

Lindsay Baxter
Manager, Regulatory and Clean Energy Strategy
lbaxter@duqlight.com
(412) 393-6224



February 1, 2023

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**
Quarterly Electric Reliability Report – 4th Quarter 2022
Docket No. M-2016-2522508

Dear Secretary Chiavetta:

The report is submitted in two versions, proprietary and non-proprietary. Enclosed is the **non-propriety** version, which can be made available to the public at the above-referenced docket. The proprietary version has been submitted via overnight mail to the Secretary.

If you have any questions regarding the information contained in this filing, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "LBQ", is written over a light blue horizontal line.

Lindsay A. Baxter
Manager, Regulatory and Clean Energy Strategy

Enclosure

cc (w/ redacted version):

Dan Searfoorce (dsearfoorc@pa.gov)
Harry Bidelspach (hbidelspac@pa.gov)
John Van Zant (jvanzant@pa.gov)
Patrick Cicero (pcicero@paoca.org)
Steven Gray (sgray@pa.gov)
Sharon Webb (swebb@pa.gov)



***Duquesne Light Company
Fourth Quarter 2022
Electric Reliability Report
to the
Pennsylvania Public Utility Commission***

February 1, 2023

57.195 Reporting Requirements

(e)(1) *A description of each major event that occurred during the preceding quarter, 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.*

No major events occurred during the fourth quarter of 2022.

(e)(2) *Rolling 12-month reliability index values (SAIFI, CAIDI, SAIDI, and if available, MAIFI) for the electric distribution company’s service territory for the preceding quarter. The report shall include the data used in calculating the indices, namely the average number of customers served, the number of sustained customer interruptions, the number of customers affected, and the customer minutes of interruption. If MAIFI values are provided, the report shall also include the number of customer momentary interruptions.*

RELIABILITY BENCHMARKS AND STANDARDS

Duquesne Light Company

System Performance Measures with Major Events Excluded

Entire System				
	SAIDI	SAIFI	CAIDI	MAIFI
Benchmark	126	1.17	108	*
12 Month Standard	182	1.40	130	*
2022 4Q (Rolling 12 mo.)	134	0.91	146	*

* 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 at least partially attributed to the wide deployment of intelligent devices on the system that can quickly isolate a fault to the least number of customers.

Through the fourth quarter of 2022 (rolling 12 months), Duquesne Light’s CAIDI is above both the benchmark and the 12-month standard; SAIDI is above the benchmark; and SAIFI performance is below both the benchmark and standard. The increase in CAIDI and SAIDI is primarily attributable to weather impacts. Over the past decade, fluctuations have been observed in the average, minimum, and maximum temperatures; wind speed; total inches of precipitation; and the number of days with precipitation. Notable increases of approximately 20 miles per hour have been observed in both sustained and gust wind, as well as increases in the amount of and days with precipitation. During the rolling 12 months, Duquesne Light experienced seven PUC reportable storms impacting our system. One of these storms affected over 50,000 customers, which is just below the threshold for an excludable event (10% of customers or approximately 60,000 customers).¹

¹ See Docket No. M-2021-3023564, Outage Reports to inform the Commission of utility service outages per 52 Pa. Code § 67.1.

CAIDI can also be negatively influenced by improvements in SAIFI. Because CAIDI is calculated by dividing SAIDI by SAIFI, Duquesne Light’s performance in SAIFI has an inverse effect on CAIDI values.

The table below lists one addition that was made to data in July 2022, subsequent to the 2022 Third Quarter Report that was previously submitted to the Commission. The addition is the result of improved data accuracy governance that has been put in place at Duquesne Light. These changes did not affect the 2022 Third Quarter CAIDI, SAIFI, and SAIDI.

<u>New Values</u>				<u>Original Values</u>	
Incident #	Date	kVA	kVA Min	kVA	kVA Min
2253402	7/23/22	37	114,108	37	105,006

Formulas used in calculating the indices

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

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

$$\text{CAIDI} = \text{SAIDI/SAIFI}$$

Data used in calculating the indices

Total kVA Interrupted for the Period: 7,256,105 kVA

Total kVA-Minutes Interrupted: 1,060,476,775 kVA-Minutes

System Connected Load as of 12/31/22 7,932,778 kVA

(e)(3) *Rolling 12-month reliability index values (SAIFI, CAIDI, SAIDI, and if available, MAIFI) and other pertinent information such as customers served, number of interruptions,*

customer minutes interrupted, number of lockouts, and so forth, for the worst performing 5% of the circuits in the system. An explanation of how the electric distribution company defines its worst performing circuits shall be included.

Circuits are evaluated based on a rolling twelve-month count of lockouts of protective devices (circuit breakers, reclosers, sectionalizers, and line fuses) and on total accumulated kVA-minutes of customer outage time. Circuits that experience multiple lockouts for a device in combination with high total accumulated kVA-minutes of customer outage time in each quarterly rolling twelve-month period are identified and the top 5% are reported as worst-performing circuits.

The list of worst-performing circuits is ranked first by the number of kVA-minutes of outage experienced by customers on these circuits (highest to lowest) and then by device lockouts from highest to lowest. This places a higher priority on circuits with repeat outages affecting customers (SAIFI) while also focusing on outage duration for customers on these circuits (SAIDI).

While repairs are made as quickly as possible following every customer outage, circuits that appear on the worst performing circuits list are targeted for more extensive remediation based on a detailed review of historical outage records looking at root cause problems, field evaluations, and engineering analysis. Project scopes developed as a result of this analysis are incorporated into the Company's Work Plan for engineering, design, and construction. Since the focus is on reducing future customer outage duration and not just outage frequency, special attention is given to establishing/optimizing sectionalizing switch locations and alternate feeds to problem-prone areas of circuits and, where possible, replacing or eliminating equipment that has historically required lengthy repair times as well as a high failure rates.

At the end of each quarter, all previously identified circuits are reviewed to verify that past remediation efforts are working and to look for new reliability issues that may be developing. Serious new reliability problems are addressed immediately without waiting additional periods to collect information. This analysis method provides for timely review of circuit performance by in-house staff and it adapts to the dynamic nature of Duquesne Light's distribution system.

Special Note: *Because of sophisticated protection and remote automation technologies that the Company uses on its distribution circuits, not all customers on a circuit identified as a worst performing circuit actually experience significant reliability issues. Circuit problems are generally isolated to one load block of a circuit in less than five minutes with downstream customers only experiencing short momentary outages. Customers upstream of a circuit problem may not even experience a momentary outage. Therefore, many customers on a circuit identified as a poor performer do not experience problems with reliability.*

See Attachment A for a list of worst-performing circuits showing feeder device lockouts and reliability index values associated with each circuit.

(e)(4) Specific remedial efforts taken and planned for the worst performing 5% of the circuits as identified in paragraph (3).

Fourth Quarter 2022 Rolling 12-Month Circuit Data

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>1 22869 Midland-Cooks Ferry Breaker</p>	<p>4 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • Two outages were caused by storms. • One outage was caused by wires wrapping together that caused a short circuit. • 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 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. Proposed for 2027.
<p>2 23770 Traverse Run Fuse Link</p>	<p>10 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • Four outages were due to unknown causes. • Four outages were caused by high winds. • One outage was caused by wires wrapping together that caused a short circuit. • 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 2018 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2023. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q3 2020. Proposed for 2025.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>3 23732 Universal Breaker</p>	<p>3 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • Two 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 Q1 2022. Proposed for 2025.
<p>4 23602 Clinton² Fuse Link</p>	<p>8 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • Five outages were due to unknown causes. • One outage was caused by icing. • One outage was caused by high winds. • One outage was caused by a storm. 	<ul style="list-style-type: none"> • Permanent repairs were made following each outage as necessary. • Next Overhead Line Inspection planned for 2023. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management proposed for 2025.

² Clinton 23602 was established as a new circuit in 2021, which absorbed a portion of the existing Traverse Run Circuit D23770 (inspected in 2018).

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>5 23843 Arsenal Fuse Link</p>	<p>3 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • One outage was caused by a storm. <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • One outage was caused by high winds. • 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 2022 and all high priority repairs completed. • Overhead Line Inspection planned for 2026. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2022. Proposed for 2026.
<p>6 23681 Woodville Breaker</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • 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 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 2021. Proposed for 2026.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>7 23699 Brunot Island Recloser</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • One outage was caused by a storm. <p>Previous 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 2022 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 2019. Proposed for 2023.
<p>8 23670 Montour Fuse Link</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous 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. 	<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 2026. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q3 2022. Proposed for 2026.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>9 23870 Mt. Nebo Fuse Link</p>	<p>5 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • Two outages were caused by tree fall-in Inside ROW. • Two outages were 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 2022 and all high priority repairs completed. • Overhead Line Inspection planned for 2027. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2021. Proposed for 2025.
<p>10 23953 Evergreen Breaker</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • One outage was caused by the malfunction of company protective equipment. • One outage was caused by wires wrapping together that 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. • Overhead Line Inspection planned for 2025. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q2 2022. Proposed for 2026.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>11 23842 Arsenal Recloser</p>	<p>4 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • One outage was caused by tree fall-in Outside ROW. • One outage was caused by equipment failure. <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • One outage was caused by a storm. • 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 2022. Proposed for 2026.
<p>12 23745 Oakland Recloser</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • One outage was caused by tree fall-in Outside ROW. <p>Previous 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 2020. Proposed for 2024.
<p>13 22358 Carnegie-Calgon Breaker</p>	<p>1 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • One outage was caused by tree fall-in Inside 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 2026. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q3 2021. Proposed for 2026.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>14 23763 Wilmerding Recloser</p>	<p>3 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • One outage was by an unknown cause. <p>Previous 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 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 2019. Proposed for 2023.
<p>15 23660 Crescent Fuse Link</p>	<p>7 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • Four outages were caused by high winds. • Two outages were by unknown causes. • One outage was caused by excess slack. 	<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 Q3 2020. Proposed for 2026.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>16 23612 Findlay Fuse Link</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • One outage was due to an unknown cause. • 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 Q2 2021. Proposed for 2025.
<p>17 23716 Pine Creek Breaker</p>	<p>6 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • One outage was caused by outside contractor work. <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • Two outages were caused by wires wrapping together that caused short circuits. • One outage was caused by a loss of supply. • One outage was caused by a storm. • 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 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 Q2 2019. Proposed for 2023.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>18 23703 North Fuse Link</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous 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 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. Proposed for 2026.
<p>19 4453 Rosslyn Breaker</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • One outage was caused by tree fall-in Inside 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 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 2021. Proposed for 2026.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>20 23698 Brunot Island Recloser</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • Two outages were 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 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 Q1 2019. Proposed for 2023.
<p>21 23692 Brunot Island Fuse Link</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • Two outages were caused by storms. 	<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 Q1 2019. Proposed for 2023.
<p>22 23844 Arsenal Fuse Link</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • One outage was due to an unknown cause. <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • One outage was caused by wires wrapping together that 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 Q2 2021. Proposed for 2026.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>23 23672 Montour Fuse Link</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • Two outages were 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 2018 and all high priority repairs completed. • Next Overhead Line Inspection planned for 2023. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2022. Proposed for 2026.
<p>24 23631 Sewickley Breaker</p>	<p>4 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • Three outages were caused by tree fall-in Outside ROW. • One outage was caused by tree fall-in Inside 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 2026. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q4 2021. Proposed for 2025.
<p>25 23693 Brunot Island Sectionalizer</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous Outage(s):</p> <ul style="list-style-type: none"> • One outage was 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 2022 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 2019. Proposed for 2023.

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>26 23685 West End Breaker</p>	<p>4 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • No outage(s). <p>Previous 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 a landslide. • 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 2026. • The Company is investigating reliability enhancements for this circuit. • Vegetation Management completed Q3 2019. Proposed for 2023.
<p>27 23706 North Fuse Link</p>	<p>2 Total Outage(s)</p> <p>Fourth Quarter Outage(s):</p> <ul style="list-style-type: none"> • One outage was caused by equipment failure. <p>Previous 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 2022 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 2022. Proposed for 2026.

(e)(5) *A rolling 12-month breakdown and analysis of outage causes during the preceding quarter, including the number and percentage of service outages, the number of customers interrupted, 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.*

Proposed solutions to identified service problems are listed in Section (e)(4) above.

**January 1, 2022 through December 31, 2022
 No PUC Major Event Exclusions**

CAUSE	NO. OF OUTAGES	OUTAGE PERCENTAGE	kVA TOTAL	kVA PERCENTAGE	kVA-MINUTE TOTAL	kVA -MINUTE PERCENTAGE
Storms	522	16%	1,496,559	21%	261,380,271	25%
Trees (Inside ROW)	308	0.9%	454,431	6%	88,871,058	8%
Trees (Outside ROW)	895	27%	1,688,338	23%	367,568,818	35%
Equipment Failures	731	22%	1,948,950	27%	205,212,125	19%
Overloads	32	1%	48,680	1%	2,229,080	<1%
Vehicles	179	5%	431,649	6%	52,551,945	5%
Contact/Dig In	35	1%	105,843	1%	9,389,761	1%
Animal Contact	123	4%	159,520	2%	13,046,862	1%
Unknown	359	11%	534,706	8%	36,261,766	3%
Other	150	4%	387,429	5%	23,965,089	2%
TOTALS	3,334	100%	7,256,105	100%	1,060,476,775	100%

(e)(6) Quarterly and year-to-date information on progress toward meeting transmission and distribution inspection and maintenance goals/ objectives.

2022 Transmission and Distribution Goals and Objectives							
Program Project	Unit of Measurement	Target for 2022 4Q	Actual for 2022 4Q	4Q % Complete	Targets for Year 2022	Actual YTD for 2022	Year End % Complete
Communications Goals							
Communication Battery Maintenance	Batteries	30	34	113%	128	124	97%
Overhead Distribution Goals							
Recloser Inspections	Circuits	14	43	307%	131	131	100%
Pole Inspections	Poles	2,226	1,898	85%	17,814	19,791	111%
OH Line Inspections	Circuits	14	43	307%	131	131	100%
OH Transformer Inspections	Circuits	14	43	307%	131	131	100%
Padmount & Below Grade Insp	Circuits	0	0	N/A	80	80	100%
Overhead Transmission Goals							
Helicopter Inspections	Circuits	0	0	N/A	11	15	136%
Ground Inspections	Structures	140	389	278%	347	410	118%
Substations Goals							
Circuit Breaker Maintenance	Breakers	59	129	219%	387	390	101%
Station Transformer Maintenance	Transformers	0	2	N/A	49	49	100%
Station Battery Maintenance	Batteries	215	216	100%	860	856	100%
Station Relay Maintenance	Relays	280	216	77%	1,537	1,629	106%
Station Inspections	Sites	474	471	99%	1,896	1,887	100%
Underground Distribution Goals							
Manhole Inspections	Manholes	0	245	N/A	700	743	106%
Major Network Insp (Prot Relay)	Ntwk Protectors	0	65	N/A	92	92	100%
Minor Network Visual Inspection (Transformer/Protector/Vault)	Ntwk Transformers	0	75	N/A	576	636	110%
Underground Transmission Goals							
Pressurization and Cathodic Protection Plant Inspection	Work Orders	108	104	96%	424	423	100%
Vegetation Management Goals							
Overhead Line Clearance	Circuit Overhead Miles	265	183	69%	1,300	1,325	102%

(e)(7) Quarterly and year-to-date information on budgeted versus actual transmission and distribution operation and maintenance expenditures in total and detailed by the EDC's own functional account code or FERC account code as available.

Budget Variance Recap – O&M Expenses
 For the Three Months Ending December 31, 2022
 (In Whole Dollars)
 Favorable/(Unfavorable)

	Total Actual	Total Budget	Variance
Customer Service	\$19,396,112	\$18,893,021	(\$503,091)
Human Resources	\$8,170,742	\$4,719,104	(\$3,451,638)
Operations/Operation Services	\$15,648,261	\$12,227,841	(\$3,420,420)
Technology	\$13,312,048	\$12,931,679	(\$380,369)
General Corporate*	\$18,975,756	\$18,969,027	(\$6,729)
Total	\$75,502,919	\$67,740,672	(\$7,762,247)

*Includes Finance, Office of General Counsel, and Senior Management costs.

Budget Variance Recap – O&M Expenses
 Year to Date through December 31, 2022
 (In Whole Dollars)
 Favorable/(Unfavorable)

	Total Actual	Total Budget	Variance
Customer Service	\$58,264,618	\$66,862,826	\$8,598,208
Human Resources	\$27,325,491	\$19,518,035	(\$7,807,456)
Operations/Operation Services	\$57,410,705	\$55,239,218	(\$2,171,487)
Technology	\$50,503,784	\$51,219,673	\$715,889
General Corporate*	\$77,729,902	\$76,389,734	(\$1,340,168)
Total	\$271,234,500	\$269,229,486	(\$2,005,014)

*Includes Finance, Office of General Counsel, and Senior Management costs.

(e)(8) *Quarterly and year-to-date information on budgeted versus actual transmission and distribution capital expenditures in total and detailed by the EDC's own functional account code or FERC account code as available.*

Budget Variance Recap – Capital
 For the Three Months Ending December 31, 2022
 (In Whole Dollars)
 Favorable/(Unfavorable)

	Total Actual	Total Budget	Variance
Customer Service	\$2,849,239	\$2,189,234	(\$660,005)
Human Resources	\$5,149,965	\$3,627,790	(\$1,522,175)
Operations/Operation Services	\$108,581,316	\$75,098,234	(\$33,483,082)
Technology	\$14,130,448	\$11,295,405	(\$2,835,043)
General Corporate*	\$18,650,677	\$15,422,548	(\$3,228,129)
Total	\$149,361,645	\$107,633,211	(\$41,728,434)

*Includes Finance, Office of General Counsel, and Senior Management costs.

Budget Variance Recap – Capital
 Year to Date through December 31, 2022
 (In Whole Dollars)
 Favorable/(Unfavorable)

	Total Actual	Total Budget	Variance
Customer Service	\$9,969,927	\$8,857,864	(\$1,112,063)
Human Resources	\$18,482,241	\$14,993,070	(\$3,489,171)
Operations/Operation Services	\$289,935,594	\$289,040,876	(\$894,718)
Technology	\$41,327,643	\$49,350,844	\$8,023,201
General Corporate*	\$74,876,629	\$64,666,158	(\$10,210,471)
Total	\$434,592,034	\$426,908,812	(\$7,683,222)

*Includes Finance, Office of General Counsel, and Senior Management costs.

(e)(9) *Dedicated staffing levels for transmission and distribution operation and maintenance at the end of the quarter, in total and by specific category (e.g. linemen, technician, and electrician).*

Job Title	Number of Employees
Telecom Splicer/Trouble Tech	6
Electronic Technician	17
Telecom Technician	2
Total Telecom	25
Electrical Equipment Technician	38
Protection & Control Technician	36
Yard Group Leader	3
Rigger	5
Laborer	3
Total Substation	85
UG Splicer	39
UG Cable Inspector	10
Cable Tester	1
Network Operator	12
Equipment Material Handler	1
Total Underground	63
Apprentice T&D	1
Equipment Attendant	1
Lineworker	126
Service Crew Leader	5
Equipment Material Handler	4
Total Overhead	137
Right of Way Agent	4
Surveyor	4
Total Real Estate	8
Total Street Light Changer	5
Engineering Technician	48
GIS Technician	9
T&D Mobile Worker	7
Test Technician, Mobile	5
Total Engineering	69
Senior Operator Apprentice	81
Senior Operator	33
Troubleshooter	17
Total Senior Operator/Troubleshooter	131
Total Switching Dispatcher	15
Total Employees	538

(e)(10) *Quarterly and year-to-date information on contractor hours and dollars for transmission and distribution operation and maintenance.*

CONFIDENTIAL INFORMATION

4th Quarter 2022

Contractor Dollars: REDACTED
Contractor Hours: REDACTED

YTD 2022

Contractor Dollars: REDACTED
Contractor Hours: REDACTED

(e)(11) *Monthly call-out acceptance rate for transmission and distribution maintenance workers presented in terms of both the percentage of accepted call-outs and the amount of time it takes the EDC to obtain the necessary personnel. A brief description of the EDC's call-out procedure should be included when appropriate.*

CONFIDENTIAL INFORMATION

Call-Out Acceptance Rate – 4th Quarter 2022
REDACTED

Amount of Time it Takes to Obtain the Necessary Personnel – 4th Quarter 2022
REDACTED

(d)(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

Jaime Bachota – Assistant Controller, Accounting & Financial Reporting
(412) 393-1122, jbachota@duqlight.com

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

ATTACHMENT A

(e)(3) *Rolling 12-month reliability index values (SAIFI, CAIDI, SAIDI, and if available, MAIFI) and other pertinent information such as customers served, number of interruptions, customer minutes interrupted, number of lockouts, and so forth, for the worst performing 5% of the circuits in the system.³*

Rank	Circuit No	Circuit Name	Equipment Type	Device	Last Lockout	Ckt KVA	Total KVA Min Interrupted	Total KVA Interrupted	SAIDI	SAIFI	CAIDI
1	22869	Midland-Cooks Ferry	S.S. BREAKER	BREAKER	2022-09-25	31120	46799897	194106	1503.852731	6.237339	241.104844
2	23770	Traverse Run	FUSE LINK	Pole # 289389	2022-05-21	18265	39001129	101912	2135.293128	5.579633	382.694177
3	23732	Universal	S.S. BREAKER	BREAKER	2022-07-23	22910	20833978	70667	909.383587	3.084548	294.819052
4	23602	Clinton	FUSE LINK	Pole # 231501	2022-08-27	25379	18574013	81810	731.8654399	3.223531266	227.038418
5	23843	Arsenal	FUSE LINK	Pole # 350288	2022-12-24	22975	16122865	26953	701.756909	1.173144	598.184432
6	23681	Woodville	S.S. BREAKER	BREAKER	2022-06-22	32960	15290282	170501	463.904186	5.172967	89.678547
7	23699	Brunot Is.	RECLOSER	ER139	2022-12-23	27722	14821578	48134	534.650385	1.73631	307.923255
8	23670	Montour	FUSE LINK	Pole # 295659	2022-03-28	34595	14688718	137977	424.590779	3.98835	106.457728
9	23870	Mt. Nebo	FUSE LINK	Pole # 208	2022-08-21	33392	13352643	78504	399.875509	2.350982	170.088696
10	23953	Evergreen	S.S. BREAKER	BREAKER	2022-03-21	36135	12735193	139525	352.433734	3.861214	91.275348
11	23842	Arsenal	RECLOSER	WR451	2022-12-23	33185	12546990	95852	378.09221	2.888413	130.899616
12	23745	Oakland	RECLOSER	ER200	2022-11-11	29485	11811324	32364	400.587552	1.097642	364.952539
13	22358	Carnegie-Calgon	S.S. BREAKER	BREAKER	2022-07-23	11000	11475000	8500	1043.181818	0.772727	1350
14	23763	Wilmerding	RECLOSER	ER16	2022-12-12	22767	11250765	84714	494.169851	3.720911	132.808803
15	23660	Crescent	FUSE LINK	Pole # 347506	2022-03-12	33195	11180102	153344	336.800783	4.61949	72.908636
16	23612	Findlay	FUSE LINK	Pole # 91640	2022-06-27	37333	11024157	47513	295.292556	1.272681	232.024014
17	23716	Pine Creek	S.S. BREAKER	BREAKER	2022-11-05	35398	11008607	133361	310.995169	3.767472	82.547423
18	23703	North	FUSE LINK	Pole # 45513	2022-07-13	22232	10802276	49805	485.888629	2.240239	216.891396
19	4453	Rossllyn	S.S. BREAKER	BREAKER	2022-06-22	7598	10222244	15677	1345.386154	2.063306	652.053581
20	23698	Brunot Is.	RECLOSER	WR1071	2022-06-15	21606	10195156	53998	471.866888	2.499213	188.806178
21	23692	Brunot Is.	FUSE LINK	Pole # 32097	2022-07-23	26850	9815107	60751	365.553333	2.262607	161.562887
22	23844	Arsenal	FUSE LINK	Pole # 3279	2022-10-24	55432	9662216	97341	174.307547	1.756043	99.261523
23	23672	Montour	FUSE LINK	Pole # 340832	2022-09-09	31830	9654378	86937	303.31065	2.731291	111.050277
24	23631	Sewickley	S.S. BREAKER	BREAKER	2022-07-25	32880	9365179	61796	284.829045	1.87944	151.549922
25	23693	Brunot Is.	SECTIONALIZER	EA293	2022-04-23	36466	9167879	65469	251.408956	1.795343	140.033893
26	23685	West End	S.S. BREAKER	BREAKER	2022-09-04	19415	8948784	43573	460.921143	2.244295	205.37452
27	23706	North	FUSE LINK	Pole # 323	2022-12-23	32220	8863926	55107	275.106331	1.710335	160.849365

³ The “Device” column indicates the device that most frequently operated and locked out in response to a fault.