

# **ComEd Summer Preparedness Hearing Documents**

**May 29, 2024**

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\* Page numbers for ward reports will vary. Data is from 2023 Annual Report



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## David R. Perez



### **Position**

Executive Vice President & Chief Operating Officer

### **Profile**

As executive vice president and chief operating officer, Perez is responsible for leading ComEd's overall performance in the areas of service reliability, operations, engineering, construction, safety, financial management and smart grid development, including the

implementation of one of the nation's first utility-operated microgrid clusters in Chicago.

A unit of Chicago-based Exelon Corp., ComEd delivers electricity to more than 4 million residential and business customers across northern Illinois, or 70 percent of the state's population.

### **Professional History**

Prior to his current role, Perez oversaw distribution operations for ComEd's more than 11,000-square-mile service area. These operations include new business, construction and maintenance, field operations and regional engineering. He previously served as vice president of transmission and substation at ComEd, where he was responsible for the construction, operation and maintenance of more than 5,800 miles of transmission lines and nearly 400 substations. He also previously served as vice president of distribution operations at ComEd for the Chicago and Maywood regions.

Before joining the operations team, Perez served as vice president of work management and new business at ComEd. In that role, he was responsible for more than 500 employees who managed construction and maintenance work plans and provided engineering and construction services for customers.

With more than 20 years of experience in the energy industry, Perez also has held managerial positions in construction, maintenance, operations, work management and technical investigations at ComEd.

### **Civic Involvement**

In 2007, Perez became a fellow of Leadership Greater Chicago, which exposes area executives to local challenges and the skills needed to make a difference in the community. He is a board member of the Chicago Metro History Center, the University of Illinois at Chicago College of Engineering and the Chicago Commons Governing Board. He also serves on the board of Association of Edison Illuminating Companies and the Chicagoland Chamber of Commerce.

### **Education**

Perez holds a bachelor's degree in electrical engineering from the University of Illinois at Chicago.

## Prepared Remarks for Dave Perez - 2024 City of Chicago Summer Preparedness Hearing

### Introduction

- Good morning, and thank you, Chair Hadden, Vice Chair Knudsen, and members of the Environmental Protection and Energy Committee for the opportunity to discuss ComEd's Summer Preparedness plans.
- I am Dave Perez, ComEd's new Chief Operating Officer.
- I am joined today by members of our senior leadership team and subject matter experts.
  - Melissa Washington, SVP of Customer Operations and Strategy at ComEd;
  - Mark Baranek, SVP of Technical Services;
  - Valerie Colletti, SVP of Distribution Operations;
  - Louie Binswanger, SVP of Governmental, Regulatory and External Affairs;
  - Scott Vogt, VP of Energy Policy and Acquisition; and
  - Jim Ortega, Director of Grid Analytics
- I've had the pleasure of meeting with several of you and look forward to working more closely with all members of the City Council.

- Before I jump straight into discussing our grid's readiness, I'd like to tell you a little bit about myself.
  - I stepped into the role of COO in January after serving at ComEd in various roles for the past 28 years.
  - I am an electrical engineer by trade, I graduated from UIC, and grew up on the north side of Chicago after immigrating to the US from Mexico when I was six years old.
  - Having lived in Chicago for most of my life, I am familiar with each of its 77 neighborhoods,
  - And, from my work at ComEd, I am intimately familiar with how our infrastructure serves these communities.

## Reliability Update

- Today, we're proud to provide an update on ComEd's summer preparedness efforts, including an overview of our reliability performance – how our system holds up, providing service to our customers rain or shine.
- In 2023, Chicago customers realized a remarkable 99.996 percent reliability rate.
- And 1.2 million of ComEd's 1.3 million Chicago customers experienced either zero or only one power interruption.
- Both of these reliability metrics are best on record.
- Through our investments in the Chicago grid, we have achieved industry leading reliability with the City's overall reliability improving by 85% since 2012.
- In fact, the City's reliability performance is ten times more reliable than the national average for utilities serving over one million customers.
- These performance gains are why ComEd was named the #1 most reliable utility in America last year.
- We are focused on ensuring all our communities have reliable power, including vulnerable communities or what Illinois refers to as Equity Investment Eligible Communities or EIECs.
- It's worth noting that the majority of Chicago's EIECs have better reliability than the City average.

- By design, our grid investments prioritize reliability improvements for areas most vulnerable to storms and the effects of climate change.
- 2024 is off to a strong start, and we are well-positioned to deliver strong reliability this summer across every community in the City of Chicago.
- You know, it wasn't always this way. Nearly 30 years ago, when I began at the company, I remember how customers in Chicago practically planned to keep their flashlight handy when they knew a storm was coming. But, that's just not the case today.
- Today, we are engaged with all of you, our customers and communities, to ensure our system is performing reliably and equitably.
- While we are proud of the progress we are making to improve the service to our customers – we aren't stopping there.
- We take seriously our responsibility to our customers to maintain the system. We aren't going to be satisfied with the status quo.
- We continue to meet quarterly with the City to review our reliability performance.

## Plan to Meet Summer 2024 Demand

- ComEd conducts extensive summer preparedness planning and exercises to ensure we are ready to accommodate summer's peak load season, and the heat and weather factors placed upon the grid.
- One key area of focus throughout all of this is on ensuring the grid is prepared for severe weather – we are currently in the midst of storm season.
- Conditions in the city and across the country are getting hotter, and wetter due to climate change:
  - Many of you know, summers that are typically marked with thunderstorms and high winds have grown increasingly more severe and frequent, and
  - Chicago continues to see the number of 90 degree or more days increase.
- Our preparation efforts include operational readiness drills and exercises, flood mitigation plans, ensuring critical work is complete prior to summer, and ensuring proper stocking levels of key equipment.
- Last summer (June 1st – Aug 31<sup>st</sup>) our investments in automated grid technology helped detect and prevent 117,000 customer interruptions in Chicago.
- Unpredictable weather is a constant reminder of our need to continue making investments to **modernize** our grid.



## Emergency Planning

- Also supporting our summer readiness is the strong collaboration we have with the City of Chicago operations team.
- Since 2018, ComEd has had a full-time member of our team embedded in the OEMC to support real-time alignment, planning and coordination with city agencies during and in advance of emergency events.
- Our OEMC partnership has been critical for restoring customer outages and repairs during storms, coordinating emergency preparedness plans for citywide, large-scale events and for planning to support city teams in working in and around our power infrastructure safely.
- This high-level of coordination will continue to be essential as the City and ComEd work together in 2024 to support the needs of residents, and as the City welcomes more than fifty-thousand visitors and a national spotlight during the Democratic National Convention.

## Community/Financial Assistance

- Customers are at the center of everything we do.
- We recognize the hardship that many of our communities face, and we are actively working to deliver solutions that will help keep the lights on and keep bills affordable for customers.
- Last year, we connected approximately 198,000 eligible customers to roughly \$93 million in financial assistance in 2023 through federal, state and ComEd programs, including \$45 million to more than 97,000 Chicago residents.
- And, we continue to find new ways to support customers in need.
- Last year, ComEd kicked off a first-of-its-kind community resources fair series – with two events held right here in the City – to meet customers where they are by bringing a suite of support services to their neighborhood.
- Collectively, these fairs helped connect over 3,000 customers to support programs, and 1,000 of them to billing assistance and energy management programs specifically.
- This work continues this year, with the next Chicago resource fair scheduled for July 27th in the Belmont-Cragin neighborhood.

## Clean Energy/Electrification

- We are actively responding to evolving demands as communities and our customers increasingly shift to cleaner and more efficient technologies to address climate change.
- ComEd is ready to meet the moment with an abundance of clean and reliable energy found in Illinois and available on our grid.
- This includes launching programs to expand solar and renewables, and to roll out new customer resources and incentives.
- In the past year, we've launched over \$90 million in EV rebates to help residential, business and public sector customers expand EV charging and upgrade their fleets.
- These programs put a key focus on equity – reserving more than half of the total funds for low-income customers and those who reside or do business in EIECs – and with higher rebate amounts for these customers as well. The program is still accepting applications.
- We're focused on ensuring that a clean energy future creates opportunity for all. For me, the ultimate measure of our success will be to ensure customers from across all of our communities can access the benefits of clean energy – all while balancing affordability.

## Closing

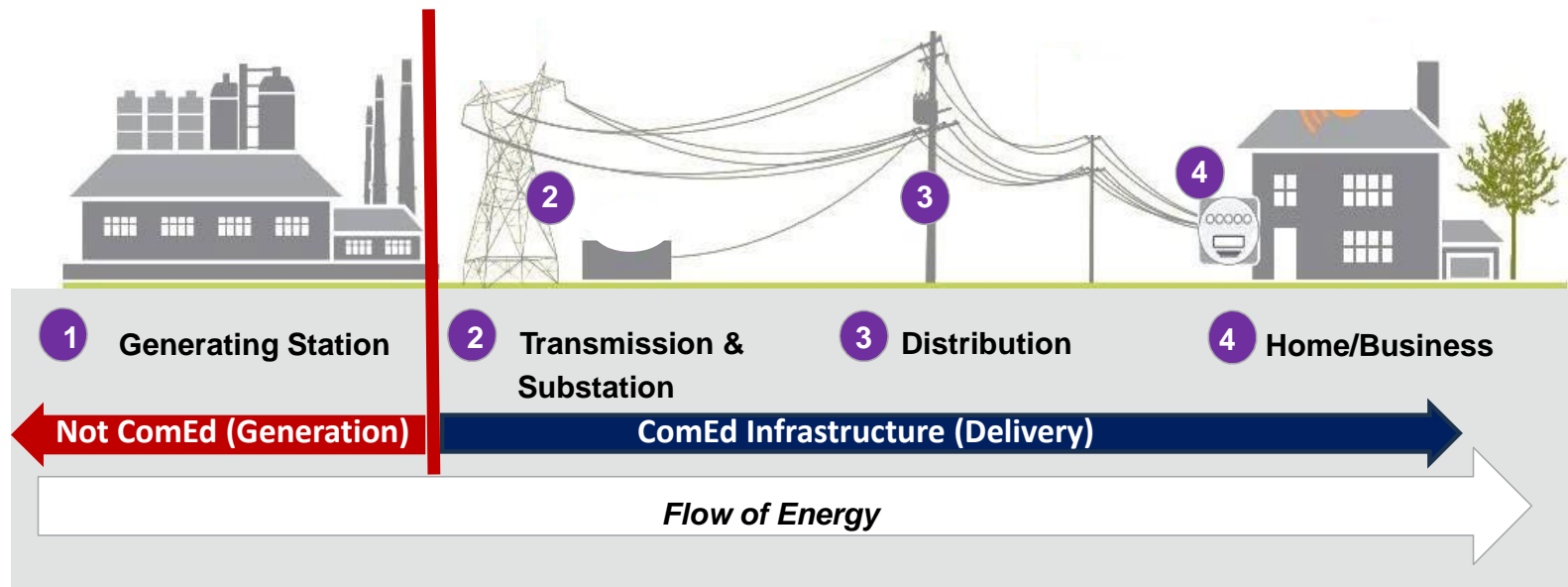
- This is just the beginning, with customer demands expected to continue to evolve, and with ComEd and the City of Chicago sharing a vision for making sure the clean energy transition is accessible for all customers and communities.
- We stand ready – and the grid is ready – to meet the moment, and we look forward to building on our 100-year partnership to meet our goals for a cleaner future.
- With that, we are happy to take your questions.

# The Electric Power System

The **Electric Power System** is a network of electrical components that **supply, transfer** and **use** electric power.

The electric power system can be broadly divided into three distinct functions

- **Generation** - energy supply by a producer (Nuclear, Wind, Solar, Coal, Natural Gas etc.)
- **Transmission & Substation** - energy transfer from supplier to load center
- **Distribution** - energy transfer from load center to the customer



## Glossary of Terms for Committee Environmental Protection & Energy Hearing

Term	Definition
<b>Beneficial Electrification (BE)</b>	A term for replacing direct fossil fuel use (e.g., propane, heating oil, gasoline) with electricity in a way that reduces overall emissions and energy costs.
<b>Carbon Footprint</b>	The total amount of greenhouse gases (including carbon dioxide and methane) and other carbon compounds emitted due to the consumption of fossil fuels.
<b>Circuit Capacity Improvement</b>	Circuit capacity improvements can increase reliability and enhance restoration flexibility in the event of an equipment failure.
<b>Clean Energy</b>	Creating electricity by means of processes that don't emit greenhouse gases.
<b>Climate and Equitable Jobs Act (CEJA)</b>	Legislation passed by the General Assembly and signed into law by Governor Pritzker on September 15, 2021. CEJA includes provisions to phase out carbon emissions from the energy and transportation sectors.
<b>ComEd System</b>	ComEd's Transmission, Distribution, and related facilities that serves over 4.0 million customers in a service territory of more than 11,400 square miles that encompasses more than 400 municipalities in northern Illinois, including the City of Chicago.
<b>Community Resiliency Hub</b>	Facilities that are equipped to operate during outages and provide services such as refrigeration, cell phone charging and communications.

## Glossary of Terms for Committee Environmental Protection & Energy Hearing

<p><b>Customer Average Interruption Duration Index (CAIDI)</b></p>	<p>CAIDI or Customer Average Interruption Duration Index is the average time required to restore service. It is calculated as total minutes of customer interruption divided by the total number of interruptions. The lower the number of minutes, the faster the utility restored service to customers.</p>
<p><b>Customer Interruption</b></p>	<p>The loss of electric service to one customer because of an interruption. For example, a single outage that causes 10 customers to lose service results in 10 customer interruptions.</p>
<p><b>Customer Target Program</b></p>	<p>The program focuses on customers who have experienced more than 6 interruptions per year for three consecutive years or more than 18 hours of total interruption duration per year for three consecutive years.</p>
<p><b>Dark Fiber</b></p>	<p>Dark fiber is unused fiber-optic cable that has been laid but is not connected to transmission equipment or data traffic.</p>
<p><b>Decarbonization</b></p>	<p>Reducing the carbon footprint by means of the transition to clean and sustainable energy sources, reduction of greenhouse gas emissions, and increased use of renewable energy.</p>
<p><b>Derecho</b></p>	<p>An intense and fast-moving line of thunderstorms that move across a great distance and are characterized by damaging winds.</p>
<p><b>Distribution Automation (DA)</b></p>	<p>Refers to equipment, software, and process that can automatically re-route electricity to avoid or minimize a problem, often with no noticeable loss of service.</p>

## Glossary of Terms for Committee Environmental Protection & Energy Hearing

<p><b>Distribution Circuit or Circuit</b></p>	<p>A circuit owned and/or operated by a jurisdictional entity and designed to operate at a nominal voltage of 15,000 volts or less and to supply one or more distribution transformers.</p>
<p><b>Distribution Tree Trimming</b></p>	<p>Tree pruning and/or removal to provide line clearance for ComEd's distribution facilities.</p>
<p><b>Emergency Operations Center</b></p>	<p>In response to large-scale events such as storms, ComEd activates the Emergency Operations Center to provide centralized coordination over restoration efforts to restore customers as quickly as possible.</p>
<p><b>Energy Efficiency Programs (EE)</b></p>	<p>Programs to help customers reduce their energy bills and consumption, and dependence on fossil fuels.</p>
<p><b>Equity Investment Eligible Communities (EIEC)</b></p>	<p>Communities throughout Illinois would most benefit from equitable investments by the State designed to combat discrimination.</p>
<p><b>ERAP (Emergency Rental Assistance Program)</b></p>	<p>Federal funds which can be used for utility arrearage relief by landlords and renters.</p>
<p><b>Fossil Fuels</b></p>	<p>Compound mixtures made of fossilized plant and animal remnants, including coal, oil and natural gas that are drilled or mined before being burned to produce electricity, or refined for use as fuel.</p>



## Glossary of Terms for Committee Environmental Protection & Energy Hearing

<p><b>GAR (Give-A-Ray)</b></p>	<p>Provides income eligible customers with an active ComEd account the advantage of participating in a community solar project without paying the usual subscription fees.</p>
<p><b>ICC (Illinois Commerce Commission)</b></p>	<p>A quasi-judicial body made up of five Commissioners responsible for regulating several industries, as directed by the Illinois General Assembly.</p>
<p><b>ICC Administrative Code Part 280</b></p>	<p>The purpose of this Part is to ensure that essential utility services are provided to and maintained for customers under reasonable terms and conditions, and to establish fair and equitable procedures governing eligibility for service, deposits, billing, payments, refunds and disconnection for utilities.</p>
<p><b>Inflation Reduction Act</b></p>	<p>U.S. federal law that seeks to curb inflation by reducing the deficit, lowering prescription drug prices, and investing in clean energy.</p>
<p><b>Infrastructure Investment Jobs Act (IIJA)</b></p>	<p>A once-in-a-generation \$1.2 trillion bipartisan infrastructure funding opportunity focused on building resilient infrastructure, accelerating an equitable, clean energy transition, and creating good-paying jobs in communities.</p>
<p><b>LIHEAP (Low-Income Home Energy Assistance Program)</b></p>	<p>Provides federally funded assistance to eligible customers based on household income and size to reduce the costs associated with home energy bills.</p>
<p><b>Middle Mile</b></p>	<p>Segment of internet connectivity that connects the global internet network to the local network. This will help to increase broadband connectivity in communities on the south and west sides of Chicago that lack equitable access to affordable broadband.</p>

## Glossary of Terms for Committee Environmental Protection & Energy Hearing

<b>Multi-Year Plan</b>	ComEd's Multi-Year Plan, filed with the Illinois Commerce Commission earlier this year, includes a Grid Plan, which outlines proposed investments across 2023-2027, and a Rate Plan, which details how those investments will be recovered through rates across the four-year plan period.
<b>Operations Control Center (OCC)</b>	The ComEd department is responsible for dispatching operators and first responders to restore customers for the entire ComEd service territory.
<b>PIPP (Percentage of Income Payment Plan)</b>	The program is a benefit choice within the Illinois Low Income Home Energy Assistance Program (LIHEAP) that is available to customers.
<b>Power fluctuations</b>	A temporary abnormality in the electric service delivery, typically very short in duration.
<b>Power Grid</b>	An electrical grid is an infrastructure of wires, transformers and equipment used for electricity delivery from producers to consumers.
<b>Power Outage</b>	An interruption of electric service.
<b>Reliability</b>	Power that's there when it's needed. Can you count on your power being there when you need it?

## Glossary of Terms for Committee Environmental Protection & Energy Hearing

<b>Reportable Storms</b>	When any single event (e.g., storm, tornado, equipment malfunction, etc.) causes interruptions for 10,000 or more of ComEd's customers for three hours or more.
<b>Resilience</b>	The ability of the electric grid to avoid and/or minimize the consequences of extreme weather or malicious physical or cyber-attacks.
<b>Restoration</b>	Steps taken to return customers to electrical service after experiencing an interruption.
<b>SARP (Supplemental Arrearage Reduction Program)</b>	An assistance program that eases the financial stress of paying for power and encourages energy efficiency as the result of timely bill payments. ComEd customers who are at 150 percent of the Federal Poverty Level and have back payments owed to ComEd will be able to enroll in SARP.
<b>Smart Grid</b>	An electricity network that uses digital and other advanced technologies to monitor and manage the transport of electricity to meet the varying electricity demands of end users.
<b>Spacer Cable</b>	Spacer Cable is covered overhead wire that is specifically geared towards areas with intermittent vegetation contact providing resistance to interruptions caused by contact with trees and wildlife.
<b>Storm Improvements</b>	Storm Improvements are improvements designed to reduce the susceptibility of certain circuits to storm-related damage. Solutions may include overhead to underground conversion, spacer cable installation, enhanced vegetation trimming, and other engineering solutions.

## Glossary of Terms for Committee Environmental Protection & Energy Hearing

<p><b>Substation</b></p>	<p>An assembly of equipment in an electric power system through which electrical energy is passed for transmission, distribution, interconnection, transformation, conversion, or switching.</p>
<p><b>Substation Capacity Improvement</b></p>	<p>Work to increase the capacity of substations by adding transformers at an existing substation, upgrading existing transformers or installing new substations.</p>
<p><b>System Average Interruption Duration Index (SAIDI)</b></p>	<p>SAIDI (System Average Interruption Duration Index) represents the total number of minutes of interruption the average customer experiences. SAIDI is calculated by dividing the sum of all customer interruption minutes within the year by the number of customers served during the year. SAIDI minutes represent how long the average customer experiences an interruption and lower SAIDI minutes equate to better electric reliability. For example, a SAIDI of 100 means that the average customer on the utility’s distribution system experiences a total of 100 minutes of interruption.</p>
<p><b>System Average Interruption Frequency Index (SAIFI)</b></p>	<p>SAIFI (System Average Interruption Frequency Index) represents the average number of times a customer experiences an interruption during the year. SAIFI is calculated by dividing the total number of customer interruptions by the total number of customers in the system. Lower SAIFI numbers represent less interruptions and better electric reliability.</p>
<p><b>Transformer</b></p>	<p>Equipment typically used to transform electricity from higher voltages to lower voltages or, in certain cases, from lower to higher voltages.</p>
<p><b>Tree Pruning</b></p>	<p>Tree Pruning is removing branches from a tree using approved practices.</p>

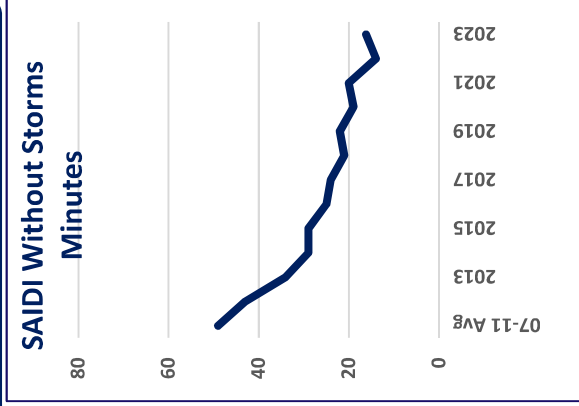
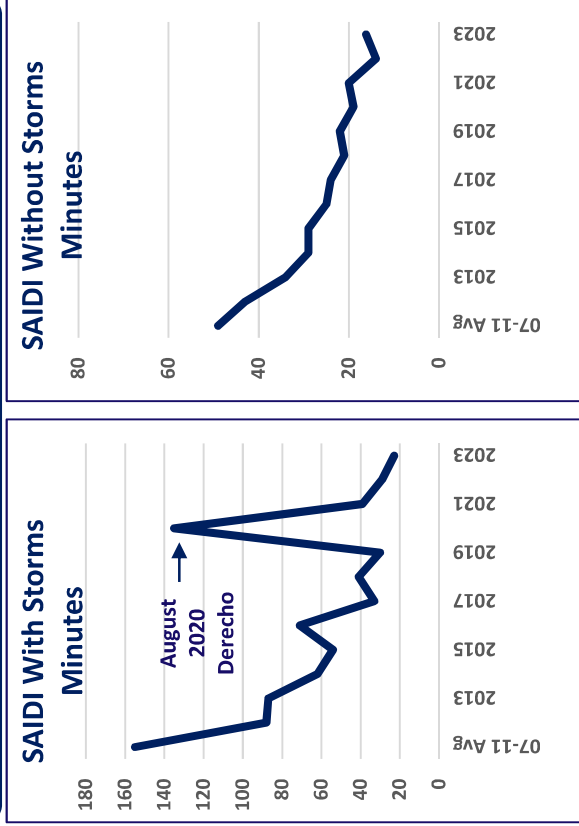
## Glossary of Terms for Committee Environmental Protection & Energy Hearing

<p><b>Underground Residential Distribution (URD) Cable</b></p>	<p>Underground cable that is typically used to serve residential subdivisions.</p>
<p><b>Utility Disconnection Avoidance Program (UDAP)</b></p>	<p>Emergency state and federal program administered following the pandemic to assist residents at risk for imminent utilities shutoff.</p>
<p><b>Vegetation Management</b></p>	<p>Refers to processes and programs that are designed to control vegetation to maintain or enhance service reliability. The program clears limbs, trees, vines, and other plants away from power lines thereby minimizing the potential for damage to facilities or equipment.</p>

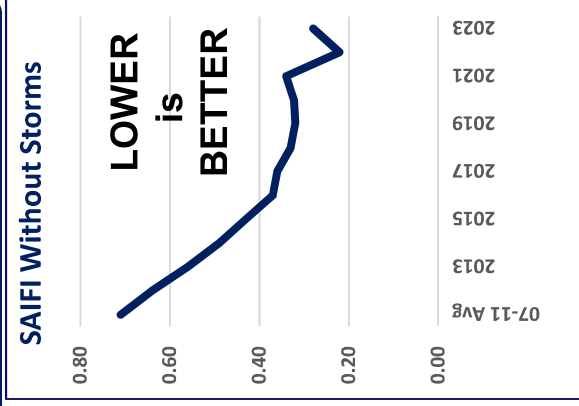
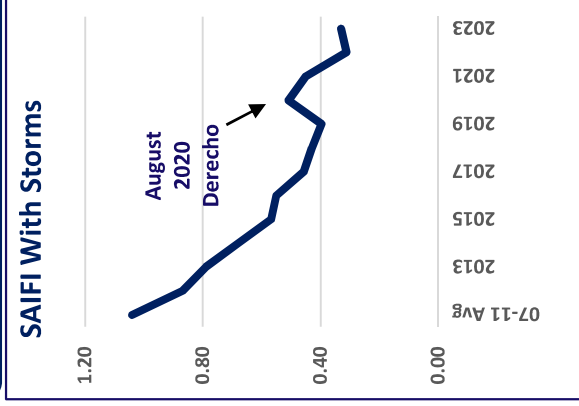


# In 2023, Chicago Customers Experienced a Best on Record 99.996% Reliability Rate

**System Average Interruption Duration Index**  
How long, on average, customer are without power



**System Average Interruption Frequency Index**  
The frequency customers have an interruption in a year



**Improvements Since 2012**

**85%**

**67%**

**69%**

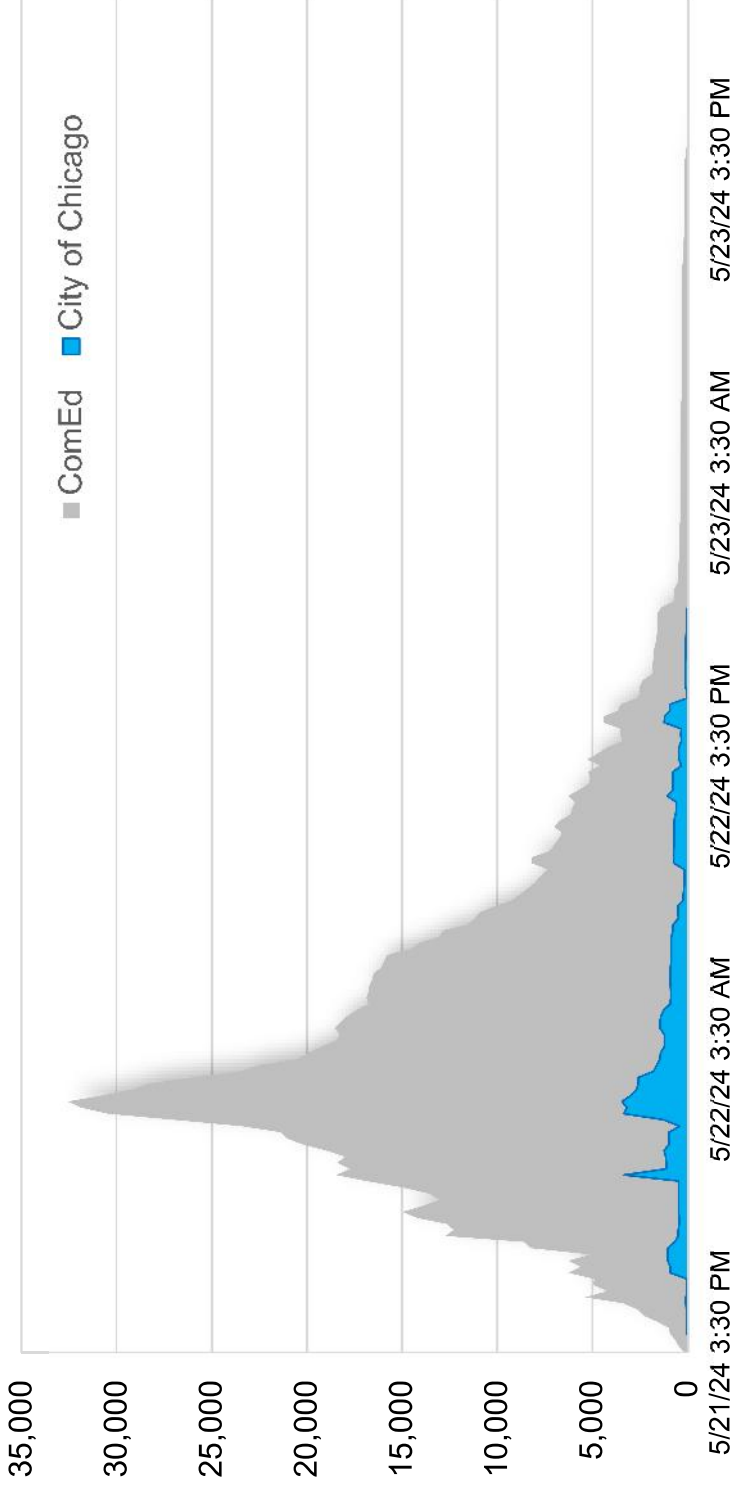
**61%**

**94% of customers experienced either 0 or 1 interruption in 2023**  
**76% of customers had 0 outages (BEST ON RECORD)**

# May 21, 2024 Storm Restoration

Category	Total Customer Outages	Percentage Restored	
		within 12 hours	within 16 hours
System	89,000	94%	96%
City of Chicago	29,000	99%	100%

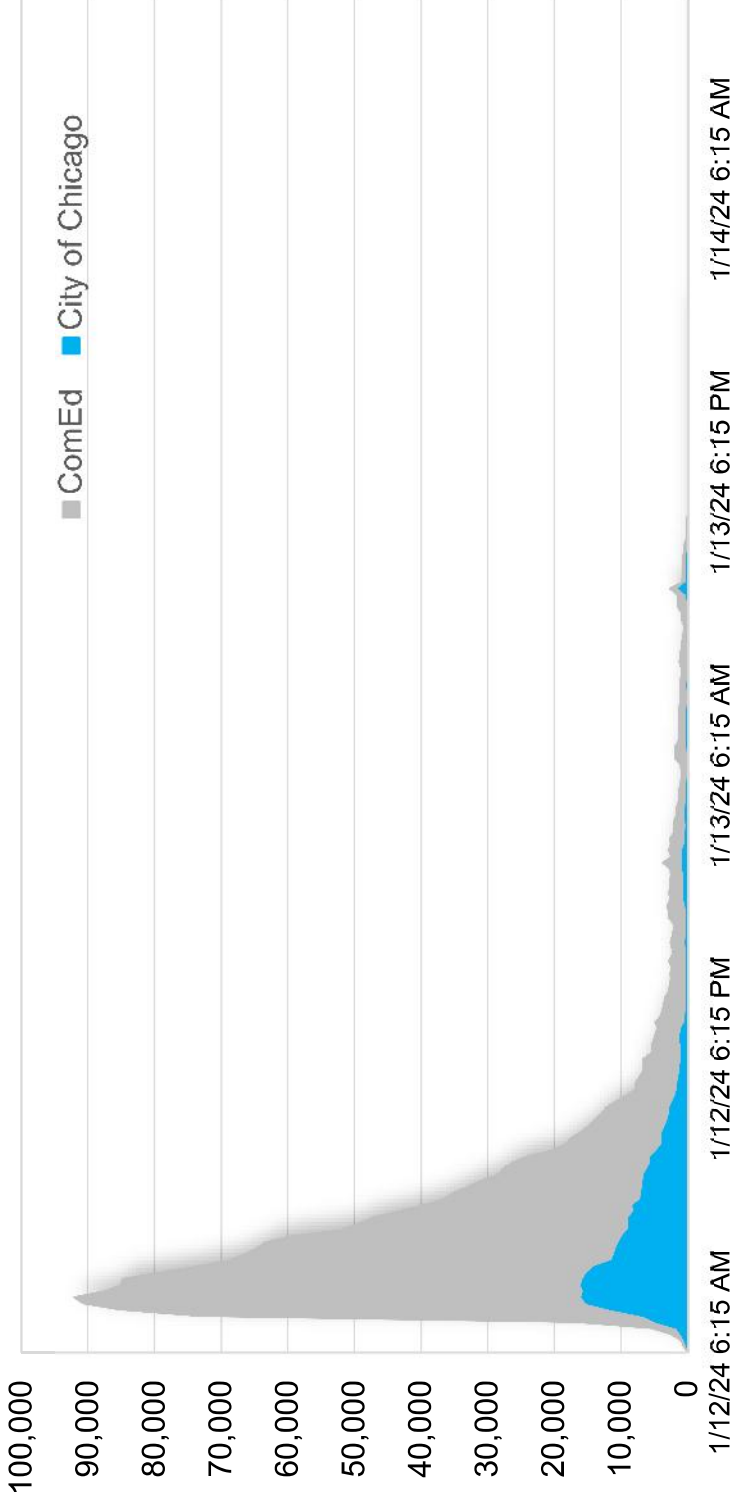
## Customers Without Power Timeline



# January 12, 2024 Storm Restoration

Category	Total Customer Outages	Percentage Restored	
		within 12 hours	within 24 hours
System	167,000	98%	99%
City of Chicago	29,000	99%	100%

## Customers Without Power Timeline

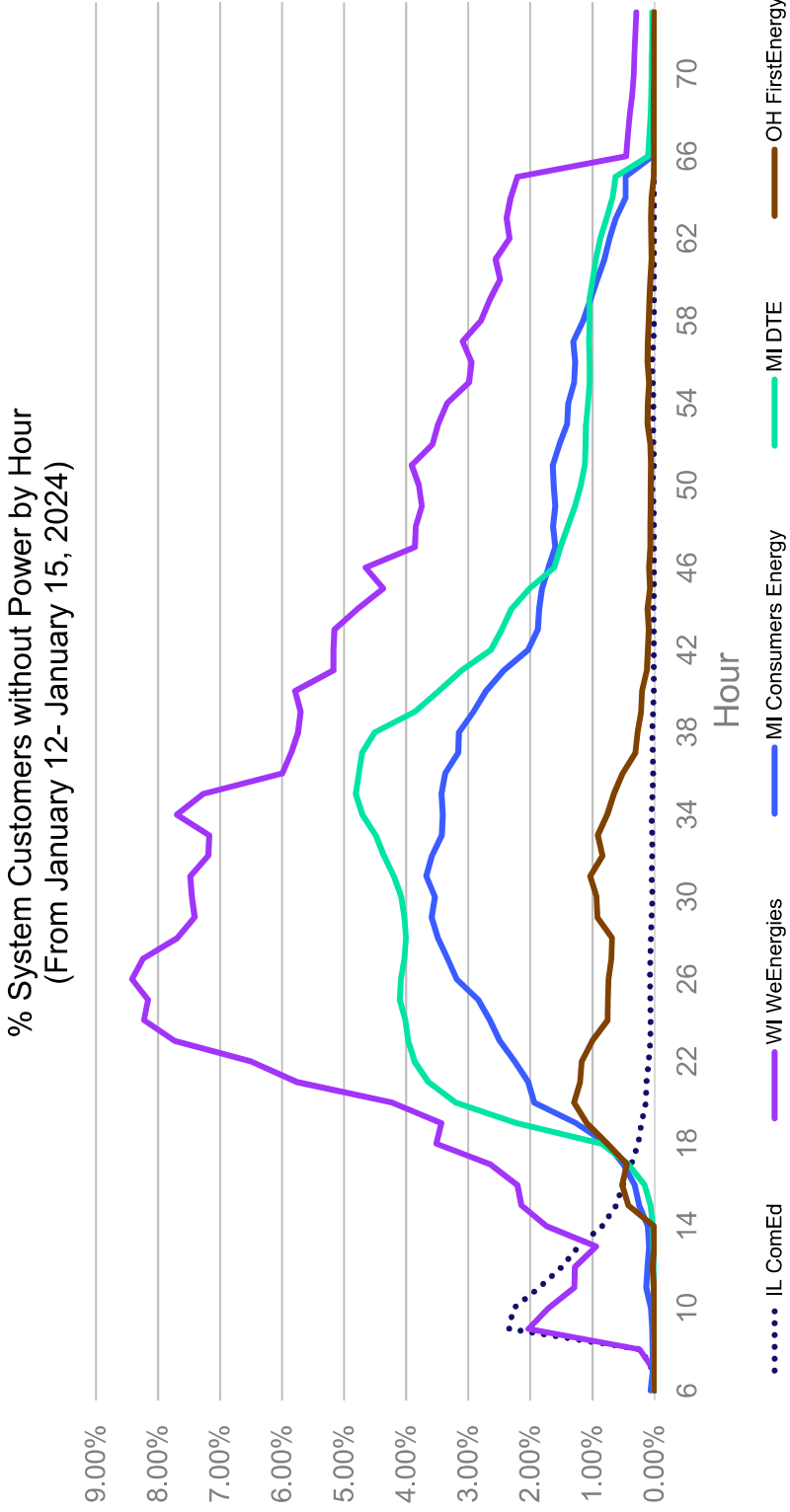




# Storm Restoration Comparison to Midwest Utilities

Jan 12 – 15, 2024

ComEd's storm restoration was faster in comparison to other Midwest utilities when comparing 12 hours of performance after the peak

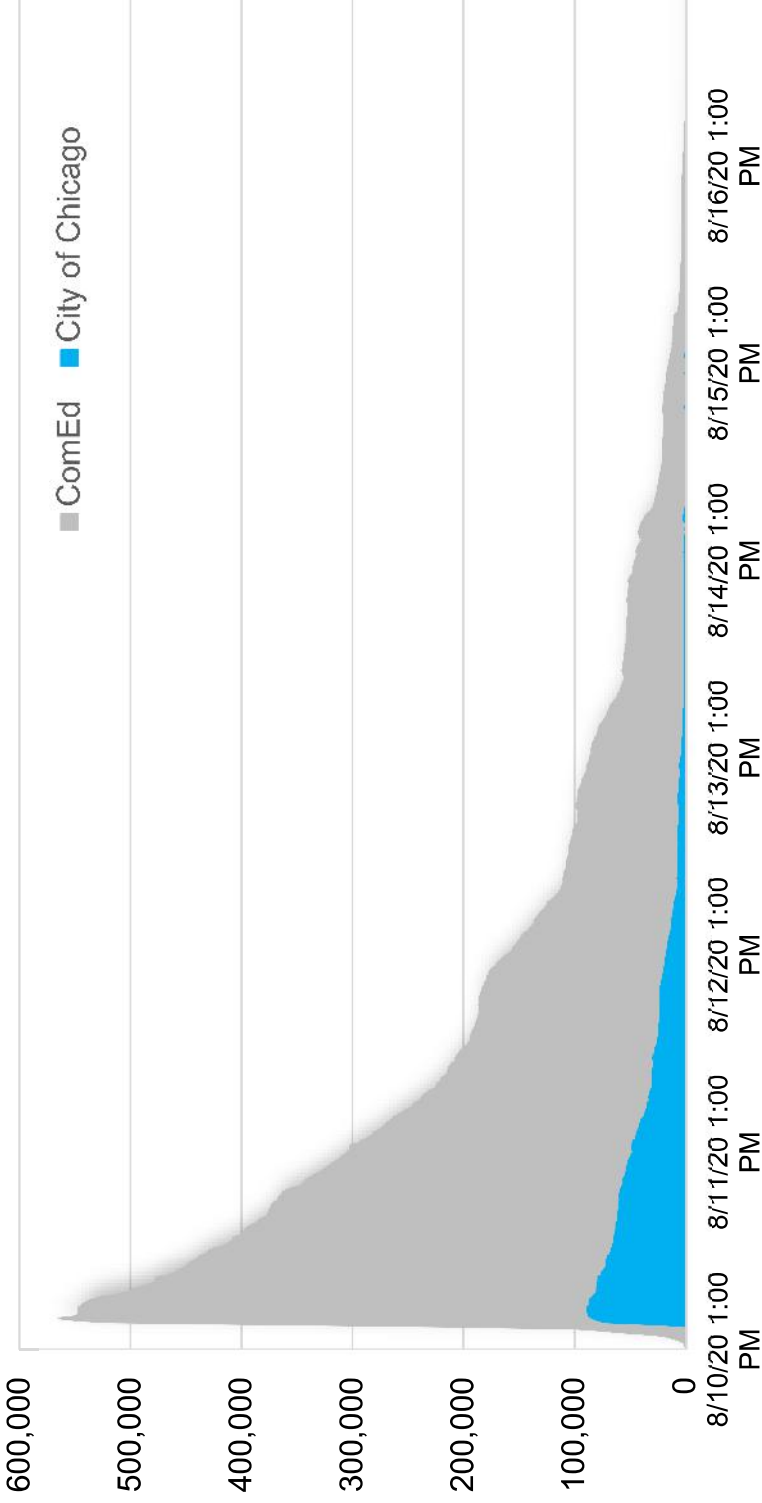


Note: ComEd data is from poweroutage.us

# August 10, 2020 (August Derecho) Storm Restoration

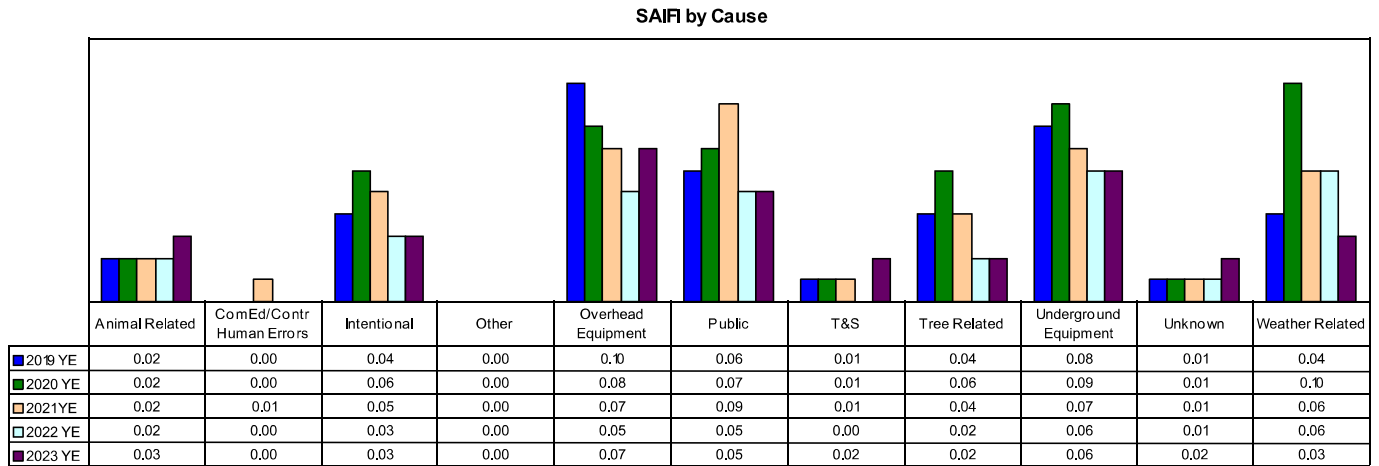
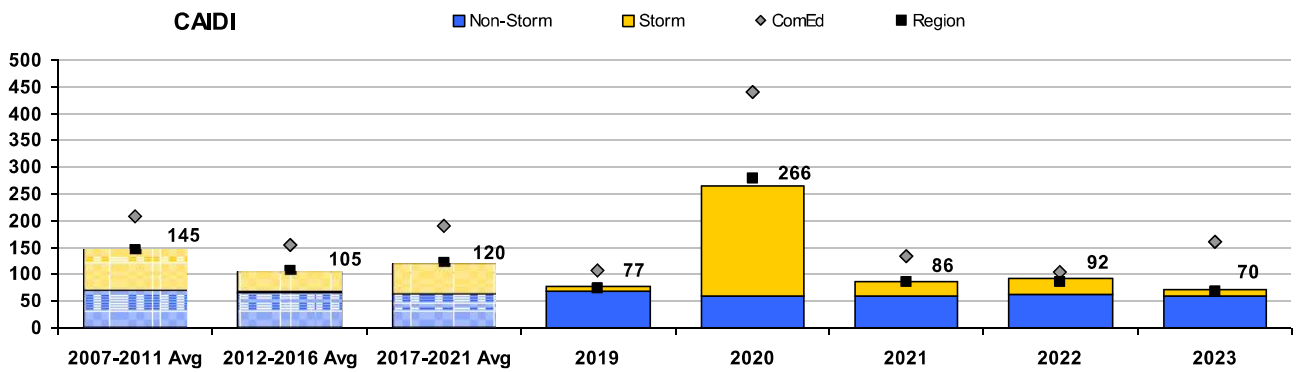
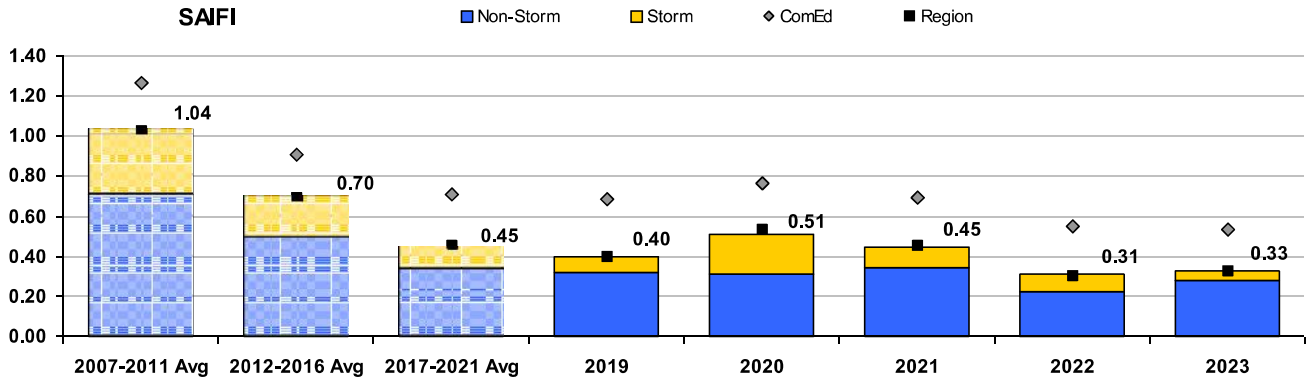
Category	Total Customer Outages	Percentage Restored	
		within 24 hours	within 48 hours
System	800,000	66%	83%
City of Chicago	142,000	74%	93%

## Customers Without Power Timeline



## Reliability across 50 Wards

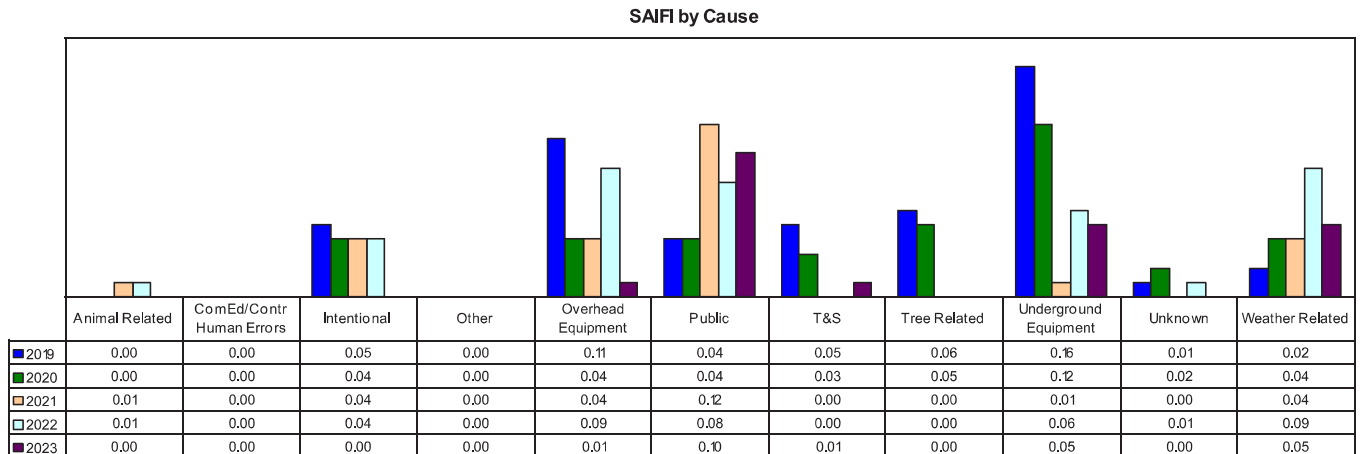
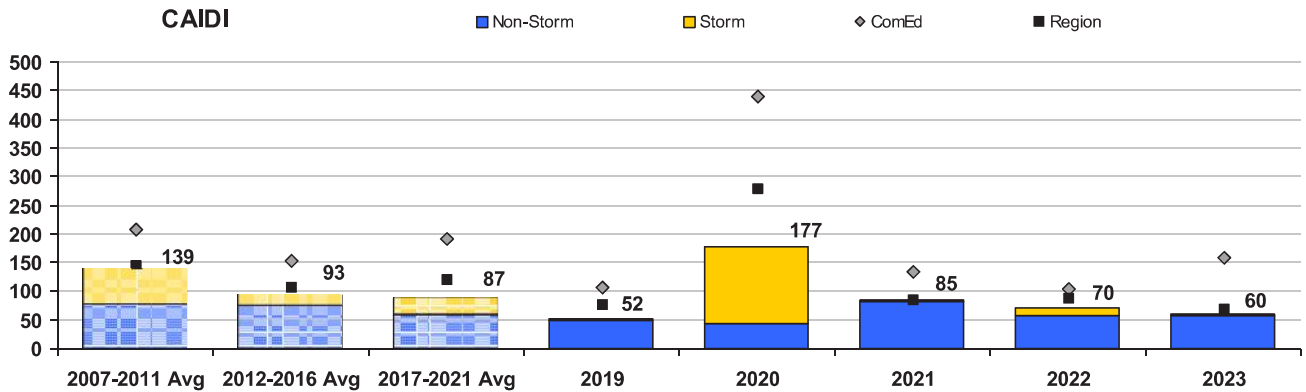
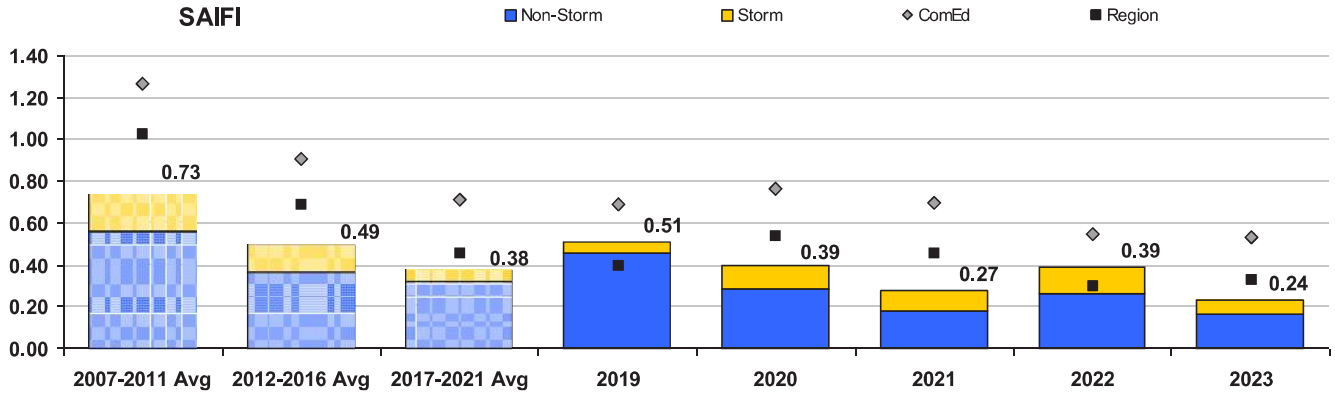
# City of Chicago Reliability Performance Year End Report



Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.

# Reliability and Reporting Statistics 4.D

## Ward 1 Reliability Performance Year End Report

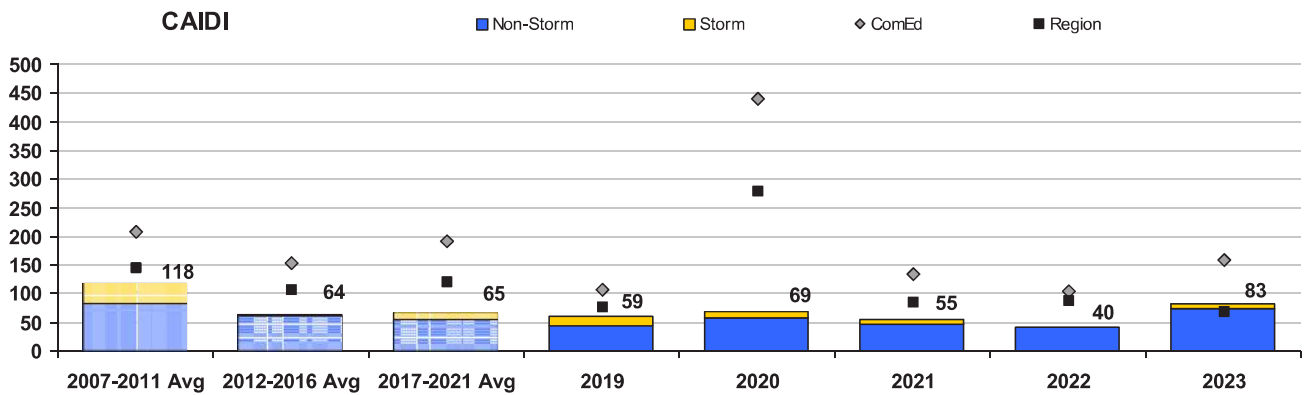
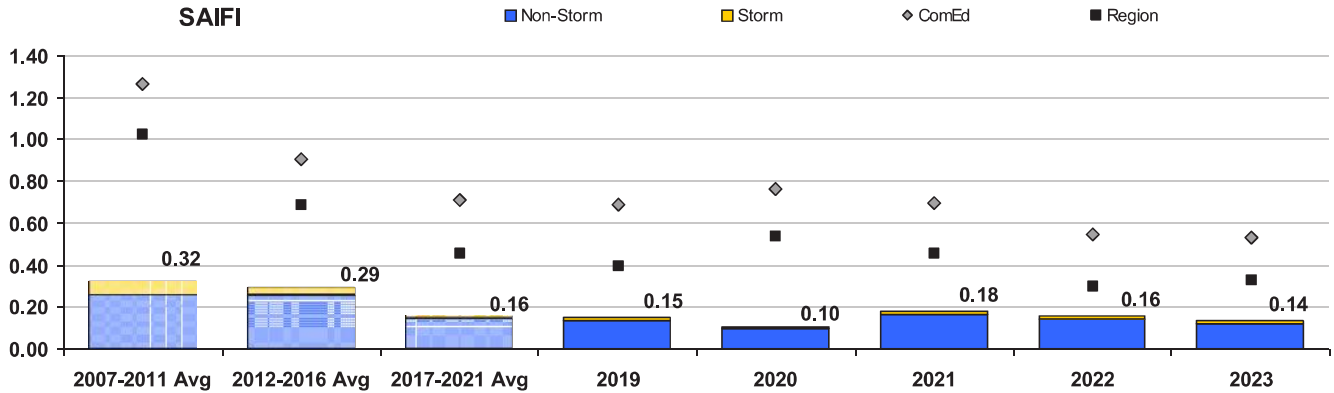


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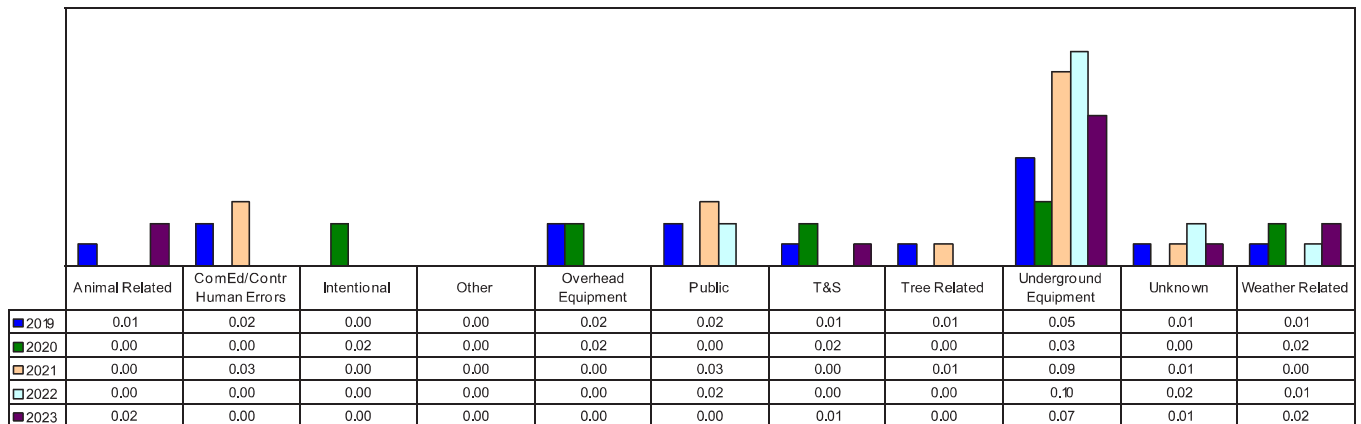
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## Ward 2 Reliability Performance Year End Report



SAIFI by Cause

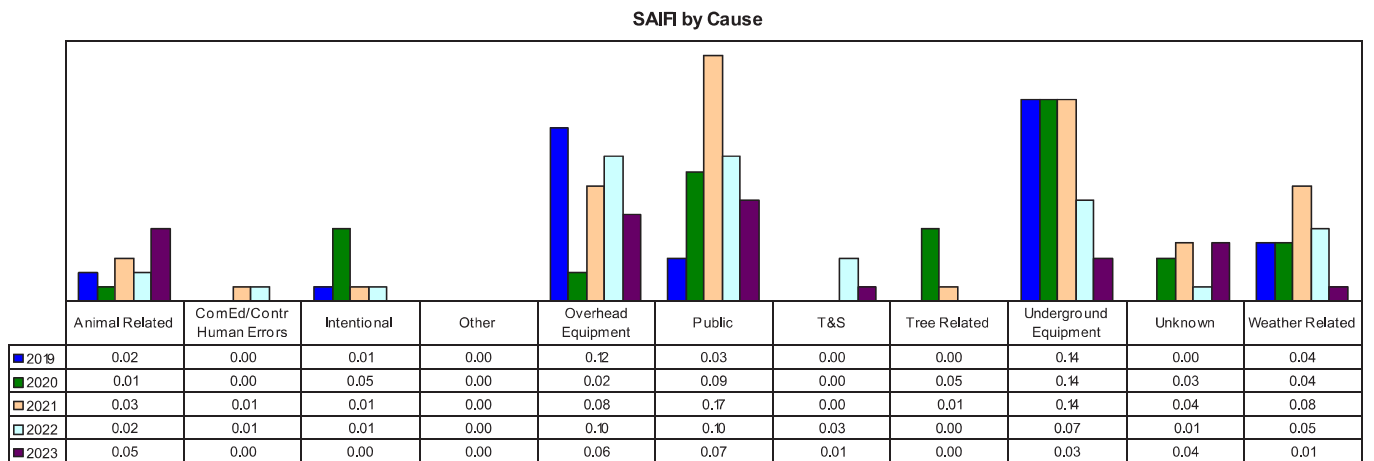
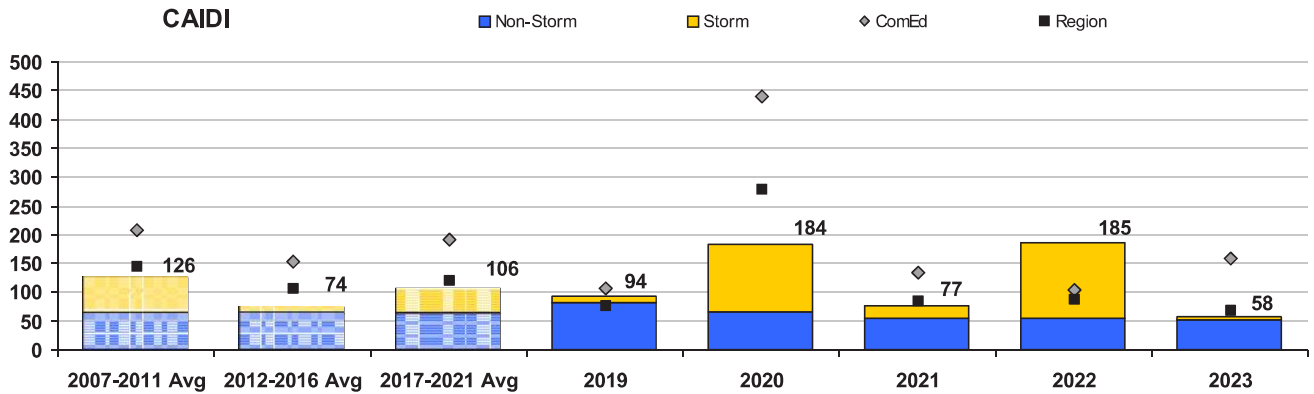
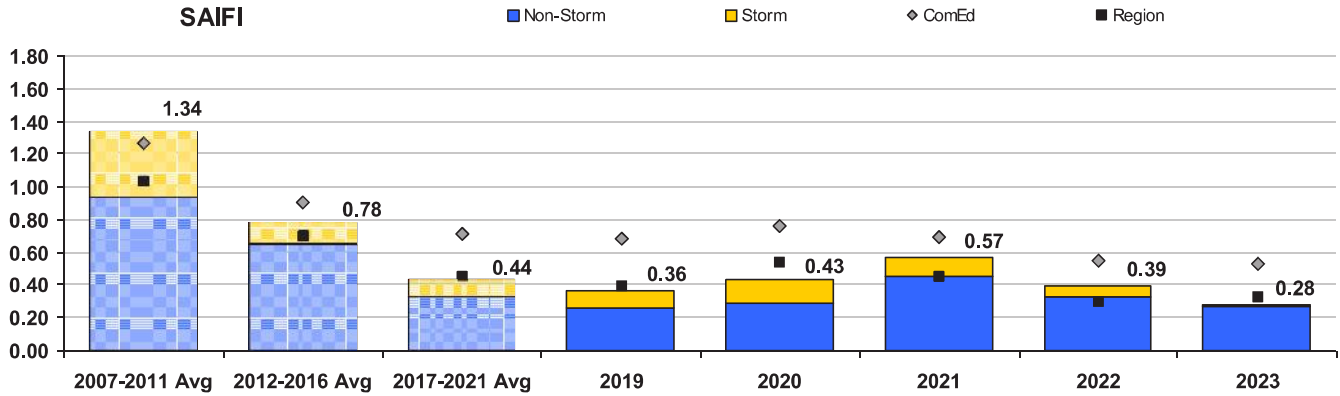


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## Ward 3 Reliability Performance Year End Report

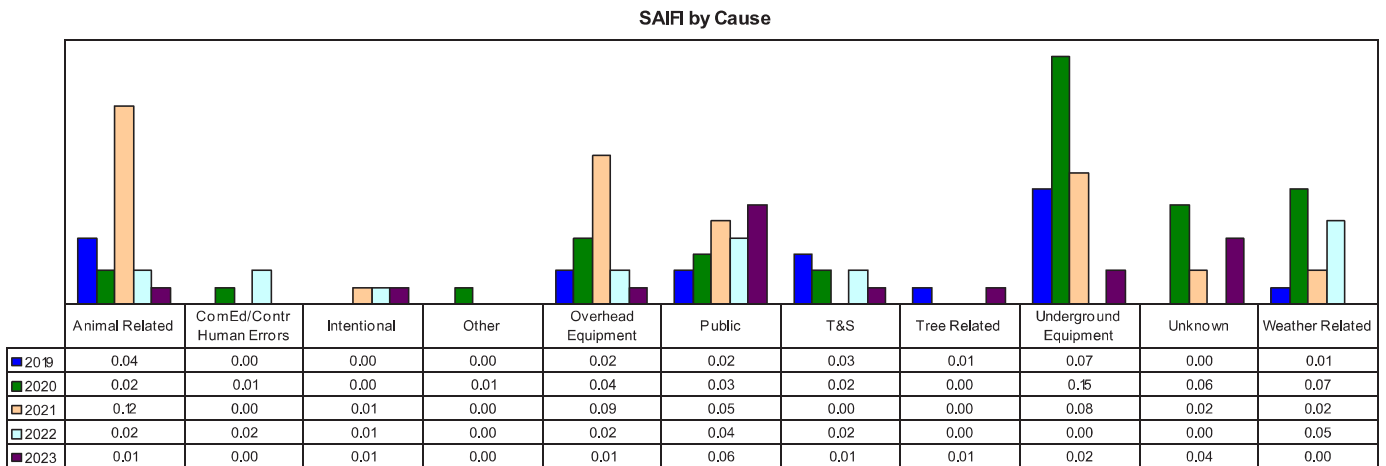
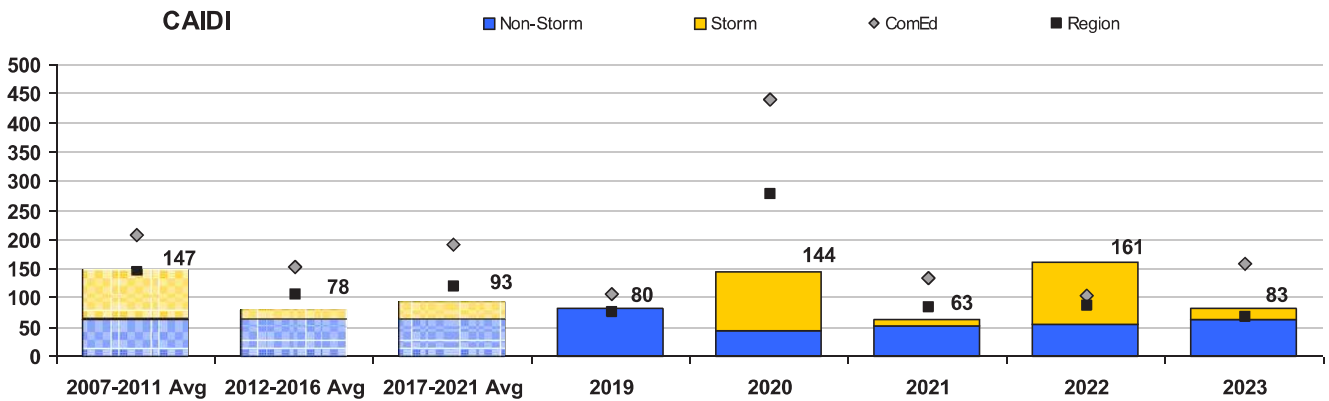
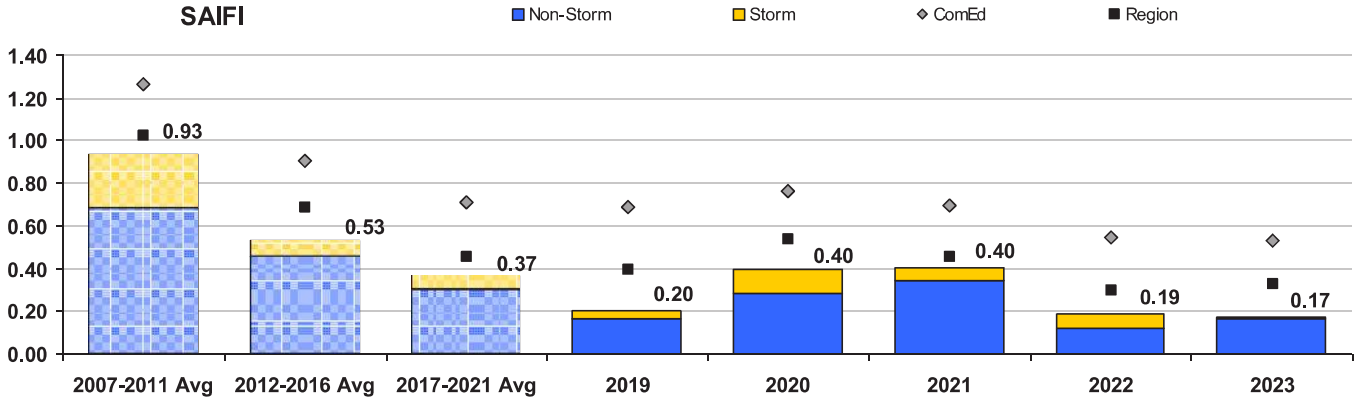


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## Ward 4 Reliability Performance Year End Report



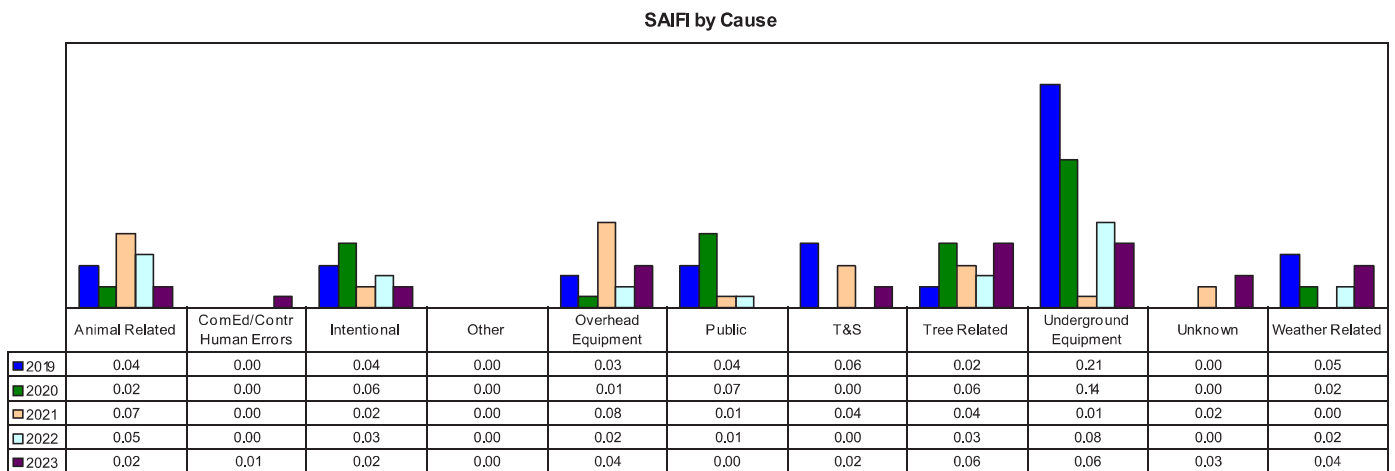
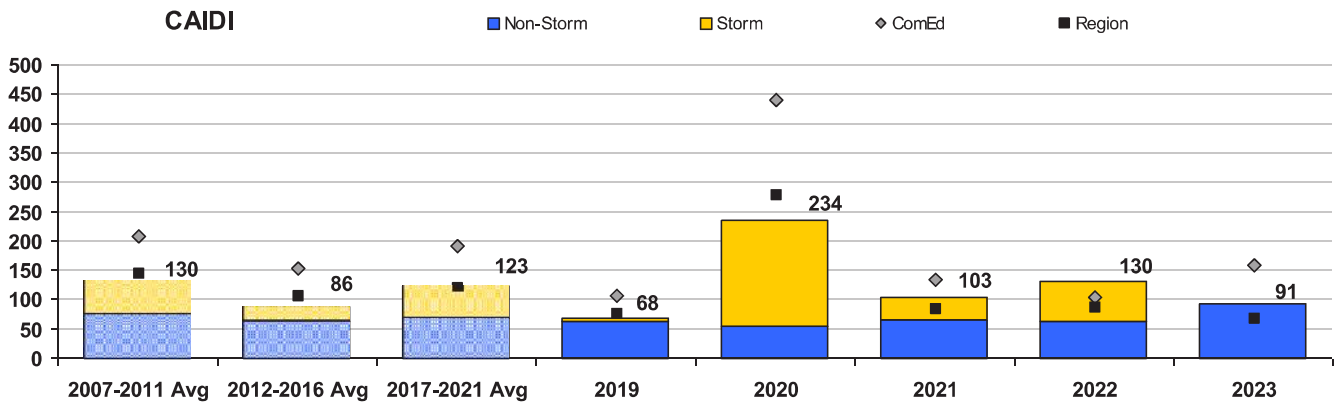
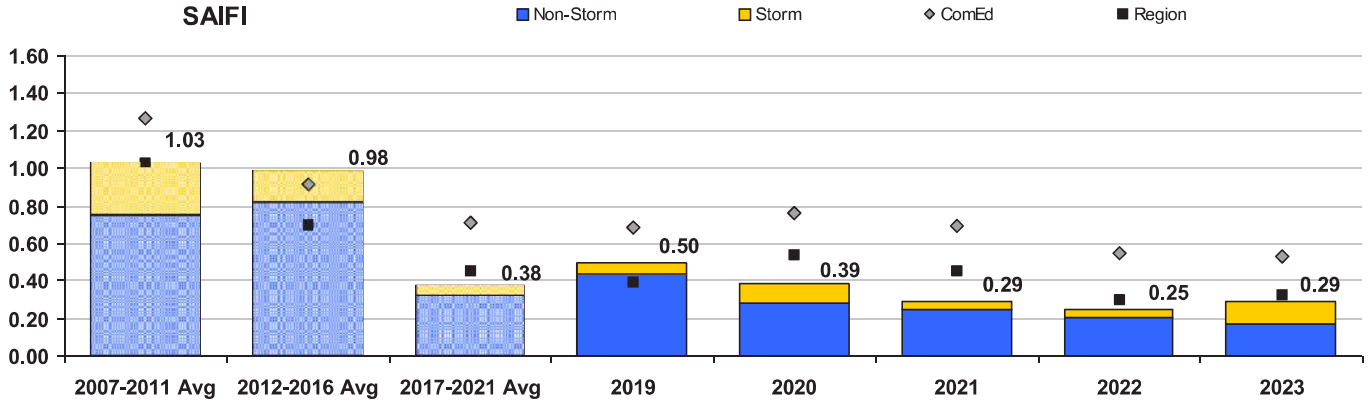
Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.





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## Ward 5 Reliability Performance Year End Report

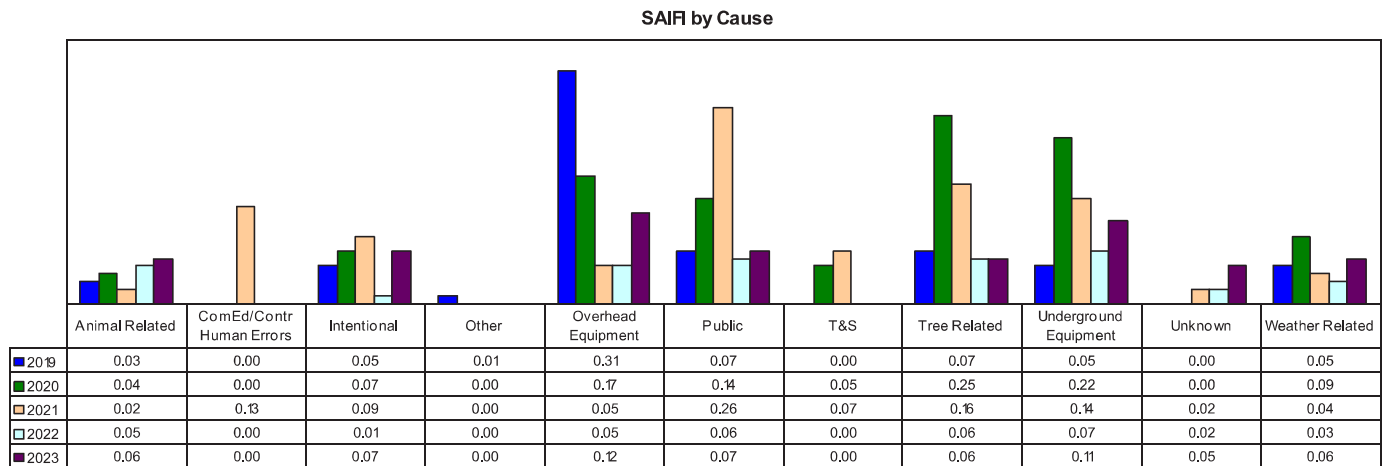
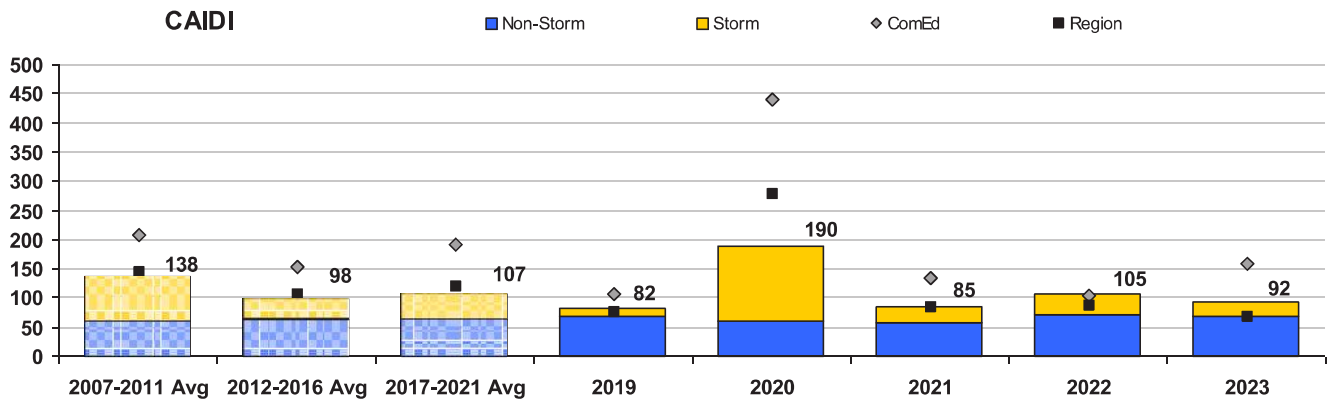
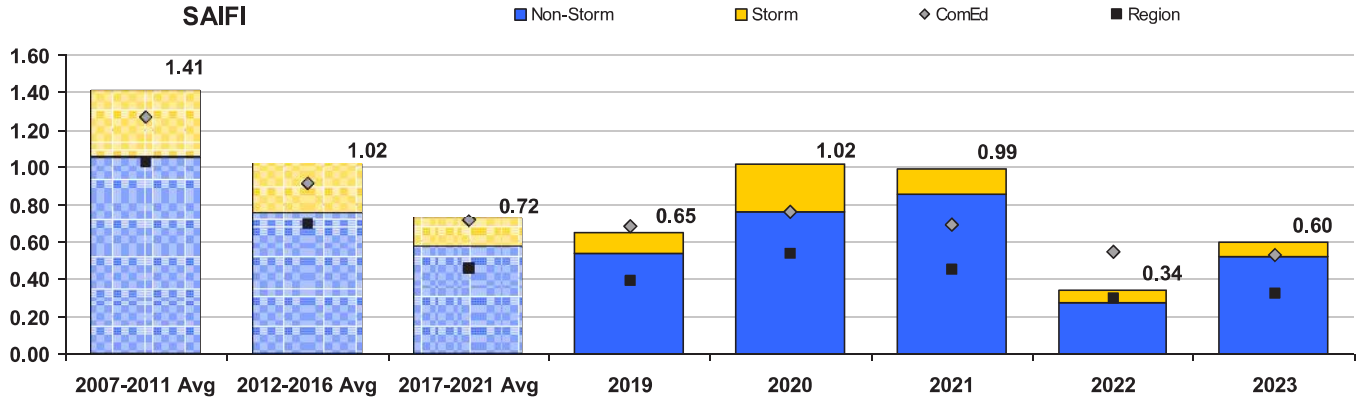


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 6 Reliability Performance Year End Report

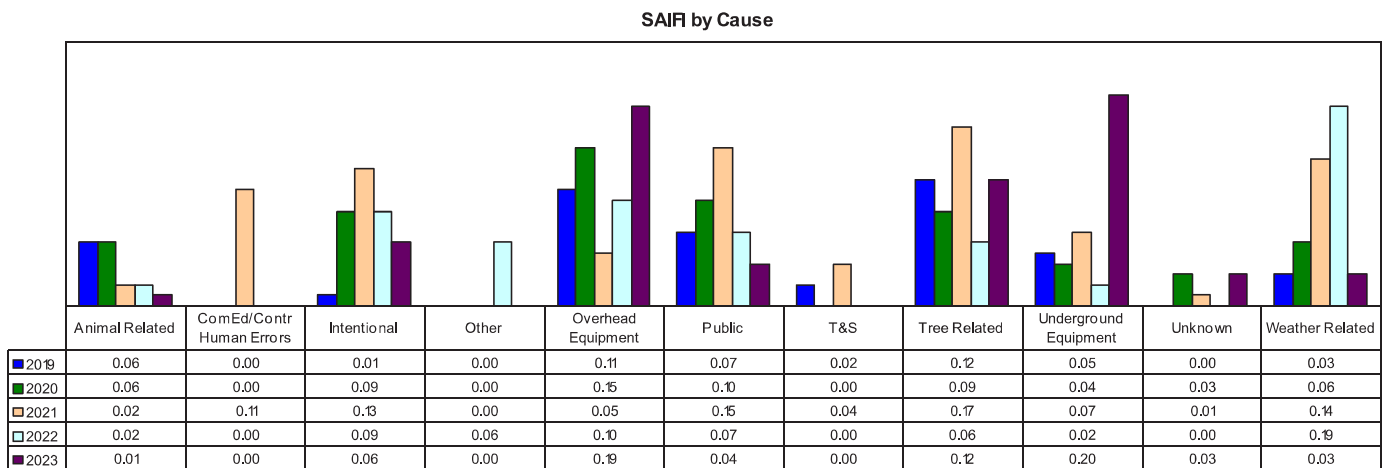
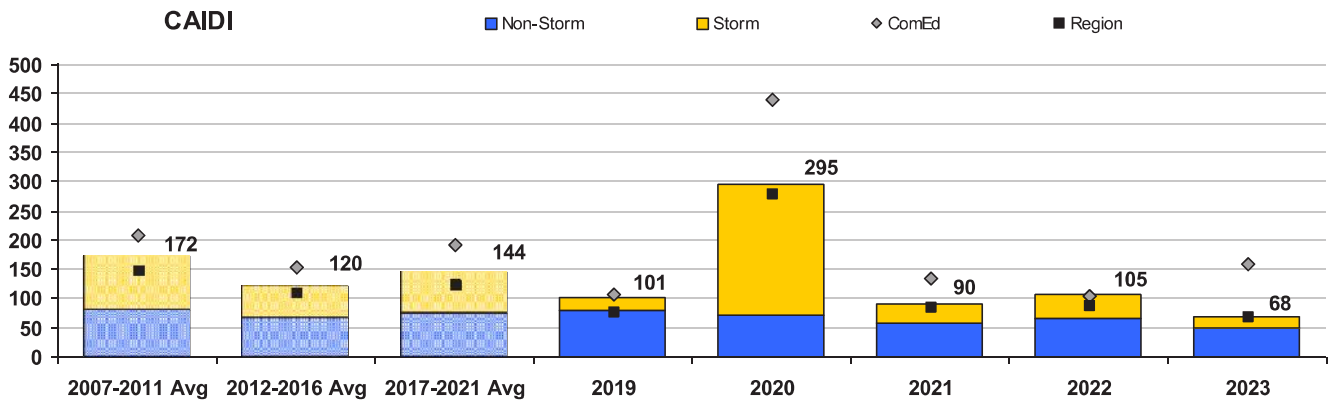
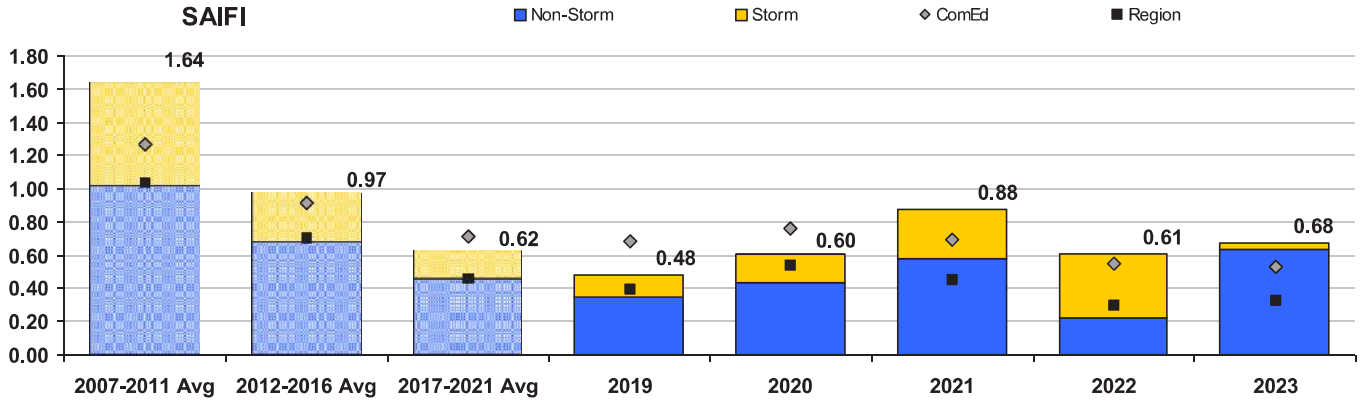


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 7 Reliability Performance Year End Report

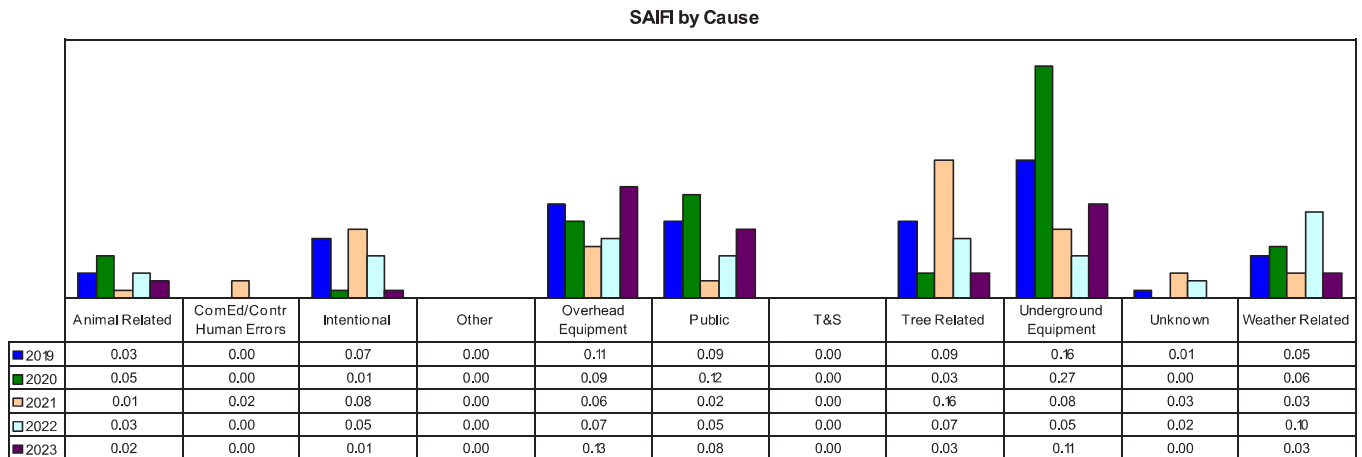
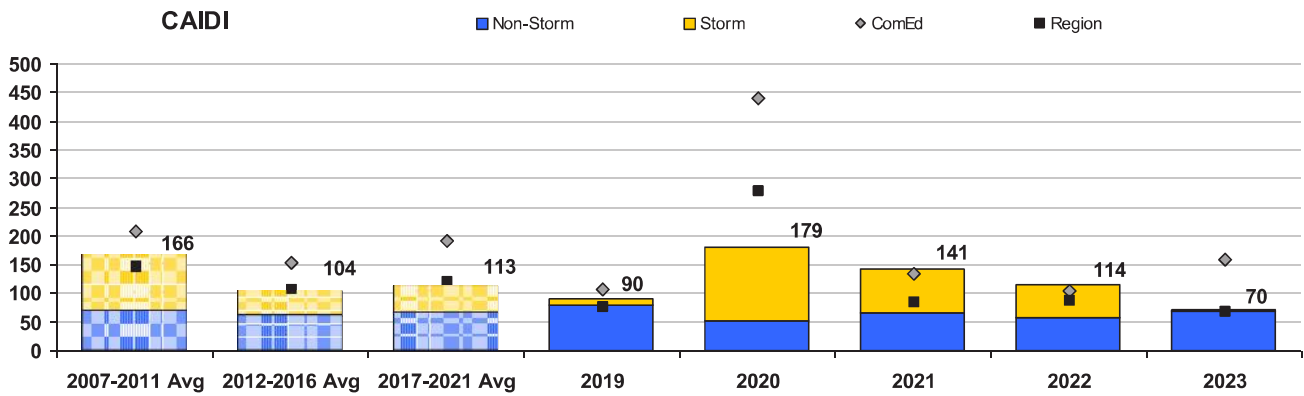
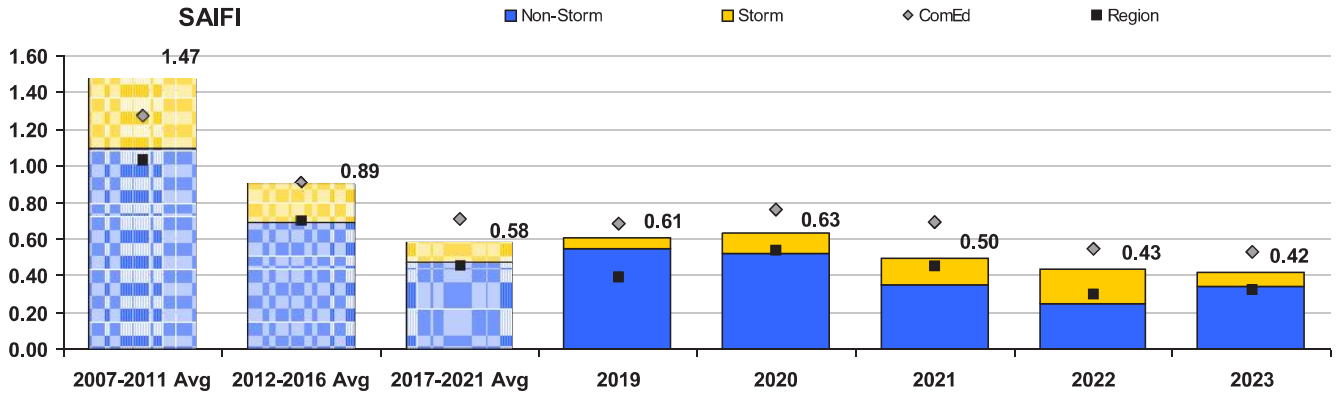


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 8 Reliability Performance Year End Report

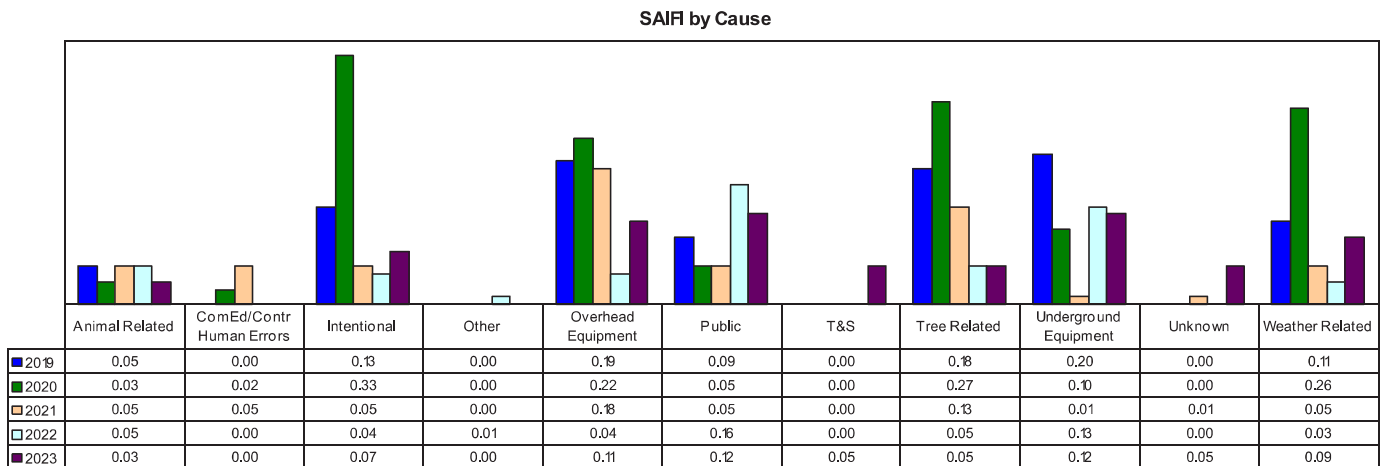
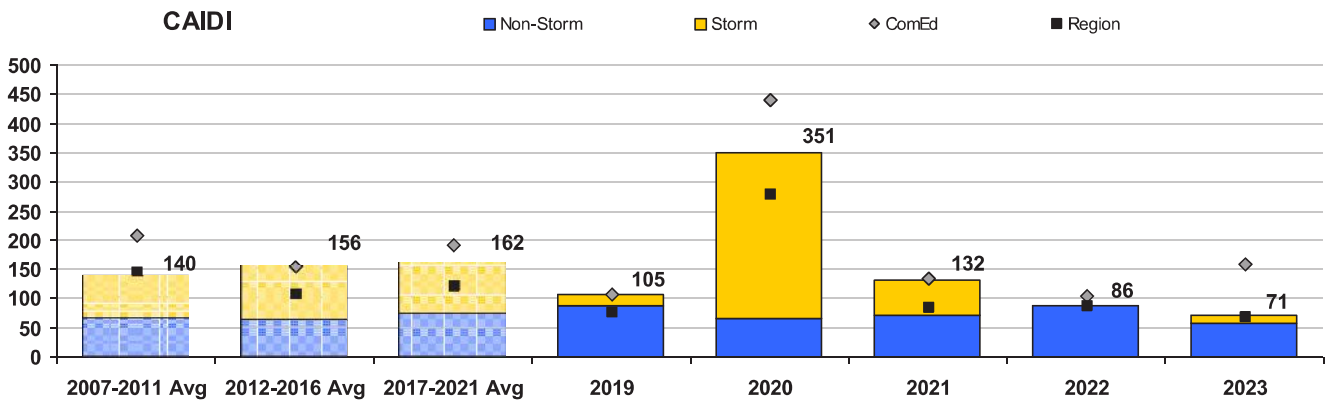
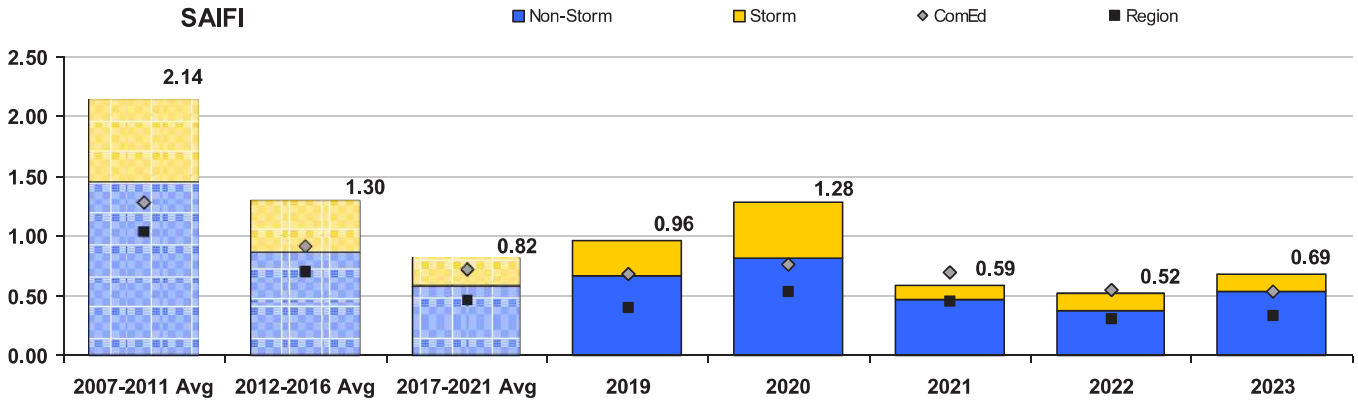


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 9 Reliability Performance Year End Report

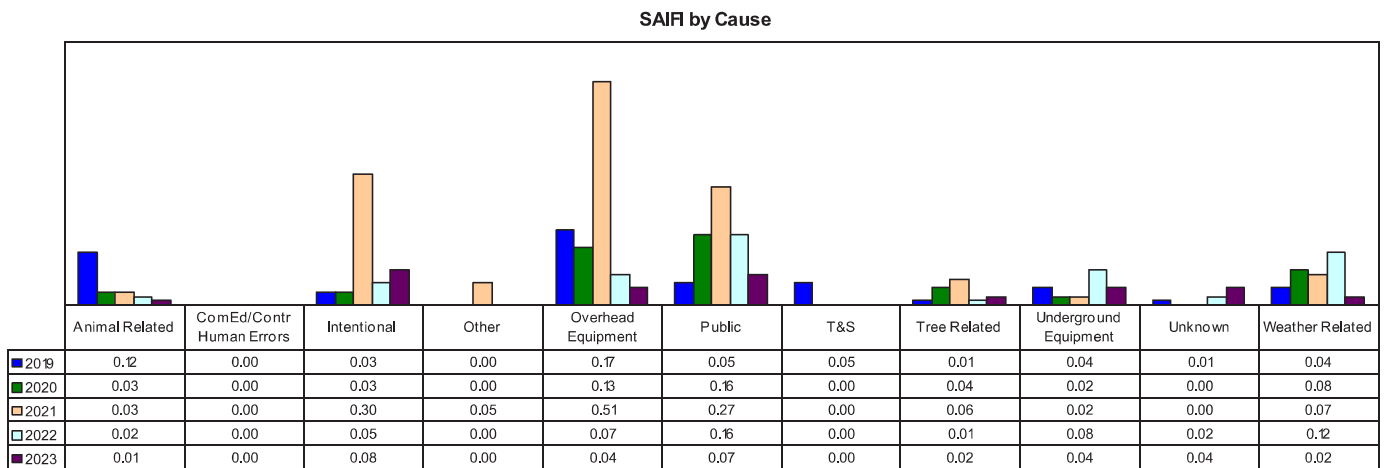
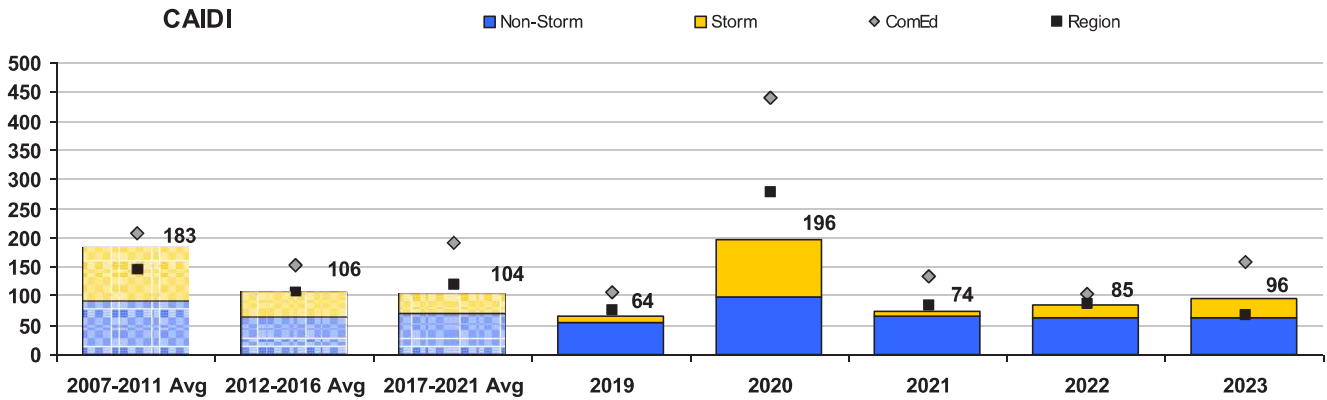
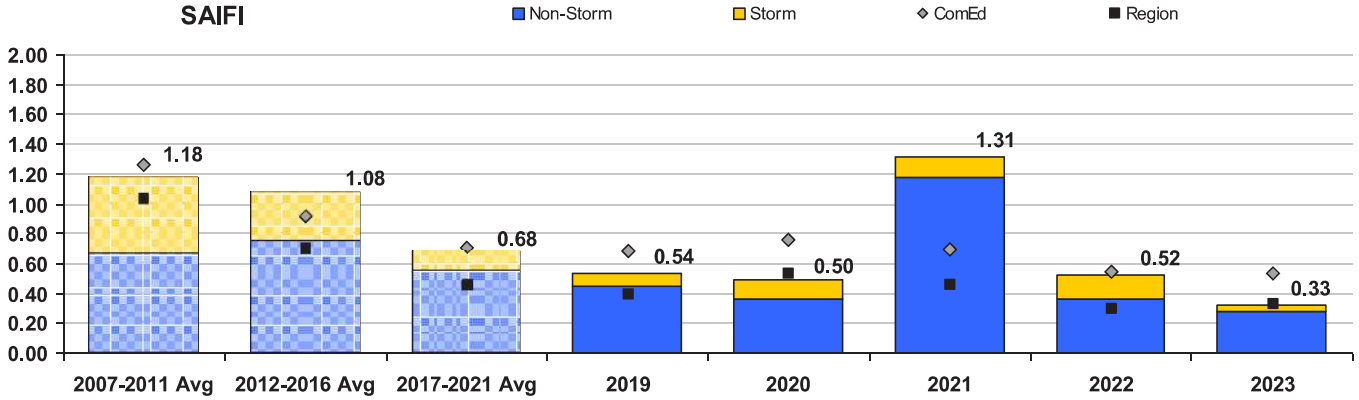


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter 1 Illinois Commerce Commission Subchapter 10 Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions. 56



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## Ward 10 Reliability Performance Year End Report

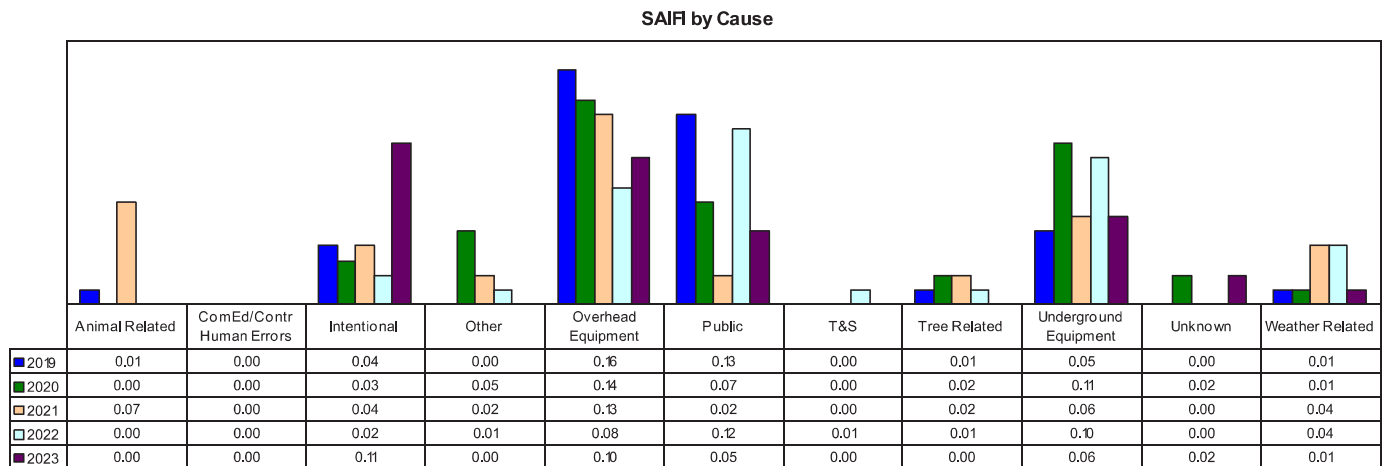
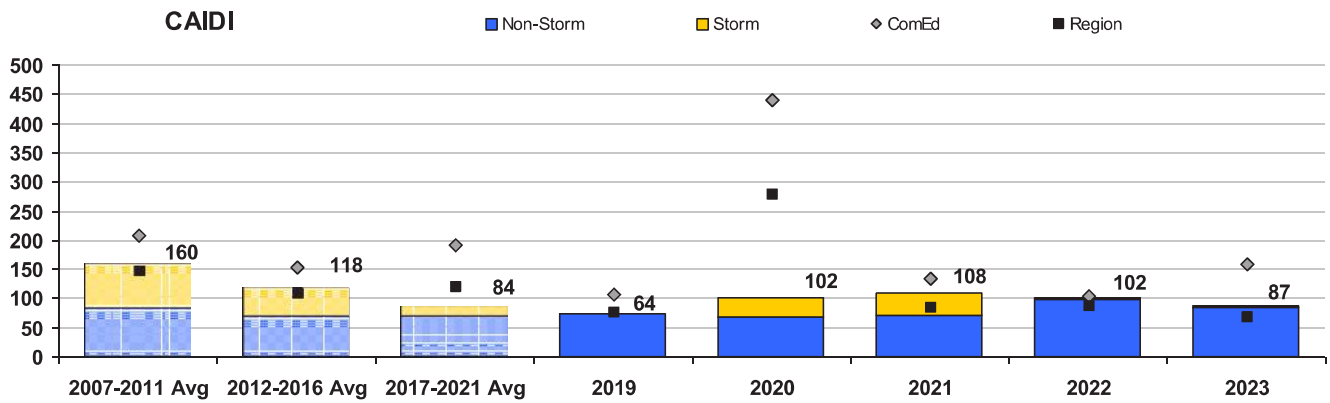
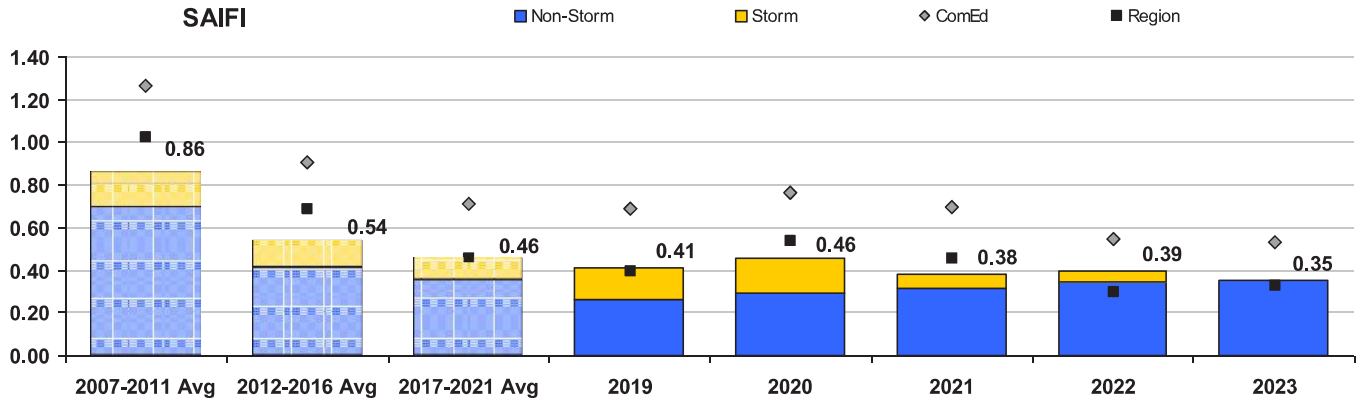


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 11 Reliability Performance Year End Report

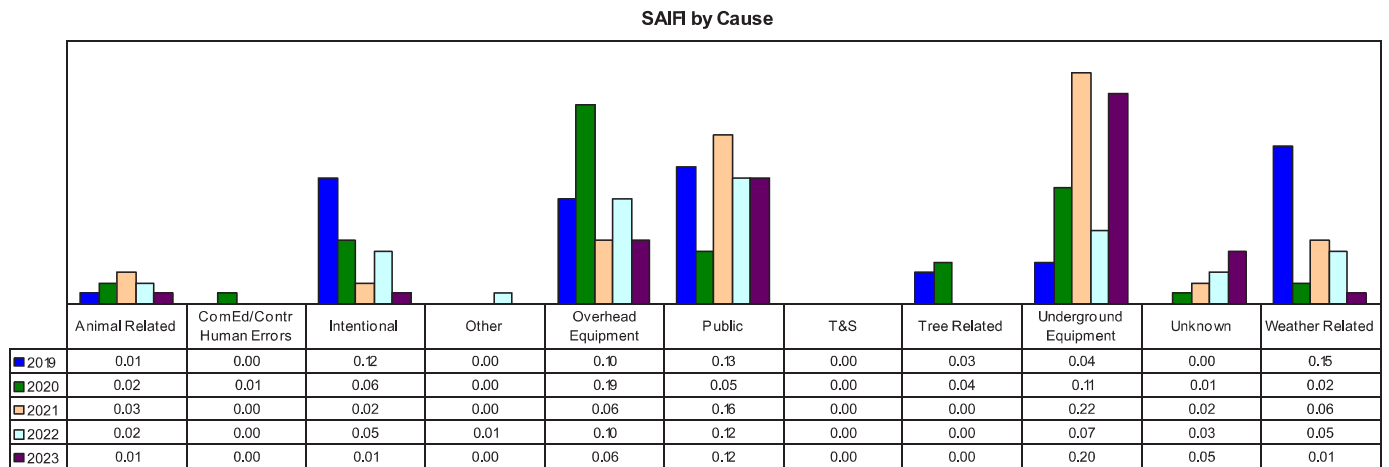
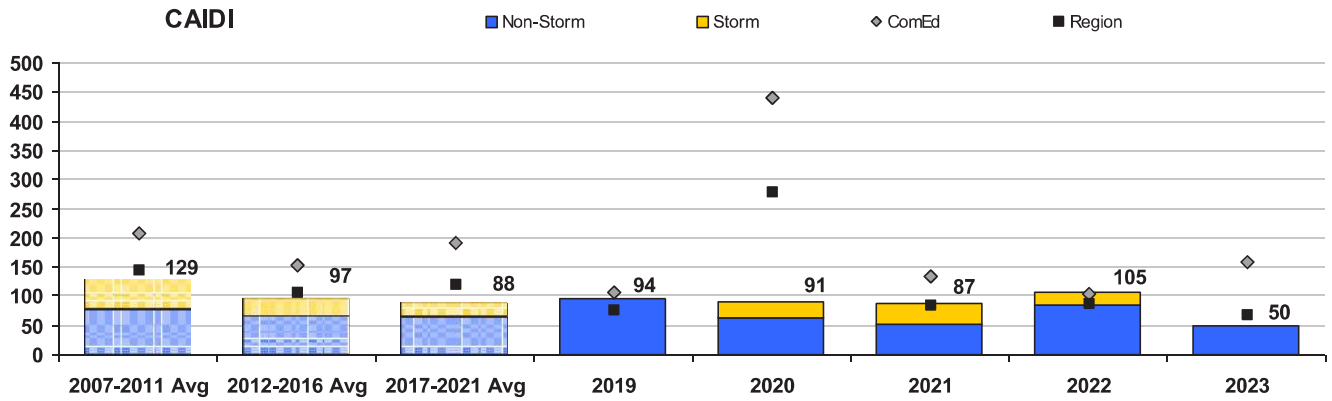
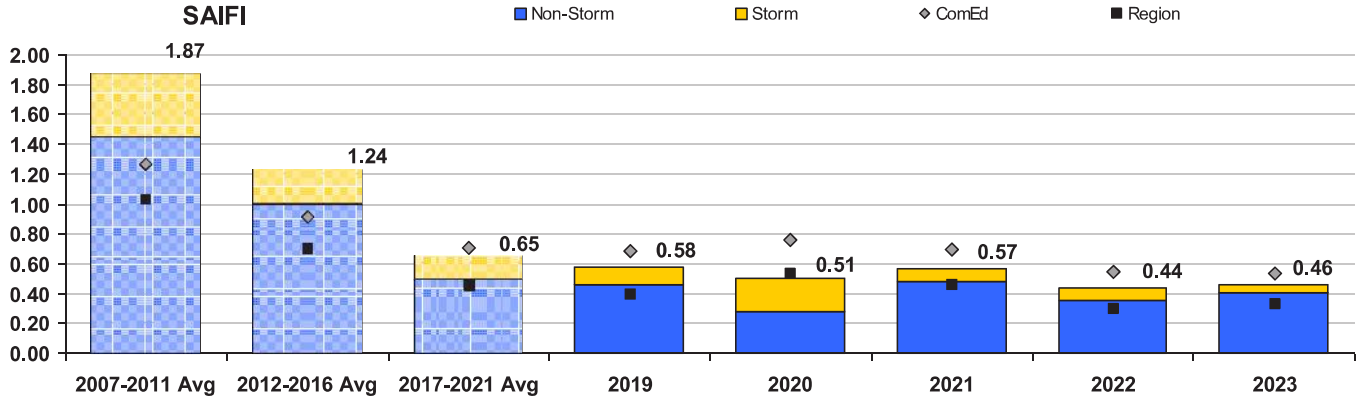


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter 1 Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions



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## Ward 12 Reliability Performance Year End Report



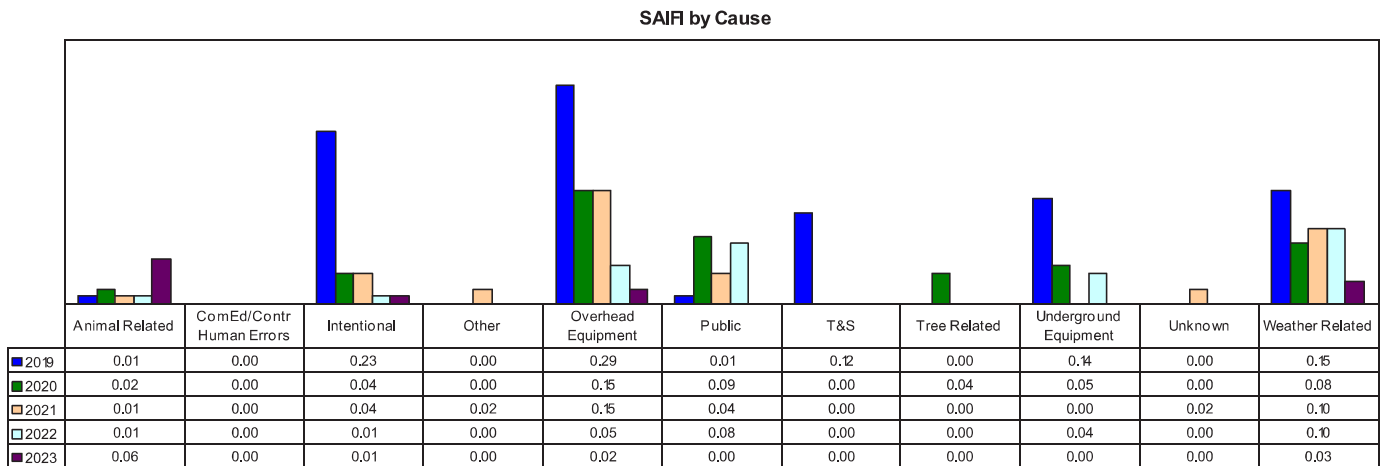
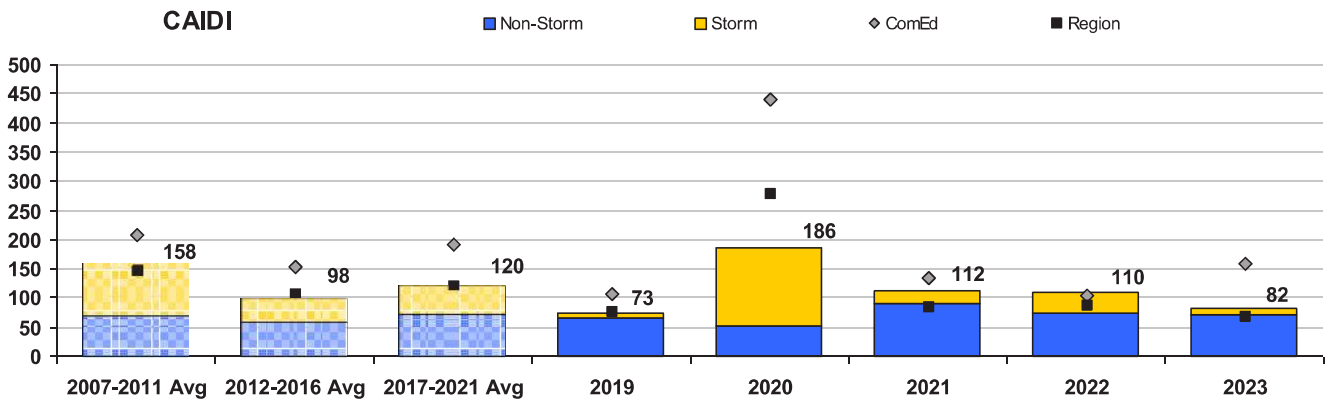
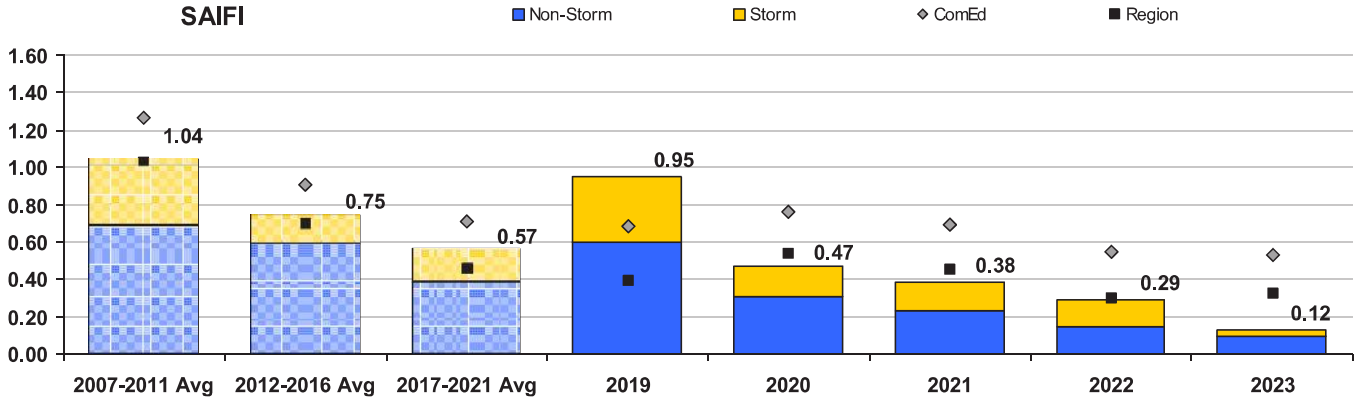
Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.





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## Ward 13 Reliability Performance Year End Report

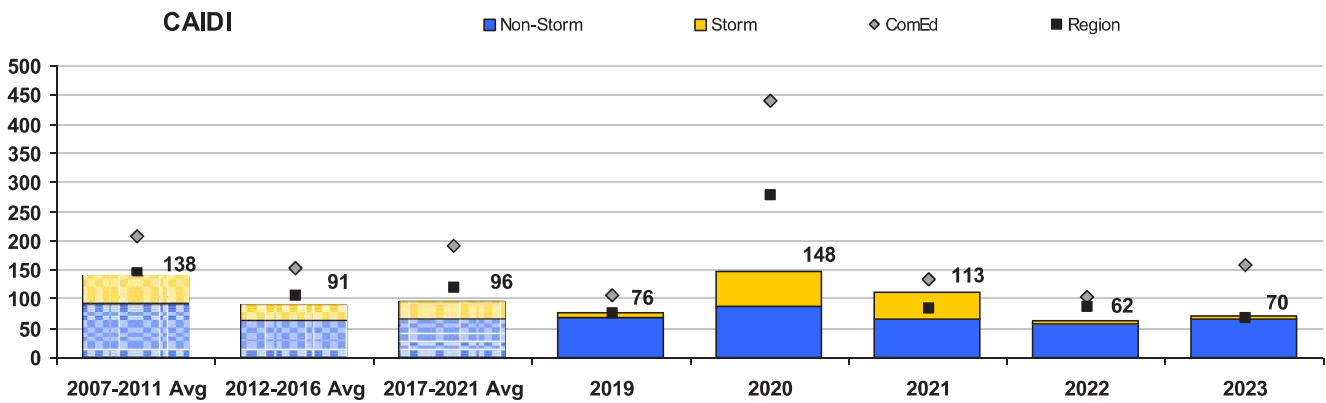
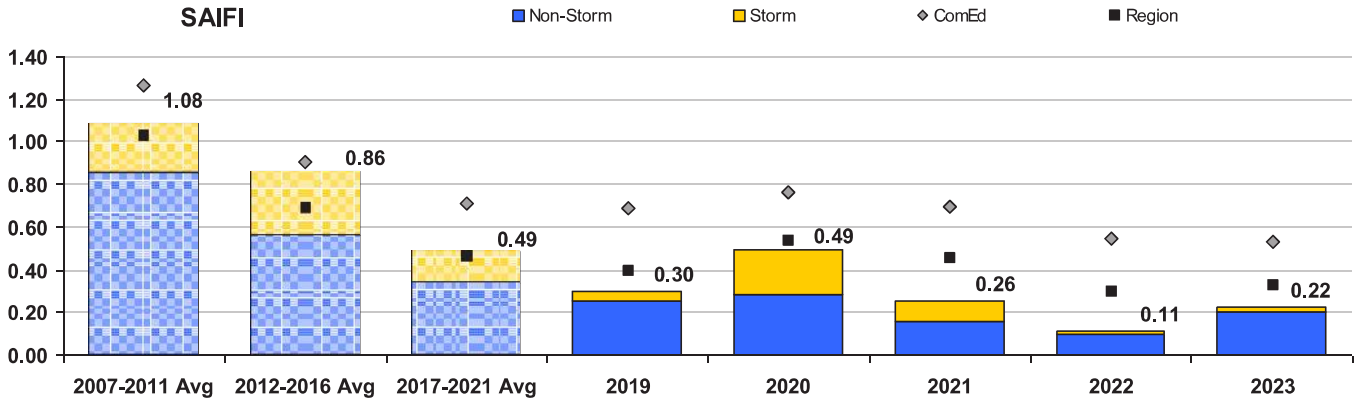


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.

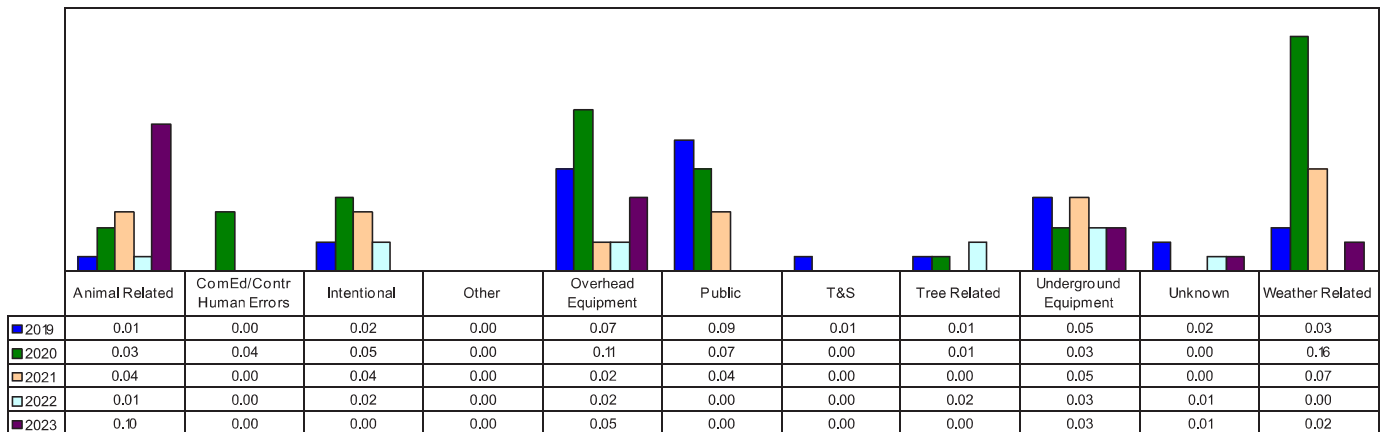


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## Ward 14 Reliability Performance Year End Report



SAIFI by Cause

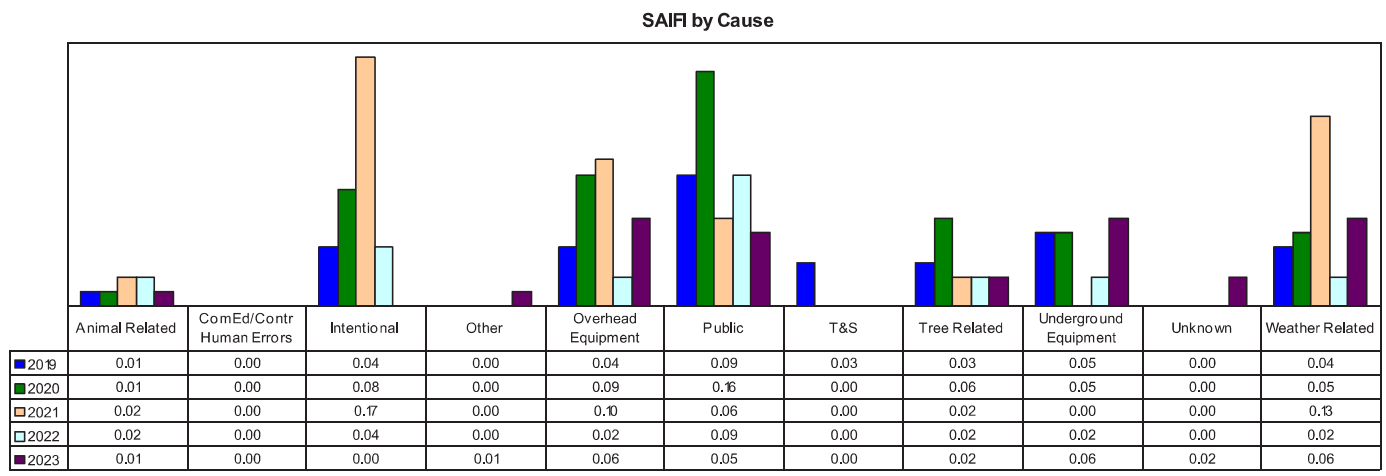
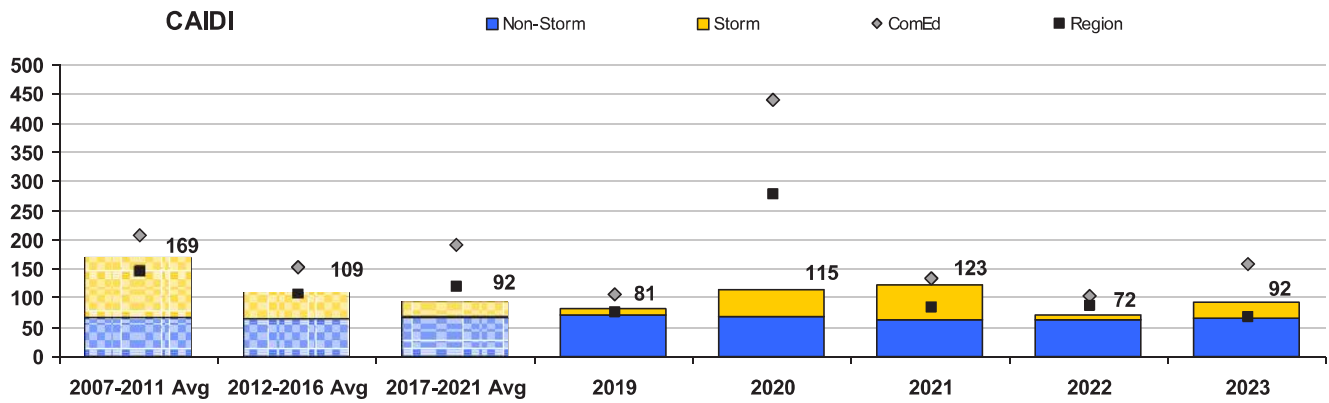
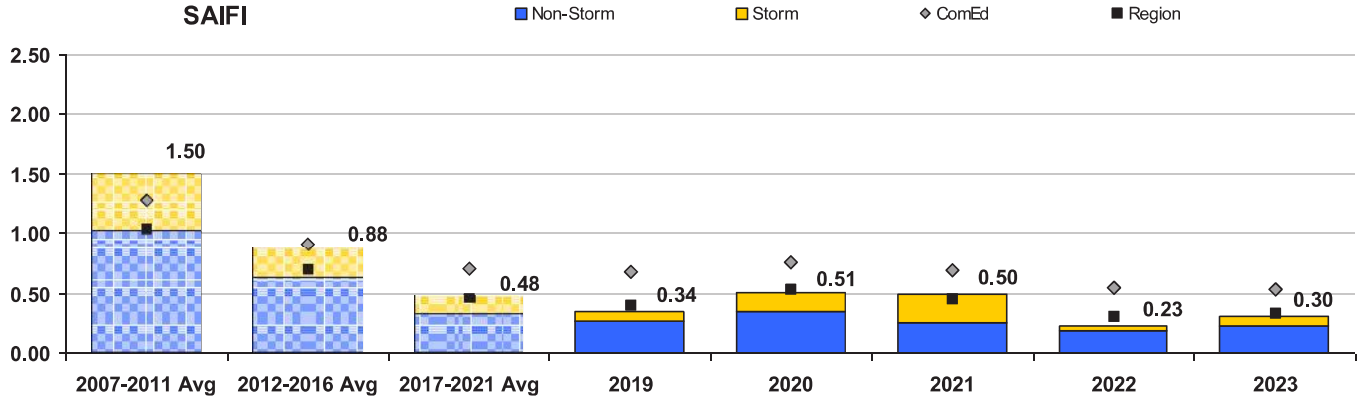


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## Ward 15 Reliability Performance Year End Report

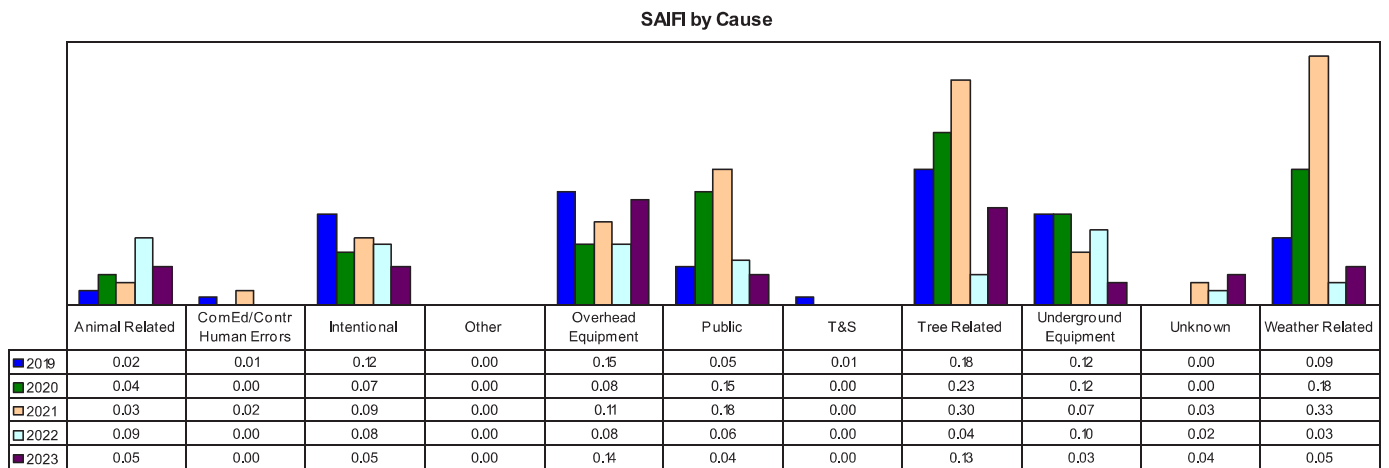
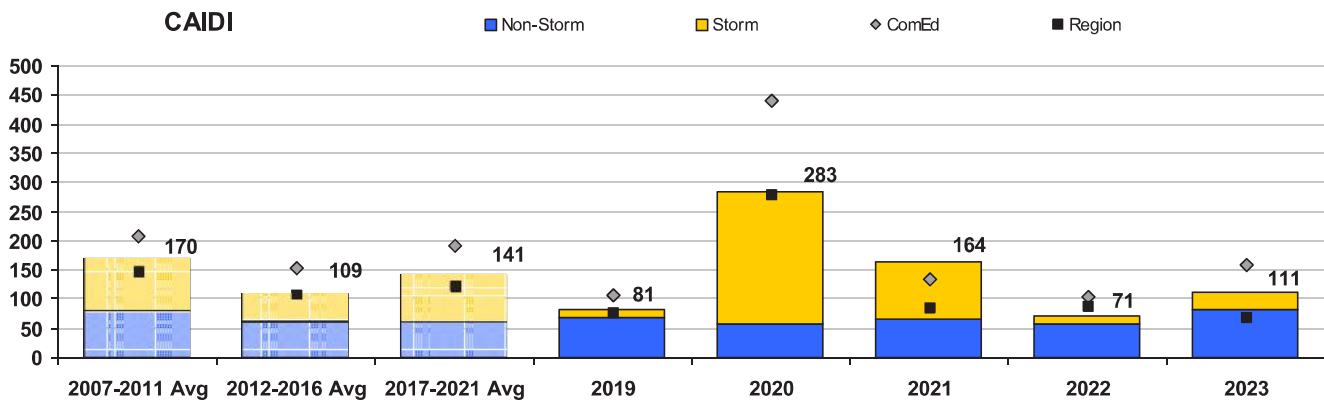
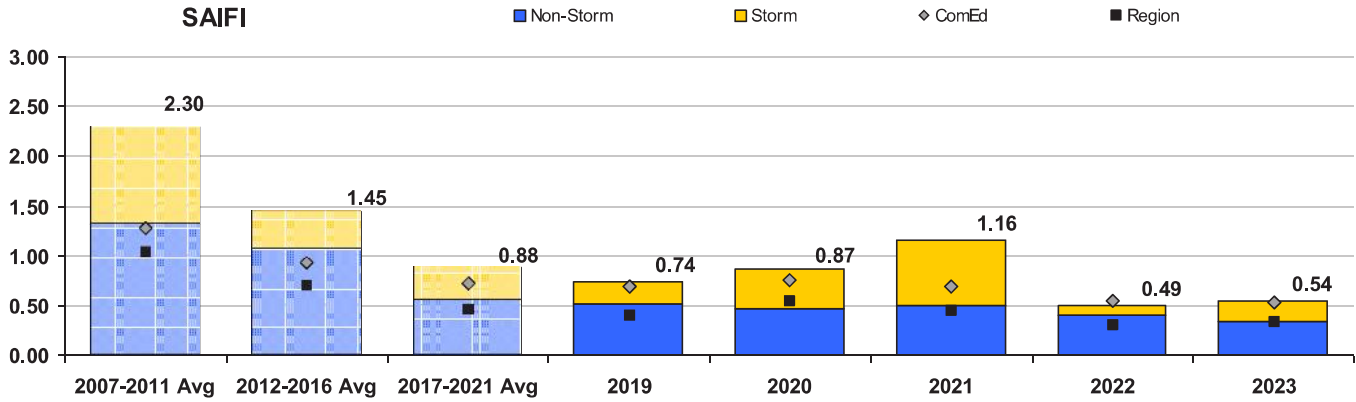


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 16 Reliability Performance Year End Report

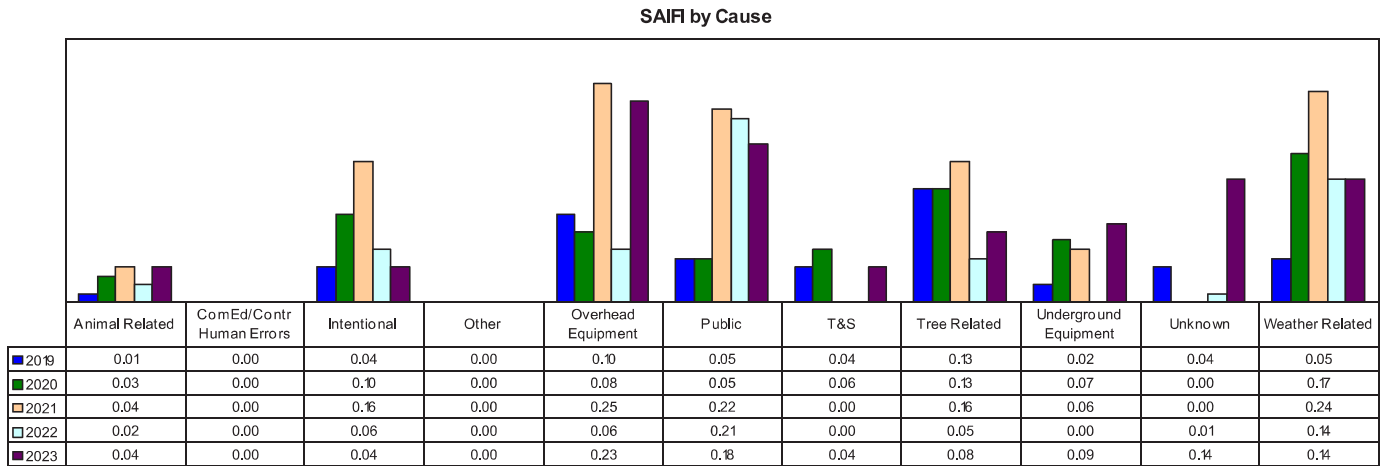
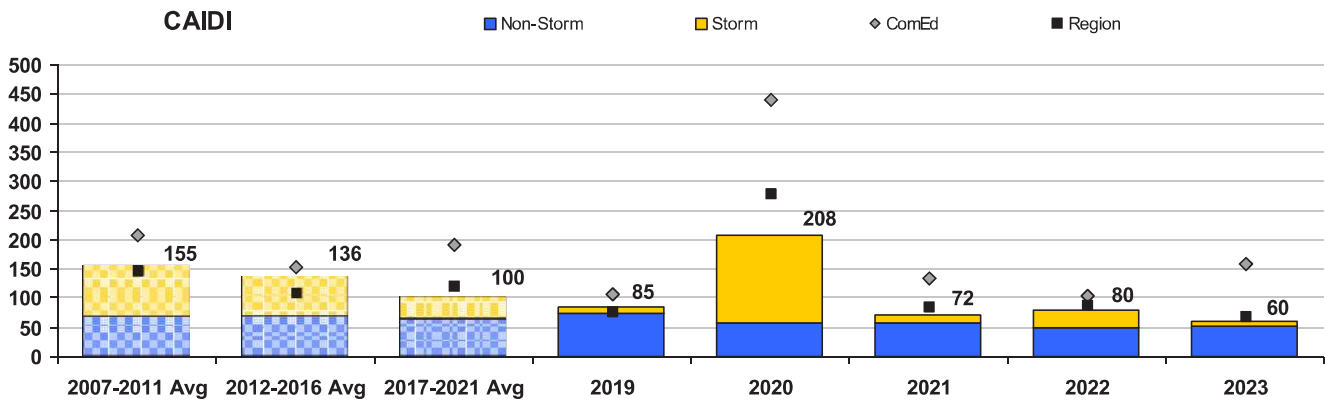
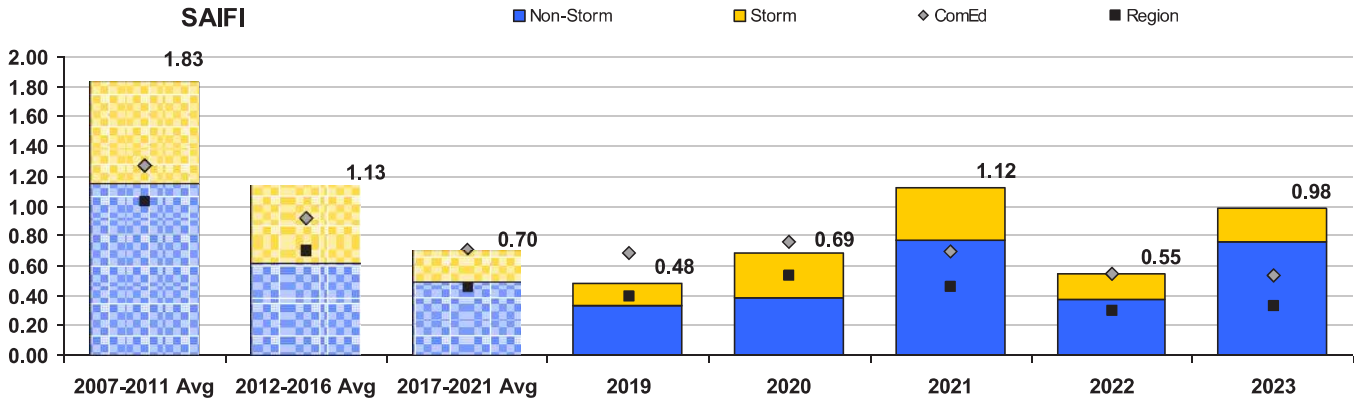


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## Ward 17 Reliability Performance Year End Report

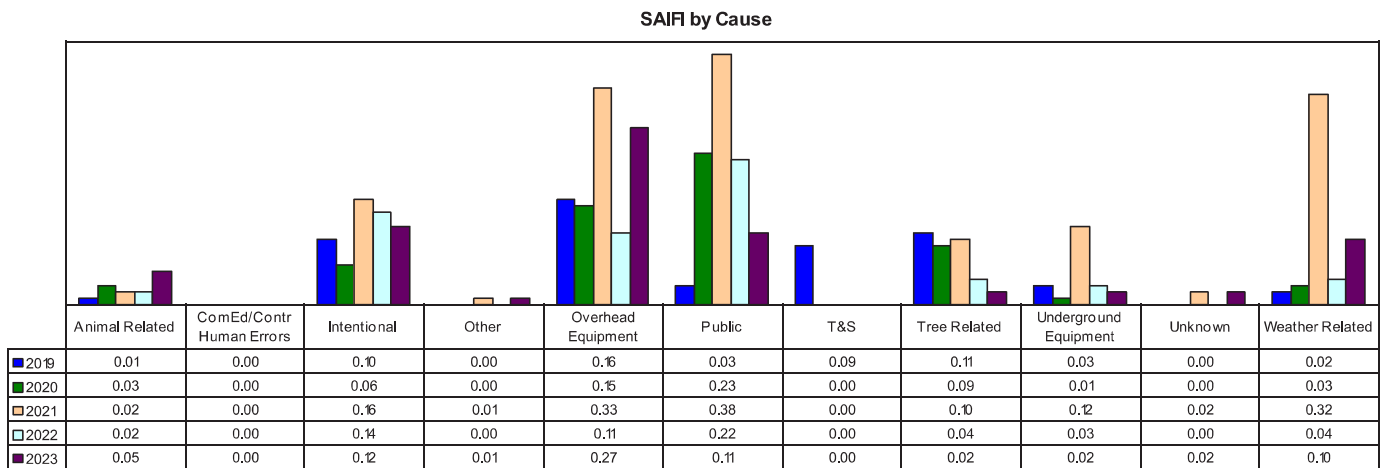
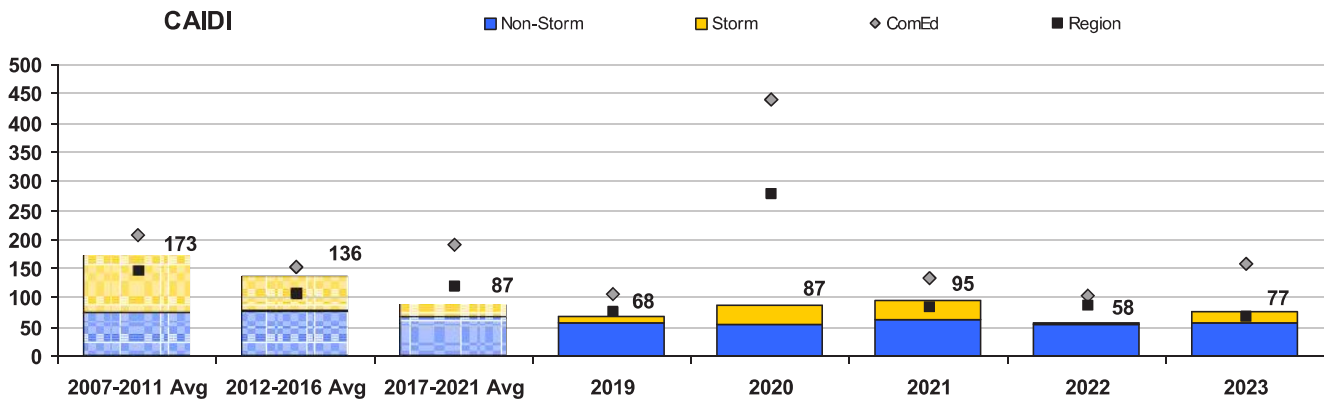
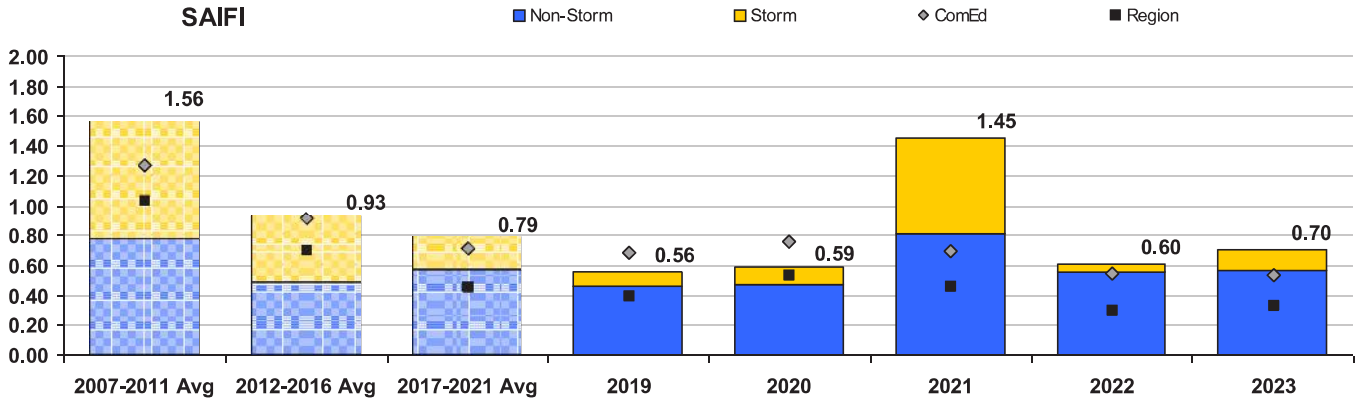


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 18 Reliability Performance Year End Report

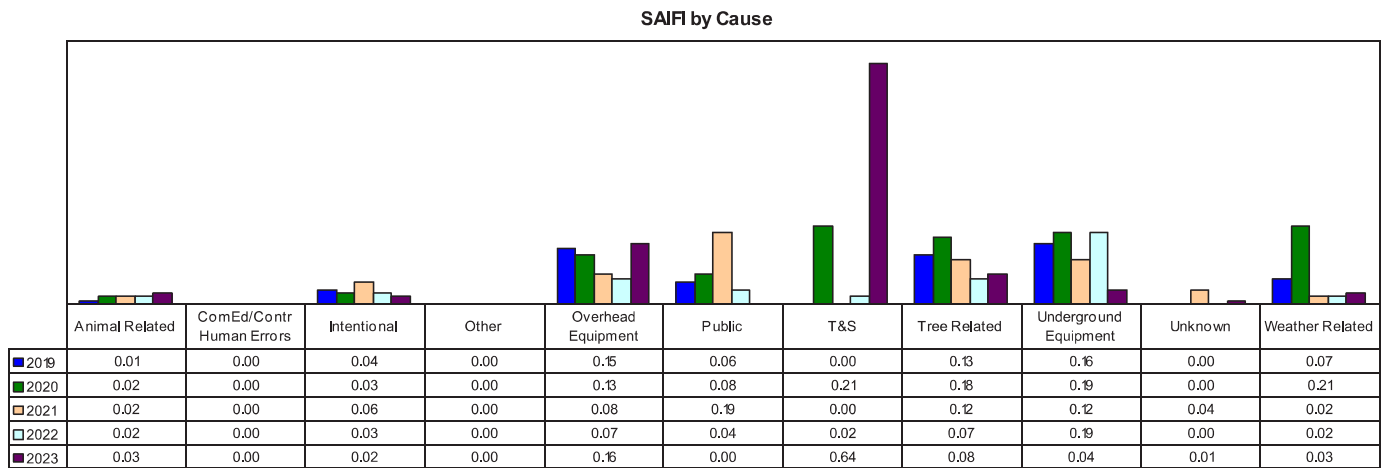
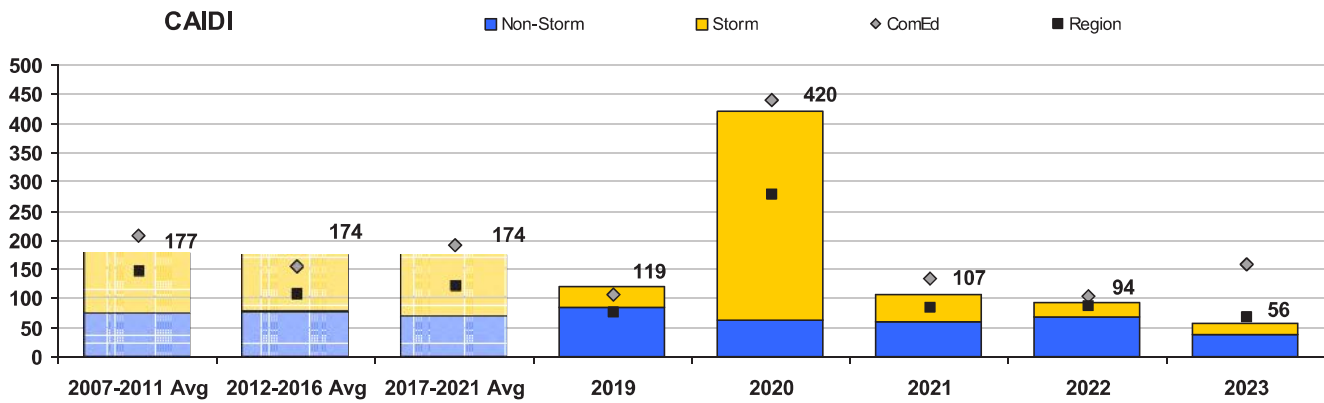
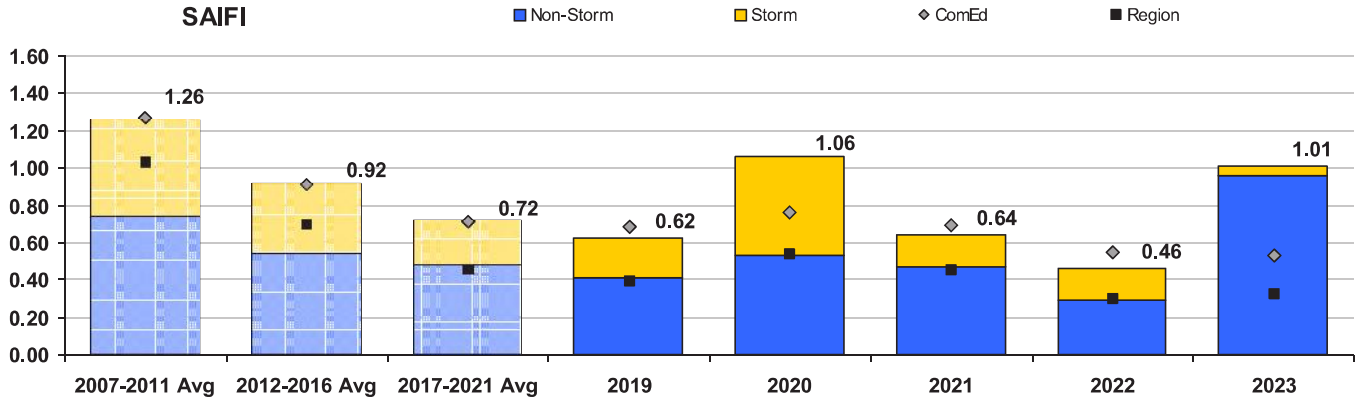


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 19 Reliability Performance Year End Report

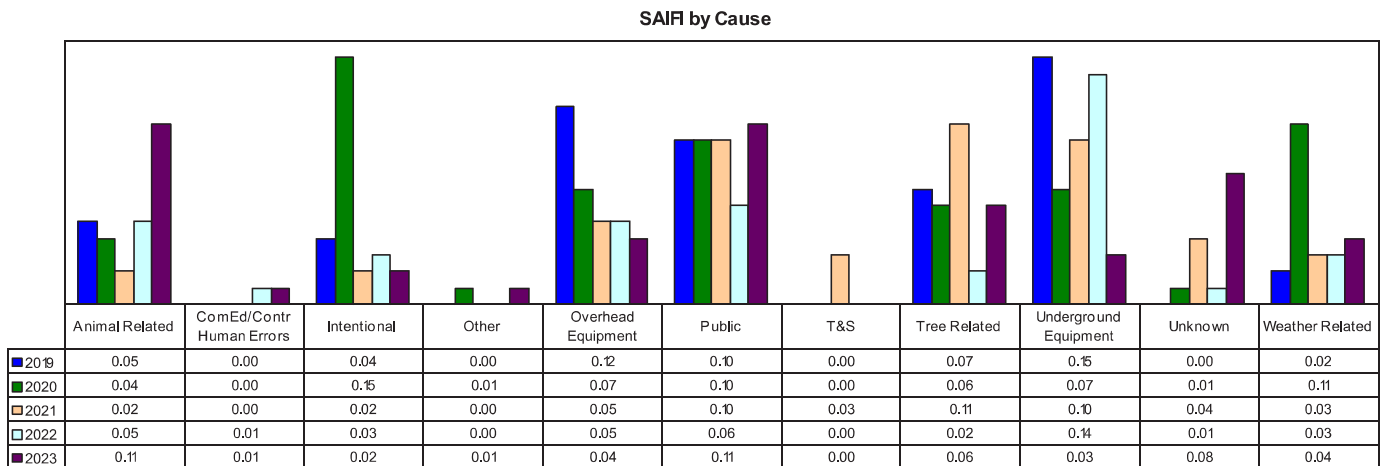
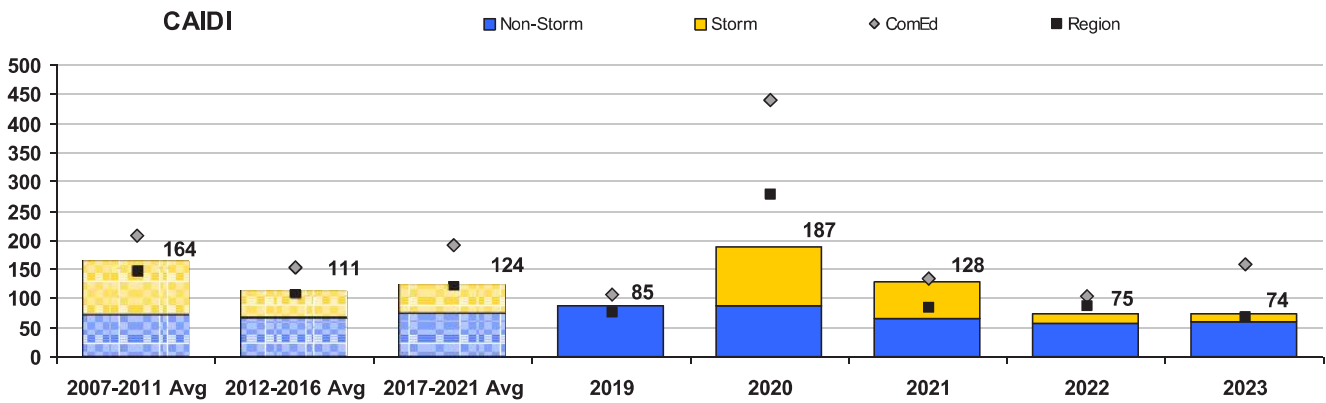
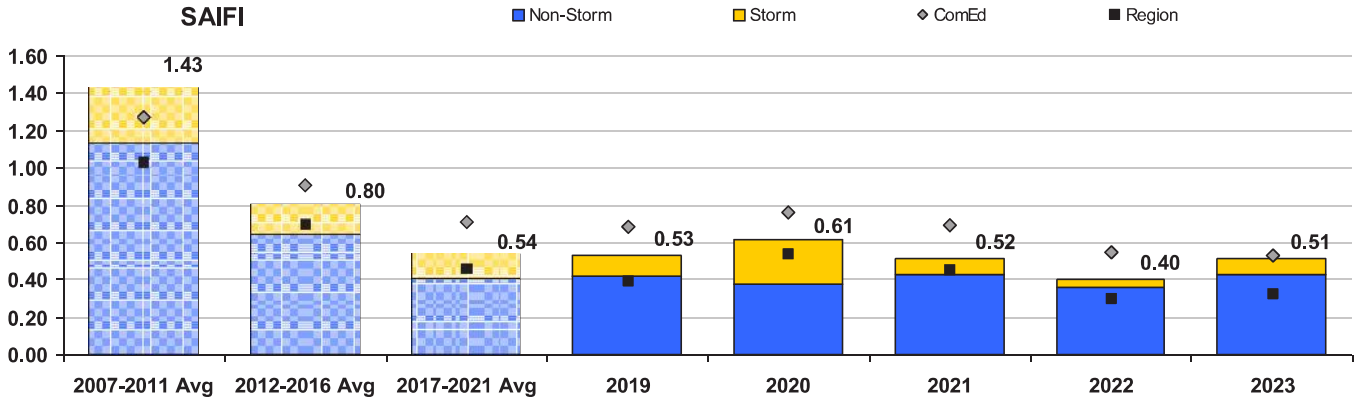


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 20 Reliability Performance Year End Report



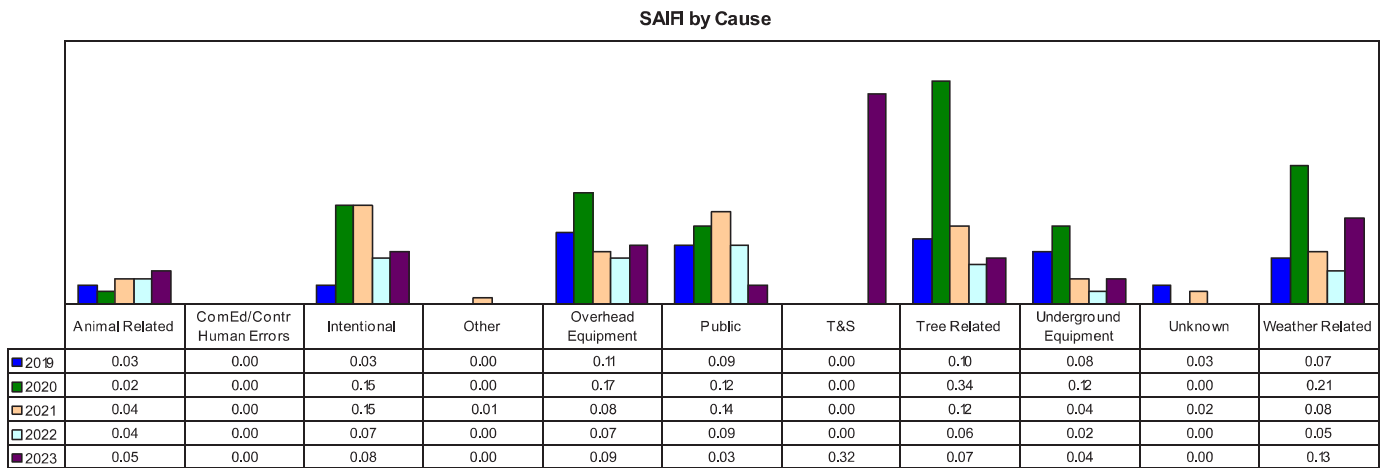
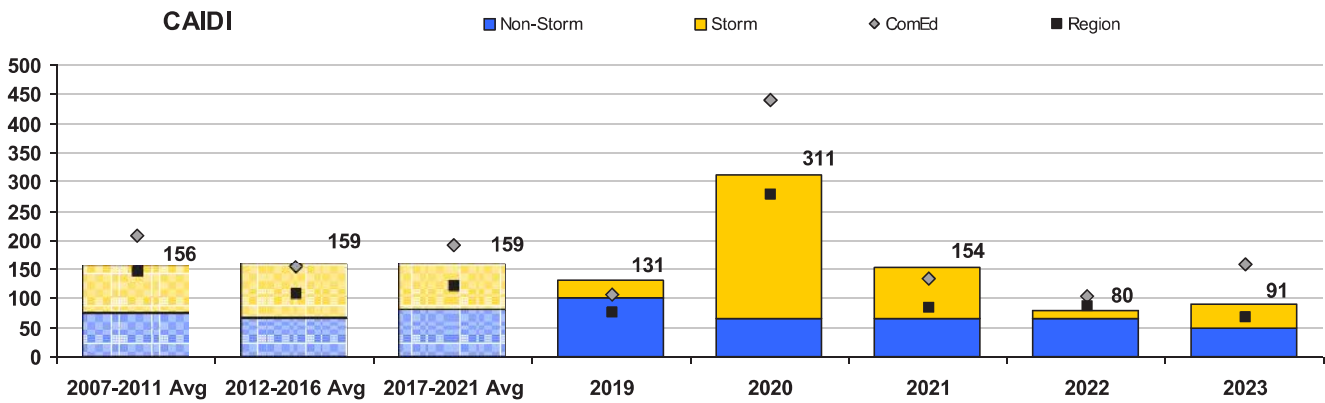
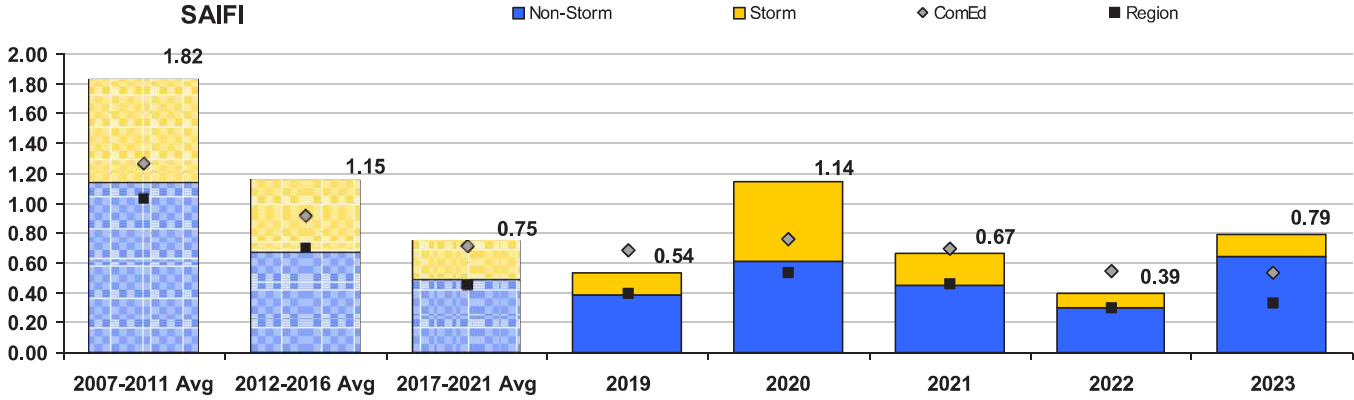
Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.





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## Ward 21 Reliability Performance Year End Report

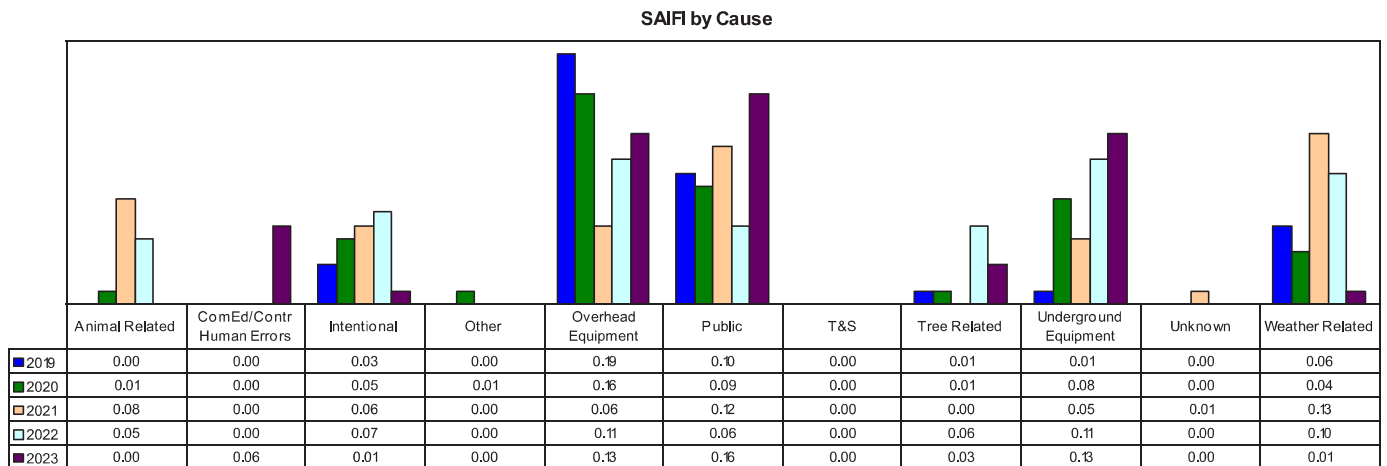
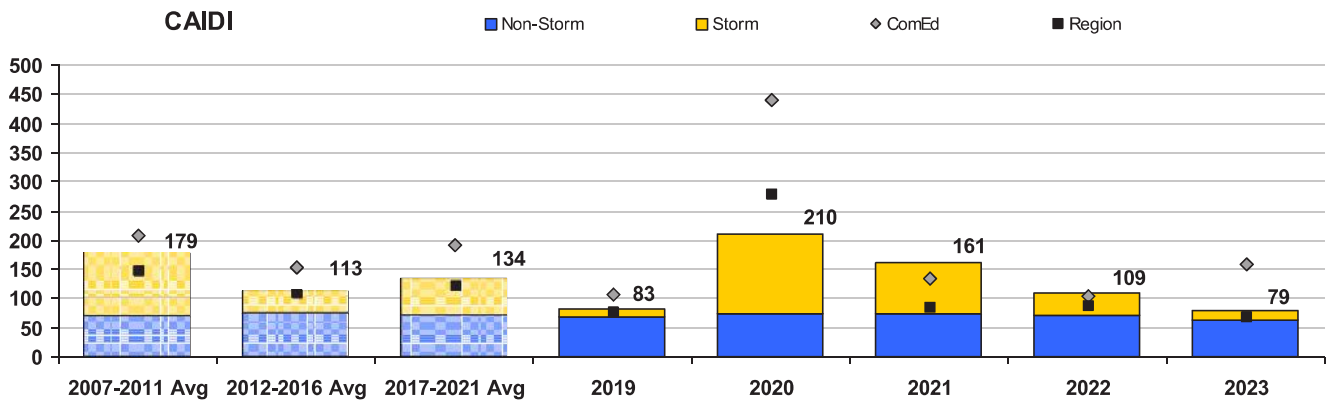
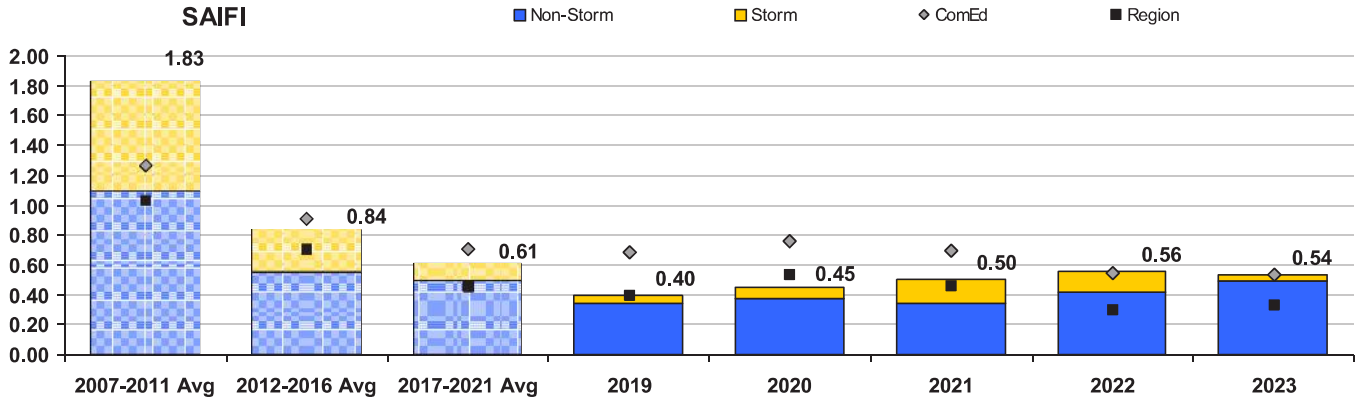


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 22 Reliability Performance Year End Report

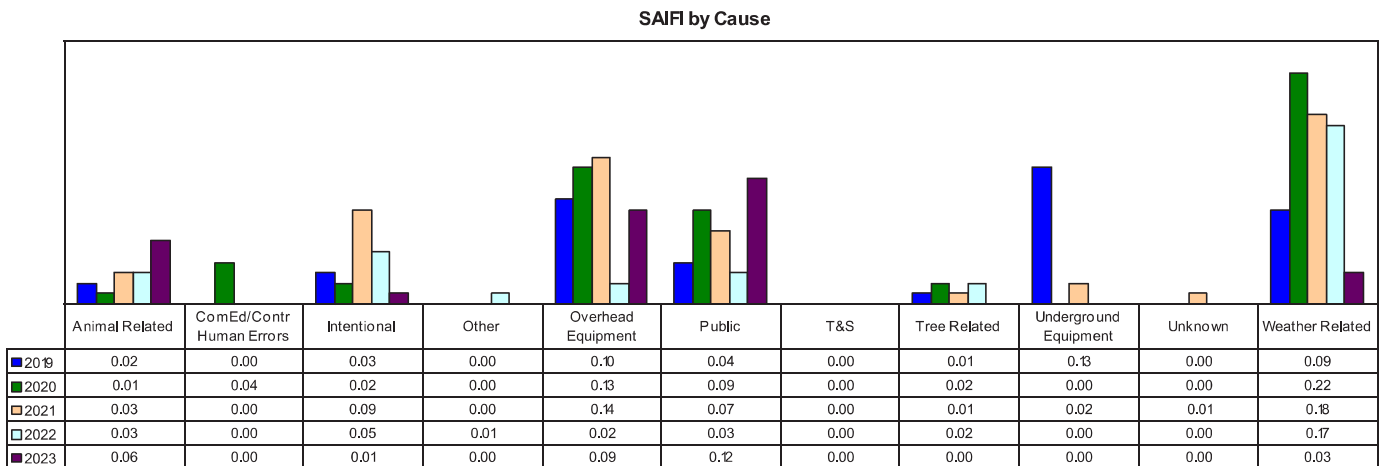
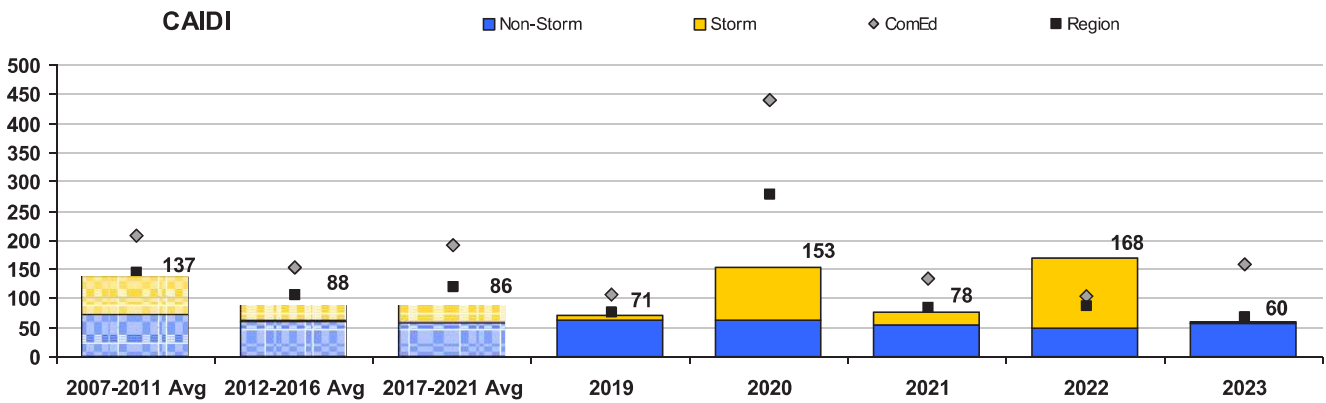
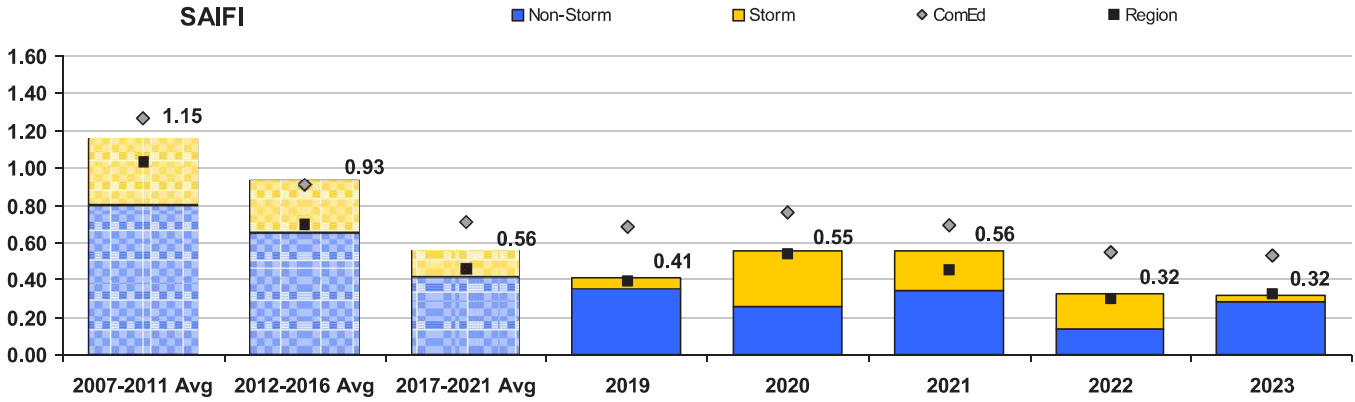


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 23 Reliability Performance Year End Report

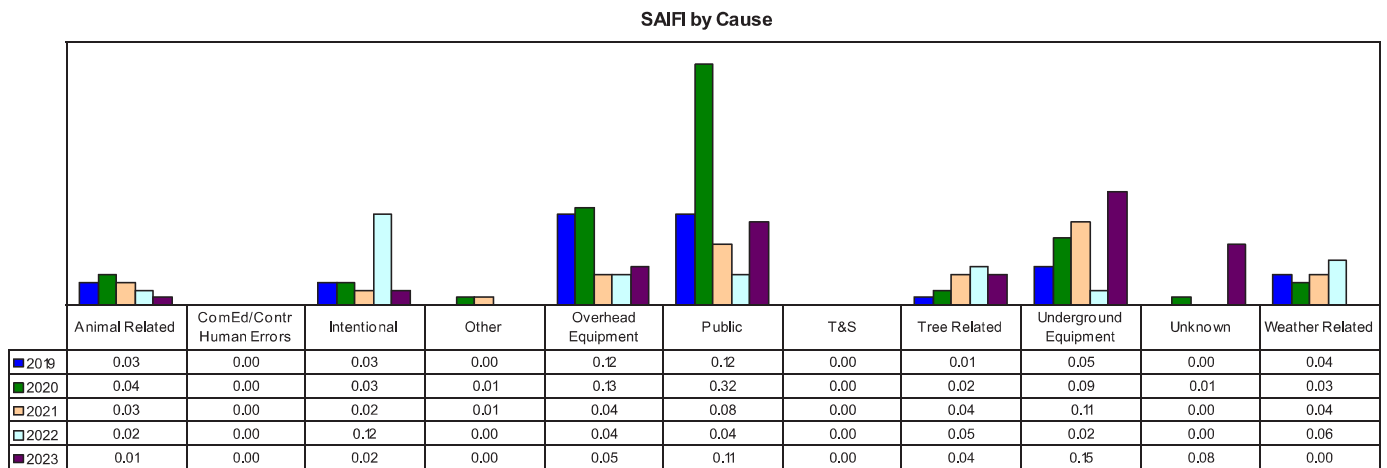
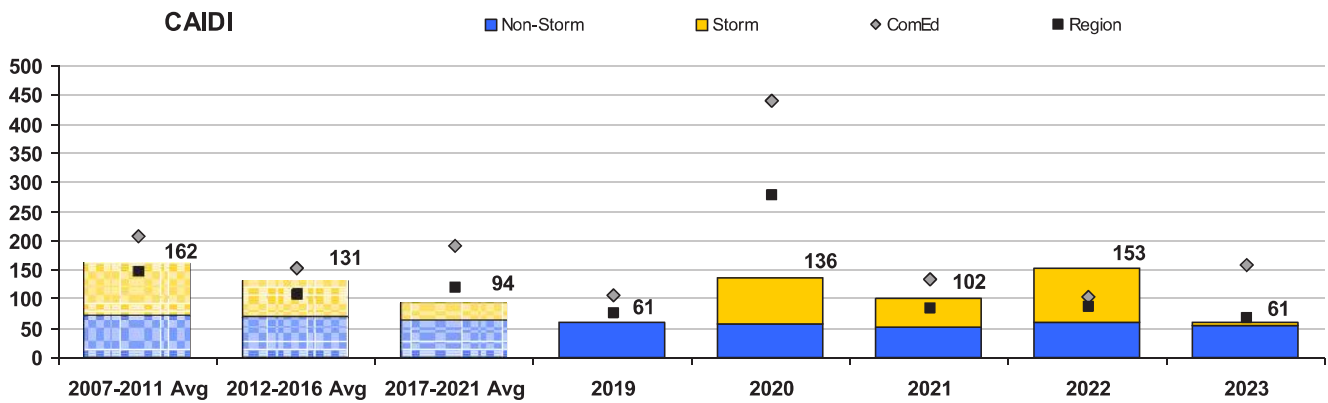
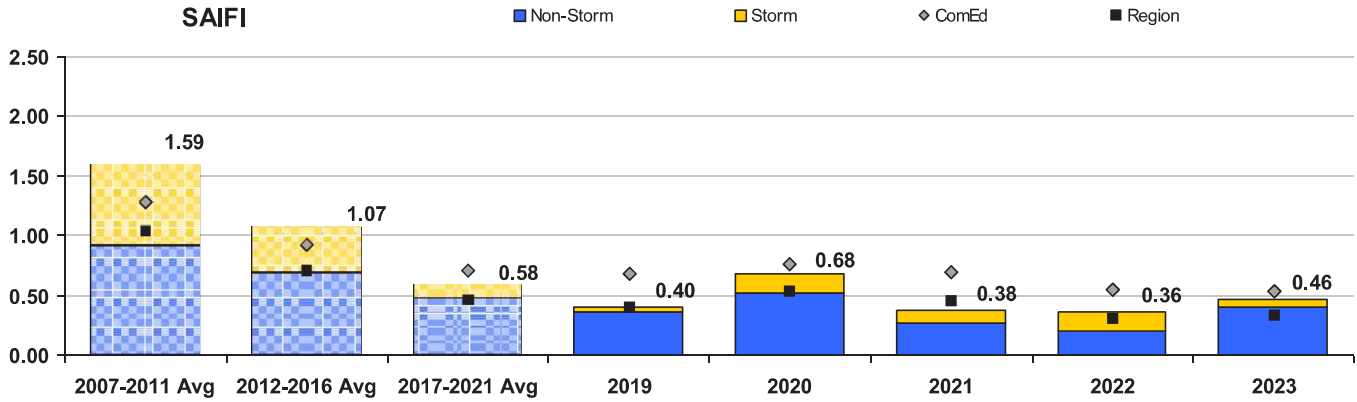


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 24 Reliability Performance Year End Report

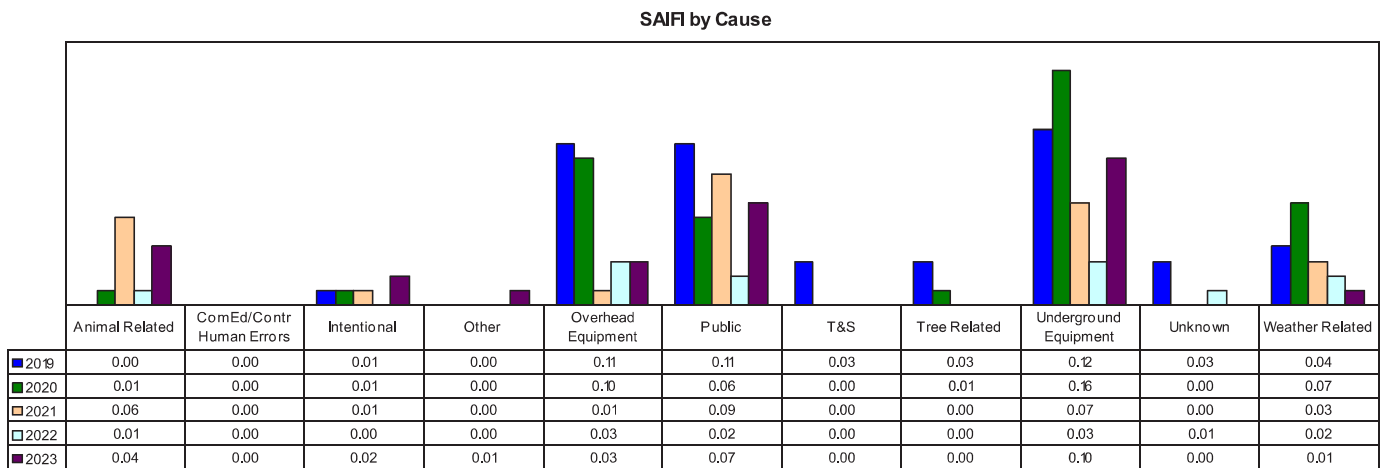
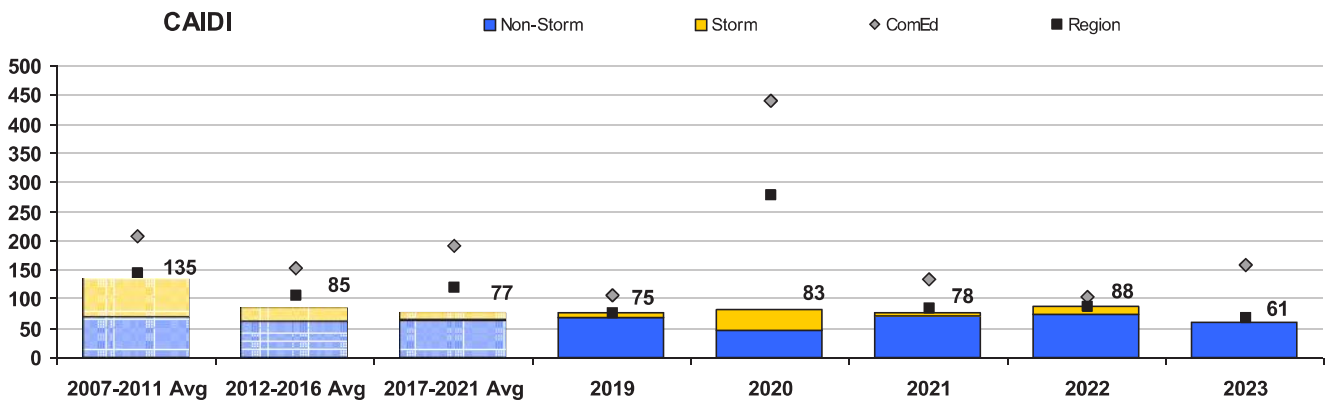
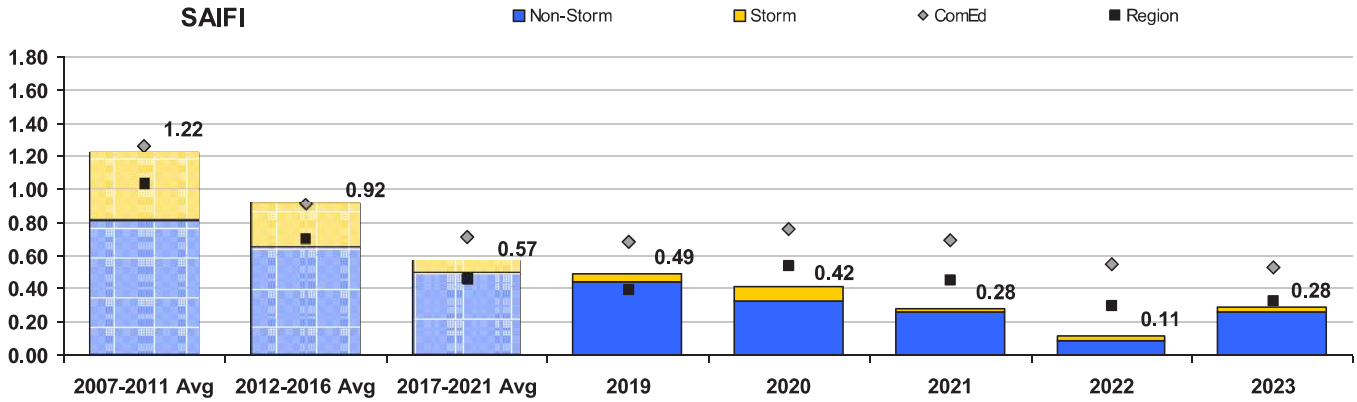


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 25 Reliability Performance Year End Report

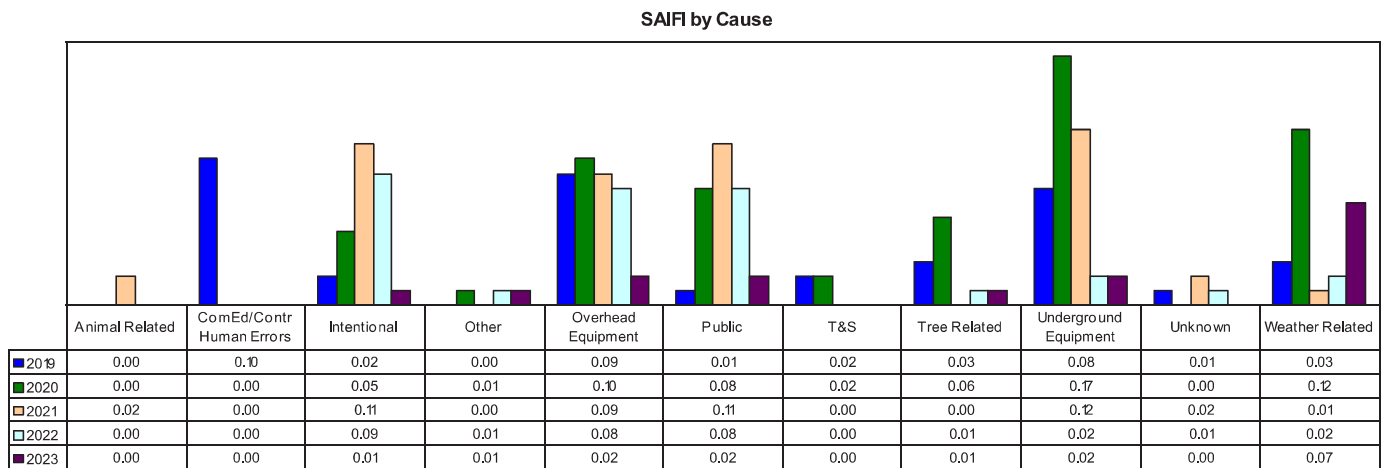
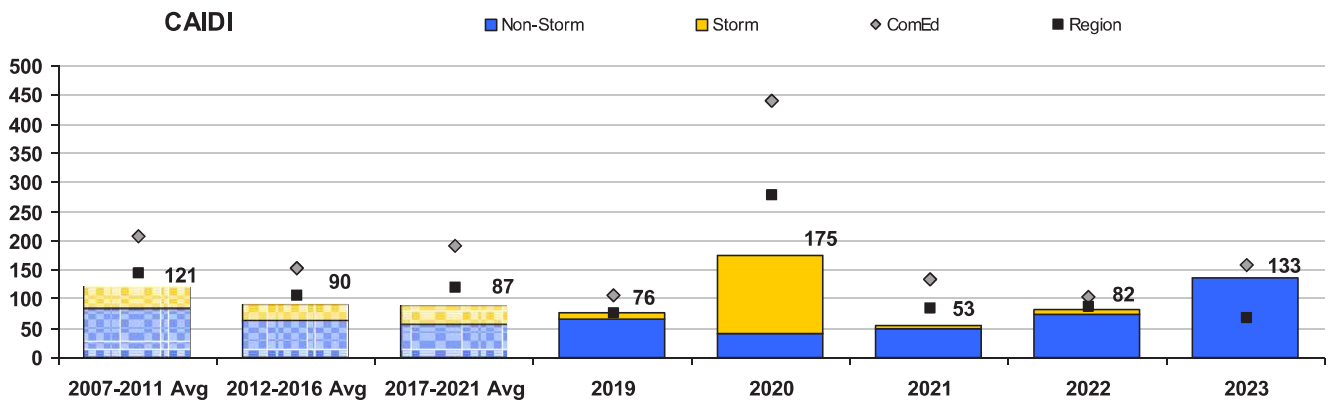
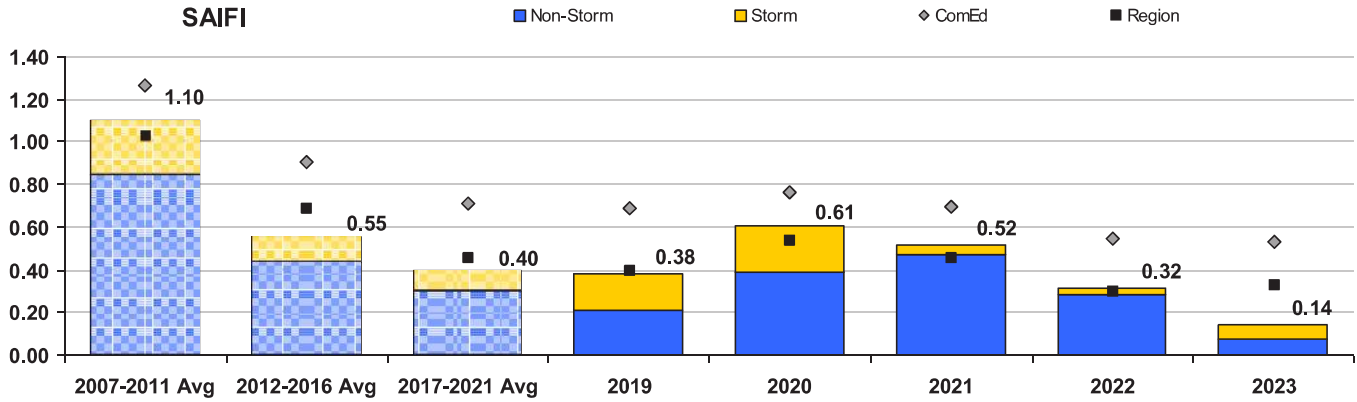


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 26 Reliability Performance Year End Report

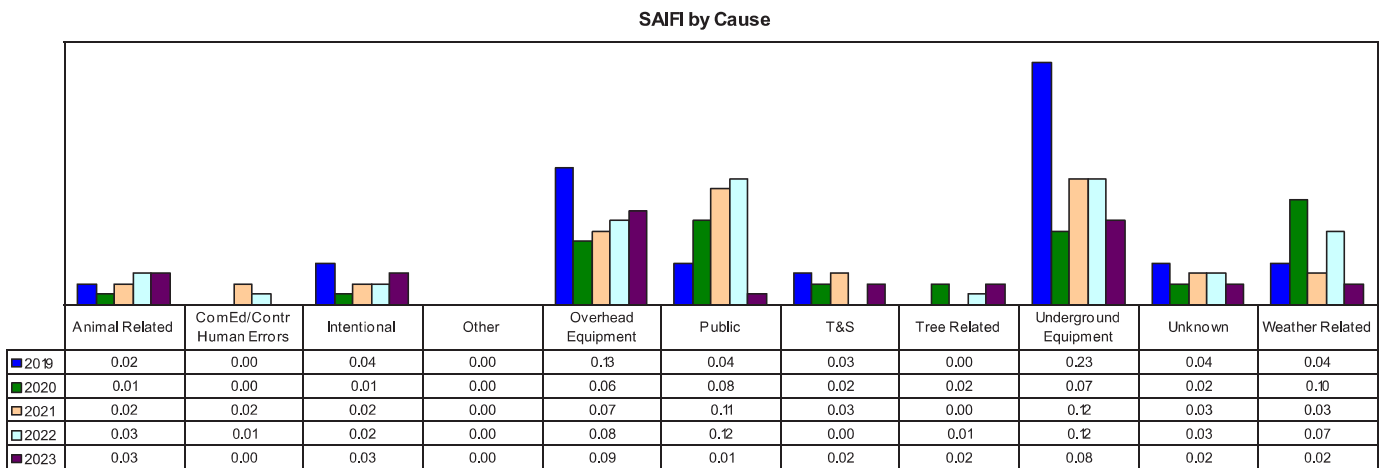
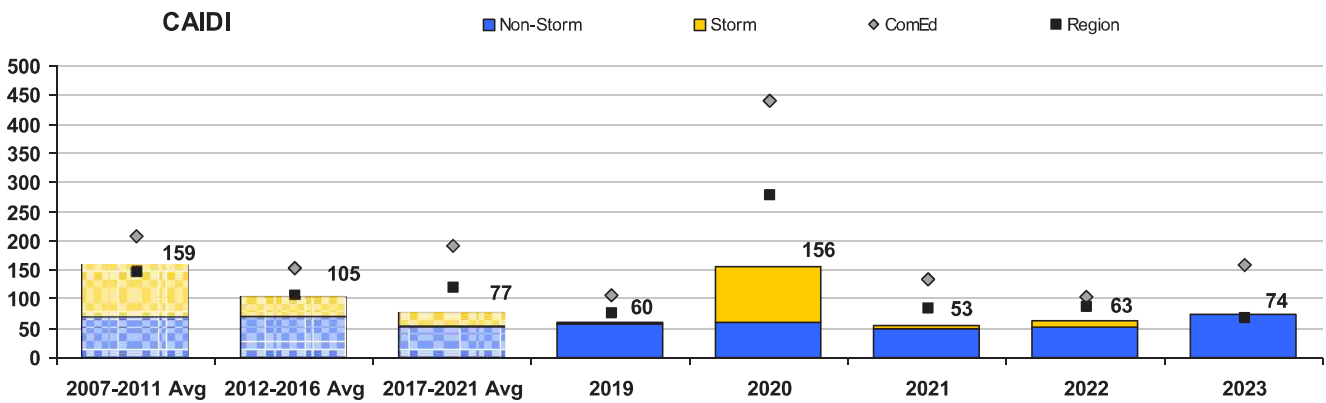
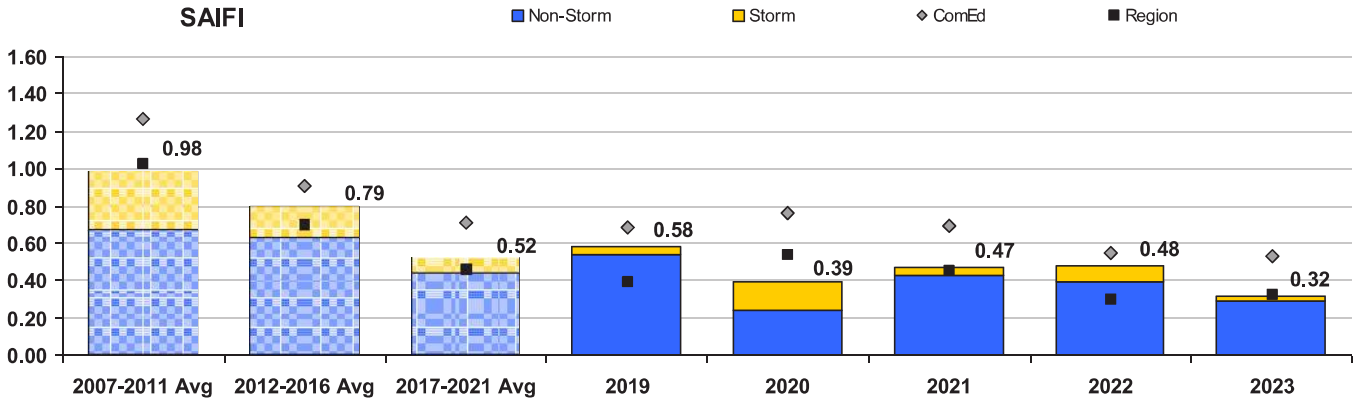


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 27 Reliability Performance Year End Report

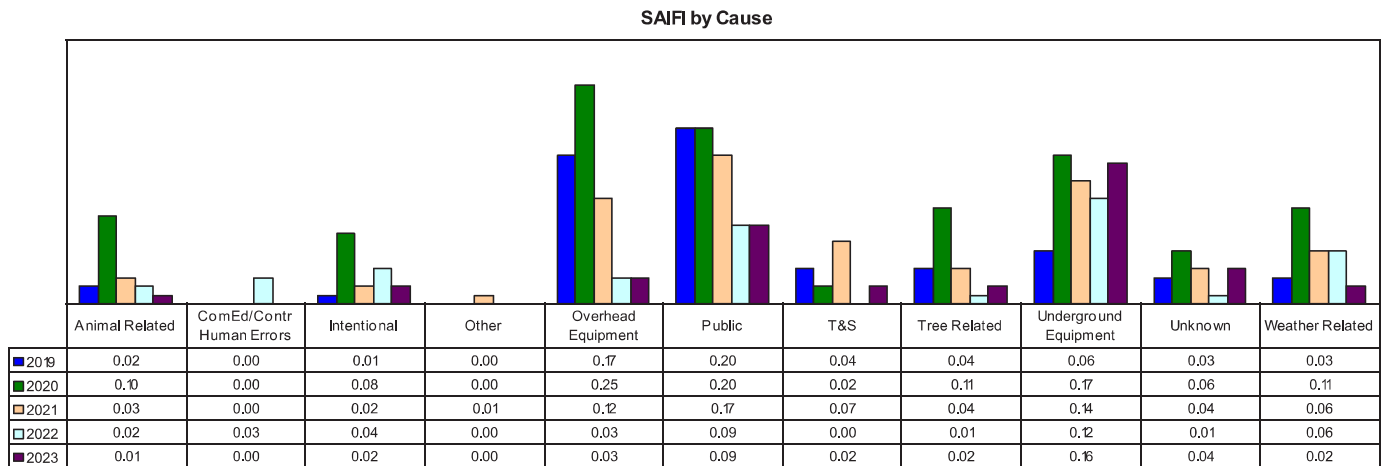
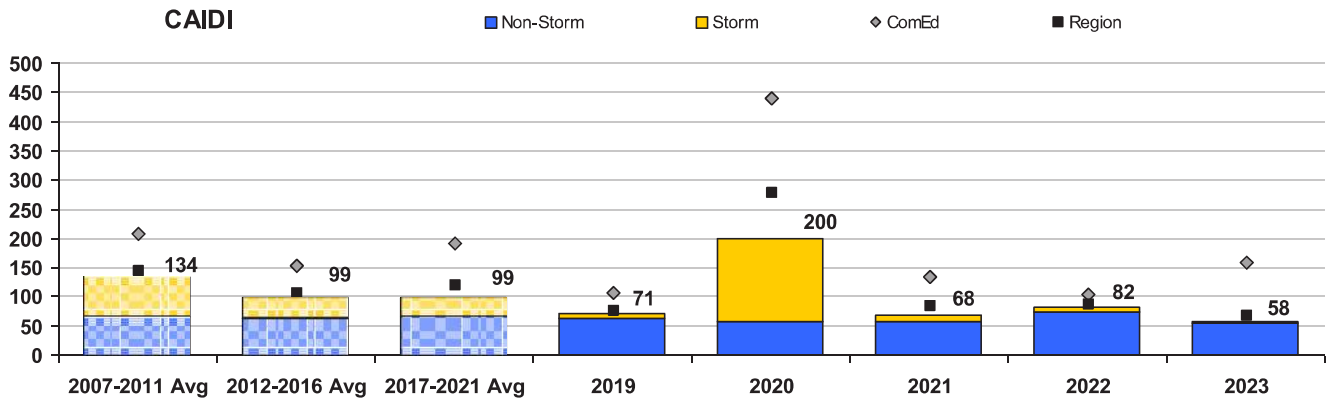
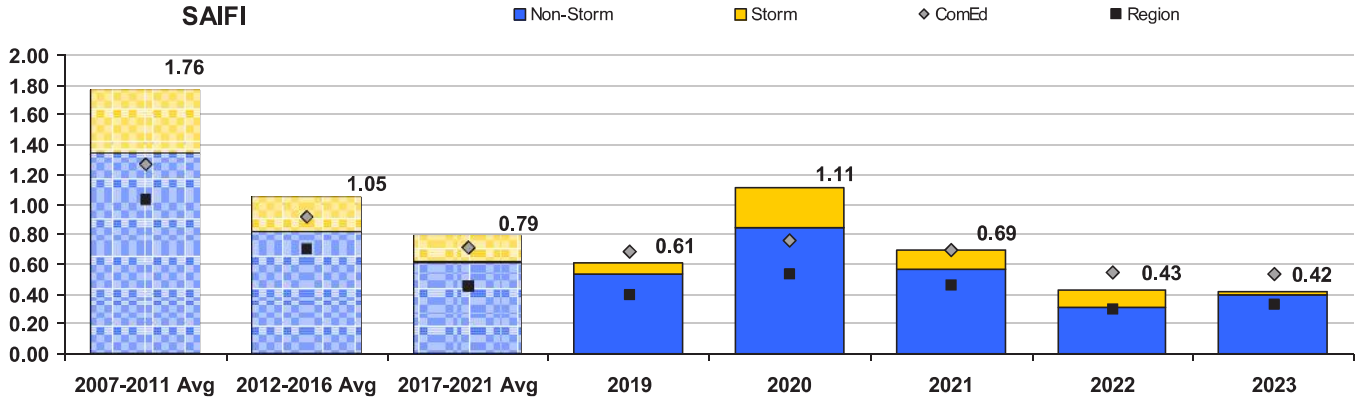


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 28 Reliability Performance Year End Report



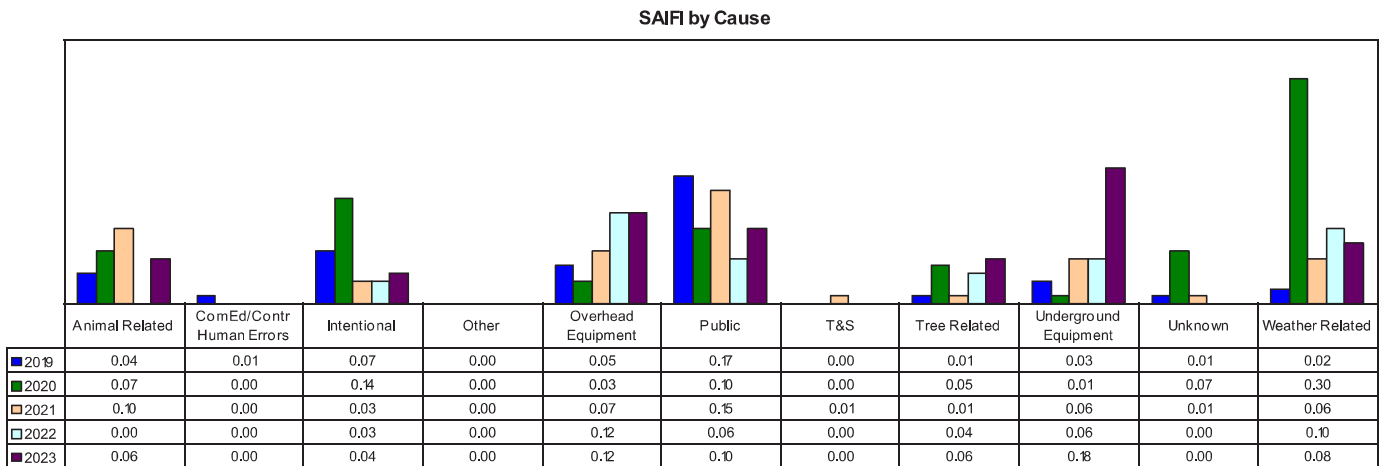
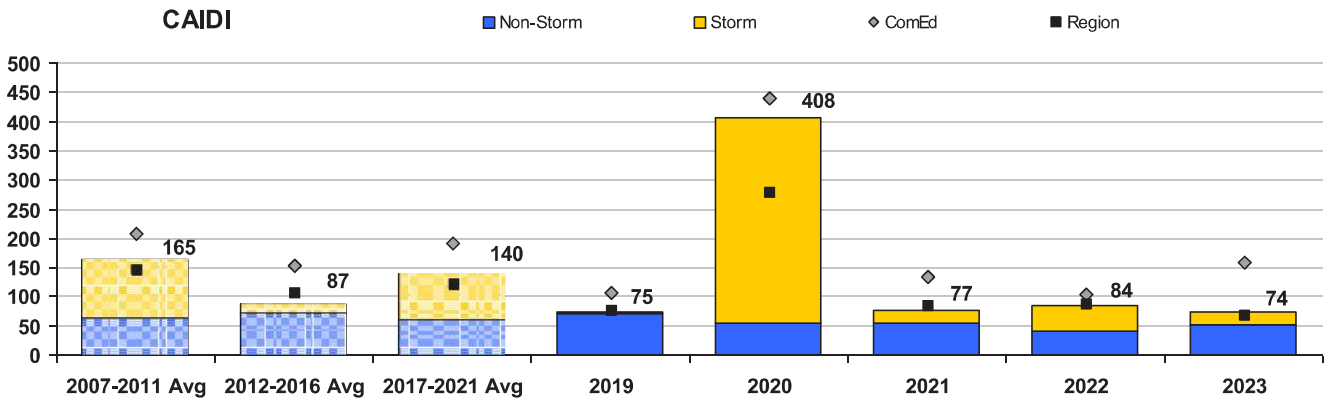
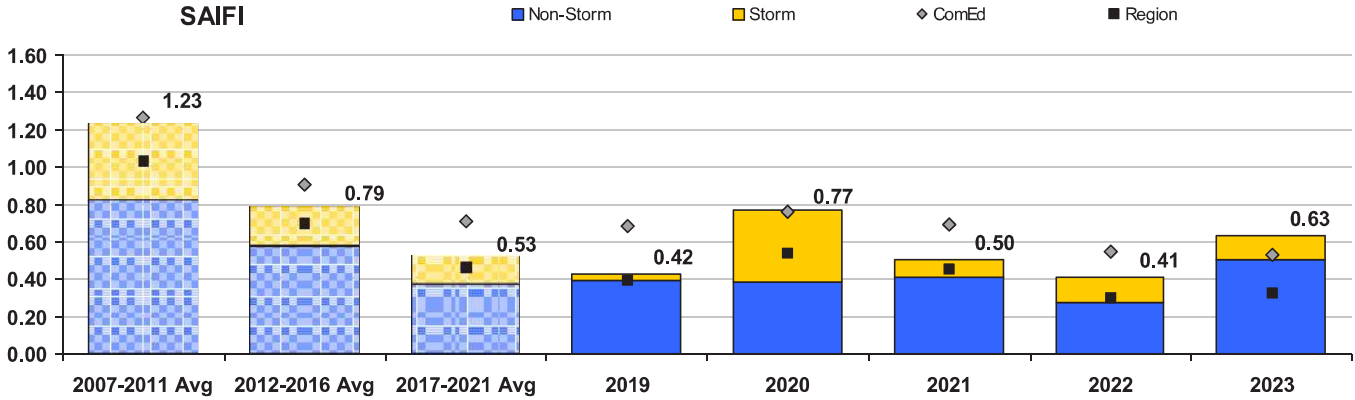
Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.





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## Ward 29 Reliability Performance Year End Report

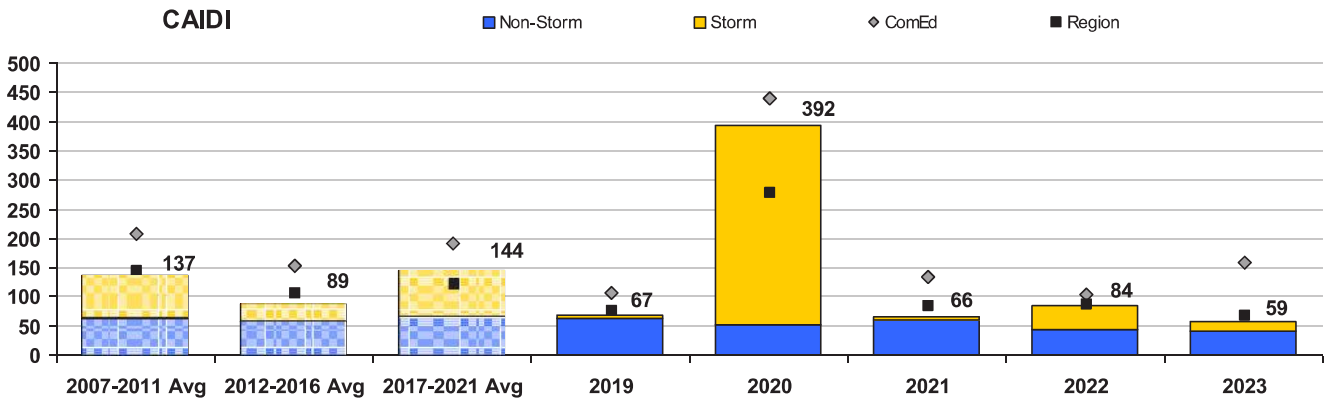
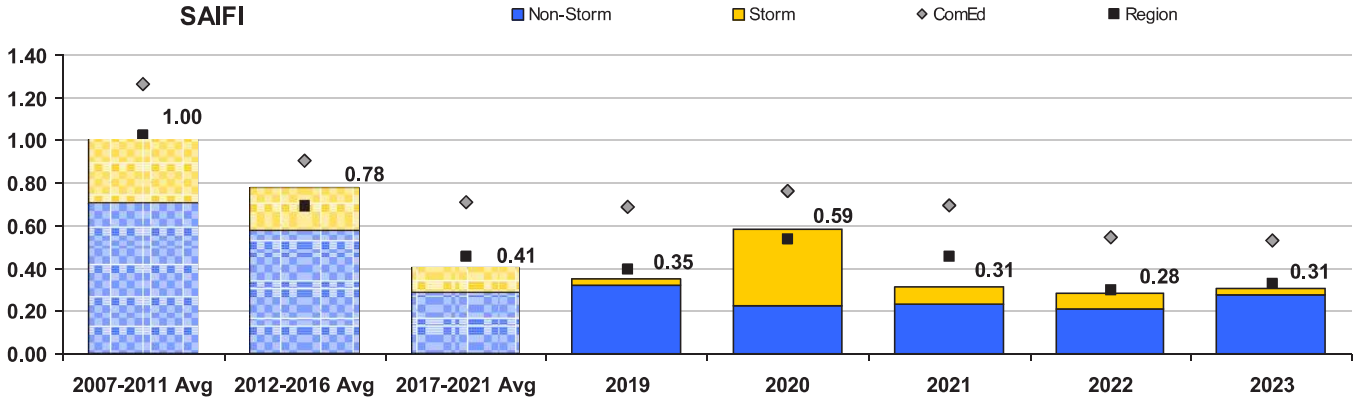


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.

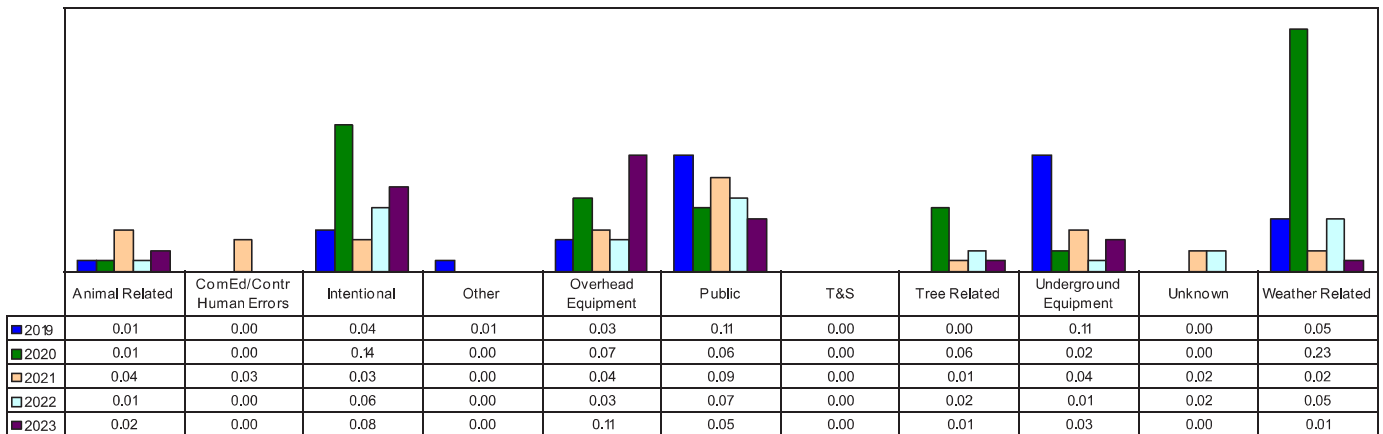


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## Ward 30 Reliability Performance Year End Report



SAIFI by Cause

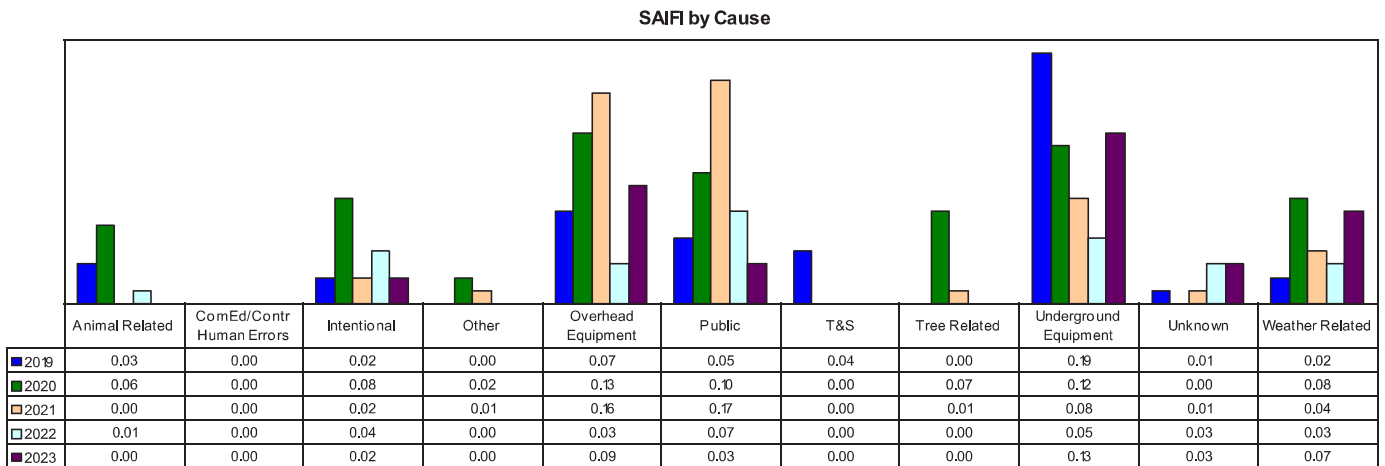
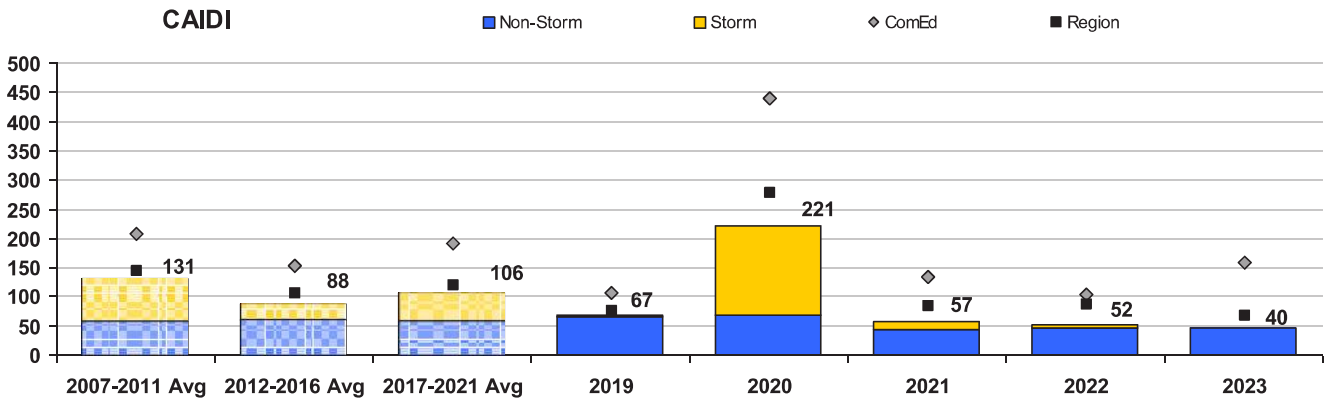
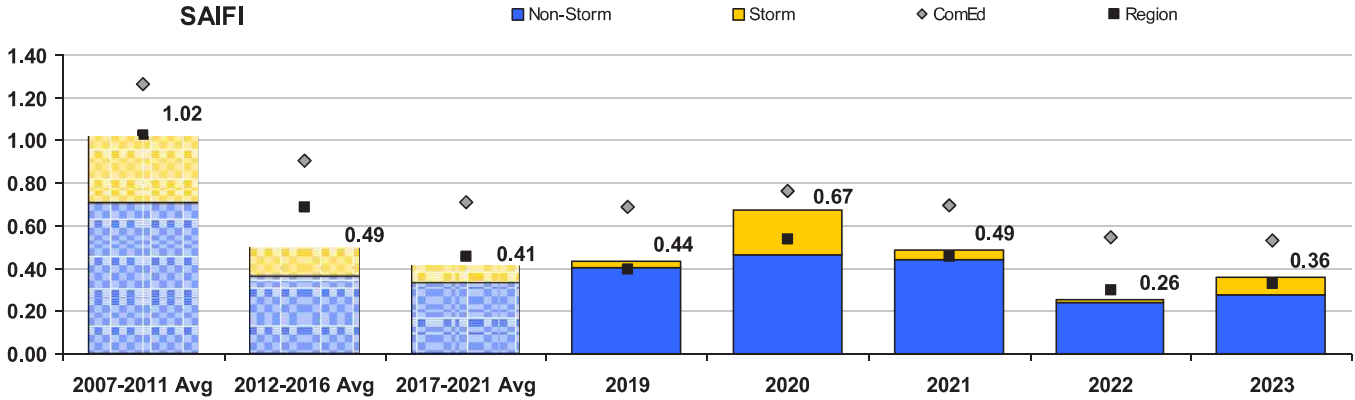


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 31 Reliability Performance Year End Report

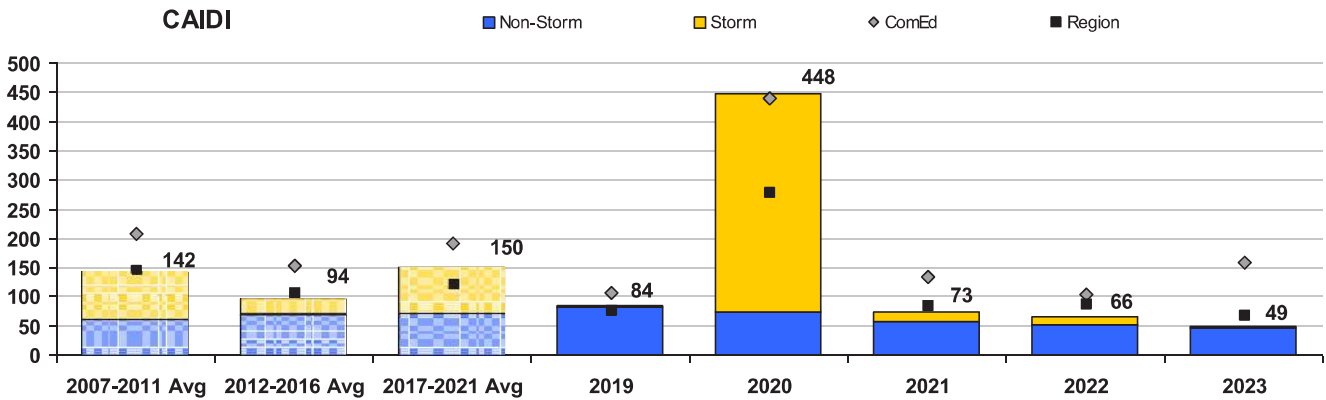
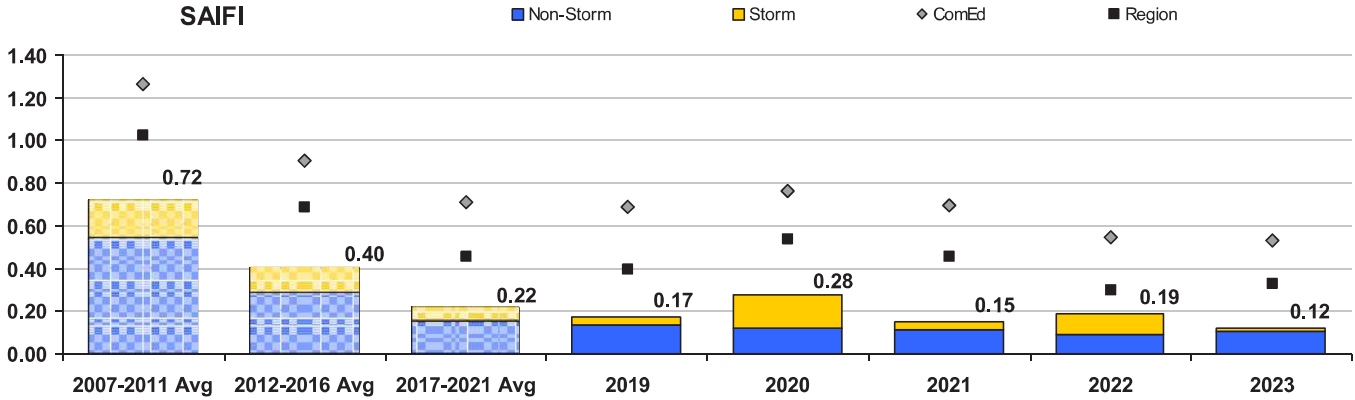


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.

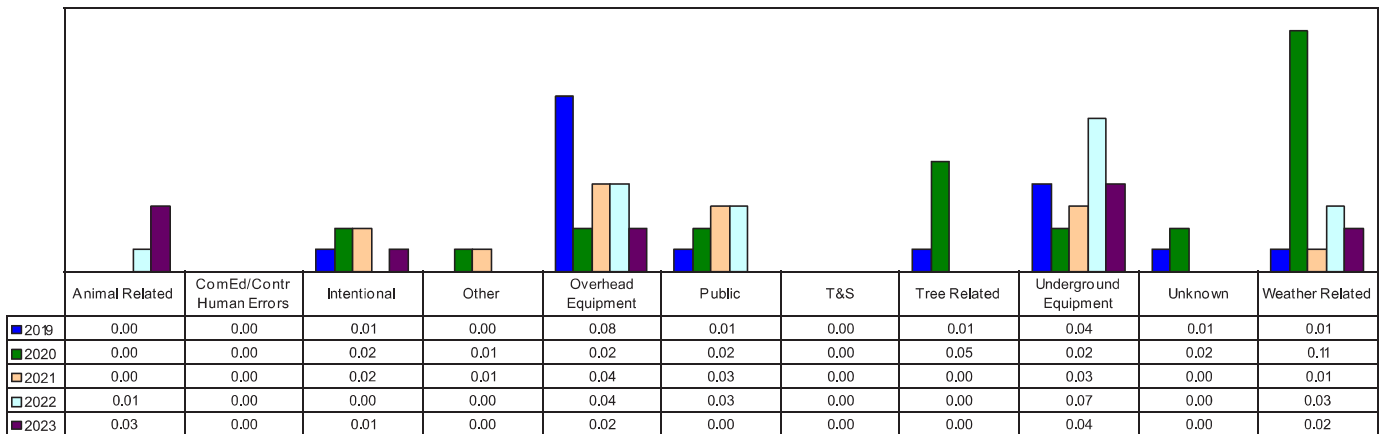


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## Ward 32 Reliability Performance Year End Report



SAIFI by Cause

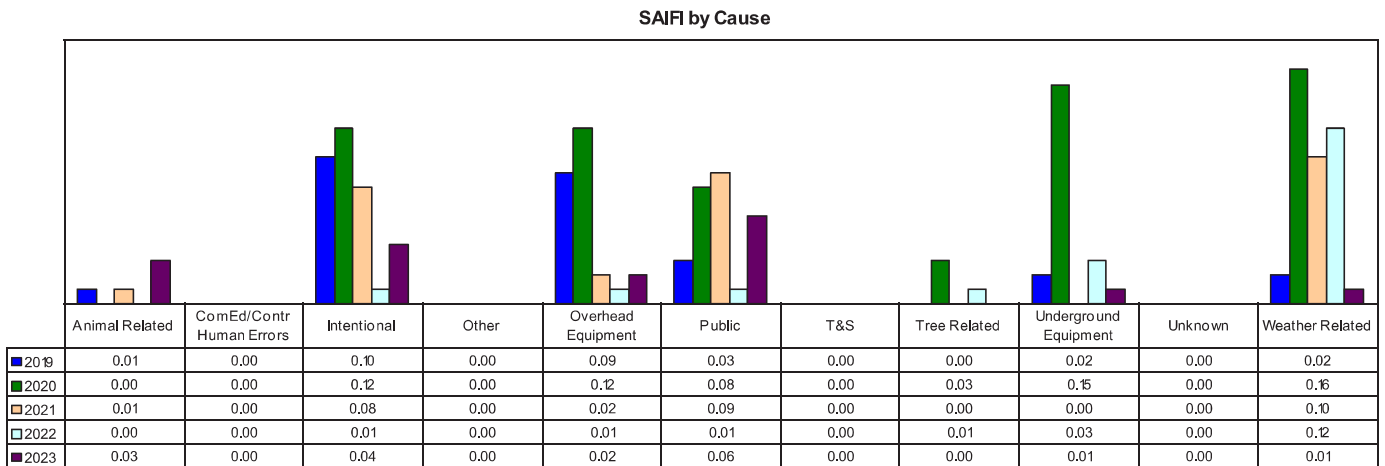
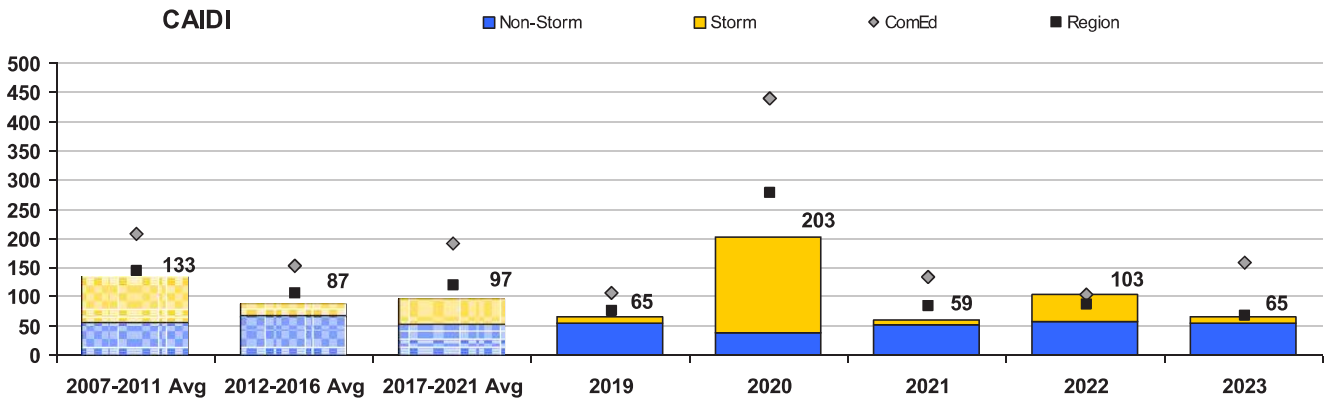
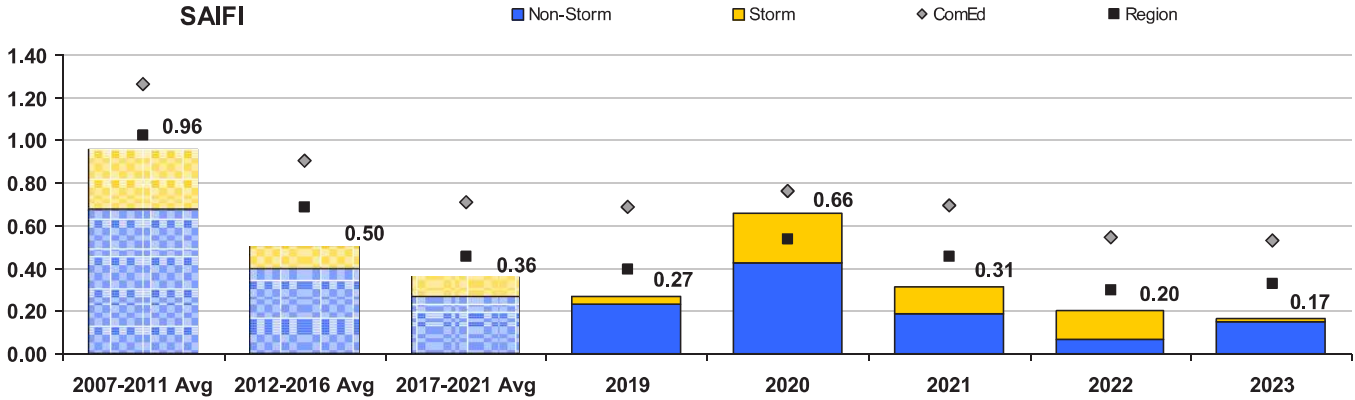


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 33 Reliability Performance Year End Report

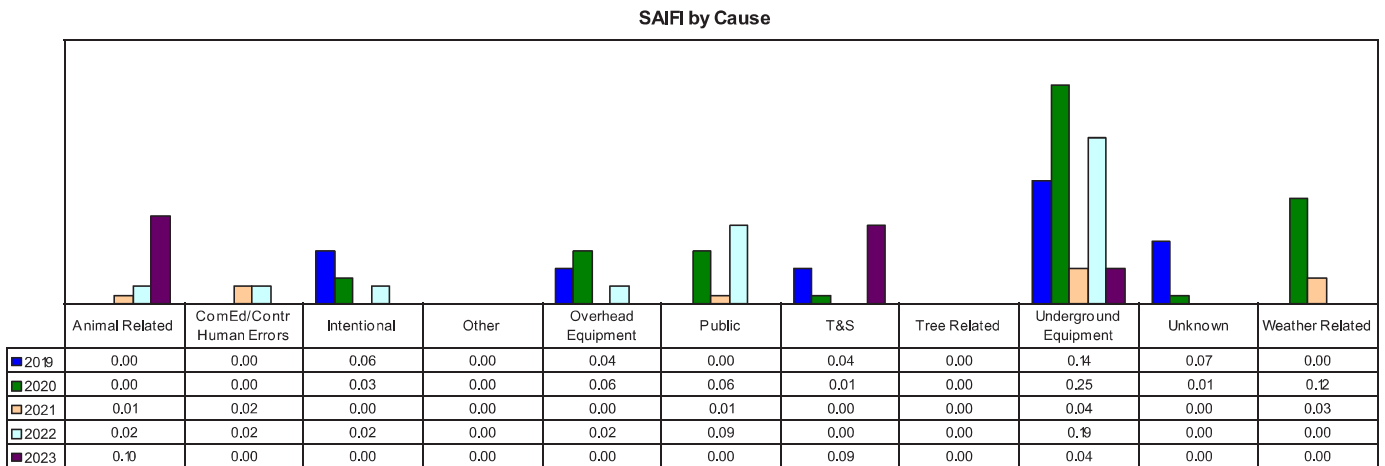
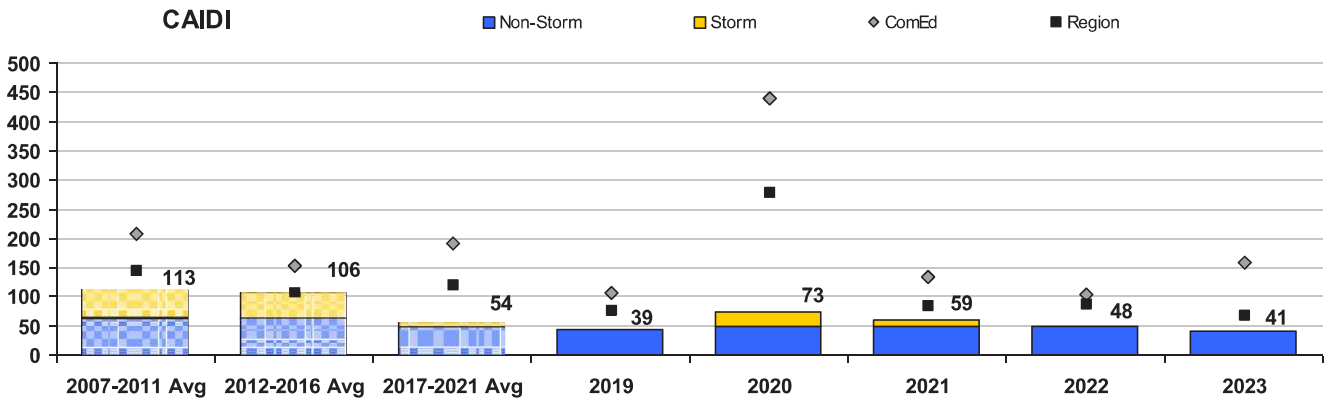
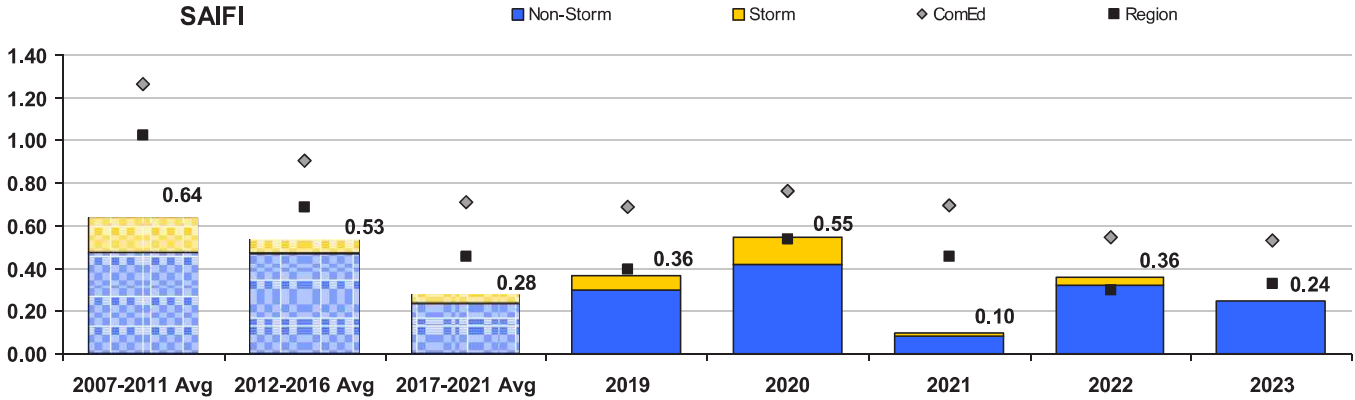


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 34 Reliability Performance Year End Report

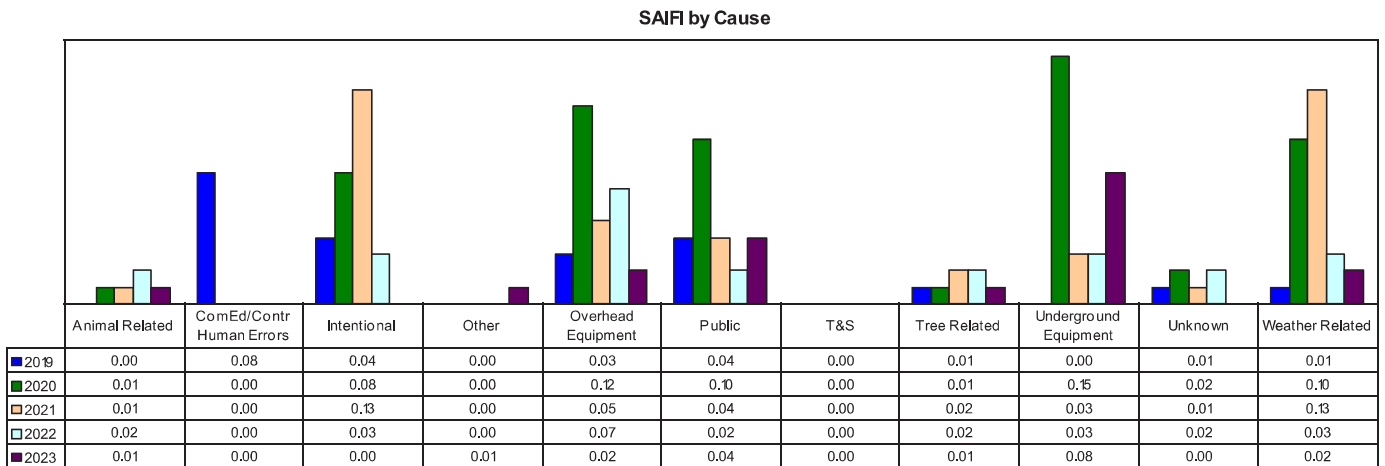
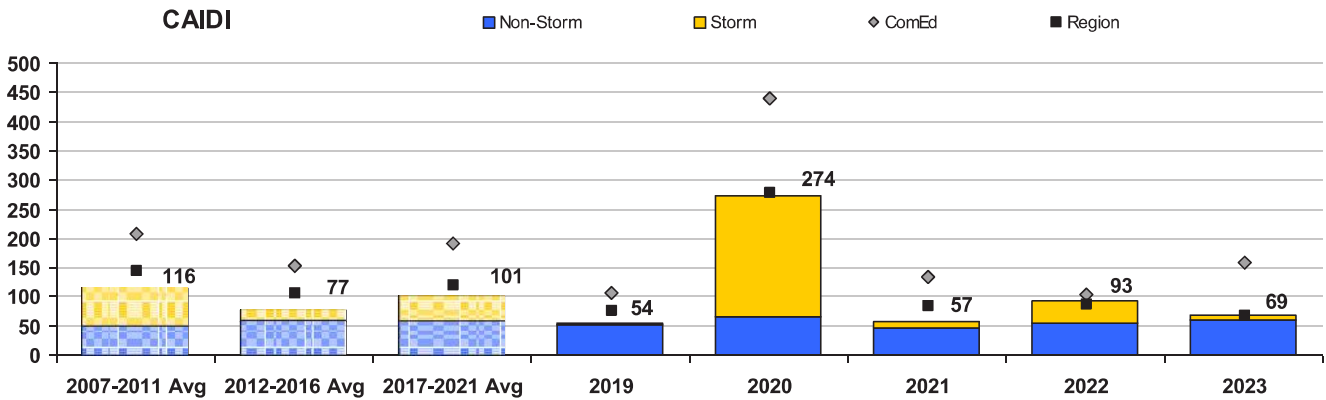
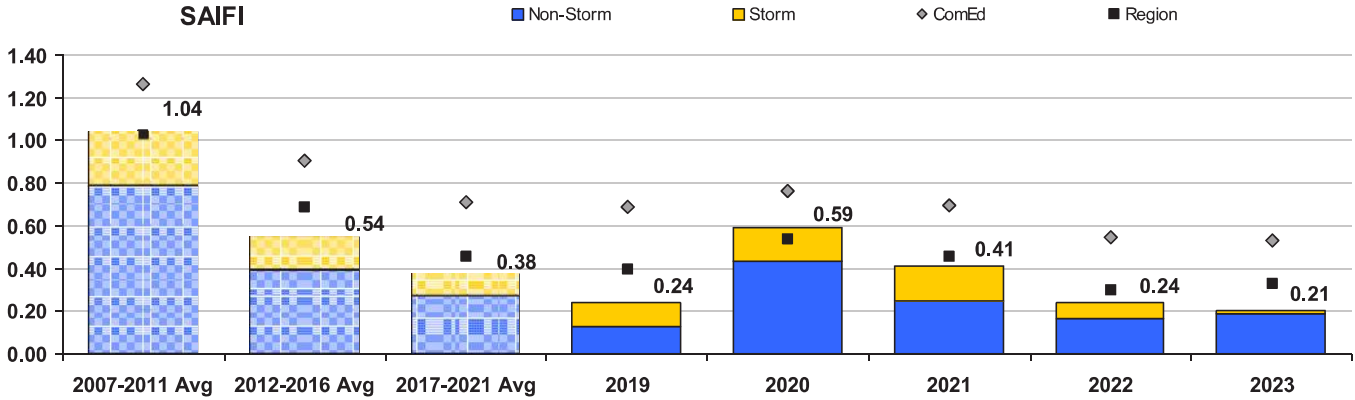


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 35 Reliability Performance Year End Report

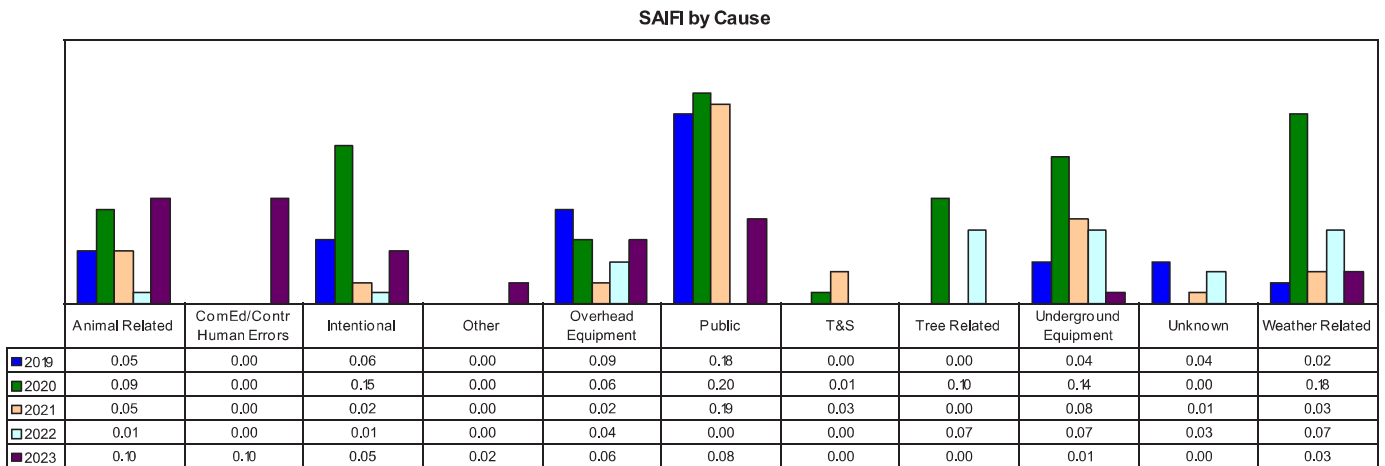
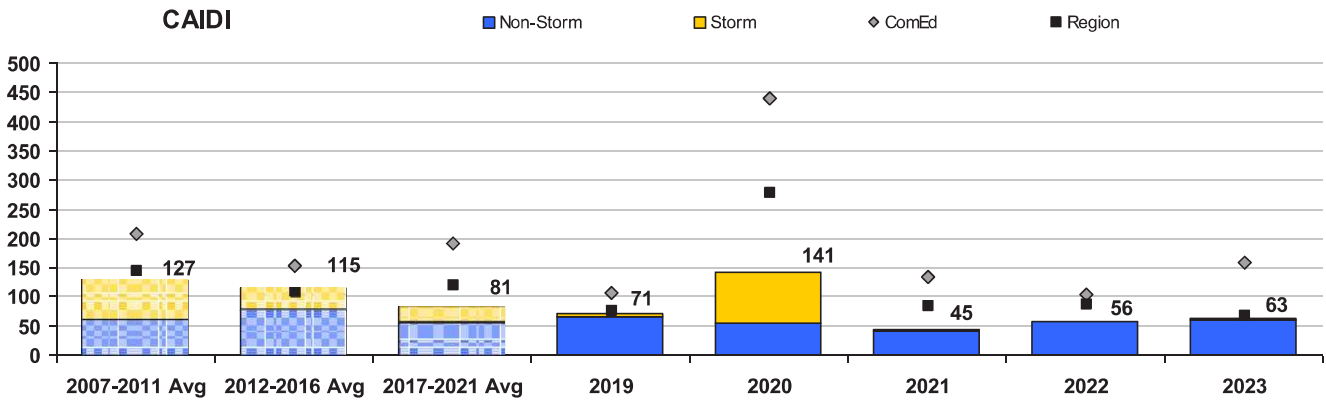
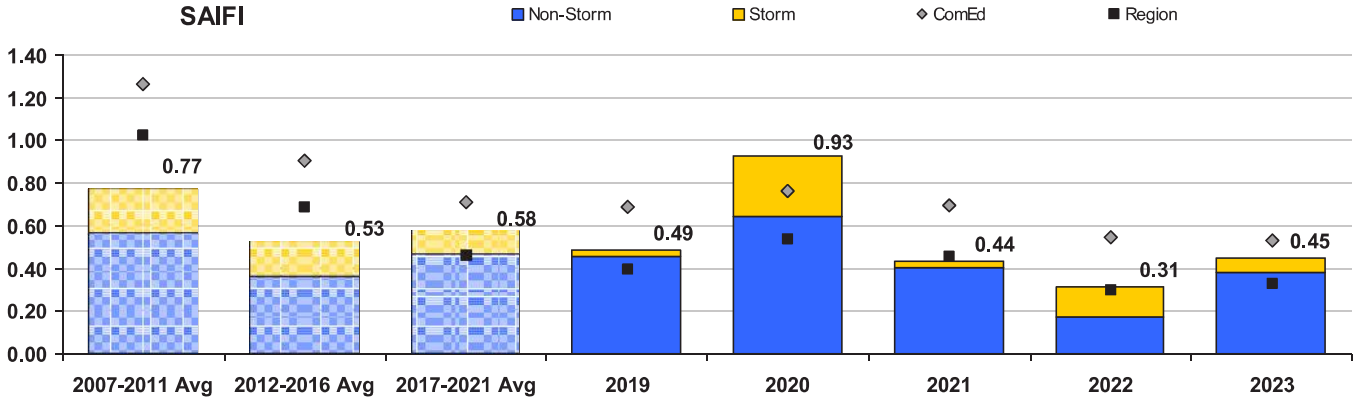


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 36 Reliability Performance Year End Report



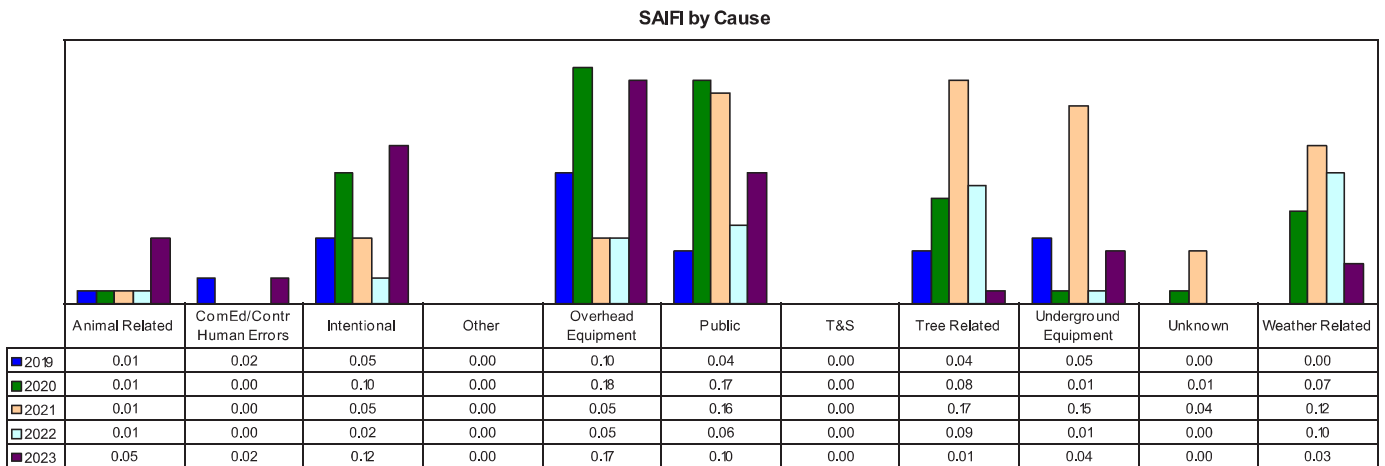
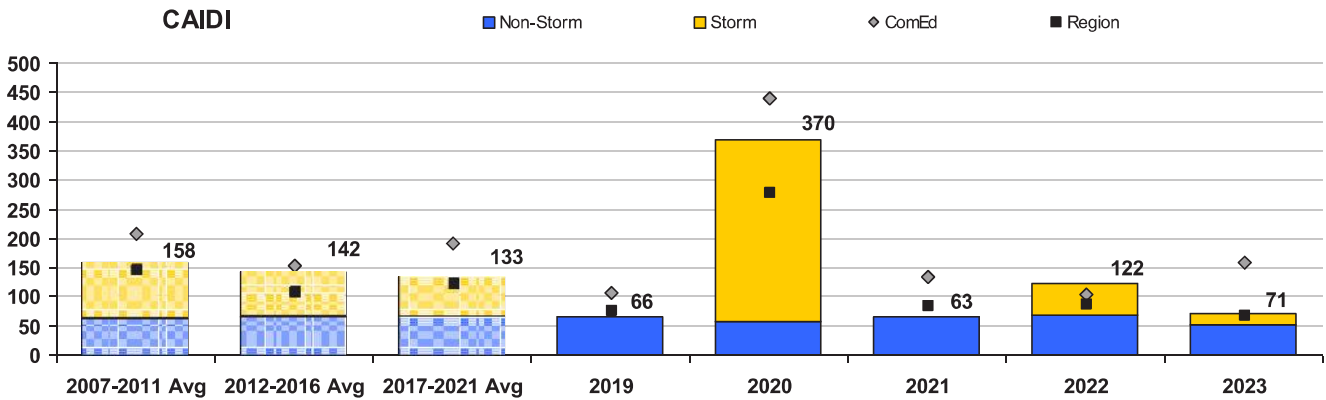
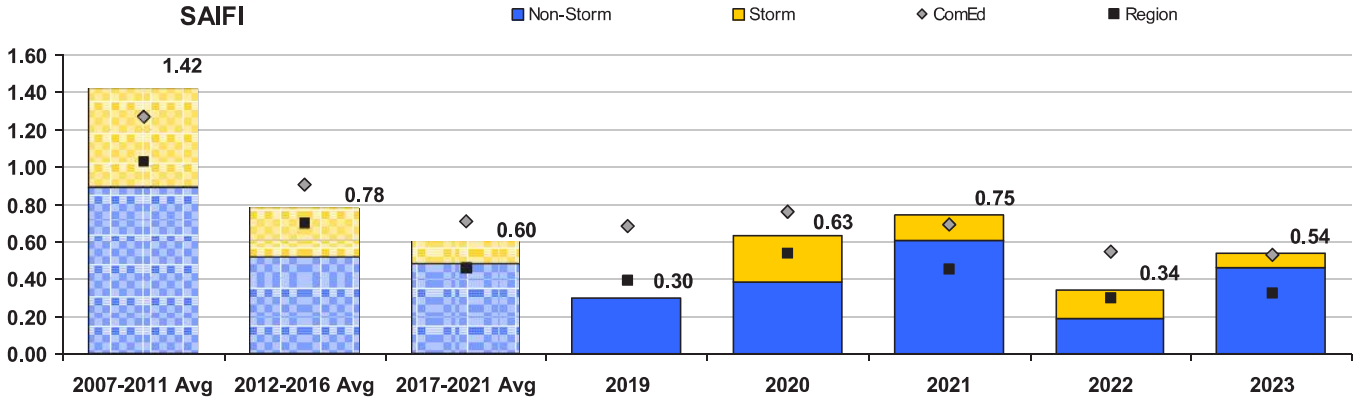
Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.





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## Ward 37 Reliability Performance Year End Report

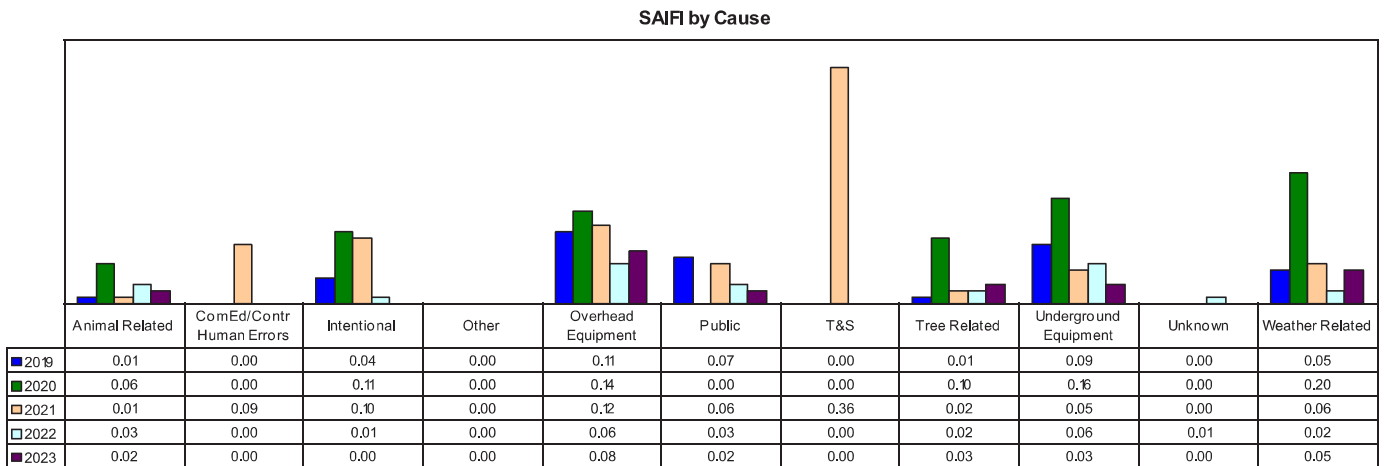
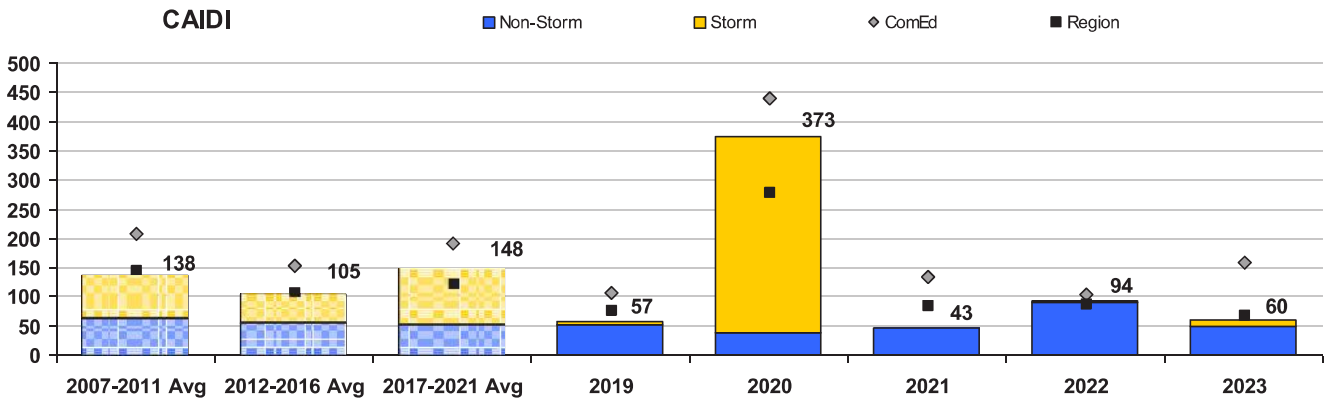
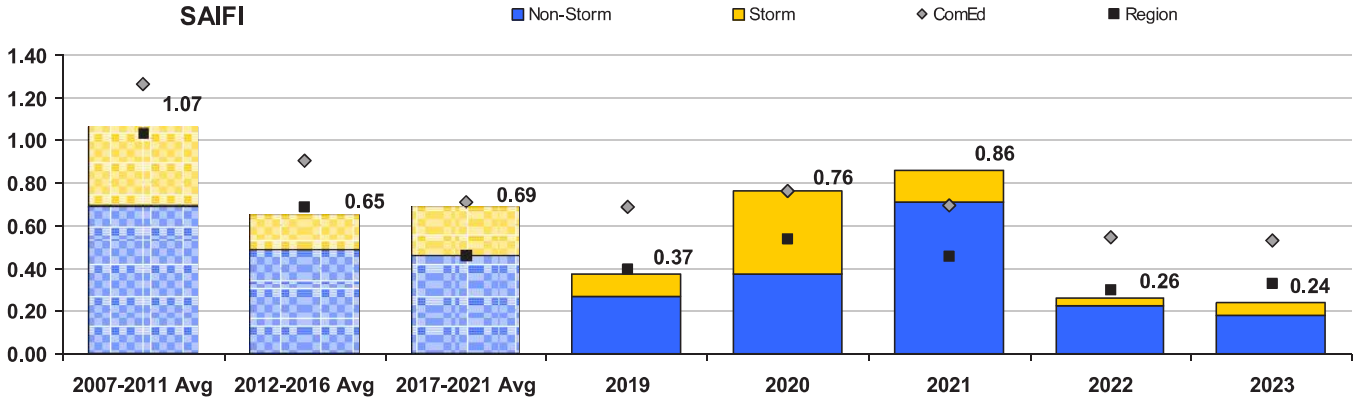


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 38 Reliability Performance Year End Report

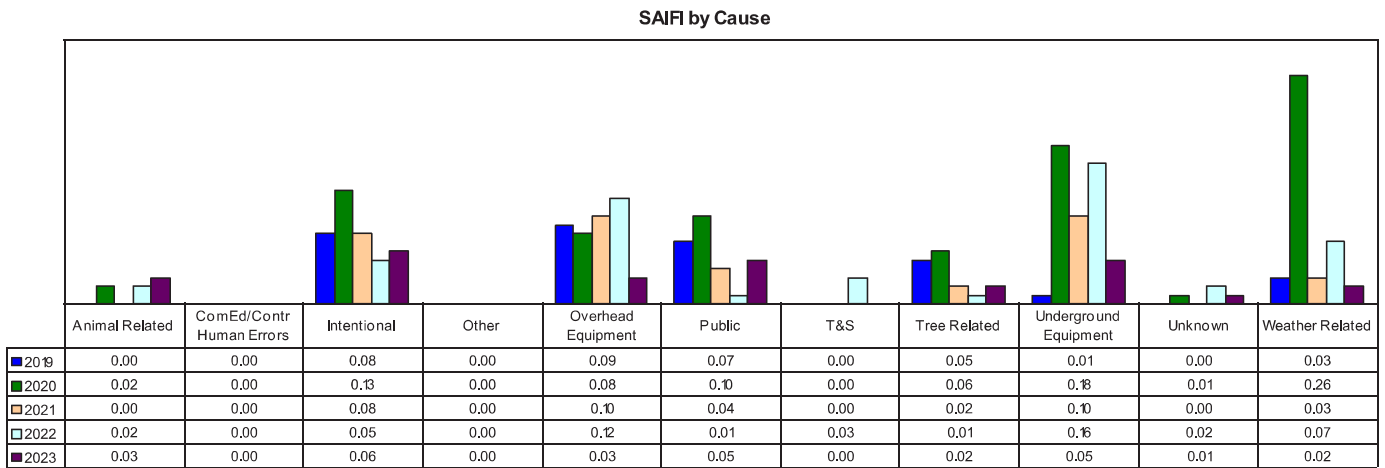
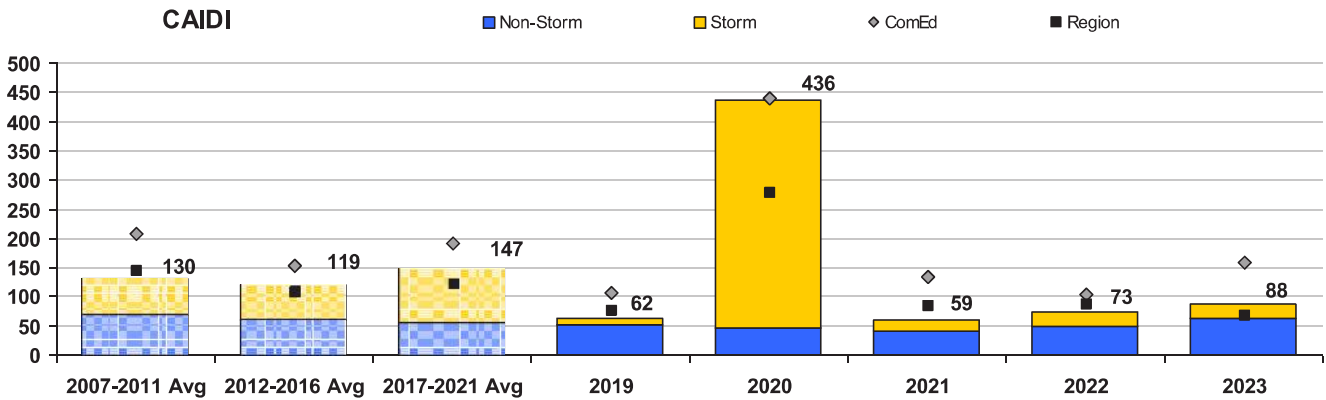
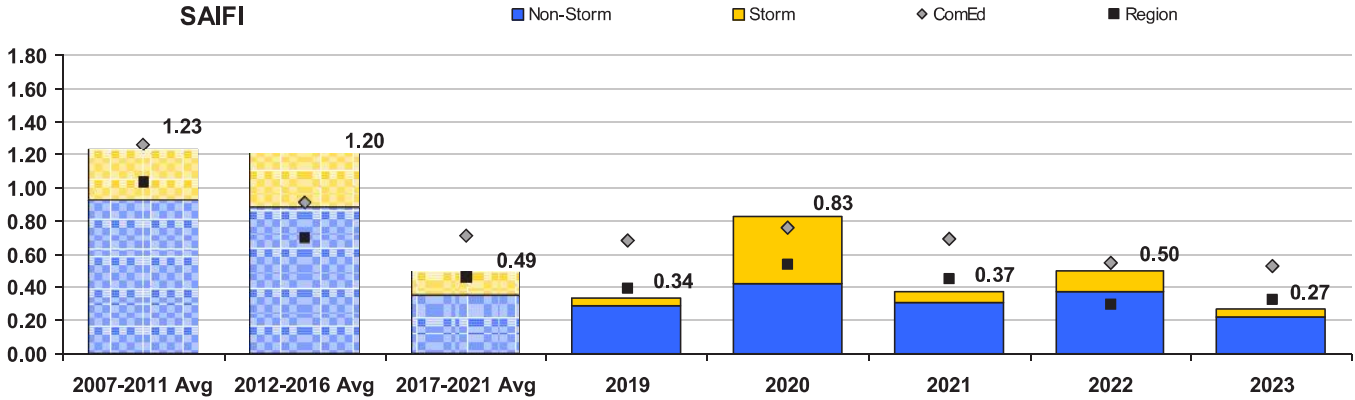


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 39 Reliability Performance Year End Report

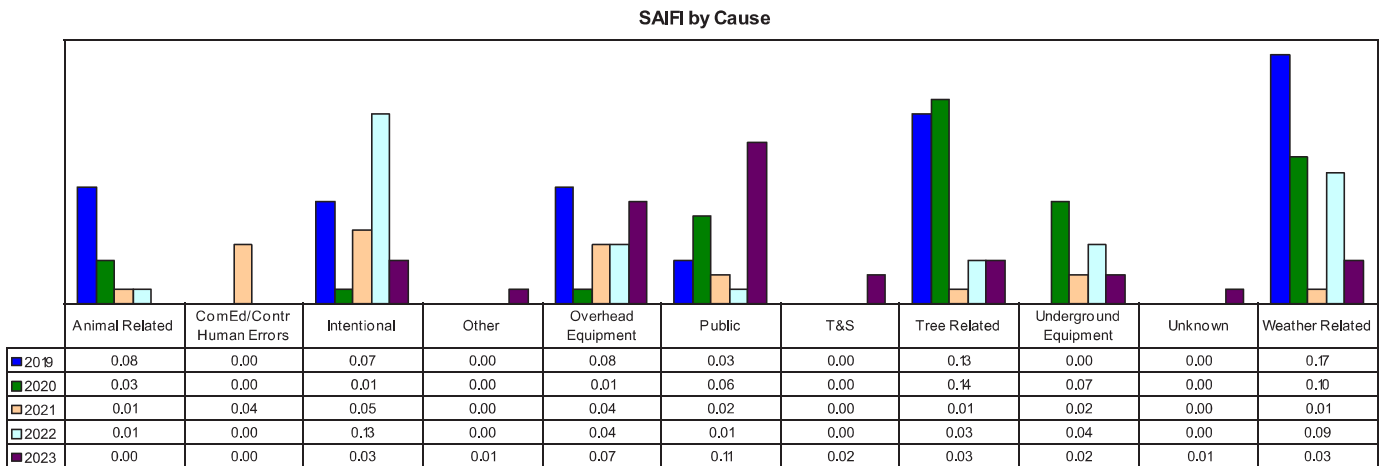
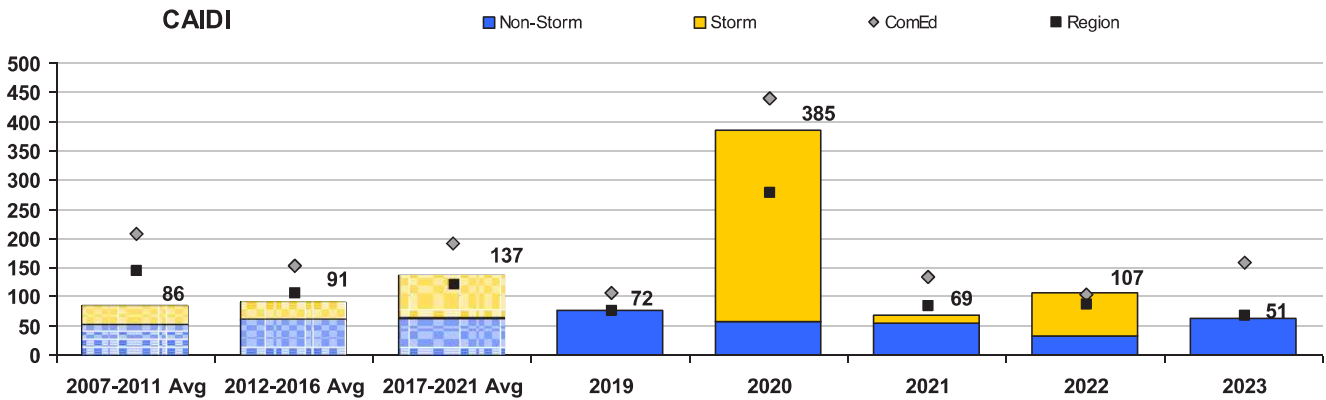
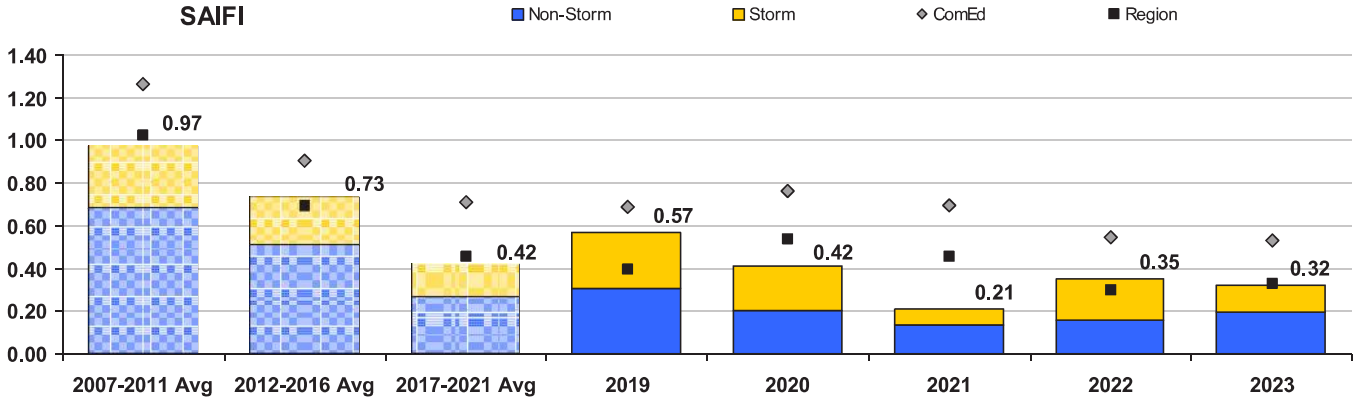


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 40 Reliability Performance Year End Report

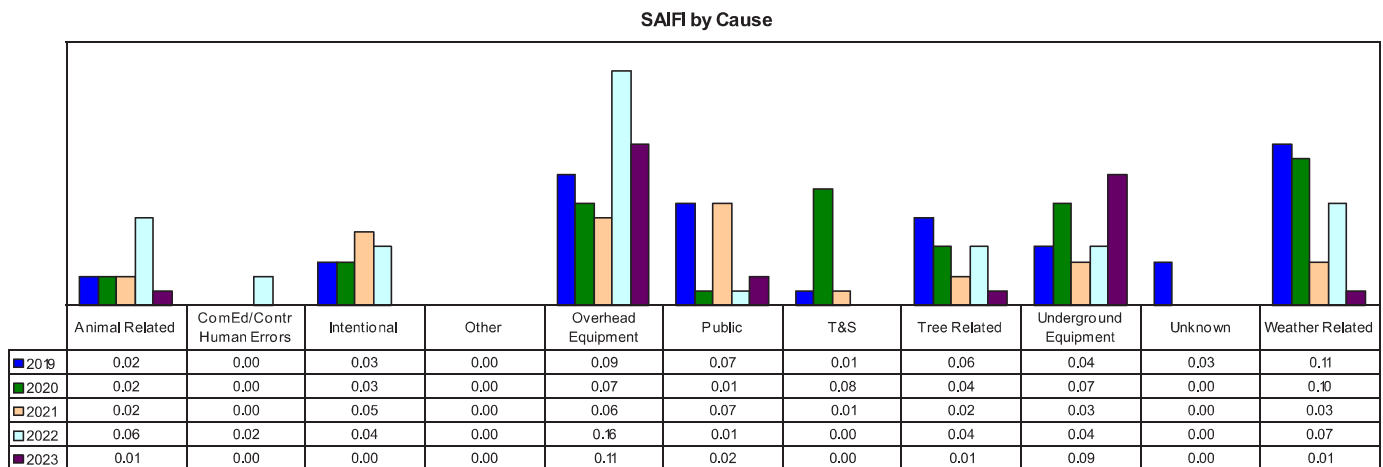
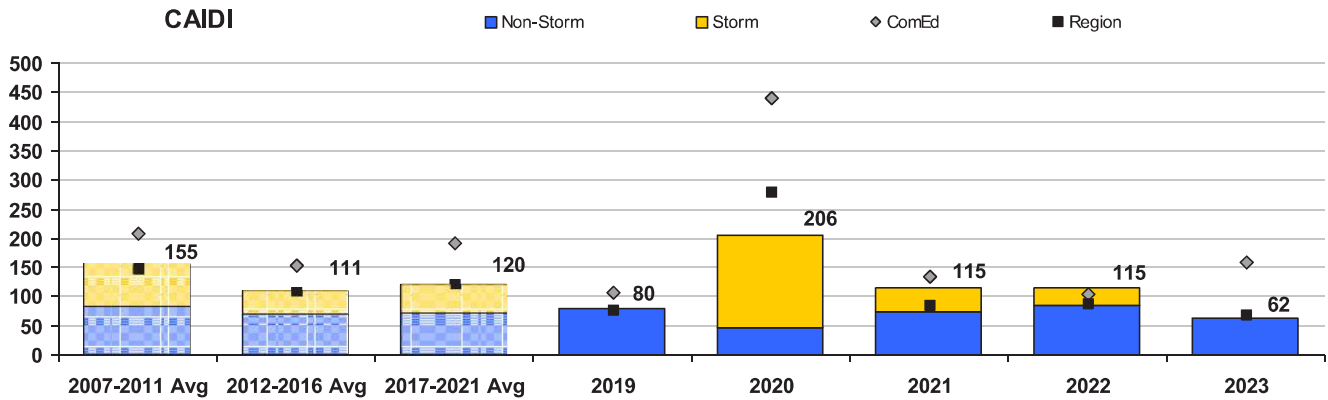
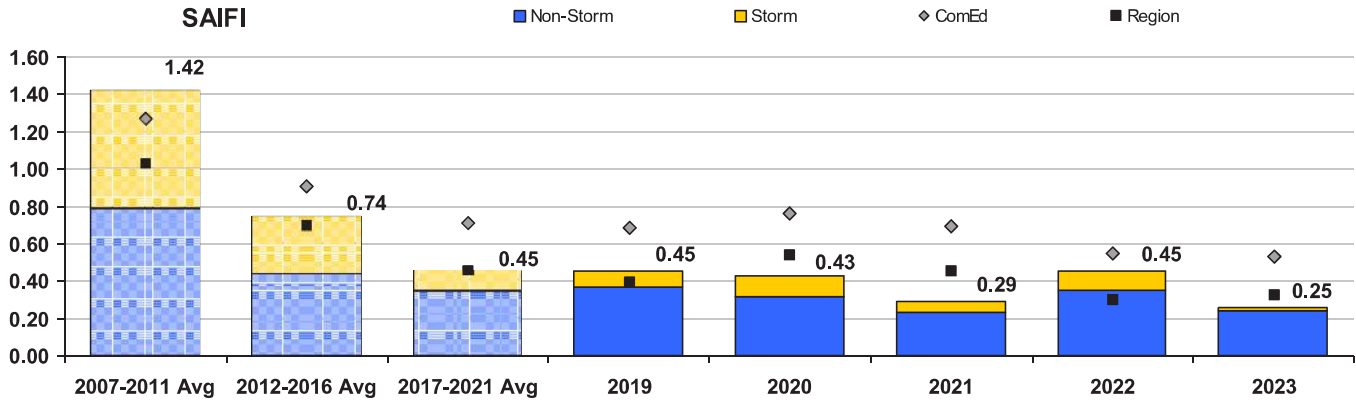


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 41 Reliability Performance Year End Report

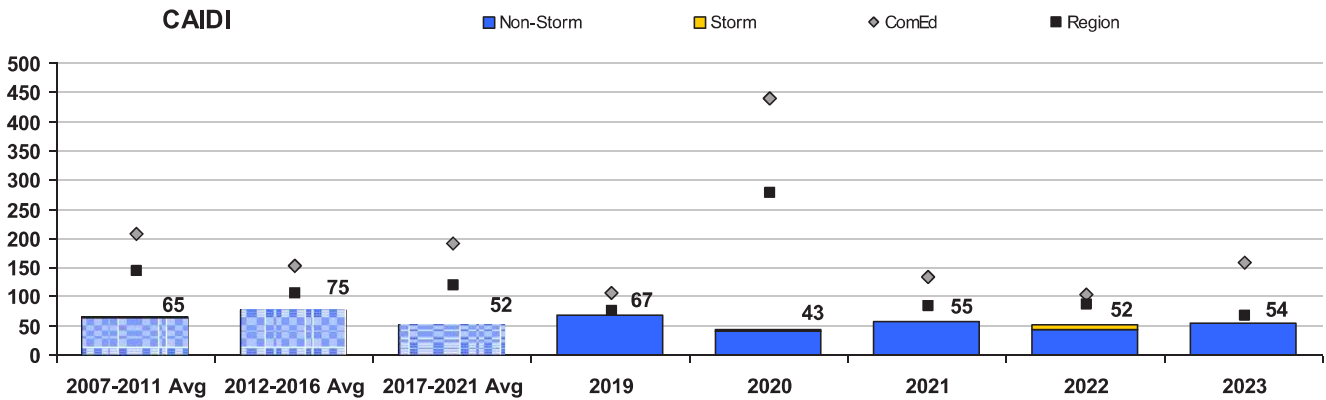
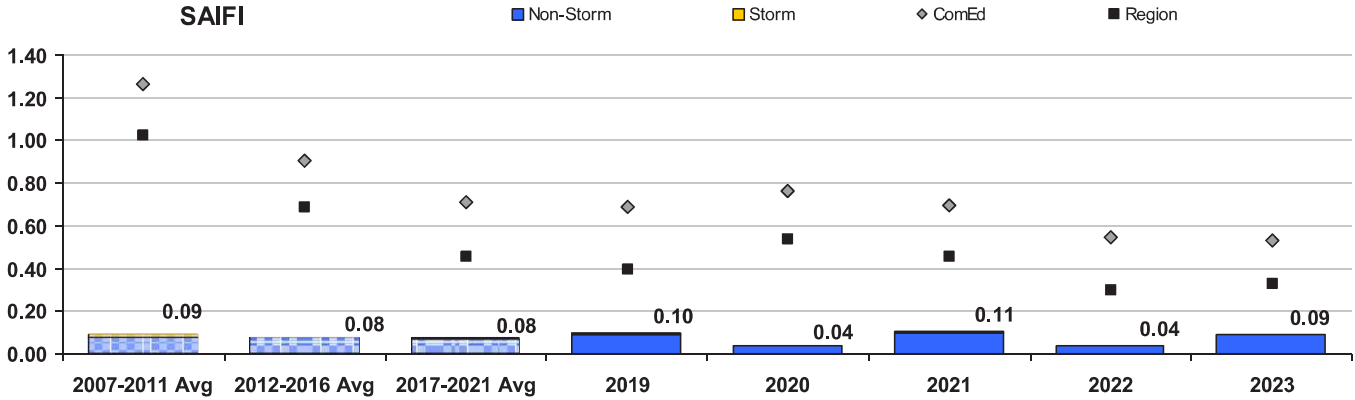


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.

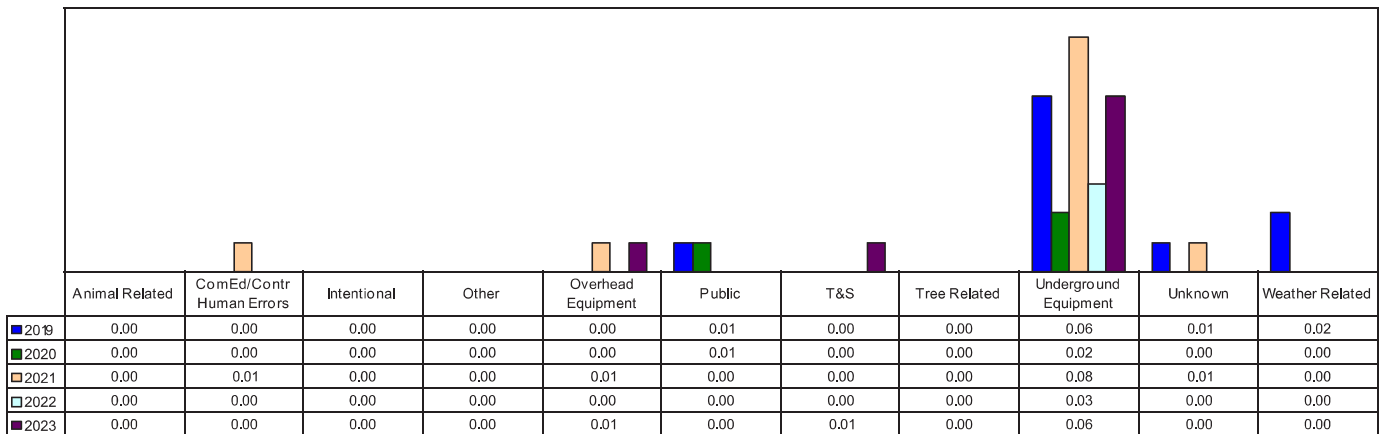


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## Ward 42 Reliability Performance Year End Report



SAIFI by Cause

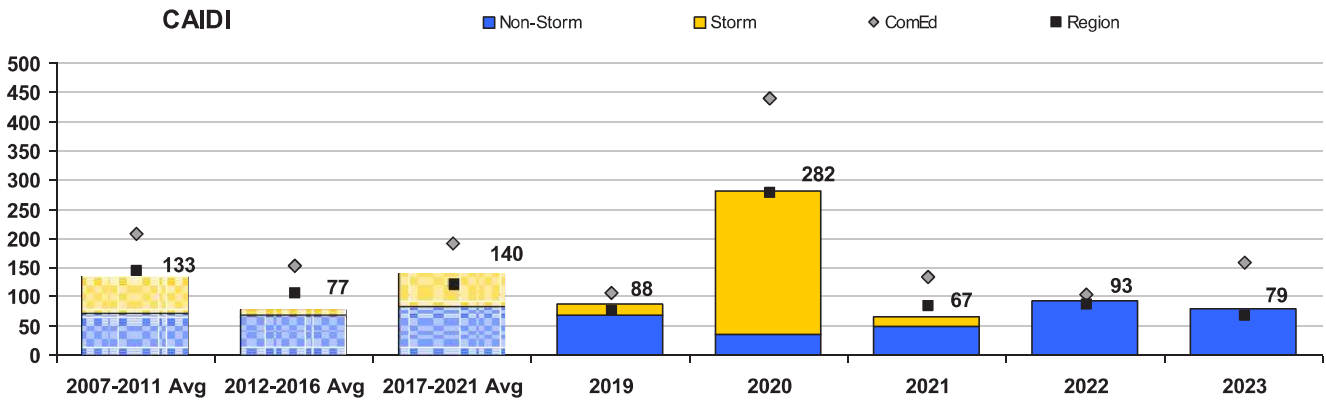
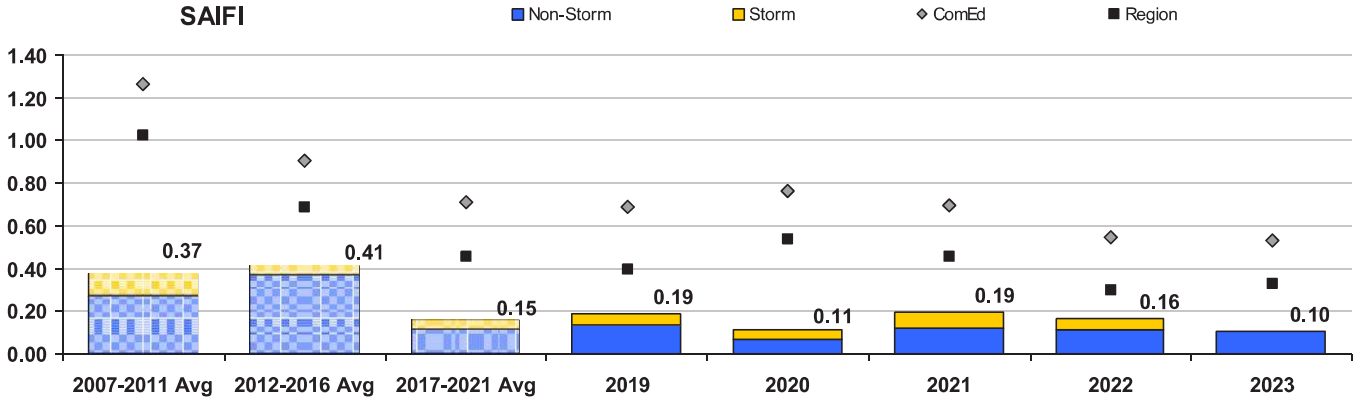


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.

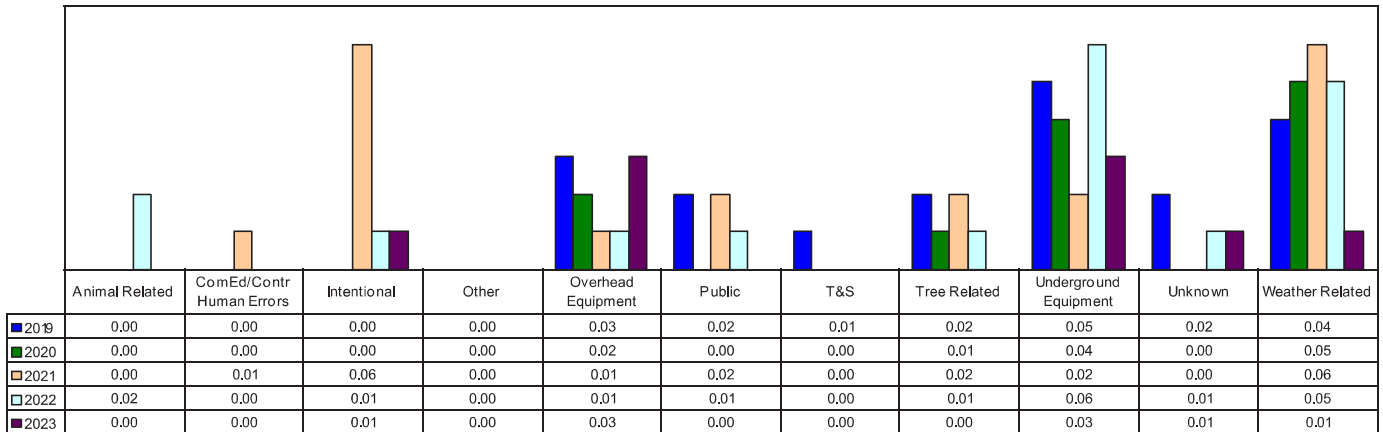


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## Ward 43 Reliability Performance Year End Report



SAIFI by Cause

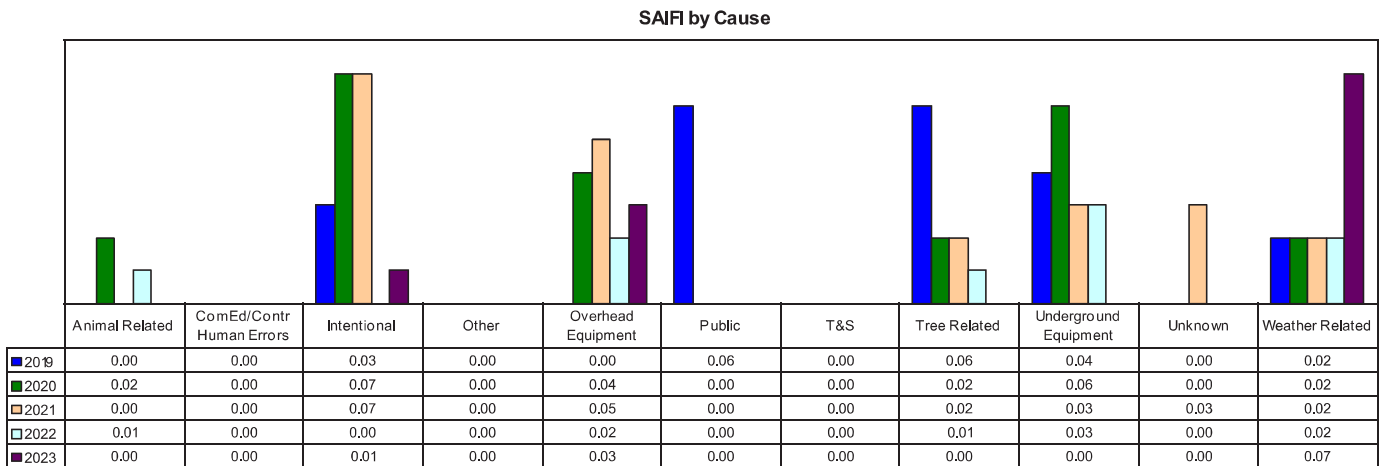
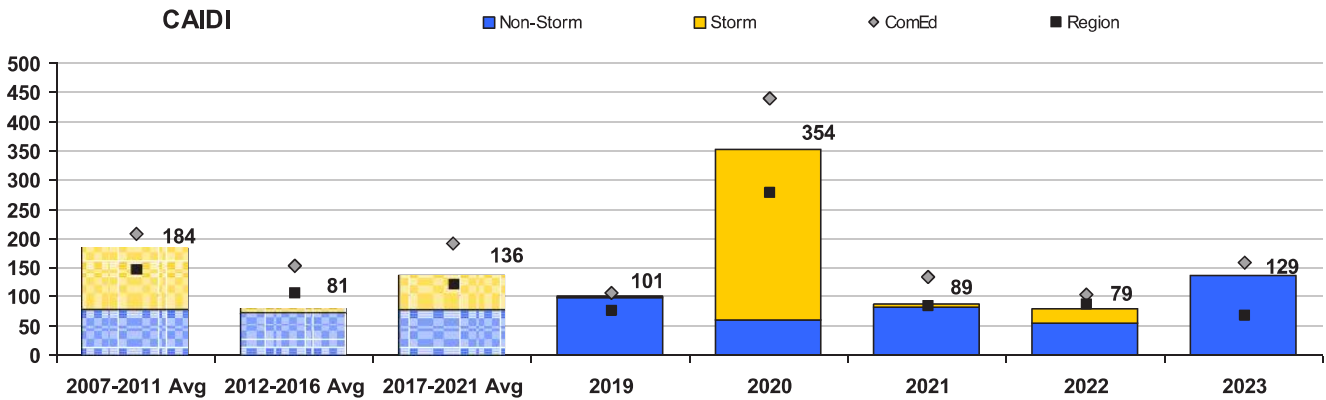
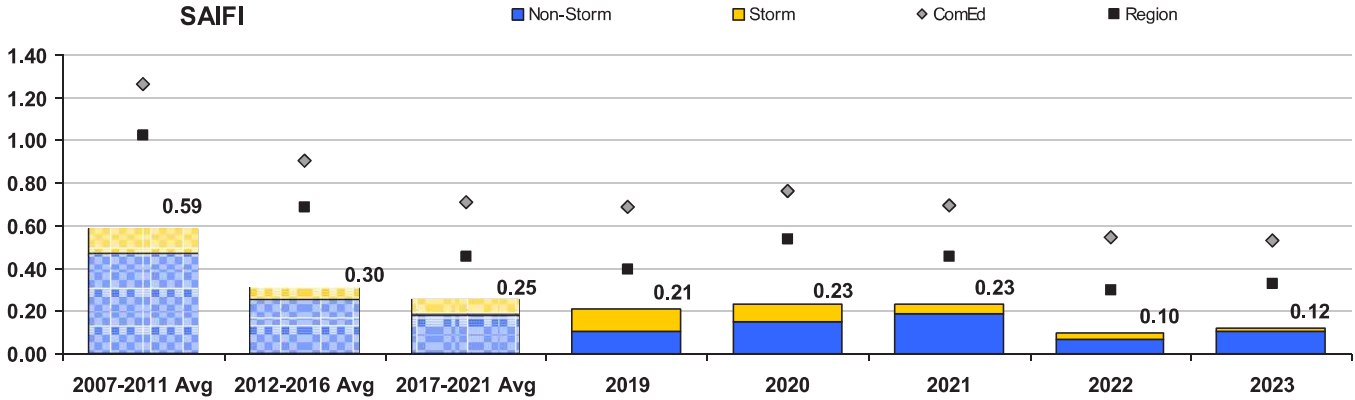


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 44 Reliability Performance Year End Report



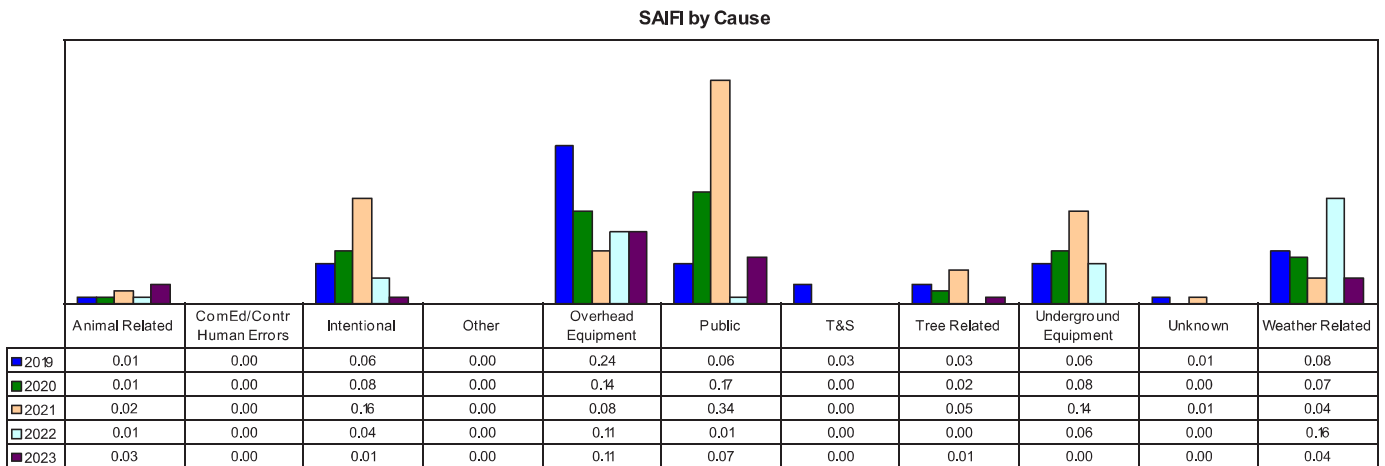
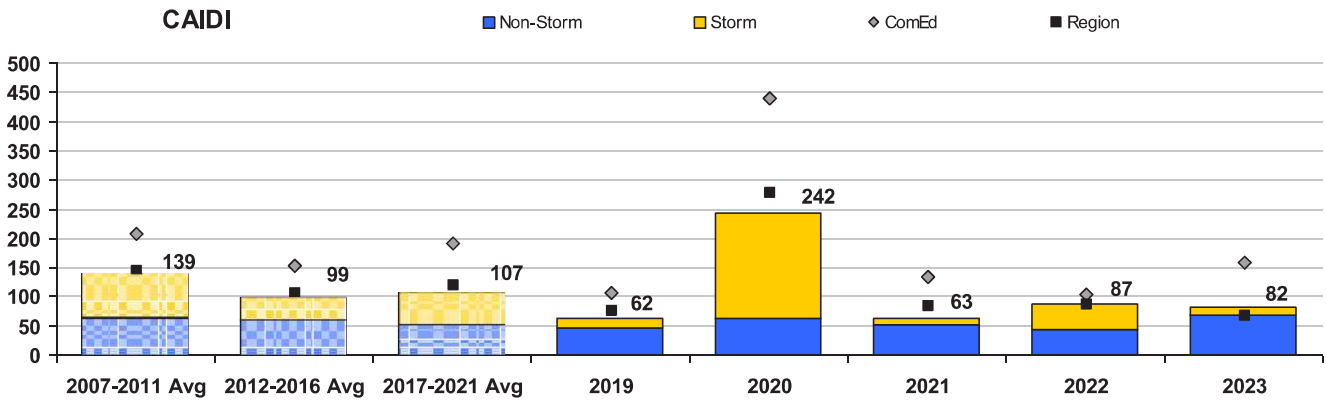
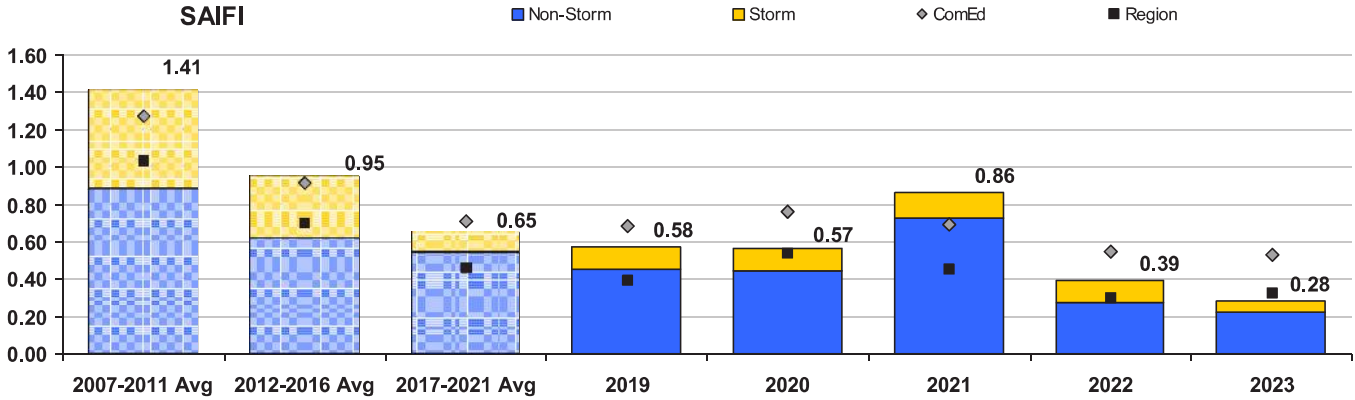
Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.





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## Ward 45 Reliability Performance Year End Report

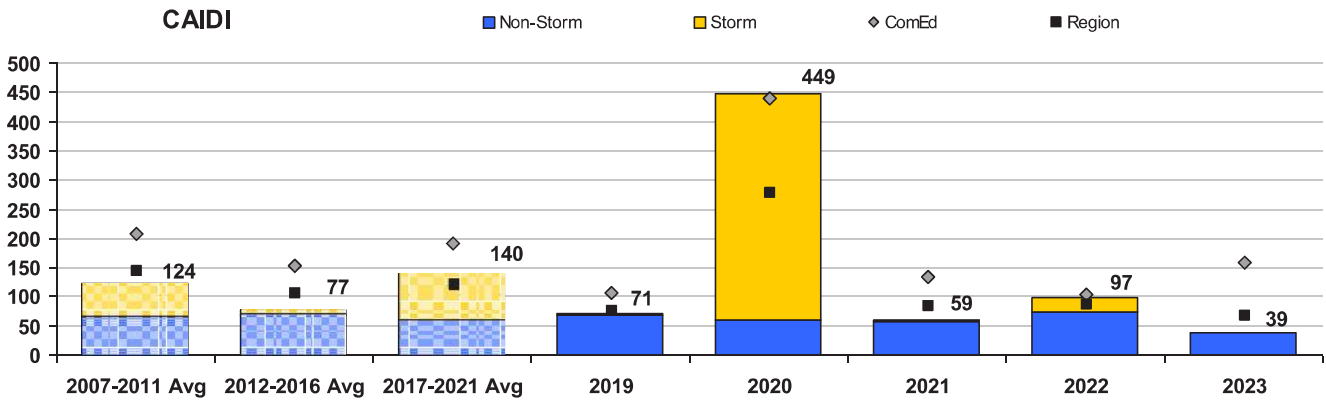
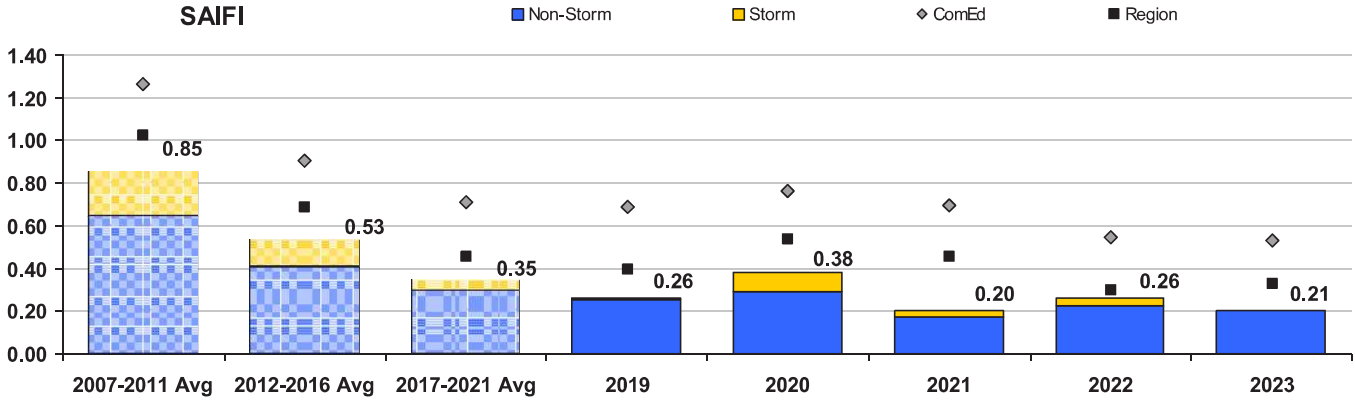


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.

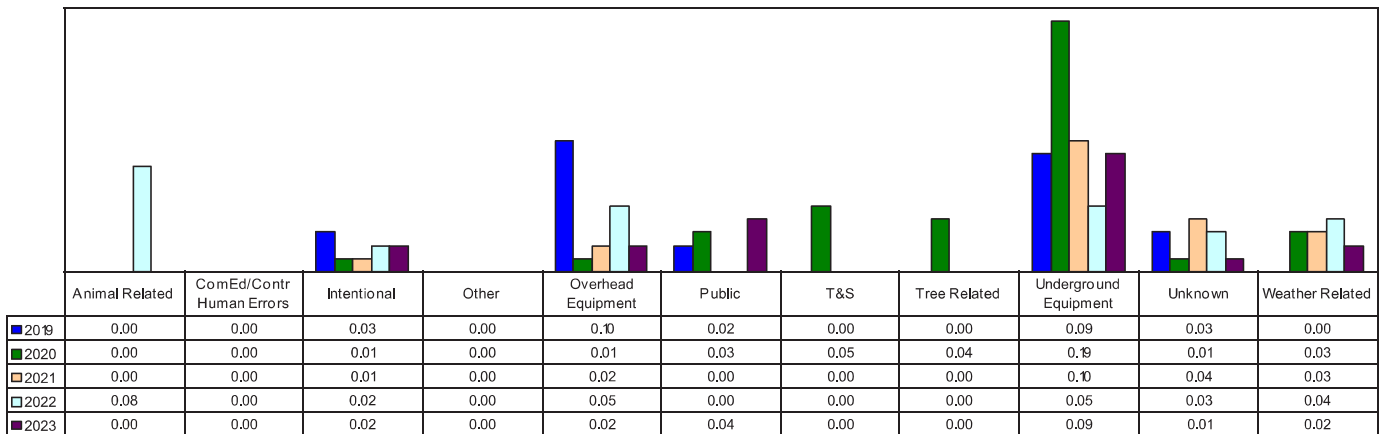


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## Ward 46 Reliability Performance Year End Report



SAIFI by Cause

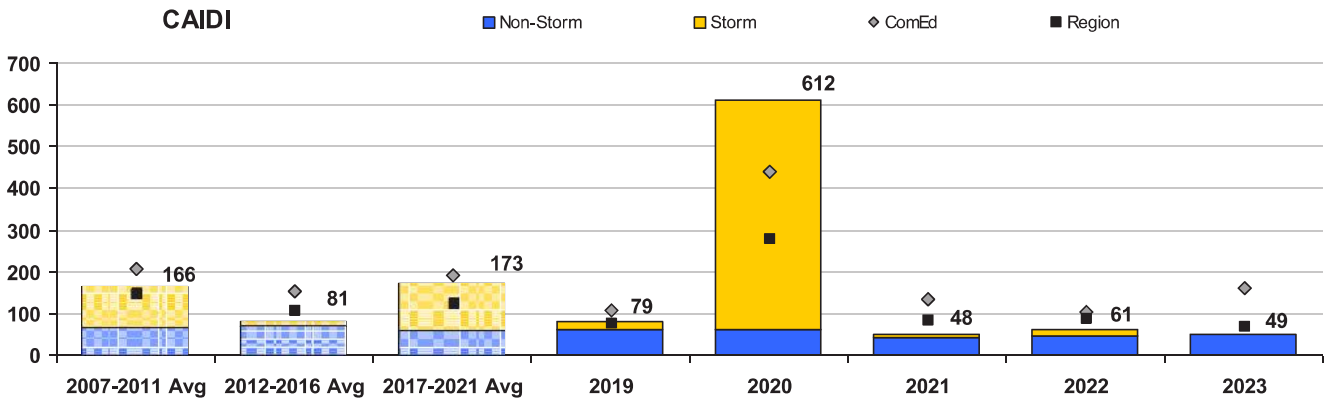
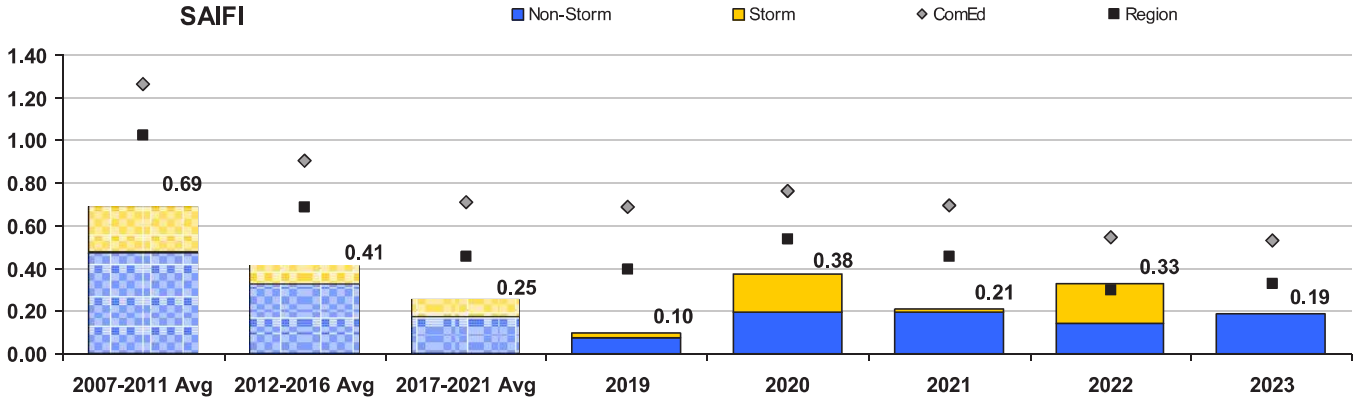


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.

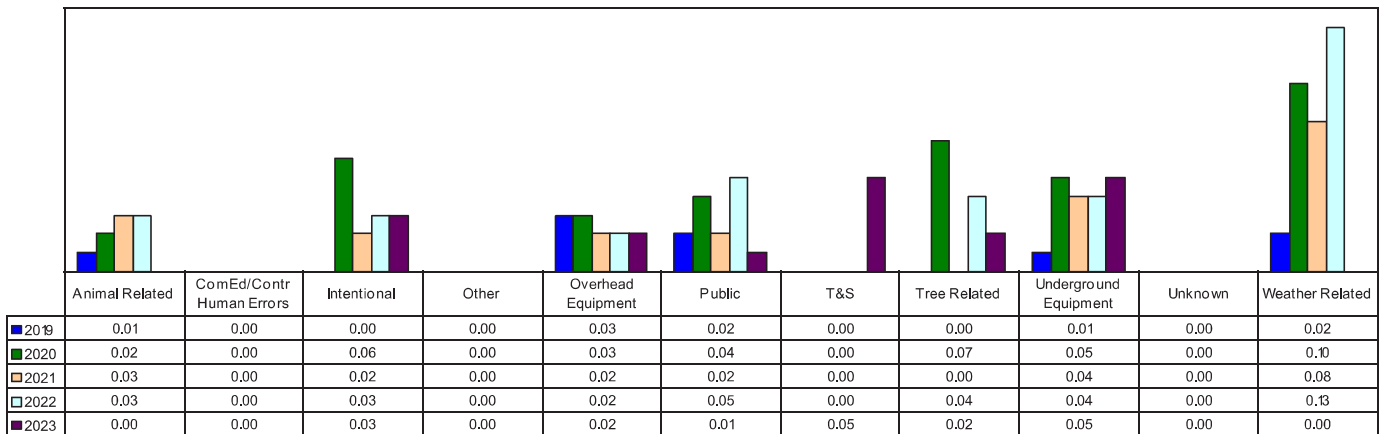


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## Ward 47 Reliability Performance Year End Report



SAIFI by Cause

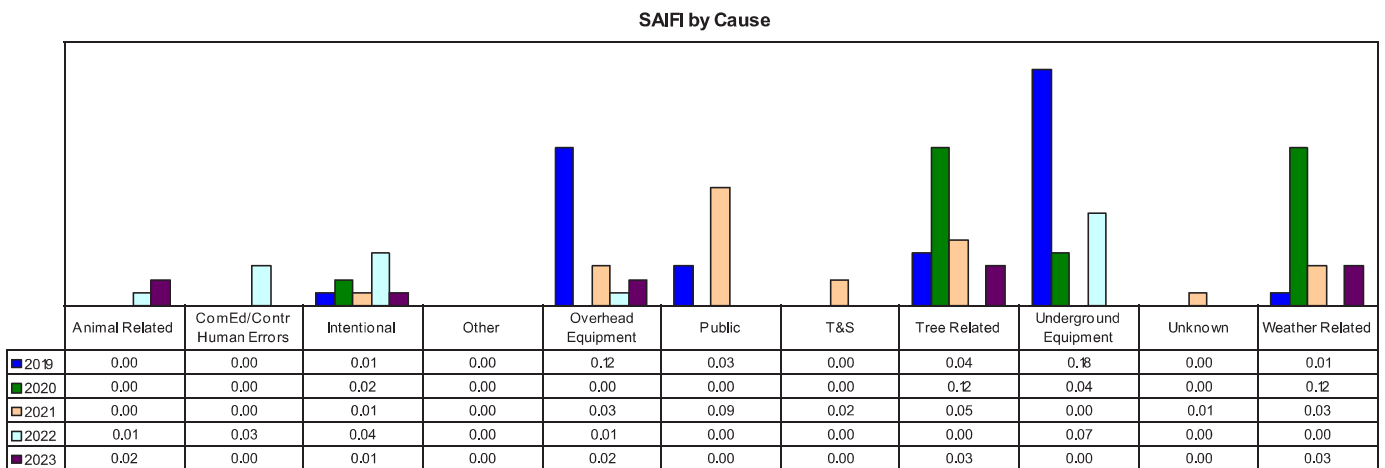
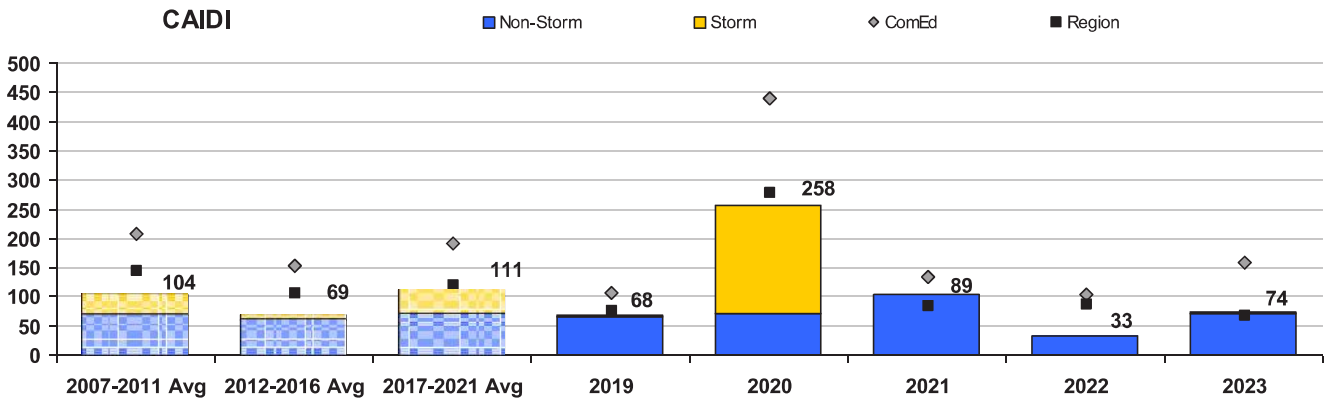
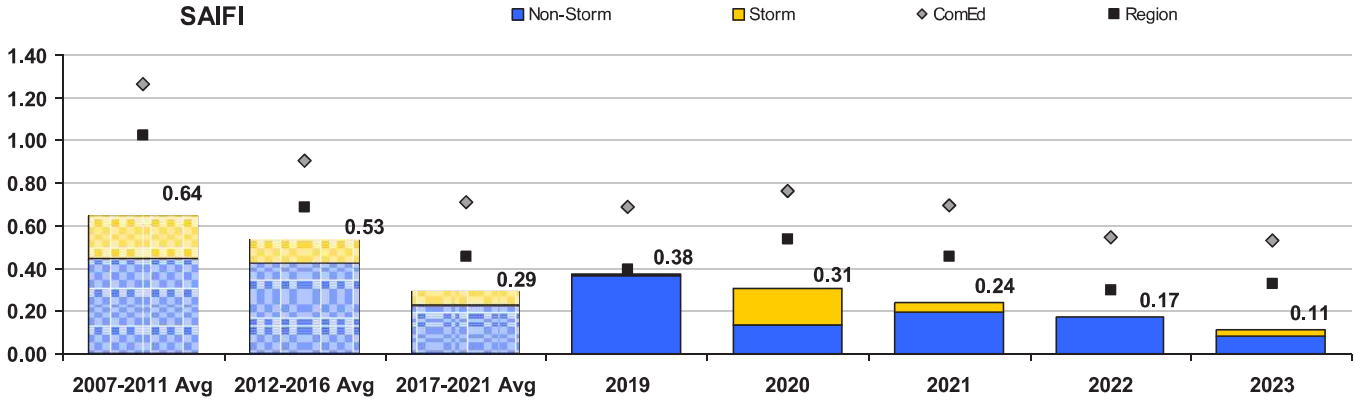


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 48 Reliability Performance Year End Report

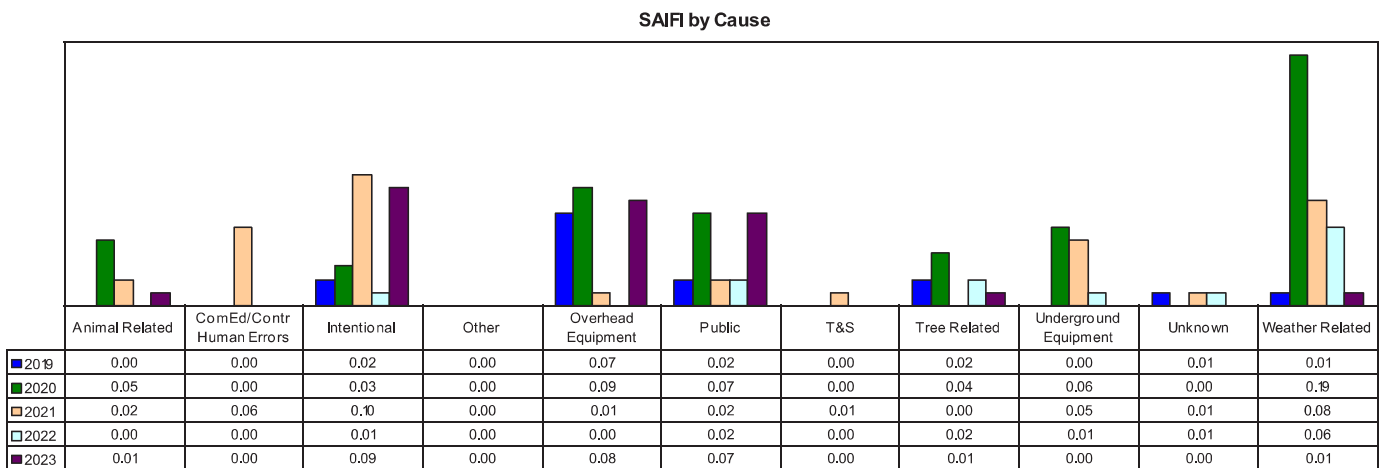
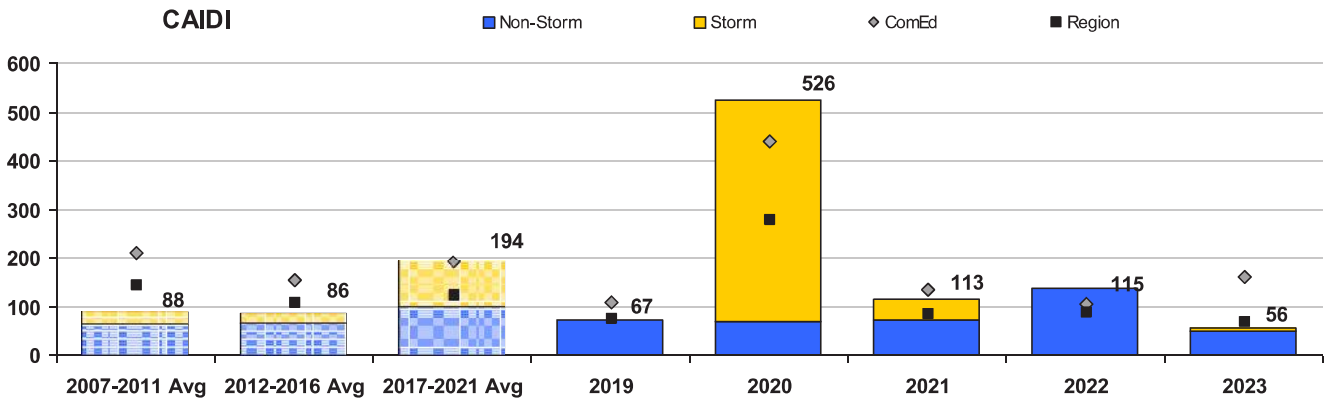
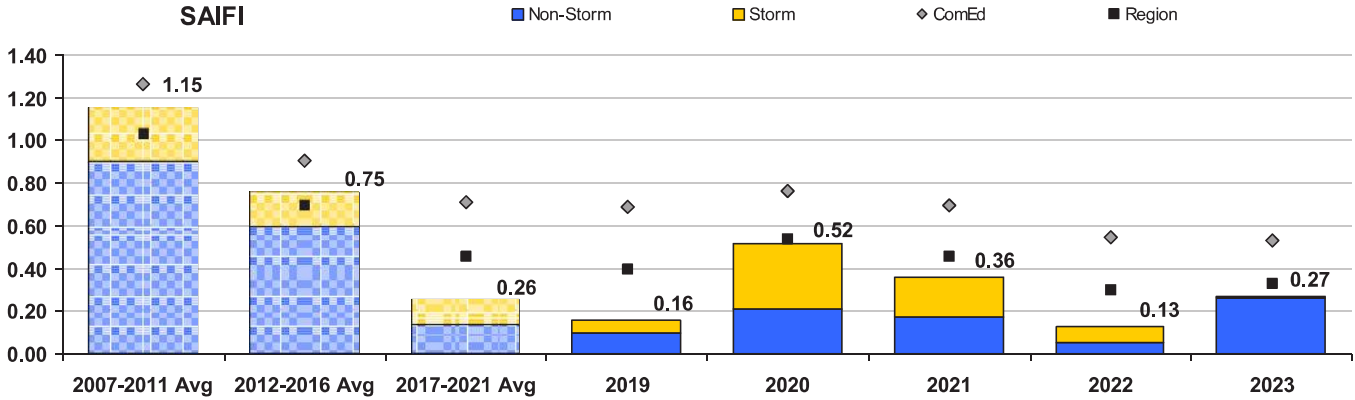


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 49 Reliability Performance Year End Report

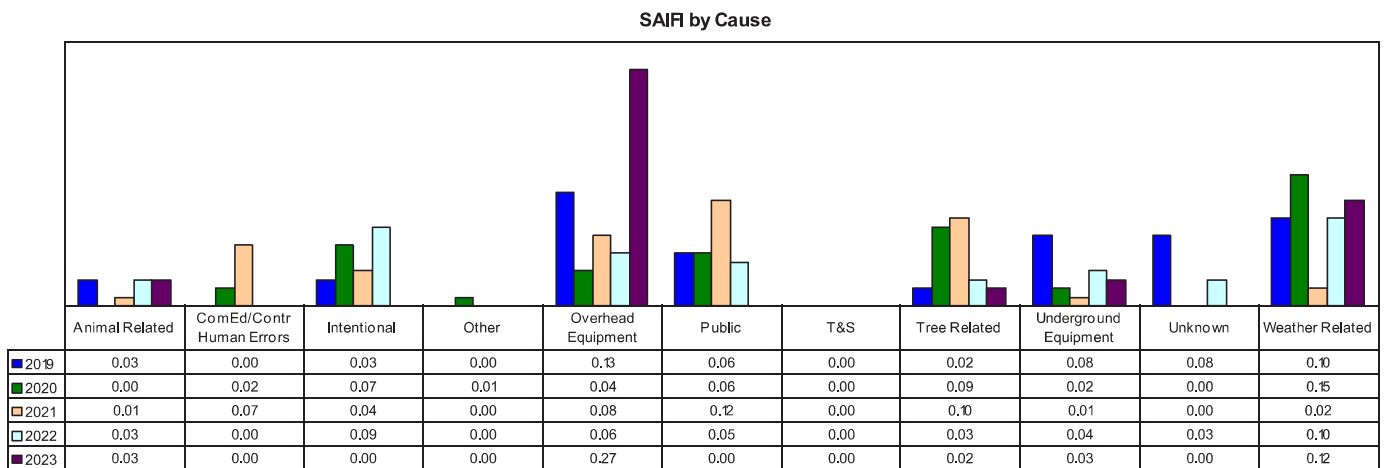
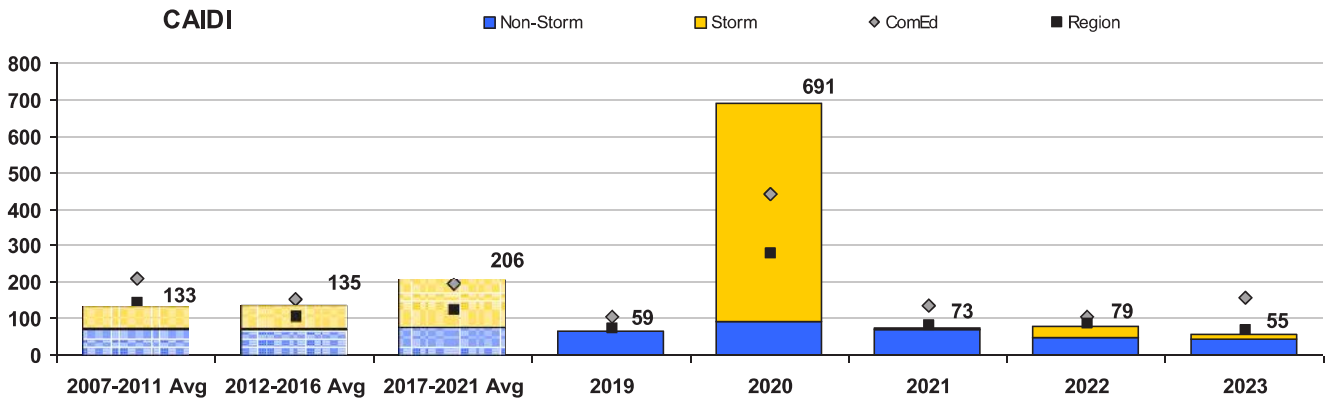
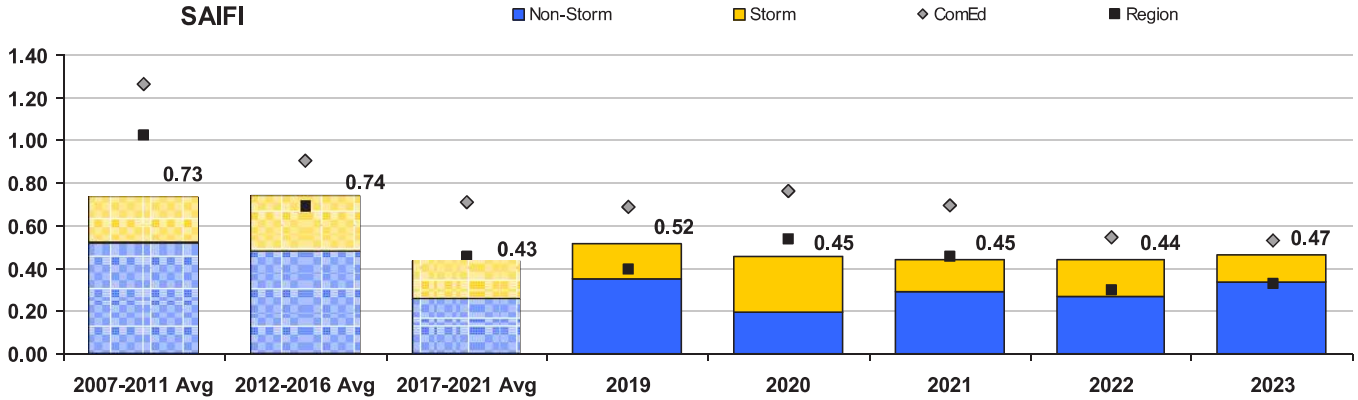


Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.



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## Ward 50 Reliability Performance Year End Report



Note: For purposes of this Annual Report only, reliability statistics reflect interruptions as defined by the Illinois Administrative Code - Title 83: Public Utilities, Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 411 Electric Reliability - Section 411.20 Definitions.