Dade City reported the highest CEMI5 percentage for 2022. With TECO's results for this index varying for the past five years, the average CEMI5 index appears to be trending downward, with a 58 percent decrease in the average CEMI5 index from 2021 to 2022.

Figure 2-29
CEMI5 across TECO's Seven Regions (Adjusted)



TECO's Regions with the Highest and Lowest Adjusted CEMI5 Distribution Reliability Performance by Year

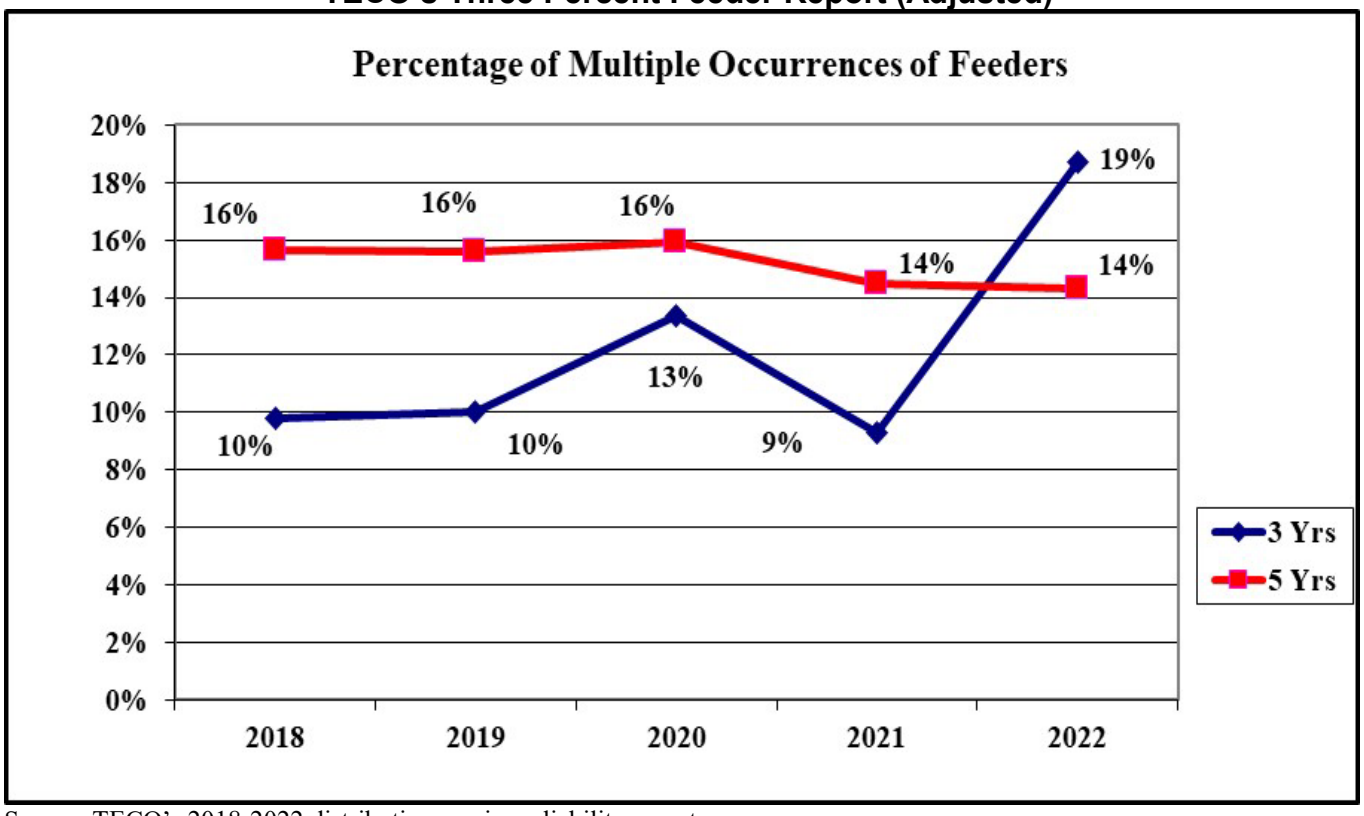
	2018	2019	2020	2021	2022
Highest CEMI5	Dade City	Dade City	Dade City	Plant City	Dade City
Lowest CEMI5	Eastern	Winter Haven	Central	Western	Central

Source: TECO's 2018-2022 distribution service reliability reports.

Figure 2-30 represents an analysis of TECO's top 3 percent of problem feeders that have reoccurred (appeared on the Three Percent Feeder Report) on a five-year and three-year basis. The graph is developed using the number of recurrences divided by the number of feeders reported. The five-year average of outages per feeder stayed the same from 2021 to 2022. The three-year average of outages had an increase from 9 percent in 2021 to 19 percent in 2022. The five-year average of outages per feeder is trending downward as the three-year average of outages is trending upward for the five-year period of 2018 to 2022.

Staff notes that there were seven feeders on the Three Percent Feeder Report for the last two years consecutively. The causes for the outages reported for these feeders varied from damaged equipment, vegetation, weather, vehicles, pole fire, and lightning. Damaged equipment was repaired or replaced, poles were replaced, and trees and vegetation were trimmed in 2022. TECO stated that it will continue to monitor circuit outage performance as part of its daily and ongoing review of system reliability and will respond accordingly at a regional level.

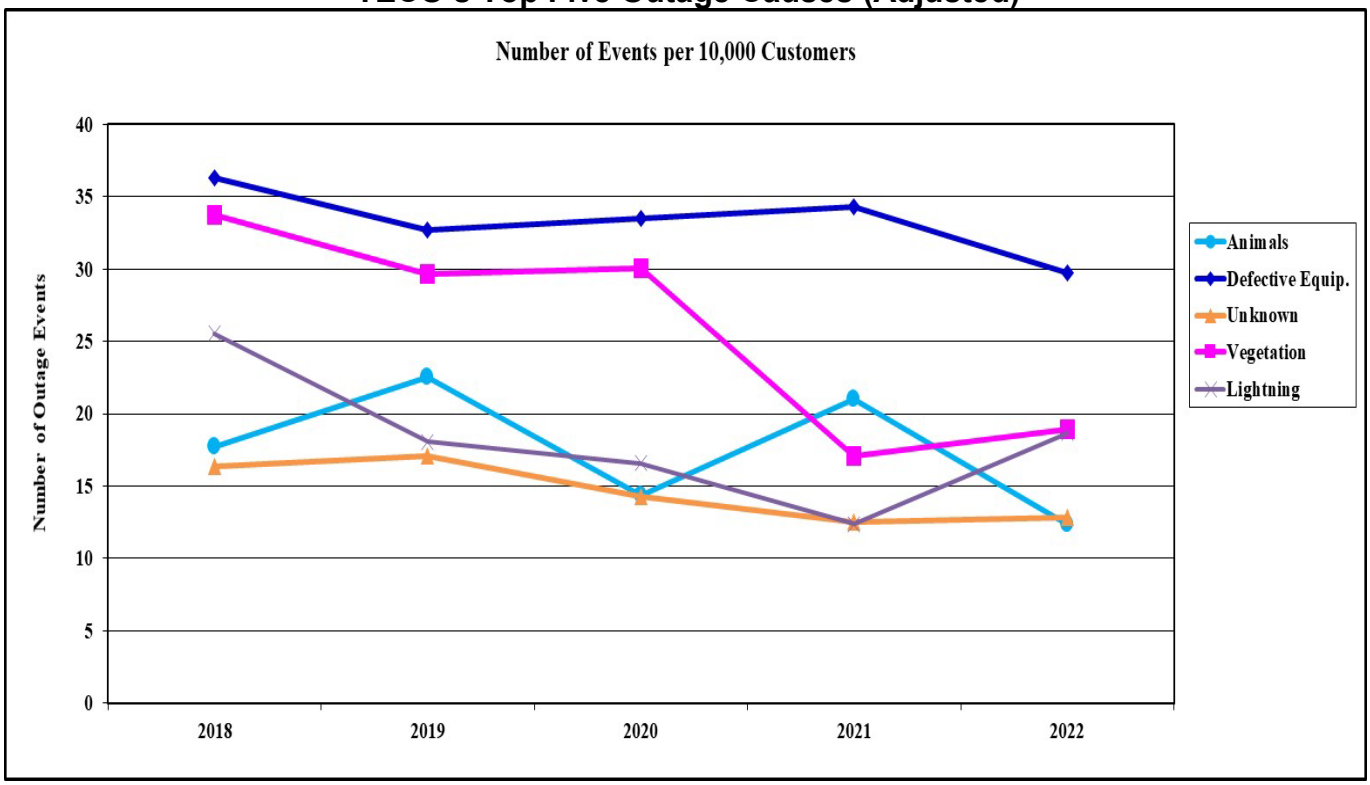
Figure 2-30
TECO's Three Percent Feeder Report (Adjusted)



Source: TECO's 2018-2022 distribution service reliability reports.

Figure 2-31 indicates that the top five causes of outage events on TECO's distribution system normalized to a 10,000-customer base. This figure is based on TECO's adjusted data of the top 10 causes of outage events and represents 84 percent of the total outage events that occurred during 2021. For the five-year period, the five top causes of outage events included "Defective Equipment" (27.2 percent), "Vegetation" (17.3 percent), "Lightning" (17.0 percent), "Unknown Causes" (11.7 percent), and "Animals" (11.3 percent) on a cumulative basis. "Defective Equipment" is the highest cause of outages for 2022. "Vegetation" and "Lightning" causes are the next two top problem areas for TECO. The outages due to "Vegetation," "Lightning," and "Unknown Causes" increased 11 percent, 51 percent, and 2 percent, respectfully, from 2021 to 2022. The outages from "Defective Equipment" decreased 13 percent and the outages from "Animals" decreased 41 percent, all for the same time period. The number of outages due to "Defective Equipment," "Vegetation," "Lightning," "Unknown," and "Animals" are all trending downward.

Figure 2-31
TECO's Top Five Outage Causes (Adjusted)



Source: TECO's 2018-2022 distribution service reliability reports.

Observations: TECO's Adjusted Data

Five of TECO's 2022 reliability indices improved in performance compared to 2021. For the five-year period of 2018 to 2022, the Three-Year Percent of Multiple Feeder outage events is trending upward. The indices for SAIDI, SAIFI, CAIDI, MAIFIe, CEMI5, L-Bar, and the Five-Year Percent of Multiple Feeder outage events are trending downward for the same period. TECO reported that the improvements in the SAIDI, CAIDI, SAIFI, LBar, and CEMI5 metrics were attributed to better tracking of reliability performance through more effective reliability dashboards, adding more reclosers and TripSavers on the system, tree trimming, and quicker outage restoration and responses. TECO reported the increase in MAIFIe was attributed to an increase in breaker events. TECO notes that the Dade City, Plant City, and Winter Haven regions have the fewest customers and represent the most rural, lowest customer density per line mile. TECO indicated that the rural areas typically have higher reliability indices due to the greater distance of travel for service restoration.

In 2022, the Dade City region had the highest reliability indices for SAIDI, SAIFI. MAIFIe, and CEMI5. To improve reliability in the Dade City region, TECO will be conducting vegetation management on circuits throughout the service area. In addition, TECO will be replacing any defective equipment like primary switches, transformers, and primary line fuses that have caused outages, as well as proactively replacing older live-front switches and installing reclosers on circuits.

DRAFT 06-15-2023

Section III: Inter-Utility Reliability Comparisons

Section III contains comparisons of the utilities' adjusted data for the various reliability indices that were reported. It also contains a comparison of the service reliability related complaints received by the Commission.

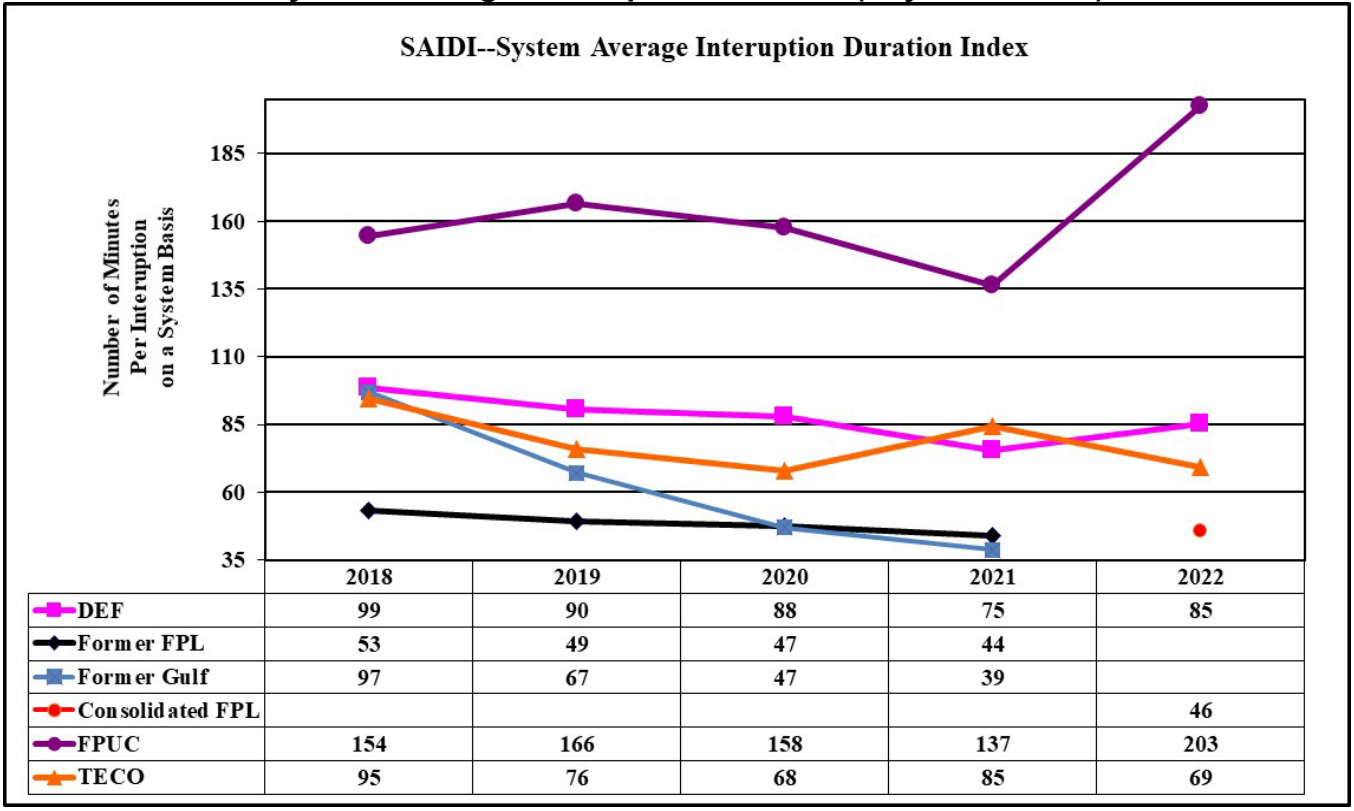
Inter-Utility Reliability Trend Comparisons: Adjusted Data

The inter-utility trend comparison focuses on a graphical presentation that combines all of the IOUs' distribution reliability indices for the years 2018 to 2022. **Figures 3-1** through **3-3** apply to all four utilities while **Figures 3-4** and **3-5** do not apply to FPUC because it is not required to report MAIFIe and CEMI5 due to the size of its customer base. The adjusted data is used in generating the indices in this report and is based on the exclusion of certain events allowed by Rule 25-6.0455(4), F.A.C. Generalizations can be drawn from the side-by-side comparisons; however, any generalizations should be used with caution due to the differing sizes of the distribution systems, the degree of automation, and the number of customers. The indices are unique to each IOU.

Figure 3-1 indicates that DEF's and TECO's SAIDI has been trending downward since 2018, while FPUC is trending upward. Comparing the 2021 and 2022 SAIDI values, all utilities except TECO have declined. DEF's SAIDI value increased 13 percent, FPUC increased by 48 percent, and TECO decreased 19 percent from 2021 to 2022. Consolidated FPL's 2022 SAIDI value was 46 minutes. The Former FPL's 2021 SAIDI value was 44 minutes and Former Gulf's 2021 SAIDI value was 39 minutes.

SAIDI is the average amount of time a customer is out of service per retail customers served within a specified area of service over a given period. It is determined by dividing the total Customer Minutes of Interruption by total Number of Customers Served for the respective area of service.

Figure 3-1
System Average Interruption Duration (Adjusted SAIDI)



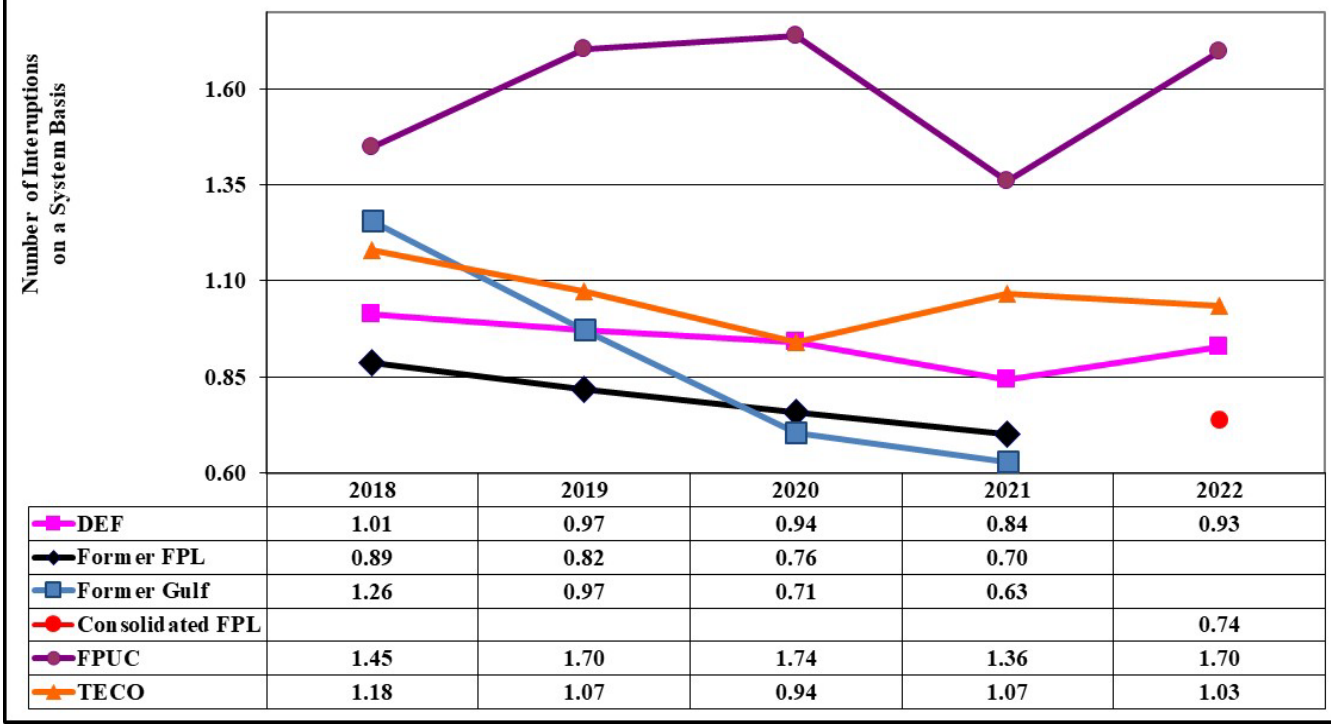
	2018	2019	2020	2021	2022
DEF	99	90	88	75	85
Former FPL	53	49	47	44	
Former Gulf	97	67	47	39	
Consolidated FPL					46
FPUC	154	166	158	137	203
TECO	95	76	68	85	69

Source: The IOUs' 2018-2022 distribution service reliability reports.

Figure 3-2 shows a five-year graph of the adjusted SAIFI for each IOU. The 2022 data shows FPUC and DEF's SAIFI values increased (declined) from the 2021 results as TECO's SAIFI values decreased. Over the five-year period of 2018 to 2022, DEF and TECO's SAIFI values are all trending downward as FPUC's SAIFI value is trending upwards.

SAIFI is the average number of service interruptions per retail customer within a specified area of service over a given period. It is determined by dividing the Sum of Service (a/k/a Customer) Interruptions (CI) by the total Number of Customers Served for the respective area of service.

Figure 3-2
Number of Service Interruptions (Adjusted SAIFI)



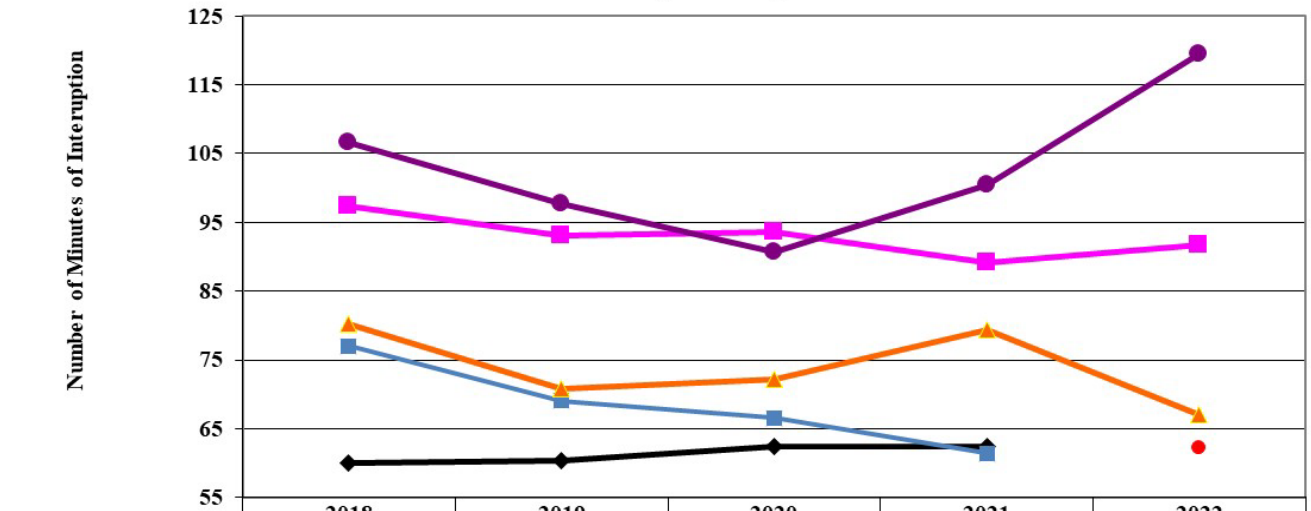
	2018	2019	2020	2021	2022
DEF	1.01	0.97	0.94	0.84	0.93
Former FPL	0.89	0.82	0.76	0.70	
Former Gulf	1.26	0.97	0.71	0.63	
Consolidated FPL					0.74
FPUC	1.45	1.70	1.74	1.36	1.70
TECO	1.18	1.07	0.94	1.07	1.03

Source: The IOUs' 2018-2022 distribution service reliability reports.

Figure 3-3 shows a five-year graph of the adjusted CAIDI for each IOU. FPUC and DEF had increases in CAIDI from 2021 to 2022 as TECO had a decrease. Consolidated FPL had relatively the same number of interruptions in 2022 as Former FPL and Former Gulf each had in 2021. DEF and TECO's CAIDI values are trending downward for the five-year period of 2018 to 2022. FPUC's CAIDI value is trending upward for the same period.

CAIDI is the average interruption duration or the time to restore service to interrupted customers. CAIDI is calculated by dividing the total system CMI by the number of customer interruptions, which is also SAIDI, divided by SAIFI.

Figure 3-3
Average Service Restoration Time (Adjusted CAIDI)



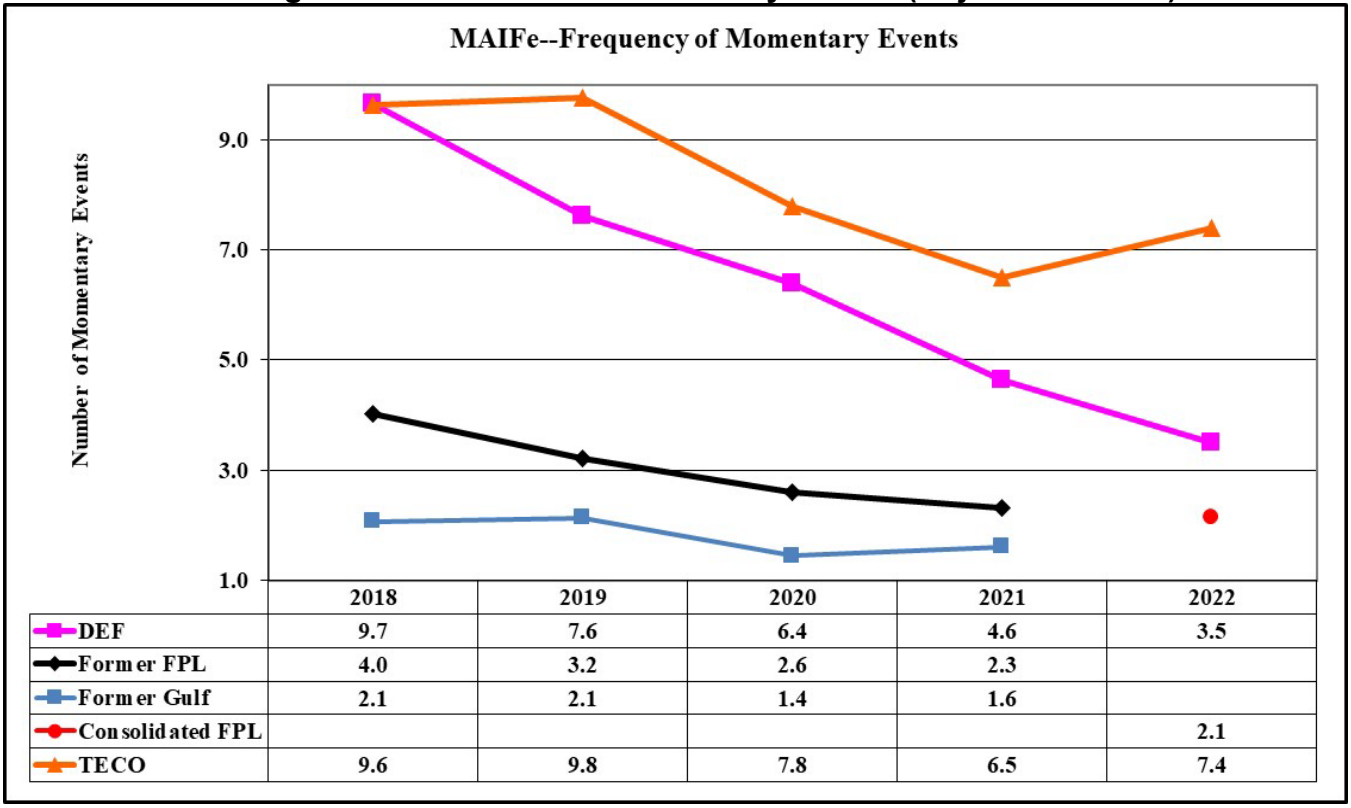
	2018	2019	2020	2021	2022
DEF	97	93	94	89	92
Former FPL	60	60	62	62	
Former Gulf	77	69	67	61	
Consolidated FPL					62
FPUC	107	98	91	100	120
TECO	80	71	72	79	67

Source: The IOUs' 2018-2022 distribution service reliability reports.

Figure 3-4 shows a five-year graph of the adjusted MAIFIe for DEF, FPL, and TECO. DEF and TECO's MAIFIe indices are trending downward for the five-year period of 2018 to 2022. Comparing the MAIFIe for 2021 to 2022, DEF decreased by 24 percent and TECO decreased by 14 percent. FPL's 2022 MAIFIe value was 2.1 events. The Former FPL's 2021 MAIFIe value was 2.3 events and the Former Gulf's 2021 MAIFIe value was 1.6 events. FPUC is exempt from reporting MAIFIe and CEMI5 because it has fewer than 50,000 customers.

MAIFIe is the average frequency of momentary interruptions events or the number of times there is a loss of service of less than one minute. MAIFIe is calculated by dividing the number of momentary interruptions events recorded on primary circuits (CME) by the number of customers served.

Figure 3-4
Average Number of Feeder Momentary Events (Adjusted MAIFIe)

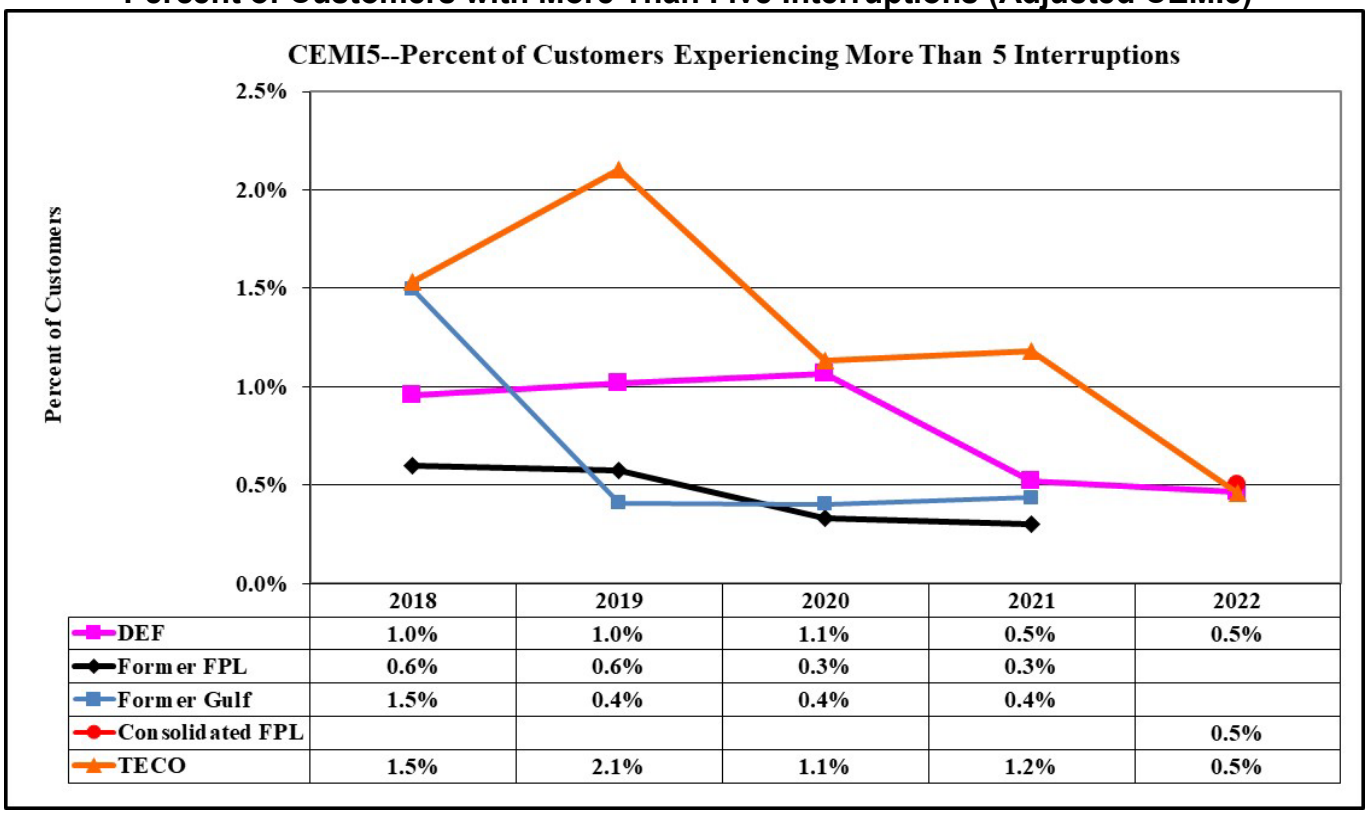


	2018	2019	2020	2021	2022
DEF	9.7	7.6	6.4	4.6	3.5
Former FPL	4.0	3.2	2.6	2.3	
Former Gulf	2.1	2.1	1.4	1.6	
Consolidated FPL					2.1
TECO	9.6	9.8	7.8	6.5	7.4

Source: The IOUs' 2018-2022 distribution service reliability reports.

Figure 3-5 shows a five-year graph of the adjusted CEMI5 for FPL, DEF, and TECO. CEMI5 is a percentage. It represents the number of customers that experienced more than five service interruptions in the year divided by the total number of customers. In 2022, TECO's CEMI5 percent decreased to 0.5 percent from 1.2 percent in 2021 as DEF's CEMI5 percentage remained at 0.5 percent. Consolidated FPL's CEMI5 percentage was 0.5 percent in 2022. In 2021, the Former FPL's CEMI5 was 0.3 percent and the Former Gulf's CEMI5 was 0.4 percent. DEF and TECO are trending downward for the period of 2018 to 2022.

Figure 3-5
Percent of Customers with More Than Five Interruptions (Adjusted CEMI5)

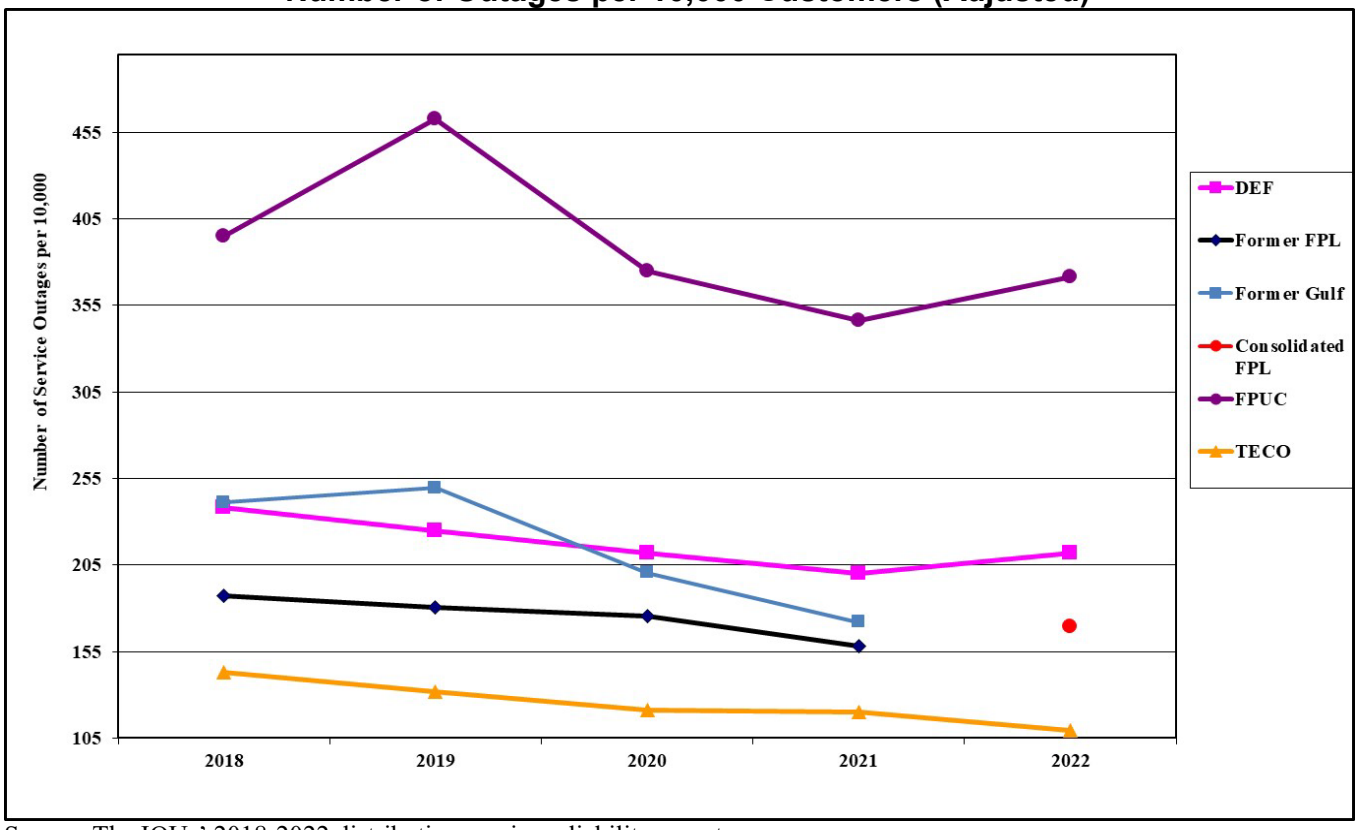


	2018	2019	2020	2021	2022
DEF	1.0%	1.0%	1.1%	0.5%	0.5%
Former FPL	0.6%	0.6%	0.3%	0.3%	
Former Gulf	1.5%	0.4%	0.4%	0.4%	
Consolidated FPL					0.5%
TECO	1.5%	2.1%	1.1%	1.2%	0.5%

Source: The IOUs' 2018-2022 distribution service reliability reports.

Figure 3-6 shows the number of outages per 10,000 customers on an adjusted basis for the four IOUs over the last five years. The graph displays each utility's adjusted data concerning the number of outage events and the total number of customers on an annual basis. The number of FPL outages in 2022 was 97,487. In 2021, the Former FPL's outages was 82,873 and the Former Gulf's outages was 8,291. TECO's results are trending downward the five-year period with a decrease in outages from 9,896 in 2021 to 9,212 in 2022. DEF's number of outages increased in 2022 and the results are trending upward for the five-year period. FPUC's results increased from 2018 to 2019, decreased from 2019 to 2020, decreased from 2020 to 2021, and increased from 2021 to 2022. Due to its small customer base, FPUC's number of outages per 10,000 customers may be more volatile.

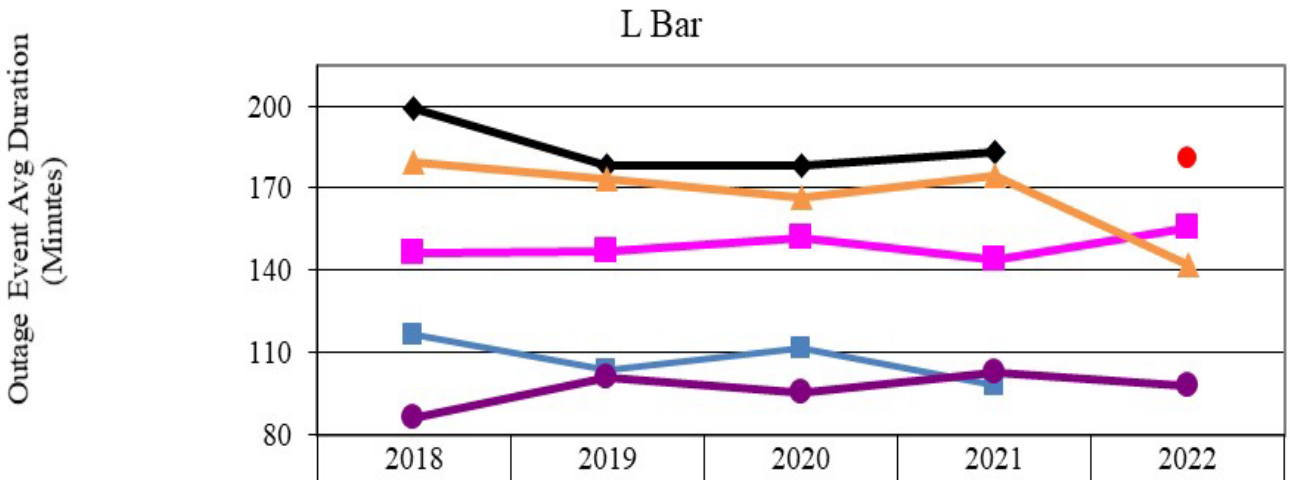
Figure 3-6
Number of Outages per 10,000 Customers (Adjusted)



Source: The IOUs' 2018-2022 distribution service reliability reports.

Figure 3-7 represents the average duration of outage events (Adjusted L-Bar) for each IOU. The data shows that DEF and FPUC are trending upward as TECO is trending downward for the five-year period from 2018 to 2022. DEF had an increase of 8 percent and FPUC had an increase of 5 percent when comparing 2022 results to 2021 results. TECO had a 19 percent decrease in 2022 compared to 2021. FPL's 2022 results in 2022 was 181 minutes. In 2021, the Former FPL's L-Bar was 183 minutes and the Former gulf's L-Bar was 98 minutes.

Figure 3-7
Average Duration of Outage Events (Adjusted L-Bar)



	2018	2019	2020	2021	2022
DEF	147	147	152	144	156
Former FPL	199	178	178	183	
Former GULF	116	103	112	98	
Consolidated FPL					181
FPUC	86	101	96	103	98
TECO	180	173	166	175	142

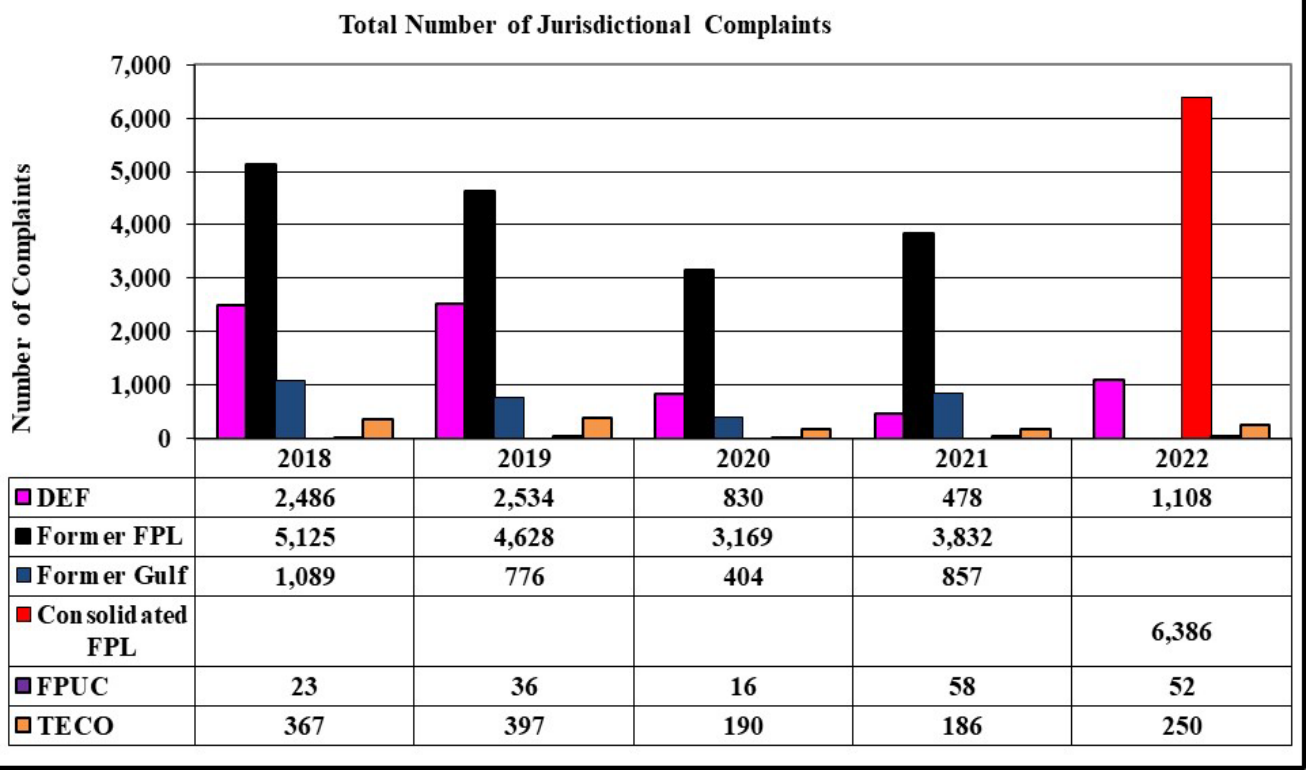
Source: The IOUs' 2018-2022 distribution service reliability reports.

Inter-Utility Comparisons of Reliability Related Complaints

Figures 3-8, **3-9**, **3-10**, and **3-11** represent consumer complaint data that was extracted from the Commission's Consumer Activity Tracking System (CATS). Each consumer complaint received by the Commission is assigned a code after the complaint is resolved. Reliability related complaints have 10 specific category types and typically pertain to "Trees," "Safety," "Repairs," "Frequent Outages," and "Momentary Service Interruptions."

Figure 3-8 shows the total number of jurisdictional complaints[7] for each IOU. In comparing the number of complaints by the different companies, the total number of customers should be considered. FPL has the higher number of complaints, but FPL also has more customers than the other companies.

Figure 3-8
Total Number of Jurisdictional Complaints



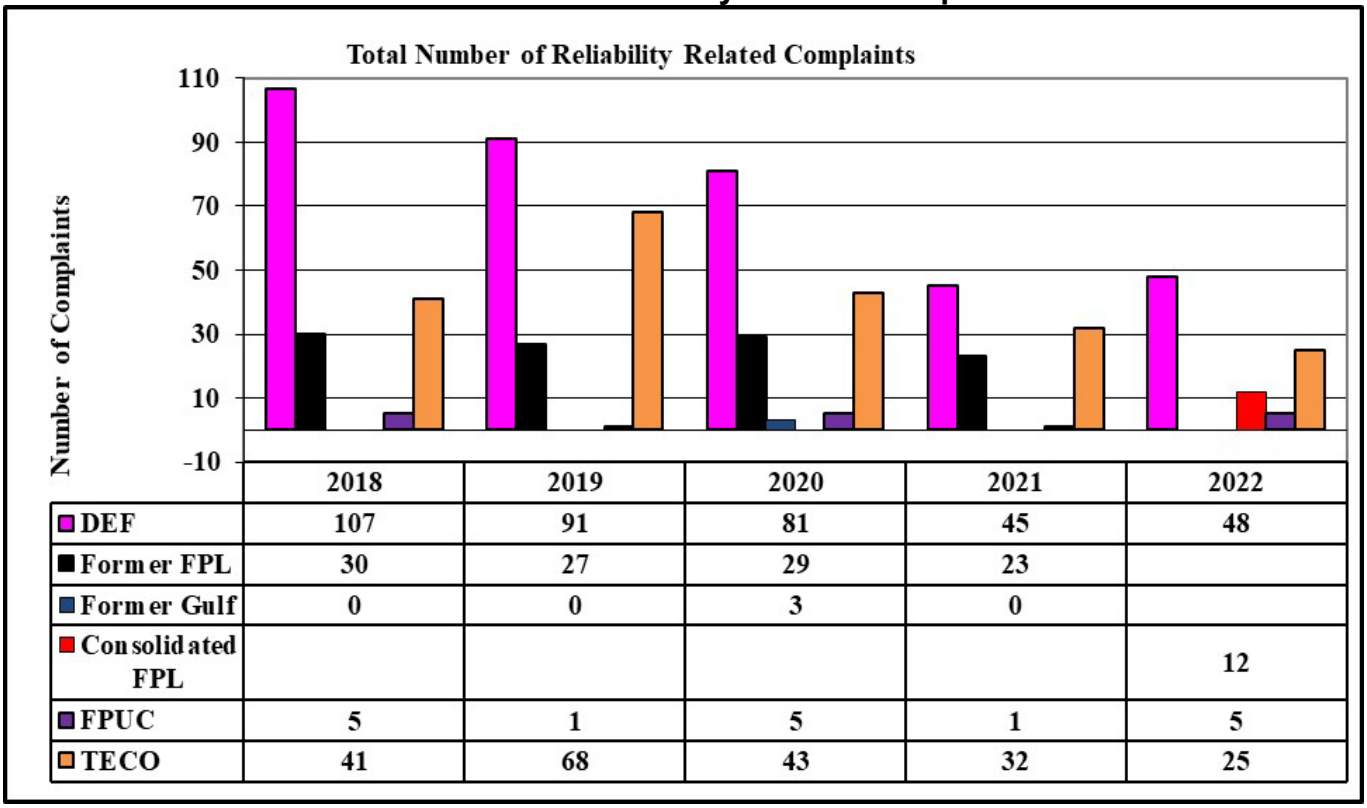
	2018	2019	2020	2021	2022
DEF	2,486	2,534	830	478	1,108
Former FPL	5,125	4,628	3,169	3,832	
Former Gulf	1,089	776	404	857	
Consolidated FPL					6,386
FPUC	23	36	16	58	52
TECO	367	397	190	186	250

Source: FPSC CATS.

[7]Non-jurisdictional complaint codes include load management, hurricanes, and damage claims.

Figure 3-9 charts the total number of reliability related complaints for the IOUs. DEF is showing the largest amount of reliability complaints for the five-year period of 2018 to 2022 with FPUC showing the least amount. DEF and TECO are trending downward in the number of reliability complaints, while FPUC remains relatively flat.

Figure 3-9
Total Number of Reliability Related Complaints

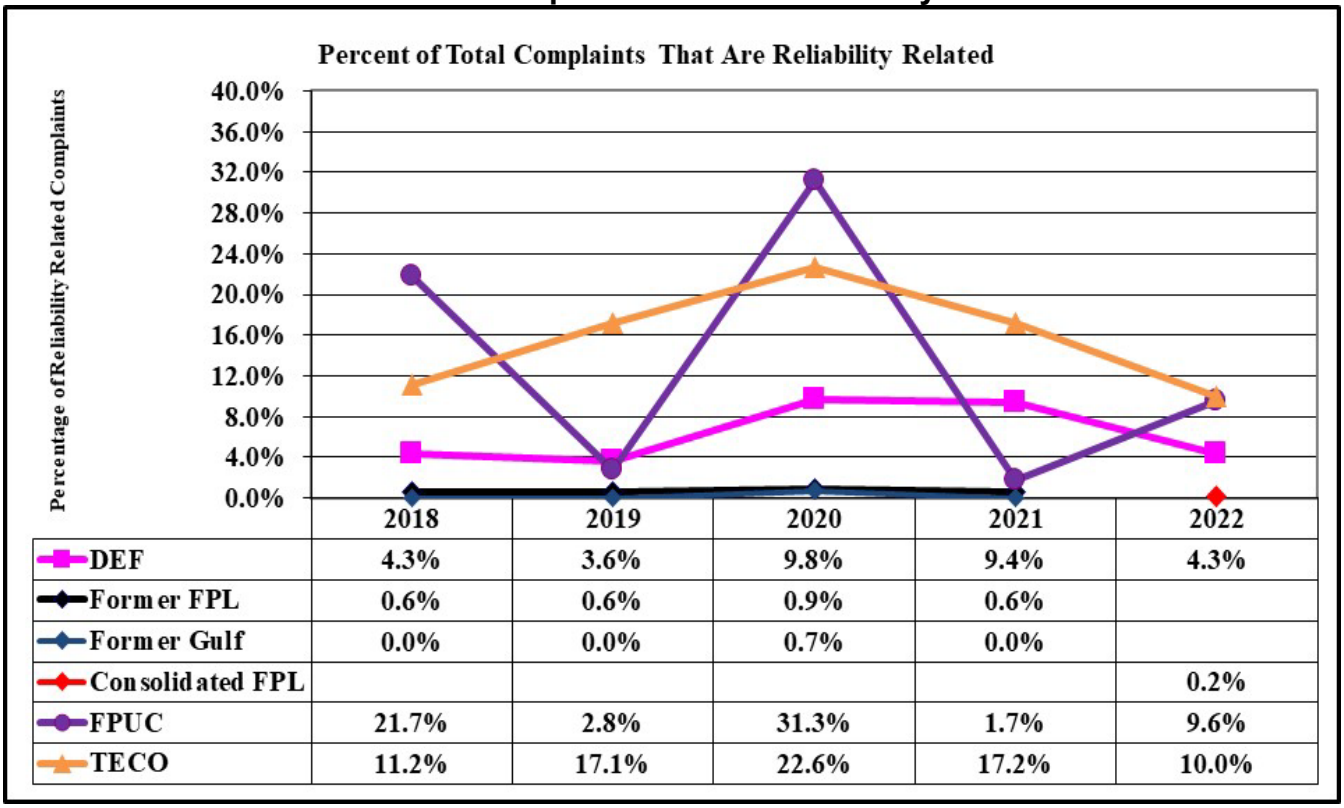


	2018	2019	2020	2021	2022
DEF	107	91	81	45	48
Former FPL	30	27	29	23	
Former Gulf	0	0	3	0	
Consolidated FPL					12
FPUC	5	1	5	1	5
TECO	41	68	43	32	25

Source: FPSC CATS.

Figure 3-10 shows the percentage of reliability related customer complaints in relation to the total number of complaints for each IOU. FPUC and TECO appears to be trending downward as DEF is trending upward. The percentages of FPUC complaints compared to the other companies appears high, however, FPUC has fewer customers and fewer complaints in total.

Figure 3-10
Percent of Complaints that are Reliability Related



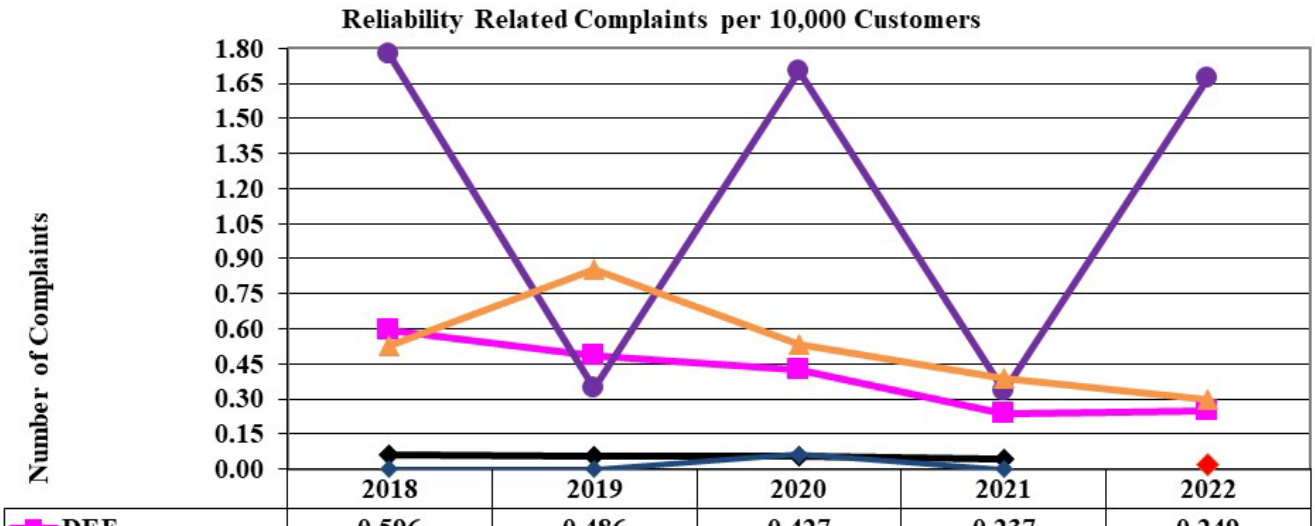
	2018	2019	2020	2021	2022
DEF	4.3%	3.6%	9.8%	9.4%	4.3%
Former FPL	0.6%	0.6%	0.9%	0.6%	
Former Gulf	0.0%	0.0%	0.7%	0.0%	
Consolidated FPL					0.2%
FPUC	21.7%	2.8%	31.3%	1.7%	9.6%
TECO	11.2%	17.1%	22.6%	17.2%	10.0%

Source: FPSC CATS.

Figure 3-11 charts the volume of reliability related complaints per 10,000 customers for the IOUs. The volume of service reliability complaints is normalized to a 10,000-customer base for comparative purposes. This is calculated for each IOU by dividing the total number of reliability complaints reported to the Commission by the total number of the utility's customers. This fraction is then multiplied by 10,000 for graphing purposes.

All the IOUs have less than one reliability complaint per 10,000 customers since 2018 except FPUC. For the five-year period, DEF, FPUC and TECO are trending downward. The volatility of FPUC's results can be attributed to its small customer base, which typically averages 29,000 customers.

Figure 3-11
Service Reliability Related Complaints per 10,000 Customers



	2018	2019	2020	2021	2022
DEF	0.596	0.486	0.427	0.237	0.249
Former FPL	0.060	0.053	0.056	0.044	
Former Gulf	0.000	0.000	0.063	0.000	
Consolidated FPL					0.021
FPUC	1.777	0.346	1.702	0.336	1.669
TECO	0.529	0.855	0.531	0.388	0.298

Source: The IOUs' 2018-2022 distribution service reliability reports and FPSC CATS.

Section IV: Appendices

Appendix A – Adjusted Service Reliability Data

Duke Energy Florida, LLC

Table A-1
DEF's Number of Customers (Year End)

	2018	2019	2020	2021	2022
North Central	409,949	425,895	429,896	428,394	431,287
North Coastal*	204,915	214,245	445,321	446,742	455,474
South Central	493,782	520,699	532,367	544,915	560,083
South Coastal*	686,076	710,806	490,952	482,484	483,353
DEF System	**1,794,722**	**1,871,645**	**1,898,536**	**1,902,535**	**1,930,197**

Source: DEF's 2018-2022 distribution service reliability reports.
Note: *DEF reorganized its Zone boundaries where two operation centers were moved from the South Coastal region to the North Coastal region.

Table A-2
DEF's Adjusted Regional Indices SAIDI, SAIFI, and CAIDI

	Average Interruption Duration Index (SAIDI)					Average Interruption Frequency Index (SAIFI)					Average Customer Restoration Time Index (CAIDI)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
North Central	86	87	85	81	99	0.96	0.81	0.84	0.83	0.99	90	108	102	98	100
North Coastal*	168	170	117	90	96	1.52	1.56	1.15	0.95	1.11	111	108	102	95	86
South Central	84	86	70	65	74	0.93	1.02	0.92	0.80	0.81	90	85	77	81	91
South Coastal*	95	72	83	68	76	0.95	0.86	0.86	0.80	0.84	100	84	96	84	90
DEF System	**99**	**90**	**88**	**75**	**85**	**1.01**	**0.97**	**0.94**	**0.84**	**0.93**	**97**	**93**	**94**	**89**	**92**

Source: DEF's 2018-2022 distribution service reliability reports.
Note: *DEF reorganized its Zone boundaries where two operation centers were moved from the South Coastal region to the North Coastal region.

Table A-3
DEF's Adjusted Regional Indices MAIFIe and CEMI5

	Average Frequency of Momentary Events on Feeders (MAIFIe)					Percentage of Customers Experiencing More than 5 Service Interruptions (CEMI5)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
North Central	3.61	4.67	6.76	5.21	3.84	0.42%	0.41%	0.42%	0.64%	0.34%
North Coastal*	13.57	9.66	6.36	5.38	3.74	4.80%	5.50%	2.32%	1.10%	1.14%
South Central	11.44	8.78	6.47	4.42	3.29	0.44%	0.79%	1.17%	0.28%	0.30%
South Coastal*	10.82	7.93	6.00	3.66	3.19	0.49%	0.19%	0.37%	0.15%	0.13%
DEF System	**9.66**	**7.62**	**6.39**	**4.63**	**3.49**	**0.95%**	**1.02%**	**1.06%**	**0.52%**	**0.46%**

Source: DEF's 2018-2022 distribution service reliability reports.
Note: *DEF reorganized its Zone boundaries where two operation centers were moved from the South Coastal region to the North Coastal region.

Table A-4
DEF's Primary Causes of Outages Events

	Adjusted Number of Outages Events						Adjusted L-Bar Length of Outages				
	2018	2019	2020	2021	2022	Percentages	2018	2019	2020	2021	2022
Animals	4,566	5,127	3,882	5,347	4,231	10.5%	82	82	82	81	83
Unknown	766	859	556	688	1,543	3.8%	83	85	88	95	137
All Other	8,310	8,223	7,170	7,199	7,021	17.4%	173	169	181	176	186
Defective Equipment	12,038	11,921	11,973	11,449	11,914	29.6%	152	146	146	146	162
Lightning	1,517	943	994	1,126	1,787	4.4%	157	168	157	151	146
Vegetation	8,522	8,883	9,291	7,790	8,552	21.2%	148	160	160	154	161
Other Weather	6,463	5,658	5,826	4,060	4,855	12.1%	144	153	159	140	151
Vehicle	599	445	509	460	367	0.9%	233	250	245	241	258
DEF System	**42,781**	**42,059**	**40,201**	**38,119**	**40,270**	**100%**	**147**	**147**	**152**	**144**	**156**

Source: DEF's 2018-2022 distribution service reliability reports.
Note: *"Other Causes" category is the sum of diverse causes of outage events which individually are not among the top 10 causes of outage events.

DRAFT 06-15-2023

Florida Power & Light Company

Table A-5
FPL's Number of Customers (Year End)

	2018	2019	2020	2021	2022
Boca Raton	380,552	383,429	386,305	390,005	392,207
Brevard	312,017	316,529	322,070	327,339	332,829
Central Broward*	278,910	282,135	285,678	289,450	290,698
Central Dade	314,448	320,532	323,326	331,087	334,196
Central Florida	293,507	298,186	305,247	312,544	318,819
Manasota	401,766	408,944	416,122	423,344	440,664
Naples	406,500	414,696	421,646	428,887	431,199
North Broward*	321,508	323,531	325,075	326,654	327,409
North Dade	248,900	251,793	253,181	255,885	257,016
North Florida	166,703	171,801	177,889	183,858	190,833
South Broward*	342,226	344,502	346,004	348,897	349,993
South Dade	299,375	303,306	306,719	310,243	314,895
Toledo Blade	275,688	281,994	289,643	299,091	294,339
Treasure Coast	299,495	340,658	346,884	354,410	362,811
West Dade	266,629	270,975	275,635	278,531	280,842
West Palm	370,077	373,533	376,620	381,083	383,931
Fort Walton	119,219	120,399	119,990	122,136	118,284
Panama City	114,413	115,446	119,041	118,379	116,859
Pensacola	229,351	232,438	234,599	241,587	226,759
Former FPL System	**4,978,301**	**5,086,544**	**5,158,044**	**5,241,308**	
Former Gulf System **	**462,983**	**468,283**	**473,630**	**482,102**	
Consolidated FPL System					**5,764,583**

Source: FPL's and Gulf's 2018-2022 distribution service reliability reports.

Note: *Three management regions were renamed: Pompano became North Broward, Wingate became Central Broward and Gulf Stream became South Broward.

**The Former Gulf system includes Fort Walton, Panama City, and Pensacola regions.

Table A-6
FPL's Adjusted Regional SAIDI Index

	Average Interruption Duration Index (SAIDI)				
	2018	**2019**	**2020**	**2021**	**2022**
Boca Raton	50	42	41	35	32
Brevard	44	44	49	46	44
Central Broward*	60	65	54	53	49
Central Dade	42	54	41	46	50
Central Florida	47	40	41	43	45
Manasota	52	34	37	37	43
Naples	55	50	45	39	50
North Broward*	39	37	31	31	33
North Dade	69	64	58	60	57
North Florida	73	60	62	55	58
South Broward*	51	51	46	35	37
South Dade	59	56	55	58	55
Toledo Blade	70	56	50	53	64
Treasure Coast	47	54	52	45	45
West Dade	67	61	48	49	49
West Palm	46	41	59	36	40
Fort Walton	86	58	40	41	35
Panama City	103	69	52	46	42
Pensacola	99	71	48	34	48
Former FPL System	**53**	**49**	**47**	**44**	
Former Gulf System**	**97**	**67**	**47**	**39**	
Consolidated FPL System					**46**

Source: FPL and Gulf's 2018-2022 distribution service reliability reports.
Note: *Three management regions were renamed: Pompano became North Broward, Wingate became Central Broward and Gulf Stream became South Broward.
**The Former Gulf system includes Fort Walton, Panama City, and Pensacola regions.

Table A-7
FPL's Adjusted Regional SAIFI Index

	Average Interruption Frequency Index (SAIFI)				
	2018	**2019**	**2020**	**2021**	**2022**
Boca Raton	1.00	0.80	0.73	0.66	0.62
Brevard	0.87	0.81	0.88	0.82	0.79
Central Broward*	0.90	0.88	0.75	0.80	0.83
Central Dade	0.77	0.78	0.57	0.67	0.66
Central Florida	0.84	0.77	0.76	0.71	0.75
Manasota	0.73	0.58	0.64	0.54	0.66
Naples	0.89	0.82	0.69	0.72	0.82
North Broward*	0.66	0.61	0.53	0.57	0.51
North Dade	0.94	1.00	0.78	0.81	0.79
North Florida	1.25	1.04	1.07	0.87	0.74
South Broward*	0.90	0.85	0.73	0.55	0.62
South Dade	0.83	0.74	0.79	0.80	0.73
Toledo Blade	1.01	0.88	0.79	0.86	1.02
Treasure Coast	0.81	0.97	0.85	0.74	0.77
West Dade	1.03	0.96	0.77	0.72	0.74
West Palm	0.97	0.83	0.96	0.58	0.79
Fort Walton	0.90	0.73	0.58	0.59	0.65
Panama City	1.30	1.12	0.78	0.70	0.75
Pensacola	1.42	1.02	0.73	0.62	0.80
Former FPL System	**0.89**	**0.82**	**0.76**	**0.70**	
Former Gulf System **	**1.26**	**0.97**	**0.71**	**0.63**	
Consolidated FPL System					**0.74**

Source: FPL and Gulf's 2018-2022 distribution service reliability reports.
Note: *Three management regions were renamed: Pompano became North Broward, Wingate became Central Broward and Gulf Stream became South Broward.
**The Former Gulf system includes Fort Walton, Panama City, and Pensacola regions.

Table A-8
FPL's Adjusted Regional CAIDI Index

	Average Customer Restoration Time Index (CAIDI)				
	2018	**2019**	**2020**	**2021**	**2022**
Boca Raton	49	52	56	53	51
Brevard	50	55	56	56	56
Central Broward*	66	74	72	66	58
Central Dade	54	69	72	69	75
Central Florida	56	53	54	60	61
Manasota	72	59	57	67	65
Naples	62	61	66	54	62
North Broward*	59	61	58	55	64
North Dade	74	64	74	73	72
North Florida	58	58	58	63	79
South Broward*	56	60	63	63	60
South Dade	71	75	69	73	75
Toledo Blade	69	64	63	61	63
Treasure Coast	59	55	61	60	58
West Dade	65	63	63	69	67
West Palm	48	49	62	62	51
Fort Walton	95	79	69	69	54
Panama City	79	62	67	65	56
Pensacola	70	69	65	55	60
Former FPL System	**60**	**60**	**62**	**62**	
Former Gulf System **	**77**	**69**	**67**	**61**	
Consolidated FPL System					**62**

Source: FPL and Gulf's 2018-2022 distribution service reliability reports.
Note: *Three management regions were renamed: Pompano became North Broward, Wingate became Central Broward and Gulf Stream became South Broward.
**The Former Gulf system includes Fort Walton, Panama City, and Pensacola regions.

Table A-9
FPL's Adjusted Regional MAIFIe Index

	Average Frequency of Momentary Events on Feeders (MAIFIe)				
	2018	**2019**	**2020**	**2021**	**2022**
Boca Raton	4.3	3.8	3.3	2.7	2.2
Brevard	3.5	3.0	2.3	2.4	2.0
Central Broward*	4.5	3.5	2.8	2.1	2.0
Central Dade	3.0	2.8	2.3	2.0	2.1
Central Florida	3.8	2.8	2.3	2.3	1.7
Manasota	3.8	2.4	1.9	1.7	1.6
Naples	4.7	3.3	2.4	2.2	2.4
North Broward*	3.4	2.4	2.0	1.5	1.6
North Dade	3.2	2.8	2.3	1.8	1.8
North Florida	3.2	2.8	2.3	2.1	2.3
South Broward*	4.4	3.4	2.8	2.4	2.1
South Dade	3.8	3.3	2.8	2.7	2.4
Toledo Blade	5.2	3.5	3.0	2.6	3.5
Treasure Coast	3.5	3.2	3.1	2.6	2.1
West Dade	4.5	3.9	2.9	3.4	3.1
West Palm	4.7	4.1	3.0	2.3	2.4
Fort Walton	1.6	2.0	1.4	1.9	2.4
Panama City	1.9	2.3	1.8	1.6	1.4
Pensacola	2.4	2.1	1.3	1.5	1.5
Former FPL System	**4.0**	**3.2**	**2.6**	**2.3**	
Former Gulf System **	**2.1**	**2.1**	**1.4**	**1.6**	
Consolidated FPL System					**2.1**

Source: FPL and Gulf's 2018-2022 distribution service reliability reports.
Note: *Three management regions were renamed: Pompano became North Broward, Wingate became Central Broward and Gulf Stream became South Broward.
**The Former Gulf system includes Fort Walton, Panama City, and Pensacola regions.

Table A-10
FPL's Adjusted Regional CEMI5 Index

	Percentage of Customers Experiencing More than 5 Service Interruptions (CEMI5)				
	2018	**2019**	**2020**	**2021**	**2022**
Boca Raton	0.90%	1.01%	0.18%	0.11%	0.17%
Brevard	0.27%	0.21%	0.42%	0.84%	0.36%
Central Broward*	0.17%	0.47%	0.22%	0.20%	1.54%
Central Dade	0.73%	0.14%	0.18%	0.19%	0.49%
Central Florida	0.84%	0.37%	0.35%	0.20%	0.34%
Manasota	0.26%	0.27%	0.17%	0.09%	0.51%
Naples	0.35%	1.00%	0.38%	0.17%	0.45%
North Broward*	0.54%	0.20%	0.08%	0.38%	0.17%
North Dade	0.70%	1.03%	0.44%	0.52%	0.37%
North Florida	1.44%	0.74%	0.70%	0.35%	0.96%
South Broward*	0.17%	0.34%	0.19%	0.23%	0.60%
South Dade	0.29%	0.72%	0.12%	0.36%	0.39%
Toledo Blade	1.94%	0.66%	0.52%	0.53%	0.91%
Treasure Coast	0.51%	1.22%	0.62%	0.36%	0.38%
West Dade	0.49%	0.61%	0.57%	0.27%	0.17%
West Palm	0.63%	0.26%	0.46%	0.26%	0.59%
Fort Walton	0.51%	0.11%	0.19%	0.15%	0.19%
Panama City	2.15%	0.82%	0.96%	1.23%	0.78%
Pensacola	1.68%	0.36%	0.23%	0.19%	0.40%
Former FPL System	**0.60%**	**0.57%**	**0.33%**	**0.30%**	
Former Gulf System **	**1.49%**	**0.41%**	**0.40%**	**0.43%**	
Consolidated FPL System					**0.50%**

Source: FPL and Gulf's 2018-2022 distribution service reliability reports.
Note: *Three management regions were renamed: Pompano became North Broward, Wingate became Central Broward and Gulf Stream became South Broward.
**The Former Gulf system includes Fort Walton, Panama City, and Pensacola regions.

Table A-11
Former FPL's Primary Causes of Outage Events

	Adjusted Number of Outage Events						Adjusted L-Bar Length of Outages				
	2018	2019	2020	2021	2022	Percentages	2018	2019	2020	2021	2022
Unknown	10,482	8,593	7,619	7,740			145	132	136	131	
Vegetation	15,949	18,123	18,375	17,090			199	193	196	207	
Animals	9,131	10,046	8,165	9,436			104	105	104	110	
Remaining Causes	3,394	3,449	3,560	3,172			172	147	141	155	
Other Weather	7,335	6,592	5,529	5,275			194	190	178	187	
Other	9,959	8,367	7,183	6,728			198	171	167	166	
Lightning	1,902	1,644	1,493	1,270			282	260	254	265	
Vehicle	954	883	895	946			275	259	259	261	
Defective Equipment	34,200	34,282	37,599	31,216			238	198	194	205	
Former FPL System	**93,306**	**91,979**	**90,418**	**82,873**	**0**	**0%**	**199**	**178**	**178**	**183**	

Source: FPL's 2018-2021 distribution service reliability reports.
Notes: (1) "Other Causes" category is a sum of outages events that require a detailed explanation.
(2) "Remaining Causes" category is the sum of many diverse causes of outage events, which individually are not among the top 10 causes of outage events, and excludes those identified as "Other Causes."

Table A-12
Former Gulf's Primary Causes of Outage Events

	Adjusted Number of Outage Events						Adjusted L-Bar Length of Outages				
	2018	2019	2020	2021	2022	Percentages	2018	2019	2020	2021	2022
Unknown	1,121	1,211	1,333	1,337			102	89	96	90	
Vegetation	2,521	2,485	2,311	1,631			119	102	112	94	
Animals	2,189	2,495	1,838	1,704			69	65	65	66	
Remaining Causes	442	652	863	832			110	98	147	105	
Other Weather	257	331	766	518			145	116	148	97	
Lightning	1,623	1,437	479	586			131	117	114	113	
Vehicle	389	443	247	236			181	150	146	148	
Defective Equipment	2,618	2,630	1,669	1,447			140	132	134	129	
Former Gulf System	**11,160**	**11,684**	**9,506**	**8,291**	**0**	**0%**	**116**	**103**	**112**	**98**	

Source: Gulf's 2018-2022 distribution service reliability reports.
Notes: (1) "Other Causes" category is a sum of outages events that require a detailed explanation.
(2) "Remaining Causes" category is the sum of many diverse causes of outage events, which individually are not among the top 10 causes of outage events, and excludes those identified as "Other Causes."

Table A-13
Consolidated FPL's Primary Causes of Outage Events

	Adjusted Number of Outage Events						Adjusted L-Bar Length of Outages				
	2018	2019	2020	2021	2022	Percentages	2018	2019	2020	2021	2022
Unknown					9,598	9.8%					135
Vegetation					18,954	19.4%					194
Animals					10,516	10.8%					101
Remaining Causes					3,477	3.6%					163
Other Weather					7,987	8.2%					197
Other					9,591	9.8%					172
Lightning					2,029	2.1%					219
Vehicle					1,116	1.1%					251
Defective Equipment					34,219	35.1%					208
FPL System	**0**	**0**	**0**	**0**	**97,487**	**100%**					**181**

Source: FPL's 2022 distribution service reliability reports.
Notes: (1) "Other Causes" category is a sum of outages events that require a detailed explanation.
(2) "Remaining Causes" category is the sum of many diverse causes of outage events, which individually are not among the top 10 causes of outage events, and excludes those identified as "Other Causes."

Florida Public Utilities Company

Table A-14
FPUC's Number of Customers (Year End)

	2018	2019	2020	2021	2022
Fernandina(NE)	16,410	16,727	17,138	17,307	17,411
Marianna (NW)	11,729	12,135	12,242	12,432	12,545
FPUC System	**28,139**	**28,862**	**29,380**	**29,739**	**29,956**

Source: FPUC's 2018-2022 distribution service reliability reports.

Table A-15
FPUC's Adjusted Regional Indices SAIDI, SAIFI, and CAIDI

	Average Interruption Duration Index (SAIDI)					Average Interruption Frequency Index (SAIFI)					Average Customer Restoration Time Index (CAIDI)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
NE	137	82	121	109	173	1.23	0.87	1.45	1.08	1.18	112	94	83	101	146
NW	178	283	209	175	244	1.75	2.85	2.15	1.75	2.41	102	99	98	100	101
FPUC System	**154**	**166**	**158**	**137**	**203**	**1.45**	**1.70**	**1.74**	**1.36**	**1.70**	**107**	**98**	**91**	**100**	**120**

Source: FPUC's 2018-2022 distribution service reliability reports.

Table A-16
FPUC's Primary Causes of Outage Events

	Adjusted Number of Outage Events						Adjusted L-Bar Length of Outages				
	2018	2019	2020	2021	2022	Percentages	2018	2019	2020	2021	2022
Vegetation	421	357	376	356	328	29.5%	86	100	91	112	107
Animals	204	184	163	168	179	16.1%	62	66	64	65	57
Lightning	128	174	102	124	172	15.5%	98	115	107	103	100
Unknown	69	125	163	154	171	15.4%	88	78	92	95	102
All Other	61	64	36	29	35	3.1%	76	89	84	129	112
Other Weather	55	130	75	34	34	3.1%	101	140	133	121	123
Vehicle	21	132	36	30	33	3.0%	148	95	135	136	106
Defective Equipment	152	170	151	135	160	14.4%	101	123	112	115	108
FPUC System	**1,111**	**1,336**	**1,102**	**1,030**	**1,112**	**100%**	**86**	**101**	**96**	**103**	**98**

Source: FPUC's 2018-2022 distribution service reliability reports.
Notes: *"Other Causes" category is the sum of many diverse causes of outage events which individually are not one of the top 10 causes of outage events.

Tampa Electric Company

Table A-17
TECO's Number of Customers (Year End)

	2018	2019	2020	2021	2022
Central	205,611	209,057	211,631	215,086	217,724
Dade City	14,954	15,305	15,604	15,873	16,246
Eastern	125,030	127,437	129,781	131,248	133,486
Plant City	62,131	63,502	63,954	64,369	65,198
South Hillsborough	84,636	91,219	96,568	101,875	107,101
Western	206,962	210,151	211,714	214,077	215,985
Winter Haven	75,778	78,282	80,016	81,794	84,575
TECO System	**775,102**	**794,953**	**809,268**	**824,322**	**840,315**

Source: TECO's 2018-2022 distribution service reliability reports.

Table A-18
TECO's Adjusted Regional Indices SAIDI, SAIFI, and CAIDI

	Average Interruption Duration Index (SAIDI)					Average Interruption Frequency Index (SAIFI)					Average Customer Restoration Time Index (CAIDI)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Central	87	63	58	64	41	1.04	0.91	0.77	0.81	0.67	83	70	75	79	61
Dade City	168	191	186	138	143	1.98	2.15	2.23	2.02	2.50	85	89	83	68	57
Eastern	85	83	56	65	57	1.00	1.15	0.85	1.01	0.96	86	72	66	64	59
Plant City	112	114	107	157	129	1.55	1.60	1.51	1.88	1.82	72	71	71	84	71
South Hillsborough	99	52	53	61	75	1.43	1.01	0.96	1.08	1.07	69	52	55	57	70
Western	97	77	71	77	70	1.12	1.00	0.86	0.97	0.95	86	78	83	79	74
Winter Haven	93	67	71	153	94	1.27	1.01	1.03	1.23	1.37	73	67	68	124	68
TECO System	**95**	**76**	**68**	**85**	**69**	**1.18**	**1.07**	**0.94**	**1.07**	**1.03**	**80**	**71**	**72**	**79**	**67**

Source: TECO's 2018-2022 distribution service reliability reports.

Table A-19
TECO's Adjusted Regional Indices MAIFIe and CEMI5

	Average Frequency of Momentary Events on Feeders (MAIFIe)					Percentage of Customers Experiencing More than 5 Service Interruptions (CEMI5)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Central	8.1	7.9	6.4	5.4	5.5	1.41%	0.81%	0.29%	0.71%	0.02%
Dade City	14.8	12.3	10.5	6.5	8.6	4.73%	11.17%	7.67%	1.56%	4.95%
Eastern	10.2	10.8	6.4	6.0	7.1	0.77%	2.10%	1.00%	1.94%	0.11%
Plant City	14.7	13.7	10.8	7.5	8.3	1.10%	4.03%	3.38%	5.43%	0.81%
South Hillsborough	11.1	9.4	8.3	6.0	7.9	2.93%	4.62%	2.92%	0.90%	0.28%
Western	8.3	9.5	7.8	7.6	8.6	1.19%	1.69%	0.33%	0.28%	0.29%
Winter Haven	10.0	10.7	10.4	7.5	8.3	2.23%	0.39%	0.47%	0.51%	1.64%
TECO System	**9.6**	**9.8**	**7.8**	**6.5**	**7.4**	**1.54%**	**2.10%**	**1.13%**	**1.18%**	**0.46%**

Source: TECO's 2018-2022 distribution service reliability reports.

Table A-20
TECO's Primary Causes of Outage Events

	Adjusted Number of Outage Events						Adjusted L-Bar Length of Outages				
	2018	2019	2020	2021	2022	Percentages	2018	2019	2020	2021	2022
Lightning	1,981	1,436	1,340	1,019	1,567	17.0%	207	222	175	211	165
Animals	1,372	1,788	1,162	1,729	1,038	11.3%	96	94	84	111	83
Vegetation	2,614	2,357	2,434	1,409	1,593	17.3%	200	197	180	184	156
Unknown	1,270	1,356	1,152	1,031	1,075	11.7%	134	129	116	113	99
Other Weather	404	214	328	1,211	711	7.7%	202	189	219	288	147
Vehicle	360	387	398	300	220	2.4%	78	231	205	170	158
Defective Equipment	2,816	2,600	2,711	2,829	2,502	27.5%	190	190	189	166	158
All Other	286	366	285	368	506	5.5%	188	148	128	183	140
TECO System	**11,103**	**10,504**	**9,810**	**9,896**	**9,212**	**100%**	**180**	**173**	**166**	**175**	**142**

Source: TECO's 2018-2022 distribution service reliability reports.
Notes: *"Other Causes" category is the sum of many diverse causes of outage events which individually are not among the top 10 causes of outages events.

Appendix B – Summary of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Alachua, City of	The City maintains an eight-year inspection cycle, with 25 percent of its total poles inspected bi-annually. The City of Alachua owns only distribution poles, no transmission poles.	The City inspected zero of its 2,492 distribution poles in 2022.	Of the 455 poles inspected in 2021, 38 (8.3%) were rejected with 2 being priority rejected due to shell rot at ground line and 36 non-priority rejected due to shell rot, decay top, split top and woodpecker damage. The priority rejects required immediate change-out.	The following poles that failed the 2021 inspection were evaluated and replaced: two 30 foot Class 6, seven 35 foot, Class 7, three 40 foot, Class 4, three 40 foot, Class 5, two 45 foot, Class 2, twelve 45 foot, Class 4, eight 45 foot, Class 8, and one 50 foot, Class 3.	The City continues to use the information from the PURC conference held in 2007 and 2009, to improve vegetation management.	The City trims approximately 62 miles of overhead distribution on a three-year cycle. Approximately 30% of the facilities are trimmed each year. GIS mapping system is used to track trimming annually and to budget annual trimming projects.
Bartow, City of	The facilities are inspected on an eight-year cycle. Inspections are visual, and tests are made to identify shell rot, insect infestation, and excavated to determine strength.	The City began round two of its eight-year pole inspection cycle in 2016 and elected to perform pole inspections every other year. In 2022, the City did not inspect any poles. Instead, the City inspected transformers in 2022.	No inspections were completed in 2022.	No inspections were completed in 2022.	The City is on a four-year trim cycle with trim out at 6 to 10 foot clearance depending on the situation and type of vegetation, along with foliage and herbicidal treatments.	The City feels that its four-year cycle and other vegetation management practices are effective in offering great reliability to its customers. The City is currently contracting additional line clearance personnel to maintain the four-year cycle.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
City of Jacksonville Beach d/b/a Beaches Energy Services	The transmission structure is inspected annual, which includes insulators, down guys, grounding, and pole integrity. The distribution poles are inspected on an eight-year cycle using sound and bore method for every wood pole. Poles 10 years old and older were treated at ground level for rot and decay.	424 (100%) transmission structure inspections were planned and completed. In 2022, 151 (2.9%) distribution poles were inspected. This included 135 wood poles and 16 concrete poles.	Three (0.7%) transmission structures failed the inspection due to structural damage/deterioration. In 2022, 23 (15.2%) distribution structure failed inspection due to woodpecker holes.	Three of the transmission structures that failed the inspection are included in the planned Transmission Line Hardware Renewal and Replacement project and are scheduled to be replaced in 2023. In 2022, 6 wood poles were replaced and 17 wood poles will be replaced in 2023.	The transmission line rights-of-way are mowed and maintained annually. Tree trimming crews work year round to maintain a two to three year VMP cycle for transmission and distribution lines.	All vegetation management activities for 2022 have been fully completed and the vegetation management activities for 2023 are on schedule.
Blountstown, City of	The City owns 2,084 utility poles and does visual inspections of all poles once a year. The City took a direct hit from Hurricane Michael, which resulted in a rebuild of its system. The City retagged all poles due to this event.	100% of all poles are visually inspected annually.	52 (2.5%) poles required replacement because of ground rot, extreme cracking and warping and upgrading the lines. The City also reconductored about 4,550 linear feet of distribution line.	52 Class 5 poles were replaced with Class 3 poles.	The City has a four-year tree trimming cycle with a 10-foot clearance of lines and facilities. The City has policies to remove dead, dying, or problematic trees before damage occurs.	The City will trim 25% of the system with a 10-foot clearance in 2023.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Bushnell, City of	The City has no transmission facilities. All distribution poles are on a five-year cycle. The inspection includes visual, sound/bore, pole condition, and wind loading.	The City inspected 499 (24%) poles in 2022.	In 2022, 11 (2.2%) poles failed inspection due to ground rot and above ground fracture.	The 11 failed poles are scheduled to be replaced by May 2023 with a larger class of poles.	The City checks vegetation throughout the year and trims on a case-by-case basis. Outside of easement is done on an as needed basis. The City maintains a 10-foot buffer between vegetation and energized lines.	In 2022, approximately 25 miles were trimmed on all feeders.
Chattahoochee, City of	The distribution facilities are on a three-year cycle inspection using visual, excavation around base, sounding, and probing with steel rod. The City does not have any transmission facilities.	1,957 distribution poles were inspected in 2022.	In 2022, 35 (2%) poles failed the inspection due to ground line and pole top decay.	No poles were replaced. A schedule has yet to be determined.	The City trims the distribution system on an annual basis. This cuts down on animal related outages by limiting their pathways to poles and conductors.	The 2007 and 2009 PURC workshops reports are used to improve vegetation management.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Clewiston, City of	In 2020, the City contracted with Power Pole Maintenance Company to perform the pole inspections, using sound and bore with calculations. Due to the City's small size, the entire system was completed in three months. The City performs infrared inspections on the facilities on a three- to four-year cycle.	In 2020, 2,300 (100%) poles were inspected. No poles were inspected in 2022. The City will perform an infrared inspection in 2024.	From the 2020 inspection, 180 (7.8%) poles did not pass inspection, due to rot below the ground or excessive split top.	In 2022, the City replaced 8 (1.3%) Class 5 distribution poles with Class 3 poles. These eight poles were from the 2020 inspection.	The City has a City ordinance that prohibits planting in easements. 100% of the distribution system is inspected annually for excessive tree growth. The City trims the entire system continuously as needed. The City will also accept requests from customers for tree trimming.	All transmission and feeders checked and trimmed in 2021 as every year. In 2022, the City procured a vegetation management contractor to remove six miles of vegetation from its primary feeder lines.
Fort Meade, City of	The City's facilities are on an eight-year cycle using visual and sound and probe technique.	The City has distribution lines only. The City inspected 350 (8%) poles in 2022. The City has approximately 2,800 distribution poles.	42 (12%) poles failed inspection. The poles failed inspection due to ground decay, pole rot, top decay, damage caused by wildlife and motor vehicle accidents.	The City replaced 42 poles in 2022 with poles ranging from 50 foot to 30 foot, Class 5 to Class 3.	The facilities are on a three-year inspection cycle. All vegetation within a 6-foot clearance of the distribution lines are cleared to 6-foot or greater distance.	The City has completed approximately 33% of trimming in 2022.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Fort Pierce Utilities Authority	FPUA utilizes a contractor to perform inspection of all wood distribution poles on an eight-year cycle and the transmission poles on a three-year cycle. The inspection includes visual inspection from ground line to the top and some excavation is performed on older poles.	2,742 distribution and 46 transmission poles were planned for inspection in 2022. However, the inspections for 2022 did not occur due to Hurricanes Ian and Nicole.	The inspections for 2022 did not occur due to Hurricanes Ian and Nicole.	FPUA replaced 264 wood distribution poles from the 2021 inspection in 2022.	FPUA maintains a three-year VM cycle for transmission and distribution system. FPUA also aggressively seeks to remove problem trees when trimming is not an effective option. FPUA will establish an in-house tree trimming crew by mid-2023 to provide greater efficiency and customer reliability.	FPUA spent $330,000 for the trimming, removal and disposal of vegetation waste in fiscal year 2022, which was sufficient to meet the yearly target of addressing one-third of the system. In 2022, FPUA trimmed and inspected approximately one-third, 80 miles, of its system.
Gainesville Regional Utilities	The facilities are on an eight-year cycle for all lines and includes visual, sound, and bore, and below ground line inspection to 18 inches around the base of each pole.	No transmission poles were inspected 2022. GRU inspected 3,646 distribution poles in 2022.	No transmission poles were rejected. 27 (1%) distribution poles failed due to shell rot, mechanical damage, exposed pocket, enclosed pocket, split top, woodpecker damage, and decayed tops.	27 distribution poles were replaced in 2022, ranging in size from 30 foot to 65 foot Class 1 to Class 9.	The VMP includes 560 miles of overhead distribution lines on a rotating cycle targeting distribution circuits that are 2 to 25 miles in length. The VMP includes an herbicide program and standards from NESC, ANSI A300, and Shigo-Tree Pruning.	The VMP is an ongoing and year round program. 100% of the transmission facilities were inspected in 2022, with 70 trees identified for trimming and /or removal. 150 distribution circuit miles were trimmed in 2022.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Green Cove Springs, City of	The City does not have transmission lines as defined by 69kV and above. The City's goal is to ride its electric distribution system once a year and identify poles that will need to be replaced in the following year budget process.	In 2022, the City planned to inspect 25% (approximately 1,312 poles) of its poles.	In 2022, 101 (7.7%) wood distribution poles were replaced. The poles failed visual inspection due to base rot and wood decay.	The poles that were replaced ranged from 30 foot to 55 foot, all Class 2.	The City contracts annually to trim 100% of the system three-phase primary circuits including all sub-transmission and distribution feeder facilities. Problem trees are trimmed and removed as identified.	100% (approximately 105 square miles) of 3 phase circuits were trimmed in 2022.
Havana, Town of	Total system is 1,182 poles; inspected several times annually using sound and probe method.	100% planned and completed in 2022.	0 (0%) poles failed inspection due to age.	No poles were replaced in 2022.	Written policy requires one-third of entire system trimmed annually. The Town maintains a 6-foot radius around lines.	50% of the system was trimmed in 2022.
Homestead Public Services/ Energy	All transmission poles concrete. With the use of drone technology, the transmission system will be on a three-year cycle performing thermographic inspection. The distribution facilities are on an eight-year cycle using sound and bore and loading evaluations and the annual thermographic inspection was completed in 2022.	No transmission system inspections were completed in 2022. HES completed 7% (392 poles) of its distribution poles inspections in 2022.	50 (12.8%) poles failed inspection due to decayed top, leaning, lightning damage, shell rot, split top, and woodpecker damage.	HES received a grant to harden its poles. As part of this program, in 2022, HES replaced 36 Class 4, 40 foot lateral poles and 63 Class 2, 45 foot feeder poles. The lateral poles were replaced with Class III A concrete poles and the feeder poles were replaced with Class III H concrete poles. No other poles remediated during 2022.	Trimming services are contracted out and entire system is trimmed on a two-year cycle. HES added an additional tree trimming crew at the end of 2016. There are no issues for transmission facilities.	HES enacted code changes, which require property owners to keep vegetation trimmed to maintain 6 feet of clearance from city utilities. HES trimmed approximately 110 miles of service lines in 2022.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
JEA	Transmission circuits are on a five-year cycle, except for the critical N-1 240kV, which is on a two-year cycle. Distribution poles are on an eight-year inspection cycle, using sound and bore with excavation.	30 (1,944 structures) transmission circuits (which includes many poles on each circuit) including 1 critical N-1 circuit and 16,285 (14%) distribution poles were inspected in 2022.	Based on 2022 inspection: 162 transmission wooden poles, 13 concrete poles, 6 steel poles, and 1,659 (9.8%) distribution poles failed inspection. The reasons for failures were due to ground decay, pole top decay, middle decay, and damage caused by wildlife and lightning.	In 2022, 1 transmission wood pole due to a vehicle accident and 101 distribution poles were replaced. The poles listed as emergency poles (under 1%) are replaced immediately.	The transmission facilities are in accordance with NERC FAC-003-1. The distribution facilities are on a 2.5-year trim cycle as requested by their customers to improve reliability.	JEA fully completed all 2022 VM activities and is fully compliant with NERC standard for vegetation management. JEA trimmed 1,161 circuit miles in 2022.
Keys Energy Services, City of Key West	The Keys does not have any wooden transmission poles. The concrete and metal transmission poles are inspected every two years by helicopter and infrared survey. The Keys distribution poles are on an eight-year inspection cycle. 100% of the distribution poles were visually inspected and 50% were sound and bore inspected in 2020 by Osmose, Inc.	An aerial inspection was performed on 100% of the transmission facilities in 2022. From the 2020 inspection, 5,826 concrete poles, 1,336 ductile iron poles, and 15,740 wooden distribution poles were inspected. In addition, 344 concrete, 67 ductile iron, and 3,267 AT&T distribution poles were inspected in 2020. The next inspection will be performed in 2023.	No transmission poles failed inspection. 44 (0.8%) concrete poles and 144 (3.4%) wooden poles failed inspection in 2020. The reasons for the failures are decayed top, excessive cracking, hollow, mechanical damage, rotten ground rot, ground shell rot, woodpecker damage and fire damage. 1 concrete and 119 wooden AT&T poles failed inspection.	No transmission facilities failed inspection. The Keys replaced all distribution poles that failed the inspection in 2020 and approximately 31% of the distribution poles that have been replaced meet the extreme wind requirements.	The Keys' 241 miles 3 Phase distribution lines are on a two-year trim cycle and 68 miles of transmission lines are a quarterly cycle. The Keys tree crews remove all invasive trees in the rights-of-way and easements. The trees are cut to ground level and sprayed with an herbicide to prevent re-growth.	In 2022, the Keys had zero feeder outages and six lateral outages due to vegetation. The Keys will strive to continue to improve its VMP to further reduce outages.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Kissimmee Utility Authority	All transmission and distribution inspections are outsourced to experienced pole inspector who utilizes sound and bore and ground-line excavation method for all wood poles. Transmission poles are inspected on a three-year cycle and distribution poles are inspected on an eight-year cycle.	In 2022, a drone inspection was performed on 220 transmission structures and 11.2 miles of transmission line. 1,592 distribution poles were inspected in 2022, which is 11.3% of the system.	Twenty-four (1.5%) distribution poles failed inspection due to mechanical damage and shell rot. In 2022, 16 (7.27%) transmission poles needed repair, one (0.45%) concrete pole needed replacement due to spalling at the top, and two (1.36%) concrete poles required banding and patching due to spalling at the top.	In 2022, the remediation of the transmission infrastructure has not been completed due to material acquisition and permitting. Twenty-four distribution poles are scheduled for replacement in 2023. The poles ranged from 35 to 45 foot, Class 3 to 4 CCA poles.	KUA has a written Transmission Vegetation Management Plan (TVMT) where it conducts visual inspection of all transmission lines semi-annually. The guidelines for KUA's distribution facilities are on a three-year trim cycle.	100% required remediation during the transmission facilities inspection was completed in 2022. Approximately 102.4 miles (33.5%) of distribution facilities were inspected and remediated in 2022.
Lake Worth Utilities, City of	Visual inspections are performed on all CLW transmission facilities on a three-year cycle. The transmission poles are concrete and steel. CLW performs an inspection of the distribution facilities on a three-year cycle. Pole tests include hammer sounding and pole prod penetration 6 inches below ground.	In 2022, CLW visually inspected 114 transmission poles and 490 distribution poles.	In 2022, 342 distribution poles were deemed unsatisfactory. Poles were unsatisfactory because they reached their maximum life expectancy.	CLW replaced 316 distribution poles in 2022, with 26 poles pending replacement. The poles range from Class 2 to Class 4, 35 foot to 55 foot.	CLW has an on-going VMP on a system wide, three-year cycle for transmission and distribution feeders and six-year cycle for distribution laterals. Minimum clearance of 10 feet in any direction from CLW conductors is obtained.	Contractor attempts to get property owners permission to remove trees which are dead or defective and are a hazard; fast growing soft-wooded or weed trees, small trees which do not have value but will require trimming in the future, tress that are unsightly as a result of trimming and have no chance for future development, and trees that are non native and invasive.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Lakeland Electric	The facilities are on an eight-year inspection cycle using visual, sound and bore, with ground line excavation and in addition; visual inspection during normal course of daily activities. Lakeland Electric initiated its second eight-year cycle in 2017.	Lakeland Electric inspected 8,146 (14.1%) distribution poles and 110 (25.8%) transmission poles in 2022.	Three (2.7%) transmission poles failed the inspection due to decay. 1,084 (13.3%) distribution poles failed inspection due to decay.	All poles recommended in 2022 were assessed for appropriate action. 515 distribution poles were replaced, repaired, or removed in 2022. Zero transmission poles were repaired or replaced in 2022.	The facilities are on a three-year inspection cycle for transmission and distribution circuits. VMP also provides in between cycle trim to enhance reliability.	27 miles of 230kV transmission lines were inspected in 2022. 10.7 miles of 69kV transmission lines were inspected in 2022. LE completed 276 miles of distribution lines for 2022.
Leesburg, City of	No transmission facilities. The Distribution facilities are on an eight-year cycle using visual, sound/bore, excavation method, and ground level strength test.	The City has completed the eight-year cycle that begun in 2016. The next round of inspections will start in 2024. No inspections were scheduled in 2022.	The City saw an estimated 5% failure rate and the causes were rot at the ground line and damage to pole tops, either by rot or woodpecker damage.	During 2022, 95 poles were replaced. The poles were 20 foot Aluminum poles and 25 to 50 foot, Class 7 to Class 4 wood poles. In some areas, underground distribution facilities were installed in place of the rejected poles.	Five-year trim cycle for feeder and lateral circuits. Problem trees are trimmed or removed as identified.	In 2022, 35 miles of distribution lines were trimmed as planned with an additional 6 miles of hot spot trimming.
Moore Haven, City of	The City inspects all the distribution facilities annually by visual and sound inspections.	The City continuously inspected the distribution facilities in 2022 by visual and sound method. The City is one square mile and easily inspected during routine activities. The City does not own any transmission facilities. The City is upgrading its 3 Phase poles.	The City has approximately 410 poles in the distribution system and streetlights.	The City replaced five 35 foot poles, and, five 40 foot poles. Also, in 2022, the City replaced two 40 foot poles due to Hurricane Ian.	The City is continuous tree trimming in easements and rights-of-way. 100% of distribution system is trimmed each year.	The City expended approximately 20% of Electric Dept. Resources to vegetation management. All vegetation management is performed in house.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Mount Dora, City of	The City does not own any transmission lines. Distribution lines and structures are visually inspected for cracks and a sounding technique used to determine rot annually. The City engaged a contractor to inspect and treat all wood poles on December 5, 2017. The project was completed in 2019. Inspections are on an eight-year cycle and the next cycle is planned to begin in 2025.	The City completed 100% of annual planned distribution field inspections in 2022.	During the 2017 inspection, all poles were inspected and corrective measures completed.	The city had 1,750 wooden poles as of January 1, 2022. The City's table shows zero wooden poles were replaced. In addition, the table showed that 26 concrete, fiberglass, or steel poles were replaced in 2022. The poles ranged between 30 to 45 foot.	An outside contractor working two crews 40 hours per week completes tree trimming on a 12-month cycle.	The City trimmed trees on a 12-month cycle, and removed limbs from trees in rights-of-way and easements that could create clearance problems.
New Smyrna Beach Utilities Commission, City of	The transmission and distribution facilities are on an eight-year inspection cycle. Additionally, the facilities are inspected as part of the City's normal maintenance when patrolling the facilities.	0 (0%) transmission poles were inspected during 2022 as transmission poles were inspected in 2012 and 2017. The next cycle starts in 2023. 1,597 (13%) distribution poles were inspected in 2022.	0 (0%) transmission poles were rejected in 2022. 67 (4.2%) distribution poles failed inspection due to decay and 22 (1.4%) distribution poles were rejected due to ground line and above ground decay.	No transmission poles were replaced in 2022. The City replaced/ repaired 88 distribution poles. The poles are sizes 30-45 foot and Class 2-7.	In 2021, the City transitioned its VM to a three-year programmatic power line-clearing plan for distribution overhead facilities. This includes professional trimming, clear cutting ROW/Easements and removing trees and other vegetation near distribution power lines. In 2022, the City transmission lines, ROWs, easements will be put on the three-year schedule similar to the distribution system.	The City trimmed approximately 101.5 (44%) distribution line miles in 2022. In 2022, 17.91 miles of transmission lines were trimmed.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Newberry, City of	Distribution poles are inspected on an eight-year inspection cycle at ground line for deterioration, entire upper part of the pole for cracks, and soundness of upper part of pole. The City has no transmission poles.	The City averages 200 poles a year. The City tested 250 poles in 2022.	The City had 19 poles fail due to rot/decay at ground level, top rot/decay, and woodpecker damage in 2022.	The City changed out 19 distribution poles in 2022.	The City trims all distribution lines on a three-year trim cycle, with attention given to problem trees during the same cycle. Problem trees not in the rights-of-way are addressed with the property owner.	One third of distribution facilities are trimmed each year to obtain a three-year cycle.
Ocala Electric Utility, City of	The City inspects its system on an eight-year inspection cycle, which include above ground inspection, sounding, boring, excavation, chipping, internal treatment, and evaluation of each pole to determine strength. 2022 is the eighth year in the second eight-year cycle.	No transmission poles were inspected in 2022, since 100% were inspected in 2015. The transmission poles will again be inspected in 2023, which is the beginning of the next cycle. None of the 31,881 wood distribution poles were inspected in 2022 due to contract issues.	No distribution poles were inspected in 2022.	No distribution poles were replaced in 2022.	The City is on a four-year trim cycle for distribution and three-year trim cycle for transmission, with additional pruning over areas allowed minimal trimming. In 2013, an IVM style-pruning program was implemented which uses manual, mechanical, and chemical control methods for managing brush.	In 2022, the City trimmed one-fourth of the distribution system and 100% the transmission system. Ocala uses mechanical trimmer, trim lifts and herbicide methods for its VM.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Orlando Utilities Commission, City Orlando	OUC facilities are on an eight-year inspection cycle, which includes visual-, sound-, bore-based inspection, excavation, removal of exterior decay, ground line, and internal treatments.	In 2022, 6,696 (13%) poles were planned for inspection and 6,684 (13%) were completed.	24 (0.4%) poles failed inspection in 2022.	OUC replaced 562 wood poles in 2022. The poles replaced in 2022 included poles that were identified for replacement during previous years' inspections.	222 miles of transmission facilities are on a three-year trim cycle. 1,323 miles of distribution facilities are on a three-year trim cycle. OUC follows safety methods in ANSI A300 & Z133.1.	For 2022, 418 distribution miles were planned and 393 miles (94%) were completed. For 2022, 107 transmission miles were planned and 100% were completed.
Quincy, City of	The City's pole inspection procedures include visual and sound and bore methods for an inspection cycle of eight years.	The City did not do any visual inspections in 2022 as all 2,869 distribution poles were inspected in 2021.	No inspection were planned or carried out in 2022.	11 (2.1%) distribution poles were replaced in 2022. The poles ranged from 30 foot to 45 foot, Class 2 to Class 5.	The City trims its electric system rights-of-way on a regular basis using in-house crews. The City strives to trim 25% of the system per year.	Approximately 27 miles (25%) of vegetation trimming was completed on the distribution system in 2022. 100% (1.2 miles) of the City's transmission lines were inspected in 2022.
Reedy Creek Improvement District	The District performs a visual inspection monthly of its overhead transmission system and inspects the distribution facilities every eight years.	The District has 7 wooden distribution poles. All distribution wood poles (7) were inspected in 2021. The next inspection is scheduled for 2029.	All distribution poles passed inspection.	The District's transmission system has no wooden poles in service. The transmission system includes approximately 14 miles of overhead transmission ROW. The distribution system is essentially an underground system with 7 wooden poles.	14 miles of transmission rights-of-way is ridden monthly for visual inspection. The District contracts tree trimming each spring to clear any issues on rights-of-way.	Periodic inspections in 2022 yielded minimal instances of vegetation encroachment. In each scenario, tree-trimming services were engaged to remove any concerns. The District continues its long-term vegetation management plan to ensure all clearances remain within acceptable tolerances.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Starke, City of	The City is in process of having all their poles GIS mapped. To date, they have approximately two-thirds of their poles mapped and inspected. The poles are replaced as needed on a visual basis.	One-half of the City's poles (1,861) were inspected.	In 2020, 28 poles (1.5%) were found to be rotten or needed support.	The City has no transmission poles. The distribution poles that were replaced in 2020 ranged from Class 2 50 foot poles to Class 2 30 foot poles.	The City trims their trees upon visual inspection along with utilizing tree trimming contractors. The City trims 33% of their electrical distribution system annually. The City uses the standard of trimming 15 feet on both sides of the poles and installing "squirrel guards."	The City trims distribution lines throughout the year, as needed and when applicable, removes dead or decayed trees. The City trimmed 33% of distribution system in 2020. The City will use the information from PURC's VM workshops to improve their VM.
Tallahassee, City of	Every eight years a new pole inspection cycle is initiated to inspect all poles over a three-year period. The inspection includes visual inspection, sound & bore, internal & fumigant treatment, assessment & evaluation for strength standards. The City performs a climbing and physical inspection of its transmission structures on a five-year cycle.	In 2019, a complete inspection of the City's 2,956 transmission poles was completed. All 53,316 distribution poles were inspected in 2020.	The City found 11 (0.4%) wooden transmission poles failed inspection due to rot and animal invasion. 1,301 (2.4%) distribution wooden poles were rejected during the 2020 inspections due to rot and animal invasion.	Six transmission poles were replaced. The City replaced 315 distribution and transmission poles and structures in 2022. The poles ranged from 25 foot to 60 foot, Classes 2 to 7. These poles were replaced with a taller stronger Class size pole.	The transmission facilities are on a three-year trim cycle with target clearance of 20 feet on 115kV lines and 30 feet on 230kV lines. The distribution facilities are on a 36-month trim with a target clearance of 9 to 12 feet. When a tree is removed, the City replaces it with a "utility compatible tree."	The transmission rights-of-way & easements were mowed in 2022. Approximately 1,117 miles of overhead distribution lines were managed in 2022. Tallahassee uses a mechanical trimmer and trim lifts to trim vegetation. In addition, Tallahassee does periodic spot spraying and vegetation maintenance.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Wauchula, City of	The City of Wauchula has a third-party contractor inspect its substation yearly and 100% of distribution poles in 2016-19. The next scheduled pole inspection will be in 2024.	The City of Wauchula has a third-party contractor inspect its substation yearly and 100% of distribution poles in 2016 to 2019. The poles have been treated and are expected to have a minimum of 10 years of service left.	Approximately 3% (out of 3,200 poles) have failed due to poles rotting or physical damage.	101 distribution poles were replaced in 2022 ranging from 35 foot to 60 foot, all Class 4 poles.	The policy on vegetation management includes trimming trees and herbicides for vines on a schedule of one-third of the distribution per year.	Approximately 3 miles were trimmed and sprayed in 2022. The City also uses PURC's 2007 and 2009 vegetation management reports to help improve its practices.
Williston, City of	Williston will comply with the most recent version of the NESC. The City is embarking on a policy of pole inspection that will inspect all poles within its system on an eight-year cycle.	The City does not have records from previous administrations that outline these inspections. They will be doing a comprehensive program moving forward.	The City does not have records from previous administrations that outline these inspections. They will be doing a comprehensive program moving forward.	No poles were replaced or remedied in 2022.	The distribution lines are on a three-year trim cycle with attention to problem trees during the same cycle. Any problem tree not in rights-of-way is addressed to the property owner to correct.	One-third of distribution facilities were trimmed in 2022.
Winter Park, City of	The City does not own transmission poles or lines. The distribution facilities are on an eight-year cycle, which the City is evaluating the cycle for length. The inspection includes visual, assessment prior to climbing and sounding with a hammer.	The City does not own transmission poles. The City did not conduct pole inspections in 2022; however, WPE routinely inspect poles that are involved with daily jobs and work orders.	The City did not replace any wood poles in 2022. The City's undergrounding program is eliminating many poles from its system and current practice is to replace poles that are no longer safe or serviceable or underground the applicable section of overhead conductor, if practicable.	Based on the 2007 full system inspections, all repairs and replacements have been made. The City routinely inspects the poles involved with daily jobs and work orders. In 2022, the City removed 150 vacated wood and concrete poles from its system.	Vegetation management is performed on a three-year trim cycle, which is augmented as needed between cycles.	The City trimmed approximately 22.91 miles of distribution lines in 2022.

Appendix C – Summary of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

Utility	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Description of policies, guidelines, practices, procedures, cycles, and pole selection	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Central Florida Electric Cooperative, Inc.	100% of the transmission facilities are inspected annually using above and ground level inspections. The distribution facilities are on a nine-year cycle for inspections using above and ground level inspections.	Central Florida planned and inspected 43 miles of the transmission facilities in 2022. 5,938 (6.772%) distribution poles were inspected in 2022.	Of the 5,938 distribution poles inspected in 2022, 20 (0.26%) were rejected. These poles are scheduled to be replaced.	385 distribution poles were replaced in 2022. The poles varied from 30 foot to 45 foot, Class 3 to Class 6.	Trees are trimmed or removed within 15 feet of main lines, taps, and guys on a five-year plan.	In 2022, 616 miles of the 3,998 miles of primary overhead line on the system were trimmed.
Choctawhatchee Electric Cooperative, Inc.	The Coop inspects new construction of power lines on a monthly basis and has an eight-year cycle to cover all poles.	During 2022, 7,939 poles or 12.9% of 61,789 total poles were inspected.	376 poles or 4.7% of the poles failed inspection ranging from spit top to wood rot.	During 2022, CHELCO replaced 737 poles, which included failed poles from the 2022 inspection and remaining poles from the 2021 inspection.	Current rights-of-way program is to cut, mow, or otherwise manage 20% of its rights-of-way on an annual basis. Standard cutting is 15 feet on either side of primary from ground to sky.	In 2022, 408 miles were cut on primary lines and the Coop worked to remove problem tress under the primary lines, which reduces hot-spotting requirements between cycles. The Coop also established herbicidal spraying program.

Appendix C – Summary of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Clay Electric Cooperative, Inc.	Clay's transmission facilities are on a ten-year cycle, which includes sound/bore techniques, excavation, climbing inspection (four-year cycle), and ground (two- year) patrol. Clay's distribution system is now on a ten-year cycle using excavation, sound and bore at the ground line and visual inspection (five-year cycle) and system feeder inspection excluding ground line (five-year cycle).	Clay completed the transmission ground patrol inspection in 2016 & the next inspection will be done in 2026. A climbing inspection was completed on the transmission system, which consists of 2,531 poles, in 2022 & the next inspection will be completed in 2024. A helicopter inspection was performed in 2021 consisting of 2,557 poles and 38 substations. Additionally, in 2022, Clay performed the system feeder and ground line pole inspection. The total number of distribution poles inspected was 56,652.	The inspection found 3 (0.12%) of 2,531 transmission poles inspected needed replacement. 4,178 (7.4%) distribution poles were rejected due to various reasons including ground rot, internal rot, top decay, holes high, and split.	3 transmission poles that failed inspection ranged from 60 to 65 foot, Class 1 poles. 2,296 distribution poles that failed inspection ranged from 20 foot to 65 foot, Class 1 to 7. Clay notes that all pole replacements are expected to be completed by the end of the second quarter of 2023.	Clay's VMP for the transmission facilities is on a three-year cycle and includes mowing, herbicide spraying and systematic re-cutting. Clay's VMP for the distribution facilities is on a three-year cycle for city, a four-year cycle for urban and five-year cycle for rural and includes mowing spraying and re-cutting.	In 2022, Clay mowed 54.32 miles, sprayed 62.77 miles, and recut 49.69 miles of its transmission rights-of-way. In 2022, Clay mowed 2,320.76 miles, sprayed 2,336.98 miles, and recut 1,892.63 miles of its distribution circuits.

Appendix C – Summary of Rural Electric Cooperative Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Escambia River Electric Cooperative	Escambia River inspects its distribution facilities on an eight-year cycle using visual, sound, and bore techniques in accordance with RUS standards.	4,375 (12.5%) distribution poles were planned and 700 (2%) inspections were completed in 2022. Escambia River reported that there were scheduling conflicts with the contractors. Escambia River does not own any transmission poles.	Approximately 30 (4.3%) poles failed inspection in 2022. The common cause was pole rot at the top and bottom of the poles.	In 2022, Escambia River replaced 240 poles. The majority of these poles were reported from the 2021 inspection. These numbers reflect various pole sizes and Classes.	Escambia River's distribution facilities are on a three-year trim cycle. Distribution lines and rights-of-way is cleared 30 feet, 15 feet on each side.	In 2022, approximately 670 miles (40.5%) of the power lines were trimmed with 550 miles (33.3%) planned.
Florida Keys Electric Cooperative Association, Inc.	The company inspects 100% of the transmission structures annually by helicopter and on the ground. In addition, FKEC started using aerial drones to supplement the helicopter inspections. The distribution poles are on an eight-year cycle and was completed in 2018. All 11,808 distribution poles were inspected and 10,698 wood poles were tested and treated with a reject rate of 3.85%. The third-cycle started in 2022.	100% of the transmission poles were inspected in 2022 by helicopter patrol and ground-based infrared inspections. In 2022, 3,973 (25%) of the distribution facilities were inspected.	No transmission structures failed inspections in 2022. 114 transmission water structures were inspected in 2017 and are scheduled for foundation repairs in 2021, which were completed in January 2022. In 2022, 68 (2.95%) distribution poles required replacement due to shell rot, cracking, pole top rot, and severe spalling (concrete).	No transmission structures were replaced in 2022. Six distribution structures were replaced in 2022 and the remaining structures are scheduled for the first half of 2023. The poles ranged from 40 to 45 feet, Class 4 poles.	100% of the transmission system is inspected and trimmed annually. The distribution system is on a three-year trimming cycle. The trade-a-tree program was implemented in 2007 for problem trees within the rights-of-way. FKEC began implementation of the AiDash IVMS product, which combines high-resolution satellite imagery and artificial intelligence to help improve trimming cycle and prediction of growth rates.	100% of the transmission facilities are inspected annually and VM tasks are performed as needed. In addition, all substation properties are inspected annually and VM tasks are performed as needed. Approximately 220 circuit miles of distribution lines were trimmed in 2022. Additionally, over 990 member-requested service requests were competed.

Appendix C – Summary of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Glades Electric Cooperative, Inc.	The facilities are on a ten-year sound and bore inspection cycle with excavation inspection cycle for all wood poles in addition to System Improvement Plan inspections.	In 2022, 100% of total 83 miles of transmission lines were planned and completed by visual inspections. 2,388 miles of distribution lines and 160 miles of underground distribution lines were planned and inspected in 2022. GEC inspected 4,118 poles in 2022.	404 (9.8%) distribution poles failed during the 2022 inspection due to decay, rot and top splits.	404 distribution poles rejected in the 2022 inspection were replaced. The poles varied in height and Classes. No transmission poles were replaced in 2022.	All trimming is on a three-year cycle. The rights-of-way are trimmed for 10-foot clearance on both sides, and herbicide treatment is used where needed.	GEC trimmed 134 miles of distribution circuits in 2022. The transmission rights-of-way are inspected annually.
Gulf Coast Electric Cooperative, Inc.	No transmission lines. Performs general distribution pole inspections on an eight-year cycle. Also, GCEC inspects underground transformers and other padmount equipment on a four-year cycle.	In 2022, GCEC inspected 1,000 poles and 100 pad-mounted inspections.	Of the 1,000 poles inventoried in 2022, 91 (9.1%) poles were rejected. The poles were rejected due to mechanical damage.	In 2022, GCEC replaced 74 structures ranging from 35 foot, Class 6 to 60 foot, Class 2 poles.	GCEC owns approximately 2,051 miles of overhead and 430 miles of underground distribution lines. GCEC strives to clear the entire ROW on a five-year cycle. GCEC clears between 20 and 30 feet width, from ground to sky.	GCEC trimmed approximately 258 miles of ROW in 2022. GCEC also works closely with property owners for danger tree removal.

Appendix C – Summary of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Lee County Electric Cooperative, Inc.	Transmission facilities are inspected ever two years for 138kV systems. The inspections are done by climbing or the use of a bucket truck. The distribution facilities are on a two-year visual inspection cycle and on a ten-year climbing inspection cycle for splitting, cracking, decay, twisting, and bird damage.	In 2022, 1,373 (55%) transmission poles were inspected, which was 100% of the poles that were scheduled. 4,515 (3%) distribution poles were inspected, which was 100% of the inspections scheduled.	Zero (0%) transmission poles failed inspection. 569 (13%) distribution poles failed inspection due to rot/split top and woodpecker damage.	15 transmission poles were replaced due to rot, 3 concrete poles were replaced as they were no longer viable, and 3 steel poles underwent rust remediation. 71 distribution poles were repaired through re-plumbing and patching. 498 poles were replaced in 2022. The sizes varied by Class 1 to Class 6.	VMP strategies include cultural, mechanical, manual, & chemical treatments and the plan is on a five-year cycle for 1 Phase distribution facilities and three years for 2 & 3 Phase distribution facilities. The 138kV transmission systems are on an annual cycle.	LCEC completed 27 miles (100% planned) of Transmission trimming, 276 miles (91% planned) three-phase trimming, and 447 (97% planned) miles of single-phase trimming,
Okefenoke Rural Electric Membership Cooperative	OREMC owns no transmission facilities. The inspections for the distribution systems include visual, sound/bore with excavations, and chemical treatment. The pole inspections are on an eight-year cycle.	In 2022, OREMC performed inspections on 204 (0.3%) poles. OREMC has 62,000 wood poles as of March 1, 2023.	In 2022, 30 (15%) poles were rejected. The cause of the rejection was woodpecker damage, split pole tops, and pole weathering.	Of the 30 poles failing inspection in 2022, 3 were retired and 27 were replaced. The poles replaced range from 30 to 40 feet. During the course of other projects, 922 new poles were added and 485 poles were retired in 2022.	Vegetation control practices consist of complete clearing to the ground line, trimming, and herbicides. The VMP is on a five-year trim cycle. OREMC utilizes contractors for its VM programs.	OREMC planned 500 miles of rights-of-way for trimming and completed 433 miles in 2022. Also in 2022, contractors sprayed 235 miles of rights-of-way. In 2022, 1,009 at risk trees were removed.

Appendix C – Summary of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Peace River Electric Cooperative, Inc.	Peace River currently uses RDUP bulletin 1730B-121 for planned inspection and maintenance. The facilities are located in Decay Zone 5 and are inspected on an eight-year cycle. The transmission poles are visually inspected every two years.	393 transmission (172 concrete, 23 steel, 198 wooden) poles are inspected every two years. 5,533 (8.9%) of 62,327 distribution poles were inspected.	Peace River did not replace any transmission poles in 2022. 96 (1.7%) distribution poles were rejected in 2022.	Peace River replaced 269 poles in 2022. The distribution poles receiving remediation in 2022 varied from 25 foot to 60 foot, Class 1 to 6. No transmission poles were changed out for storm hardening.	Peace River utilized guidelines in either RUS bulletins or other materials available through RUS. In addition, Peace River uses a Georgia Rights-of-way program, which uses a ground to sky method by removing trees. The VMP is on a four- to five-year cycle.	In 2022, the Company completed rights-of-way maintenance on 2,848 (99%) of its 2,876 miles of overhead distribution.
Sumter Electric Cooperative, Inc., dba SECO Energy	The transmission facilities are on a five-year cycle using ground line visual inspections, which includes sounding and boring and excavation. The distribution facilities are on an eight-year cycle using sound, bore, & excavation tests.	Zero transmission poles were planned and inspected in 2022. 15,734 (11.5%) distribution poles were planned and 15,665 (11.4%) were inspected in 2022.	Zero transmission poles failed inspection. 722 (4.6%) distribution poles failed inspection. The causes are due to ground rot and top deterioration	Zero wooden transmission poles were replaced with spun-concrete poles. 720 distribution poles were replaced. The distribution poles ranged from 30 to 60 foot and Class 1 to Class 6. The poles replaced include pole failures from the 2021 and 2022 inspections.	Distribution and transmission systems are on a three-year trim cycles. SECO's VM includes tree trim cycles, tree removals, and herbicide treatment with a minimum 10-foot clearance and a desired clearance of 15 feet from its distribution system. The transmission system specification is a 30-foot clearance.	In 2022, SECO trimmed 885 miles for its cycle and an extra 14 miles of its transmission and distribution system. SECO removed 30,537 trees in 2022.

Appendix C – Summary of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

Utility	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
	Description of policies, guidelines, practices, procedures, cycles, and pole selection	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Suwannee Valley Electric Cooperative, Inc.	SVEC inspects all structures on an eight-year cycle using sound/bore and visual inspection procedures.	SVEC inspected five (100%) transmission structures in 2022. 14,002 (15%) distribution structures were inspected in 2022.	774 (5%) inspections of distribution poles failed due to ground line decay, excessive splitting, and woodpecker damage. Zero inspections of transmission poles failed.	587 (4%) distribution poles of total inspected were remediated by ground line treatment and 926 (3%) distribution poles were replaced. Zero transmission structures were remediated.	SVEC's facilities are on a four- to three-year inspection cycle includes cutting, spraying and visual on as-needed basis.	In 2022, 1,116 (30%) miles of rights-of-way were cut and in 2023, there are plans to cut an additional 1,116 (30%) miles.
Talquin Electric Cooperative, Inc.	Annual inspections in house of transmission lines are performed by checking the pole, hardware, and conductors. An outside pole-treating contractor inspects distribution and transmission poles each year. The poles are inspected on an eight-year rotation cycle since 2007.Talquin performs infrared inspections annually at its substations.	10,339 distribution poles were inspected in 2022. Talquin did not inspect any transmission poles in 2022 due to the small percentage of its existing wooden transmission poles.	125 (1.21%) of the distribution poles inspected were rejected due to wood decay, split tops, or woodpeckers damage.	The priority poles were replaced and the rejected poles are being inspected and repaired or replaced if necessary. Talquin replaces 30 foot, Class 7 poles with stronger 35 foot, Class 6 poles with guys and 35 foot Class 6 poles with 40 foot Class 4 poles as a minimum standard.	Talquin maintains its rights-of-way by mechanical cutting, mowing, and herbicidal applications.	439 (16.1%) miles of distribution and 2.8 (5.2%) miles of transmission rights-of-way were treated in 2022. In addition, Talquin received 699 non-routine requests for tree maintenance.

Appendix C – Summary of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Tri-County Electric Cooperative, Inc.	The transmission facilities are inspected on a five-year cycle by both ground line and visual inspections. The distribution facilities are on an eight-year cycle using both ground line and visual inspections.	During 2022, the transmission poles were visually inspected. Tri-County inspected 7,139 (12.6%) distribution poles in 2022.	31 (0.43%) distribution poles were rejected. The Coop repaired broken ground wires and changed out or replaced missing guy guards during the inspections.	The 31-rejected distribution poles found during the 2022 inspection, which required replacement, are in the process of being changed out.	The Coop attempts to acquire 30 foot rights-of-way easement for new construction. The entire width of the obtained ROW easement is cleared from ground level to a maximum height of 60 feet in order to minimize vegetation and ROW interference with the facilities.	In 2022, approximately 550 distribution miles were trimmed. The Coop has approximately 2,810 miles of overhead distribution lines in four counties.
West Florida Electric Cooperative Association, Inc.	West Florida continues to use RUS Bulletin 1730B-121 as its guideline for pole maintenance and inspection.	Prior to Hurricane Michael, WFEC inspected 7% of its poles.	Out of the 7% inspected, 5% required maintenance or replacement.	West Florida suspended its pole inspection in 2019 to concentrate on repairing the damage caused by Hurricane Michael. West Florida expects to restart the program in 2023.	West Florida's VM includes ground to sky side trimming along with mechanical mowing and tree removal.	During 2022, WFEC mowed and side trimmed 685 miles of its distribution system. Also, WFEC chemically sprayed approximately zero miles of rights-of-way.

Appendix C – Summary of Rural Electric Cooperative Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2022

	Transmission & Distribution Facility Inspections				Vegetation Management Plan (VMP)	
Utility	**Description of policies, guidelines, practices, procedures, cycles, and pole selection**	**Number and percent of poles and structures planned and completed**	**Number and percent of poles and structures failing inspections with reasons**	**Number and percent of poles and structures by class replaced or remediated with description**	**Description of policies, guidelines, practices, procedures, tree removals, with sufficient explanation**	**Quantity, level, and scope of planned and completed for transmission and distribution**
Withlacoochee River Electric Cooperative, Inc.	WREC inspects the transmission and distribution facilities annually (approximately 5,397 miles for 2022) by line patrol, drone/infrared, physical and visual inspections.	74 miles or 100% of transmission facilities were inspected by walking, riding or aerial patrol. 5,397 miles of distribution facilities were inspected annually by line patrol, voltage conversion, rights-of-way, and Strategic Targeted Action and Repair (S.T.A.R.).	OSMOSE (a contractor for pole inspection and treatment) found 6.2% poles with pole rot and 1.0% poles were rejected in 2003 to 2004. WREC discontinued this type of inspection/ treatment plan and now data is unavailable on the exact failure rates. In 2022, zero transmission poles/structures failed inspection.	In 2022, 5,994 distribution and transmission wooden, composite, cement, concrete, steel, aluminum, and fiberglass poles ranging in size from 12 to 120 foot were added; 2,774 poles were retired.	In 2017, WREC contracted with an arborist company to assist with the aggressive VMP that includes problem tree removal, horizontal/vertical clearances and under-brush to ground. WREC maintains over 180 overhead feeder circuits (over 7,200 miles of line) on a trim cycle between four to five years.	All transmission lines are inspected annually. 15 miles of transmission rights-of-way issues were addressed in 2022. In addition, during 2022, WREC addressed 3,240 rights-of-way service orders ranging from trimming a single account to trimming an entire subdivision or area.