

Shelly-Ann Maye
Senior Manager, Regulatory Performance
smaye@duqlight.com
(856) 425-5693



April 30, 2024

M-2023-3039027- jbs

VIA ELECTRONIC FILING

Ms. Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
2nd Floor, Room-N201
400 North Street
Harrisburg, PA 17120

Re: **Duquesne Light Company 2023 Annual Electric Reliability Report**
Docket No. M-2016-2522508

Dear Secretary Chiavetta:

Please find enclosed for filing Duquesne Light Company's 2023 Annual Electric Reliability Report.

If you have any questions regarding the information contained in this filing, please feel free to contact me or Mary Kellam at mkellam@duqlight.com or 412-393-6099.

Sincerely,

A handwritten signature in blue ink that reads "Smaye".

Shelly-Ann Maye
Senior Manager, Regulatory Performance

Enclosure

Cc (w/enc.):

Bureau of Technical Utility Services (dsearfoorc@pa.gov)

Office of Consumer Advocate (Patrick Cicero, ra-oca@paoca.org)

Office of Small Business Advocate (Steven Gray, Sharon Webb, ra-sba@pa.gov)



2023 Annual Electric Reliability Report

to the

Pennsylvania Public Utility Commission

Duquesne Light Company
411 Seventh Avenue
Pittsburgh, PA 15219

April 30, 2024

**DUQUESNE LIGHT COMPANY
ANNUAL ELECTRIC RELIABILITY REPORT**

Filed April 30, 2024

52 Pa Code §57.195 Reporting Requirements

- (a)(2) The name, title, telephone number and e-mail address of the persons who have knowledge of the matters, and can respond to inquiries.**

Matthew Thimons – General Manager, Asset Management
(412) 393-8639, mthimons@duqlight.com

Jason Keller – Director, Operations Center
(412) 393-2897, jkeller@duqlight.com

- (b)(1) An overall current assessment of the state of the system reliability in the electric distribution company’s service territory including a discussion of the electric distribution company’s current programs and procedures for providing reliable electric service.**

Duquesne Light Company’s (“Duquesne Light” or “the Company”) service territory covers approximately 817 square miles, with a well-developed distribution system throughout. Electric service reliability remains very consistent across the service territory. The combination of an effective outage restoration process and significant distribution automation allows the Company to quickly restore power to large numbers of customers in outage situations.

Achieving outstanding performance in system reliability continues to be one of Duquesne Light’s most important long-term objectives. The Asset Management and System Planning Groups perform ongoing analysis of reliability indices, root cause analysis of outages, and tracking and monitoring of other performance measures to identify improvement opportunities and optimize reliability. This long-term process includes making recommendations for capital projects such as circuit rehabilitation, new substations, and distribution circuits. It also includes implementation of new advanced protection and coordination schemes on the distribution system that better localize customer outages and reduce momentary outages.

Duquesne Light continues its Emergent Work Process, which is used to identify problems, set priorities, and resolve reliability issues as quickly as possible. Each day, field personnel perform field inspections and any abnormalities are logged into a database. This database is reviewed regularly and any high priority problems are identified and a course of action is determined. Analysis at the device level is used to identify small areas where customers have experienced multiple outages. Assessing only system level or even circuit level data may mask these isolated problems.

Scheduled preventative and predictive maintenance activities continue to reduce the potential for future service interruptions. Corrective maintenance is prioritized with the objective to reduce backlog in the most cost-efficient manner.

Several capital budget projects in 2023 targeted distribution reliability improvements, including pole replacement, substation rehabilitation, circuit load relief and voltage improvement, URD rehabilitation, circuit rearrangement, and installation of additional automated remotely controlled pole top devices.

Specific programs, procedures, and ongoing maintenance activities that support Duquesne Light's commitment to service reliability include:

- A Distribution Overhead Line Inspection Program, which includes infrared inspections, that systematically identifies circuit problems for remedial action in advance of failure.
- Vegetation Management Maintenance Programs with the goal of reducing tree and branch failures through proactive pruning and removal to manage proper clearances. Duquesne Light believes that this program will help reduce the frequency of outages by addressing targeted tree failure conditions that typically result in physical damage to our facilities.
- An all pulse-reclosing protection technology has been implemented on some 23kV circuits. This technology eliminates traditional "hard reclosing," thereby making it easier and faster to conduct repairs and restore circuits to normal operation, enabling customers to be restored more quickly. This technology also reduces stress and damage on the entire circuit since the breaker is no longer required to trip, also contributing to the reduction in momentary outages to customers.
- Line maintenance work of various types is regularly performed in order to maintain the distribution plant. This work includes replacement of cross arms, arrestors, insulators, and other equipment on the overhead system as well as inspections and remedial work on the underground system.
- Storm Preparedness Training is conducted each year and Storm Review Meetings are held following major events. These meetings focus on the successes and challenges of the most recent emergency service restoration effort. Service restoration process improvements are made as needed to improve response time and effectiveness during the next restoration effort.

Finally, the Company implemented its Long-Term Infrastructure Improvement Plan (LTIIP) approved April 20, 2017¹ to accelerate its infrastructure program. The Company's second LTIIP was approved November 11, 2022, and spans January 1, 2023 through December 31, 2028.²

¹ Petition of Duquesne Light Company for Approval of its Long-Term Infrastructure Improvement Plan, Docket No. P-2016-2540046.

² Petition of Duquesne Light Company for Approval of its Second Long-Term Infrastructure Improvement Plan, Docket No. P-2022-3032805.

- (b)(2) A description of each major event that occurred during the year being reported on, including the time and duration of the event, the number of customers affected, the cause of the event and any modified procedures adopted in order to avoid or minimize the impact of similar events in the future.**

Duquesne Light experienced two major events during 2023.

The first event was due to a front of thunderstorms with rain and high winds moving through Duquesne Light’s service territory. It began on March 25, 2023 and ended on March 29, 2023, for a duration of 5 days. 62,276 customers were impacted by the event.

The second event was due to a strong line of storms with high winds moving across Duquesne Light’s service territory. It began on April 1, 2023 and ended on April 4, 2023, for a duration of 3 days, 5 hours. 67,383 customers were impacted by the event.

- (b)(3) A table showing the actual values of each of the reliability indices (SAIFI, CAIDI, SAIDI, and if available, MAIFI) for the electric distribution company’s service territory for each of the preceding 3 calendar years. The report shall include the data used in calculating the indices, namely the average number of customers served, the number of sustained customer minutes interruptions, the number of customers affected, and the minutes of interruption. If MAIFI values are provided, the number of customer momentary interruptions shall also be reported.**

**RELIABILITY BENCHMARKS AND STANDARDS
Duquesne Light Company
System Performance Measures with Major Events Excluded**

	SAIDI	SAIFI	CAIDI	MAIFI
2021	172	0.93	185	*
2022	136	0.93	146	*
2023	63	0.57	110	*
3 Year Average	123	0.81	153	*
Benchmark	126	1.17	108	*
12 Month Standard	182	1.40	130	*

* Sufficient information to calculate MAIFI is unavailable.

Duquesne Light has been a strong performer in reliability over the past 15 years. The Company’s success in this area can be partially attributed to the wide deployment of intelligent devices on the system that can quickly isolate a fault to the least number of customers.

Formulae Used in Calculating the Indices

$$SAIFI = \frac{(Total\ kVA - interrupted) - (kVA\ impact\ of\ major\ events)}{System\ Connected\ kVA}$$

$$SAIDI = \frac{(Total\ kVA\ minutes - interrupted) - (kVA\ minute\ impact\ of\ major\ events)}{System\ Connected\ kVA}$$

$$CAIDI = \frac{SAIDI}{SAIFI}$$

Data used in calculating the indices

2023

Total kVA Interrupted for the Period:	4,547,896 kVA
Total kVA -Minutes Interrupted:	501,561,985 kVA-Minutes
System Connected Load as of 12/31/23:	7,932,442 kVA

2022

Total kVA Interrupted for the Period:	7,363,584 kVA
Total kVA -Minutes Interrupted:	1,075,913,781 kVA-Minutes
System Connected Load as of 12/31/22:	7,932,778 kVA

2021

Total kVA Interrupted for the Period:	7,321,277 kVA
Total kVA -Minutes Interrupted:	1,356,923,480 kVA-Minutes
System Connected Load as of 12/31/21:	7,869,335 kVA

(b)(4) A breakdown and analysis of outage causes during the year being reported on, including the number and percentage of service outages and customer interruption minutes categorized by outage cause such as equipment failure, animal contact, tree related, and so forth. Proposed solutions to identified service problems shall be reported.

**January 1, 2023 through December 31, 2023
Two Major Events Excluded**

CAUSE	NO. OF OUTAGES	OUTAGE PERCENTAGE	kVA TOTAL	kVA PERCENTAGE	kVA-MINUTE TOTAL	kVA-MINUTE PERCENTAGE
Storms	167	7%	436,638	10%	50,082,906	10%
Trees (Inside ROW)	217	10%	327,432	7%	42,491,466	8%
Trees (Outside ROW)	632	28%	1,013,722	22%	147,277,160	29%
Equipment Failures	530	23%	1,508,885	33%	138,278,616	28%
Overloads	15	1%	26,813	1%	10,019,834	2%
Vehicles	167	7%	495,367	11%	56,226,927	11%
Contact / Dig In	34	2%	88,784	2%	9,284,154	2%
Animal Contact	104	5%	139,270	3%	10,559,986	2%
Unknown	276	12%	313,010	7%	16,589,926	3%
Other	115	5%	197,975	4%	20,751,010	4%
TOTALS	2,257	100%	4,547,896	100%	501,561,985	100%

(b)(5) A list of remedial efforts taken to date and planned for circuits that have been on the worst performing 5% of circuits list for a year or more.

Duquesne Light has five circuits that have been on the worst performing 5% of circuits list for four consecutive quarters. The majority of these circuits have received remedial actions or are scheduled for maintenance activities in 2024 that are expected to improve their reliability. The Company will continue to monitor these circuits closely to verify that the remedial actions taken have been successful and that reliability has improved. Many of the circuits have already shown improvement as indicated in the following detailed descriptions.

Duquesne uses a sophisticated automated protection system on its 23kV circuits, which utilizes numerous 3-phase sectionalizers and reclosers on the main feeders and as ties to adjacent circuits. This automation technology with remote control generally allows circuit problems to be isolated and rerouted in less than five minutes. Generally, only a small portion of the customers on a worst performing circuit experience reliability issues.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>1 23770 Traverse Run Recloser</p>	<p>3 Total Outage(s)</p> <ul style="list-style-type: none"> • Two outages were caused by tree fall-in Outside ROW. • One outage was caused by contact with company equipment by vehicle. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2023 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2028. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q2 2020. Performed mid-cycle maintenance Q4 2023. Next maintenance proposed for 2025.
<p>2 23675 Montour Recloser</p>	<p>3 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by tree fall-in Outside ROW. • One outage was caused by high winds. • One outage was caused by equipment failure. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2020 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2025. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2020. Performed mid-cycle maintenance Q4 2023. Next maintenance proposed for 2025.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>3 23709 North Sectionalizer</p>	<p>3 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by tree fall-in Outside ROW. • One outage was caused by a storm. • One outage was caused by contact with company equipment by vehicle. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2027. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2022. Next maintenance proposed for 2027.
<p>4 23688 Chess Fuse Link</p>	<p>1 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by equipment failure. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2021 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2026. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2018. Next maintenance proposed for 2024.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>5 23868 Wildwood Fuse Link</p>	<p>2 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by tree fall-in Outside ROW. • One outage was by an unknown cause. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2020 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2024. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2020. Next maintenance proposed for 2025.
<p>6 23870 Mt. Nebo Fuse Link</p>	<p>4 Total Outage(s)</p> <ul style="list-style-type: none"> • Two outages were caused by tree fall-in Outside ROW. • One outage was by an unknown cause. • One outage was caused by contact with company equipment by vehicle. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2027. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2021. Performed mid-cycle maintenance Q4 2023. Next maintenance proposed for 2025.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>7 23650 Neville Fuse Link</p>	<p>2 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by contact with company equipment by vehicle. • One outage was caused by animal contact. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2027. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q3 2023. Next maintenance proposed for 2027.
<p>8 23921 Logans Ferry Fuse Link</p>	<p>3 Total Outage(s)</p> <ul style="list-style-type: none"> • Two outages were by unknown causes. • One outage was caused by grow-in by tree, brush, or vines. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2027. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2020. Next maintenance proposed for 2025.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>9 22869 Midland-Cooks Ferry Recloser</p>	<p>2 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by tree fall-in Outside ROW. • One outage was caused by a voltage surge or lightning. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2019 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2024. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2022. Performed mid-cycle maintenance Q4 2023. Next maintenance proposed for 2027.
<p>10 22366 Woodville- Kirwan Circuit Manually De- Energized</p>	<p>1 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by high current. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2021 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2026. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q3 2020. Next maintenance proposed for 2025.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>11 22862 Crescent-Sewickley S.S. Breaker</p>	<p>2 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by animal contact. • One outage was caused by wires wrapping together which caused a short circuit. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2020 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2025. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2021. Next maintenance proposed for 2025.
<p>12 23713 Pine Creek Recloser</p>	<p>3 Total Outage(s)</p> <ul style="list-style-type: none"> • Two outages were caused by tree fall-in Outside ROW. • One outage was caused by equipment failure. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2023 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2028. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2020. Performed mid-cycle maintenance Q4 2023. Next maintenance proposed for 2025.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>13 23646 Wolfe Run Fuse Link</p>	<p>2 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by equipment failure. • One outage was caused by high winds. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2023 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2028. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2023. Next maintenance proposed for 2029.
<p>14 23714 Pine Creek Fuse Link</p>	<p>4 Total Outage(s)</p> <ul style="list-style-type: none"> • Three outages were caused by tree fall-in Inside ROW. • One outage was caused by tree fall-in Outside ROW. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2023 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2028. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2018. Next maintenance proposed for 2024.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>15 23683 Woodville Recloser</p>	<p>4 Total Outage(s)</p> <ul style="list-style-type: none"> • Three outages were caused by equipment failure. • One outage was caused by high winds. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2027. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2021. Next maintenance proposed for 2026.
<p>16 4687 Lewis Run S.S. Breaker</p>	<p>1 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by tree fall-in Outside ROW. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2027. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2022. Next maintenance proposed for 2026.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>17 23682 Woodville Fuse Link</p>	<p>1 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by animal contact. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2023 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2028. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2020. Performed mid-cycle maintenance Q4 2023. Next maintenance proposed for 2025.
<p>18 23685 West End S.S. Breaker</p>	<p>2 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by equipment failure. • One outage was caused by contact with company equipment by vehicle. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2021 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2026. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2023. Next maintenance proposed for 2029.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>19 22150 Wilmerding-Rankin No.3 S.S. Breaker</p>	<p>2 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by tree fall-in Inside ROW. • One outage was caused by tree fall-in Outside ROW. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2023 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2028. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2020. Next maintenance proposed for 2025.
<p>20 23614 Findlay Recloser</p>	<p>2 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by tree fall-in Inside ROW. • One outage was caused by tree fall-in Outside ROW. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2021 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2026. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2021. Performed mid-cycle maintenance Q4 2023. Next maintenance proposed for 2026.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>21 23920 Logans Ferry Fuse Link</p>	<p>7 Total Outage(s)</p> <ul style="list-style-type: none"> • Five outages were by unknown causes. • One outage was caused by tree fall-in Inside ROW. • One outage was caused by wires wrapping together which caused a short circuit. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2024 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2029. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q2 2020. Next maintenance proposed for 2025.
<p>22 23640 Midland Recloser</p>	<p>5 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by contact with company equipment by vehicle. • One outage was caused by tree fall-in Inside ROW. • One outage was by an unknown cause. • One outage was caused by high winds. • One outage was caused by equipment failure. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2027. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2018. Next maintenance proposed for 2024.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>23 23803 Elwyn Recloser</p>	<p>2 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by tree fall-in Outside ROW. • One outage was caused by a storm. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2020 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2025. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2018. Next maintenance proposed for 2024.
<p>24 23900 Plum S.S. Breaker</p>	<p>2 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by contact with company equipment by vehicle. • One outage was caused by equipment failure. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2023 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2028. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2021. Next maintenance proposed for 2026.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>25 23613 Findlay Recloser</p>	<p>2 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by animal contact. • One outage was caused by equipment failure. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2027. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2021. Next maintenance proposed for 2026.
<p>26 23696 Brunot Island Sectionalizer</p>	<p>2 Total Outage(s)</p> <ul style="list-style-type: none"> • One outage was caused by a dig in. • One outage was caused by equipment failure. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2020 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2025. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q1 2019. Next maintenance proposed for 2024.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p style="text-align: center;">27 4601 Rankin S.S. Breaker</p>	<p>2 Total Outage(s)</p> <ul style="list-style-type: none"> • Two outages were caused by tree fall-in Outside ROW. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Distribution Overhead Line Inspection performed in 2021 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2026. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q3 2023. Next maintenance proposed for 2028.

- (b)(6) A comparison of established transmission and distribution inspection and maintenance goals/objectives versus actual results achieved during the year being reported on. Explanations of any variances shall be included.

2023 Transmission and Distribution Goals and Objectives

Program Project	Unit of Measurement	Target for 2023	Year End Actuals for 2023	Percent Complete
Communications Goals				
Communication Battery Maintenance	Batteries	124	118	95%
Overhead Distribution Goals				
Recloser Inspections	Circuits	129	156	121%
Pole Inspections*	Poles	17,695	16,665	94%
OH Line Inspections	Circuits	129	156	121%
OH Transformer Inspections	Circuits	129	156	121%
Padmount & Below Grade Insp	Circuits	82	82	100%
Overhead Transmission Goals				
Helicopter Inspections	Circuits	23	23	100%
Ground Inspections	Number of Structures	283	283	100%
Substations Goals				
Circuit Breaker Maintenance	Breakers	515	488	95%
Station Transformer Maintenance	Transformers	55	55	100%
Station Battery Maintenance	Batteries	856	850	99%
Station Relay Maintenance	Relays	1,382	1,336	97%
Station Inspections	Sites	1,884	1,884	100%
Underground Distribution Goals				
Manhole Inspections	Manholes	700	738	105%
Major Network Insp (Prot Relay)	Ntwk Protectors	92	93	101%
Minor Network Visual Inspection (Transformer/Protector/Vault)	Ntwk Transformers	576	565	98%
Underground Transmission Goals				
Pressurization and Cathodic Protection Plant Inspection	Work Orders	424	419	99%
Vegetation Management Goals				
Overhead Line Clearance	Circuit Overhead Miles	1,300	1,300	100%

*All pole inspections were completed in cycle. This variance is attributable to exceeding targeted goals in previous years.

(b)(7) A comparison of budgeted versus actual transmission and distribution operation and maintenance expenses for the year being reported on. Explanations of any variances shall be included.

Budget Variance Recap – O&M Expenses
For the Twelve Months Ending December 31, 2023
Favorable/(Unfavorable)

	Total Actual	Total Budget	Variance
Customer Service	\$79,061,207	\$67,565,574	(\$11,495,633)
Human Resources	\$25,461,429	\$22,005,380	(\$3,456,049)
Operations/Operation Services	\$51,342,954	\$49,199,680	(\$2,143,274)
Technology	\$49,218,013	\$50,388,739	\$1,170,726
General Corporate*	\$74,537,469	\$75,264,350	\$726,881
Total	\$279,621,072	\$264,423,723	(\$15,197,349)

* Includes Finance, Office of General Counsel, and Senior Management Costs

O&M expenses were unfavorable to budget primarily due to bad debt expense being higher than budgeted, but they were partially offset by deferment of spend for outside services and lower labor costs due to vacancies.

(b)(8) A comparison of budgeted versus actual transmission and distribution capital expenditures for the year being reported on. Explanations of any variances shall be included.

Budget Variance Recap – Capital
For the Twelve Months Ending December 31, 2023
Favorable/(Unfavorable)

	Total Actual	Total Budget	Variance
Customer Service	\$13,045,730	\$14,841,588	\$1,795,858
Human Resources	\$20,197,758	\$16,872,423	(\$3,325,335)
Operations/Operation Services	\$304,196,153	\$320,316,012	\$16,119,859
Technology	\$43,790,570	\$38,125,005	(\$5,665,565)
General Corporate*	\$94,737,060	\$65,456,874	(\$29,280,186)
Total	\$475,967,271	\$455,611,902	(\$20,355,369)

* Includes Finance, Office of General Counsel, and Senior Management Costs

T&D capital investment was \$20.5 million higher than budgeted, primarily due to increased investment in pole replacement costs and customer commitment activity. Partially offsetting this unfavorability was lower investment in equipment during 2022, customer commitment cancellations, and timing of construction on other major projects.

(b)(9) Quantified transmission and distribution inspection and maintenance goals/objectives for the current calendar year detailed by system area (i.e., transmission, substation, and distribution).

2024 Transmission and Distribution Goals and Objectives

Program Project	Unit of Measurement	Target for Year 2024
Communications Goals		
Communication Battery Maintenance	Batteries	112
Overhead Distribution Goals		
Recloser Inspections	Circuits	114
Pole Inspections	Poles	17,742
OH Line Inspections	Circuits	114
OH Transformer Inspections	Circuits	114
Padmount & Below Grade Insp	Circuits	78
Overhead Transmission Goals		
Helicopter Inspections	Circuits	23
Ground Inspections	Circuits	7
Substations Goals		
Circuit Breaker Maintenance	Breakers	305
Station Transformer Maintenance	Transformers	48
Station Battery Maintenance	Batteries	852
Station Relay Maintenance	Relays	1,359
Station Inspections	Sites	1,884
Underground Distribution Goals		
Manhole Inspections	Manholes	700
Major Network Insp (Prot Relay)	Network Protectors	92
Minor Network Visual Inspection (Transformer/Protector/Vault)	Network Transformers	576
Underground Transmission Goals		
Pressurization and Cathodic Protection Plant Inspection	Work Orders	424
Vegetation Management Goals		
Overhead Line Clearance	Circuit Overhead Miles	1,300

(b)(10) Budgeted transmission and distribution operation and maintenance expenses for the current year in total and detailed by EDC functional account.

	Total Budget
Customer Service	\$69,593,931
Human Resources	\$23,450,105
Operations/ Operation Services	\$50,241,858
Technology	\$54,108,248
General Corporate*	\$71,603,380
Total	\$268,997,522

*Includes Finance, Office of General Counsel, and Senior Management Costs

(b)(11) Budgeted transmission and distribution capital expenditures for the current year in total and detailed by EDC functional account.

	Total Budget
Customer Service	\$22,688,360
Human Resources	\$17,239,683
Operations/ Operation Services	\$367,814,794
Technology	\$43,618,941
General Corporate*	\$87,037,947
Total	\$538,399,725

*Includes Finance, Office of General Counsel, and Senior Management Costs

(b)(12) Significant changes, if any, to the transmission and distribution inspection and maintenance programs previously submitted to the Commission.

Duquesne Light has not made any significant changes to its transmission and distribution inspection and maintenance programs.