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May 1, 2023

**VIA ELECTRONIC FILING**

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

Re: **Duquesne Light Company**  
**Quarterly Electric Reliability Report – 1<sup>st</sup> Quarter 2023**  
**Docket No. M-2016-2522508**

Dear Secretary Chiavetta:

Enclosed please find Duquesne Light Company's Quarterly Electric Reliability Report for the first quarter of 2023. The report is submitted in two versions, proprietary and non-proprietary. Enclosed is the **non-proprietary** version, which can be made available to the public at the above-referenced docket. The proprietary version has been submitted via overnight mail.

If you have any questions regarding the information contained in this filing, please contact me or Megan Good at [mgood@duqlight.com](mailto:mgood@duqlight.com) or 412-393-6496.

Sincerely,

A handwritten signature in blue ink, appearing to read "LB Baxter".

Lindsay A. Baxter  
Manager, Regulatory and Clean Energy Strategy

Enclosure

cc (w/ redacted version):

Dan Searfoorce ([dsearfoorc@pa.gov](mailto:dsearfoorc@pa.gov))  
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***Duquesne Light Company  
First Quarter 2023  
Electric Reliability Report  
to the  
Pennsylvania Public Utility Commission***

***May 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.*

Duquesne Light had one major event that occurred on March 25, 2023.

Duquesne Light’s major outage event was caused by a thunderstorm with high winds in Allegheny and Beaver Counties that began on Saturday March 25, 2023, at 1233 hours and ended Wednesday March 29, 2023, at 1249 hours. The storm affected 62,276 of the 612,157 total customers in our service territory. A combination of rain and high winds downed trees on power lines and caused extensive damage to poles and equipment throughout Duquesne Light’s service territory in Allegheny and Beaver Counties.

Please also see Duquesne Light’s Electric Utility Report of Outage Dated April 12, 2023, and Request for Exclusion of Major Outage for Reliability Reporting Purposes dated April 13, 2023. The Request for Exclusion of Major Outage for Reliability Reporting Purposes was approved April 18, 2023.

**(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
<b>Benchmark</b>	126	1.17	108	*
<b>12 Month Standard</b>	182	1.40	130	*
<b>2023 1Q (Rolling 12 mo.)</b>	111	0.86	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 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 2023 (rolling 12 months), Duquesne Light’s CAIDI is above the benchmark while meeting the 12-month standard; SAIDI is below both the

benchmark and standard; and SAIFI performance is below both the benchmark and standard. The increase in CAIDI 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 six PUC reportable storms and one PUC-excludable storm 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).<sup>1</sup>

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.

**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**

Total kVA Interrupted for the Period:	6,827,641 kVA
Total kVA-Minutes Interrupted:	884,207,966 kVA-Minutes
System Connected Load as of 12/31/22	7,932,778 kVA

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

**(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).**

**First Quarter 2023 Rolling 12-Month Circuit Data**

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>1 22869 Midland-Cooks Ferry Breaker</p>	<p>3 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• Two outages were caused by storms.</li> <li>• One outage was caused by wires wrapping together that caused a short circuit.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2019 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2024.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2022. Proposed for 2027.</li> </ul>
<p>2 23732 Universal Breaker</p>	<p>3 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• Two outages were caused by equipment failure.</li> <li>• One outage was caused by high winds.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2027.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q1 2022. Proposed for 2025.</li> </ul>

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>3 23770 Traverse Run Breaker</p>	<p>5 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by tree fall-in Inside ROW.</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• Three outages were caused by tree fall-in Outside ROW.</li> <li>• One outage was by an unknown cause.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2018 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2023.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q2 2020. Proposed for 2025.</li> </ul>
<p>4 23843 Arsenal Sectionalizer</p>	<p>2 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by equipment failure.</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by a storm.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2026.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2022. Proposed for 2026.</li> </ul>

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>5  23953 Evergreen  Fuse Link</p>	<p>2 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by a storm.</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by high winds.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2020 and all high priority repairs completed.</li> <li>• Overhead Line Inspection planned for 2025.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2022. Proposed for 2025.</li> </ul>
<p>6  23681 Woodville  Breaker</p>	<p>2 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by equipment failure.</li> <li>• One outage was caused by high winds.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2019 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2024.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2021. Proposed for 2026.</li> </ul>

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>7  23699 Brunot Island  Recloser</p>	<p>2 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by equipment failure.</li> <li>• One outage was caused by a storm.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2026.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q3 2019. Proposed for 2023.</li> </ul>
<p>8  23842 Arsenal  Recloser</p>	<p>4 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• Two outages were caused by equipment failure.</li> <li>• One outage was caused by a storm.</li> <li>• One outage was caused by tree fall-in Outside ROW.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2020 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2025.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2022. Proposed for 2026.</li> </ul>

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>9  23745 Oakland  Recloser</p>	<p>2 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• Two outages were caused by tree fall-in Outside ROW.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Overhead Line Inspection planned for 2027.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2020. Proposed for 2024.</li> </ul>
<p>10  22358 Carnegie-Calgon  Breaker</p>	<p>1 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by tree fall-in Inside ROW.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Overhead Line Inspection planned for 2026.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q3 2021. Proposed for 2026.</li> </ul>

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>11  23870 Mt. Nebo  Fuse Link</p>	<p>4 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• Two outages were caused by tree fall-in Inside ROW.</li> <li>• Two outages were caused by tree fall-in Outside ROW.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2027.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2021. Proposed for 2025.</li> </ul>
<p>12  23703 North  Fuse Link</p>	<p>2 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by tree fall-in Outside ROW.</li> <li>• One outage was by an unknown cause.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2027.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2021. Proposed for 2026.</li> </ul>

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>13  23716 Pine Creek  Breaker</p>	<p>6 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• Two outages were caused by wires wrapping together that caused short circuits.</li> <li>• One outage was caused by outside contractor work.</li> <li>• One outage was caused by loss of supply.</li> <li>• One outage was caused by a storm.</li> <li>• One outage was caused by equipment failure.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2019 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2024.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q2 2019. Proposed for 2023.</li> </ul>
<p>14  23685 West End  Breaker</p>	<p>4 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by contact with company equipment by vehicle.</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by contact with company equipment by vehicle.</li> <li>• One outage was caused by high winds.</li> <li>• One outage was caused by equipment failure.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2026.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q3 2019. Proposed for 2023.</li> </ul>

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>15  23692 Brunot Island  Fuse Link</p>	<p>2 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• Two outages were caused by storms.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2019 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2024.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q1 2019. Proposed for 2023.</li> </ul>
<p>16  23693 Brunot Island  Recloser</p>	<p>2 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by equipment failure.</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by equipment failure.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2026.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q3 2019. Proposed for 2023.</li> </ul>

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>17  23698 Brunot Island  Recloser</p>	<p>2 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• Two outages were caused by equipment failure.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2019 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2024.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q1 2019. Proposed for 2023.</li> </ul>
<p>18  23763 Wilmerding  Recloser</p>	<p>3 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• Two outages were caused by tree fall-in Outside ROW.</li> <li>• One outage was by an unknown cause.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2027.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q3 2019. Proposed for 2023.</li> </ul>

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>19  4453 Rosslyn  Breaker</p>	<p>1 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by tree fall-in Inside ROW.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2019 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2024.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2021. Proposed for 2026.</li> </ul>
<p>20  23675 Montour  Recloser</p>	<p>2 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by equipment failure.</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by tree fall-in Inside ROW.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2020 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2025.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2020. Proposed for 2025.</li> </ul>
<p>21  23706 North  Fuse Link</p>	<p>2 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by a storm.</li> <li>• One outage was by an unknown cause.</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2026.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2022. Proposed for 2026.</li> </ul>

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>22  23810 Brentwood  Recloser</p>	<p>3 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• Two outages were caused by high winds.</li> <li>• One outage was caused by equipment failure.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2026.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q1 2019. Proposed for 2023.</li> </ul>
<p>23  23683 Woodville  Recloser</p>	<p>5 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• Two outages were caused by equipment failure.</li> <li>• One outage was caused by high winds.</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by equipment failure.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2027.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2021. Proposed for 2026.</li> </ul>
<p>24  23682 Woodville  Recloser</p>	<p>2 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by tree fall-in Outside ROW.</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by tree fall-in Outside ROW.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2023 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2028.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2020. Proposed for 2025.</li> </ul>

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>25 23708 North Fuse Link</p>	<p>1 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• One outage was caused by tree fall-in Inside ROW.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2022 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2027.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q2 2018. Proposed for 2024.</li> </ul>
<p>26 23690 Brunot Island Breaker</p>	<p>6 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• Four outages were caused by equipment failure.</li> <li>• One outage was caused by high winds.</li> <li>• One outage was caused by a storm.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2023 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2028.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q4 2022. Proposed for 2026.</li> </ul>

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>27            23790            Legionville            Fuse Link</p>	<p>2 Total Outage(s)</p> <p>First Quarter Outage(s):</p> <ul style="list-style-type: none"> <li>• No outage(s).</li> </ul> <p>Previous Outage(s):</p> <ul style="list-style-type: none"> <li>• Two outages were caused by tree fall-in Outside ROW.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage as necessary.</li> <li>• Distribution Overhead Line Inspection performed in 2020 and all high priority repairs completed.</li> <li>• Next Overhead Line Inspection planned for 2025.</li> <li>• The Company is investigating reliability enhancements for this circuit.</li> <li>• Vegetation Management completed Q3 2019 Proposed for 2024.</li> </ul>

**(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.

**April 1, 2022 through March 31, 2023  
 No PUC Major Event Exclusions**

<b>CAUSE</b>	<b>NO. OF OUTAGES</b>	<b>OUTAGE PERCENTAGE</b>	<b>kVA TOTAL</b>	<b>kVA PERCENTAGE</b>	<b>kVA-MINUTE TOTAL</b>	<b>kVA -MINUTE PERCENTAGE</b>
Storms	442	15%	1,317,856	19%	228,515,067	26%
Trees (Inside ROW)	284	10%	449,278	7%	82,562,013	9%
Trees (Outside ROW)	773	26%	1,483,922	22%	242,474,646	27%
Equipment Failures	677	23%	2,007,437	29%	193,667,028	22%
Overloads	31	1%	55,880	1%	4,242,158	0.5%
Vehicles	166	6%	486,922	7%	56,265,262	6%
Contact/Dig In	32	1%	73,752	1%	8,087,244	1%
Animal Contact	118	4%	153,202	2%	12,787,497	1%
Unknown	314	11%	458,667	7%	29,167,293	3%
Other	138	5%	340,725	5%	26,439,758	3%
<b>TOTALS</b>	<b>2975</b>	<b>100%</b>	<b>6,827,641</b>	<b>100%</b>	<b>884,207,966</b>	<b>100%</b>

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

2023 Transmission and Distribution Goals and Objectives							
Program Project	Unit of Measurement	Target for 2023 IQ	Actual for 2023 IQ	IQ % Complete	Targets for Year 2023	Actual YTD for 2023	Year End % Complete
<b>Communications Goals</b>							
Communication Battery Maintenance	Batteries	31	27	87%	124	27	22%
<b>Overhead Distribution Goals</b>							
Recloser Inspections	Circuits	35	57	163%	129	57	44%
Pole Inspections	Poles	2,872	2,827	98%	17,695	2,827	16%
OH Line Inspections	Circuits	35	57	163%	129	57	44%
OH Transformer Inspections	Circuits	35	57	163%	129	57	44%
Padmount & Below Grade Insp	Circuits	82	82	100%	82	82	100%
<b>Overhead Transmission Goals</b>							
Helicopter Inspections	Circuits	0	0	N/A	23	0	0%
Ground Inspections	Structures	118	283	240%	283	283	100%
<b>Substations Goals</b>							
Circuit Breaker Maintenance	Breakers	129	223	173%	515	223	43%
Station Transformer Maintenance	Transformers	6	11	183%	55	11	20%
Station Battery Maintenance	Batteries	214	210	98%	856	210	25%
Station Relay Maintenance	Relays	316	321	102%	1,382	321	23%
Station Inspections	Sites	471	471	100%	1,884	471	25%
<b>Underground Distribution Goals</b>							
Manhole Inspections	Manholes	200	85	43%	700	85	12%
Major Network Insp (Prot Relay)	Ntwk Protectors	26	4	15%	92	4	4%
Minor Network Visual Inspection (Transformer/Protector/Vault)	Ntwk Transformers	120	515	429%	576	515	89%
<b>Underground Transmission Goals</b>							
Pressurization and Cathodic Protection Plant Inspection	Work Orders	105	102	97%	424	102	24%
<b>Vegetation Management Goals</b>							
Overhead Line Clearance	Circuit Overhead Miles	325	347	107%	1,300	347	27%

*(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 March 31, 2023  
 (In Whole Dollars)  
 Favorable/(Unfavorable)

	<b>Total Actual</b>	<b>Total Budget</b>	<b>Variance</b>
<b>Customer Service</b>	\$14,827,396	\$13,710,466	(\$1,116,930)
<b>Human Resources</b>	\$6,398,364	\$5,277,600	(\$1,120,764)
<b>Operations/Operation Services</b>	\$13,596,213	\$13,352,791	(\$243,422)
<b>Technology</b>	\$12,815,880	\$12,662,957	(\$152,923)
<b>General Corporate*</b>	\$20,001,264	\$19,013,728	(\$987,536)
<b>Total</b>	<b>\$67,639,117</b>	<b>\$64,017,542</b>	<b>(\$3,621,575)</b>

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

Budget Variance Recap – O&M Expenses  
 Year to Date through March 31, 2023  
 (In Whole Dollars)  
 Favorable/(Unfavorable)

	<b>Total Actual</b>	<b>Total Budget</b>	<b>Variance</b>
<b>Customer Service</b>	\$14,827,396	\$13,710,466	(\$1,116,930)
<b>Human Resources</b>	\$6,398,364	\$5,277,600	(\$1,120,764)
<b>Operations/Operation Services</b>	\$13,596,213	\$13,352,791	(\$243,422)
<b>Technology</b>	\$12,815,880	\$12,662,957	(\$152,923)
<b>General Corporate*</b>	\$20,001,264	\$19,013,728	(\$987,536)
<b>Total</b>	<b>\$67,639,117</b>	<b>\$64,017,542</b>	<b>(\$3,621,575)</b>

\*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 March 31, 2023  
 (In Whole Dollars)  
 Favorable/(Unfavorable)

	<b>Total Actual</b>	<b>Total Budget</b>	<b>Variance</b>
<b>Customer Service</b>	\$3,032,017	\$3,809,472	\$777,455
<b>Human Resources</b>	\$4,811,034	\$4,268,868	(\$542,166)
<b>Operations/Operation Services</b>	\$69,422,826	\$83,979,320	\$14,556,494
<b>Technology</b>	\$8,770,574	\$10,358,296	\$1,587,722
<b>General Corporate*</b>	\$22,023,938	\$16,344,465	(\$5,679,473)
<b>Total</b>	<b>\$108,060,389</b>	<b>\$118,760,421</b>	<b>\$10,700,032</b>

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

Budget Variance Recap – Capital  
 Year to Date through March 31, 2023  
 (In Whole Dollars)  
 Favorable/(Unfavorable)

	<b>Total Actual</b>	<b>Total Budget</b>	<b>Variance</b>
<b>Customer Service</b>	\$3,032,017	\$3,809,472	\$777,455
<b>Human Resources</b>	\$4,811,034	\$4,268,868	(\$542,166)
<b>Operations/Operation Services</b>	\$69,422,826	\$83,979,320	\$14,556,494
<b>Technology</b>	\$8,770,574	\$10,358,296	\$1,587,722
<b>General Corporate*</b>	\$22,023,938	\$16,344,465	(\$5,679,473)
<b>Total</b>	<b>\$108,060,389</b>	<b>\$118,760,421</b>	<b>\$10,700,032</b>

\*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).*

<b>Job Title</b>	<b>Number of Employees</b>
Telecom Splicer/Trouble Tech	5
Electronic Technician	15
Telecom Technician	2
<b>Total Telecom</b>	<b>22</b>
Electrical Equipment Technician	38
Protection & Control Technician	36
Yard Group Leader	3
Rigger	5
Laborer	4
<b>Total Substation</b>	<b>86</b>
UG Splicer	39
UG Cable Inspector	10
Cable Tester	1
Network Operator	11
Equipment Material Handler	1
<b>Total Underground</b>	<b>62</b>
Apprentice T&D	0
Equipment Attendant	0
Lineworker	126
Service Crew Leader	5
Equipment Material Handler	3
<b>Total Overhead</b>	<b>134</b>
Right of Way Agent	5
Surveyor	4
<b>Total Real Estate</b>	<b>9</b>
<b>Total Street Light Changer</b>	<b>4</b>
Engineering Technician	48
GIS Technician	8
T&D Mobile Worker	7
Test Technician, Mobile	5
<b>Total Engineering</b>	<b>68</b>
Senior Operator Apprentice	69
Senior Operator	33
Troubleshooter	17
<b>Total Senior Operator/Troubleshooter</b>	<b>119</b>
<b>Total Switching Dispatcher</b>	<b>13</b>
<b>Total Employees</b>	<b>517</b>

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

**CONFIDENTIAL INFORMATION**

**1<sup>st</sup> Quarter 2023**

Contractor Dollars: REDACTED  
Contractor Hours: REDACTED

**YTD 2023**

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 – 1<sup>st</sup> Quarter 2023**  
REDACTED

**Amount of Time it Takes to Obtain the Necessary Personnel – 1<sup>st</sup> Quarter 2023**  
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](mailto:mthimons@duqlight.com)

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

Jason Keller – Director, Operations Center  
(412) 393-2897, [jkeller@duqlight.com](mailto: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.<sup>2</sup>*

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	20430679	101603	656.51282	3.264877	201.083422
2	23732	Universal	S.S. BREAKER	BREAKER	2022-07-23	22910	20153949	65540	879.70096	2.860759	307.506087
3	23770	Traverse Run	S.S. BREAKER	BREAKER	2023-03-04	18265	17313978	102255	947.932	5.598411	169.321578
4	23843	Arsenal	SECTIONALIZER	WA478	2023-03-29	22975	16034454	38910	697.90877	1.693579	412.090824
5	23953	Evergreen	FUSE LINK	Pole # 273568	2023-03-04	36135	15889310	115121	439.720769	3.185857	138.022689
6	23681	Woodville	S.S. BREAKER	BREAKER	2022-06-22	32960	13537384	148343	410.721601	4.500697	91.257315
7	23699	Brunot Is.	RECLOSER	ER139	2022-12-23	28247	13303353	27727	479.840299	1.000078	479.797778
8	23842	Arsenal	RECLOSER	WR451	2022-12-23	33185	12557424	95889	378.406629	2.889527	130.95792
9	23745	Oakland	RECLOSER	ER200	2022-11-11	30223	11792312	32584	399.902867	1.104766	361.904984
10	22358	Carnegie-Calgon	S.S. BREAKER	BREAKER	2022-07-23	11000	11475000	8500	1043.181818	0.772727	1350
11	23870	Mt. Nebo	FUSE LINK	Pole # 208	2022-08-21	33392	10964303	73449	328.351191	2.199598	149.27777
12	23703	North	FUSE LINK	Pole # 45513	2022-07-13	24673	10796513	49792	485.625126	2.239489	216.832282
13	23716	Pine Creek	S.S. BREAKER	BREAKER	2022-11-05	35398	10715811	131943	302.723627	3.727413	81.215456
14	23685	West End	S.S. BREAKER	BREAKER	2023-02-23	19815	10590445	56477	542.877141	2.887189	187.517839
15	23692	Brunot Is.	FUSE LINK	Pole # 32097	2022-07-23	29668	10302136	74615	381.969303	2.729911	138.070575
16	23693	Brunot Is.	RECLOSER	ER212	2023-01-03	36466	10261537	69803	281.400126	1.914193	147.007105
17	23698	Brunot Is.	RECLOSER	WR1071	2022-06-15	21606	10195156	53998	471.866888	2.499213	188.806178
18	23763	Wilmerding	RECLOSER	ER16	2022-12-12	22767	9791855	76574	430.089822	3.363376	127.874409
19	4453	Rosslyn	S.S. BREAKER	BREAKER	2022-06-22	7598	9561649	8004	1258.442879	1.053434	1194.60882
20	23675	Montour	RECLOSER	ER253	2023-02-23	26130	8846583	94998	333.575953	3.585601	93.123886
21	23706	North	FUSE LINK	Pole # 186535	2023-03-04	32220	8787390	54338	272.730912	1.686467	161.717214
22	23810	Brentwood	RECLOSER	ER769	2022-07-23	32460	8686496	95795	267.60616	2.951169	90.677968
23	23683	Woodville	RECLOSER	ER644	2023-03-03	32865	8549509	74945	260.140239	2.280389	114.077109
24	23682	Woodville	RECLOSER	ER174	2023-01-26	32304	8397553	55714	278.348876	1.845815	150.726083
25	23708	North	FUSE LINK	Pole # 305	2022-12-23	32312	8226705	87208	263.843269	2.796864	94.334292
26	23690	Brunot Is.	S.S. BREAKER	BREAKER	2022-08-11	21330	8086153	60847	379.097655	2.852648	132.893207
27	23790	Legionville	FUSE LINK	Pole # 125027	2022-07-28	33741	7542808	75904	223.55022	2.249606	99.372997

<sup>2</sup> The “Device” column indicates the device that most frequently operated and locked out in response to a fault.