Review of Florida's Investor-Owned Electric Utilities

2023 Service Reliability Reports

September 2024

State of Florida
Florida Public Service Commission
Division of Engineering

Review of Florida's Investor-Owned Electric Utilities 2023 Service Reliability Reports

September 2024

State of Florida
Florida Public Service Commission
Division of Engineering

Table of Contents

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 Duration 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 2023 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 IOU's 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 IOUs to file an SPP, the Municipal Electric Utilities and Rural Electric Cooperative Utilities continue to provide updates of their storm hardening efforts as indicated in Appendices 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), Tampa Electric Company (TECO), and responses to staff's data requests were sufficient to perform the 2023 review.

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

[5]While FPL and Gulf Power Company merged in 2020, the systems were not fully integrated, and therefore, separate reports were filed for the 2020 and 2021 Reliability Reports. The consolidated data for FPL began in 2022. 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 2023 allowable exclusions accounted for approximately 59 percent of all excluded Customer Minutes of Interruption (CMI). The "Named Storms" category accounted for approximately 52 percent of the total unadjusted CMI. DEF experienced outages associated with Hurricane Idalia, two tornadoes, and an Emergency Operation Center (EOC) activation.

On an adjusted basis, DEF's 2023 System Average Interruption Duration Index (SAIDI) was 71 minutes, decreasing its adjusted SAIDI by 14 minutes from the 2022 results. The trend for the SAIDI over the five-year period of 2019 to 2023 is trending downward. The System Average Interruption Frequency Index (SAIFI) in 2023 was 0.86 interruptions, indicating an 8 percent decrease from 2022. The Customer Average Interruption Duration Index (CAIDI) decreased for 2023 compared to 2022. Over the five-year period, the SAIFI and CAIDI are both trending downward.

In **Figure 2-8**, DEF's Top Five Outage Causes, the category "Defective Equipment" is in the top spot, representing 29 percent of the total number of outages. The subsequent categories were "Unknown" (21 percent) and "Vegetation" (21 percent), followed by "Animals" (10 percent) and "Lightning" (7 percent). The "Animals" category is trending downward for the five-year period of 2019 to 2023, having an 8 percent decrease in 2023. The "Vegetation" category is trending downward for the same period with a 9 percent decrease from 2022 to 2023. The "Defective Equipment" category decreased between 2022 and 2023 and is trending downward for the five-year period. The "Unknown" and "Lightning" categories had increases in 2023 and are trending upward for the five-year period.

Figure 3-10 shows the percentage of reliability complaints, compared to the total number of complaints filed with the Commission for DEF, decreased to 4.0 percent in 2023 from 4.3 percent in 2022. Over the five-year period from 2019 to 2023, DEF's reliability related complaints have been trending downward.

Service Reliability of Florida Power & Light Company

The unadjusted data for FPL indicates that its 2023 allowable exclusions accounted for approximately 46 percent of the total CMI. The "Named Storms" category accounted for approximately 11 percent of the CMI excluded and the "EOC Activations" category accounted for approximately 25 percent of the excluded CMI. In addition, FPL's service area was affected by 13 tornadoes, Tropical Storms Arlene and Ophelia, Hurricane Idalia, and five EOC activations.

FPL's 2023 metrics on an adjusted basis include SAIDI, which was reported as 43 minutes compared to 46 minutes in 2022. The 2023 SAIFI for FPL was reported as 0.62 interruptions, compared to 0.74 interruptions in 2022. FPL's 2023 CAIDI was reported as 69 minutes, compared to 62 minutes in 2022.

"Defective Equipment" (37 percent) and "Vegetation" (18 percent) outages were the leading causes of outage events for 2023. The next three outage causes are "Animals" (11 percent), "Unknown Causes" (10 percent), and "Other Causes" (10 percent). All categories had decreases

when compared to the outage events of 2022, with "Vegetation" having the largest decrease of 11 percent.

Complaints related to FPL's reliability decreased from 0.2 percent in 2022 to 0.1 percent in 2023. FPL's reliability related complaints appear to be trending downward, as shown in **Figure 3-10**.

Service Reliability of Florida Public Utilities Company

The unadjusted data for FPUC indicates that its 2023 allowable exclusions accounted for approximately 49 percent of the total CMI. The "Named Storms" category accounted for approximately 2 percent of the CMI excluded. FPUC reported that during 2023, both the Northwest and Northeast divisions were impacted by Hurricane Idalia.

The 2023 adjusted data for FPUC's SAIDI was 161 minutes, a 21 percent decrease from 203 minutes reported in the previous year. The SAIFI decreased from 1.70 interruptions in 2022 to 1.37 interruptions in 2023. The CAIDI value in 2023 was 117minutes, a decrease from the 120 minutes in 2022.

As shown in **Figure 2-23**, "Vegetation" (30 percent) was the number one cause of outages in 2023, followed by "Animals" (20 percent), "Unknown" (20 percent), "Lightning" (13 percent), and "Defective Equipment" (6 percent). "Defective Equipment" attributed outages decreased in 2023, as "Animals," "Lightning," "Unknown" and "Vegetation" caused outages increased.

FPUC's reliability related complaints were minimal. In 2023, the Utility had three reliability related complaints 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, which averages 30,000 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 2023 allowable exclusions accounted for approximately 30 percent of the CMI. Hurricane Idalia affected TECO's service area during 2023. The "Named Storms" category accounted for approximately 5 percent of the CMI. No tornadoes impacted TECO's service area in 2023.

The adjusted SAIDI decreased from 69 minutes in 2022 to 57 minutes in 2023, and represents a 17 percent improvement in performance. The SAIFI decreased to 0.82 interruptions from 1.03 interruptions in the previous year. The CAIDI increased 4 percent to 70 minutes from 67 minutes reported in 2022.

"Defective Equipment" (30 percent), "Vegetation" (17 percent), and "Animals" (15 percent) were the largest contributors to TECO's causes of outage events followed by "Unknown Causes" (11 percent) and "Lightning" (10 percent). **Figure 2-31** illustrates the top five outage causes. "Defective Equipment," the leading cause of outages, has been trending downward since 2019 with a 1 percent decrease in outages when compared to the previous year. The outage causes for "Vegetation," "Lightning," "Animals," and "Unknown Causes," are also trending downward.

TECO's percentage of total service reliability related complaints decreased from 10.0 percent in 2022 to 8.2 percent in 2023. TECO's percentage of service reliability complaints is trending downward over the period of 2019 to 2023.

Review Outline

This review primarily relies on the March 2024 Reliability Reports filed by the IOUs for the 2023 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 2023 distribution service reliability data and support for each of its adjustments to the actual service reliability data.
- **Section II:** Each utility's 2023 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 2019 to 2023.
- **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 2023 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 2023. Excludable outage events accounted for approximately 59 percent of the minutes of interruption experienced by DEF's customers. DEF experienced outages associated with Hurricane Idalia, which impacted its service area on August 29, 2023. On October 12, 2023, two tornados affected the North and South Coastal regions. In addition, Pinellas County activated its EOC on December 16, 2023, as a precautionary measure due to high winds and heavy rain.

The "Planned Service Interruptions" events accounted for approximately 3 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 3 percent of the minutes of interruptions. DEF asserted that the initiating causes varied from equipment failures to weather. The sustained causes also varied from animals to equipment failure.

Table 1-1
DEF's 2023 Customer Minutes of Interruptions and Customer Interruptions

2023	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	**345,481,732**		**2,248,384**	
Documented Exclusions				
Planned Service Interruptions	8,868,180	2.57%	180,866	8.04%
Named Storms	181,283,584	52.47%	172,559	7.67%
Tornadoes	3,326,502	0.96%	6,709	0.30%
Ice on Lines		0.00%		0.00%
Planned Load Management Events		0.00%		0.00%
Generation/Transmission Events	8,864,953	2.57%	160,383	7.13%
Extreme Weather (EOC Activation/Fire)	2,582,820	0.75%	20,088	0.89%
Reported Adjusted Data	**140,555,693**	**40.68%**	**1,707,779**	**75.96%**

Source: DEF's 2023 distribution service reliability report.

Florida Power & Light Company: Actual Data

Table 1-2 provides an overview of FPL's CMI and CI figures for 2023. Excludable outage events accounted for approximately 46 percent of the minutes of interruption experienced by FPL's customers. FPL reported 13 tornadoes, and the following named storms: Tropical Storm Arlene impacted FPL's service territories on June 2-3, 2023, Hurricane Idalia on August 29, 2023, through September 2, 2023, and Tropical Storm Ophelia on September 22, 2023. In addition, the EOC in Broward County was activated on April 13-18, 2023, due to heavy rain, flash flooding, and tornado threats. From June 16-18, 2023, the Santa Rosa County EOC was activated due to a severe multi-day rain and wind events. The Sarasota County EOC was activated from September 1-2, 2023, due to severe weather associated with Hurricane Idalia. The EOC in Ft. Lauderdale was activated from November 15-18, 2023, due to severe wind and rain. The State EOC was activated from December 16-18, 2023, due to widespread flooding, strong winds gusts, and tornados. The 13 tornadoes affected the following regions:

- North Florida region on March 13, 2023
- Central and South Broward regions on April 12, 2023
- Brevard region on April 26, 2023
- Panama City region on April 27, 2023
- Boca Raton region on April 28, 2023
- West Palm region on April 29, 2023
- Toledo Blade region on April 30, 2023
- South Dade region on May 25, 2023
- Brevard region on June 7, 2023
- Pensacola region on June 15, 2023
- Fort Walton region on June 19, 2023
- Naples region on August 24, 2023
- Central Florida region on October 12, 2023

Table 1-2
FPL's 2023 Customer Minutes of Interruptions and Customer Interruptions

2023	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	**% of Actual**	**Value**	**% of Actual**
Reported Actual Data (1)	**471,249,896**		**5,197,716**	
Documented Exclusions				
Planned Service Interruptions	20,247,927	4.30%	235,488	4.53%
Named Storms	52,424,843	11.12%	317,980	6.12%
Tornadoes	27,394,433	5.81%	305,010	5.87%
Ice on Lines	0	0.00%	0	0.00%
Planned Load Management Events	0	0.00%	0	0.00%
Generation/Transmission Events (2)	7,921,421	1.68%	559,528	10.76%
Extreme Weather (EOC Activation/Fire)	117,180,978	24.87%	679,931	13.08%
Reported Adjusted Data	**254,001,715**	**53.90%**	**3,659,307**	**70.40%**

Source: FPL's 2023 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 2023. Excludable outage events accounted for approximately 49 percent of the minutes of interruption experienced by FPUC's customers. The "Named Storms" events accounted for approximately 2 percent of the minutes of interruption. The Northeast and Northwest Divisions were impacted by Hurricane Idalia on August 29-30, 2023.

The Northeast division experienced several transmission outages throughout 2023. The outages were related to insulator, arrestor, or other substation equipment failures. The Northwest Division had one transmission outage due to an FPL equipment failure and one substation outage related to a substation breaker. 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 2023 Customer Minutes of Interruptions and Customer Interruptions

2023	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	**9,481,141**		**81,358**	
Documented Exclusions				
Planned Service Interruptions	1,890,490	19.94%	19,745	24.27%
Named Storms	154,921	1.63%	1,975	2.43%
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	2,586,812	27.28%	18,167	22.33%
Extreme Weather (EOC Activation/Fire)	0	0.00%	0	0.00%
Reported Adjusted Data	**4,848,918**	**51.14%**	**41,471**	**50.97%**

Source: FPUC's 2023 distribution service reliability report.

Tampa Electric Company: Actual Data

Table 1-4 provides an overview of TECO's CMI and CI figures for 2023. Excludable outage events accounted for approximately 30 percent of the minutes of interruption experienced by TECO's customers. All of TECO's service area was impacted by Hurricane Idalia on August 29, 2023, through August 31, 2023.

The "Planned Service Interruptions" events accounted for approximately 16 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 9 percent of the minutes of interruptions. In 2023, TECO reported three transmission outages due to vehicle collision, vegetation, and weather. TECO reported 201 substation outages in 2023. The causes listed included equipment failures and animal contacts.

Table 1-4
TECO's 2023 Customer Minutes of Interruptions and Customer Interruptions

2023	Customer Minutes of Interruption (CMI)		Customer Interruptions (CI)	
	Value	% of Actual	Value	% of Actual
Reported Actual Data	**69,854,938**		**1,199,763**	
Documented Exclusions				
Planned Service Interruptions	10,976,803	15.71%	295,882	24.66%
Named Storms	3,340,989	4.78%	40,877	3.41%
Tornadoes	0	0.00%	0	0.00%
Ice on Lines	0	0.00%	0	0.00%
Planned Load Management Events	533,934	0.76%	22,848	1.90%
Generation/Transmission Events	6,125,392	8.77%	141,481	11.79%
Extreme Weather (EOC Activation/Fire)	0	0.00%	0	0.00%
Reported Adjusted Data	**48,877,820**	**69.97%**	**698,675**	**58.23%**

Source: TECO's 2023 distribution service reliability report and response to staff data requests.

Section II: Adjusted Distribution Service Reliability Review of Individual Utilities

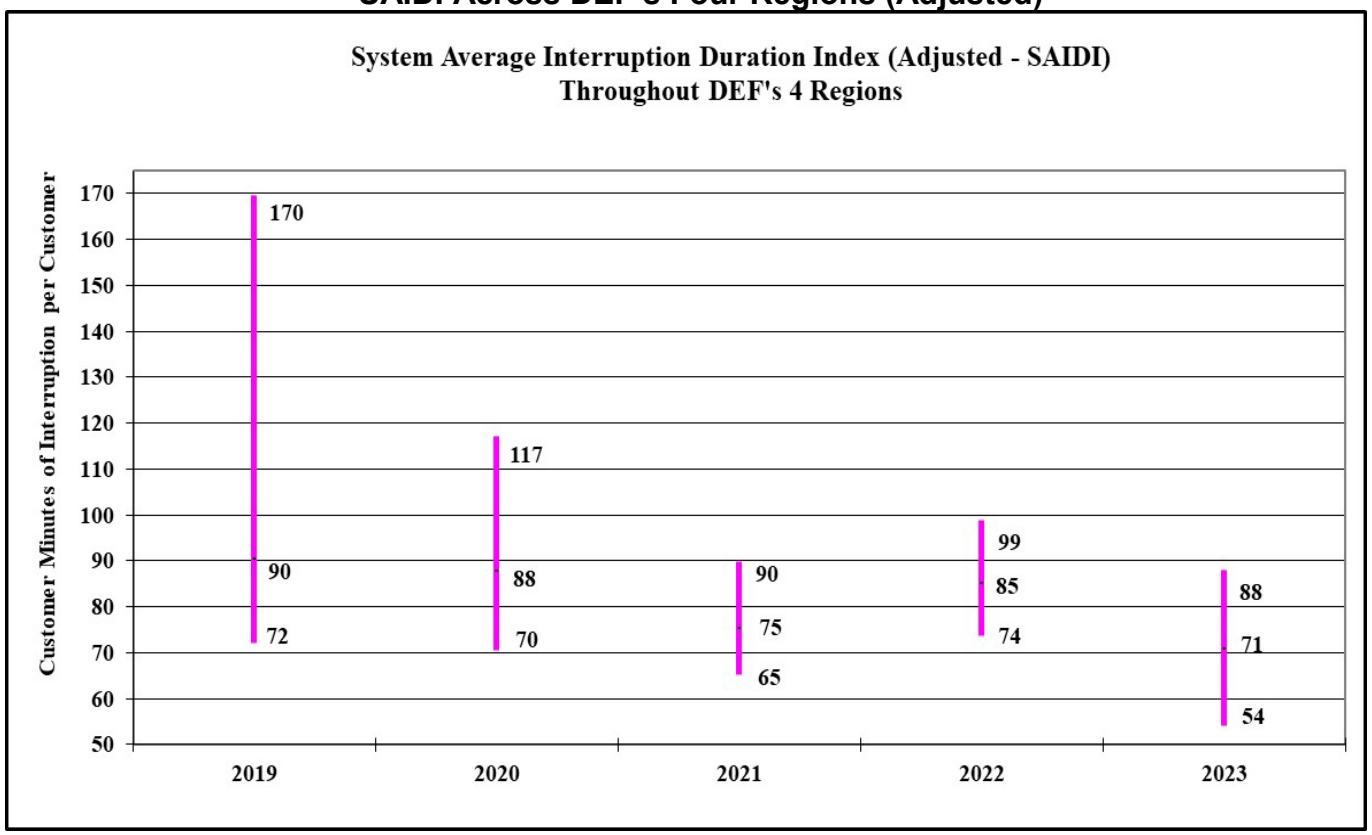
The adjusted distribution reliability metrics or indices provide insight into potential trends in a utility's daily practices and maintenance of its distribution facilities. This section of the review is based on each utility's reported adjusted data.

Duke Energy Florida, LLC: Adjusted Data

Figure 2-1 charts the adjusted SAIDI recorded across DEF's system and depicts decreases in the highest, lowest and the average values in 2023. DEF reported that in 2023, it experienced two tornadoes and one hurricane. In addition, DEF reported that there were five non-excluded days related to storms that affected DEF's overall indices. The overall impact to DEF from extreme weather was lower 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 88 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)



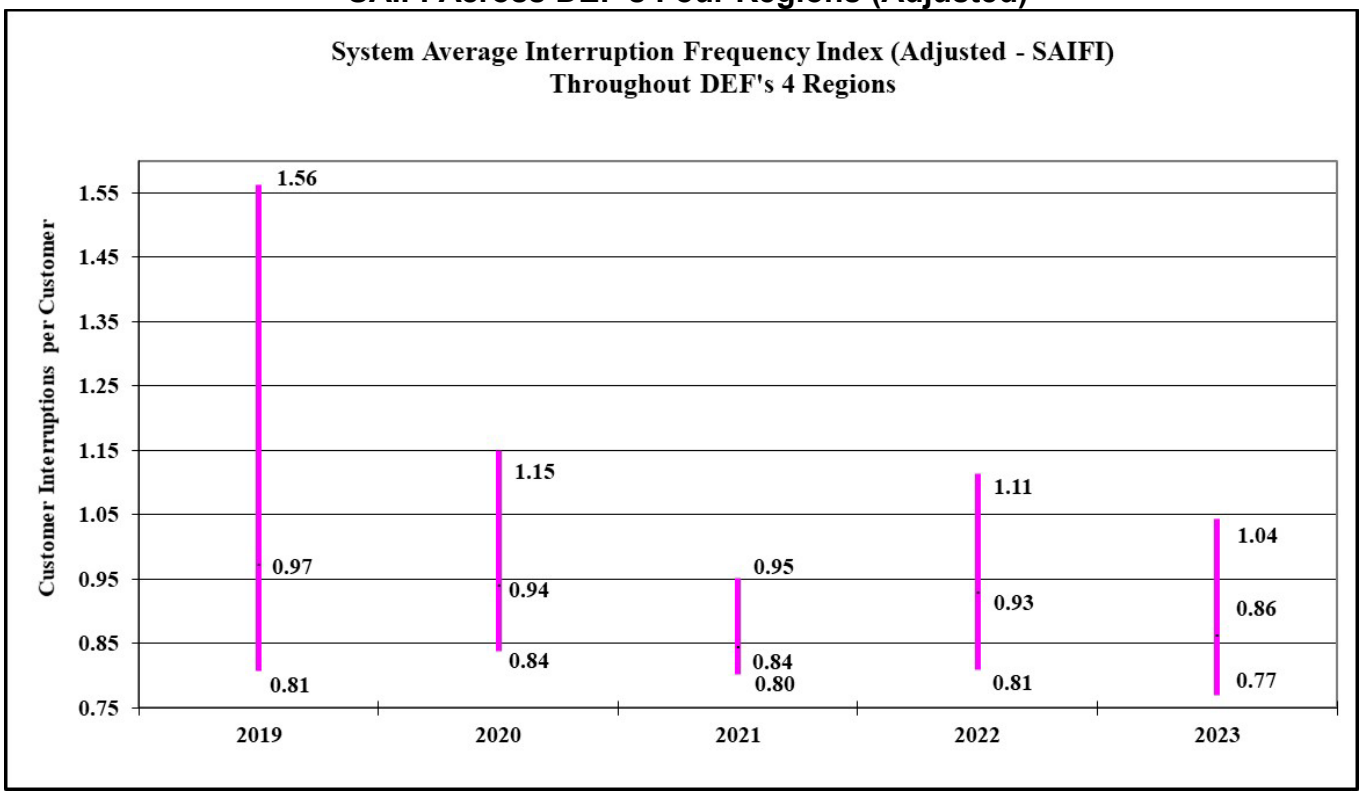
DEF's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2019	2020	2021	2022	2023
Highest SAIDI	North Coastal	North Coastal	North Coastal	North Central	North Coastal
Lowest SAIDI	South Coastal	South Central	South Central	South Central	South Coastal

Source: DEF's 2019-2023 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 2019 to 2023. There was a 5 percent decrease for the minimum value, an 8 percent decrease for the average value, and a 7 percent decrease for the maximum value from 2022 to 2023. The South Coastal 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)



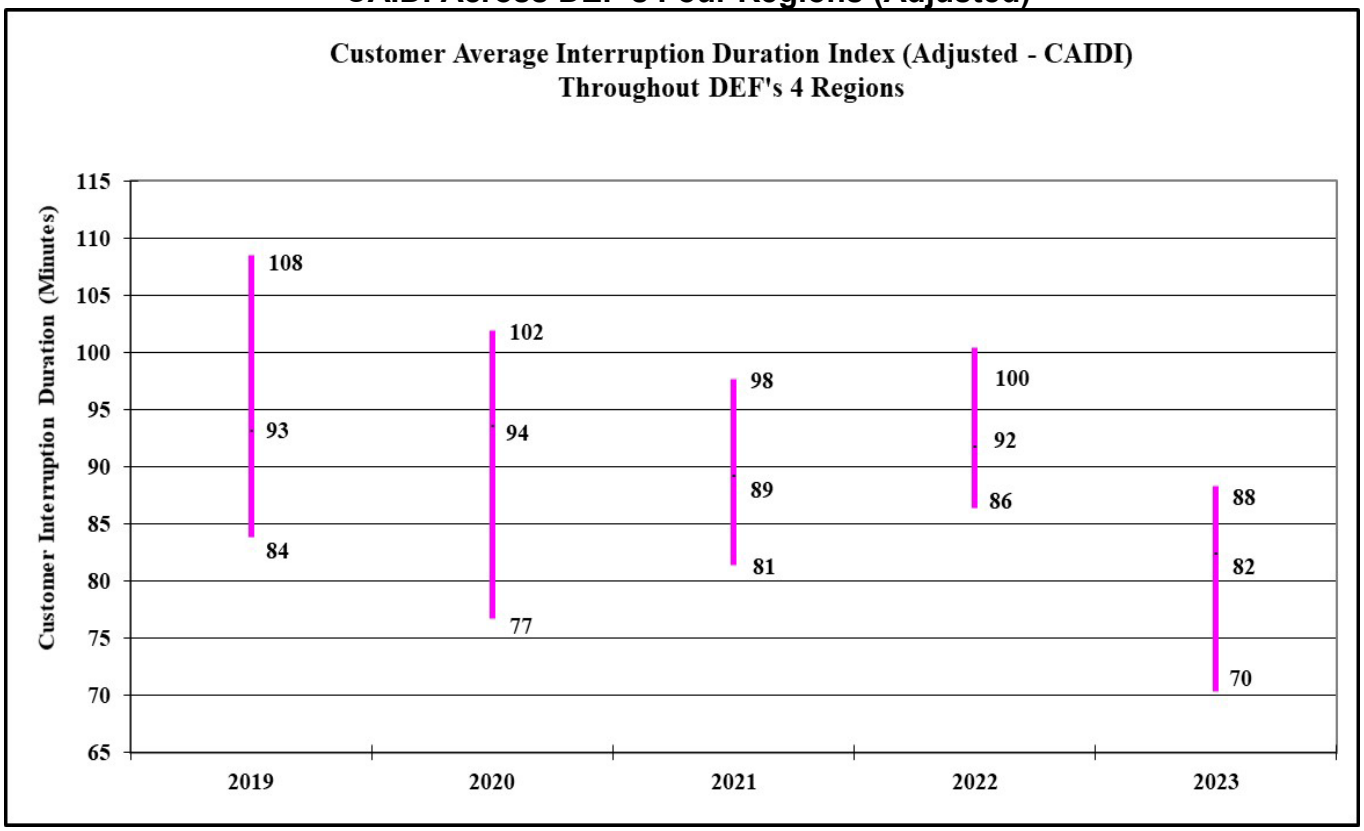
DEF's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2019	2020	2021	2022	2023
Highest SAIFI	North Coastal	North Coastal	North Coastal	North Coastal	North Coastal
Lowest SAIFI	North Central	North Central	South Central	South Central	South Coastal

Source: DEF's 2019-2023 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 the five-year period from 93 minutes in 2019 to 82 minutes in 2023. The South Central region had the highest CAIDI level for 2023, with the maximum CAIDI is trending downward. The South Coastal region had the lowest CAIDI level during the same period with the minimum CAIDI also trending downward.

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



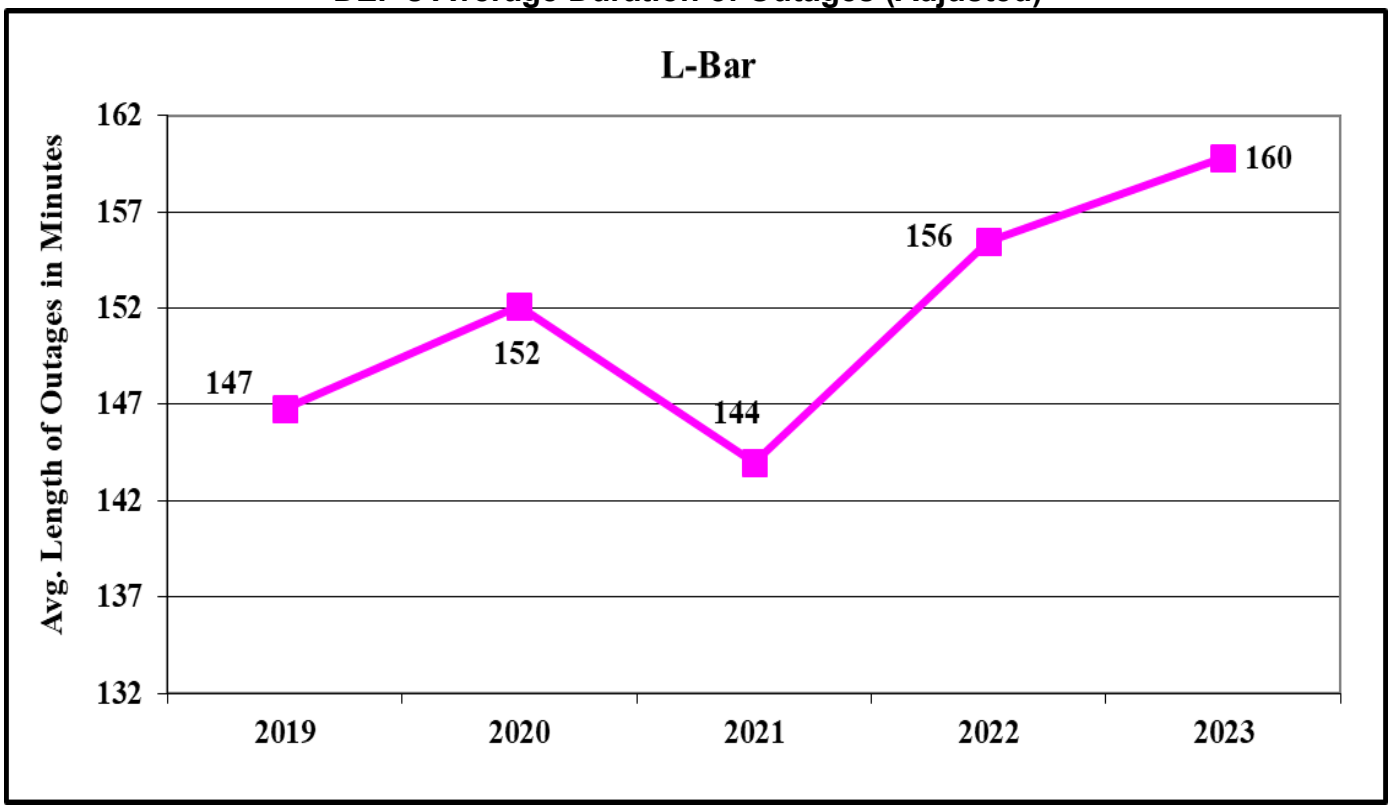
DEF's Regions with the Highest and Lowest Adjusted CAIDI Distribution Reliability Performance by Year

	2019	2020	2021	2022	2023
Highest CAIDI	North Coastal	North Coastal	North Central	North Central	South Central
Lowest CAIDI	South Coastal	South Central	South Central	North Coastal	South Coastal

Source: DEF's 2019-2023 distribution service reliability reports.

Figure 2-4 is the average length of time DEF spends restoring service to customers affected by outage events, excluding hurricanes and certain other outage events, otherwise known as L-Bar. The data demonstrates an overall 9 percent increase of outage durations since 2019, with a 3 percent increase from 2022 to 2023. DEF's overall L-Bar index is trending upward, indicating that DEF is spending more time restoring service from outage events.

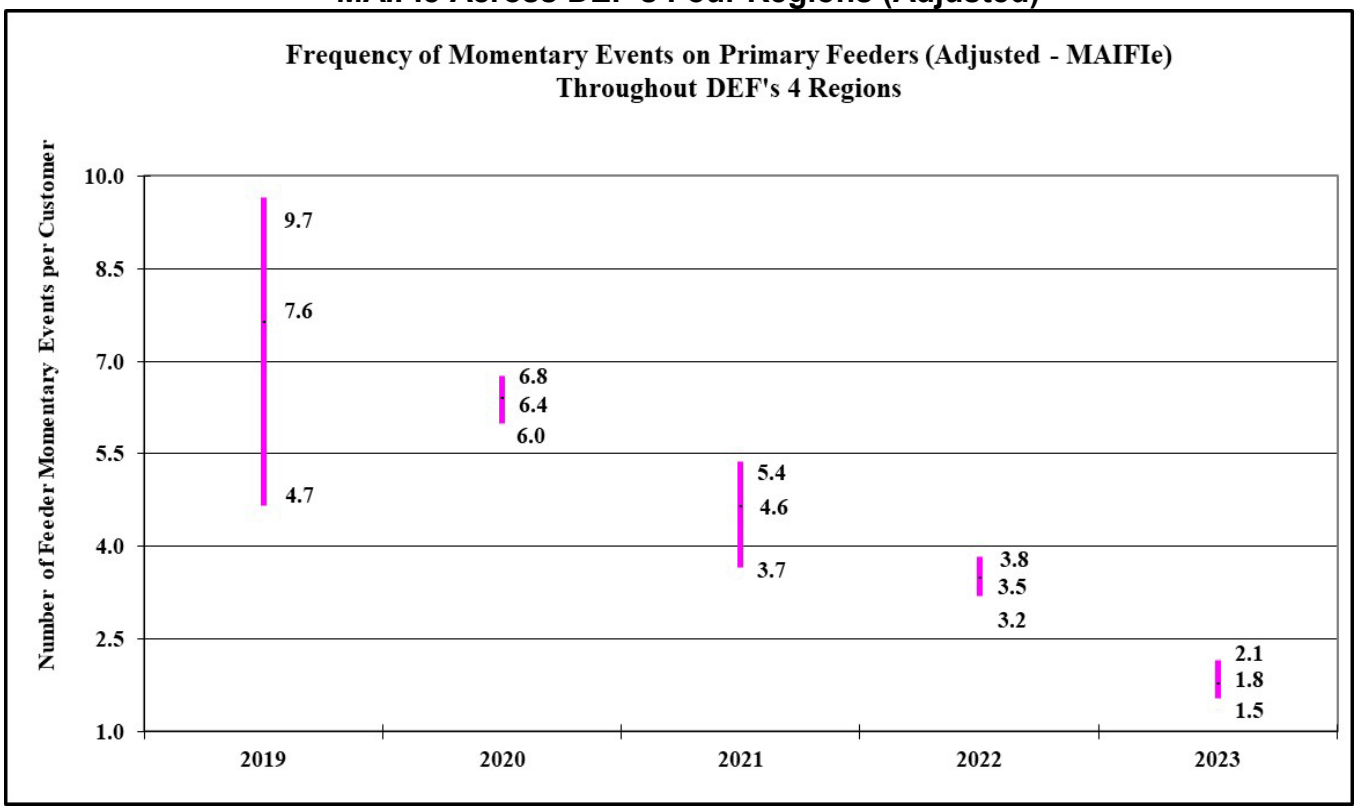
Figure 2-4
DEF's Average Duration of Outages (Adjusted)



Source: DEF's 2019-2023 distribution service reliability reports.

Figure 2-5 illustrates the frequency of momentary events on primary circuits for DEF's customers recorded across its system, otherwise known as MAIFIe. These momentary events often affect a small group of customers. A review of the supporting data suggests that the MAIFIe results between 2019 and 2023 appear to be trending downward showing improvement and there was a decrease in the average MAIFIe of 49 percent from 2022 to 2023. The South Coastal and North Central regions appear to fluctuate between having the best (lowest) results and the North Coastal, North Central, and South Central fluctuate between having the worst (highest) results. From 2022 to 2023, the highest MAIFIe decreased by 45 percent as the lowest MAIFIe decreased by 53 percent.

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



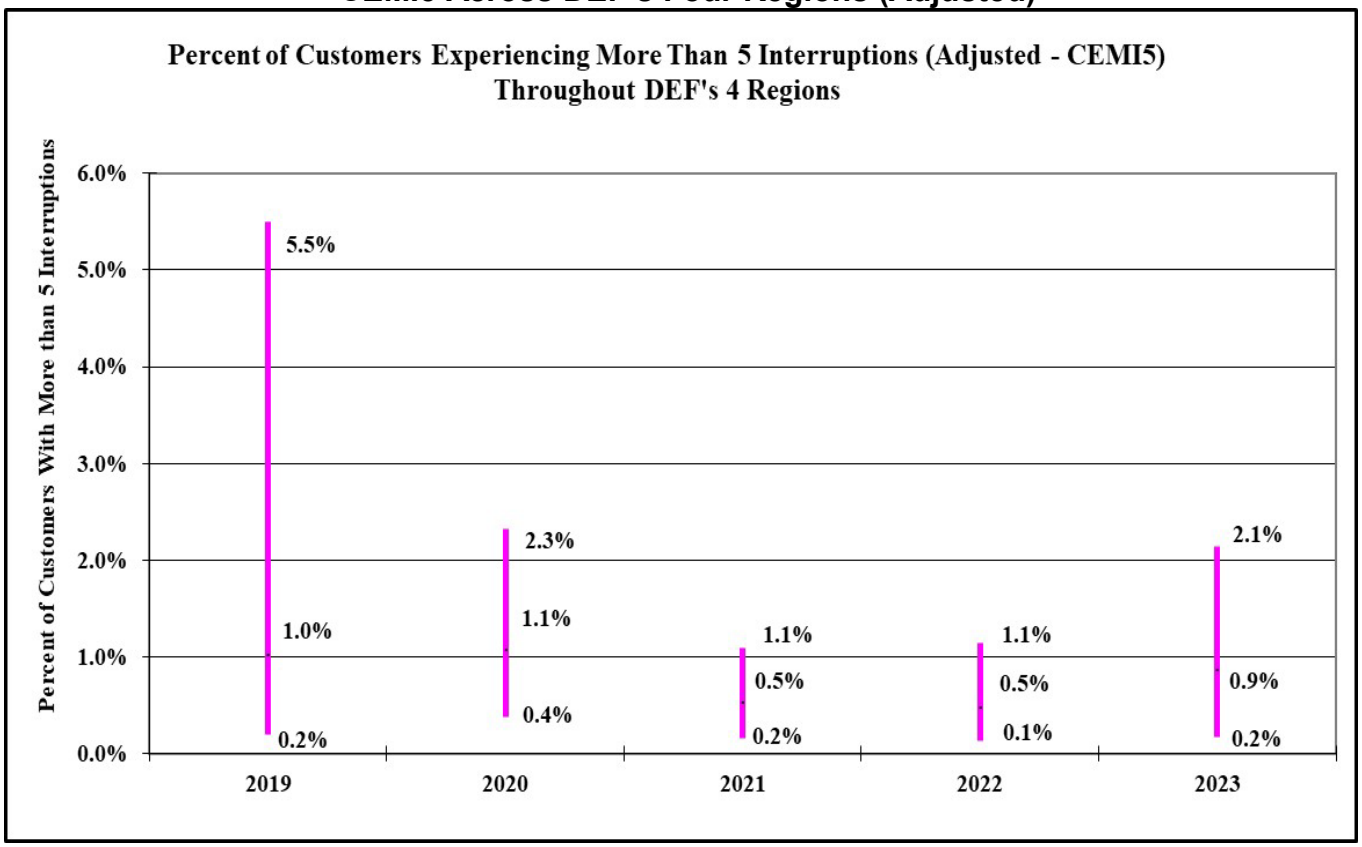
DEF's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

	2019	2020	2021	2022	2023
Highest MAIFIe	North Coastal	North Central	North Coastal	North Central	South Central
Lowest MAIFIe	North Central	South Coastal	South Coastal	South Coastal	South Coastal

Source: DEF's 2019-2023 distribution service reliability reports.

Figure 2-6 charts the percentage of DEF's customers experiencing more than five interruptions over the last five years, otherwise known as CEMI5. DEF reported the average CEMI5 increased from 2022 to 2023. However, 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

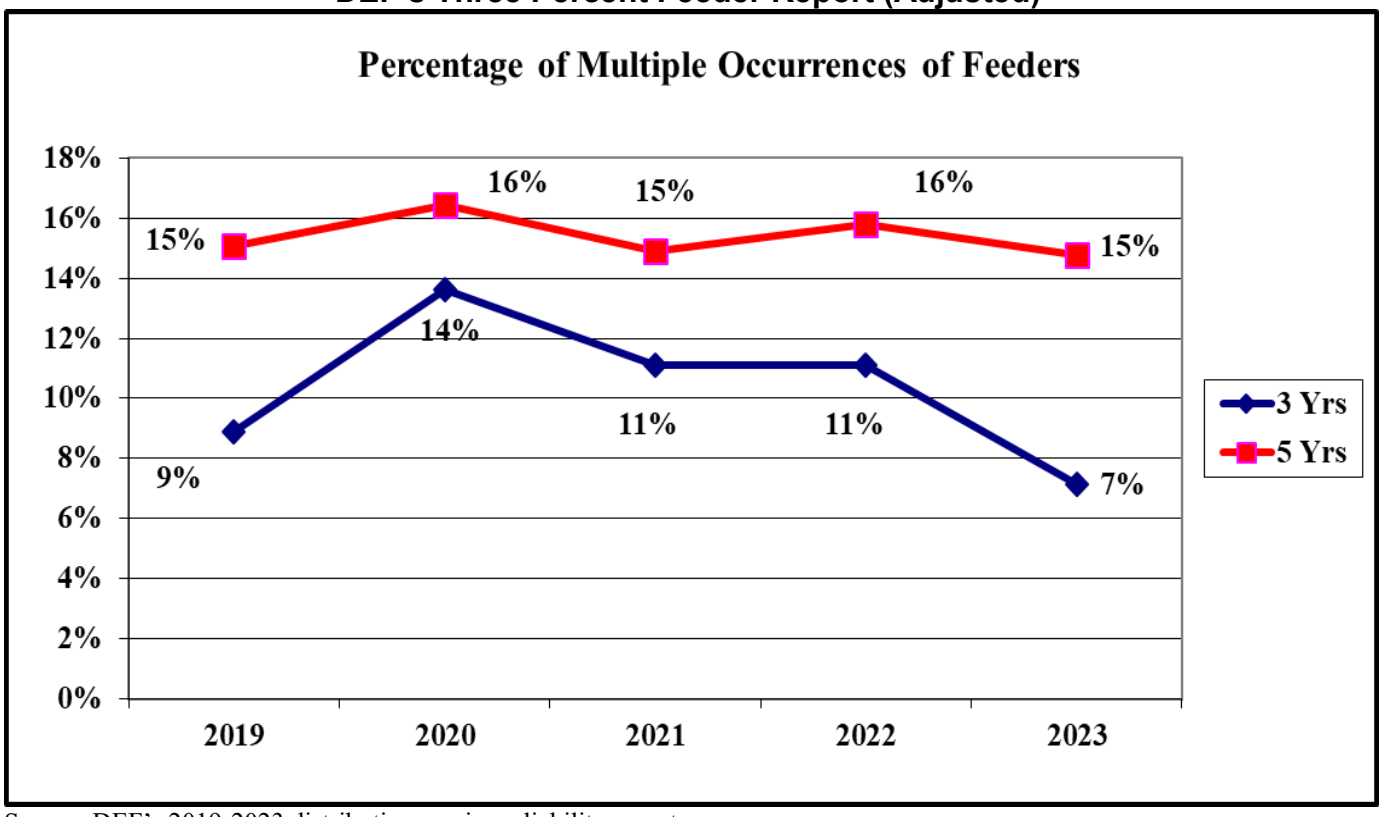
	2019	2020	2021	2022	2023
Highest CEMI5	North Coastal	North Coastal	North Coastal	North Coastal	North Coastal
Lowest CEMI5	South Coastal	South Coastal	South Coastal	South Coastal	South Coastal

Source: DEF's 2019-2023 distribution service reliability reports.

Figure 2-7 shows the percentage of multiple occurrences of feeders using a three-year and five-year basis. During the period of 2019 to 2023, the five-year percentage of multiple occurrences appears to be relatively flat, while the three-year percentage of multiple occurrences appears to be trending downward. The Three Percent Feeder Report lists the top 3 percent of feeders with the most feeder outage events. The percentage of multiple occurrences is calculated from the number of recurrences divided by the number of feeders reported.

Four 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, and vegetation. DEF repaired equipment, trimmed trees, and performed infrared scans on the feeders. The scans indicated that reclosers, voltage regulators, switches and arrestors needed to be replaced. DEF scheduled work orders to repair the equipment and will perform another scan on these feeders in 2024. In total, DEF trimmed 4.33 feeder miles and 93.64 lateral miles on these four feeders between 2019 and 2023.

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

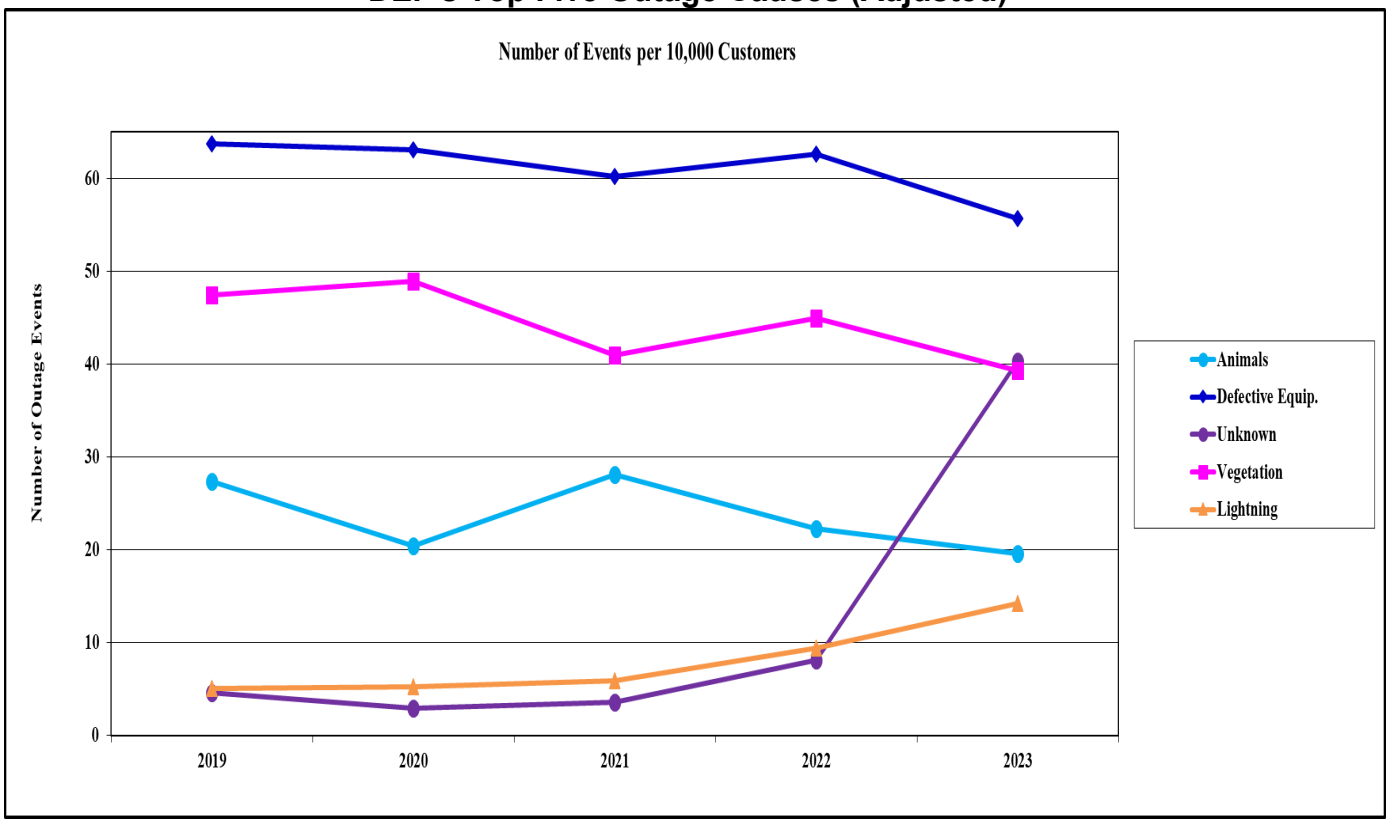


Source: DEF's 2019-2023 distribution service reliability reports.

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 88 percent of the top 10 causes of outage events that occurred during 2023. For the five-year period, the top five causes of outage events were "Defective Equipment" (29 percent), "Unknown" (21 percent), "Vegetation" (21 percent), "Animals" (10 percent), and "Lightning" (7 percent) on a cumulative basis. The outage events caused by "Defective Equipment," "Vegetation," and "Animals" are all trending downward, while the outage events caused by "Unknown" and "Lightning" are trending upwards. The "Defective Equipment" category had a 7 percent decrease, "Vegetation" category had a 9 percent decrease, and "Animals" category had a 8 percent decrease, while the "Unknown" category had a 418 percent increase and "Lightning" category had a 57 percent increase in 2023. 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 2019-2023 distribution service reliability reports.

Observations: DEF's Adjusted Data

DEF's SAIDI, SAIFI, CAIDI, MAIFIe, and the Three-Year Percent of Multiple Feeder Outage Events are trending downward over the past five years. The L-Bar is trending upward over the five-year period, as the CEMI5 and the Five-Year Percent of Multiple Feeder Outage Events appears to stay relatively flat. The SAIDI, SAIFI, CAIDI, MAIFIe, the Three-Year Percent of Multiple Feeder Outage Events, and the Five-Year Percent of Multiple Feeder Outage Events decreased from 2022 to 2023. The CEMI5 and L-Bar had increased from 2022 to 2023.

DEF reported that there were five non-excluded days related to storms that affected DEF's overall indices. The overall impact to DEF from extreme weather was lower than the previous five-year 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.

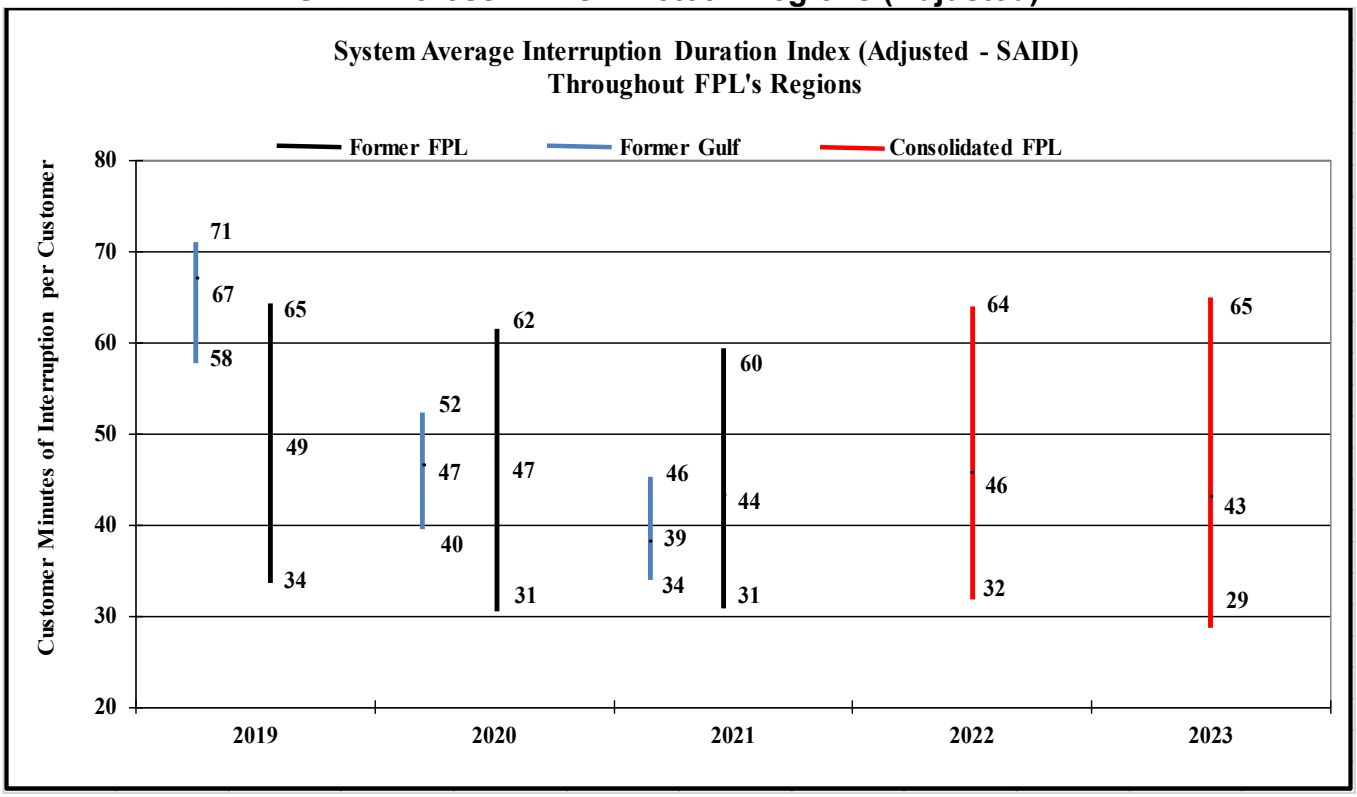
The North Coastal Region was the highest (poorest) of the four regions in three of the service reliability indices in 2023. In 2021 and 2023, DEF hardened 28.67 miles of the 13 feeders in the North Coastal region. In addition, currently, 75 percent of the customers in the North Coastal region are connected to DEF's Self-Healing Team. In 2024, DEF is planning the following activities in the North Coastal Region:

- Harden 14.5 miles on 6 feeders under the Feeder Hardening Program
- Perform Fuse Replacement Program work on 5 feeders
- Harden 14.9 miles under the Lateral Hardening Program
- Add equipment to 12 feeders under the Self Optimizing Grid Program
- Trim 1,686 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, which encompasses five management regions with 19 service areas (16 areas from the Former FPL and 3 areas 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 43 minutes in 2023, compared to 46 minutes in 2022. The Manasota region had the best SAIDI results for 2023.

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



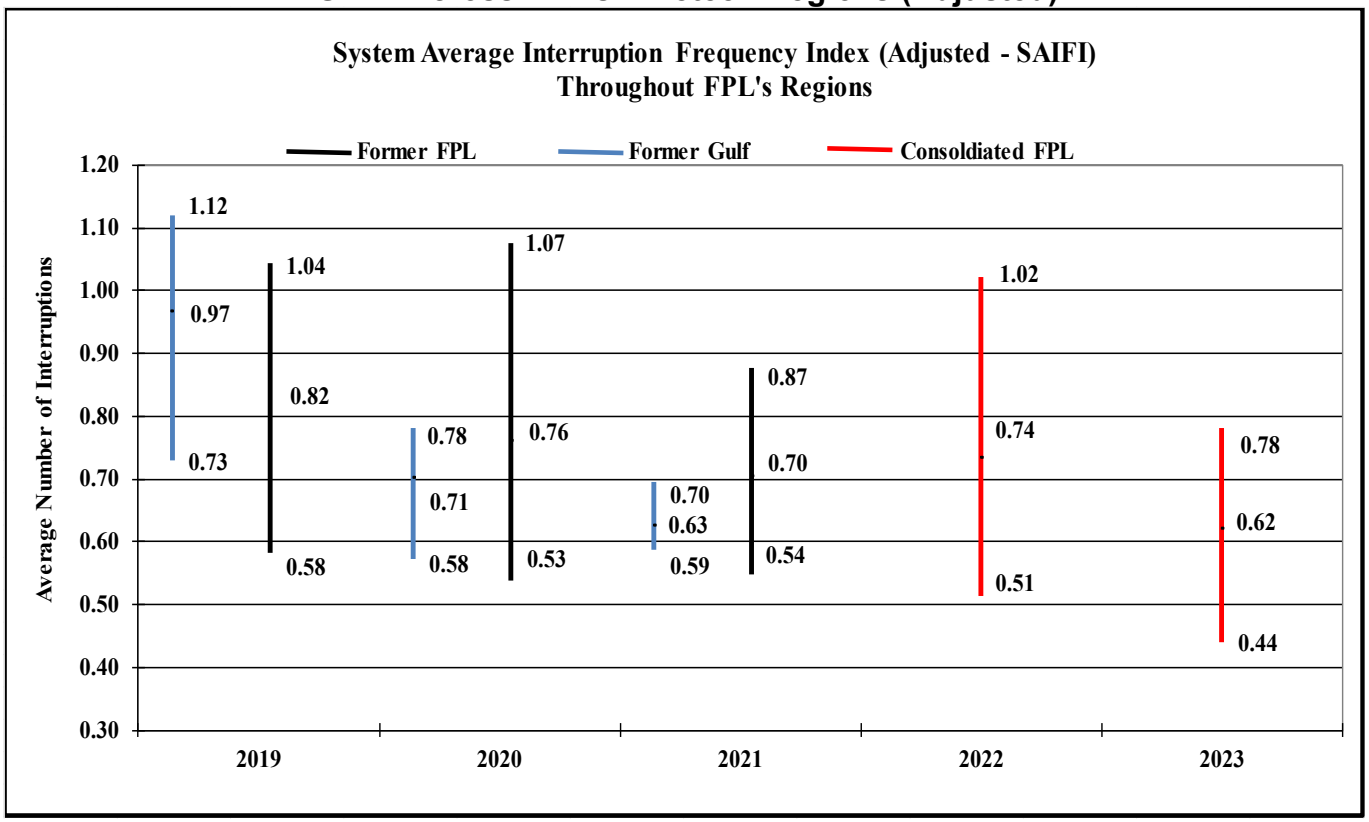
FPL's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

Consolidated FPL	**2019**	**2020**	**2021**	**2022**	**2023**
Highest SAIDI				Toledo Blade	South Dade
Lowest SAIDI				Boca Raton	Manasota
Former FPL					
Highest SAIDI	Central Broward	North Florida	North Dade		
Lowest SAIDI	Manasota	North Broward	North Broward		
Former Gulf					
Highest SAIDI	Pensacola	Panama City	Panama City		
Lowest SAIDI	Fort Walton	Fort Walton	Pensacola		

Source: FPL and Gulf's 2019-2023 distribution service reliability reports.

Figure 2-10 is a chart of the highest, average, and lowest adjusted SAIFI across FPL's system. For 2023, it was reported that FPL's average SAIFI was 0.62 interruptions compared to 0.74 interruptions in 2022. FPL reported 0.78 interruptions for the highest SAIFI in 2023, while in 2022, FPL reported 1.02 interruptions for the highest SAIFI. The region reporting the lowest adjusted SAIFI for 2023 was Manasota with 0.44 interruptions compared to North Broward with 0.51 interruptions in 2022.

Figure 2-10
SAIFI Across FPL's Nineteen Regions (Adjusted)



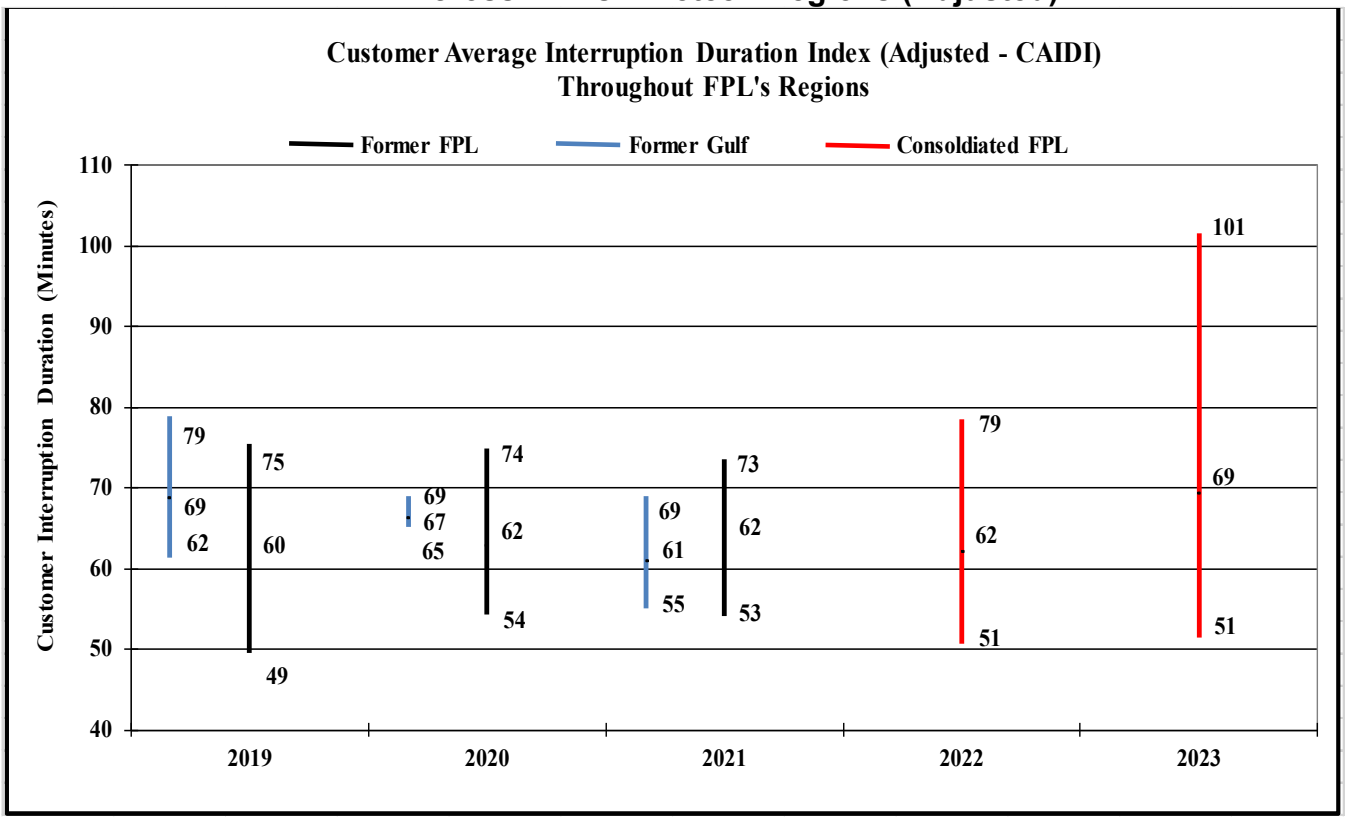
FPL's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

Consolidated FPL	2019	2020	2021	2022	2023
Highest SAIFI				Toledo Blade	Toledo Blade
Lowest SAIFI				North Broward	Manasota
Former FPL					
Highest SAIFI	North Florida	North Florida	North Florida		
Lowest SAIFI	Manasota	North Broward	Manasota		
Former Gulf					
Highest SAIFI	Panama City	Panama City	Panama City		
Lowest SAIFI	Fort Walton	Fort Walton	Fort Walton		

Source: FPL and Gulf's 2019-2023 distribution service reliability reports.

Figure 2-11 depicts FPL's highest, average, and lowest CAIDI expressed in minutes. FPL's adjusted average CAIDI was 69 minutes in 2023 compared to 62 minutes in 2022. For 2023, the Panama City service area reported the lowest duration of CAIDI at 51 minutes, which was the same as West Palm's CAIDI in 2022. The highest duration of CAIDI was 101 minutes for the North Dade service area in 2023 compared to North Florida's CAIDI of 79 minutes in 2022.

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



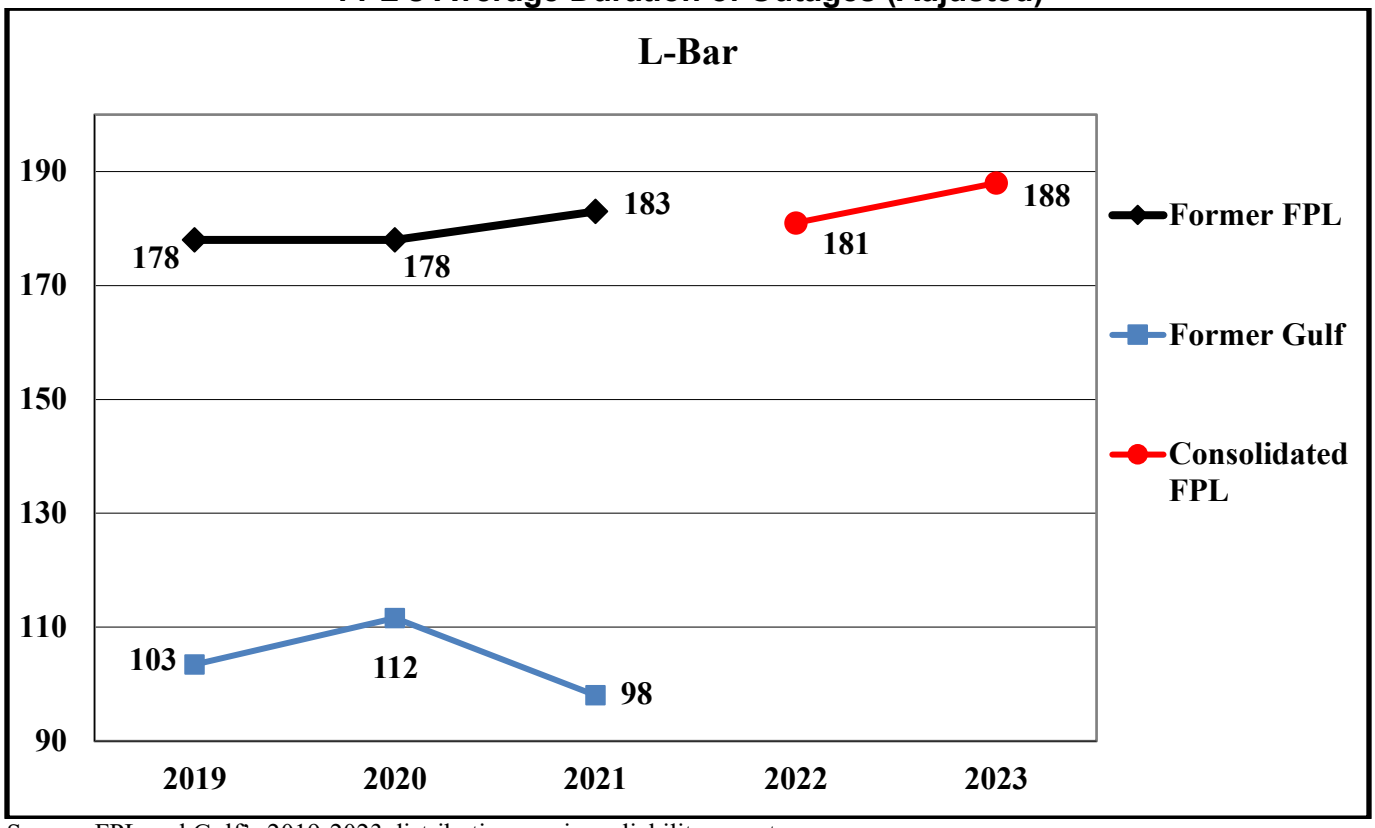
FPL's Regions with the Highest and Lowest Adjusted CAIDI Distribution Reliability Performance by Year

Consolidated FPL	2019	2020	2021	2022	2023
Highest CAIDI				North Florida	North Dade
Lowest CAIDI				West Palm	Panama City
Former FPL					
Highest CAIDI	South Dade	North Dade	North Dade		
Lowest CAIDI	West Palm	Central Florida	Boca Raton		
Former Gulf					
Highest CAIDI	Fort Walton	Fort Walton	Fort Walton		
Lowest CAIDI	Panama City	Pensacola	Pensacola		

Source: FPL and Gulf's 2019-2023 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 2023 was 188 minutes, which is a 4 percent increase compared to 181 minutes in 2022. This indicates that FPL is taking more time to restore service after an outage event.

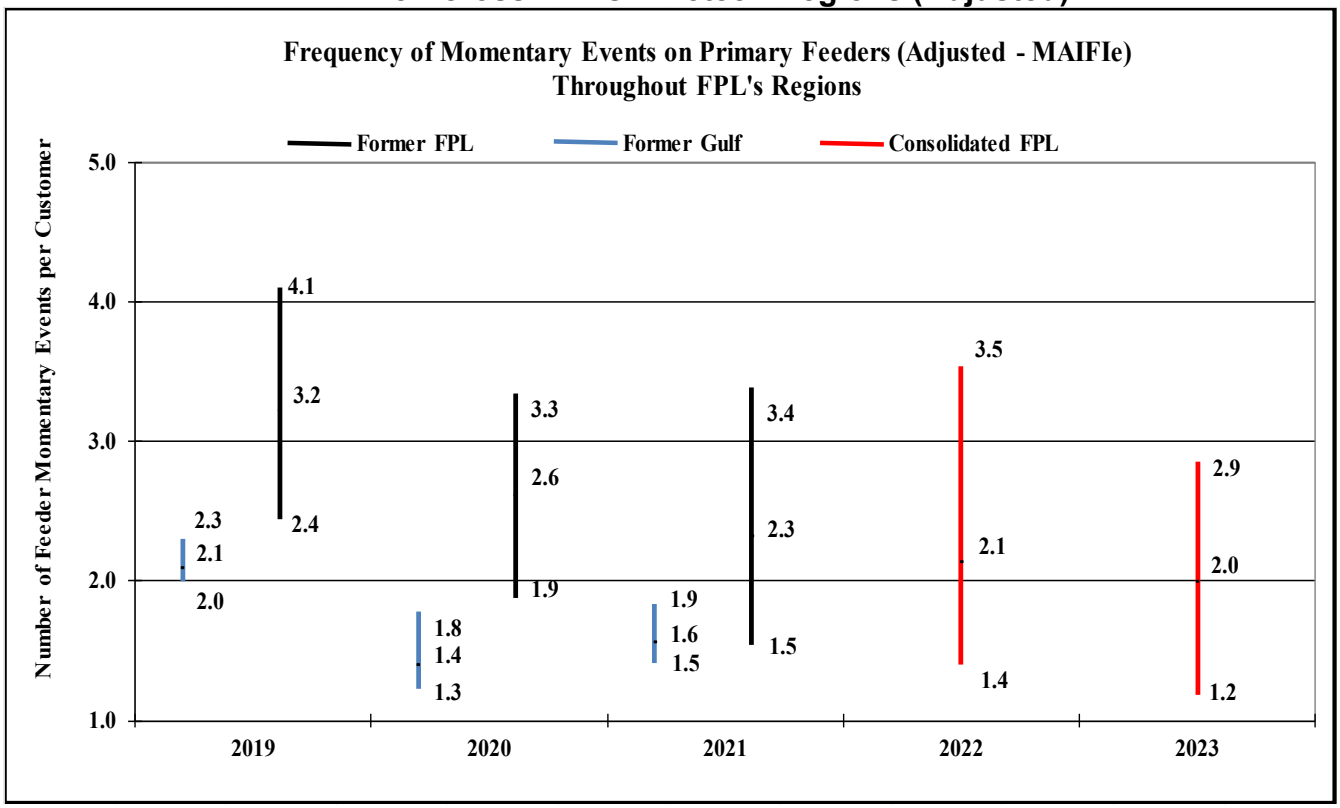
Figure 2-12
FPL's Average Duration of Outages (Adjusted)



Source: FPL and Gulf's 2019-2023 distribution service reliability reports.

Figure 2-13 is the highest, average, and lowest adjusted MAIFIe recorded across FPL's system. For 2023, FPL's results indicated that West Dade was the region with the highest MAIFIe and Central Florida was the region with the lowest MAIFIe. In 2022, Toledo Blade has the highest MAIFIe and Panama City had the lowest MAIFIe. In 2023, FPL's average MAIFI was 2.0 events per customer compared to 2.1 events per customer in 2022. 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)



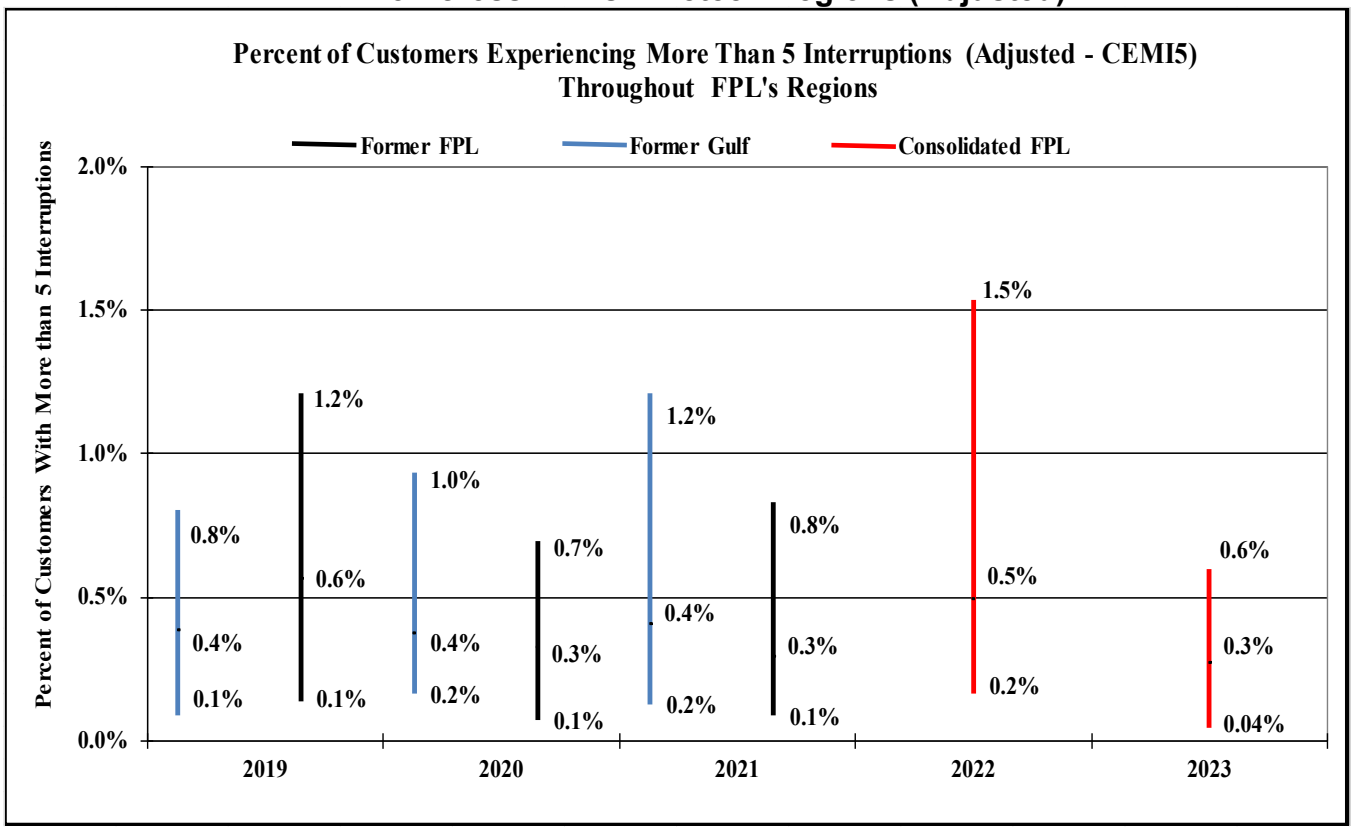
FPL's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

Consolidated FPL	2019	2020	2021	2022	2023
Highest MAIFIe				Toledo Blade	West Dade
Lowest MAIFIe				Panama City	Central Florida
Former FPL					
Highest MAIFIe	West Palm	Boca Raton	West Dade		
Lowest MAIFIe	Manasota	Manasota	North Broward		
Former Gulf					
Highest MAIFIe	Pensacola	Panama City	Fort Walton		
Lowest MAIFIe	Fort Walton	Pensacola	Pensacola		

Source: FPL and Gulf's 2019-2023 distribution service reliability reports.

Figure 2-14 shows the highest, average, and lowest adjusted CEMI5. In FPL's service area for 2023, Toledo Blade had the highest CEMI5 at 0.6 percent and North Broward had the lowest CEMI5 at 0.04 percent. In 2022, Central Broward had the highest CEMI5 at 1.5 percent and West Dade had the lowest CEMI5 at 0.2 percent. FPL's average CEMI5 result for 2023 was 0.3 percent compared to 0.5 percent in 2022.

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

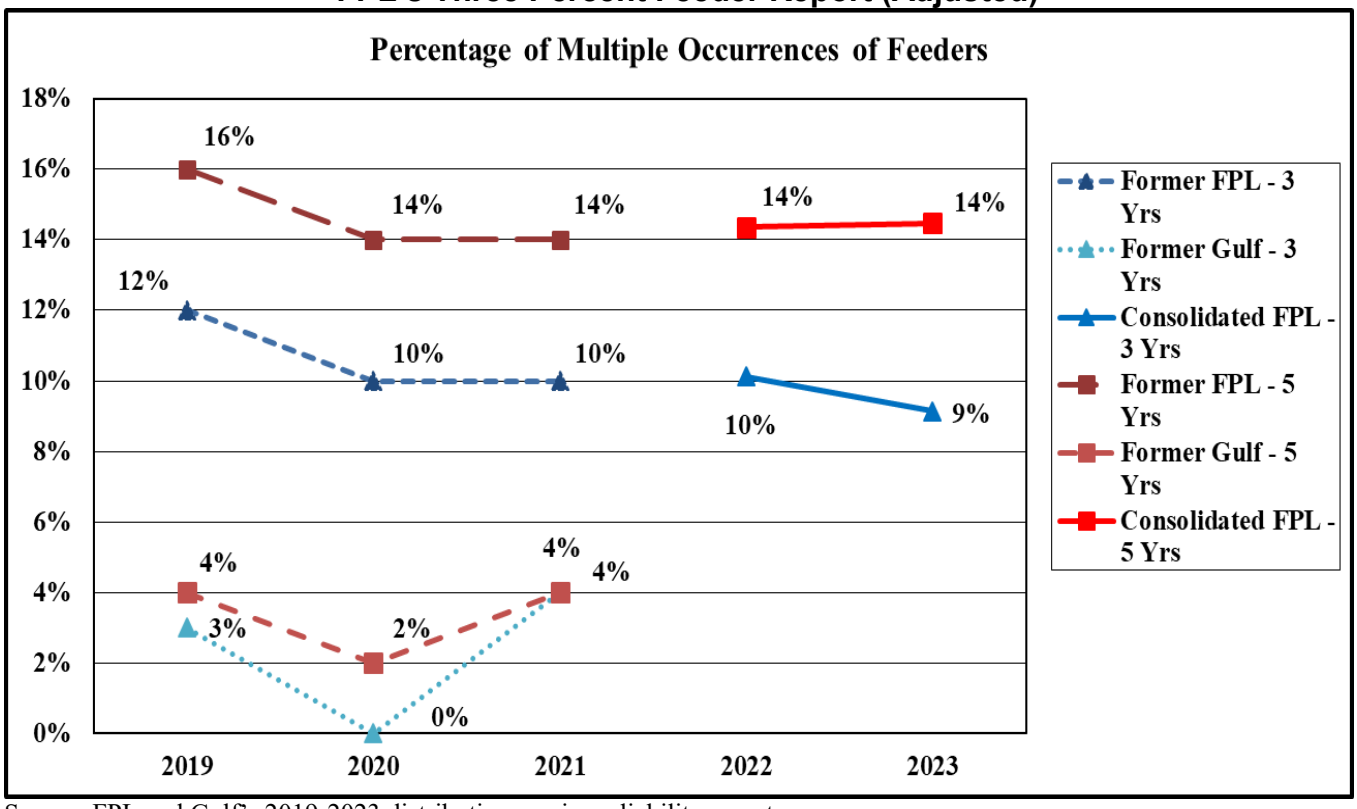
Consolidated FPL	2019	2020	2021	2022	2023
Highest CEMI5				Central Broward	Toledo Blade
Lowest CEMI5				West Dade	North Broward
Former FPL					
Highest CEMI5	Treasure Coast	North Florida	Brevard		
Lowest CEMI5	Central Dade	North Broward	Manasota		
Former Gulf					
Highest CEMI5	Panama City	Panama City	Panama City		
Lowest CEMI5	Fort Walton	Fort Walton	Fort Walton		

Source: FPL's 2019-2023 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 percentage of multiple occurrences is calculated from the number of recurrences divided by the number of feeders reported. The consolidated three-year percentage was 9 percent in 2023 compared to 10 percent in 2022. The consolidated five-year percentage was 14 percent in 2023 and 2022.

Staff notes five feeders were on the Three Percent Feeder Report within the last two years. The outages ranged from defective equipment, vegetation, animals, lightning, other weather, unknown, and vehicle. FPL utilized visual, thermovision, and drone assessments, as well as its CEMI Program to repair feeders. Further, to mitigate future feeder outages, FPL installed automated feeder switches on one feeder in 2023. Four of the feeders already had automated feeder switches. FPL also reported that in 2023, approximately 132 miles of trimming was performed on the five feeders. FPL will continue repairs on the feeders and plans to harden two of the feeders in 2024. Three of the five feeders have already been hardened.

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

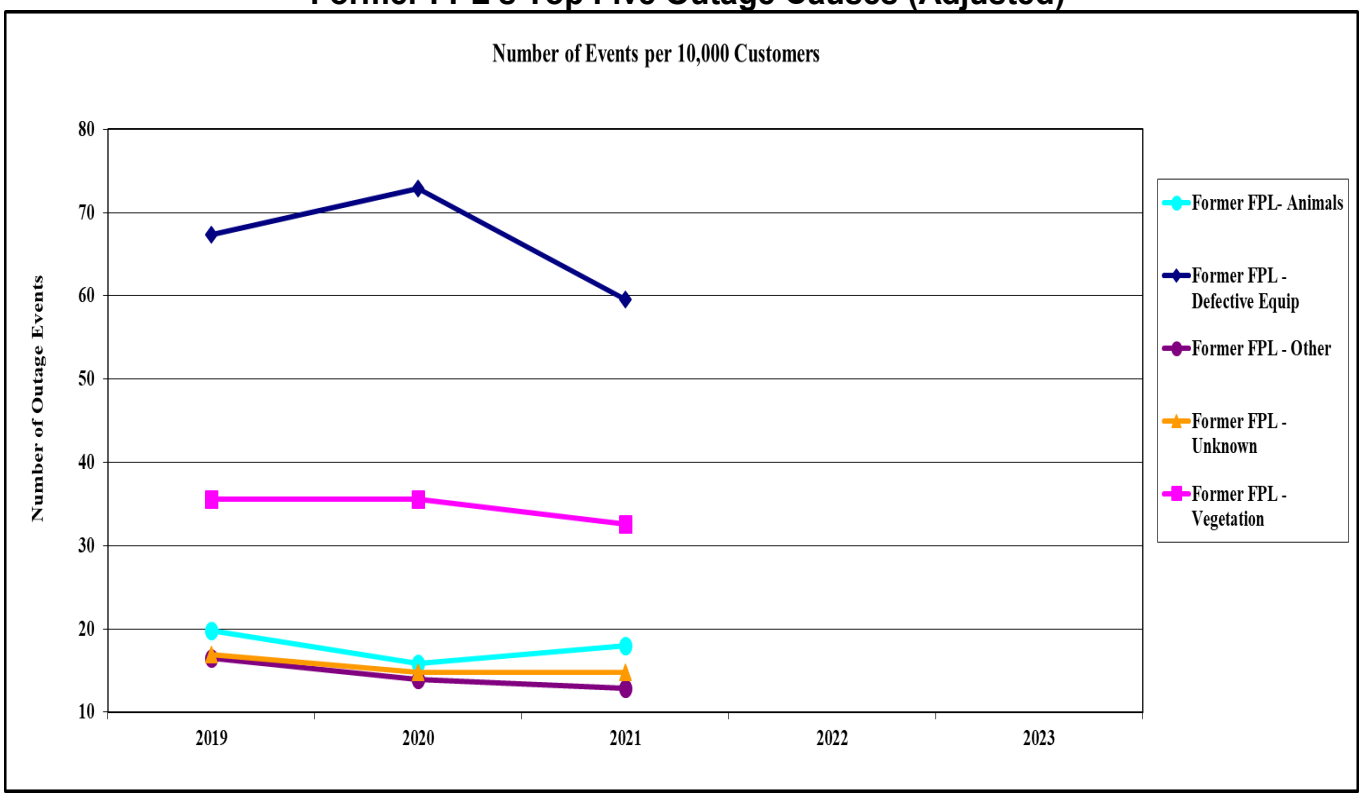


Source: FPL and Gulf's 2019-2023 distribution service reliability reports.

Figures 2-16, 2-17, and 2-18 depict 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 2023, the five top causes of outage events included "Defective Equipment" (37 percent), "Vegetation" (18 percent), "Animals" (11 percent), "Unknown Causes" (10 percent), and "Other Causes" (10 percent). All the causes of outage events had decreased in 2023.

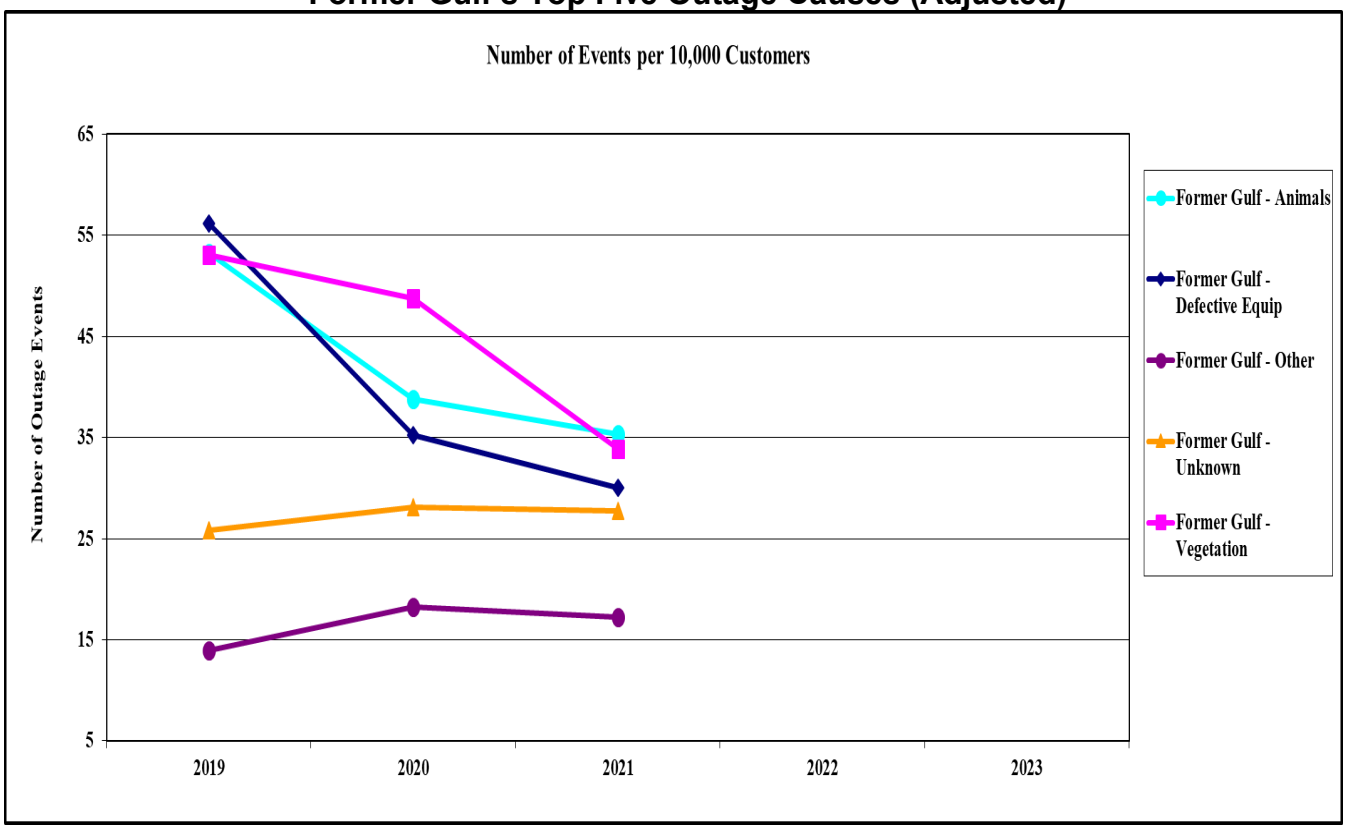
Annually, FPL evaluates its current reliability remediation programs and verifies the program's need and/or existence. In addition, FPL proposes new reliability remediation programs to improve its reliability performance, concentrating on the highest cause codes and those cause codes that have shown trends needing attention. FPL has 13 reliability programs listed for its 2024 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. These programs are intended to help improve the defective equipment, vegetation, and animals cause codes. In addition, FPL's pole inspections, feeder and lateral hardening, and undergrounding lateral programs should help mitigate outages caused by defective equipment. FPL has also incorporated the use of drone assessments to help identify equipment that should be repaired or replaced.

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



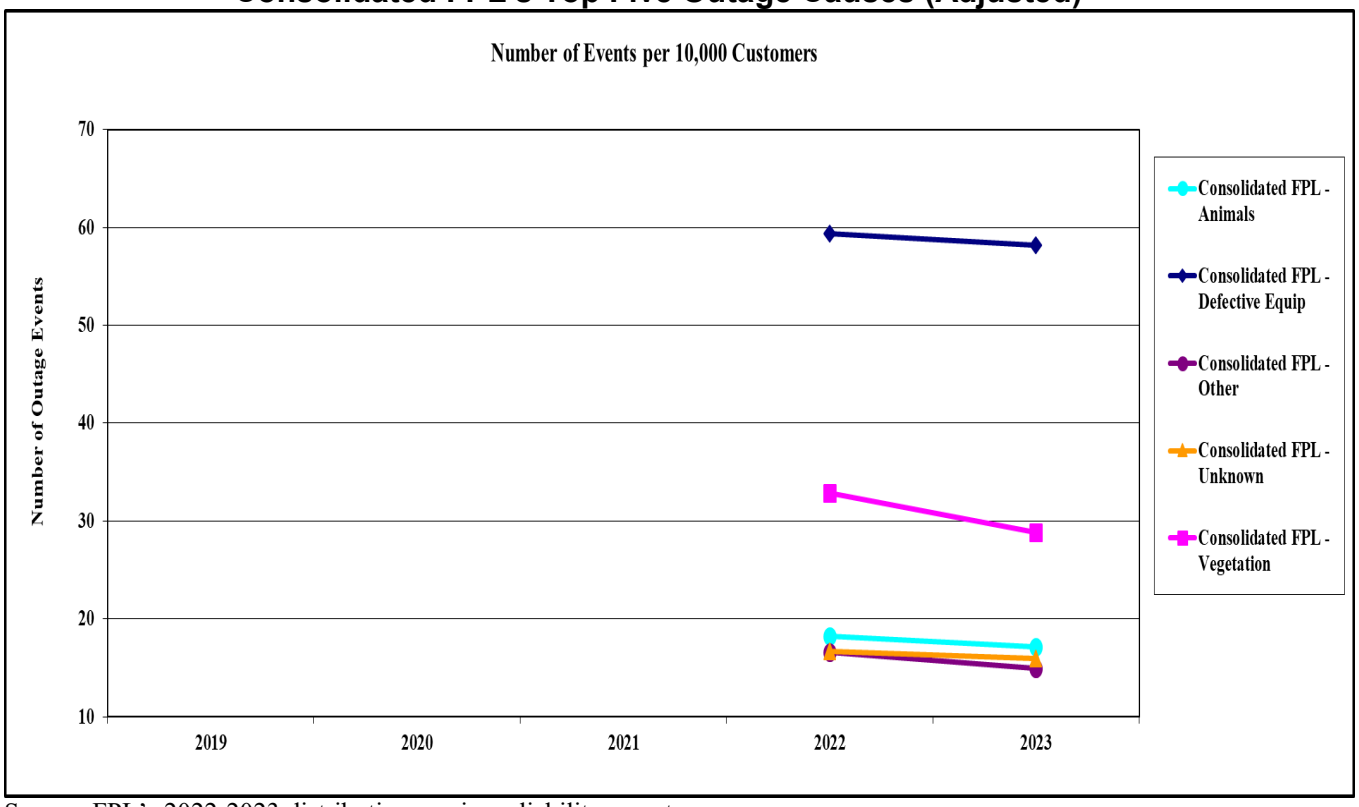
Source: FPL's 2019-2021 distribution service reliability reports.

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



Source: Gulf's 2019-2021 distribution service reliability reports.

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



Source: FPL's 2022-2023 distribution service reliability report.

Observations: FPL's Adjusted Data

In 2023, FPL's overall adjusted SAIDI was 43 minutes compared to 46 minutes in 2022. In 2023, FPL's SAIFI was 0.62 interruptions compared to 0.74 interruptions in 2022. FPL's CAIDI was 69 minutes in 2023 and was 62 minutes in 2022. The 2023 MAIFIe for FPL was 2.0 events compared to 2.1 events in 2022. FPL's CEMI5 was 0.3 percent in 2023 and 0.5 percent in 2022. The highest regions listed for SAIDI and CEMI5 were only listed once for the five-year period. The highest regions for SAIFI and MAIFIe were listed twice in the five year period. The highest region for CAIDI, North Dade region, was listed three times during 2019 through 2023. FPL explained that it evaluates its current reliability programs annually to verify the program's need and/or existence. In addition, FPL proposed 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 2023, Toledo Blade was the highest region in two of the five indices. In 2023, FPL performed the following actions in the Toledo Blade region:

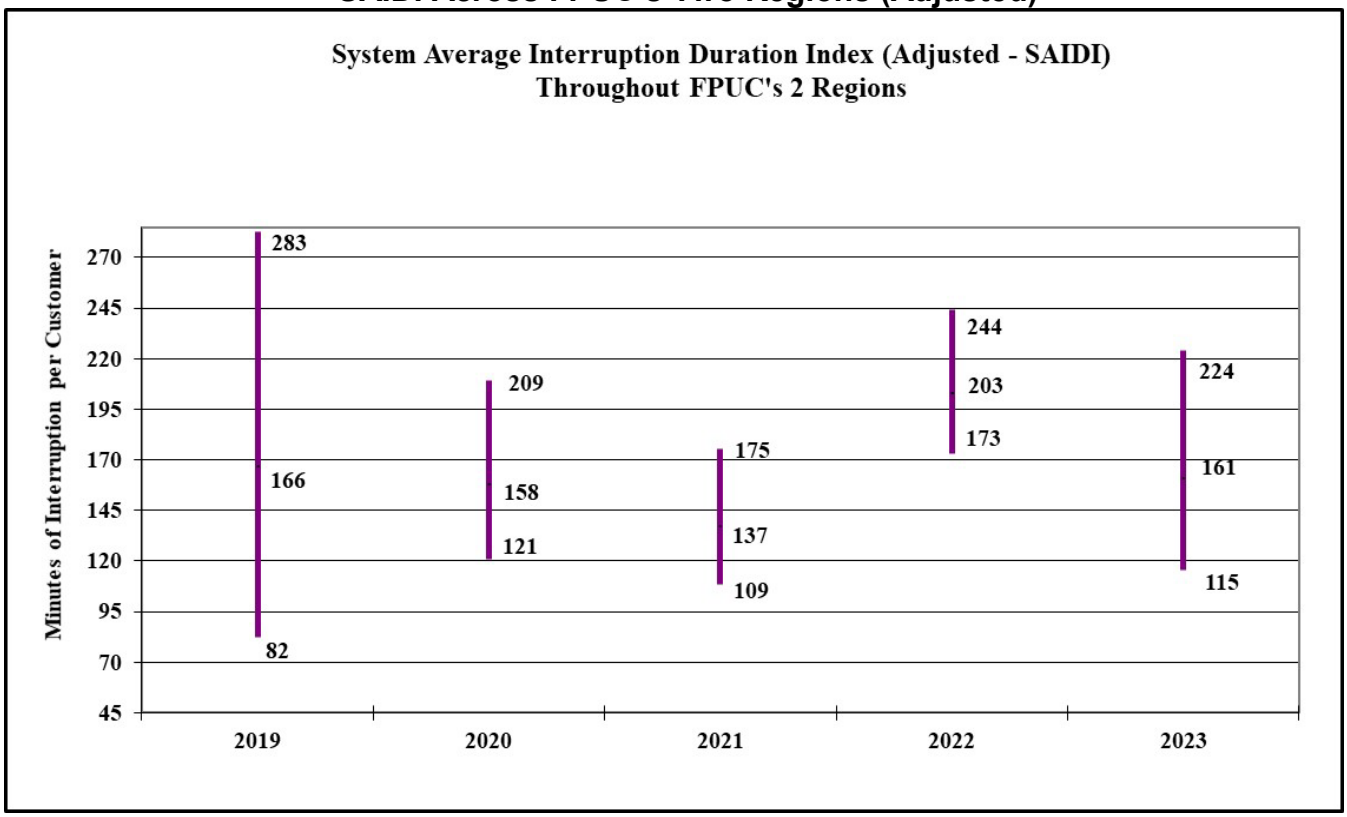
- Vegetation trimming on 455 miles (41 percent) of overhead primary lines, 932 miles mid-cycle trimming
- Commissioned 24 automated feeder switches
- Addressed 22 feeders under the reliability programs
- Completed 20 Immediate Response Jobs (Assess overhead/hybrid feeders visually and perform repairs from the findings)
- Completed 12 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 downward for the five-year period of 2019 to 2023 and there was a 21 percent decrease from 2022 to 2023.

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



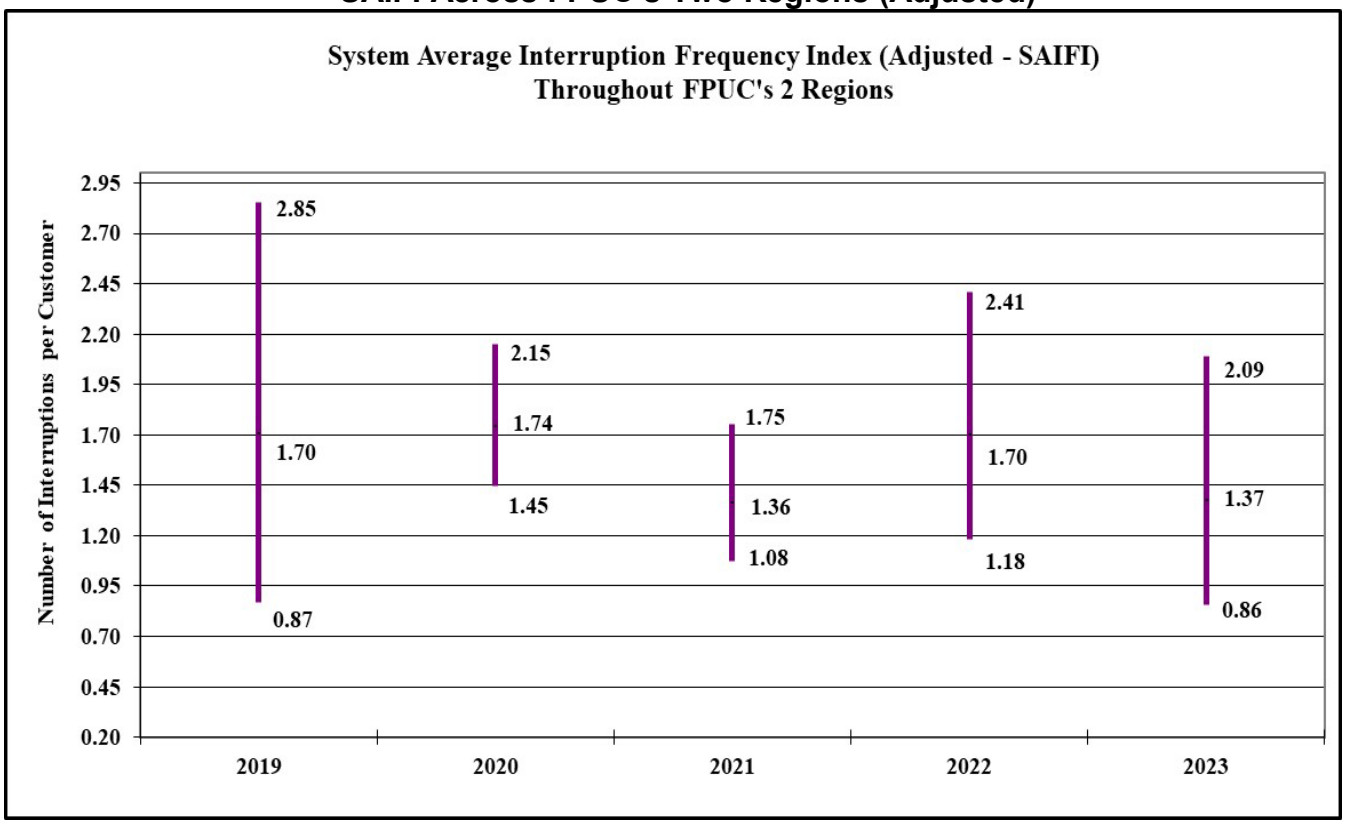
FPUC's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2019	2020	2021	2022	2023
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 2019-2023 distribution service reliability reports.

Figure 2-20 shows the adjusted SAIFI across FPUC's two divisions. The data depicts a 19 percent decrease in the 2023 average SAIFI reliability index from 2022. The data for the minimum, average and maximum SAIFI values are all trending downward over the five-year period of 2019 to 2023.

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



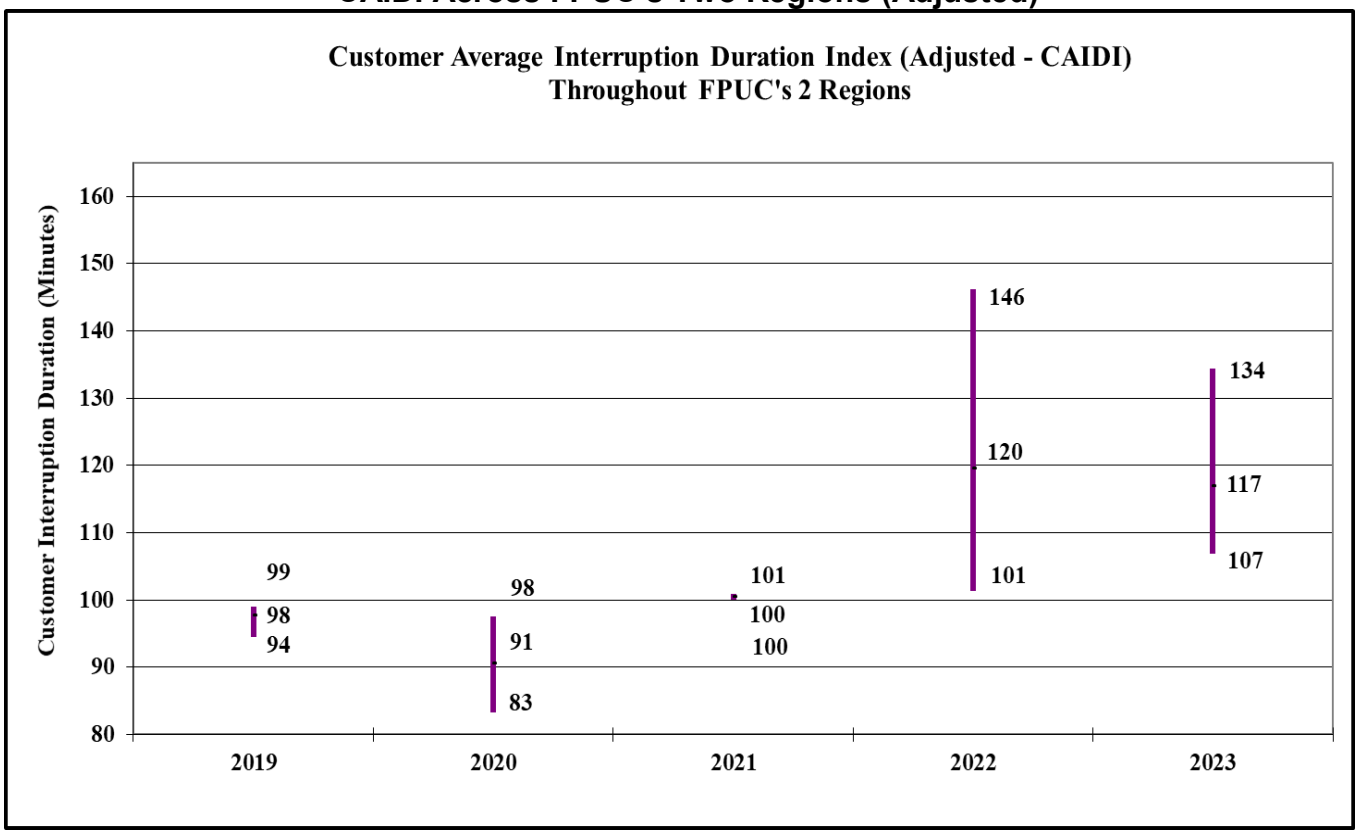
FPUC's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2019	2020	2021	2022	2023
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 2019-2023 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 decreased by 3 percent for 2023 (117 minutes) when compared to 2022 (120 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)



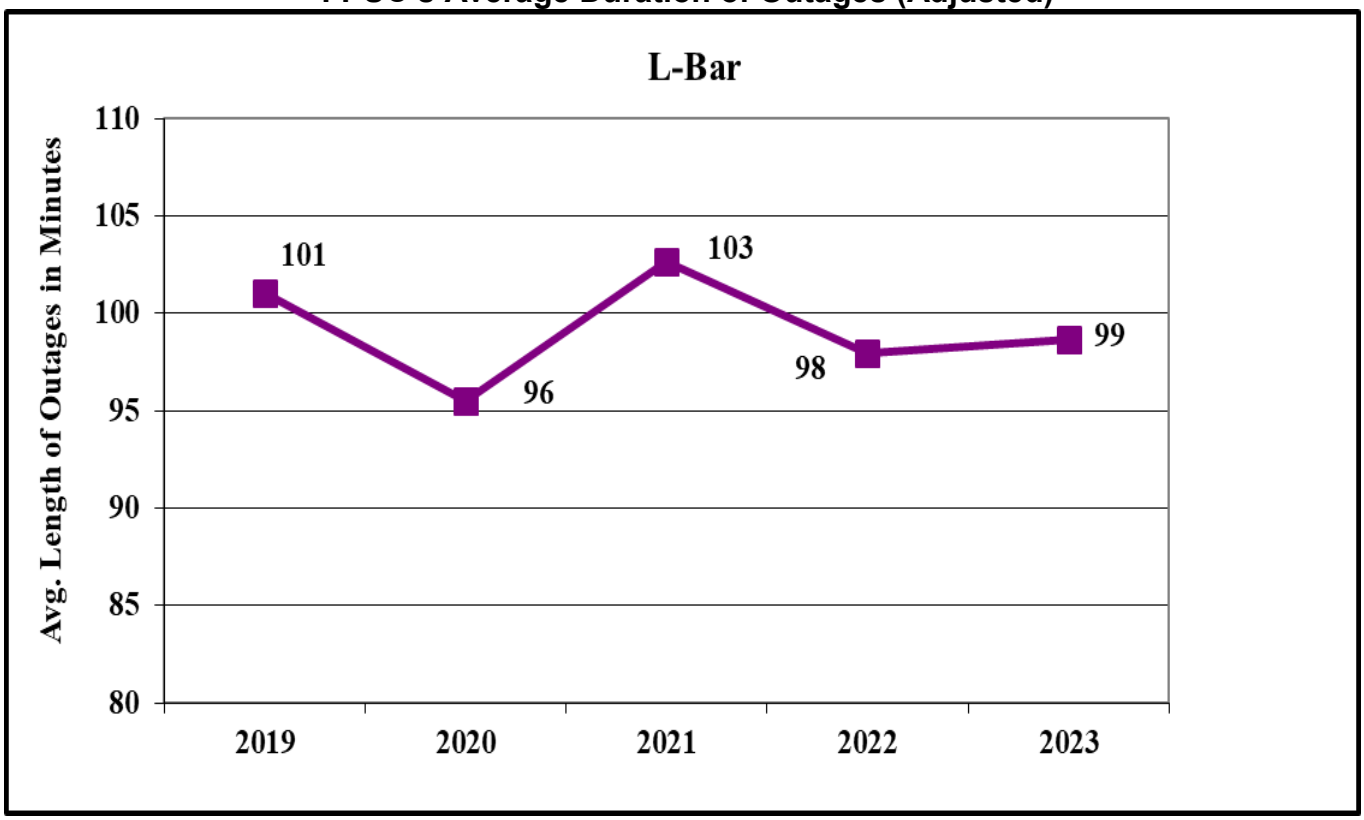
FPUC's Regions with the Highest and Lowest Adjusted CAIDI Distribution Reliability Performance by Year

	2019	2020	2021	2022	2023
Highest CAIDI	Marianna (NW)	Marianna (NW)	Fernandina(NE)	Fernandina(NE)	Fernandina(NE)
Lowest CAIDI	Fernandina(NE)	Fernandina(NE)	Marianna (NW)	Marianna (NW)	Marianna (NW)

Source: FPUC's 2019-2023 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 1 percent increase in the L-Bar value from 2022 to 2023. However, the data for the five-year period of 2019 to 2023 suggests that the L-Bar index is trending slightly downward, indicating FPUC is taking less time to restore service after an outage event.

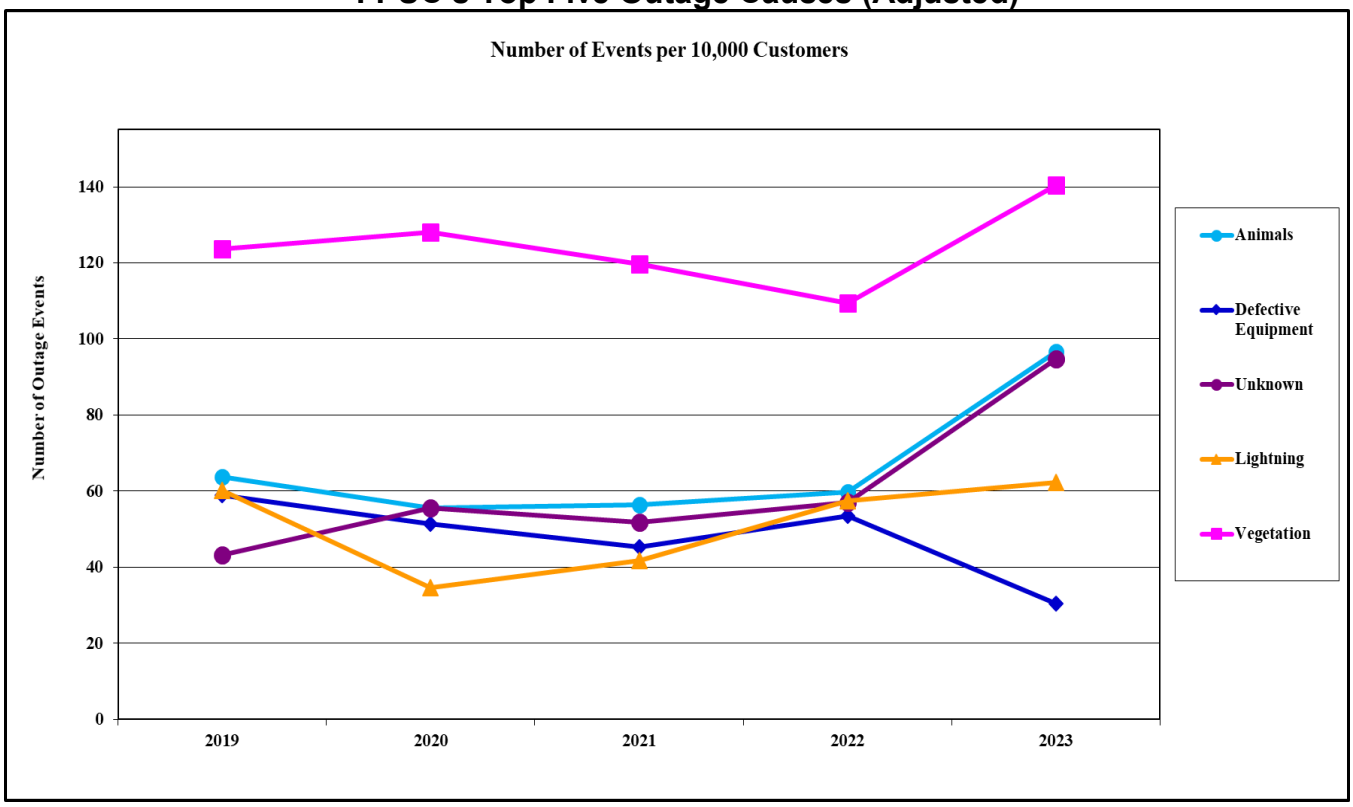
Figure 2-22
FPUC's Average Duration of Outages (Adjusted)



Source: FPUC's 2019-2023 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 2023, the top five causes of outage events were "Vegetation" (30 percent), "Animals" (20 percent), "Unknown" (20 percent), "Lightning" (13 percent), and "Defective Equipment" (6 percent). These five factors represent 89 percent of the total adjusted outage causes in 2023. The "Vegetation" category is trending upward with a 29 percent increase from 2022 to 2023. Outages causes by "Animals," "Lightning," and "Unknown" are also trending upward. "Defective Equipment" is trending downward, and had a 43 percent decrease from 2022 to 2023. The "Lightning" category had a 9 percent increase and the "Unknown" category increased 67 percent during the same time period. The "Animals" category had a 63 percent increase from 2022 to 2023. FPUC will continue to install animal guards on overhead transformer bushings and continue to review other overhead devices and configurations where the guards could prevent animal access and associated equipment damage. FPUC will also continue to focus on and invest in its vegetation management initiatives.

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



Source: FPUC's 2019-2023 distribution service reliability reports.

FPUC filed a Three Percent Feeder Report listing the top 3 percent of feeders with the outage events for 2023. 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 2019 and 2023. The other feeder was listed on the report only in 2023.

Observations: FPUC's Adjusted Data

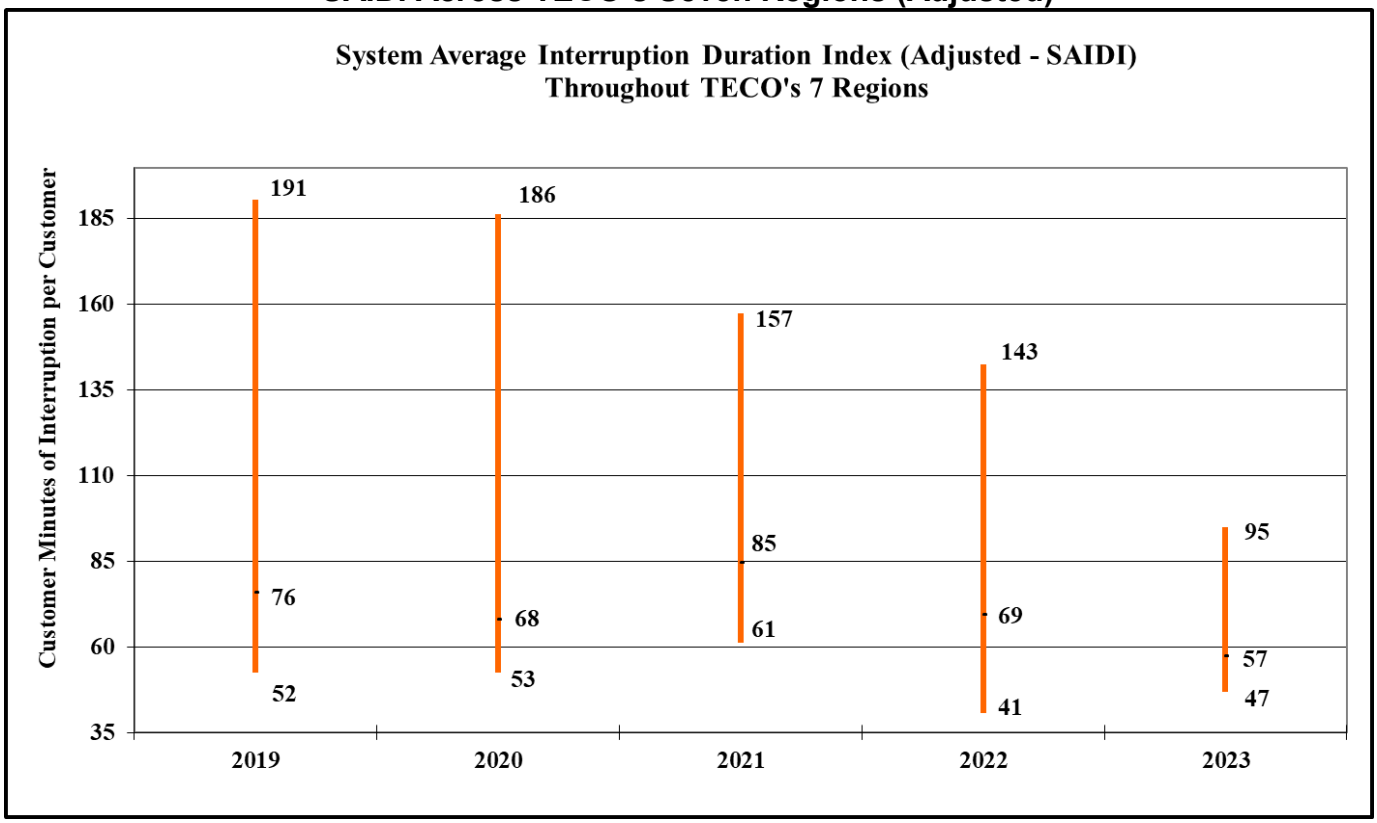
The SAIDI, SAIFI, and CAIDI average indexes have decreased compared to 2022. For the five-year period of 2019 to 2023, the average index for SAIDI, SAIFI, and L-Bar are trending downward, as the CAIDI average index is trending upwards. FPUC reported that the improvements in the reliability indexes were due to its focus on vegetation management, implementation of FPUC's SPP, and investment in other system infrastructure. Both division are now on a four-year feeder and lateral vegetation management schedule. In addition, FPUC upgraded its substation assets by replacing older autotransformers and regulators with newer models. 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.

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.

Tampa Electric Company: Adjusted Data

Figure 2-24 shows the adjusted highest, lowest, and average SAIDI values among TECO's seven service regions. One of the seven TECO regions had declining performance in SAIDI during 2023. The Western region had the lowest SAIDI performance result 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 17 percent from 2022 to 2023. The average SAIDI index appears to be trending downward. The South Hillsborough, Central and Western regions recorded the lowest SAIDI indices for the five-year period. Dade City, Plant City, and Winter Haven 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)



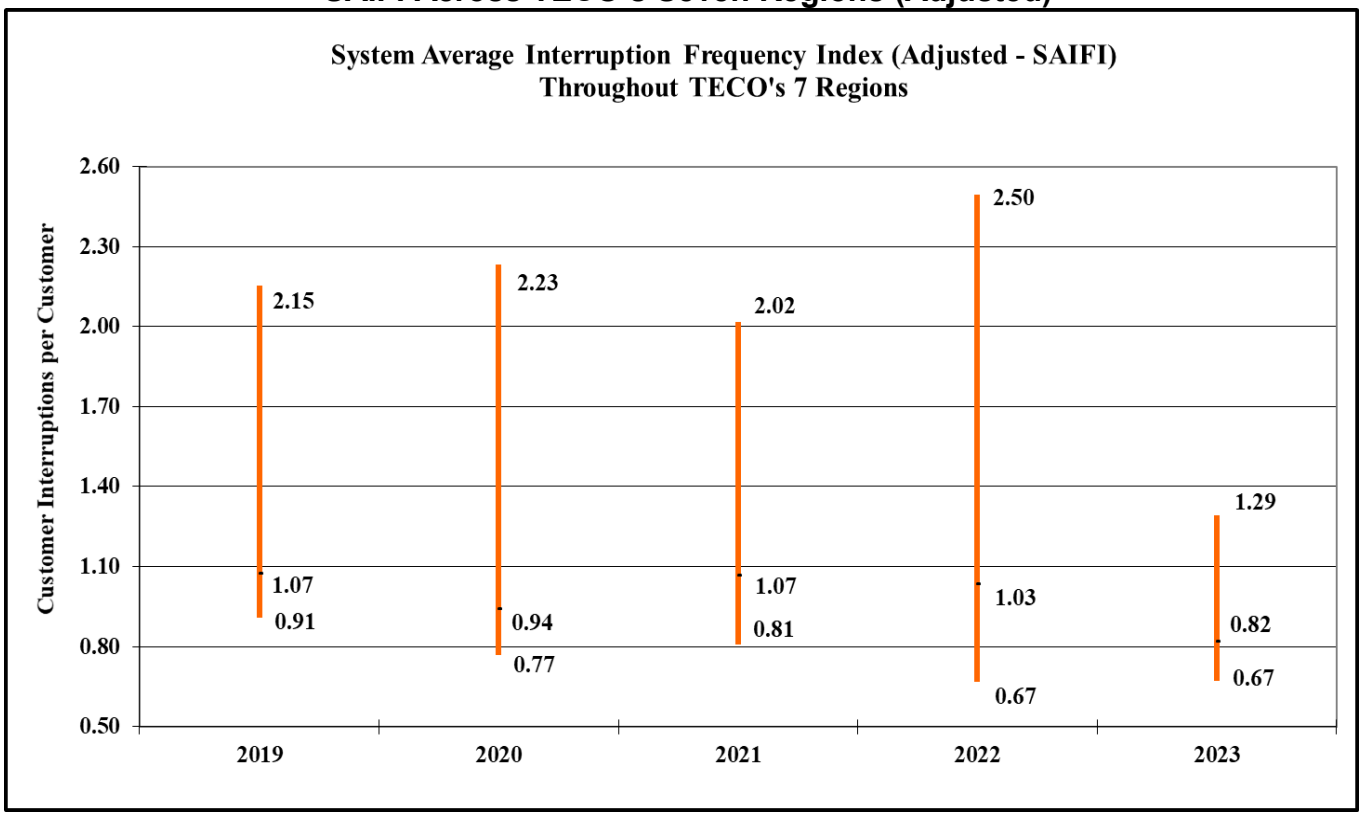
TECO's Regions with the Highest and Lowest Adjusted SAIDI Distribution Reliability Performance by Year

	2019	2020	2021	2022	2023
Highest SAIDI	Dade City	Dade City	Plant City	Dade City	Dade City
Lowest SAIDI	South Hillsborough	South Hillsborough	South Hillsborough	Central	Western

Source: TECO's 2019-2023 distribution service reliability reports.

Figure 2-25 illustrates TECO's adjusted frequency of interruptions per customer reported by the system. TECO's data represents a 20 percent decrease in the SAIFI average from 1.03 interruptions in 2022 to 0.82 interruptions in 2023. TECO's Plant City region had the highest frequency of service interruptions when compared to TECO's other regions. The maximum, the average, and minimum SAIFI are all trending downward.

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



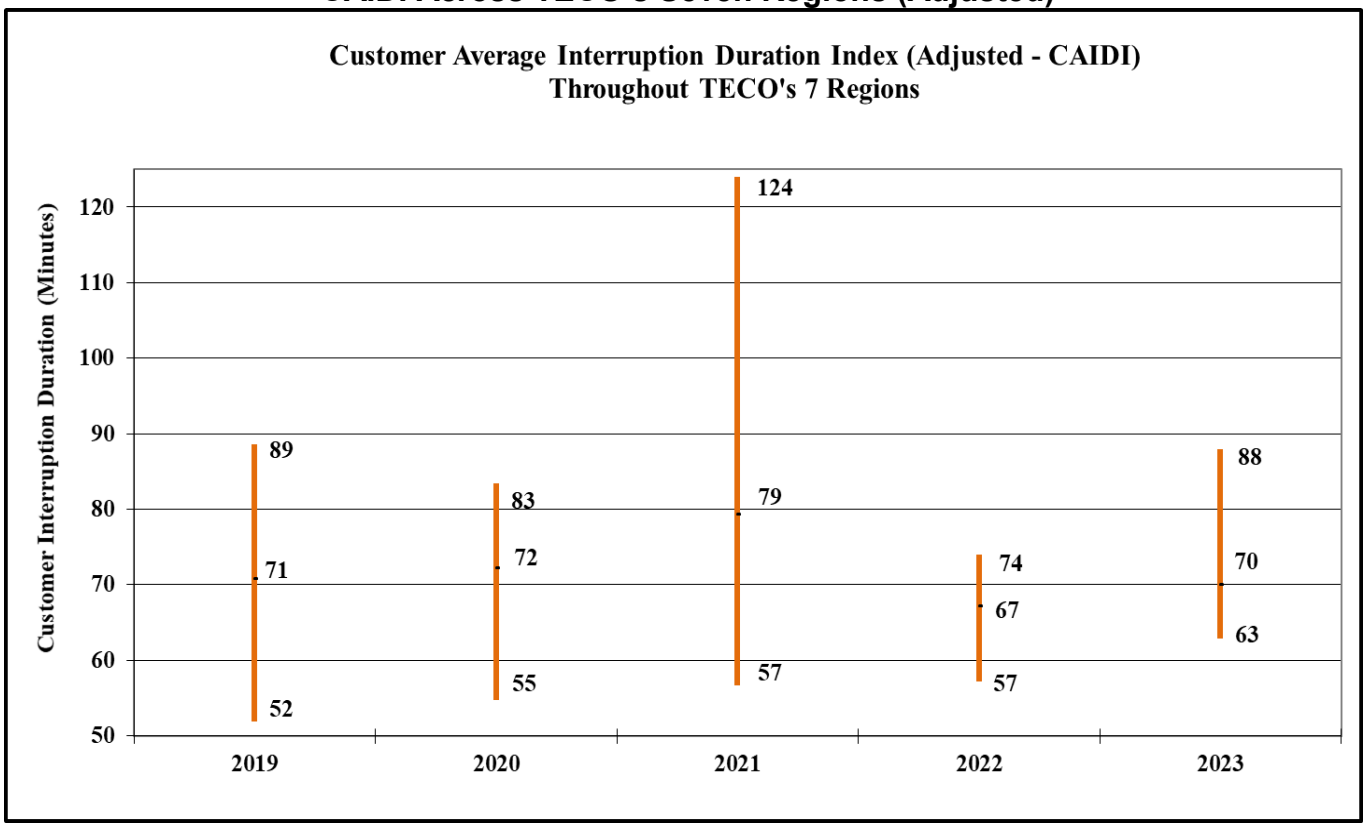
TECO's Regions with the Highest and Lowest Adjusted SAIFI Distribution Reliability Performance by Year

	2019	2020	2021	2022	2023
Highest SAIFI	Dade City	Dade City	Dade City	Dade City	Plant City
Lowest SAIFI	Central	Central	Central	Central	Western

Source: TECO's 2019-2023 distribution service reliability reports.

Figure 2-26 illustrates CAIDI, or the average number of minutes a customer is without power when a service interruption occurs. The highest CAIDI minutes appear to be confined to the Central, Western, and Dade City regions. The South Hillsborough and Dade City regions had the lowest (best) results for the five year period. The average CAIDI has remained relatively stable from 2019 to 2023.

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



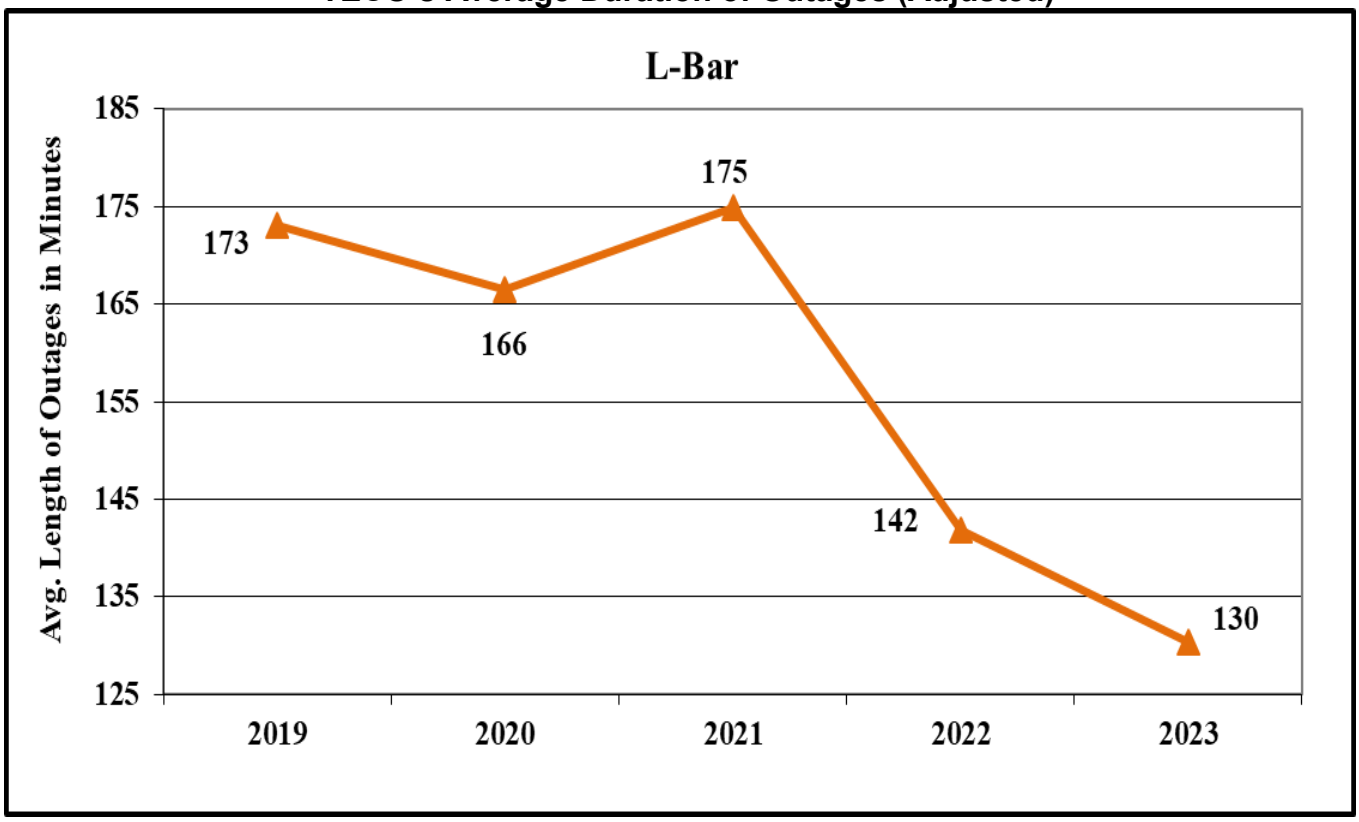
TECO's Regions with the Highest and Lowest Adjusted CAIDI Distribution Reliability Performance by Year

	2019	2020	2021	2022	2023
Highest CAIDI	Dade City	Dade City	Winter Haven	Western	Dade City
Lowest CAIDI	South Hillsborough	South Hillsborough	South Hillsborough	Dade City	South Hillsborough

Source: TECO's 2019-2023 distribution service reliability reports.

Figure 2-27 denotes an 8 percent decrease in outage duration for the period from 2022 to 2023 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 2019 to 2023, suggesting shorter restoration times.

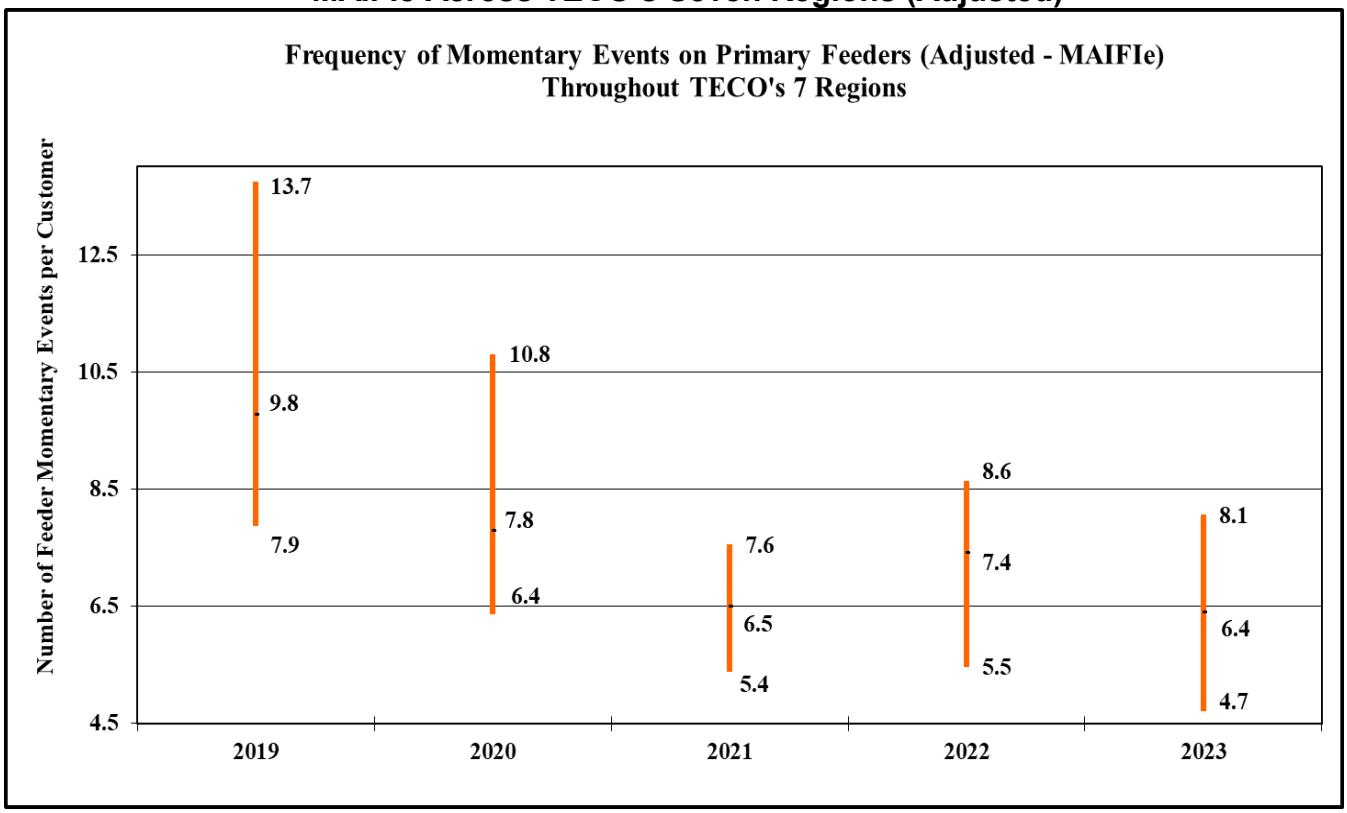
Figure 2-27
TECO's Average Duration of Outages (Adjusted)



Source: TECO's 2019-2023 distribution service reliability reports.

Figure 2-28 illustrates TECO's number of momentary events on primary circuits per customer recorded across its system. In 2023, the MAIFIe performance improved over the 2022 results in all regions. The average MAIFIe decreased by 14 percent from 2022 to 2023. Figure 2-28 also indicates that the average MAIFIe is trending downward, which suggests an improvement in performance over the five-year period of 2019 to 2023.

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



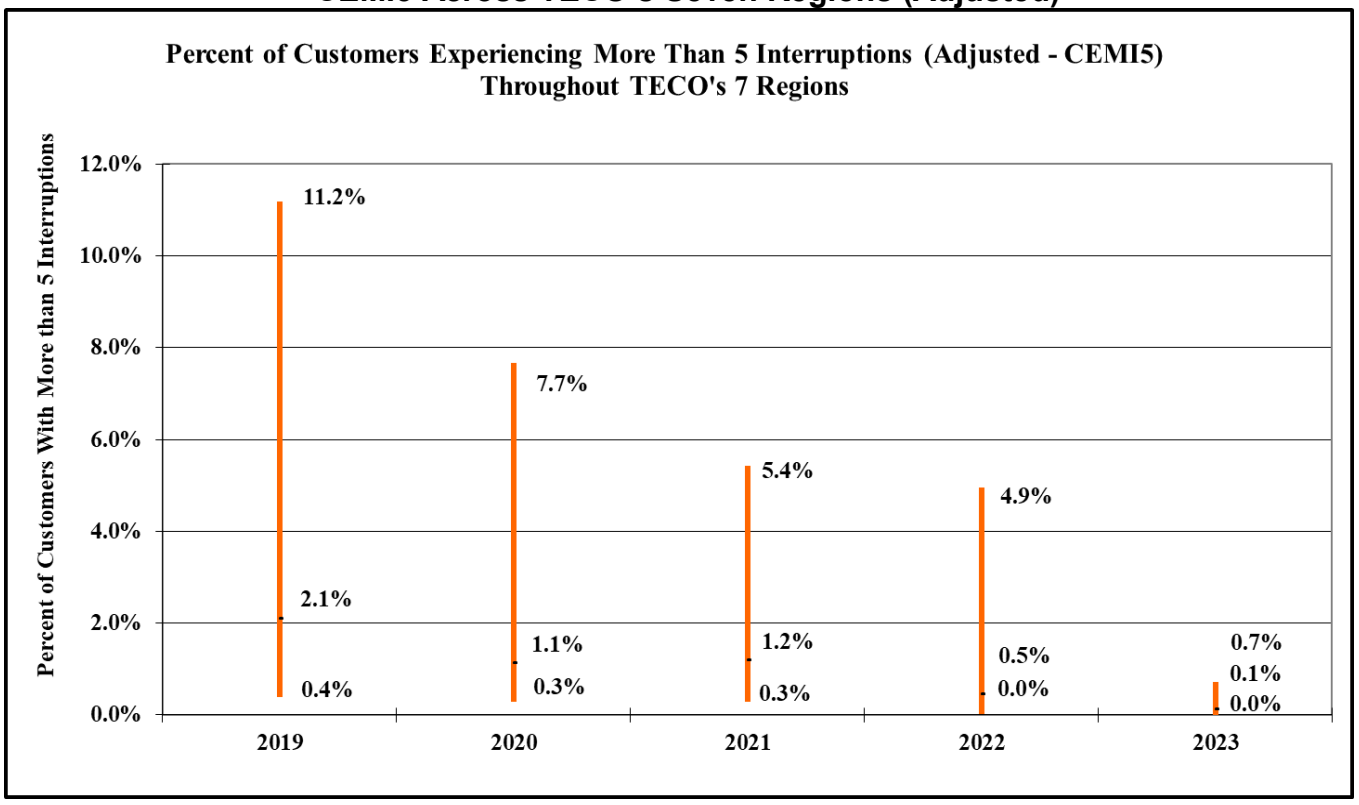
TECO's Regions with the Highest and Lowest Adjusted MAIFIe Distribution Reliability Performance by Year

	2019	2020	2021	2022	2023
Highest MAIFIe	Plant City	Plant City	Western	Dade City	Winter Haven
Lowest MAIFIe	Central	Central	Central	Central	South Hillsborough

Source: TECO's 2019-2023 distribution service reliability reports.

Figure 2-29 indicates the percent of TECO's customers experiencing more than five interruptions. Six of the seven regions in TECO's territory experienced a decrease in the CEMI5 results for 2023. Dade City reported the highest CEMI5 percentage for 2023. With TECO's results for this index varying for the past five years, the average CEMI5 index appears to be trending downward, with an 80 percent decrease in the average CEMI5 index from 2022 to 2023.

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

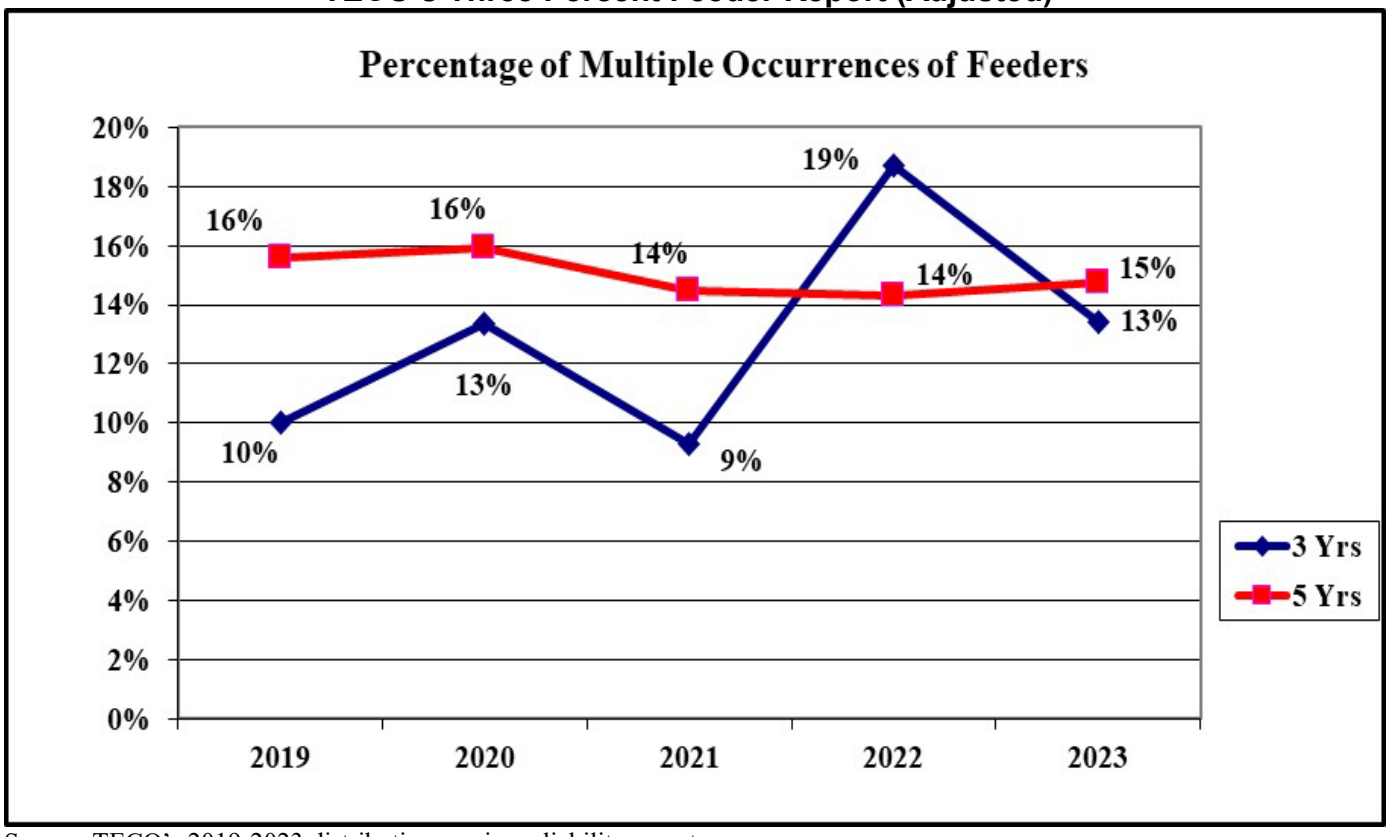
	2019	2020	2021	2022	2023
Highest CEMI5	Dade City	Dade City	Plant City	Dade City	Dade City
Lowest CEMI5	Winter Haven	Central	Western	Central	South Hillsborough

Source: TECO's 2019-2023 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 increased from 14 percent in 2022 to 15 percent in 2023. The three-year average of outages had decreased from 19 percent in 2022 to 13 percent in 2023. 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 2019 to 2023.

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, planned outages, animals, weather, vehicles, lightning, construction crews, and unknown causes. Damaged equipment was repaired or replaced, poles were replaced, and approximately 11 miles of trees and vegetation were trimmed in 2023. 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.

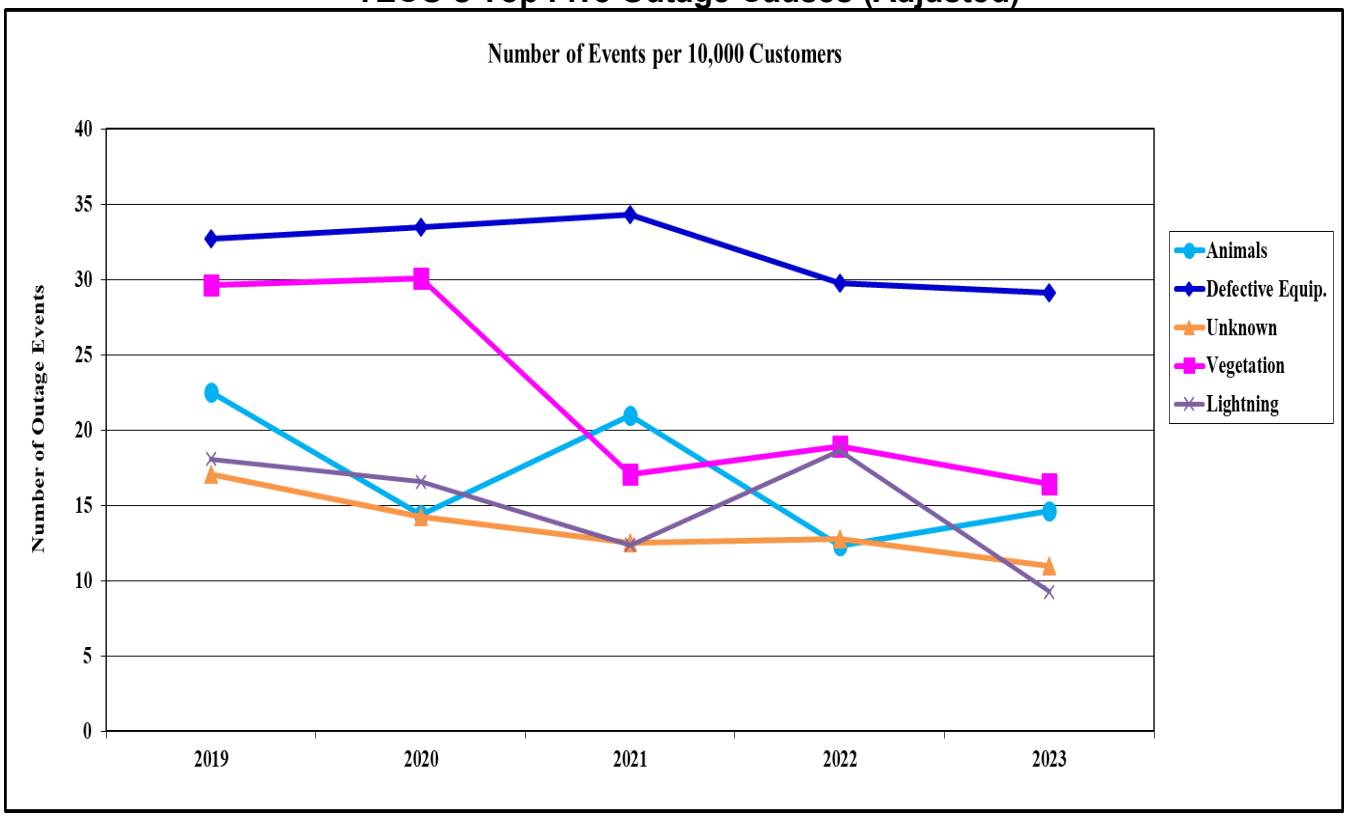
Figure 2-30
TECO's Three Percent Feeder Report (Adjusted)



Source: TECO's 2019-2023 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 83 percent of the total outage events that occurred during 2023. For the five-year period, the five top causes of outage events included "Defective Equipment" (30 percent), "Vegetation" (17 percent), "Animals" (15 percent), "Unknown Causes" (11 percent), and "Lightning" (10 percent) on a cumulative basis. "Defective Equipment" is the highest cause of outages for 2023. "Vegetation" and "Animals" causes are the next two top problem areas for TECO. The outages due to "Vegetation," "Lightning," and "Unknown Causes" decreased 12 percent, 49 percent, and 13 percent, respectively , from 2022 to 2023. The outages from "Defective Equipment" decreased 1 percent and the outages from "Animals" increased 20 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 2019-2023 distribution service reliability reports.

Observations: TECO's Adjusted Data

Four of TECO's 2023 reliability indices improved in performance compared to 2022. For the five-year period of 2019 to 2023, 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, MAIFIe, L-Bar, and CEMI5 metrics were attributed to investments in vegetation management, the utilization of smart devices, hardening feeders, and converting overhead systems to underground. TECO reported the increase in CAIDI was attributed to slightly longer response times to outages in three of the seven service areas. The three service areas were Central, Dade City and Western.

In 2023, the Dade City region had the highest reliability indices for SAIDI, CAIDI, and CEMI5. To improve reliability in the Dade City region, TECO will be conducting vegetation management on six circuits throughout the service area. In response to CAIDI increases for the Central, Dade City, and Western service areas, TECO added more Distribution Service Operators (DSOs) and Troubleshooters to help reduce the duration of outages.

Section III: Inter-Utility Reliability Comparisons

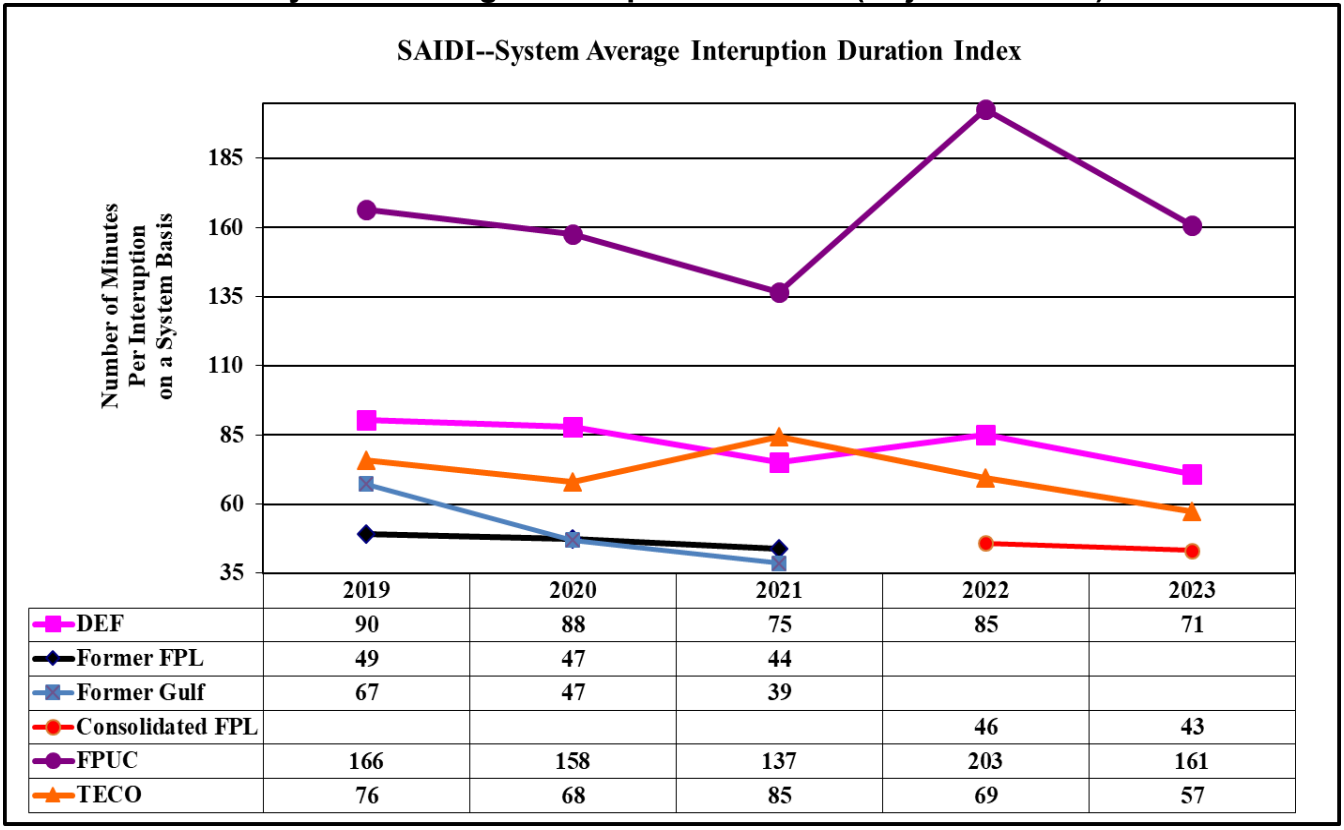
Section III contains comparisons of the utilities' adjusted data for the various reliability indices that were reported. It also contains a comparison of the service reliability related complaints received by the Commission.

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 2019 to 2023. **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, FPUC and TECO's SAIDI has been trending downward since 2019. Comparing the 2022 and 2023 SAIDI values, all utilities have improved. DEF's SAIDI value decreased 16 percent, FPL's SAIDI decreased 7 percent, FPUC decreased by 40 percent, and TECO decreased 17 percent from 2022 to 2023.

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

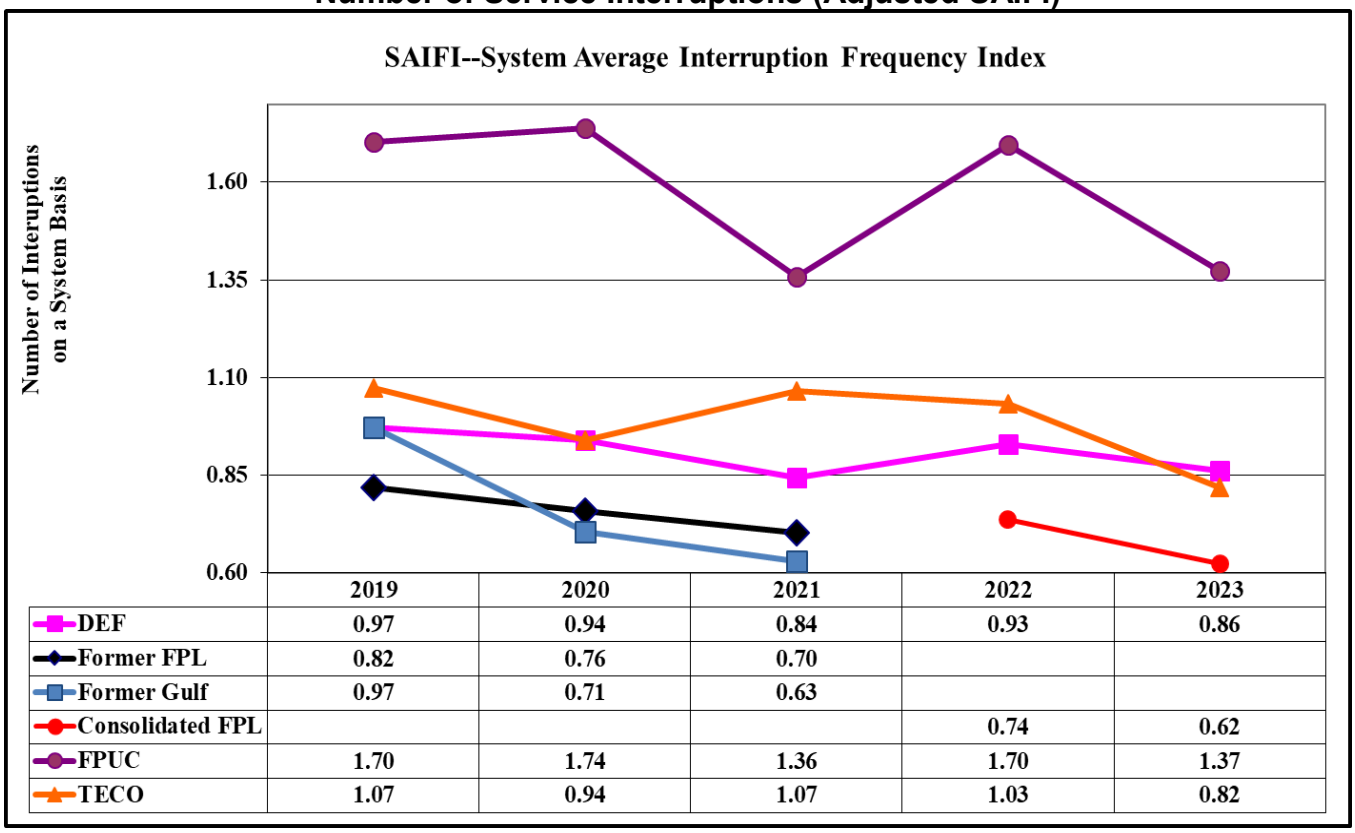


	2019	2020	2021	2022	2023
DEF	90	88	75	85	71
Former FPL	49	47	44		
Former Gulf	67	47	39		
Consolidated FPL				46	43
FPUC	166	158	137	203	161
TECO	76	68	85	69	57

Source: The IOUs' 2019-2023 distribution service reliability reports.

Figure 3-2 shows a five-year graph of the adjusted SAIFI for each IOU. The 2023 data shows all the utilities' SAIFI values decreased (improved) from 2022. Over the five-year period of 2019 to 2023, DEF, FPUC, and TECO's SAIFI values are all trending downward.

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

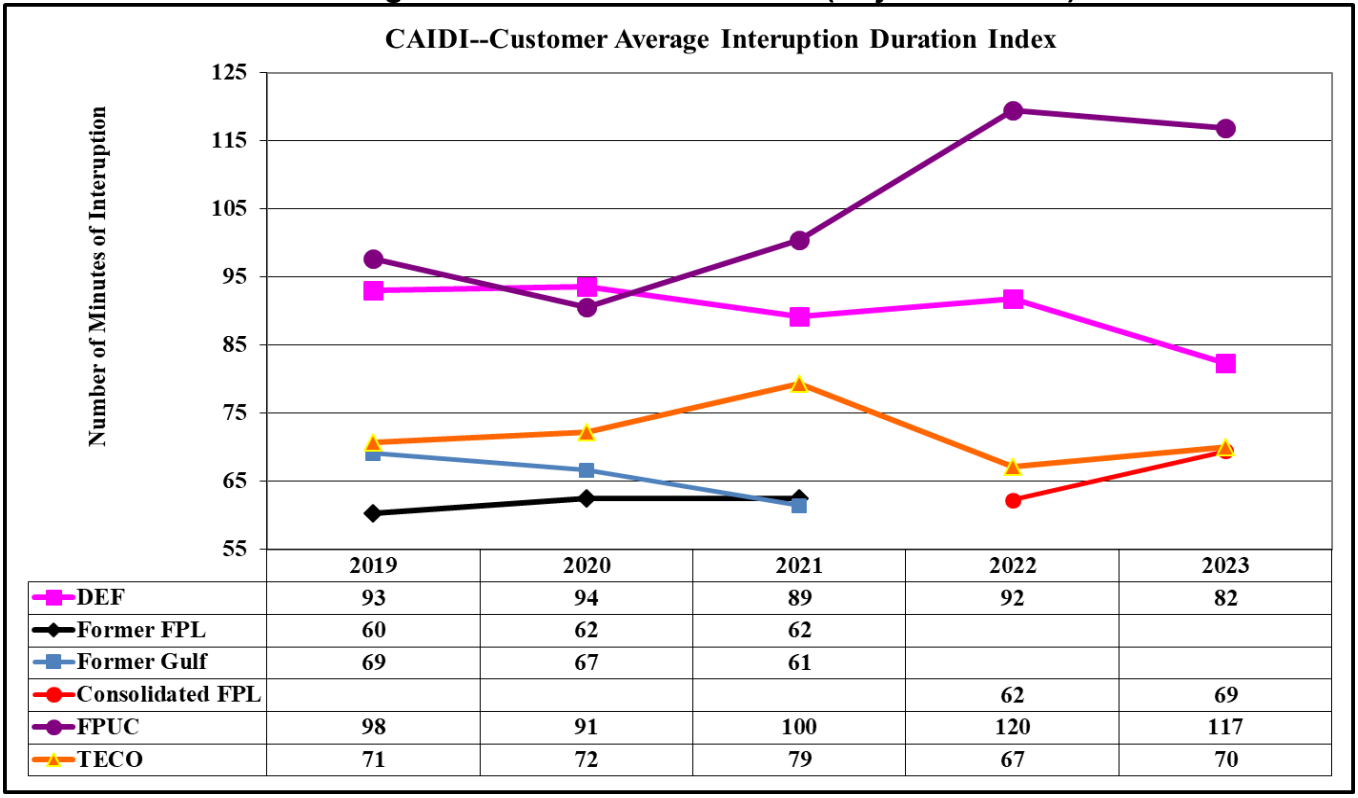


	2019	2020	2021	2022	2023
DEF	0.97	0.94	0.84	0.93	0.86
Former FPL	0.82	0.76	0.70		
Former Gulf	0.97	0.71	0.63		
Consolidated FPL				0.74	0.62
FPUC	1.70	1.74	1.36	1.70	1.37
TECO	1.07	0.94	1.07	1.03	0.82

Source: The IOUs' 2019-2023 distribution service reliability reports.

Figure 3-3 shows a five-year graph of the adjusted CAIDI for each IOU. FPL and TECO had increases in CAIDI from 2022 to 2023 as DEF and FPUC had a decrease. DEF and TECO's CAIDI values are trending downward for the five-year period of 2019 to 2023. FPUC's CAIDI value is trending upward for the same period.

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

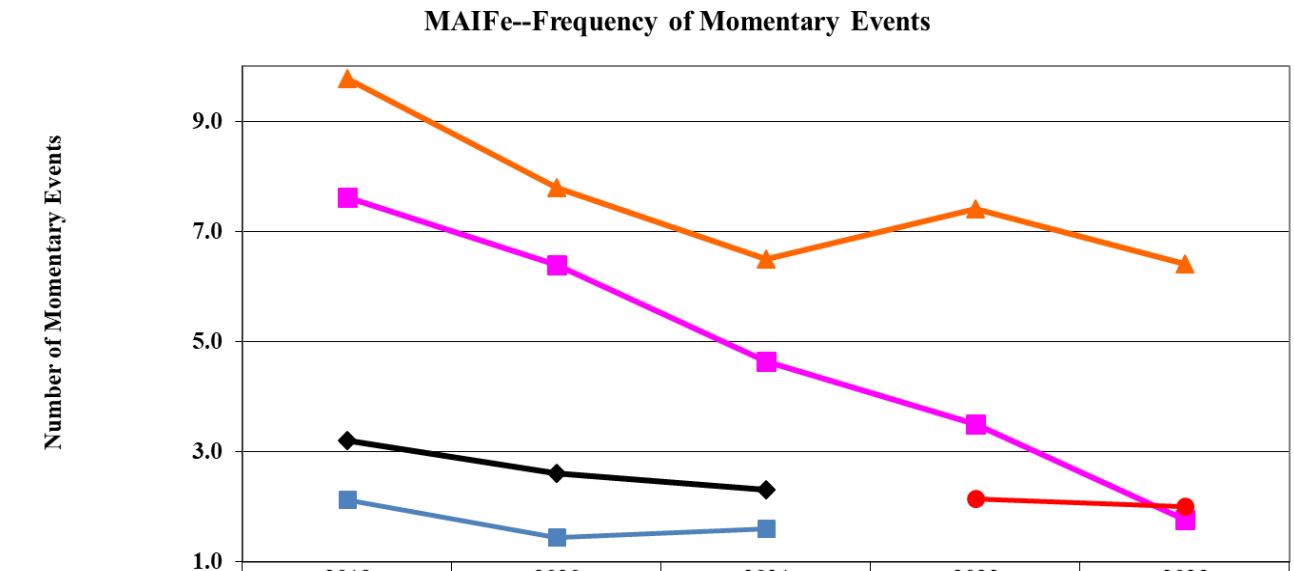


	2019	2020	2021	2022	2023
DEF	93	94	89	92	82
Former FPL	60	62	62		
Former Gulf	69	67	61		
Consolidated FPL				62	69
FPUC	98	91	100	120	117
TECO	71	72	79	67	70

Source: The IOUs' 2019-2023 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 2019 to 2023. Comparing the MAIFIe for 2022 to 2023, DEF decreased by 49 percent and TECO decreased by 14 percent. FPL's 2023 MAIFIe value decreased by 5 percent when compared to the 2022 MAIFIe value. FPUC is exempt from reporting MAIFIe and CEMI5 because it has fewer than 50,000 customers.

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

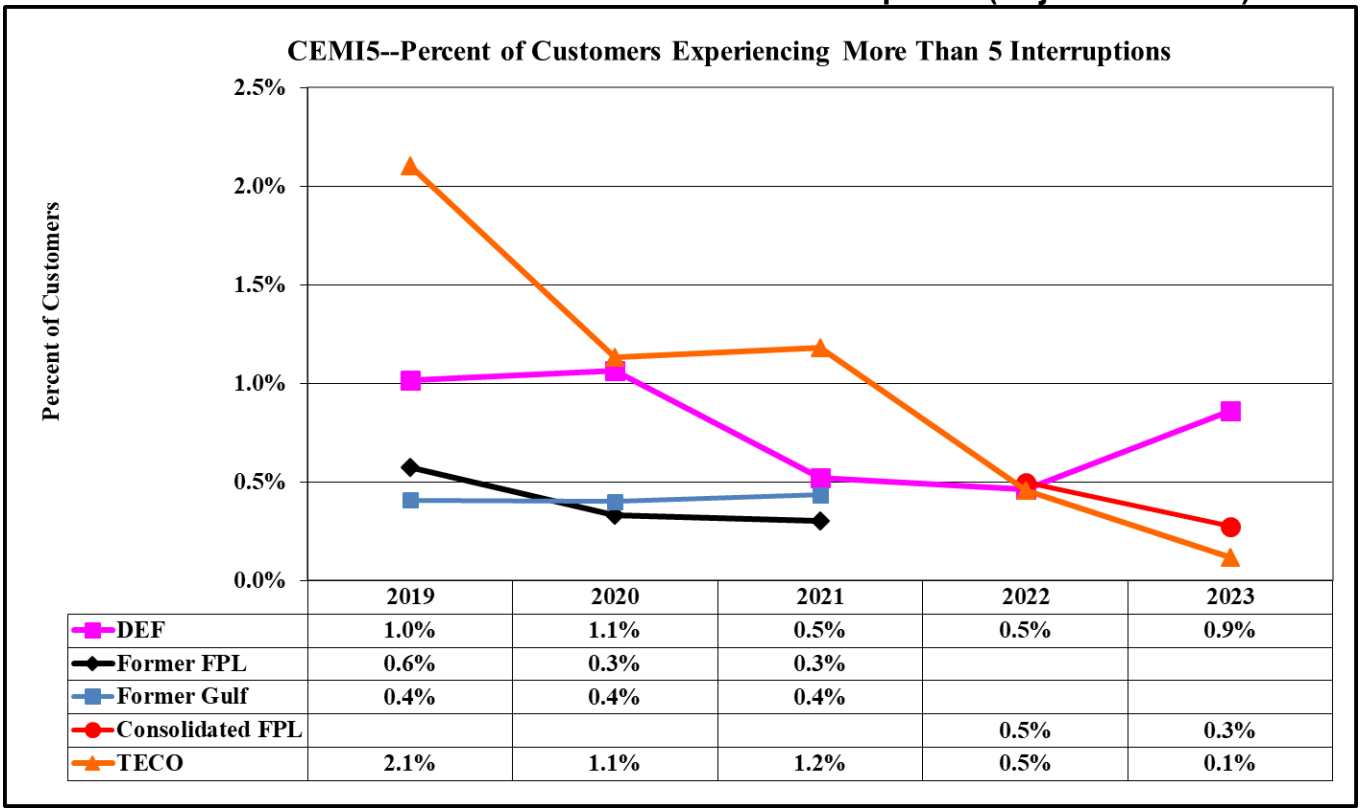


	2019	2020	2021	2022	2023
DEF	7.6	6.4	4.6	3.5	1.8
Former FPL	3.2	2.6	2.3		
Former Gulf	2.1	1.4	1.6		
Consolidated FPL				2.1	2.0
TECO	9.8	7.8	6.5	7.4	6.4

Source: The IOUs' 2019-2023 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. In 2023, TECO's CEMI5 percent decreased to 0.1 percent from 0.5 percent in 2022, as DEF's CEMI5 percentage increased to 0.9 percent from 0.5 percent in 2022. FPL's CEMI5 percentage decreased to 0.3 percent in 2023 from 0.5 percent in 2022.

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

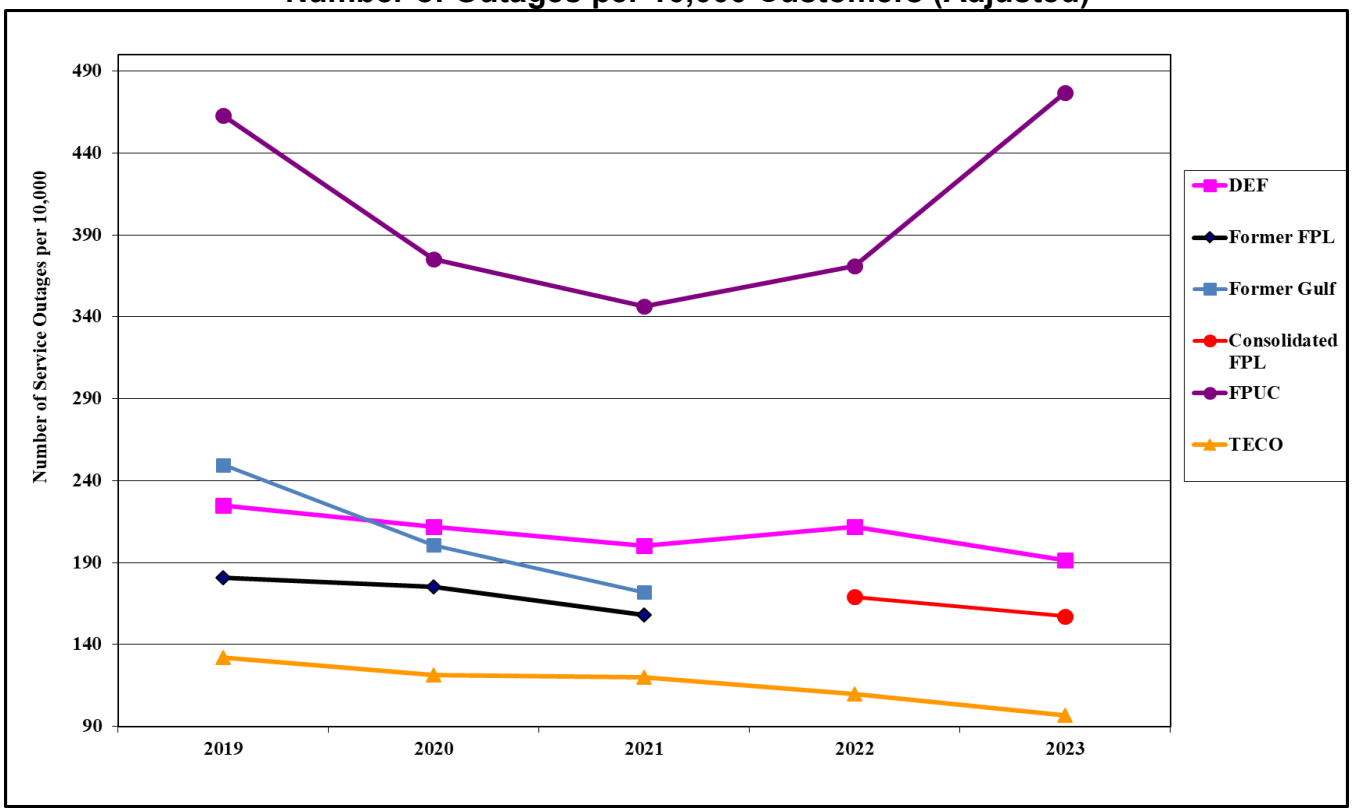


	2019	2020	2021	2022	2023
DEF	1.0%	1.1%	0.5%	0.5%	0.9%
Former FPL	0.6%	0.3%	0.3%		
Former Gulf	0.4%	0.4%	0.4%		
Consolidated FPL				0.5%	0.3%
TECO	2.1%	1.1%	1.2%	0.5%	0.1%

Source: The IOUs' 2019-2023 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 2023 was 92,209, which was a decrease from 97,484 in 2022. TECO's results are trending downward for the five-year period with a decrease in outages from 9,212 in 2022 to 8,244 in 2023. DEF's number of outages decreased in 2023, and the results are trending downward for the five-year period. FPUC's results decreased from 2019 to 2020, decreased from 2020 to 2021, increased from 2021 to 2022, and increased from 2022 to 2023. Due to its small customer base, FPUC's number of outages per 10,000 customers may be more volatile.

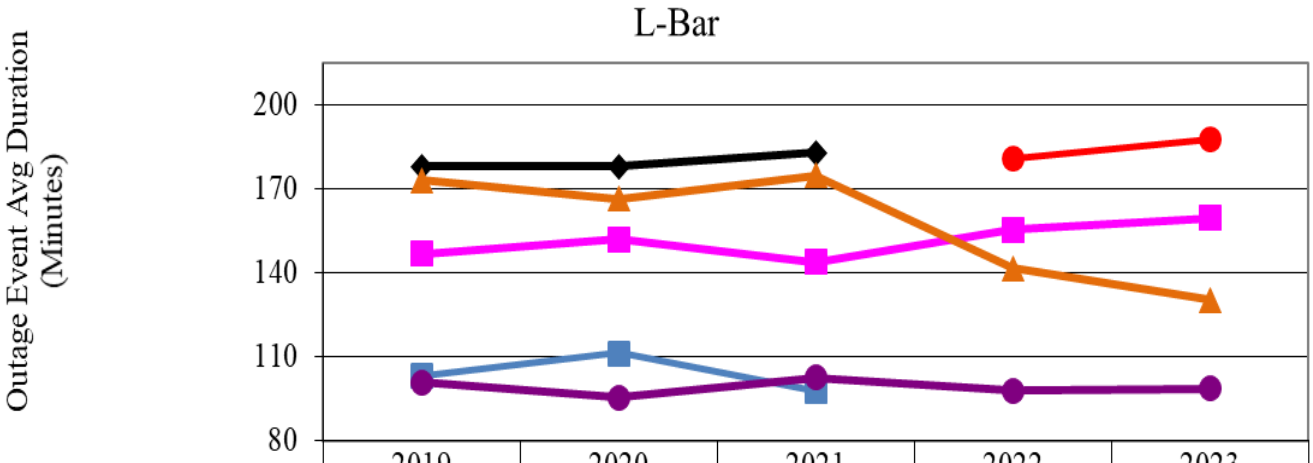
Figure 3-6
Number of Outages per 10,000 Customers (Adjusted)



Source: The IOUs' 2019-2023 distribution service reliability reports.

Figure 3-7 represents the average duration of outage events (Adjusted L-Bar) for each IOU. The data shows DEF is trending upward as FPUC and TECO are trending downward for the five-year period from 2019 to 2023. DEF had an increase of 3 percent, FPL had an increase of 4 percent, and FPUC had an increase of 1 percent when comparing 2023 results to 2022 results. TECO had an 8 percent decrease in 2023 compared to 2022.

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



	2019	2020	2021	2022	2023
DEF	147	152	144	156	160
Former FPL	178	178	183		
Former GULF	103	112	98		
Consolidated FPL				181	188
FPUC	101	96	103	98	99
TECO	173	166	175	142	130

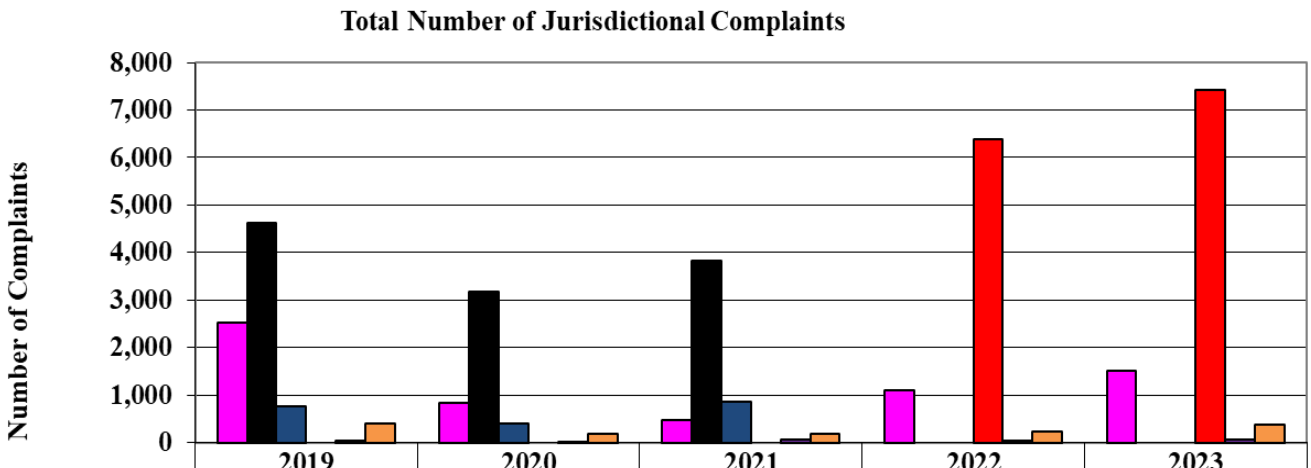
Source: The IOUs' 2019-2023 distribution service reliability reports.

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[6] 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



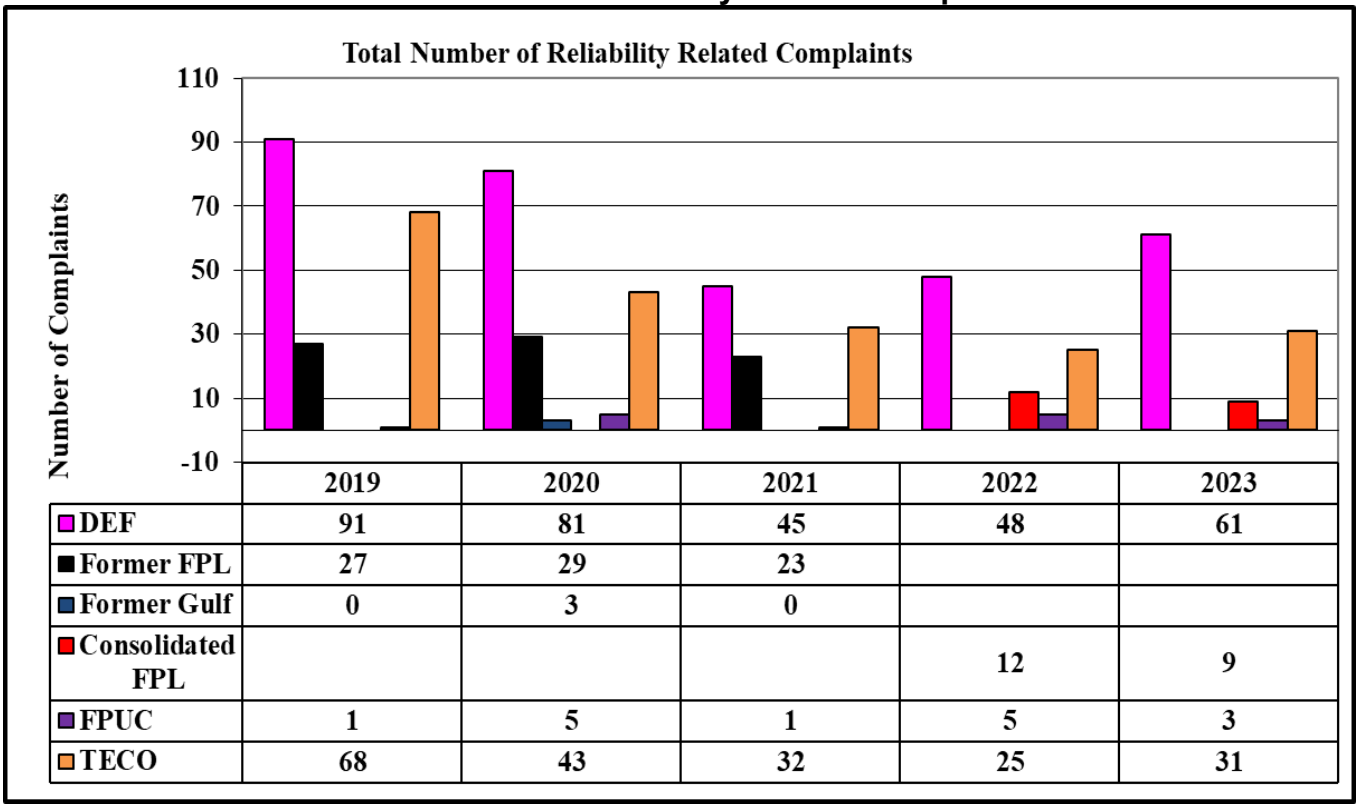
	2019	2020	2021	2022	2023
DEF	2,534	830	478	1,108	1,514
Former FPL	4,628	3,169	3,832		
Former Gulf	776	404	857		
Consolidated FPL				6,390	7,432
FPUC	36	16	58	52	71
TECO	397	190	186	250	379

Source: FPSC CATS.

[6]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 2019 to 2023, with FPUC showing the least amount. DEF, FPUC, and TECO are trending downward in the number of reliability complaints.

Figure 3-9
Total Number of Reliability Related Complaints

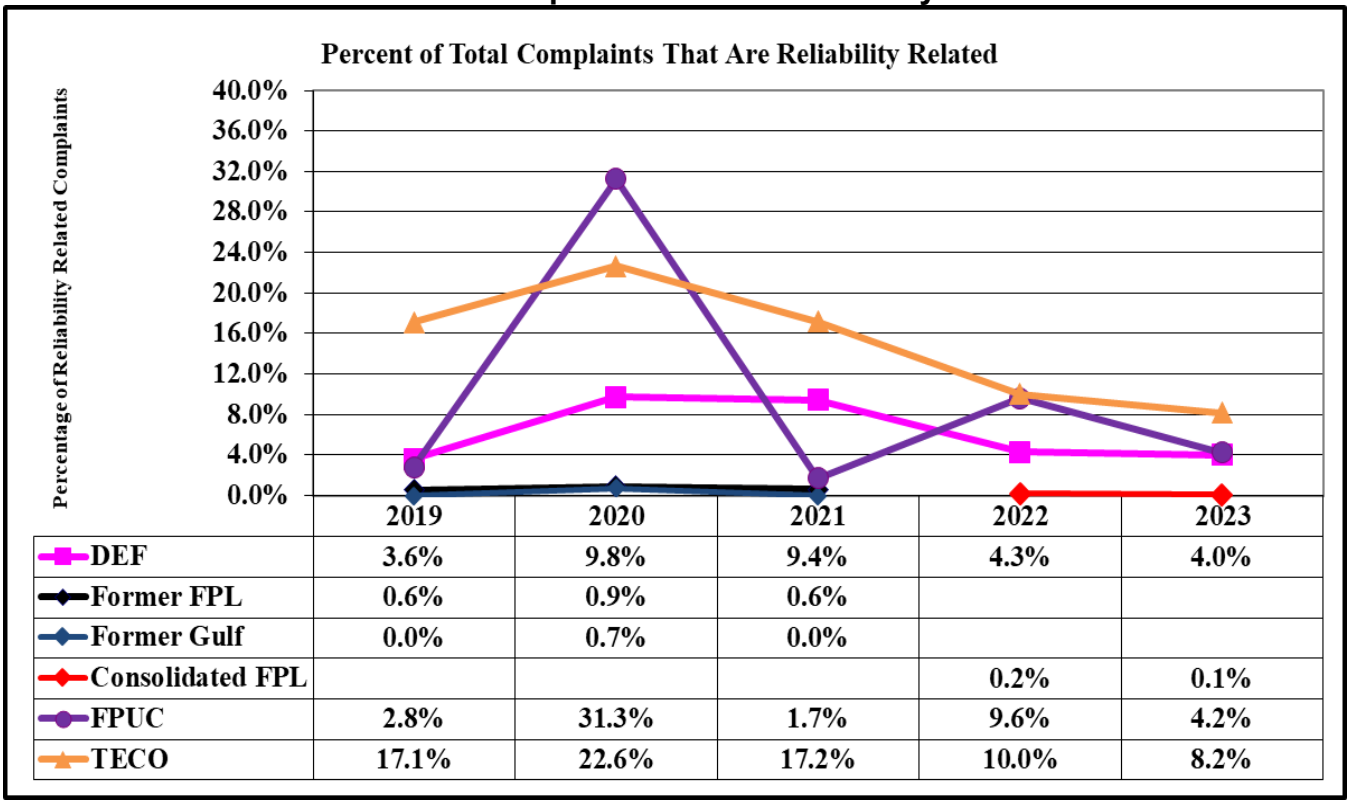


	2019	2020	2021	2022	2023
DEF	91	81	45	48	61
Former FPL	27	29	23		
Former Gulf	0	3	0		
Consolidated FPL				12	9
FPUC	1	5	1	5	3
TECO	68	43	32	25	31

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. DEF, FPUC and TECO appear to be trending downward. The percentages of FPUC complaints, compared to the other companies, appear high, however, FPUC has fewer customers and fewer complaints in total.

Figure 3-10
Percent of Complaints that are Reliability Related



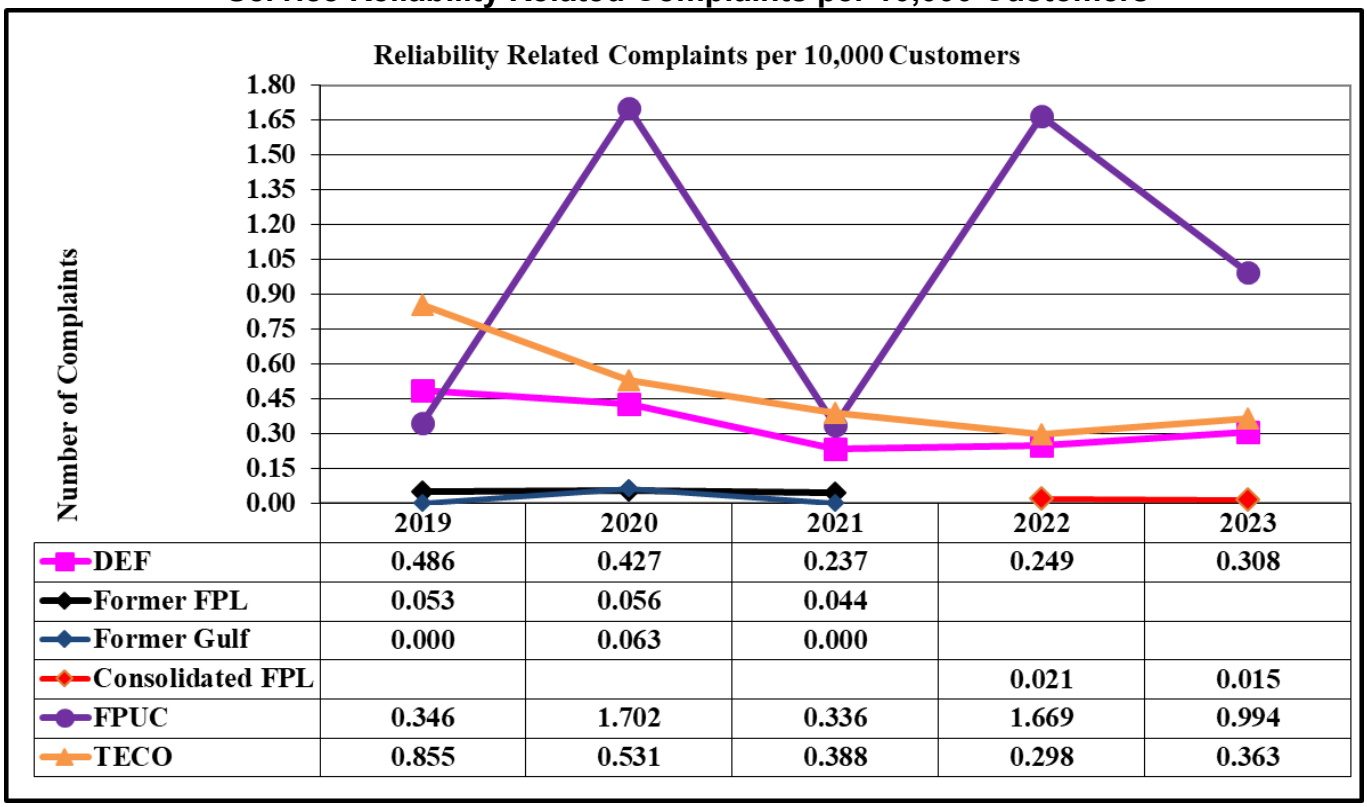
	2019	2020	2021	2022	2023
DEF	3.6%	9.8%	9.4%	4.3%	4.0%
Former FPL	0.6%	0.9%	0.6%		
Former Gulf	0.0%	0.7%	0.0%		
Consolidated FPL				0.2%	0.1%
FPUC	2.8%	31.3%	1.7%	9.6%	4.2%
TECO	17.1%	22.6%	17.2%	10.0%	8.2%

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 2019. For the five-year period, DEF and TECO are trending downward, while FPUC is trending upwards. 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



	2019	2020	2021	2022	2023
DEF	0.486	0.427	0.237	0.249	0.308
Former FPL	0.053	0.056	0.044		
Former Gulf	0.000	0.063	0.000		
Consolidated FPL				0.021	0.015
FPUC	0.346	1.702	0.336	1.669	0.994
TECO	0.855	0.531	0.388	0.298	0.363

Source: The IOUs' 2019-2023 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)

	2019	2020	2021	2022	2023
North Central	425,895	429,896	428,394	431,287	441,634
North Coastal*	214,245	445,321	446,742	455,474	469,422
South Central	520,699	532,367	544,915	560,083	583,847
South Coastal*	710,806	490,952	482,484	483,353	487,740
DEF System	**1,871,645**	**1,898,536**	**1,902,535**	**1,930,197**	**1,982,643**

Source: DEF's 2019-2023 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)				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
North Central	87	85	81	99	69	0.81	0.84	0.83	0.99	0.83	108	102	98	100	84
North Coastal*	170	117	90	96	88	1.56	1.15	0.95	1.11	1.04	108	102	95	86	84
South Central	86	70	65	74	72	1.02	0.92	0.80	0.81	0.82	85	77	81	91	88
South Coastal*	72	83	68	76	54	0.86	0.86	0.80	0.84	0.77	84	96	84	90	70
DEF System	**90**	**88**	**75**	**85**	**71**	**0.97**	**0.94**	**0.84**	**0.93**	**0.86**	**93**	**94**	**89**	**92**	**82**

Source: DEF's 2019-2023 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)				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
North Central	4.67	6.76	5.21	3.84	1.63	0.41%	0.42%	0.64%	0.34%	0.50%
North Coastal*	9.66	6.36	5.38	3.74	1.68	5.50%	2.32%	1.10%	1.14%	2.14%
South Central	8.78	6.47	4.42	3.29	2.15	0.79%	1.17%	0.28%	0.30%	0.70%
South Coastal*	7.93	6.00	3.66	3.19	1.53	0.19%	0.37%	0.15%	0.13%	0.17%
DEF System	**7.62**	**6.39**	**4.63**	**3.49**	**1.77**	**1.02%**	**1.06%**	**0.52%**	**0.46%**	**0.86%**

Source: DEF's 2019-2023 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				
	2019	2020	2021	2022	2023	Percentages	2019	2020	2021	2022	2023
Animals	5,127	3,882	5,347	4,231	3,893	10.2%	82	82	81	83	91
Unknown	859	556	688	1,543	7,997	21.0%	85	88	95	137	130
All Other	8,223	7,170	7,199	7,021	1,950	5.1%	169	181	176	186	232
Defective Equipment	11,921	11,973	11,449	11,914	11,040	29.1%	146	146	146	162	182
Lightning	943	994	1,126	1,787	2,814	7.4%	168	157	151	146	169
Vegetation	8,883	9,291	7,790	8,552	7,795	20.5%	160	160	154	161	166
Other Weather	5,658	5,826	4,060	4,855	2,198	5.8%	153	159	140	151	168
Vehicle	445	509	460	367	308	0.8%	250	245	241	258	260
DEF System	**42,059**	**40,201**	**38,119**	**40,270**	**37,995**	**100%**	**147**	**152**	**144**	**156**	**160**

Source: DEF's 2019-2023 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.

Florida Power & Light Company

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

	2019	2020	2021	2022	2023
Boca Raton	383,429	386,305	390,005	392,207	395,149
Brevard	316,529	322,070	327,339	332,829	339,659
Central Broward*	282,135	285,678	289,450	290,698	292,588
Central Dade	320,532	323,326	331,087	334,196	337,006
Central Florida	298,186	305,247	312,544	318,819	327,521
Manasota	408,944	416,122	423,344	440,664	450,541
Naples	414,696	421,646	428,887	431,199	429,768
North Broward*	323,531	325,075	326,654	327,409	328,537
North Dade	251,793	253,181	255,885	257,016	258,312
North Florida	171,801	177,889	183,858	190,833	199,762
South Broward*	344,502	346,004	348,897	349,993	351,979
South Dade	303,306	306,719	310,243	314,895	318,825
Toledo Blade	281,994	289,643	299,091	294,339	306,563
Treasure Coast	340,658	346,884	354,410	362,811	372,187
West Dade	270,975	275,635	278,531	280,842	283,013
West Palm	373,533	376,620	381,083	383,931	388,407
Fort Walton	120,399	119,990	122,136	118,284	121,827
Panama City	115,446	119,041	118,379	116,859	126,597
Pensacola	232,438	234,599	241,587	226,759	239,114
Former FPL System	**5,086,544**	**5,158,044**	**5,241,308**		
Former Gulf System **	**468,283**	**473,630**	**482,102**		
Consolidated FPL System				**5,764,583**	**5,867,355**

Source: FPL and Gulf's 2019-2023 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)				
	2019	**2020**	**2021**	**2022**	**2023**
Boca Raton	42	41	35	32	40
Brevard	44	49	46	44	38
Central Broward*	65	54	53	49	53
Central Dade	54	41	46	50	48
Central Florida	40	41	43	45	33
Manasota	34	37	37	43	29
Naples	50	45	39	50	40
North Broward*	37	31	31	33	36
North Dade	64	58	60	57	60
North Florida	60	62	55	58	54
South Broward*	51	46	35	37	39
South Dade	56	55	58	55	65
Toledo Blade	56	50	53	64	40
Treasure Coast	54	52	45	45	45
West Dade	61	48	49	49	58
West Palm	41	59	36	40	41
Fort Walton	58	40	41	35	34
Panama City	69	52	46	42	35
Pensacola	71	48	34	48	43
Former FPL System	**49**	**47**	**44**		
Former Gulf System**	**67**	**47**	**39**		
Consolidated FPL System				**46**	**43**

Source: FPL and Gulf's 2019-2023 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)				
	2019	**2020**	**2021**	**2022**	**2023**
Boca Raton	0.80	0.73	0.66	0.62	0.63
Brevard	0.81	0.88	0.82	0.79	0.49
Central Broward*	0.88	0.75	0.80	0.83	0.66
Central Dade	0.78	0.57	0.67	0.66	0.58
Central Florida	0.77	0.76	0.71	0.75	0.52
Manasota	0.58	0.64	0.54	0.66	0.44
Naples	0.82	0.69	0.72	0.82	0.61
North Broward*	0.61	0.53	0.57	0.51	0.46
North Dade	1.00	0.78	0.81	0.79	0.59
North Florida	1.04	1.07	0.87	0.74	0.68
South Broward*	0.85	0.73	0.55	0.62	0.56
South Dade	0.74	0.79	0.80	0.73	0.68
Toledo Blade	0.88	0.79	0.86	1.02	0.78
Treasure Coast	0.97	0.85	0.74	0.77	0.75
West Dade	0.96	0.77	0.72	0.74	0.76
West Palm	0.83	0.96	0.58	0.79	0.75
Fort Walton	0.73	0.58	0.59	0.65	0.63
Panama City	1.12	0.78	0.70	0.75	0.68
Pensacola	1.02	0.73	0.62	0.80	0.73
Former FPL System	**0.82**	**0.76**	**0.70**		
Former Gulf System **	**0.97**	**0.71**	**0.63**		
Consolidated FPL System				**0.74**	**0.62**

Source: FPL and Gulf's 2019-2023 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)				
	2019	**2020**	**2021**	**2022**	**2023**
Boca Raton	52	56	53	51	64
Brevard	55	56	56	56	77
Central Broward*	74	72	66	58	81
Central Dade	69	72	69	75	83
Central Florida	53	54	60	61	63
Manasota	59	57	67	65	65
Naples	61	66	54	62	66
North Broward*	61	58	55	64	77
North Dade	64	74	73	72	101
North Florida	58	58	63	79	79
South Broward*	60	63	63	60	70
South Dade	75	69	73	75	95
Toledo Blade	64	63	61	63	52
Treasure Coast	55	61	60	58	59
West Dade	63	63	69	67	75
West Palm	49	62	62	51	55
Fort Walton	79	69	69	54	53
Panama City	62	67	65	56	51
Pensacola	69	65	55	60	58
Former FPL System	**60**	**62**	**62**		
Former Gulf System **	**69**	**67**	**61**		
Consolidated FPL System				**62**	**69**

Source: FPL and Gulf's 2019-2023 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)				
	2019	**2020**	**2021**	**2022**	**2023**
Boca Raton	3.8	3.3	2.7	2.2	2.4
Brevard	3.0	2.3	2.4	2.0	1.9
Central Broward*	3.5	2.8	2.1	2.0	1.8
Central Dade	2.8	2.3	2.0	2.1	1.9
Central Florida	2.8	2.3	2.3	1.7	1.2
Manasota	2.4	1.9	1.7	1.6	1.3
Naples	3.3	2.4	2.2	2.4	1.8
North Broward*	2.4	2.0	1.5	1.6	1.5
North Dade	2.8	2.3	1.8	1.8	2.1
North Florida	2.8	2.3	2.1	2.3	1.9
South Broward*	3.4	2.8	2.4	2.1	2.4
South Dade	3.3	2.8	2.7	2.4	2.6
Toledo Blade	3.5	3.0	2.6	3.5	2.6
Treasure Coast	3.2	3.1	2.6	2.1	2.6
West Dade	3.9	2.9	3.4	3.1	2.9
West Palm	4.1	3.0	2.3	2.4	2.2
Fort Walton	2.0	1.4	1.9	2.4	2.0
Panama City	2.3	1.8	1.6	1.4	1.3
Pensacola	2.1	1.3	1.5	1.5	1.4
Former FPL System	**3.2**	**2.6**	**2.3**		
Former Gulf System **	**2.1**	**1.4**	**1.6**		
Consolidated FPL System				**2.1**	**2.0**

Source: FPL and Gulf's 2019-2023 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)				
	2019	**2020**	**2021**	**2022**	**2023**
Boca Raton	1.01%	0.18%	0.11%	0.17%	0.42%
Brevard	0.21%	0.42%	0.84%	0.36%	0.12%
Central Broward*	0.47%	0.22%	0.20%	1.54%	0.25%
Central Dade	0.14%	0.18%	0.19%	0.49%	0.33%
Central Florida	0.37%	0.35%	0.20%	0.34%	0.09%
Manasota	0.27%	0.17%	0.09%	0.51%	0.06%
Naples	1.00%	0.38%	0.17%	0.45%	0.20%
North Broward*	0.20%	0.08%	0.38%	0.17%	0.04%
North Dade	1.03%	0.44%	0.52%	0.37%	0.27%
North Florida	0.74%	0.70%	0.35%	0.96%	0.40%
South Broward*	0.34%	0.19%	0.23%	0.60%	0.10%
South Dade	0.72%	0.12%	0.36%	0.39%	0.43%
Toledo Blade	0.66%	0.52%	0.53%	0.91%	0.60%
Treasure Coast	1.22%	0.62%	0.36%	0.38%	0.25%
West Dade	0.61%	0.57%	0.27%	0.17%	0.57%
West Palm	0.26%	0.46%	0.26%	0.59%	0.45%
Fort Walton	0.11%	0.19%	0.15%	0.19%	0.19%
Panama City	0.82%	0.96%	1.23%	0.78%	0.50%
Pensacola	0.36%	0.23%	0.19%	0.40%	0.17%
Former FPL System	**0.57%**	**0.33%**	**0.30%**		
Former Gulf System **	**0.41%**	**0.40%**	**0.43%**		
Consolidated FPL System				**0.50%**	**0.28%**

Source: FPL and Gulf's 2019-2023 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				
	2019	2020	2021	2022	2023	Percentages	2019	2020	2021	2022	2023
Unknown	8,593	7,619	7,740				132	136	131		
Vegetation	18,123	18,375	17,090				193	196	207		
Animals	10,046	8,165	9,436				105	104	110		
Remaining Causes	3,449	3,560	3,172				147	141	155		
Other Weather	6,592	5,529	5,275				190	178	187		
Other	8,367	7,183	6,728				171	167	166		
Lightning	1,644	1,493	1,270				260	254	265		
Vehicle	883	895	946				259	259	261		
Defective Equipment	34,282	37,599	31,216				198	194	205		
Former FPL System	**91,979**	**90,418**	**82,873**	**0**	**0**	**0%**	**178**	**178**	**183**		

Source: FPL's 2019-2021 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			
	2019	2020	2021	2022	2023	Percentages	2019	2020	2021	2022
Unknown	1,211	1,333	1,337				89	96	90	
Vegetation	2,485	2,311	1,631				102	112	94	
Animals	2,495	1,838	1,704				65	65	66	
Remaining Causes	652	863	832				98	147	105	
Other Weather	331	766	518				116	148	97	
Lightning	1,437	479	586				117	114	113	
Vehicle	443	247	236				150	146	148	
Defective Equipment	2,630	1,669	1,447				132	134	129	
Former Gulf System	**11,684**	**9,506**	**8,291**	**0**	**0**	**0%**	**103**	**112**	**98**	

Source: Gulf's 2019-2022 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				
	2019	2020	2021	2022	2023	Percentages	2019	2020	2021	2022	2023
Unknown				9,598	9,365	10.2%				135	178
Vegetation				18,954	16,919	18.3%				194	209
Animals				10,516	10,069	10.9%				101	110
Remaining Causes				3,477	3,196	3.5%				163	168
Other Weather				7,987	6,320	6.9%				197	190
Other				9,591	8,763	9.5%				172	141
Lightning				2,029	2,438	2.6%				219	259
Vehicle				1,116	1,007	1.1%				251	246
Defective Equipment				34,216	34,132	37.0%				208	209
FPL System	**0**	**0**	**0**	**97,484**	**92,209**	**100%**				**181**	**188**

Source: FPL's 2022-2023 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)

	2019	2020	2021	2022	2023
Fernandina(NE)	16,727	17,138	17,307	17,411	17,586
Marianna (NW)	12,135	12,242	12,432	12,545	12,600
FPUC System	**28,862**	**29,380**	**29,739**	**29,956**	**30,186**

Source: FPUC's 2019-2023 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)				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
NE	82	121	109	173	115	0.87	1.45	1.08	1.18	0.86	94	83	101	146	134
NW	283	209	175	244	224	2.85	2.15	1.75	2.41	2.09	99	98	100	101	107
FPUC System	**166**	**158**	**137**	**203**	**161**	**1.70**	**1.74**	**1.36**	**1.70**	**1.37**	**98**	**91**	**100**	**120**	**117**

Source: FPUC's 2019-2023 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				
	2019	2020	2021	2022	2023	Percentages	2019	2020	2021	2022	2023
Vegetation	357	376	356	328	424	29.5%	100	91	112	107	120
Animals	184	163	168	179	292	20.3%	66	64	65	57	56
Lightning	174	102	124	172	188	13.1%	115	107	103	100	106
Unknown	125	163	154	171	286	19.9%	78	92	95	102	85
All Other	64	36	29	35	58	4.0%	89	84	129	112	121
Other Weather	130	75	34	34	64	4.4%	140	133	121	123	142
Vehicle	132	36	30	33	35	2.4%	95	135	136	106	118
Defective Equipment	170	151	135	160	92	6.4%	123	112	115	108	108
FPUC System	**1,336**	**1,102**	**1,030**	**1,112**	**1,439**	**100%**	**101**	**96**	**103**	**98**	**99**

Source: FPUC's 2019-2023 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)

	2019	2020	2021	2022	2023
Central	209,057	211,631	215,086	217,724	219,838
Dade City	15,305	15,604	15,873	16,246	16,928
Eastern	127,437	129,781	131,248	133,486	134,994
Plant City	63,502	63,954	64,369	65,198	66,261
South Hillsborough	91,219	96,568	101,875	107,101	110,875
Western	210,151	211,714	214,077	215,985	217,506
Winter Haven	78,282	80,016	81,794	84,575	86,931
TECO System	**794,953**	**809,268**	**824,322**	**840,315**	**853,333**

Source: TECO's 2019-2023 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)				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Central	63	58	64	41	55	0.91	0.77	0.81	0.67	0.70	70	75	79	61	78
Dade City	191	186	138	143	95	2.15	2.23	2.02	2.50	1.08	89	83	68	57	88
Eastern	83	56	65	57	51	1.15	0.85	1.01	0.96	0.76	72	66	64	59	67
Plant City	114	107	157	129	86	1.60	1.51	1.88	1.82	1.29	71	71	84	71	67
South Hillsborough	52	53	61	75	51	1.01	0.96	1.08	1.07	0.81	52	55	57	70	63
Western	77	71	77	70	47	1.00	0.86	0.97	0.95	0.67	78	83	79	74	70
Winter Haven	67	71	153	94	78	1.01	1.03	1.23	1.37	1.18	67	68	124	68	66
TECO System	**76**	**68**	**85**	**69**	**57**	**1.07**	**0.94**	**1.07**	**1.03**	**0.82**	**71**	**72**	**79**	**67**	**70**

Source: TECO's 2019-2023 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)				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Central	7.9	6.4	5.4	5.5	5.4	0.81%	0.29%	0.71%	0.02%	0.06%
Dade City	12.3	10.5	6.5	8.6	6.5	11.17%	7.67%	1.56%	4.95%	0.72%
Eastern	10.8	6.4	6.0	7.1	6.4	2.10%	1.00%	1.94%	0.11%	0.05%
Plant City	13.7	10.8	7.5	8.3	7.9	4.03%	3.38%	5.43%	0.81%	0.64%
South Hillsborough	9.4	8.3	6.0	7.9	4.7	4.62%	2.92%	0.90%	0.28%	0.00%
Western	9.5	7.8	7.6	8.6	7.2	1.69%	0.33%	0.28%	0.29%	0.05%
Winter Haven	10.7	10.4	7.5	8.3	8.1	0.39%	0.47%	0.51%	1.64%	0.19%
TECO System	**9.8**	**7.8**	**6.5**	**7.4**	**6.4**	**2.10%**	**1.13%**	**1.18%**	**0.46%**	**0.12%**

Source: TECO's 2019-2023 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				
	2019	2020	2021	2022	2023	Percentages	2019	2020	2021	2022	2023
Lightning	1,436	1,340	1,019	1,567	792	9.6%	222	175	211	165	146
Animals	1,788	1,162	1,729	1,038	1,247	15.1%	94	84	111	83	76
Vegetation	2,357	2,434	1,409	1,593	1,403	17.0%	197	180	184	156	137
Unknown	1,356	1,152	1,031	1,075	939	11.4%	129	116	113	99	91
Other Weather	214	328	1,211	711	553	6.7%	189	219	288	147	133
Vehicle	387	398	300	220	252	3.1%	231	205	170	158	150
Defective Equipment	2,600	2,711	2,829	2,502	2,485	30.1%	190	189	166	158	158
All Other	366	285	368	506	573	7.0%	148	128	183	140	141
TECO System	**10,504**	**9,810**	**9,896**	**9,212**	**8,244**	**100%**	**173**	**166**	**175**	**142**	**130**

Source: TECO's 2019-2023 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 2023

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**
Alachua, City of	The City maintains an eight-year inspection cycle, with 25% of its total poles inspected bi-annually. The City of Alachua owns only distribution poles, no transmission poles.	The City inspected 504 (20%) of its 2,492 distribution poles in 2023.	Of the 504 poles inspected in 2023, 46 (9.1%) were rejected with two being priority rejected due to shell rot at ground line and 44 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 2023 inspection were evaluated and replaced: fourteen 30 foot Class 6, four 35 foot, Class 5, fourteen 40 foot, Class 5, twelve 45 foot, Class 5, and two 50 foot, Class 3.	The City continues to use the information from the PURC conferences held in 2007 and 2009, to improve vegetation management.	The City trims approximately 69 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 2023, the City did not inspect any poles.	No inspections were completed in 2023.	For 2021 through 2023, the City replaced 358 poles. The poles ranged in size from 30 to 50 feet, Classes 3 to 5.	The City is on a five-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 five-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 five-year cycle.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

	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 annually, 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 2023, 366 (7.2%) distribution poles were inspected. This included 335 wood poles and 31 concrete poles.	Four (0.9%) transmission structures failed the inspection due to structural damage/deterioration. In 2023, four (1.1%) distribution structures 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 2024. In 2023, 17 wood poles that failed the 2022 inspected were replaced and four wood poles that failed the 2023 inspected were replaced.	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 2023 have been fully completed and the vegetation management activities for 2024 are on schedule.
Blountstown, City of	The City owns 2,096 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.	36 (1.75%) poles required replacement because of ground rot, extreme cracking and warping and upgrading the lines. The City also reconductored about 2,300 linear feet of distribution line.	36 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 2024.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

	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 did not inspect any poles in 2023.	The City did not inspect any poles in 2023.	The City did not inspect any poles in 2023.	The City checks vegetation throughout the year and trims on a case-by-case basis. Areas outside of an easement are done on an as needed basis. The City trims on a four-year cycle.	In 2023, approximately 25 miles were trimmed on all feeders.
Central Florida Tourism Oversight District	The District performs a visual inspection monthly of its overhead transmission system and inspects the distribution facilities every eight years.	The District has seven wood distribution poles. All wood distribution poles (seven) were inspected in 2021. The next inspection is scheduled for 2029.	All distribution poles passed inspection.	The District's transmission system has no wood poles in service. The transmission system includes approximately 14 miles of overhead transmission ROW. The distribution system is essentially an underground system with seven wood 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 2023 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.
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 2023.	In 2023, 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 workshop 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 2023

	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 2024. The City will resume inspections in 2030.	From the 2020 inspection, 180 (7.8%) poles did not pass inspection, due to rot below the ground or excessive split top.	In 2023, the City replaced 22 (1%) Class C distribution poles.	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.	The City contracts with a third-party to remove vegetation in the easement and rights-of- way in areas where growth is most problematic.
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 and inspected 1,000 (36%) poles in 2023. The City has approximately 2,800 distribution poles.	37 (12%) poles failed inspection due to age and ground rot.	The City replaced 12 poles in 2023. The poles replaced were 50 foot, Class 2.	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 100% of trimming in the beginning of 2024.
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.	1,656 distribution and 34 transmission poles were planned for inspection in 2023. FPUA completed 1,882 distribution and 17 transmission poles inspections for 2023, indicating that 14.6% of the system was inspected.	Zero transmission and 379 distribution poles failed inspection. FPUA owns 89 of the total failed poles. The poles failed for the following reasons: decayed top, exposed pocket, shell rot, split top, woodpecker holes, and other.	FPUA replaced 37 wood distribution poles and one wood transmission pole in 2023.	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 spent $330,000 for the trimming, removal and disposal of vegetation waste in fiscal year 2023, which was sufficient to meet the yearly target of addressing one-third of the system.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

	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**
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 in 2023. GRU inspected 4,231 distribution poles in 2023.	No transmission poles were rejected. 25 (1%) distribution poles failed due to shell rot, mechanical damage, exposed pocket, enclosed pocket, split top, woodpecker damage, and decayed tops.	25 distribution poles were replaced in 2023, ranging in size from 30 foot to 55 foot Class 1 to Class 6.	The VMP includes 560 miles of overhead distribution lines on a three-year 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 2023, with 72 trees identified for trimming and /or removal. 170 distribution circuit miles were trimmed in 2023.
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's budget process.	In 2023, the City planned to inspect 25% of its poles.	In 2023, 198 (15%) wood distribution poles were replaced. The poles failed visual inspection due to base rot and wood decay.	The poles that were replaced ranged from 35 foot to 65 foot, all Class 2.	The City contracts annually to trim 100% of the system's three-phase primary circuits including all sub-transmission and distribution feeder facilities. Problem trees are trimmed and removed as identified.	100% of three phase circuits were trimmed in 2023.
Havana, Town of	Total system is 1,186 poles; inspected several times annually using sound and probe method.	100% planned and completed in 2023.	Zero (0%) poles failed inspection.	No poles were replaced in 2023.	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 2023.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

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**
Homestead Public Services/ Energy	All transmission poles are 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 2023.	No transmission system inspections were completed in 2023. Distribution pole inspections will be completed during the Fiscal year of 2023/2024.	No inspections were completed in 2023.	HES received a grant to harden its poles. As part of this program, in 2023, HES replaced six wood 35 foot, Class 5 poles with wood 35 foot, Class 4 poles. In addition, HES replaced 481 wood poles, ranging from 40 to 45 feet, Class 2 to 4 with concrete poles ranging from 40 to 45 feet Class III A, G, and H.	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 2023.
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.	20 (1,353 structures) transmission circuits (which includes many poles on each circuit) and 18,705 (12.5%) distribution poles were inspected in 2023.	Based on the 2023 inspection: 41 transmission wood poles and 2,222 (11.9%) distribution wood 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 2023, 29 transmission wood poles and 1,766 distribution wood poles were replaced. There were no poles listed as emergency poles (under 1%), which are replaced immediately.	The transmission facilities are in accordance with NERC FAC-003-1. The distribution facilities are on a two-and-a-half-year trim cycle as requested by their customers to improve reliability.	JEA fully completed all 2023 VM activities and is fully compliant with NERC standard for vegetation management. JEA trimmed 1,097 circuit miles in 2023.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

	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**
Keys Energy Services, City of Key West	The Keys does not have any wood 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 2023 inspection, 4,224 concrete poles, 638 ductile iron poles, and 1,921 wood distribution poles were inspected. In addition, one concrete, one ductile iron, and 230 AT&T distribution poles were inspected in 2023. The next inspection will be performed in 2027.	One (0.15%) transmission pole failed inspection due to excessive cracking. 26 (0.6%) concrete poles and 517 (27%) wood poles failed the distribution inspection in 2023. The reasons for the failures are decayed top, hollow, mechanical damage, rotten/ shell rot, woodpecker damage and split top. 77 wood AT&T poles failed inspection.	A bid request to replace the one concrete transmission pole has been issued. The Keys replaced approximately 200 non-storm hardened poles and all distribution poles that failed the inspection in 2023. Approximately 33% of the distribution poles that have been replaced meet the extreme wind requirements.	The Keys' 241 miles three 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 2023, the Keys had three feeder outages and 15 lateral outages due to vegetation. The Keys will strive to continue to improve its VMP to further reduce outages.
Kissimmee Utility Authority	All transmission and distribution inspections are outsourced to an 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 2023, a drone inspection was performed on 220 transmission structures and 11.2 miles of transmission line. 1,545 distribution poles were inspected in 2023, which is 10% of the system.	Eleven (0.015%) distribution poles failed inspection due to woodpecker holes and shell rot. In 2023, 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 2023, the remediation of the transmission infrastructure has not been completed due to material acquisition and permitting. Eleven distribution poles are scheduled for replacement in 2024.	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 2023. Approximately 102.8 miles (35.7%) of distribution facilities were inspected and remediated in 2023.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

	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**
Lake Worth Beach Electric Utility, City of	Visual inspections are performed on all CLWBEU transmission facilities on a three-year cycle. The transmission poles are concrete and steel. CLWBEU 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 2023, CLWBEU visually inspected 500 transmission poles and distribution poles.	In 2023, 169 (33%) distribution poles were deemed unsatisfactory due to deterioration. No transmission poles failed inspection.	CLWBEU replaced 169 distribution poles in 2023. Most distribution wood poles that failed the inspection were a Class 5 pole.	CLWBEU has an on-going VMP. At least weekly, a visual inspection and patrolling of the distribution feeders and transmission overhead facilities are performed. The lateral inspections occur monthly and are based on historical outage records.	CLWBEU schedules tree trimming and mowing of vegetation every three weeks once patrolling is performed and it is determined tree trimming and mowing is needed.
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 inspected 14,084 (24.2%) distribution poles and 54 (13.5%) transmission poles in 2023.	Five (9.3%) transmission poles and 1,524 (10.8%) distribution poles failed inspection due to decay.	All poles recommended in 2023 were assessed for appropriate action. 512 distribution poles were replaced, repaired, or removed in 2023. Zero transmission poles were repaired or replaced in 2023.	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 2023 with 8.6 miles trimmed. 12 miles of 69kV transmission lines were trimmed in 2023. LE completed 400 miles of distribution lines for 2023.
Leesburg, City of	No transmission facilities. The Distribution facilities are on an eight-year cycle using visual, sound and bore, excavation method, and ground level strength test.	The City has completed the eight-year cycle that began in 2016. The next round of inspections will start in 2024. No inspections were scheduled in 2023.	No inspections were scheduled in 2023.	During 2023, 156 poles were replaced. The poles were 12 foot and 20 foot Aluminum poles, 50 foot concrete poles, and 25 to 50 foot, Class 7 to Class 4 wood poles.	Five-year trim cycle for feeder and lateral circuits. Problem trees are trimmed or removed as identified.	In 2023, 46 miles of distribution lines were inspected with 10.3 miles trimmed. An additional 3.8 miles were hot spot trimmed.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

	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**
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 2023 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 distribution poles that failed the inspection will require contracting with outside sources for replacement. Those poles are still being identified. (this needs to be reworded)	A schedule for replacement has yet to be determined.	The City is continually trimming trees in easements and rights-of-way. 100% of distribution system is trimmed each year.	The City expended approximately 20% of Electric Dept. resources on vegetation management. All vegetation management is performed in house.
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 2023.	During the 2017 inspection, all poles were inspected and corrective measures completed.	The city had 1,750 wood poles as of January 1, 2022. The City's table shows zero wood poles were replaced. In addition, the table showed that 20 concrete, fiberglass, or steel poles were replaced in 2023. The poles ranged between 30 and 45 feet.	An outside contractor working two crews 40 hours per week completes tree trimming on a 24month cycle.	The City trimmed approximately 20 miles of distribution lines maintaining a 24 month cycle.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

	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**
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.	218 (52%) transmission poles were inspected during 2023. 1,600 (14%) distribution poles were inspected in 2023.	3 (1.4% transmission poles failed inspection due to decay and 10 (4.6%) transmission poles were rejected in 2023 due to ground line and above ground decay. 58 (3.6%) distribution poles failed inspection due to decay and 29 (1.8%) distribution poles were rejected due to ground line and above ground decay.	Pole replacement and serviceable repair recommendations are currently under review and planned for completion in 2024.	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 93.2 (38%) distribution line miles in 2023. In 2023, 100% of transmission lines were trimmed.
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 was up to date and did not perform any inspection in 2023.	The City did not conduct any inspections in 2023.	The City changed out 12 distribution poles that were identified during the 2020 inspection in 2023.	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.

Appendix B – Summary of Municipal Electric Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

	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**
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.	14 (3.91%) transmission poles were inspected in 2023. 3,591 (11.26%) wood distribution poles were inspected in 2023.	One (0.03%) distribution pole was rejected due to decayed top in 2023. Zero transmission poles failed inspection in 2023.	16 (0.45%) distribution poles were braced in 2023 with no poles being replaced. Zero transmission poles were either braced or replaced in 2023.	The City is on a four-year trim cycle for distribution and a three-year trim cycle for transmission.. 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 was controlled by herbicide. Ocala uses mechanical trimmers, trim lifts and herbicide methods for its VM.
Orlando Utilities Commission, City of 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 2023, 6,124 (12%) poles were planned for inspection and 5,855 (12%) were completed.	141(2.4%) poles failed inspection in 2023. The reason for the rejected poles are hollow, shell rot, exposed pocket, enclosed pocket, wood borers, decayed top, split top, and woodpecker holes.	OUC replaced 165 wood poles in 2023. The poles replaced in 2023 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 2023, 425 distribution miles were planned and 425 miles (100%) were completed. For 2023, 99 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 2023 as all 2,869 distribution poles were inspected in 2021.	No inspections were planned or carried out in 2023.	12 (1%) distribution poles were replaced in 2023. The poles ranged from 25 foot to 45 foot, Class 3 to Class 6.	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 2023. 100% (1.2 miles) of the City's transmission lines were inspected in 2021.

Appendix B – Summary of Municipal Electric Utility Reports
Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

	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 inspects one circuit at a time by inspecting poles, vegetation, low lines, and guying.	The City inspected one of their six circuits.	In 2023, 25 poles failed inspection.	The City has no transmission poles. The City replaced 25 distribution poles in 2023, with all Class 2 poles for storm hardening.	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 2023. 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%) wood transmission poles failed inspection due to rot and animal invasion. 1,301 (2.4%) distribution wood poles were rejected during the 2020 inspections due to rot and animal invasion.	To date, eleven transmission poles and 663 distribution poles were replaced. The poles ranged from 25 foot to 75 foot, Classes 1 to 7. These poles were replaced with a taller, stronger Class size pole.	The transmission facilities are on a three-year trim cycle, with a target clearance of 20 feet on 115kV lines and 30 feet on 230kV lines. The distribution facilities are on a 36-month trim cycle, 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 2023. Approximately 1,117 miles of overhead distribution lines were managed in 2023. 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 2023

	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 2016-18. The next scheduled pole inspection will be in 2025.	The City of Wauchula has a third-party contractor inspect its substation yearly and 100% of distribution poles in 2016 to 2018. The poles have been treated and are expected to have a minimum of 10 years of service left.	Approximately 2% (out of 3,200 poles) have failed due to poles rotting or physical damage.	54 distribution poles were replaced in 2023, ranging from 35 foot to 55 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 2023. However, the City did install 8 new poles ranging from 35 to 45 feet.	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 with the property owner to correct.	One-third of distribution facilities were trimmed in 2023.
Winter Park, City of	The City does not own transmission poles or lines. The City intends to replace all overhead distribution facilities with underground facilities. The remaining 30% of the facilities are targeted for completion by 2030.	The City does not own transmission poles. The remaining overhead distribution system was 100% inspected in 2023.	Three poles did not pass inspection in 2023.	The City replaced three (3%) 40 foot, Class 3 poles in 2023.	Vegetation management is performed on a three-year trim cycle, which is augmented as needed between cycles.	The City trimmed three of the 17 feeders and removed several invasive trees in 2023.

Appendix C – Summary of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

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 2023. 17,250 (14.3%) distribution poles were inspected in 2023.	Of the 17,250 distribution poles inspected in 2023, 112 (0.65%) were rejected. These poles are scheduled to be replaced.	1,411 distribution poles were replaced in 2023. The poles varied from 30 foot to 55 foot, Class 2 to Class 6.	Trees are trimmed or removed within 15 feet of main lines, taps, and guys on a five-year plan.	In 2023, 578 miles of the 4,016 miles of primary overhead line on the system was trimmed.
Choctawhatchee Electric Cooperative, Inc.	CHELCO inspects new construction of power lines on a monthly basis and has an eight-year cycle to cover all poles.	During 2023, 6,284 poles or 10.1% of 62,392 total poles were inspected.	230 poles or 3.7% of the poles failed inspection ranging from spit top to wood rot.	During 2023, CHELCO replaced 413 poles, which included failed poles from the 2023 inspection and remaining poles from the 2022 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 2023, 453 miles were cut on primary lines and CHELCO worked to remove problem tress under the primary lines, which reduces hot-spotting requirements between cycles. They also established an herbicidal spraying program.

Appendix C – Summary of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

	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 2023, consisting of 2,557 poles and 38 substations. Additionally, in 2023, Clay performed the system feeder and ground line pole inspection. The total number of distribution poles inspected was 52,648.	The 2022 inspection found 3 (0.12%) of 2,531 transmission poles inspected needed replacement. 13,157 (25%) distribution poles were rejected due to various reasons including ground rot, internal rot, top decay, holes high, and split top.	3 transmission poles that failed inspection ranged from 60 to 65 foot, Class 1 poles. 4,471 distribution poles that were replaced in 2023 ranged from 18 foot to 65 foot, Class 1 to 7.	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 2023, Clay mowed 61.97 miles, sprayed 53.19 miles, and recut 62.88 miles of its transmission rights-of-way. In 2023, Clay sprayed 2,470.67 miles, and recut 2,578.1 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 2023

	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.	30,000 (91.6%) distribution poles were planned and 23,400 (71.5%) inspections were completed in 2023. Escambia River does not own any transmission poles.	Approximately 2,300 (9.83%) poles failed inspection in 2023. The common cause was pole rot at the top and bottom of the poles and clearance violations for the fiber optic cable being added.	In 2023, Escambia River replaced 2,300 poles. 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 2023, approximately 331 miles (20%) 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 2023 by helicopter patrol and ground-based infrared inspections. In 2023, 3,731 (25%) of the distribution facilities were inspected.	No transmission structures failed inspections in 2023. In 2023, 103 (2.7%) distribution poles required replacement due to split pole tops, shell rot, cracking, and severe spalling (concrete).	No transmission structures were replaced in 2023. 82 distribution structures were replaced in 2023 and the remaining structures are scheduled for the first half of 2024. The poles ranged from 40 to 45 feet, Classes 3 and 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 200 circuit miles of distribution lines were trimmed in 2023. 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 2023

	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 an eight-year sound and bore inspection cycle with excavation inspection cycle for all wood poles, in addition to System Improvement Plan inspections.	In 2023, 100% of the total of 83 miles of transmission lines were planned and completed by visual inspections. 2,100 miles of distribution lines and 53 miles of underground distribution lines were planned and inspected in 2023. GEC inspected 4,600 poles in 2023.	895 (19%) distribution poles failed during the 2023 inspection due to decay, rot and top splits.	716 (80%) distribution poles were rejected in the 2023 inspection were replaced. The poles varied in height and Classes. No transmission poles were replaced in 2023.	All trimming is on a four-year cycle. The rights-of-way are trimmed for 10 foot clearance on both sides, and herbicide treatment is used where needed.	GEC completed 90% of its distribution trimming goals in 2023. 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 pad-mount equipment on a four-year cycle.	In 2023, GCEC inspected 10,126 poles and 430 pad-mounted inspections.	Of the 10,126 poles inventoried in 2023, 91 (0.9%) poles were rejected. The poles were rejected due to mechanical damage.	GCEC has a continually active work order program for maintenance and replacement of its wood poles and structures. Work orders are created to correct any identified system deficiency, including pole replacements.	GCEC owns approximately 2,051 miles of overhead and 430 miles of underground distribution lines. GCEC strives to clear the entire right-of-way on a five-year cycle. GCEC clears between 20 and 30 feet width, from ground to sky.	GCEC trimmed approximately 327 miles of ROW in 2023. GCEC also works closely with property owners for dangerous tree removal.

Appendix C – Summary of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

	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 every 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 10-year inspection cycle by climbing or bucket truck for splitting, cracking, decay, twisting, and bird damage.	In 2023, 1,206 (48%) transmission poles were inspected, which was 100% of the poles that were scheduled. 107,800 (64%) distribution poles were inspected, which was 100% of the inspections scheduled. Included in the inspections were 103,801 poles that were Hurricane Ian follow-up inspections.	Zero (0%) transmission poles failed inspection. 1,805 (1.7%) distribution poles failed inspection due to rot/decay/split top/out of plumb, damage due to hurricane, and woodpecker damage.	14 transmission poles were replaced due to rot. 226 distribution poles were repaired through re-plumbing and patching. 900 poles were replaced in 2023. 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 or less based on reliability and/or budget. The 138kV transmission systems are on an annual cycle.	LCEC completed 28.5 miles (100% planned) of Transmission mowing and trimming, 410 miles (100% planned) three-phase trimming, and 644 (100 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 and bore with excavations, and chemical treatment. The pole inspections are on an eight-year cycle.	In 2023, OREMC performed inspections on 8,312 (13%) poles. OREMC has 62,000 wood poles as of March 1, 2023. In addition, OREMC completed 3,645 meter base and 182 underground inspections.	In 2023, 83 (1%) poles were rejected. The causes of the rejection were ground rot and above ground damage.	The 83 poles failing inspection in 2023 are in the process of being replaced. During the course of other projects, 1,024 new poles were added and 557 poles were retired in 2023.	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 285 miles in 2023. Also in 2023, contractors sprayed 400 miles of rights-of-way. In 2023, 1,090 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 2023

	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.	383 transmission (172 concrete, 23 steel, 188 wood) poles are inspected every two years. 5,005 (8%) of 62,801 distribution poles were inspected.	Peace River replaced 10 transmission poles in 2023. 259 (5.1%) distribution poles were rejected in 2023.	Peace River replaced 259 poles in 2023. The distribution poles receiving remediation in 2023 varied from 30 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 2023, the Company completed rights-of-way maintenance on 3,388 (100%) of its 3,388 miles of overhead distribution.
Sumter Electric Cooperative, Inc., dba SECO Energy	The transmission facilities are visually inspected on an annual basis using infrared and drones. The distribution facilities are on an eight-year cycle using sound, bore, and excavation tests.	15 (1.3%) transmission poles were planned and inspected in 2023. 15,760 (11.5%) distribution poles were planned and 15,836 (11.6%) were inspected in 2023.	Zero transmission poles failed inspection. 79 (0.5%) distribution poles failed inspection. The causes are due to ground rot and top deterioration	Zero wood transmission poles were replaced with spun-concrete poles. 79 distribution poles were replaced. The distribution poles ranged from 27 to 50 foot and Class 3 to Class 7.	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 2023, SECO trimmed 651 miles for its cycle and an extra 6 miles of its transmission and distribution system. SECO removed 27,970 trees in 2023.

Appendix C – Summary of Rural Electric Cooperative Utility Reports Pursuant to Rule 25-6.0343, F.A.C. – Calendar Year 2023

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 2023. 15,445 (17%) distribution structures were inspected in 2023.	667 (4%) inspections of distribution poles failed due to ground line decay, excessive splitting, and woodpecker damage. Zero inspections of transmission poles failed.	667 (4%) distribution poles of total inspected were remediated by ground line treatment and 948 (4%) distribution poles were replaced. Zero transmission structures were remediated.	SVEC's facilities are on a three – to – four - year inspection cycle which includes cutting, spraying and visual on as-needed basis.	In 2023, 1,090 (28%) miles of rights-of-way were cut and in 2024, there are plans to cut an additional 1,046 (28%) miles.
Talquin Electric Cooperative, Inc.	Talquin annually inspects its transmission lines by checking the pole, hardware, and conductors. An outside pole-treating contractor inspects distribution and transmission poles each year. The poles have been inspected on an eight-year rotation cycle since 2007. Talquin performs infrared inspections annually at its substations.	9,396 distribution poles were inspected in 2023. Talquin inspected 101 transmission poles in 2023.	113 (1.2%) of the distribution poles inspected were rejected due to wood decay, split tops, or woodpecker 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.	405 (15%) miles of distribution and 4.37 (8%) miles of transmission rights-of-way were treated in 2023. In addition, Talquin received 1,194 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 2023

	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 2023, the transmission poles were visually inspected. Tri-County inspected 7,133 (12.6%) distribution poles in 2023.	105 (1.47%) distribution poles were rejected. Tri-County repaired broken ground wires and changed out or replaced missing guy guards during the inspections.	The 105-rejected distribution poles found during the 2023 inspection, which required replacement, are in the process of being changed out.	Tri-County attempts to acquire 30 foot rights-of-way easement for new construction. The entire width of the obtained right-of-way 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 2023, approximately 443 distribution miles were trimmed. Tri-County 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.	West Florida suspended its pole inspection in 2019 to concentrate on repairing the damage caused by Hurricane Michael. WFEC restarted the program in 2023 by inspecting 10,367 poles.	In 2023, 342 (3.3%) poles were rejected.	Since the inspections were complete late 2023, the pole replacements have not been completed. West Florida anticipates the poles will be replaced in 2024.	West Florida's VM includes ground to sky side trimming along with mechanical mowing and tree removal.	During 2023, WFEC mowed and side trimmed 784 miles of its distribution system. Also, WFEC chemically sprayed approximately 685 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 2023

	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 3,735 miles for 2023) by line patrol, drone/infrared, physical and visual inspections.	1,042 structures (74 miles) or 100% of transmission facilities were inspected by walking, riding or aerial patrol. Out of the 14,000 (6.51%) distribution structures planned, WREC inspected 9,503 (4.4%) structures in 2023.	In 2023, zero transmission poles/structures failed inspection. In 2023, 144 (1.6%) distribution poles/structures failed inspection due to ground rot and top deterioration.	In 2023, 3,777 distribution and 38 transmission wood, composite, cement, concrete, steel, aluminum, and fiberglass poles, ranging in size from 35 to 120 foot were added; 2,888 distribution poles were retired. WREC added 1,392 light poles and retired 365.	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. 24 miles of transmission rights-of-way issues were addressed in 2023. In addition, during 2023, WREC addressed 3,024 rights-of-way service orders ranging from trimming a single account to trimming an entire subdivision or area.